



Listed Building Consent Application

Installation of WiFi at

Worsbrough Mill



Contents

- Introduction
- Background
- Design and Access Statement
- Location Plan and Site Description
- Planning Statement
- Proposed Work
- Heritage Statement
- Listing Information
- Recent Planning Applications
- Appendix 1– Examples of Equipment
- Appendix 2 – Colour Charts

Introduction

Barnsley Council operate five museum sites across the borough. These visitor attractions currently have very limited or no wi-fi connectivity for staff and corporate guests, and little or no connectivity for the public. Consent is sought to install equipment to enable wifi connectivity throughout key buildings and outdoor areas at Worsbrough Mill.

Background

Barnsley Museums welcome over £1.3M visitors annually to the council owned visitor attractions at Cannon Hall, Elsecar Heritage Centre, the Cooper Gallery, Experience Barnsley Museum and Worsbrough Mill. The visitor attraction market is highly competitive and expectations of today's visitors have gone way beyond simple learning through seeing and reading. Visitors want to stay fully connected throughout their visit. It's increasingly important that visitors can use their phones to engage with our interpretation and offer and connect to social media during their visit. In addition we need this connectivity to support our business clients who want to hire the venues but need and expect good connectivity. All Barnsley Museums are free to enter so it is important to continue to attract visitors to boost donations. Improving our offer will achieve this.

Wi-fi connectivity is poor or non-existent in many areas of the museum buildings in which our teams are currently based which limits agile working. However, wifi has recently been installed in the Mill Cottage as part of a project to create a shop.

The proposal to improve and install wifi at our museum sites supports the council's commitment to Digital First agenda, and the delivery of Barnsley Museums' Digital Strategy, a requirement as a National Portfolio Organisation and the Barnsley 2030 priorities (Digital Barnsley).

Capital Funding to undertake the project was agreed by Cabinet on 14/07/2021 Cab.14.7.2021/11. Work has taken place in conjunction with key stakeholders to further develop plans and we are now in a position to seek Listed Building Consent to complete the work.

Design and Access Statement

This statement is to support the application for the proposed addition of wifi to key buildings and outdoor areas within the Worsbrough Mill complex.

Location Plan and Site Description

Worsbrough Mill is a complex of buildings which comprises of a historic water mill, learning centre, mill cottage, shop, gallery and tearoom. It is located in Worsbrough Country Park, around two miles south of Barnsley. The park also includes Worsbrough Reservoir.



Planning Statement

Relevant Legislation/Planning Policy:

Planning (Listed Buildings and Conservation Areas) Act 1990

In terms of the impact on the special character and appearance of the listed building, Section 16 (2) of the Planning (Listed Buildings and Conservation Areas) Act 1990, states:

In considering whether to grant listed building consent for any works the local planning authority or the Secretary of State shall have special regard to the desirability of preserving the building or its setting or any features of special architectural or historic interest which it possesses

The National Planning Policy Framework (NPPF)

NPPF para 189 and 190: The NPPF requires applicants to describe the significance (heritage) of any heritage asset affected by a proposal including any contribution made by the setting of the asset. The level of detail should be proportionate to the importance of the asset and the degree of intervention the proposal represents. The local Planning Authorities will take the heritage significance of an asset into account and consider any impacts on the asset to avoid conflict with the conservation of the asset.

NPPF para 193: Great weight given to an asset's conservation, irrespective of the degree of harm

NPPF para 194: Any harm to or loss of significance will require clear and convincing justification

Barnsley Local Plan Policies

Barnsley Local Plan Policy HE1: The Historic Environment: Positively encourage developments that help in the management, conservation and understanding of the historic environment

Barnsley Local Plan Policy HE3: Developments affecting Historic Buildings: Proposals involving historic buildings should conserve and where appropriate enhance, respect historic precedents, and capitalise on opportunities to reveal significance

Proposed Works

The addition of wifi to key buildings and outdoor areas at Worsbrough Mill, using internal and external wifi access points (AP) and point to point radio bridge link technology. Pictures and dimensions of equipment are in appendix A. The bridge links enable two or more buildings to be connected to the data network without the need for cables.



