

# **G.Network**

**100% FIBRE CONNECTIVITY**

## Installation Proposal of Telecommunications Apparatus

### **Location of Works**

**Menzies Aviation, 21 Bloomsbury Square**

### **Surveyor**

**Aston Cross**

### **Reviewed by**

**Mark Grogan**

# G.Network

## 100% FIBRE CONNECTIVITY

Type of Order	B	Service Appointment Number	SA-272311	Date Surveyed	20.10.2022
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Surveyed By	Aston Cross	Date Pack Generated	20.10.2022
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Work type	Single Connection
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Total Residential Premises	1	Total Commercial Premises	0	Total Premises	1
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### Customer Details

Customer Name	Justin Apps
Full Address	21, Bloomsbury Square, WC1A 2NS
Contact Name	Justin Apps
Contact Number	07770856190
Building Manager/ Landlord	-

### Nearest A&E Hospital Location

Imperial College Healthcare NHS Trust The Bays, S Wharf Rd, London W2 1NY Tel: 02033113311
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Welfare location	7 Swallow Place, London, W1B 2AF
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### Proposal of Works

This site has had a dry install, The FSB is located inside the Comms room on the ground floor level.

From the existing Toby, drill down to the basement level and feed the multicore cable through the Toby. Continue the multicore cable run along the wall via the tacking method. Drill a small hole through the wood next to the window frame and continue the multicore cable run along the wall and into the existing FSB, located inside the electrical cupboard.

The 2f cable has already been run to the CSP/ONT location within the comms-room on the 1<sup>st</sup> floor level.

FSB Proposed/Installed Location	FSB present on the basement level
CSP Termination Location	CSP/ONT present inside the comm room on the 1 <sup>st</sup> floor level

**Attention**

Please note, pictures are shown as an example of the cable routes, drill holes and equipment positions. These are not an exact location. Other factors may need to be taken into consideration at the time of installation.  
All route changes will be discussed with Property owner before works continue

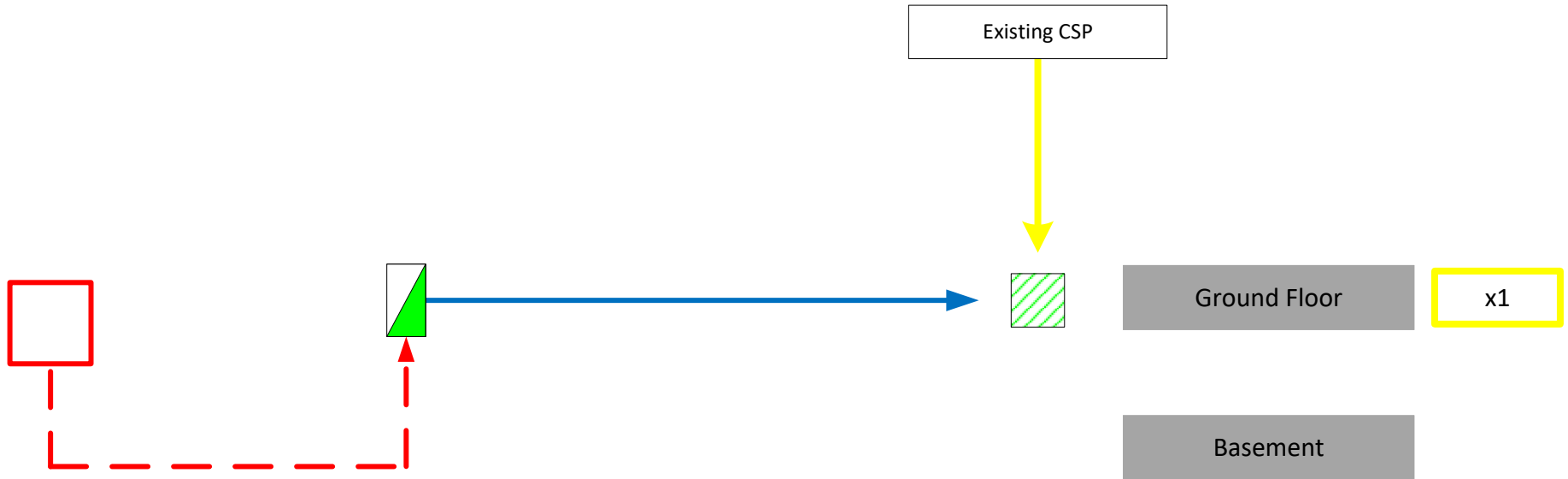
Time				
<b>Labour</b>	<b>Length of time</b>			
Length of time for 2 engineers to complete	Half Day			
Out Of Hours	No			
Asbestos				
Was any Asbestos identified on site	N			
Materials				
<b>Cable</b>	<b>Quantity (in metres)</b>			
Multi Core	100			
2f cable (white)	2f has been installed / dry install			
2f cable (Black)				
Micro-duct				
Terminating equipment				
<b>BFP</b>	<b>Quantity</b>			
BFP	0			
FSB	FSB has already been installed			
CSP	1 CSP/ONT has already been installed			
ONT	1 CSP/ONT has already been installed			
Access requirements (Please choose Height required in Meters)				
Powered Access	N			
Ladders	N			
Roof Access required?	N			
Absailers	N	Safe system of works in place on the roof?	N	
Additional Materials				
<b>Containment</b>	<b>Type</b>	<b>Quantity (in meters) / Size</b>		
Kopex	Metal	5		
Trunking				
Catenary Wire	Wire Rope (m)	Turnbuckles	Eye Bolts	Wire Eyes
	Straight lengths	Clamps	Additional	
Hatches		Y/N	Quantity	
Cut and shut hatches required		N		
Access hatches required		N		
Checklist				
Are there any other fibre providers in the building?	N			
Is the BFP/FSB located in a common area	Y			
Electrical socket available for the ONT	Y			
Risers in a common area	N/A			
Are specific keys required for risers?	N/A			
Any possible issue with the risers	N/A			
Who has been informed of potential costs?	N			
Additional Comments or Equipment required for works				
<b>This site has had a dry install, early access to carriage way chamber is required.</b>				



