

26 June 2023

FAO Jack Naven  
Planning Portal  
Manchester City Council  
Town Hall  
Manchester  
M60 2LA

Dear Jack,

**Science and Industry Museum: Power Hall Package 4  
Application for Listed Building Consent (PP-12243768)**

Please find enclosed an application for Listed Building Consent at the Science and Industry Museum's Power Hall for internal refurbishment works in relation to the platform, balustrades, services, historic working machinery and floor finishes. The description of development is:

*"Listed Building Consent for internal gallery refurbishment at the Power Hall including works to remove, replace and reinstate flooring, remove and replace internal platforms, balustrades and installation of services and associated works."*

The Science and Industry Museum is located to the northwest of central Manchester, to the east of the River Irwell and is within the Castlefield Conservation Area.

The Applicant is the Science and Industry Museum.

## 1 Background

In December 2020, £4.3 million of funding from the Government's Public Sector Decarbonisation Scheme was awarded to the Power Hall and the wider Science and Industry Museum (SIM) site to substantially improve energy efficiency and lower carbon emissions across this globally significant site. This grant will ensure the museum's environmental sustainability and support Greater Manchester's goal to become carbon neutral by 2038 – 12 years ahead of the national target.

This environmental sustainability project will utilise some of the unique site-specific opportunities. For example, in 1830 a well was built on the site to harness the power of the ground water. This natural resource will once again be utilised by the installation of new water source heat pumps and boreholes along with the latest green technologies. This is a visionary, sector-leading project where the original and modern combine to create a sustainable museum of the future. Additional funding from the Department for Culture, Media and Sport will help to place carbon literacy and zero carbon technology at the heart of

the museum's story and visitor experience, as well as assisting in undertaking urgent and major repairs to the Power Hall. Overall, the project will transform the Power Hall into a landmark symbol of the past, present and future of engineering, inspiring future scientists, entrepreneurs and innovators in developing careers and skills to help achieve a green economy and the next (green) industrial revolution.

The Power Hall and Decarbonisation project is to be delivered as one project. However, the required Planning and Listed Building Consent applications have been split into several separate applications due to the deadlines for the Government's Public Sector Decarbonisation Scheme. Splitting the consent packages has allowed construction work to start on site earlier and ensure the Applicant has met the Government deadlines.

This application is for Package 4 of 4 as highlighted in the below table.

| Works Package | Package Description                                                                         | Planning and Listed Building Consent Applications                                                                                                                                                                                                                                                | Submission / Determination            |
|---------------|---------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|
| 1A            | Water Source Heat Pump Network (External)                                                   | <ul style="list-style-type: none"> <li>Application for Listed Building Consent for alterations to the Grade II Listed Power Hall for the creation of openings and the installation of plant plus the introduction of a services trench within its curtilage.</li> </ul>                          | Determined 02.07.21                   |
|               | Water Source Heat Pump and other associated plant in the Power Hall                         |                                                                                                                                                                                                                                                                                                  | 130170/LO/2021                        |
| 1B            | Boiler House External Modifications (to facilitate installation of a new sub-station)       | <ul style="list-style-type: none"> <li>Application for Listed Building Consent for installation of a new services trench within the curtilage of the Grade II New Warehouse.</li> </ul>                                                                                                          | 130173/LO/2021                        |
|               | Pipework in the 1830 Warehouse (to facilitate installation of a new water source heat pump) |                                                                                                                                                                                                                                                                                                  | 130171/FO/2021                        |
| 2             | Power Hall Roof Removal                                                                     | <ul style="list-style-type: none"> <li>Application for Planning Permission external works to the Boiler Room including removal of an external staircase and making good in addition to the installation of a new balustrade and new doors.</li> </ul>                                            | 130172/LO/2021                        |
|               |                                                                                             | <ul style="list-style-type: none"> <li>Application for Listed Building Consent for alterations to the Grade I Listed 1830 Warehouse for the creation of openings and the installation of pipework plus the introduction of a services trench and borehole cover within its curtilage.</li> </ul> | Determined 29.07.21<br>130614/FO/2021 |
| 2             | Power Hall Roof Removal                                                                     | <ul style="list-style-type: none"> <li>Application for Planning Permission for removal of the Power Hall roof during refurbishment and repair works.</li> </ul>                                                                                                                                  | 130615/LO/2021                        |
|               |                                                                                             | <ul style="list-style-type: none"> <li>Application for Listed Building Consent for the removal of the Power Hall roof</li> </ul>                                                                                                                                                                 |                                       |

