



Installation Quality Manual

Active Communication Company Limited

Installation Quality Manual

The following information is the basis for the Installation Quality Manual designed by Active Communication Company Limited. The purpose of this INSTALLATION QUALITY MANUAL is to ensure that all engineers clearly understand the ACCL quality installation method and the personal requirements it places on the engineers themselves. This will further help to ensure that:

- The completed installation has been correct installed to the required standards of ACCL, the client and all relevant cabling Standards and Codes of Practice.
- That all installations are consistent in design.
- That all installations are consistent in quality levels.
- That all delays and non-productive time are properly recorded.
- That all engineers undertake a pro-active and forward thinking attitude to the installation works at hand.

As testament that the following document has been read and understood, please complete the following section.

Engineers Name: Date:

Engineers Signature:

Operations Manager: Date:

OP's Manager Signature:

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Site Setup

a. Dress Code

1. You should always be presentable in your dress code as you represent ACCL at all times while working.
2. Jeans or other trousers without rips or damage will be worn on all sites at all times. Shorts or jogging bottoms are not to be worn on site at any time.
3. Where provided, you must ensure that you wear all ACCL image wear.
4. No image wear is to be worn whilst working on any ACCL site that shows a competitors or manufacturers logo or name.
5. Full personal protective equipment must be worn at all times where there is a potential for injury or damage. Personal protective equipments will include the use of safety shoes or boots, hard hats, eye protection, gloves and any other personal protective equipment required for you to complete the installation safely and incident free.

b. Engineer Site Handover

1. Prior to any work on site, the ACCL Operations Manager (or appointed ACCL employee) will conduct a site and scope of works orientation.
2. The Scope of Works will be fully explained and a signature of acceptance will be required.
3. Any changes to the Scope of Works will be classed as a variation and is subject to approval by the ACCL Operations Manager.
4. Required materials will be supplied, and the quantity supplied needs to be confirmed against the materials check list.

c. Initial Site Visit

1. Do not access the site unless your dress code is correct with the INSTALLATION QUALITY MANUAL.
2. Ensure that you always sign in and sign out of any sites where employed to work.
3. Acquaint yourself with the site, the site manager, site agent or any client's representative.
4. Inspect the work area prior to commencing any work and notify the ACCL Operations Manager and the site manager or site agent immediately of any conditions that may affect the progress on site.

d. Site Conditions

1. If your area of work is not a safe working environment – **Stop – Do not continue work**. Report all items to the ACCL Operations Manager immediately and also to the site manager or site agent.
2. Under the Health & safety Act 1974 it is required that you wear all personal protective equipment in all environments where required.
3. Do not smoke in any area unless it has been designated as a smoking zone.
4. Do not take personal radios onto site.
5. Do not undertake any changes to the scope of works (including variations) without written authorisation from the Operations Manager.
6. If you are obstructed or delayed in anyway from carrying out your work or if your progress is hindered in anyway by other trades, continue to work, but notify the ACCL Operations Manager, site manager and or site agent immediately.

e. Variation of Works

1. If you are requested to change cable routes or location or the number of telecommunications outlets in any area, either verbally or from new sets of site drawings notify the ACCL Operations Manager prior to doing so.
2. Do not undertake any changes to the scope of works (including variations) without written authorisation from the Operations Manager.

f. Building Regulations

1. Section M of the Building Regulations requires that data outlets that fall between the heights of 400 – 1000mm above the floor, although with preference to the lower end of that distance figure.
2. This Standard also requires the data outlet contrast the containment system (white trunking etc), this is normally achieved by the insertion of a black front shutter plate or similar.
3. Ensure from the ACCL Project Manager or Operations Manager prior to installation.