1

**21 Bloomsbury Square**

Route	Y/N
Was an internal route found?	N
If No, give reason	
No riser / Dry install completed	

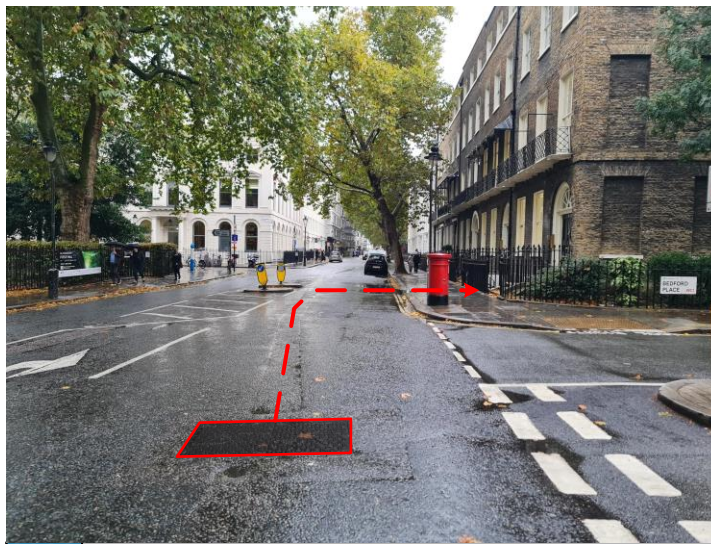


Chamber Information

Local Council	Westminster	Street Built at time of survey	Y	Early Access Chamber	Y	Chamber in restricted space? E.g TFL Route, Parking Bay, Cycle Lane, Etc	JNC
		G Network Logo on Chamber	Y	Chamber in Carriageway or Footway	CW		



2 G.Network Chamber, close up view



3 G.Network Chamber, wide view



4 Parking



Chamber Details

### Toby Checklist

Is there a Toby/poke out in place?	Y	Mini Civil work required	N	Fibre blowing equipment required?	N
Toby box duct checked with 5M rod	Y	Mini Civil pack built	N	Any potential issues drilling from the Toby box?	N



5 Picture to show toby Rodded with 5m fish tape



6 Picture showing toby in relation to property



7 Picture showing toby in relation to property



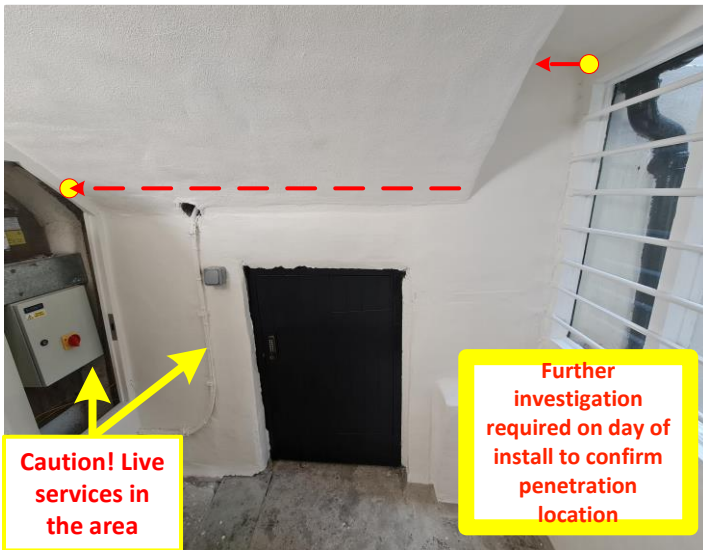
8 Multicore cable route, from existing FSB



