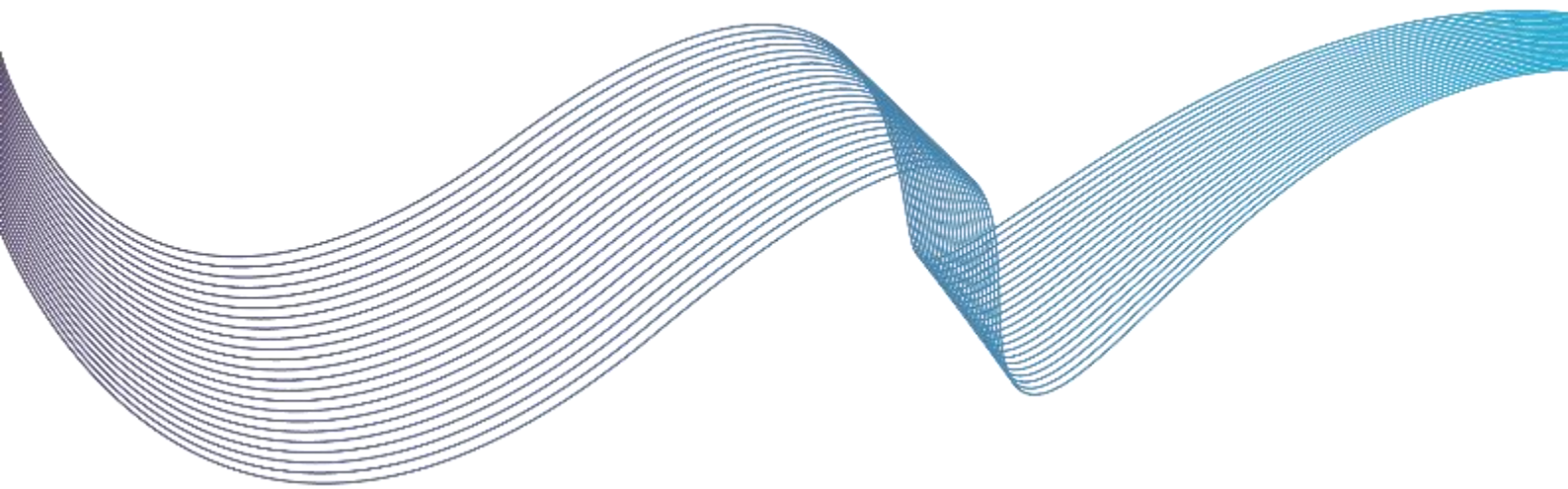




Installation Proposal

Victoria Square

3277825355



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Project Details

Location of Work	Victoria Square Oldham Road Manchester M4 5DX
Date of Survey	04.06.2021
Status	Complete
Duration of works	40 engineer days
Revision date	16.06.2021
Revision Issue	V 1.0
Prepared by	Name: Tom Reade 07892782315 thomas.reade@hyeroptic.com
Signature	

Hyperoptic contact information

Hyperoptic Sales Manager:

Name: Sam Foster

Hyperoptic Head of Delivery:

Name: Rob Dutton 07711 782065

Hyperoptic Head of Field Operations Planning:

Name: David Hook 07828914434

Hyperoptic Area Deployment Manager:

Name: 00000 00000

Key Site Information

Site personnel.

On Site Contact:	Manchester City Council 0161 234 5000
Out of hours contact:	Manchester City Council 0161 234 5000
Developer / Freeholder Contact:	Manchester City Council 0161 234 5000

Access Arrangements

Arrangements for access:	Manchester City Council 0161 234 5000
This development is manned/unmanned.	manned
During the survey I was escorted through the area being surveyed?	No
Details of escort:	N/A

Parking Arrangements

Parking availability on site	Yes
Location of parking	There are roadside parking spaces around the outside of the building, also limited spaces inside.
Contact for parking	Manchester City Council 0161 234 5000

Welfare Arrangements

Are welfare facilities on site	No
Location of Toilets	N/A
Location of nearest Hospital with A&E	Royal Manchester Hospital Upper Brook Street Manchester M13 0FH

Storage Facilities

Storage availability on site	No
Location of storage	N/A

Site Safety File Information

Was Fire Strategy available at time of survey?	No
Provide Details: Will be needed before deployment.	
Was Asbestos Register available at time of survey?	No
Provide Details: Will be needed before deployment.	

The Hyperoptic installation

Scope of Works

The following information outlines a proposal to provide the capability of a 1Gb internet service through the installation of a fibre optic infrastructure to each individual unit.

This document includes a detailed survey of the proposed installation within the development, plus a proposal of how the installation would be completed within the buildings.

Hyperoptic will deliver a fibre connection from our network directly to a central enclosure within the development. If multiple enclosures are required, Hyperoptic will build a fibre optic cable backbone (spine) to support the network within the development.

The cable route and building route has now been surveyed in detail and the build instruction will be issued to the works teams.

Planning Supervision and training

The Team Leaders will be briefed by the Project Manager and issued with a Risk Assessment and Method Statement.