Health & Safety

a. General

1. If your area of work is not a safe working environment – **Stop – Do not continue work**. Report all items to the ACCL Operations Manager immediately and also to the site manager or site agent.
2. Take care not to misuse or break any equipment, tools and health & safety equipment etc.
3. Ensure that you use the correct tool for the right job.
4. Do not use any broken or damaged tools and notify the ACCL Operations Manager immediately if you have any problems with site tools.

b. Asbestos

1. If you believe that you are working in any environment where asbestos is present – STOP work immediately and vacate that environment and notify the ACCL Operations Manager, Site Manager, Site Agent or the client immediately.
2. Asbestos may be found in some types of older ceiling tiles, coatings on fire parity walls, some types of thermoplastic or vinyl tiles, cement style guttering, corrugated roofing, cement style pipes and also in some types of electrical equipment insulation materials.

c. Fire Extinguishers

1. In the case of fire you should only attempt to tackle a fire yourself if it safe to do so and always sound the evacuation alarm.
2. There are different four types of fire extinguisher and it is essential that you understand the differences between each and the environment where they can be used.
3. Class A (water) fire extinguishers should only be used on carbon based products such as paper or wood etc.
4. Class B (foam) fire extinguishers should only be used on liquid fires such as petrol etc.
5. Class B (dry powder) fire extinguishers may be used on any type of fire.
6. CO² fire extinguishers may be used class B, C and electrical fires. In the case of electrical fires you should only use a CO² extinguisher and ensure that the electrical supply has been turned off.

d. Working at Height

1. Ladders (including stepladders) pose one of the biggest accidental risk opportunities. ACCL request that all ladders must be checked prior to use to ensure that they are safe to use and fit for purpose and requires the following items to be adhered too.
2. Inspect the ladder to ensure that is are damage free prior to use. That the step rungs themselves are well fixed into the sub-frame of the ladder and that all rivets and welds are strong.
3. Ensure that all locking braces work correctly and that the ladder can be correctly locked into a safe climbing position.
4. Aluminium ladders fitted with rubber feet need to be inspected to ensure that the feet are not damaged through wear, thereby causing a possible route to earth and allowing a conductive path.
5. Do not place a ladder in the vicinity of a door unless the door is locked shut or secured open with a guard.
6. Damaged ladders need to be labelled with a 'DO NOT USE' sign or card and must be either repaired fully or preferably destroyed.
7. The position of a ladder must be safe to ensure the safety of the person intending to use the equipment. The angle of the ladder should extend out from the base of the wall by an angle of 75° and should extend beyond the height of the climb by at least four rungs.
8. The purpose of a ladder is for gaining access to or from an environment, they are not designed for working from. The ladder must also be secured or anchored at the top.
9. When requested to work at height, the requirement is to use a scaffold tower with foot and guardrails (when over 2 metres) to prevent the workers and tools or equipment following out of the tower to the ground below.
10. Workers within the tower will also be required to wear safety harnesses. If the tower is moveable the wheels must have the brakes applied prior to use and the tower must not be manoeuvred from one location to another while workers are still located on the tower.
11. When working at height always ensure that adequate barriers are positioned around to prevent people entering the working area.

e. Roof Tops

1. You must ensure that you never climb or walk on a roof without adequate protection and harness protection and only after ensuring that the roof is

safe enough to climb on. Some roofs may be covered with corrugated coverings and may require crawl boards.

f. Underground Working

1. Installing data communications cable underground or through a floor will require the lifting of manholes, suspended floor tiles and or wooden floors to facilitate a working area large enough for you to fit into safely with ease of evacuation or fear of becoming trapped to install data cabling.
2. It is essential that care and thought be considered to whether you will be entering a confined space and the necessary controls that need to be in place.
3. Prior to entering a manhole check for gas or foul air and with a gas tester and follow the guidelines of the Confined Spaces Regulation. Manholes must be surrounded by a barrier at all times while open and be also supported by a physical guard.
4. It is required that both the person contained within the confined space and the observer have completed some successful training in working in confined spaces and can deal effectively with any emergency should it arise. Manhole covers must always be replaced once the work has been completed.
5. When working in a floor area, suitable barriers must be erected to prevent any person entering the area. Once all the work has been completed the floor tiles or floor traps must be securely placed back into their final position.

g. Confined Spaces

1. When routing cables or planning the installation of equipment care must be taken to select a safe route for both the installation staff and cables to reside in.
2. Confined spaces fall under the control of the Confined Spaces Regulations 1997, and it is amazing that so many of us will either knowingly or perhaps unwittingly enter a confined space on a regular basis. Confined spaces are those areas, which by their nature are enclosed and therefore regarded as confined.
3. Fine powders include materials such as flour, sugar and even custard powder are to be considered as hazardous in a confined area and will be referred to as 'free flowing solids'.