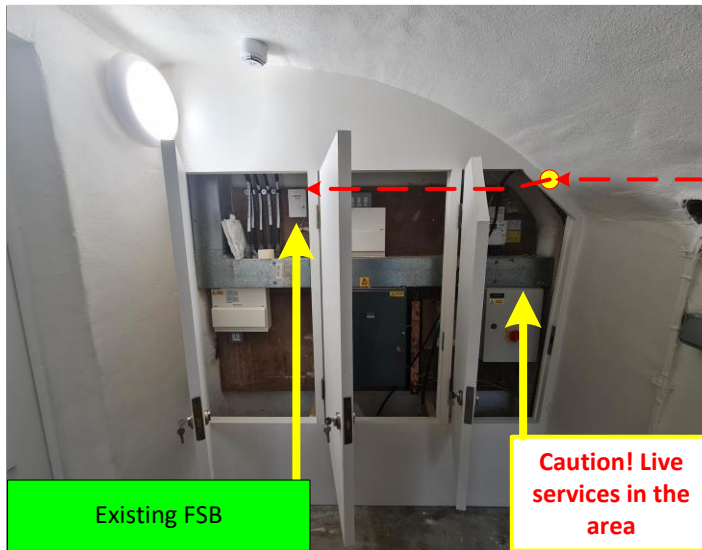
9 Multicore cable route, to existing FSB



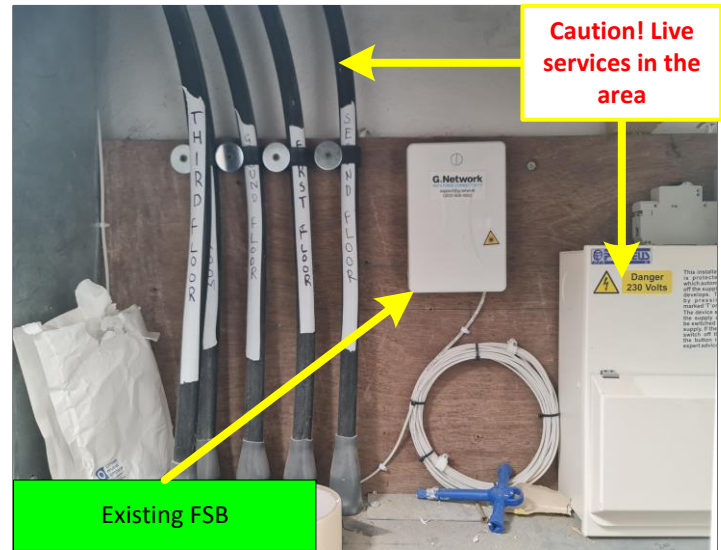
10 Multicore cable route, to existing FSB



11 Multicore cable route, to existing FSB



12 Multicore cable route, to existing FSB



13 Existing FSB



Multicore cable route





14 2f cable route, from existing FSB



15 2f cable route, to existing CSP



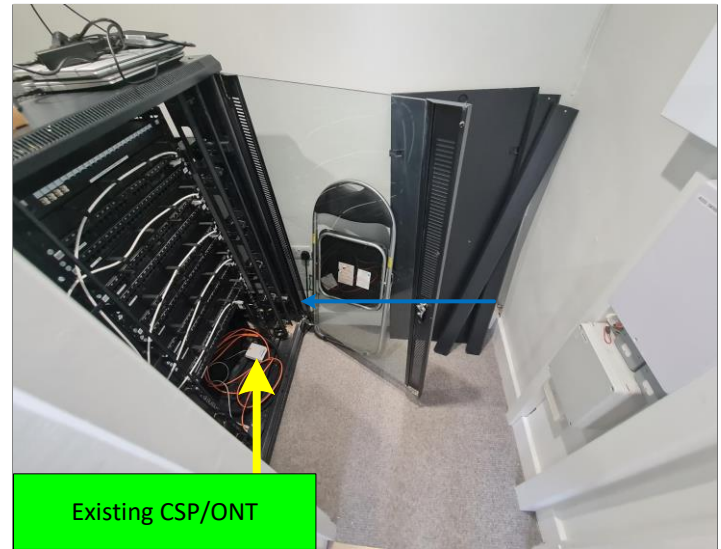
16 2f cable route, to existing CSP



17 2f cable route, to existing CSP



18 2f cable route, to existing CSP














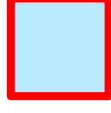


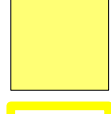
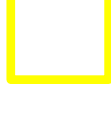