Dimensions: W x L x H 21.6cm
x 21.6cm x 4.3 cm



Dimensions : W x L x H 25.9cm
x 23.3cm x 8.1 cm



Dimensions: H x W x D: 16.9
cm x 10.0 cm x 5.4 cm

The Council's IT contractor has provided a proposal to achieve this. The contractor has worked on similar projects in the past for the British Museum, the British Library and cities of York and Bath.

The internal and external APs have internal antennae to minimise their appearance. (See appendix A for further information) Where required, the APs and other equipment can be wrapped to blend in with décor or surroundings. (See appendix B)

The structured data cables, installed as part of the project to provide power and up to 1Gbps data network services to the wireless access points, will be Leviton category 6 unshielded twisted pair (UTP). The cables will be run through existing and/or new surface mounted trunking where needed. Any new trunking installed will be done in an aesthetically sensitive way.

Works to install power, as described below, will be undertaken by Barnsley Property Services.

Worsbrough Bagging Room bridge and AP – 1 x fused spur (or 13A outlet acceptable)
Worsbrough Classroom network cabinet – 1 x fused spur (or 13A outlet acceptable)

Example of fused spur below:



Where it is appropriate aesthetically, wall mount 2P+E Industrial Power Sockets may be used rather than a fused spur. Example below:



The sites identified for the APs in this proposal should be sufficient to meet the project brief. However, the proposed locations may be subject to minor changes, dependent upon availability of suitable cable routes and digital wifi signal mapping survey by the contractor. In the event of this situation, preservation of the asset would come first. If changes are required, they will be discussed and agreed with the Council's Conservation Officer.

The plan below shows that a bridge link (yellow dots) installed on the front of the mill cottage will be used to transmit a signal to a bridge link on the learning centre (block 4). Another bridge link will be used to transmit a signal to a bridge link on the bagging room (block 2). The bridge links will enable the external APs (red dots) to provide wifi for the terraces and yards within the complex.



The addition of wifi to the external areas will improve our visitor and commercial offer and allow employees to work digitally at areas of the site other than the office. The green dots are the internal APs that were recently installed in the mill cottage.

The photo below shows the mill cottage. There are lights, CCTV cameras and cabling already fixed to this elevation. The AP and bridge link could be located where the empty nesting box is currently fitted. The photo on the right gives an example of the equipment attached to the building. It is shown in black, however the equipment can be wrapped if preferable.



The Learning Centre, a temporary building, can be seen from the terrace in front of the mill cottage. (Photo below left). The photo on the right shows where the bridge link could be located on this building. It is proposed that a network cabinet and switches will be installed in a cupboard in the Learning Centre and an internal AP fitted in the classroom area. This will add to the types of learning that can take place and increase the commercial potential of the building.



The photos below show the bagging room. The photo on the right shows an example of the bridge link and AP equipment attached to it. Wifi in this area will enable visitors to engage with digital interpretation and enable employees to be connected whilst working in this location.



The photos below show the rear courtyard of the mill cottage. There is a seating area for visitors and customers of the tearoom. Wifi in this location would increase the visitor offer and assist with engagement with digital interpretation.



Heritage Statement

Consultation has taken place with the Senior Conservation Officer and advice given has been fully incorporated into this submission.

Any external access points, cabling, point to point bridge technology will be attached to the mortar of the building(s) rather than to the stone/brickwork, or alternatively attached to a piece of wood and then this attached to the mortar if this would cause less disturbance to walls. The wood would be painted to be in keeping with the surrounding environment.

Anything which is attached to the buildings will be as unobtrusive as possible. Where able, the external fittings will be tucked under guttering and/or vinyl wrapped to disguise them, or be in a colour that blends in with the surroundings.

A point to point wireless bridge link solution will be used to link extend the data network to the Learning Centre and outside spaces in the complex. This will avoid trenches being dug and disruption to the cobbles and archaeology.