The Client field representative and Contractor

The Hyperoptic representative will liaise with the contractors appointed supervisors to discuss any design, operational or Health and Safety Issues as appropriate.

A Hyperoptic Area Deployment Manager (ADM) will be assigned to each building development. The ADM will be your single point of contact for any on-site and/or technical support you may require from the proposal stage, through installation and onto go-live.

The installation activities can be arranged to accommodate your overall building development plans to enable efficient coordination/scheduling of Hyperoptic and other sub-contractors. The ADM will agree with you with a Schedule of Work prior to commencing any installation activities.

Public protection within the site

It has been noted that the site is an occupied development and as such the protection and the safety of the public is paramount.

It is the task of both the site manager/supervisor and each engineer working on the installation that this is foremost in their thinking and actions and no works will commence until an assessment of the works and the work area has been carried out and it is concluded that it will be safe to proceed.

It should be realised that the work area and the nearby environment needs to be safe at all times and the workforce are required to be aware of the presence of the public.

Working areas will be cordoned off with the use of signage and guarding.

All materials and equipment should be placed within the safe work area and attended at all times or left safe that no unauthorised persons can get access.

Construction site safety - installation of new cables

The following observations were made during the detailed site survey and the noted actions will be taken into account by the network installations team during their activities.

A detailed site-specific method statement and risk assessment will be produced once the installation proposal has been approved.

Cable Installation

Hyperoptic have a host of differing cable solutions that can be utilised within the installation of the Hyperoptic service.

The best most effective solution will be determined by the planner at the time of survey and will be represented within this installation proposal.

The data cabling will be installed from the Hyperoptic Cabinets or Enclosures to the individual units, utilising the existing building infrastructure. This will include the service utility risers, existing containment, ceiling voids and tray work.

Cables will be left suitably positioned so upon request a customer installation can connect onto this cable to provide and service provided to the unit. Cables will then be routed into the unit at the time of the client requesting service from Hyperoptic.

All our installations are carried out according to industry best practice and strict adherence to cabling standards.

All cabling once installed and terminated will be tested.

Hyperoptic Cabinet/Enclosures

Following the Hyperoptic DSS survey, the Cabinet/Enclosure locations and types, best suited to the site and installation will be identified.

These Cabinet/Enclosures house all cabling, terminations and Hyperoptic switches as required to provide service to the allocated units.

A wide range of Cabinet/Enclosure sizes are available, as well as bespoke solutions if required.

Typical enclosure sizes are listed below:

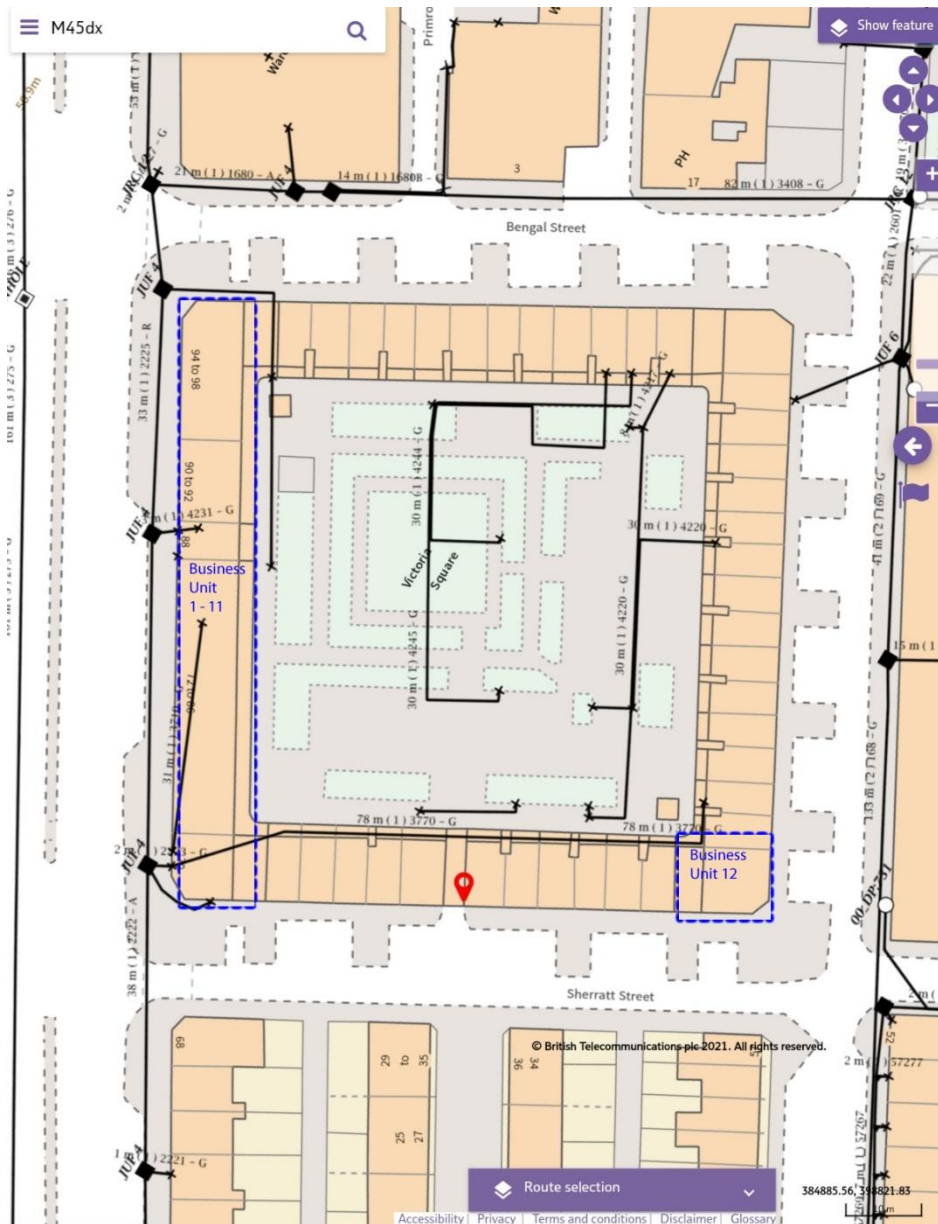


Cabinet size	Cabinet width	Cabinet depth	Cabinet height
Standard wall mounted Cabinets			
6U	600mm(int), 720mm(ext)	450mm(int), 500mm (ext)	370mm
9U	600mm(int), 720mm(ext)	450mm(int), 500mm (ext)	500mm
12U	600mm(int), 720mm(ext)	450mm(int), 500mm (ext)	635mm
15U	600mm(int), 720mm(ext)	450mm(int), 500mm (ext)	770mm
18U	600mm(int), 720mm(ext)	450mm(int), 500mm (ext)	905mm
21U	600mm(int), 720mm(ext)	450mm(int), 500mm (ext)	1040mm
Slim line inverted cabinet			
6u inverted	600mm	300mm	750mm
Enclosures			
Dist Enc	245mm	130mm	395mm
12-unit Enc	130mm	70mm	216mm
16-unit Enc	250mm	114mm	330mm
24-unit Enc	190mm	90mm	300mm
32-unit Enc	275mm	114mm	368mm
48-unit Enc	320mm	130mm	420mm
64-unit Enc	222mm	100mm	365mm
96-unit Enc	376mm	182mm	500mm

General site information

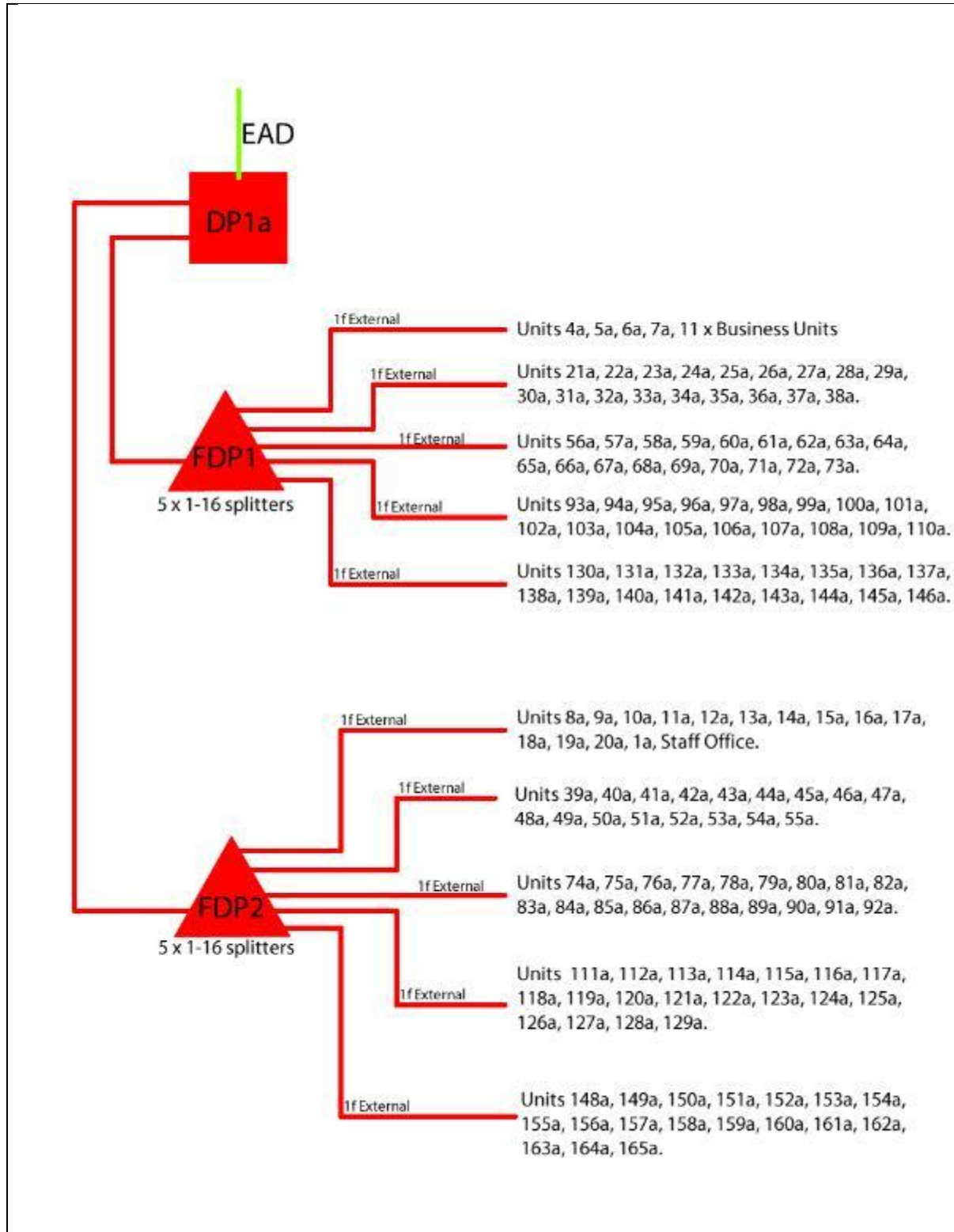
- The site consists of 1 building with a total of 177 units.
- Total number of residential units at the site 163.
- Total number of business units at the site 12.
- Connections for the Community Room and site office.
- At the time of survey, there were 0 units that are deemed not serviceable.