Materials Management

a. Deliveries

1. When you accept any deliveries ensure that you check the items and quantity before you sign. If the delivery size is too large to check immediately sign but clearly stating that the delivery was received unchecked.
3. Contact the Operations Department of ACCL once a delivery has been made stating the goods received.
4. If you are expecting a delivery and it has not arrived at its agreed delivery time slot, notify ACCL Operations Department immediately.
5. Ensure that you store all materials away from main access or fire escape routes and in a safe position that will not require the items to be regularly moved to another location.
6. Notify the ACCL Operation Department of any shortages on any delivery immediately.

b. Storage

1. Store all goods and materials in a safe and secure location with all other materials, as specified by the ACCL Operations Manager, site manager or the site agent.
2. Ensure that access times to storage areas are pre-arranged if necessary to collect stores if from a secure area.

Site Housekeeping

1. It is essential that you always maintain a clear and tidy workplace at all times.
2. Clear away used drums, cable boxes and packaging to the sites designated areas on a daily basis.
3. It is essential as part of your ACCL housekeeping guide, it is imperative that you make yourself known to the either the client, site agent or any other appointed person when you arrive on and leave site each day.

Containment

a. Pre-inspection

1. Prior to the installation of any cables, walk the containment route to check that full and complete containment is in place.
2. If additional containment is required, report this to the ACCL Operations Manager immediately, followed by the Site Manager or Site Agent.
3. Check that the cable routes will maintain electrical separation distances as specified within the BS 6701:2004 Standard documents. These figures can be found in the appendix of this ACCL INSTALLATION QUALITY MANUAL.
4. Confirm with the ACCL Operations Manager who is responsible for the earth bonding of all metal containment.
5. If containment routes pass through fire rated walls or ceiling etc, contact the ACCL Operations Manager to ascertain who has responsibility for fire stopping any opening.
6. Under the requirements of BS 6701: 2004 and BS 7671 confirm with the ACCL Operations Manager who is responsible for the correct earthing of all metal containment systems.

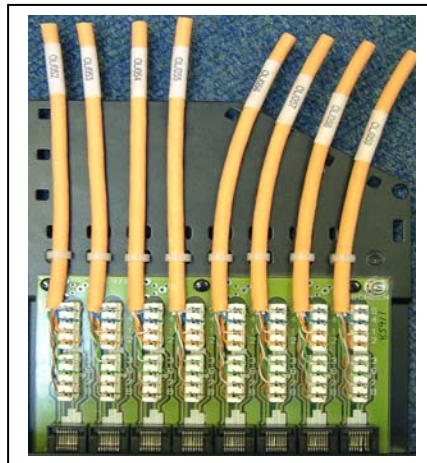
b. Fitting Containment

1. Before fitting any containment ensure that the containment type is fit for purpose.
2. Ensure that cable minimum bend radii are always maintained.
3. Ensure that the surface to which the containment is to be fitted has been checked for hidden services, such as water and gas etc prior to drilling.
4. Ensure that the choice of wall surface and fixings will support any and all types of containment selected.
5. Ascertain from the ACCL Operations Manager who will be responsible for the earth bonding of that containment.
6. If containment routes pass through fire rated walls or ceiling etc, contact the ACCL Operations Manager to ascertain who has responsibility for fire stopping any opening.