19 2f cable route, to existing CSP



Presumed existing 2f cable route, from FSB, to existing CSP/ONT

### Annotation Legend

Existing Multi Core Cable		Solid Red Line
New Multi Core Cable		Dotted Red Line
Existing Multi Core Coil		Empty Red Circle
Existing 2 Fibre Cable		Solid Blue Line
New 2 Fibre Cable		Dotted Blue Line
Existing 2 Fibre Coil		Empty Blue Circle
New 2 Fibre Coil		Striped Blue & White Circle
BFP (Building Flexibility Point)		Solid Blue Rectangle
FSB (Fibre Splice Box)		New - Blue & White Rectangle
		Existing - Green & White Rectangle
CSP (Customer Splice Box)		Striped Blue & White Square
New Toby		Red Square with Black Boarder
Existing Toby		Empty Square with Red Boarder
Pull through chamber		Light Blue Square with Red Border
Chamber		Grey Square with Red Border
Proposed Cut & Shut Hatch		Faded Red Square
Proposed Access Panel		Faded Yellow Square
Existing Access Panel		Empty Yellow Square
Existing CAT5/6 Cable		Solid Green Line
Containment		<b>Solid Yellow Line</b>
Existing Duct		Solid Black Line

### 1) Site Rules

Specific site rules/instructions defined by the building management team/landlord/freeholder during the site survey will be included in the planning pack and followed by the installation operatives.

Contact with your building management team/landlord/freeholder will be conducted by a representative from G.Network prior to works being carried out.

### 2) Asbestos/ACM

Most recent information regarding Asbestos Containing Materials (ACM) must be provided by the building management team/landlord/freeholder to G.Network representatives prior to any work commencing.

Any suspected ACM will be reported to building management team/landlord/freeholder for investigation.

If ACM is suspected of being present, all work will cease until an alternative route has been found or the affected area has been made safe by the building owner and removals report confirming of the removal and disposal of any ACM by an accredited body.

### 3) Continuing Liaison

Procedures for dealing with unforeseen eventualities and issues will be arranged through the nominated G.Network representative. Any damage caused by G.Network employees will be investigated and repairs arranged with our 3<sup>rd</sup> party accredited contractors.

### 4) Project Plan

Names and contact details for those Personnel undertaking this work will be advised when requested and prior to access date.

These details will be forwarded to the nominated customer, their site representative and/or the building management team/landlord/freeholder or their representative.

The prior route shows the best potential cable route from a quality and safety standards. Any deviation or change to the pack will require clearance from both G.Network Representatives and building management team/landlord/freeholder.

### 5) Risk Assessments

All operatives will conduct and Point of Works Risk Assessment before commencing any planned works on site. Any risks or hazards will be highlighted to the works supervisor and line manager.

The following pack contains a Site Specific RAMS which pertains to the activities and work to be carried out by G.Network or an agreed operator on behalf of G.Network.

### 6) Firestopping

All penetrations made by G.Network will be resealed with a 2 hour rated intumescent fire stop mastic (white in colour and paintable) internally and External Fire stop mastic (grey and weatherproof). These products will be used on any cavity up to 25mm wide and 50mm deep, as per product guidelines.

Any existing fire-stopping which is removed/penetrated/damaged during installation will be repaired/replaced to the appropriate standard and documented on our company system

G.Network will only seal holes made by their installers on the day of installation.

Anything larger (for example open risers, duct work between sealed rooms and open ceiling voids) are not within our scope of works and are to be managed by the building management team/landlord/freeholder before or after work begins.

### 7) Working at Height

All working at height will be conducted under the rules and regulations set out in the Health and Safety at work Act as well as PUWER and LOLER.

All works at height requiring TETRA will follow the same process. A 10mm eyebolt will be drilled into the wall at roughly chest height of the operative climbing the ladder. Straps will be secured from the eyebolt to the ladder along with the area cordoned off. An addition 10mm eyebolt may be required further up the building if going above 6m or along the same horizontal area for triangulation if extra support is required. All holes will be filled with a rubber gromit for future use and to ensure no water penetration into the masonry.

Emergency rescue plans are available for review upon request.

All working at height areas will be guarded by barriers and grounds person at all time, all items will have a valid and clear inspection notice and will never be left unattended or unsecured if overnight.

### 8) Cable Works

All cabling works required will be installed and tested as per specification laid out in the description and following pictured route.

All bend radius should not be larger than 10x the cables diameter. The cable will be tie wrapped with fire resistant metal ties every 600mm and plastic tie wraps in places to ensure a neat finish and to eliminate cable sag.

Any cables running above or near points of access and egress will only be secured with fire resistant metal ties, fire rated cable clips or a combination of nail in anchor and tie plate where structural material allows.

All containment used will be fire rated to a minimum of 1 hour and approved by the building management team/landlord/freeholder before installation.

All Catenary wire will be installed with tension turnbuckles at either end with supporting brackets/eye bolts will be placed above all entrances/exits, stairwells, lift access area and over communal areas of high foot traffic in case of break or fire related issues. All eye bolts to be installed every 3m (or as close to 3m as reasonably practicable).