Access points will be mounted out of the line of sight, wherever possible. Where it is not possible to do this, access points can be wrapped to match with the decoration of the room, or placed near other existing wall mounted equipment, eg CCTV, signs etc. A colour chart is included in appendix A for reference of stock colours, however bespoke colour wraps can be created at a cost. Cables will follow existing routes where possible and any new trunking painted to match décor. Existing structured cabling will be utilised wherever possible. Where new structured cabling has to be installed it will comply to the Telecommunication Industry Standard (TIA) category 6 standard for unshielded twisted pair and be installed in dual surface mount outlets. The use of dual outlets will enable other system to be developed in the future without a repeat of the cable installation process, e.g. CCTV or Internet of Things (IoT) networks.

Consultation has taken place with the Collections and Exhibitions Manager, Visitor Services Manager and with the Museums Team to ensure that the collections can be kept safe throughout this work. Arrangements will be made with the Museums Team to move and/or protect artefacts or enlist the services of specialist removers, if needed, prior to work commencing.

The Group Leader for Heritage and Arts has been fully consulted and briefed about all aspects of this project.

North, the Council's IT contractor is fully appreciative of the protected status of the museum sites and has worked on similar projects for the British Museum, British Library and cities of York and Bath. North have stated that they are fully committed to working alongside the Conservation Officer and all relevant stakeholders in the undertaking of this project.

This project has given great consideration to the conservation of the Cannon Hall site. The proposed addition of wifi would not cause any significant degree of harm to the asset, either inside or outside. The wifi will enable improvements to the management, conservation and understanding of the site. It will improve the visitor and commercial offer which in turn will contribute to the conservation of the Hall, Park and Gardens.

Overall, we would suggest the proposal is justified and represents no harm to the heritage significance of the listed building(s) and is therefore in accordance with local and national planning policy.

Listing information

Heritage Category: Listed Building Grade: II*

List Entry Number: 1151044

Date first listed: 11-Nov-1966

Date of most recent amendment: 04-Dec-1986

Statutory Address 1:

Worsbrough Corn Mill, Park Road

District: Barnsley (Metropolitan Authority)

Parish: Non Civil Parish

National Grid Reference: SE 34945 03326

Details: SE30SW 1/90

WORSBROUGH PARK ROAD (west side, off) Worsbrough Corn Mill (formerly listed as Worsbrough Bridge Mill) 11.11.66

GV II* Corn mill now museum. Early C17 with addition of c1843. Deeply-coursed dressed sandstone, stone slate and Welsh slate roofs. C17 part on left is two storeys and three bays (internally); C19 part on right three storeys with loft, four bays. C17 part: wide doorway to right has external stone ramp and massive lintel, four-light double-chamfered, mullioned window on its left has iron stanchions, beyond is a broad buttress with six chamfered offsets and with small window, another door to far left. Original three-light mullioned window to first-floor right has iron stanchions and casement with glazing bars, later two-light mullioned window above buttress. Left return of C17 part: quoined first-floor doorway with massive lintel.

C19 part: bay four breaks forward and has round-headed iron casement with glazing bars, bay three doorway with external stone ramp, first-floor doorway above has ashlar surround. Other bays with thirty-six-pane iron casements with projecting stone sills and plain lintels, bay two window on second floor is blind. Ashlar gable copings with small end stacks. Rear of C19 part has three bays of similar iron casements.

Interior: C17 part has early-C19 cast-iron overshot wheel driving three pairs of stones. Original king-post trusses with trenched purlins. C19 part, originally steam-powered, now contains a rare Hornsby oil engine of 1911.