Cabling

a. Labelling

1. Labels following an agreed format (as per the requirements of BS 6701: 2004) with the client will be supplied to you by the ACCL Operations Department when requested.
2. Cables shall initially be labelled using a waterproof permanent marker three times over the first half metre of cable at either end. However hand written cable markings must not be visible at the patch panel.
3. Once the cables are in place at the telecommunications outlet, the cable must be labelled with the labels supplied by the ACCL Operations Department no closer than 100mm to the end of the cable termination point.
4. Cables at the patch panel end will be labelled in a similar fashion as shown below, which allows up to four more terminations if required.



b. Cable Pulling

1. Cable bundles for pulling will not exceed any more than twelve cables in any one bundle in an aim to reduce the amount of stress applied to the cables at any one time.
2. Cables will be pulled in avoiding any sharp edges.
3. Cables during the installation process will maintain a minimum bend of not less than eight times the outer diameter of the cable sheath.
4. During the cable pulling process care must be taken so not to cause any trip hazard or other associated health & safety violation.
5. Cables will be protected from damage at all times.

c. Copper Cable Dressing

1. Temporary cable dressing is permitted – But only as a temporary measure.
2. Bundles will not exceed anymore than twenty-four cables.
3. Cables will be formed into neat bundles within all cabinets and frames with the cable bundle feeding either from the top or bottom of the cabinet allowing for one to two metres of spare cable. It is important that swan neck looms be formed and tied in using either nylon or Velcro ties higher than the patch panel itself, thus reducing leverage onto the patch panel.
4. Frames and cabinets cable distribution will alternate from one side of the cabinet to the other in bundles of no more than 24 cables, when and where possible allowing for electrical segregation.
5. Frames and cabinets are required by BS 6701: 2004 to have a clearance distance of 1.2m on all sides where access is required. If this distance is not available notify the ACCL Operations Manager.

Copper Termination

a. Data Outlets

1. It is vitally important that all telecommunication outlets are terminated in a manner as required by the manufacturer of that product.
2. The cable pair twist must be maintained as close as possible to the point of termination. The days of 13mm acceptable cable un-twist have long since passed.
3. The outer cable jacket *must be* maintained as close as possible to the point of termination.
4. All face plates and floor boxes *must be* screwed back into final position prior to any testing taking place.
5. Cable to outlet fixing kits must be fitted, where supplied.
6. It is acceptable to use nylon cable-ties on Category 5e solutions provided that offer support and do not crimp the data cable.
7. Category 6 cables must be only tied in using Hook & loop (Velcro®).
8. All outlets will be terminated to the 568-B wiring code, unless specified differently by the Operations Manager.

b. Data Patch Panels

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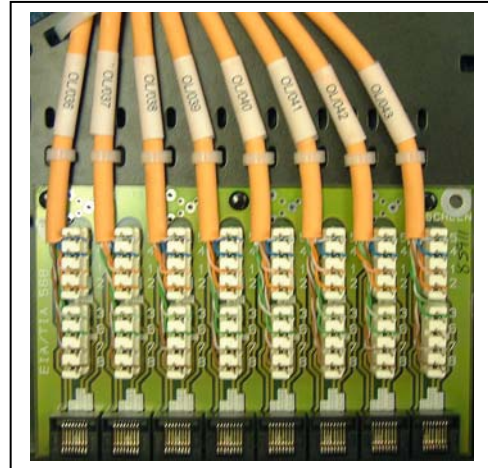
1. Cables must be formed in a swan neck loomed onto patch panel to reduce weight and stresses applied to cable bundles.
2. Cable bundles must be tied slightly higher than the final fixed position of the actual patch panel to reduce leverage on the back of the panel.
3. The cable pair twist must be maintained as close as possible to the point of termination. The days of 13mm acceptable cable un-twist have long since passed.
4. The permitted amount of stripped back data cable must be mounted tight into the IDC termination points as opposed to excess cable curling into it's final position.
5. The outer cable jacket *must be* maintained as close as possible to the point of termination.
6. Patch panels will receive cable bundles (not exceeding 24 cables in a single bundle) from the left and right in an alternating fashion from the frame or cabinet.
7. Labels must be fitted.
8. Patch panel lids if supplied will be fitted.
9. Straight slotted patch panel screw heads will all faced into a vertical position.
10. Patch panels must not be tested until the patch panel is fully fixed back into its final position and all cables dressed in.

Question:

Below you will find three pictures demonstrating terminated patch panels. The question is which one offers the correct termination and labelling regime?