Horizontally run catenary will not exceed 10m without turnbuckle installed to avoid sagging. Vertically run catenary to be no longer than 20m without turnbuckle installed to eliminate weight and side swing issues

Internal cables shall be clearly marked with "**GNET, cable ID [including origin and destination]**" at all points where the cable enters/exits a communal room or space within the building and at regular intervals (maximum 20m separation) along the entire internal cable route.

Instances where cut and shut hatches are being implemented to pass the cable through walls and ceilings, a specialist team will reinstate and "make good" as quickly as possible. They will only re-paint the area a matt white colour unless prior agreements are made for colour matching. Please speak with G.Network representative if you have other requirements.

If Access hatches are to be installed they will be a minimum of 1 hour fire rated metal hatches, placed as per landlords agreed locations and sealed with 2 hour rated intumescent fire stop around the edges. If you have other requirements please speak to G.Network Representative.

Work areas and safety zones to be clearly marked at all times and the work areas safely guarded using appropriate signage and barriers where required.

All large/heavy pieces of furniture or equipment should be moved by tenant/landlord/freeholder before installation.

All delicate/valuable pieces of furniture or equipment should be removed from work area by tenant/landlord/freeholder before installation.

The start date will be agreed with the customer contact and the building management team/landlord/freeholder before any installation works take place on site. Details will be forwarded to the customer and/or the building management team/landlord/freeholder prior to work commencing.

### 9) The Existing Environment

All works under this application are within the landlords demised area as detailed within the enclosed cable installation drawing.

Any works in the public domain will be outlined in a separate pack for internal use

Any possible health related issues from materials in existing structures will have been identified in this site survey stage with the building management team/landlord/freeholder and Customer representatives

No debris or site rubbish to be placed in communal bins. All rubbish and debris to be removed from site and secured away until safe disposal by trained operatives. Any liquids will be disposed of in accordance with COSHH guidelines and all sharps stored in secured sharps bin until safe disposal can be arranged off site.

### 10) For site specific cable route design and method statements please see the pictured route in survey pack

### 11) This pack consists of: Work locations, cable route, potential drill locations, potential access hatch/cut and shut positions.

## 5 x 5 Risk Matrix

Key	
Severity	Likelihood
1. No Injury	1. Rare
2. Minor Injury or Illness	2. Unlikely
3. ≥ 7 Day Injury or Illness	3. Possible
4. Major Injury or Illness	4. Very Likely
5. Fatality, disabling Injury etc.	5. Almost certain

<b>Likelihood</b>	5	5	10	15	20	25
	4	4	8	12	16	20
	3	3	6	9	12	15
	2	2	4	6	8	10
	1	1	2	3	4	5
	1	2	3	4	5	

**Risk Rating = Severity x Likelihood**

High Risk = 15 – 25 (Intolerable)

Medium Risk = 5 – 12 (Tolerable)

Low Risk = 1 – 4 (Acceptable)