Listing NGR: SE3494503326

Recent Planning Applications

Reference	Description	Site Address	Valid From	Decision	Status
2022/0125	Fitting of defibrillator to the exterior wall of an outbuilding adjacent to the Millers Cottage (Millers Tea Rooms) (Listed Building Consent)	Worsbrough Mill Museum, Worsbrough Mill, Park Road, Worsbrough, Barnsley, S70 5LJ	7 February 2022	Approve with Conditions	Final Decision
2022/0020	Removal of existing container and erection of larger replacement container in new location for storage of machinery and tools	Worsbrough Mill, Worsbrough Mill Museum, Park Road, Worsbrough, Barnsley, S70 5LJ	15 February 2022	Approve with Conditions	Final Decision
2020/1416	Alterations to Mill Cottage including replacement windows and doors and to Corn Mill including electric motor and new grain silo and external site works including re-grading of land for accessibility reasons and provision of storage container (Listed Building Consent)	Worsbrough Mill, Worsbrough Mill Museum, Park Road, Worsbrough, Barnsley, S70 5LJ	8 December 2020	Approve with Conditions	Final Decision
2020/1399	Alterations to Mill Cottage including replacement windows and doors and to Corn Mill including electric motor and new grain silo and external site works including re-grading of land for accessibility reasons and provision of storage container	Worsbrough Mill, Worsbrough Mill Museum, Park Road, Worsbrough, Barnsley, S70 5LJ	8 December 2020	Approve with Conditions	Final Decision
2020/0059	Conversion of existing cottage from office and residential accommodation into new bakery shop (ground floor) and office and staff facilities at first floor	Worsbrough Mill Cottage, Worsbrough Bridge, Barnsley, S70 5LJ	24 February 2020	Approve with Conditions	Final Decision
2020/0058	Conversion of existing cottage from office and residential accommodation into new bakery shop (ground floor) and office and staff facilities at first floor with associated internal alterations (Listed Building Consent)	Worsbrough Mill Cottage, Worsbrough Bridge, Barnsley, S70 5LJ	24 February 2020	Approve with Conditions	Final Decision

Appendix A

Equipment information

External AP

The Cisco Catalyst 9124AX Series outdoor access points are next-generation Wi-Fi 6 access points encased in a rugged and robust design that service providers and enterprises can easily deploy.



Figure 1.
Cisco Catalyst 9124AX Series Access points

Dimensions : W x L x H : 25.9 x 23.3 x 8.1 cm (excluding mounting bracket)

Internal AP

The Cisco Catalyst 9120AX Series Access Points are the next generation of enterprise access points. They are resilient, secure, and intelligent.



Access point (without mounting brackets): C9120AXI: 21.6 x 21.6 x 4.3 cm

Mounting bracket is invisible behind the AP and is attached to the wall/ceiling by four screws.

Point to point bridge link equipment

60 GHz cnWave V1000 Client Node



Dimensions

H x W x D: 16.9 cm x 10.0 cm x 5.4 cm

Cabling and trunking

The cabling will be Leviton Category 6 (which meets the minimum requirement of BS 6701, Euroclass Cca-s1b,d2,a2 in accordance with BS EN 13501-6). The trunking and components will be Marshall

Tufflex Plastic Mini Trunking and components. Marshall Tufflex Plastic conduit 20mm and components will also be used.

Example of Tufflex Mini Trunking (left) Marshall Tufflex Plastic conduit 20mm (right).



Network Switches and Cabinets

The Cisco Catalyst 9300 Series is made up of nineteen modular uplink switch models and fourteen fixed uplink switch models.



Figure 1.
Cisco Catalyst 9300 Series switches

The network switches will be housed in network cabinets. Network cabinets are used to store the networking equipment and accessories.



Above is an example of a 600x600mm floor standing cabinet. Cabinets can also be wall mounted and come in different colours eg black. The cabinets lock to prevent tampering of the equipment.

Appendix B

product overview



Supreme Wrapping Film

Gloss

White SW 900-101-O	
Black SW 900-190-O	
Yellow SW 900-225-O	
Ambulance Yellow SW 900-234-O	
Dark Yellow SW 900-245-O	
Orange SW 900-370-O	
Soft Red SW 900-427-O	
Red SW 900-415-O	
Cardinal Red SW 900-433-O	
Carmine Red SW 900-436-O	
Burgundy SW 900-475-O	
Light Blue SW 900-632-O	
Intense Blue SW 900-667-O	
Blue SW 900-677-O	
Dark Blue SW 900-681-O	
Indigo Blue SW 900-699-O	
Lime Green SW 900-731-O	