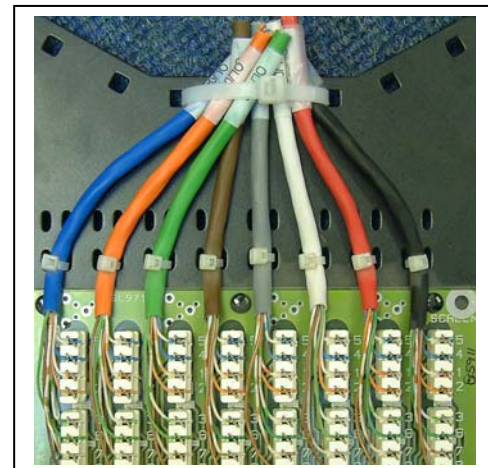
Picture One:

1. Cable sheaths are trimmed back to the right position. ✓
2. Cables ties are not too tight and ties heads are cut flush and are not visible. ✓
3. Copper conductors are pulled in tight to IDC's. ✓
4. Labels position fails to allow for any re-termination if required. ✗



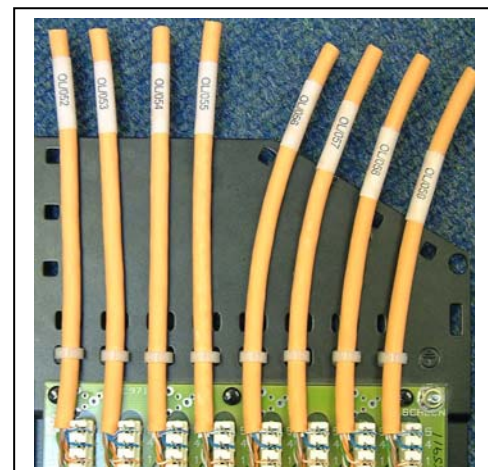
Picture Two:

1. Cable sheath at far right end is at a different length to other copper cables. ✗
2. Cable ties heads are uppermost and not cut flush. ✗
3. Copper conductors have no twist maintained. ✗
4. Labels are hidden by tight cable tie at the back of the patch panel, making it hard to locate specific cables if required. ✗



Picture Three:

1. Cable sheaths are trimmed back to the right position. ✓
2. Cables ties are not too tight and ties heads are cut flush and are not visible. ✓
3. Copper conductors are pulled in tight to IDC's. ✓
4. Labels position fails to allow for any re-termination if required. ✓



c. Voice Patch Panels

1. Voice cables will maintain the cable pair twists as close as possible to the point of termination.
2. Voice cable looms will be formed into neat bundles and will be swan necked in towards the patch panel and tied in slightly above the height of the panel.
3. All voice patch panels will have designation strips correctly labelled as per the requirements of the Operations Manager of ACCL and those of the client (as per the requirements of BS 6701: 2004).
4. Confirm with the ACCL Operations Manager whether one or two pair voice modulation is required.

d. Cabinets & Frames

1. Cables will be dressed into all cabinets and frames in neat bundles.
2. For cabinet/frame types where additional containment is required, ensure that the cable tray is located halfway between the rear and the front of the cabinet.
3. Frame and cabinets front mounting rails will be positioned 150mm back from the front of the metal work sub frame.
4. Cables must be formed in a swan neck loomed onto patch panel to reduce weight and stresses applied to cable bundles.
5. Cable bundles must be tied slightly higher than the final fixed position of the actual patch panel to reduce leverage on the back of the panel.
9. Patch panels will receive cable bundles (not exceeding 24 cables in a single bundle) from the left and right in an alternating fashion from the frame or cabinet.
6. It is acceptable to use nylon cable-ties provided that offer support and do not crimp the data cable.
7. Frames and cabinets are required by BS 6701: 2004 to have a clearance distance of 1.2m on all sides where access is required. If this distance is not available notify the ACCL Operations Manager.
8. Cabinet and frame power supply systems must meet the requirements of BS 6701: 2004 with regard to electrical safety segregation and the necessary electro-magnetic requirements of BS EN 50174 Part 1: 2001.