No.	Hazard	Risk	Risk Score			Control Measures	New Risk Rating		
			L	S	RR		L	S	RR
1	Chamber Works	Fatality or serious harm caused by collision with vehicles in carriageway	4	5	20	All operatives are to wear the correct PPE for working in the carriage way, These include hard hat, safety boots, clean long sleeve hi vis jacket/coat and clean hi vi trousers as per company guidelines.  All necessary roadwork guarding and signage to be set out as per guidelines in the Safety at Street Works and Road Works Codes of practice and should adhere to the New Roads and Street Works Act (1991) before any works in the carriageway/footway are to be started.  Engineer to face on coming traffic at all times  Constant survey of road and weather conditions are to be carried out during works to ensure safety is maintained.  All carriageway works are to be carried out by a minimum of 2 engineers at one time.  GDU's to be used as soon as seal is broken and lid is lifted on any chamber or toby box.  Once chamber is open the engineer should wait 2-3 minutes and retest with GDU at bottom of chamber and at each duct entry position. If no alarms raised then GDU is to be left within the chamber as works commence and removed once completed.  If alarms are raised, engineer should check the readings and consult with supervisor or health and safety rep on best action to take.  If Gas is suspected lid must not be replaced and National Gas Emergencies number must be called along with Supervisor or Health and Safety rep.	2	5	10
		Explosion or exposure to noxious gases	3	5	15	All water in chamber should be treated as contaminated and Engineers are to ensure they are wearing non-porous or latex gloves when handling any nodes or cables that may be submerged within.  If water proves to be sewerage then Engineer to carefully close the chamber lid and to contact supervisor and Environmental Health and Safety rep for advice on next steps	1	5	5
		Exposure to contaminated water	3	4	12	All chamber lifts should be completed with manual handling guidelines laid out by both G.Network and the HSE.  Carriage way chambers are to be lifted by 2 people at all times with the appropriately supplied G.Network tools.  Footway boxes are to only be opened with box keys and roller bars	2	4	8
		Muscular skeletal problems caused by lifting chamber lids in carriage way	4	5	20	Treat members of the public politely. All threats should be highlighted to your supervisors however minor. Staff must also ensure they progress their work accordingly and if issues occur, remove them selves from the area to a safe space	3	4	12
2	Assault on the workforce	Serious injury or fatality	3	5	15	Engineers to ensure they only carry/lift items that put little to no strain on their body and can be carried comfortable for the duration at hip height.  Engineers to ensure route is clear of any debris or obstacles before making their journey and to consult G.Network manual handling training if necessary.  If item is too heavy either a multiple person lift would be required or a specialist tool, to aid with pick up and transportation appropriate for the site and job at hand, should be sourced	1	5	5
3	Manual Handling	Slip, trip or fall carrying sharp/heavy tools	3	5	15	All engineers are to be trained and competent in rodding and roping techniques for all toby, chamber or riser works.  Engineers must not twist or over exert their bodies to get the rod/cable/rope through the space. If required mechanical means can be utilised in areas where it is reasonably practicable	2	5	10
		Pulling/pushing cables through voids/risers/duct work	3	5	15	All works and equipment required for works should be within a comfortable zone for the engineer to work safely.  If item is out reach the engineer is to reposition themselves or the kit they are using to reach area comfortably	2	5	10
		Over reaching/Over stretching	4	4	16	All Engineers to be trained and competent to use the right ladder for the job.  They must also be wearing the appropriate PPE of gloves and hard hat with 5 point chin strap at all times whilst up a ladder.  The engineer must not work upon or above the top 2 steps of the ladder at any time. Tetra to be implemented where possible  Engineer to only use supplied G.Network ladder for working at height items and must ensure the ladder is fit for purpose and in good stead by checking the rungs, joints, support beams and treads at all times. Logging inspection before every use and ensuring ladder tag is in date	2	4	8
4	Working from Height (Ladders)	Falling off ladder	5	5	25	All ladders to be inspected before each use and confirmed usable. Any issues to be flagged with supervisor and ladders to be condemned asap  Engineers must work in groups of 2 incase of a malfunction to ensure if a ladder collapses there is some one to call for help or administer first aid.	3	5	15
		Ladder Malfunction	3	5	15	All ladders used must be appropriate for the height being worked at and ground on which it is to stand. If required anti-slip foot plates must be used along with top tie system and eyebolts.  Ladders must be used as intended by manufacturer, stored appropriately as to not create an obstacle or a trip hazard and footed at all times.  All ladders to be guarded off and closed down when not in use	2	5	10
		Incorrect use of ladder	3	5	15	Engineers to ensure they are wearing FFP3 face fitted dust masks at all times along with goggles and ear protectors. This is to ensure all orifices are protected from any dust and debris that could enter the body.  All ejected materials will be allowed to settle and then cleaned with vacuum cleaner and wet wipes.  If dust to too grand or area is too confined then respiratory equipment and dust suppression will be required	2	5	10
5	Using Power Tools	Ejected materials	4	4	16	Site to be drilled will be checked with a service detector first for power and then for any ferrous metals. If clear engineer can drill.  If not clear and no site can be found to drill through, the engineer must try to liaise with landlord/freeholder or building manager for plans of the property that detail where services are placed.	2	4	8
		Service Strikes (concealed services)	5	5	25	All penetrations into the building will be done at a shallow angle and sealed both ends with weather resistant mastic. No drilling to take place through known "tanked" areas of the property	2	5	10