Grass Green SW 900-758-O	
Emerald Green SW 900-771-O	
Dark Green SW 900-792-O	
Grey SW 900-832-O	
Dark Grey SW 900-865-O	

Matte

Matte White SW 900-102-O	
Matte Black SW 900-190-O	
Matte Orange SW 900-321-O	
Matte Emerald Green SW 900-751-O	
Matte Dark Grey SW 900-866-O	

Matte Metallic

Silver Matte Metallic SW 900-657-M	
Anthracite Matte Metallic SW 900-658-M	
Gunmetal Matte Metallic SW 900-640-M	
Charcoal Matte Metallic SW 900-645-M	
Pink Matte Metallic SW 900-520-M	
Cherry Matte Metallic SW 900-444-M	

Lagoon Blue Matte Metallic SW 900-648-M	
Blue Matte Metallic SW 900-639-M	
Brilliant Blue Matte Metallic SW 900-671-M	
Purple Matte Metallic SW 900-565-M	
Night Blue Matte Metallic SW 900-623-M	

Pearlescent

White Pearlescent SW 900-109-S	
Orange Pearlescent SW 900-327-S	
Gold Orange Pearlescent SW 900-328-S	
Red Pearlescent/ Red Rush SW 900-437-S	
Light Green Pearlescent SW 900-777-S	
Dark Green Pearlescent/ Emerald Pearl SW 900-796-S	

Gloss Metallic

Black Metallic SW 900-192-M	
Cherry Red Metallic SW 900-440-M	
Gold Metallic SW 900-215-M	
Brown Metallic SW 900-329-M	
Bright Blue Metallic SW 900-546-M	
Dark Blue Metallic SW 900-653-M	
Silver Metallic SW 900-803-M	
Grey Metallic SW 900-807-M	
Quick Silver Metallic SW 900-814-M	

Brushed Metallic

Garnet Matte Metallic SW 900-472-M	
Blaze Orange Matte Metallic SW 900-371-M	
Brown Matte Metallic SW 900-950-M	
Midnight Sand Matte Metallic SW 900-797-M	
Green Matte Metallic SW 900-768-M	
Apple Green Matte Metallic SW 900-745-M	
Emerald Matte Metallic SW 900-771-M	
Frosty Blue Matte Metallic SW 900-643-M	
Powder Blue Matte Metallic SW 900-614-M	

Satin

Black Brushed Metallic SW 900-193-X	
Aluminum Brushed Metallic SW 900-812-X	
Titanium Brushed Metallic SW 900-802-X	
Steel Brushed Metallic SW 900-813-X	
Bronze Brushed Metallic SW 900-933-X	
NEW Bubblegum Pink Satin SW 900-514-O	
NEW Carmine Red Satin SW 900-438-O	
NEW Black Satin SW 900-197-O	
NEW White Satin SW 900-116-O	
NEW White Pearlescent Satin SW 900-117-O	

Conform Chrome

Conform Black Chrome SF 100-196-S	
Conform Gold Chrome SF 100-604-S	
Conform Blue Chrome SF 100-256-S	
Conform Silver Chrome SF 100-843-S	

Carbon Fiber

White Carbon Fiber SW 900-115-X	
Black Carbon Fiber SW 900-194-X	

For information on warranty terms, exclusions and certain limitations that apply please see our website: graphics.averydennison.com

All statements, technical information and recommendations about Avery Dennison products are based upon tests and information believed to be reliable but do not constitute a guarantee or warranty of any kind. All Avery Dennison products are sold with the understanding that Purchaser has independently determined the suitability of such products for its intended and other purposes.



Graphics
Solutions

*The colors shown are digitally reproduced for printing purposes and are not 100% accurate. For an actual production color match, please contact your Avery Dennison sales representative.

Avery Dennison Graphics Solutions
8080 Norton Parkway
Mentor, Ohio 44060
graphics.averydennison.com



Satin



Matte



Textures



Color Flips



Chrome