| Works Package | Package Description                                                                                                                                   | Planning and Listed Building Consent Applications                                                                                                                                                                                                                                              | Submission / Determination                              |
|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|
|               |                                                                                                                                                       | during refurbishment and repair works.                                                                                                                                                                                                                                                         |                                                         |
| 3a            | Power Hall Timber Repairs and Strengthening                                                                                                           | <ul style="list-style-type: none"> <li>Application for Listed Building Consent for Timber Repairs and Strengthening in relation to the Power Hall roof.</li> </ul>                                                                                                                             | Determined 04.10.21<br>131290/LO/2021                   |
| 3b            | Power Hall Roof reinstatement, new windows and doors, new internal services, fabric repairs and removal of 1980s internal platform and railway doors. | <ul style="list-style-type: none"> <li>Application for Planning Permission for removal of the Power Hall roof during refurbishment and repair works.</li> <li>Application for Listed Building Consent for the removal of the Power Hall roof during refurbishment and repair works.</li> </ul> | Determined 19.11.21<br>130614/FO/2021<br>130615/LO/2021 |
| 4             | Power Hall Gallery Refurbishment                                                                                                                      | <ul style="list-style-type: none"> <li>Application for Listed Building Consent</li> </ul>                                                                                                                                                                                                      | This application.                                       |

## 2 Context

The Power Hall is a Grade II Listed Building within the Science and Industry Museum complex. The Science and Industry Museum is located to the north-west of central Manchester, to the east of the River Irwell and within the Castlefield Conservation Area.

The Power Hall was erected as a shipping shed in 1855 for the LNWR to provide space for immediate unloading and transportation of goods on to carts, trucks and overnight garaging for locomotives. Offices were built at its western end in the early 1860s to serve the administrative functions of the shipping shed. In 1881, a substantial electrical travelling gantry train was installed by the LNWR, adjoining the northern elevation of the building to support its expanded use. The building remained in use as a goods transfer shed until the mid-1970s.

In the late 1970s – mid 1980s, a series of considerable repairs and alterations were carried out and an extension was added to the north west of the Site to convert the building into a gallery for the Science and Industry Museum. The shipping shed was subsequently renamed the ‘Power Hall’ and has housed the Museum’s collection of locomotives since 1983.

The Power Hall was considerably redeveloped throughout the 1980s with works carried out to remove timber doors and insert glazing as well as a new door being introduced at the west elevation of the structure. Rooflight glazing was also implemented and new rooflights inserted to the east slope. Exhibition plinths and footings to support the exhibition collection were introduced while central loading platforms were removed. In addition, a new platform was introduced to the east of the Power Hall alongside railings and steps while concrete paths were introduced and rails and cobbles relaid.

In 2018 the Power Hall was closed to members of the public due to health and safety concerns in relation to the poor condition of the roof. In the same year a £6 million grant from the Department of Digital, Culture, Media and Sport and additional funding from the Science Museum Group was committed to the

Power Hall to facilitate urgent and major repairs to the roof and a redisplay of the gallery content to show how Manchester changed the world.

The below plan identifies where the Power Hall is located within the Science Museum estate.