Map of Business Units on Site.



Site Connectivity Topology

Topology Plan



Block 1. Victoria Square

Enclosure locations and information

DP1a – This Cabinet will be installed on the 1st floor wall in the corner of Bengal Street and Oldham Road next to apartment 20A.

The building address is Victoria Square, Oldham Road, Manchester, M4 5DX

The calculated proposed Cabinet size is to be a 18U C-OLT cabinet.

The Cabinet will be fixed onto the brick wall next the boxed off riser cupboard.

The cabinet will require the installation of a dedicated un-switched 13-amp fused spur, which will be fed from the nearest electrical distribution board as identified below.

The location of this DB is Office next to vehicle entrance to the courtyard.

There are suitable spare ways within this board. (please see below the picture showing product type)

Description of the route between Hyperoptic cab and Electrical distribution board is: the cable will route across the room and out into the courtyard where it will route along the tray work all the way to DP1a.

The distance of this route is: 110m.

DP 1a Location:



Picture showing the Cabinet location next to 20A.



Picture showing spares in DB.



Picture showing make of DB.



Picture showing power cable route.



Picture showing power cable route.



Picture showing power cable route.



Picture showing power cable route.



Picture showing power cable route.



Picture showing power cable route.

Connectivity to Hyperoptic Cabinet DP1a

The lead in can be found on the outside of the building to the left of the entrance on the corner of Bengal Street and Oldham Road. The cable will run up the galvanised trunking and through the wall following the existing Openreach cables. The cable will then route around the communal entrance corridor to the riser, where it will run up to the 1st floor where DP1a is located. The route is 20m.



Picture showing Lead in.



Picture showing EAD route.



Picture showing EAD route.



Picture showing EAD route.



Picture showing EAD route.



Picture showing EAD route.

FDP1 - Cabinet locations and information

FDP1 will be installed on the 2nd floor in the corner of the building of Bengal Street and Oldham Road.

The building address is Victoria Square, Oldham Road, Manchester, M4 5DX

The calculated proposed Enclosure size is to be a 96 unit with 5 x 1-16 splitters installed.

The Enclosure will be fixed onto the brick wall.

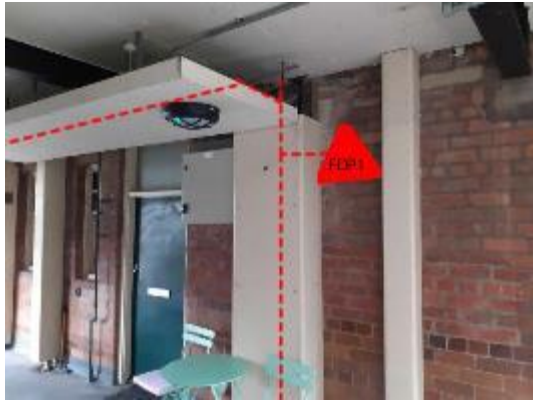
FDP1 Location:



Picture showing the Enclosure location

Cable routes for Hyperoptic Enclosure FDP1

The cables will route up or down the riser to the relevant floor. The cables will then run on the already installed tray work on the ceiling down the corridor to the relevant apartment. Once at the apartment the cable will be spliced on to a pigtail and left for stage 2. Some of the front doors lead to 2 apartments so these will need to separate cables running to them. The top floor of the building the cables will run through the loft space above each of the apartments following the route of the other service cables. The loft has boards and should be able to walk or crawl round it. Core holes will need to be drilled to allow cables to pass through each floor.



Picture showing cable route from FDP1.



Picture showing typical cable run along tray work.



Picture of the Business unit on Ground floor.



Picture showing cable route to loft space.



Picture showing cable route to loft space.



Picture showing cable route to loft space.