		Water ingress	3	4	20	Check tool is appropriate for the job and used in accordance with manufacturer's instructions. Users shall be trained in the correct use of portable tools. Inexperienced power tools users should be supervised or observed when first using an unfamiliar item of equipment or in an unfamiliar environment. Power tools should be securely stored when not in use. Check condition of lead and plug before use. Use 110v or battery tools or RCD where practicable. Check for hidden/buried cables before drilling etc. Do not work where water is present without specialist advice.	1	4	4
		White Hand Vibration, hearing loss, electrocution	3	4	20	Remove waste and rubbish as it arises.  Adequate barriers and equipment on site at all times.  Cable will be run and neatly tucked to one side of property to create an appropriate pathway for the public.  Barriers will be placed around work area to protect members of the public and engineers.	2	4	8
6	Slips, trips and falls (Common Areas)	Poor housekeeping and tool management	4	5	20	Work area will be kept tidy to avoid any trips & slips and minor injuries  Manufacturer's Safety Data Sheet to be held with chemical in case of an emergency.  Replace cap when not in use and dispose of used IPA soaked clothes frequently.  Do not ingest.	2	3	6
7	COSHH risks from use of Isopropyl Alcohol 70% abv	Dizziness/drowsiness	3	5	15	All chemicals to be stored securely if left unattended  If at anytime ACM is suspect all works must stop and supervisor/line manager contacted.  If asbestos register is available this is to be consulted first, if not available speak to supervisor/line manager about getting a sample tested to confirm material.  If ACM has been disturbed then anyone working in the vicinity must stop work immediately and try to seal the are disturbed carefully. Any ACM on clothing will need to be removed, so clothing items are to be carefully removed in a safe area and bagged up for testing or disposal.  No attempts to continue works are to be made until a NADIS result is returned from sample or another route avoiding asbestos is sourced  All people in the direct vicinity will be informed of the potential breach and outcome of survey check or test result.  If proven materials prove to be asbestos, its is down to landlord/freeholder/building manager to remove as per HSE guidelines.	1	5	5
8	Asbestos and ACM	Suspected ACM	4	4	16	Site to be closed down instantly  Engineers will be given a change of clothing and specialist bag to store any contaminated materials.  No one to enter site and any premises leading into affected areas will be informed in the first instance and either issued with replacement clothing and receptacle for any contaminated items.  Asbestos test and recovery team to be contact asap to clear site or repair/manage damage and test samples.	2	4	8
		Accidental penetration through ACM	3	5	15	Entrances/exits to be kept clear at all times for public use.  Fire doors to be locked after use and to not be propped open and left unattended	2	5	10
9	Fire Escapes/Emergency Exits/Fire doors	Obstruction of emergency Entrance/exit during evacuation	5	5	25	Hand tools are limited to side cutters, screwdrivers and termination tools. Terminating is limited to experienced operatives only. All hand tools to be used in accordance with training received and manufacturer's instructions. Ensure the correct tool is used for each task and that damaged, blunt or ineffective tools are replaced.	2	5	10
10	Use of hand tools	Cuts & abrasions.	3	4	12	Upmost care must be taken when handling live fibre's.  If a fibre is cut or snaps engineer is to avoid looking directly into the center of the fibre and instead looks to remove the source feed where possible until work is completed.  Direct contact with lasers can damage the eyes	2	4	8
11	Fibre Optic Cables	Laser burn/blinding	3	5	15	All fibre off cuts must be placed into a sharps bin supplied and disposed of in the correct manner and not placed into a public receptacle.	2	5	10
		Sharps/fibre splinters	4	4	16	All penetrations to be filled with 2 hour fire rated intumescent mastic.  Any area where G.Network have to pass through existing passive firestop this will be replaced like for like by either G.Network Accredited firestop installers or a 3 <sup>rd</sup> party of equivalent or higher standards  When applying mastic all sides to be smoothed down to ensure tight seal around penetration.  All fire stopping to be documented once installed and inspected after job completion to confirm correct installation.  If a fire starts during works, all operatives are to rally at fire point and contact emergency services. All burns to be treated by onsite first aider and appropriate emergency service to be called if applicable. Incidents to be reported to RIDDOR and logged in incident book for later investigation by line manager and Health and safety representative.	2	4	8
12	Fire stopping (passive)	Smoke inhalation can cause asphyxiation, various lung and respiratory complications and death. Smoke build up can be disorientating and blinding. Burns - from mild to fatal	5	5	25	Dust masks to be worn by those carrying out task. Comfort masks should be sufficient subject to absence of other respiration risks. Others not directly involved in the task to be excluded from area of work whilst the risk of creating dust exists.  Any person suffering a reaction to exposure must be removed to fresh air immediately. A 1st aider must be available on site at all material times.	2	5	10
13	Nuisance dust (Silica)	Intake of nuisance dust and debris via respiratory system or other means	5	4	20	Splicer to be inspected before each use and PAT tested once every 6 months. Splicer will undergo routing calibration and maintenance once a year as per manufacturers guidelines. Any defects to be flagged at earliest opportunity	1	4	4
14	Fusion Splicing	Electrocution	3	4	12	Regular contact between the worker and their supervisor/colleague. Access to adequate First Aid Kit must be made available. Ensuring progress is updated on Salesforce.	2	5	10
15	Lone Working	Mental and Physical health conditions	3	5	15	Regular contact between the worker and their supervisor.  Must not be left unsupervised for too long on tasks. Clear instructions to be given for each task	2	5	10
16	Inexperienced workforce member	Apprentices, Re-skillship, other non-fibre experienced engineers	4	5	20		2	5	10