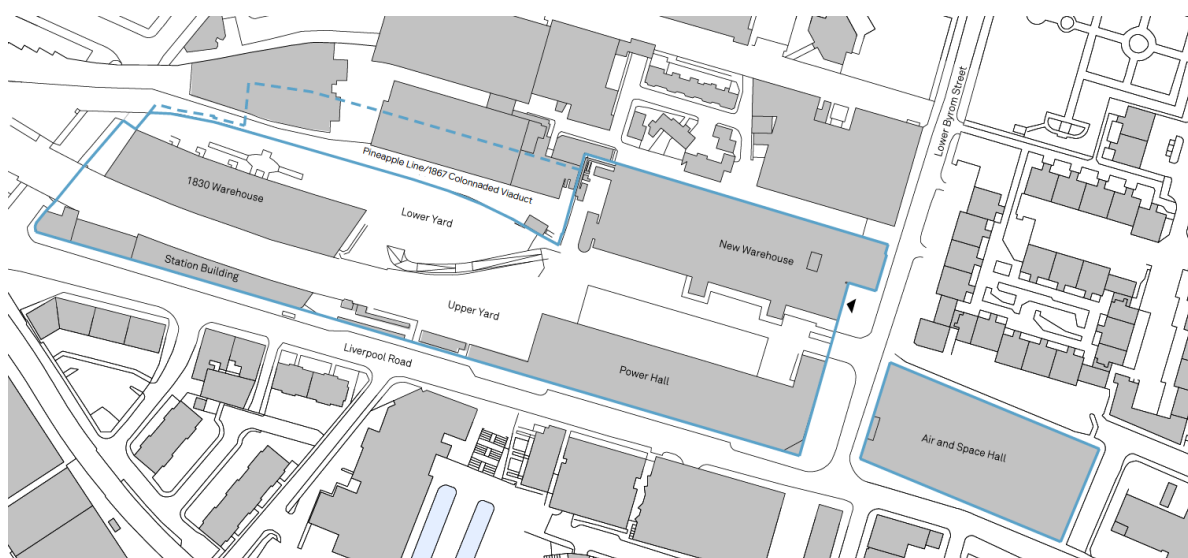


Figure 1 – Site Plan of Science Museum Estate

### 3 Significance of the Power Hall

The Power Hall is of high historic value for its role as one of Manchester's key hubs for goods transfer and it represents the success of the Liverpool Road Station as part of a wider network of goods distribution across the country and throughout the world. It is also representative of the site's historic development – as the first major building to be erected following the station's transfer to a goods only station in 1844.

The building is also significant as the first building to be converted and used by the Museum to celebrate the station's 150th anniversary.

The site and the building are of high evidential value for the continued development of the site for goods and shipping sheds.

It is of high aesthetic value as a rare survivor of an early urban goods transfer shed and is representative of development of the railway good sheds as a building type.

Some of the building's features exemplify LNWR's architectural standards – including the roof lights and the blind arcading to its street-facing elevations, which contributes to its significance.

The former Goods Offices contribute to the building's significance and are representative of the mid-Victorian development of the goods station and are a typical example of their type.

The late-19th century travelling crane, located along the north elevation is of high significance as an increasingly rare survivor of its type.

The mid-20th century WC block has little or no architectural value and does not contribute to the significance.

The early-1980s Visitor Entrance Block was designed to reflect the architecture and detailing of the Power Hall; however, it fails to contribute as its details are not well-handled and it features large expanses of smoked brown glazing, which detracts. Overall, this building is of neutral significance.

For further information, including a hierarchy of significance of the building's features, please see the accompanying Heritage Impact Assessment prepared by Donald Insall.

The significance of the Powe Hall is reflective of its Grade II listing.

## 4 Pre-application Engagement

The scope of this application has been discussed with Manchester City Council as the Local Planning Authority. Several site visits and formal pre-application meetings were held to discuss the proposed application. Detailed discussions have been undertaken including in relation to the strategy for the re-use of original cobbles within the building.

The accompanying Design and Access Statement prepared by Carmody Groarke details how pre-application feedback has been considered and addressed in the design proposals being brought forward.

## 5 Proposals

The description of development for the planning permission is:

*“Listed Building Consent for internal gallery refurbishment at the Power Hall including works to remove, replace and reinstate flooring, remove and replace internal platforms, balustrades and installation of services and associated works.”*

The proposed works which form this application can be separated into five workstreams which are summarised below and are fully detailed in the accompanying Design and Access Statement prepared by Carmody Groarke, as well as the architectural drawings submitted with this application.

### 5.1 Platform Proposals

#### Platform Demolition

Proposed demolition of the platform is shown on the proposed demolition plan within section 3.2.4 of the accompanying Design and Access Statement prepared by Carmody Groarke.

In summary, this includes regions of existing cobbles and floor finishes, the non-original timber platform, partition walls and ramp and non-original rails, concrete plinths and brick walls.