Units per floor with assigned Enclosures

Block 1

Floor Level	No. of Units	Unit Numbers	Service Hatches	Enclosure
Ground	16	4a, 5a, 6a, 7a, 11 x Business Units, Community Room.	0	FDP1
1 st Floor	18	21a, 22a, 23a, 24a, 25a, 26a, 27a, 28a, 29a, 30a, 31a, 32a, 33a, 34a, 35a, 36a, 37a, 38a.	0	FDP1
2 nd Floor	18	56a, 57a, 58a, 59a, 60a, 61a, 62a, 63a, 64a, 65a, 66a, 67a, 68a, 69a, 70a, 71a, 72a, 73a.	0	FDP1
3 rd Floor	18	93a, 94a, 95a, 96a, 97a, 98a, 99a, 100a, 101a, 102a, 103a, 104a, 105a, 106a, 107a, 108a, 109a, 110a.	0	FDP1
4 th Floor	17	130a, 131a, 132a, 133a, 134a, 135a, 136a, 137a, 138a, 139a, 140a, 141a, 142a, 143a, 144a, 145a, 146a.	0	FDP1
Totals	87	87 Units (resi x 75 units and business x 11 units,)	0	FDP1

Stage 2 considerations for FDP1 serviced units

The cables will be left terminated in a customer box onto a pigtail. The cable will be left on the tray work outside each apartment. Some doors have some brick work above the door to have the cable run through and others are having a newly installed fire seal baton put above the door frame which stage 2 can go through.



Picture showing fire seal above doors.



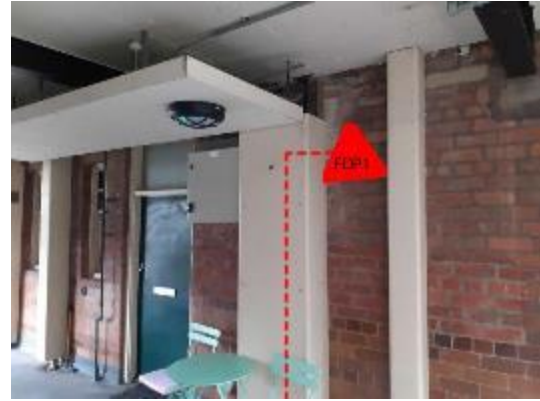
Picture showing connection for business units.

Connectivity to Hyperoptic Enclosure FDP1

The cable will leave DP1a and travel up the riser to the 2nd floor where FDP1 is located. The route 15m.



Picture showing route.



Picture showing cable route.

FDP2 - Cabinet locations and information

FDP2 will be installed on the 2nd floor in the corner of the building of George Leigh Street and Sherratt Street outside apartment 84A.

The building address is Victoria Square, Oldham Road, Manchester, M4 5DX

The calculated proposed Enclosure size is to be a 96 unit with 5 x 1-16 splitters installed.

The Enclosure will be fixed onto the brick wall.

FDP2 Location:



Picture showing the Enclosure location

Cable routes for Hyperoptic Enclosure FDP2

The cables will route up or down the riser to the relevant floor. The cables will then run on the already installed tray work on the ceiling down the corridor to the relevant apartment. Once at the apartment the cable will be spliced on to a pigtail and left for stage 2. Some of the front doors lead to 2 apartments so these will need to separate cables running to them. The top floor of the building the cables will run through the loft space above each of the apartments following the route of the other service cables. The loft has boards and should be able to walk or crawl round it. Core holes will need to be drilled to allow cables to pass through each floor.



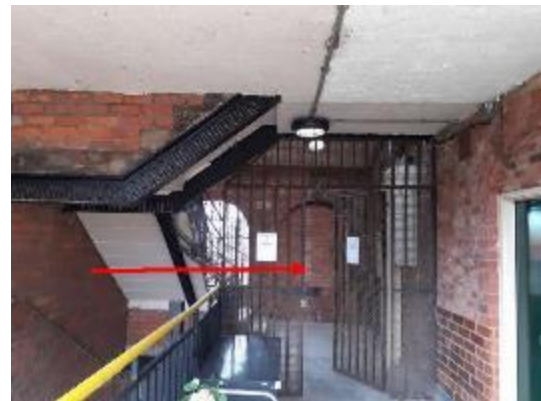
Picture showing cable route from FDP1.



Picture showing typical cable run along tray work.



Picture of cable route at of the run.



Picture showing entrance to loft space.



Picture showing cable route to loft space.



Picture showing cable route to loft space.