Testing

a. Voice Circuits

1. Each pair must individually testing using a continuity tester.

b. Copper Data Circuits

1. Ensure that the tester is a level III tester before starting testing of any kind.
2. Ensure that you and ACCL Operations department have a relevant up to date calibration certificate.
3. Ensure that you are operating with the latest version of firmware & software. If you are unsure the Operational department can inform you of the latest software versions.
4. Ensure that you calibrate the master and remote together prior to starting any testing of the system.
5. Correctly setup the site details, including company name, operator, labelling scheme and cable ID.
6. Ensure that the patch panel and faceplates are fully screwed in their final locations prior to testing.
7. You must ensure that the correct NVP is set up on the cable, otherwise the test is null and void and all your work has been done for nothing.
8. If you are using test leader adapters (such as the Fluke PM06) ensure that they are in good condition and ready for use.
9. ACCL will only accept 100% compliance testing.

BS 6701: 2004

The following information is a requirement of BS 6701: 2004 and all ACCL installations will be carried out to this Standard. If for any reason, you are unable to comply with the following sections or areas, please contact the ACCL Operations Department prior to undertaking any work.

a. Electrical Segregation

1. For electrical circuits operating between 230V to 600V a separation distance of not less than 50mm be maintained, preferably within separate containment (dado and basket etc).
2. For electrical circuits operating at voltages exceeding 600V, a separation distance in excess of 150mm must be applied with a separator meeting the requirements of BS 7671 (16th Edition Electrical Regulations).
3. Fluorescent lamps and other high discharge lamps require a segregation distance greater than 130mm.

b. Earthing & Bonding

1. Patch panels must be earth bonded back to the frame.
2. Frames and cabinets (including doors) must be earth bonded.
3. The size of the correct earth cable is dependent on how far away the cabinet or frame is located from the customers CMET (customer's main earthing terminal).
4. For PE (protective earth) the cable shall be Green & Yellow in colour and the must be labelled at the CMET as a 'Telecoms Earth – Do not Remove'.
5. For FE (functional earth) the cable must be cream in colour (in accordance with BS 6746c) and must be continually labelled with the words 'Telecoms Earth – Do not Remove'.

c. Environmental

1. Thought is made to consider environmental conditions, such as dramatic changes in ambient temperature from one room to another, and also towards flooding.
2. Thought is also required to ensure that the cabling route is free and fit for purpose.

d. Other

1. Before drilling holes, check with the site manager or site agent regarding working hours reference noise levels etc.

Personal Requirements

a. Manufacturer Training

1. Every sub-contractor employed by ACCL, will prior to working for ACCL will provide the Operations Manager photocopies of all manufacturer-training courses.
2. If the manufacturer course carried with it any formal qualifications such as City & Guilds etc, make sure that these certificates are also included.

b. Academic Courses

1. Please supply the ACCL Operations Manager with every relevant academic qualification prior to starting any work.

c. CSCS Certification

1. All ACCL sub-contractors and directly employed staff are required to hold valid JIB or CSCS cards, as this denotes evidence of skill knowledge level and a degree of health & safety education.

d. Criminal Records Bureau

1. It is ACCL company policy that all employees (PAYE, Self-Employed & Sub-Contractors) all complete the necessary paperwork with the CRB. Failure to do so will result in dismissal.

Appendix

Site Inspection Document

Example Structured Cabling Inspection Form

This form must be used on all installations and may be used for onsite snagging and as part of the project final acceptance and sign off.

There is a requirement that this form be completed as per the ACCL Operational Procedures and the use of this form further complies with the requirements of the British Standard BS 6701.

Every section of this quality form must be completed, any sections that are answered with either No or N/A must have notes included within section 14 of this document.

Active Communication Company Limited

Installation Quality Manual

1 Details

1.1 Customer		1.2 Audit carried out by:	
Name		Name	
Project/Phase			ACCL
Address		Address	International House Cray Avenue Orpington KENT BR5 3RY
Contact		Contact	
Tel Number		Tel Number	

ACCL Site Engineer Signature :.....

Date:.....

ACCL Auditor: :.....

Date:.....

ACCL Operations Manager :.....

Date:.....