Existing balustrades are also to be removed as well as a further region of cobbles for excavation to allow for building services. The cobbles will be retained for reuse elsewhere in the building.

#### Platform Construction

The proposed construction of the platform is shown within section 3.2.6 of the Design and Access Statement.

In summary:

- The ramp at the west end of the platform will be constructed with modern timber joists and historic floorboards above.
- The west platform will be constructed with historic joists and historic timber floorboards.
- The central ramp, east ramp and east platform will be constructed with modern timber joists and modern floorboards.

Existing timber joists and floor boards from the historic west platform will be carefully removed and stored for re-use in the re-construction of the new west platform. The historic floorboards (currently painted black) will be sanded and stained as part of the proposed reinstatement work.

The sides of the platform will be clad in dark stained Douglas fir cladding to match the vertical boarding as agreed via the planning conditions attached to the Package 3b (LBC Ref. 130615/LO/2021) consent.

M&E services will be housed below the length of the platform. Where possible the existing (non-original) masonry walls that run beneath the west platform are proposed to be retained. Where there is an existing concrete slab beneath the platform, this is proposed to be retained and re-used to support the new construction.

Modern joists and floorboards are proposed where there are ramps and landings for structural purposes.

Given the complex nature of the sub structure beneath the east platform - there are a variety of different structural proposals for this region. Similar to the west platform, the existing concrete slab is to remain in place and act as the supporting structure to the new platform. Where possible, existing masonry walls are proposed to be re-used with new and/or re-purposed timber joists.

## **5.2 Balustrades**

Edge protection and balustrades are needed to protect building users from the risks associated with level changes within the building. They are also required in relation to the Historic Working Machines (HWM) to ensure that the public are safely protected from any moving parts and heat.

Gates are required to provide staff access into the collection enclosures. These are intended to visually match and be fully integrated with the balustrade proposal.

A full overview highlighting each balustrade type proposed can be found in section 3.3.3 of the Design and Access Statement.

Along the west platform where there are existing timber joists and floor boards, the balustrades are fixed into new noggins that sit in between the historic joists.

There are a variety of different ways in which the balustrade will be fixed to the ground below / the platform. Where there are pre-existing cobbles, the cobbles will be locally removed so that the balustrade can be fixed into a concrete pad. The cobbles will then be reinstated to match the surrounding area.

## **5.3 Services**

### **Heating Strategy**

The raised platform has been designed as a servicing spine, distributing heat down the centre of the Power Hall.

The heating within the building is required to protect the historic collection. The extent of the heating network has been reduced in response to concerns raised about the extent and finish of trench heaters as discussed during pre-application meetings.

However, to futureproof the proposals a number of concealed and visually unobtrusive 'capped' off heating pipes will be provided in strategic locations. Please see section 3.4.1 of the Design and Access Statement for a full summary of this.

### **Trench Locations**

The extent of builder's work / trenching has been co-ordinated with the engineering consultants and the contractor to ensure that it is minimised as far as possible. For a full overview of trench locations please the 'Trench Location Plan' within section 3.4.2 of the Design and Access Statement.

## **5.4 Relocation of Historic Working Machines**

It is proposed to only move objects where absolutely necessary for visitor circulation, to clarify the overall narrative within the gallery or improve the setting of a specific collection item.

The key object moves proposed are summarised below and expressed within section 3.5.1 of the Design and Access Statement:

- The relocation / reorientation of Pender (which previously sat immediately in front of the new entrance) to the west of the main entrance.
- The reorientation of the Lancashire boiler which would be beneficial from a curatorial perspective and aid the building services installation.
- The relocation of Metrovicks further south toward the back of the building makes space at the main entrance and clarifies the curatorial narrative.
- The reshuffling of the locomotives / rail operation vehicles to reflect the curatorial ambitions and the need to equally distribute the rail loads over the existing vaults below.

## **5.5 Finishes**

### **Floor Finishes**

The proposed floor finish strategy aims to improve accessibility through smoother, safer and more even surfaces. The intention is to create a coherent material language that provides clarity to the proposed circulation routes.

There is a requirement for the floor finish immediately around the working machines to be impermeable and able to withstand oil discharge. As a result of this, the localised areas of existing slip-resistant flooring will be replaced with a new sheet flooring material.