Units per floor with assigned Enclosures

Block 1

Floor Level	No. of Units	Unit Numbers	Service Hatches	Enclosure
Ground	16	8a, 9a, 10a, 11a, 12a, 13a, 14a, 15a, 16a, 17a, 18a, 19a, 20a, 1a, Staff Office, 1 x Business Unit.	0	FDP2
1 st Floor	17	39a, 40a, 41a, 42a, 43a, 44a, 45a, 46a, 47a, 48a, 49a, 50a, 51a, 52a, 53a, 54a, 55a.	0	FDP2
2 nd Floor	19	74a, 75a, 76a, 77a, 78a, 79a, 80a, 81a, 82a, 83a, 84a, 85a, 86a, 87a, 88a, 89a, 90a, 91a, 92a.	0	FDP2
3 rd Floor	19	111a, 112a, 113a, 114a, 115a, 116a, 117a, 118a, 119a, 120a, 121a, 122a, 123a, 124a, 125a, 126a, 127a, 128a, 129a.	0	FDP2
4 th Floor	19	148a, 149a, 150a, 151a, 152a, 153a, 154a, 155a, 156a, 157a, 158a, 159a, 160a, 161a, 162a, 163a, 164a, 165a, 166a	0	FDP2
Totals	90		0	FDP2

Stage 2 considerations for FDP2 serviced units

The cables will be left terminated in a customer box onto a pigtail. The cable will be left on the tray work outside each apartment. Some doors have some brick work above the door to have the cable run through and others are having a newly installed fire seal baton put above the door frame which stage 2 can go through.



Picture showing fire seal above doors.



Picture showing connection for apartments.

Connectivity to Hyperoptic Enclosure FDP2

The cable will leave DP1a and travel on the tray work all the way round the building to the opposite corner of the courtyard. It will then travel up the riser to the 2nd floor where FDP2 is located. The route is 190m.



Picture showing cable route.



Picture showing cable route.

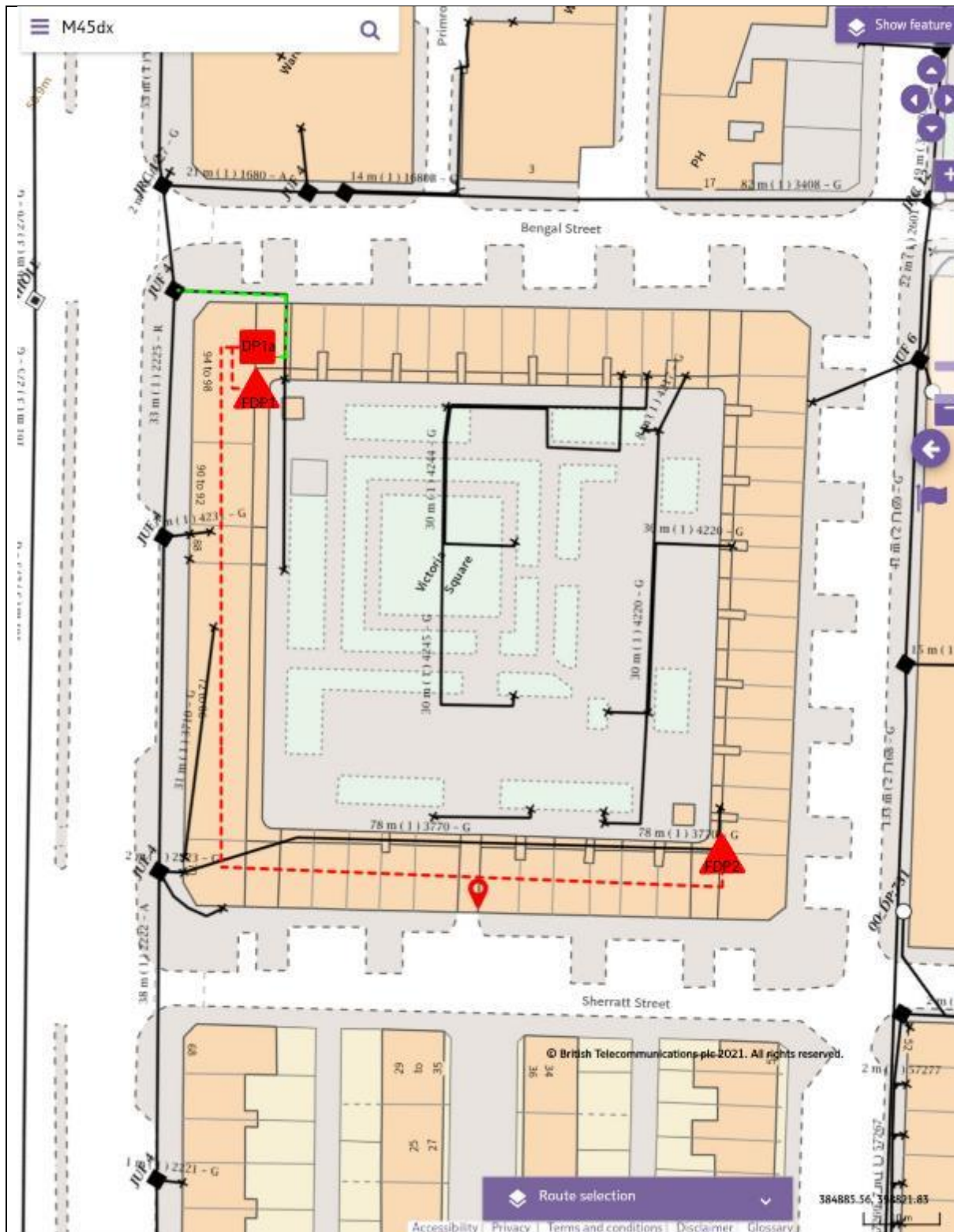


Picture showing cable route.