## Fire stopping

Where the cable(s) require to pass through an area, G.Network Engineers will create a new penetration and seal it with intumescent mastic. This is a specially developed product created to be used to meet all current British Fire Regulation and performance requirements to ensure the integrity of the building.

G.Network are committed to ensuring all passive fire stopping undertaken on any client's site will be carried out by full trained operatives, using the correct products and installed as detailed by product manufacturers.

The products used are outlined here

### Intumescent Mastic



Everflex Fire Mate Intumescent Sealant is an acrylic sealant that swells when exposed to temperatures in excess of 125°C to prevent the passage of fire and smoke and has a fire rating of up to 4 hours in certain joint configurations.

- Fire rated to EN1366-4 (2006). Acoustic rates to BS EN ISO 140/3
- Tested for air permeability to EN13141-1
- Swells more than 150% of its original size when exposed to heat
- No priming required for most construction substrates
- Permanently flexible
- Excellent acoustic properties
- Easy to apply and tool off
- Fast cure – tack free in 15 minutes
- Over paintable

### Coated Batt Mineral Board and Panel Coating



Where building services such as pipes, ducts and cable trays, penetrate fire rated walls and structures, the Fireplug slabs are appropriate for reinstating the integrity and fire rating of those structures. They can be easily cut to the size and shape of any aperture, using a knife or saw, and inserted into voids around the services to form a smoke tight seal that is capable of holding back fire for up to four hours.

- Fire rated for up to four hours
- Low smoke emission
- High density board - will not delaminate during installation
- Ablative - forms fire retardant crust on the board face
- Halogen free - coating contains no solvent or toxic products
- Water based coating that is easy to apply and clean off
- Coating is over paintable
- Easy to penetrate - for adding further surfaces

### Metal Stud and Fire Cement



For use when creating cut and shut hatches, the metal studwork acts as a baton to hold the refitted plasterboard in place whilst the cement is used to fill the gaps and finish hatch to ensure a smooth and clean finish that can withstand high heats and restore compartment to relevant standards

### Gypsum Fire board and Plaster

When new plasterboard is required to seal the ceiling we will reinstate a minimum of gypsum fire board and re plaster the area with the same smooth finish as before. This method cannot be used on Lath plaster work.

All firestopping will be accredited under the BM-TRADA Q Mark and a detailed log of all fire stopping will be created and stored on our internal systems as part of any as-built report once installation is completed and inspections have cleared work all works.

Only trained and competent engineers will be installing any passive fire stopping and will only install products as outlined by manufacturers in their best practice documentation.

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.

## Standard Products

Below are examples of some of the products we use and their key attributes. Please note these are for guidance purposes and the final product installed may have some variances. If you wish to know more about the products please contact your connection representative

### 2 core fibre optic cable (2f)



This cable comes in 3 colours white, black or brown and can be used both internally and externally. The tension strip in the centre allows for a neater look when installing along with protection to the cable. We use this to feed from our FSB into the CSP.

Size	Fire Rating	IP rating	Product material
3mm (Diameter)	ECA	IP65	Polycarbonate with UV protective coating

### Multicore fibre optic cable (12f)



This is our main feed cable from the street into the FSB. The standard size we use is 12 core (12f) but it can be any size up to 96 core (96f). Comes in Black as standard, but other colours maybe available.

Size	Fire Rating	IP rating	Product material
5-12mm (Diameter)	ECA	IP65	Polycarbonate with UV protective coating

### Kodex



We use various types depending on the need for the task and the location it will be installed. The main one used is the metal with PVC coating as it gives greater protection. Usually installed externally.

Size	Fire Rating	IP rating	Product material
10-25mm (Diameter)	V-0	IP65	Galvanised Steel with PVC UV treated coating

### Fibre Splice Box (FSB)



This is our standard Distribution box for buildings. It is used to convert the multicore to multiple 2f cables that then feed out to each premises.

Size	Fire Rating	IP rating	Product material
H 154mm, W 104mm, D 34mm	V-0	IP55	ABS Plastic

### Customer Splice Point (CSP)



The CSP is used as the customers main connection in their premises to connect to the router (ONT). This is where the 2f cable terminates.

Size	Fire Rating	IP rating	Product material
H 85mm, W 85mm, D 16mm	V-0	IP55	ABS Plastic

### Building Flexibility Point (BFP)



This is used for large buildings or where multiple multicores are required to feed various floors or blocks. We would normally use the mid size option but can use the larger or smaller one where needed.

Size	Fire Rating	IP rating	Product material
H 241mm, W 154mm, D 71.6mm	V-0	IP55	Polycarbonate with UV protective coating

### Optical Network Termination (ONT or Router)

We currently operate with 2 different models. The one supplied to the customer is based on the product type feeding the network from the local street cabinet.

#### Huawei HG8245Q2



Size	Wi-Fi	Ethernet Ports	Product material
H 265mm, W 176mm, D 82mm	Dual Band (2.4GHz and 5GHz)	4	Polycarbonate

#### Nokia ONT G-2425G-B



Size	Wi-Fi	Ethernet Ports	Product material
H 265mm, W 176mm, D 82mm	Dual Band (2.4GHz and 5GHz)	4	Polycarbonate