The floor strategy aims to enhance the accessibility and visual coherence of the Power Hall. The area of visible cobbles within the Power Hall will largely be maintained however some of the cobbles will be redistributed and re-laid in response to the proposed layout.

At the main entrance, a new cobbled route is proposed to the interior of the building only, to make good the area of non-original tracks that previously formed part of the set works for the Pender Locomotive. The use of reclaimed cobbles is an appropriate choice within the historic context of the Upper Yard, however these are proposed to be laid perpendicular to the grain of the existing cobbles.

The timber platform which forms the spine of the Power Hall informs the east to west circulation within the space. The timber finish references the original timber clad Victorian platform and allows the historic deck to be reused along part of the platform.

The existing areas of cobbles are proposed to be cleaned and left as per the existing installation. Scattered regions of existing concrete are rationalised while previously lost areas of historic cobbles are reinstated, improving the coherence of the circulation routes and the setting of the Power Hall as a heritage asset.

Areas of existing and proposed concrete will have a scabbled concrete finish. This will achieve the required slip resistance in these areas.

Dark matte vinyl is proposed to replace the existing blue vinyl around some of the Historic Working Machinery where there is a risk of minor oil spillage. The railway staging around the Beyer Garrett locomotive will be updated in that the wooden surround will be replaced with more robust steel angle and the loose ballast replaced.

## **De-Materialising Exhibition Backdrops**

In order to improve the spatial clarity of the Power Hall, it is proposed to de-materialise some elements within the space including the existing setworks, plant room walls and plinths. This will be achieved through painting and staining surface finishes to establish a visual hierarchy between the historic building and modern interventions such as the plinths, setworks and plant room enclosures. Samples of such works are proposed to be agreed by way of planning condition prior to works commencing.

## **6 Methodology**

Detailed method statements for all works to be carried out as part of this application have been prepared by H.H. Smith. These fully detail how the works will be carried out as well as how historic fabric will be protected prior to works beginning and throughout the works taking place.

The Method Statements have been split into three workstreams:

- Demolition
- Trenches for M&E Services
- Installation of New Platform

## 7 Impact on the Listed Building

The accompanying Heritage Impact Assessment prepared by Donald Insall Associates assesses the works in terms of impact on the listed building and concludes that the proposals would result in no harm to the significance of the Power Hall.

It is noted that proposals have the potential to cause some very minor harm through the loss of a limited extent of historic cobbles, however when viewed holistically it is considered that subject to appropriate methods of repair, design mitigation and reuse of historic fabric, the proposals preserve and, in some instances, enhance the special interest of the listed building through rationalising the areas of existing concrete and visible cobbles.

Further to this, the methodologies prepared by H.H. Smith set out the sequential process of recording and protection of historic fabric and monitoring works which would ensure that the significant elements of the listed building are preserved.

## 8 Accordance with Planning Policy

The key material planning consideration for this application is the impact on the designated heritage asset, the Power Hall, and therefore adherence to planning policy regarding the historic environment.

Paragraph 190 of the NPPF (2021) states that *“in determining applications, local planning authorities should take account of:*

- *the desirability of sustaining and enhancing the significance of heritage assets and putting them to viable uses consistent with their conservation;*
- *the positive contribution that conservation of heritage assets can make to sustainable communities including their economic vitality; and*
- *the desirability of new development making a positive contribution to local character and distinctiveness.”*

Paragraphs 201-203 place great weight on the conservation of designated heritage assets, emphasising the need to avoid “substantial harm” in terms of demolition, significant alteration, or compromise the setting unless that harm is clearly justified (via four specific tests) or there are substantial public benefits that outweigh that harm. Where a development proposal will lead to less than substantial harm to the significance of a designated heritage asset, this harm should be weighed against the public benefits.

When viewed holistically, it is concluded that the proposals pose no harm to the listed asset. However, it has been identified that improvements to floor finishes have the potential to cause some very minor harm through the loss of a limited extent of historic cobbles. The loss of cobbles has been restricted to the minimum amount necessary and has been weighed up against the significant positive impact in terms of public benefit.