Picture showing cable route.

Site Connectivity Plan



Fibre Cable Connectivity

Hyperoptic will connect the site using fibre optic cables.

The incoming back haul cable will connect the site to the Hyperoptic external network.

The Back-Haul cable will be route to DP1 - FDP1, and additional fibre cables will be distributed from DP1 - FDP1 to any other Cabinet/Enclosures requiring connectivity.

The distances for Hyperoptic fibre are as below: -

Cable route between Cabinet/Enclosures		Route Method	Cable length in mtrs	Fibre type & Count Required
DP1a	FDP1	Internal spine	15m	12f OS2
DP1a	FDP2	Internal spine	190m	12f OS2
DP1a	UG BFP	Hifi Spine	40m	24f ULW

- The HyFi fibre will be installed through the external underground duct system that will supply a feed into the buildings via a lead-in duct.
- At each of these lead-in duct entries used by Hyperoptic there will be a Building Flexibility point BFP.
- The BFP should be located suitably near to the lead-in duct for easy access and workability.
- The BFP is approx. 200mm (h) x 150mm (w) and acts as a transition point between the external cables and the internally routed cables, as well as a distribution point for the site.
- The BFP acts as a transition location for the external cable to be converted into the internal cable.
- They also act as a distribution point for the connectivity of the fibres.

A full connectivity topology design will be compiled for this site prior to installation and inputted into the Site Design Plan.

Installation methods, standards and Health and Safety issues

Asbestos

Asbestos represents a significant risk within the working environment, and shall take such steps as far as is reasonably practicable to control the risk

It is the duty of the premise owner or building Management Company to manage asbestos in a premise under its control and a survey to establish the presence of asbestos should be carried out or register put in place detailing its location.

Hyperoptic commit that any information produced from that survey or register will be made available to the relevant person(s) carrying out work within those premises where there is a potential risk of asbestos becoming disturbed.

The Company will ensure that employees and any others person(s) who are likely to come into contact with asbestos will receive awareness training to provide information on the use of asbestos, asbestos containing materials, risks to health and the correct procedure for the reporting of asbestos if identified.

During any working activity on a client's building, the risks too asbestos will be managed to prevent such disturbance with instructions being issued to employees or others who may be affected.

Should suspected asbestos containing materials be discovered during any works, then all works will be stopped until specialist advice is sought.

Any asbestos removal works will be carried out by trained asbestos contractors, and all waste will be disposed of in accordance with current waste regulations.

No works that will disturb asbestos containing materials shall be undertaken under any circumstances.

All Field Operatives & Field Management are trained under Regulation 10 Control of Asbestos Category A

Content is delivered on the following subject matters

- Types of Asbestos
- Asbestos Related Diseases
- ACM's
- Understanding Asbestos Surveys
- Duty of the Worker

Fire stopping

When the cable is to pass through an area the fire protection the reinstatement work will be undertaken in the form of an intumescent seal.

A sufficient sized hole will be made which will be resealed with a fully approved product, which has been specially developed to meet the fire performance requirements and ensure the integrity of the building.

Hyperoptic commit to ensuring that all Passive Fire Stopping undertaken on a client's site will be carried out by fully trained operatives using the correct products and techniques.

All Apertures created by the Hyperoptic installation teams; through the penetration of drilling and cutting will be made good through the use of Intumescent products to ensure the integrity of the existing substrate.

These products can be as below:

Intumescent Acrylic Mastic



Intumescent mastic is used as an adhesive in securing to the existing board

The use of Intumescent Acrylic mastic as a standalone solution is only permitted for any apertures made into a plasterboard/concrete/masonry substrate that are between the sizes of 10-20mm for cable entry.

An aperture of 20mm will provide a sufficient gap for the fibre cable and, in all cases the mastic must be applied to create a tight seal around the entry point, ensuring that no gaps are present.

Coated Fire Batt



Coated fire Batt is used for larger apertures within walls & floors
 Penetrations in to coated Batt must be kept small and, re-instated with Intumescent mastic
 The use of power tools must be avoided
 Coated batt can also act as a shutter board base for Fire Mortar in certain scenarios.

Gypsum Board



Used for patressing apertures to where a seal cannot be applied within the separating element
 Like for Like must be applied within a patressing scenario.

Fire Mortar



Fire Mortar is used for larger apertures within floors that are considered to be load bearing
 A ready-mix solution to which can be poured or applied with a trowel
 Used in conjunction with Coated Batt within a floor scenario

Installations will be accredited under the BM-TRADA Q Mark scheme and, a declaration of conformity will be made available on post completion of works.
 All Operatives will be fully trained in the techniques of Passive Fire Stopping and, instructed on the full use of Intumescent products in accordance with the manufactures data sheets.

The fire stopping completion report will follow the below process:

- Generate a FSCR against all Stage 1 and 2 builds to which can be updated daily by the Lead Engineer
- The report will record each aperture as an item inclusive of: Size, Location, Product Type, Pre-& Post Image

- The Hyperoptic Label will be applied against each seal incorporating the line engineer and installation details.
- Final report will be presented to the client and held internally on file.
- A Q mark certificate of conformity will be issued to the building along with the report.

Operatives will be supported and advised by their accredited Installer who will provide a level of supervision. Internal periodic audits will be carried out by the accredited installer to ensure that standards are being maintained.

Cabling Requirements.

Hyperoptic cables will be installed in accordance with Regulation 521.10.202.

The purpose of Regulation 521.10.202 is to improve the safety of firefighters and others throughout the building/installation under fire conditions – preventing the premature collapse of cables. Wiring/cabling systems that due to failure of a means of support in fire conditions have the potential to entangle persons. In recent years, there have been cases of firefighters being killed as a result of being entangled in this way.

The requirement will apply to all cables that are fixed to the surface of walls or the underside of ceilings. But it is important to note that – as is the case with supports for cables for fire detection, fire alarms and emergency lighting systems – supports for cables should be of non-combustible material such as metal.

Wiring systems throughout the installation shall be supported such that they will not be liable to premature collapse in the event of fire. The requirements of Regulation 422.2.1 shall also apply.

Non-metallic cable trunking or other non-metallic means of support can fail when subject to either direct flame or hot products of combustion. This may lead to wiring systems hanging across routes such that they hinder evacuation and firefighting activities.

This precludes the use of non-metallic cable clips, cable ties or trunking as the sole means of support within an escape route. For example, where non-metallic trunking is used, a suitable fire-resistant means of support/retention must be provided to prevent cables falling out in the event of fire



Assumptions, requirements and potential concerns that need addressing before deployment

- The cables routed within a designated escape route will be secured using metallic fixings to prevent cables falling out in the event of fire.
- Access to the asbestos register will be required before stage 1 deployment.
- All engineers conducting work within the site will need to read the asbestos register/survey prior to works commencing.
- This will be required for all tasks involved in the installation process including stage 1 and stage 2.
- All penetrations shown are advisory, exact location should be checked prior to drilling.
- All penetrations to be fire sealed in accordance with regulations.
- 8 x core holes to be drilled.
- Being a grade 2 listed building, I would suggest the BFP for the building that we normally install for linking further developments be changed to UG node in the closest chamber to the lead in. This would reduce the footprint of our equipment to be installed on the building walls to the minimum whilst still allowing further use of the C-OLT system.

CDM Design Hazard/Risk Management Sheet

• Project Name / Description	Victoria Square	Project Ref No	3277825355	Stage	
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Date of Latest Update		Prepared by	Tom Reade	Checked by	
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Location of other useful information provided in accordance with Regulation 9(4) – e.g. reports, drawings, surveys, etc	
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	FORESEEABLE HAZARD/RISK IDENTIFIED [That has potential to cause harm to those constructing, repairing, maintaining, cleaning; demolishing or using the structure]	HAZARD/RISK APPLIES DURING tick one or more of the following:					COMMENTS: Provide. - the actions taken by the designer to eliminate risk, - the reasons why remaining risks cannot be eliminated, - an explanation of the reduction and controls necessary and the significance of the residual risk. - any special instructions (e.g. to include any pre-construction information)	Residual Significant* Risk still present? YES / NO
		Construction	Maintenance	Cleaning	In Use Workplace	Demolition		
1	Manual Handling	x	x			x	Use correct lifting techniques when moving stores. Use lifts to move stores as much as possible.	YES
2	Working at heights	x	x	x		x	Correct use of equipment required for working at heights.	YES
3	Firestopping	x	x			X	All penetrations are to be fire stopped once cables have been routed through.	YES
4	Fire strategy document	x	x	x	x	x	Fire strategy document will be required before deployment	YES

5	Asbestos	x	x	x		x	Ensure all read Asbestos register before starting any work.	YES
6								
7								

***significant risks (health & safety)**

not necessarily those that involve the greatest risks, but those (including health risks) that are **not likely to be obvious, are unusual, or likely to be difficult to manage effectively**. (HSE CDM2015 Guidance L153, *Glossary of acronyms and terms*, <http://www.hse.gov.uk/pubns/books/l153.htm>)

NOTE: those residual risks that are not likely to be obvious to a competent Contractor, that are difficult to manage, or unusual, must be:

1) communicated to the Project Team,

Where there is more than one Contractor working on a project, this Sheet must be,

2) sent to the Principal Designer for assessment and inclusion in the Pre-Construction Information, and

3) sent to the Principal Contractor for consideration and inclusion in the Construction Phase Plan.

Main Health & Safety Hazards / Risks in Construction / Hyperoptic Works

- Work at Height
- Moving Vehicles & Plant
- Slips, Trips & Falls
- Noise
- Hand Arm Vibration Syndrome
- Lifting Operations & Materials Movement
- Manual Handling
- Fire Management & Fire Compartmentation Integrity
- Asbestos
- Airborne Fibres & Materials – Respiratory Diseases
- Electricity
- Underground & Overhead Services
- Confined Spaces
- Excavations
- Collapse – Structures & Scaffolds
- Protecting the Public