The removal of a limited amount of historic cobbles will rationalise the currently inconsistent floor coverings to visually uplift the appearance of the building. In addition, these works are necessary to meet targets in terms of accessibility for users throughout the Power Hall, ensuring it is a usable space for all visitors to enjoy. Through the re-ordering of collections on display, a simpler visitor experience is created, which seeks to be more participative, engaging and better interprets the displays that are on show. These benefits will therefore greatly enhance the visitor experience within the Power Hall and provide significant benefit to the general public in terms of both education and enjoyment.

Proposals also provide significant benefit in terms of reducing the carbon footprint of the museum through the installation of new plant systems. This will contribute to the wider objective of the Power Hall in terms of lowering carbon emissions across the Science and Industry Museum site.

The proposals will facilitate the enhancement of the Power Hall's optimum use as an important part of the popular Science and Industry Museum. This will be beneficial in terms of ensuring the long-term conservation of the Grade II listed structure as well as the wider museum complex, resulting in a major heritage benefit.

Taking this into account, the proposals are in accordance with Paragraph 202 of the NPPF in that the public benefits outweigh any harm associated with the Proposed Development.

This approach is in line with Policy CC9 Design and Heritage within the adopted Manchester Core Strategy (2012). This policy sets out that development in Manchester City Centre should protect or enhance the heritage assets that have been identified, including listed buildings, conservation areas and scheduled ancient monuments. The policy also supports the need to ensure buildings are of the highest standard in terms of appearance and function, and all reinstatement works will repair the listed fabric to match the original like-for-like.

Saved UDP Policy DC18.1 states that the Council give particularly careful consideration to development within Conservation Areas and will seek to preserve and enhance the character of these designated areas, while saved UDP Policy DC19.1 states that applications for listed building consent involving or having an impact on buildings of Special Architectural or Historic Interest will have regard to securing the retention, restoration, maintenance and continued use of such buildings and to protecting their general setting.

A series of modern elements that are considered of neutral significance of the listed structure are being removed as part of the proposed works including regions of modern floor finish and concrete plinths. With regard to the platform demolition, features being removed are predominantly modern including non-original rails, balustrades, timber partition walls and platforms/ramps. Features such as these confuse the architectural clarity of the building and clutter the space therefore detracting from the significance of the asset. In removing these the space is opened up, allowing accessibility to be improved throughout the Power Hall and allowing visitors to better admire the architectural significance of the space. Where historic features are being removed in terms of the historic cobbles, they are being set aside and re-used where possible to further protect the significance of the listed asset.

The works proposed to facilitate the optimum future use and conservation of the building will, overall, result in the significance of the building being preserved.

The proposals are therefore in accordance with Policy CC9 Design and Heritage of the Manchester Core Strategy (2012) as well as saved UDP Policies DC18.1 and DC19.1.

## 9 Application Documents

The following information is provided in support of this application:

- Covering Letter (Dated 26 June 2023), prepared by Deloitte;
- Design and Access Statement (Dated 26 June 2023), prepared by Carmody Groarke;
- Architectural Drawings Schedule (Dated 26 June 2023), prepared by Carmody Groarke;
- Schedule of Works (Dated 26 June 2023), prepared by Carmody Groarke;
- Heritage Impact Assessment, prepared by Donald Insall Associates;
- M&E Summary Note (Dated 09 June 2023), prepared by Max Fordham;
- Structural Design Summary (16 June 2023), prepared by Conisbee;
- Method Statements, prepared by H.H Smith;
  - SSOW 1 - Demolition (Dated 12 July 2023)
  - SSOW 2 – Trenches for M&E Services (Dated 02 July 2023)
  - SSOW 3 – Installation of New Platform (Dated 02 July 2023)

The Planning Portal Reference is PP- 1224376.

We look forward to receiving your confirmation that the application has been formally registered. In the meantime, if you have any queries or require any further information, please do not hesitate to contact my colleagues Joe McElhone (0161 455 6994 / [joemcelhone@deloitte.co.uk](mailto:joemcelhone@deloitte.co.uk)) or Josh Wyatt-Smith (0161 455 8451 / [jwyattsmith@deloitte.co.uk](mailto:jwyattsmith@deloitte.co.uk)).

Yours sincerely



Deloitte LLP