Drawing Number	Issue Date	Received By

2 Channel Model

2.1 Copper	<input checked="" type="checkbox"/>	UTP		STP		FTP		Other
2.2 Fibre	<input checked="" type="checkbox"/>	Yes		No				
2.3 Fibre Type	<input checked="" type="checkbox"/>	Multimode		Singlemode				
2.4		62.5/125µm	<input checked="" type="checkbox"/>	50/125µm				
2.5		OM 1		OM 2		OM 3		OS1
2.6 Description	KRONE Category 6 – CL Jacks – KM8 Patch Panel KRONE SC – LC BLOWN FIBRE							

3 Cabinets Frames

3.1 Type	<input checked="" type="checkbox"/>	Cabinet		Frame	<input checked="" type="checkbox"/>	MDF		ODF/S
		Other (specify)						
3.2 Cabinet/Earthed	<input checked="" type="checkbox"/>	Yes		No				N/A
3.3 Patch Panel earth bonded to frame/cabinet	<input checked="" type="checkbox"/>	Yes		No				N/A
3.4 Bonding passed to electrician for earth connection	<input checked="" type="checkbox"/>	Yes		No				N/A

4 Cabling

4.1 Cables secured at adequate centres (should be uneven)	4.1.1 Horizontal	<input checked="" type="checkbox"/>	Yes		No		N/A
	4.1.2 Vertical	<input checked="" type="checkbox"/>	Yes		No		N/A
4.2 Cable tie type	<input checked="" type="checkbox"/>	Velcro		Nylon		Other	
4.3 Cable tie not too tight	<input checked="" type="checkbox"/>	Yes		No			N/A
4.4 Cable follows well defined routes	<input checked="" type="checkbox"/>	Yes		No			N/A
4.5 Cable not being crushed	<input checked="" type="checkbox"/>	Yes		No			N/A
4.6 Cabling protected from sharp edges, movement and accidental damage.	<input checked="" type="checkbox"/>	Yes		No			N/A
4.6 Containment fit for purpose	<input checked="" type="checkbox"/>	Yes		No			N/A
4.7 Minimum bend radii observed.	4.7.1 During install	<input checked="" type="checkbox"/>	Yes		No		N/A
	4.7.2 Finished	<input checked="" type="checkbox"/>	Yes		No		N/A
4.8 Power/Data separation (in accordance with BS 6701)	<input checked="" type="checkbox"/>	Yes		No			N/A
4.10 Power/Data separation (in accordance with 50174 Standards series.	<input checked="" type="checkbox"/>	Yes		No			N/A
4.11 Cabling raised off ceiling tiles with basket/tray/cleats	<input checked="" type="checkbox"/>	Yes		No			N/A
4.12 Fire-stopping completed		Yes		<input checked="" type="checkbox"/> No			N/A
4.13 Integrity of gas tight areas maintained	<input checked="" type="checkbox"/>	Yes		No			N/A
4.14 External grade cable terminated within 2m of building entry or fitted into approved fire resistance containment.	<input checked="" type="checkbox"/>	Yes		No			N/A
4.14 Building Regulations Section M: Colour Contrast	<input checked="" type="checkbox"/>	Yes		No			N/A
4.14 Building Regulations Section M: Height between 400 & 1000mm	<input checked="" type="checkbox"/>	Yes		No			N/A

5 Copper Voice Terminations

5.1 Voice: One pair modulation	✓	Yes	No	N/A
5.2 Voice: Two pair modulation		Yes	No	✓ N/A
5.3 Voice: Pair Twist Maintained to Termination	✓	Yes	No	N/A
5.4 Voice: Designation Strips Completed	✓	Yes	No	N/A
5.5 Voice: Continuity Tested	✓	Yes	No	N/A

6 Copper Data Terminations

6.1 Pair twist maintained	5.1.1 Jack	✓	Yes	No	N/A
	5.1.2 Module		Yes	No	N/A
	5.1.3 Voice Modules	✓	Yes	No	N/A
6.2 Cable sheath strip back minimised		✓	Yes	No	N/A
6.3 Conductors not nicked or damaged		✓	Yes	No	N/A
6.4 Conducts fully terminated in IDC & trimmed		✓	Yes	No	N/A
6.5 Cables anchored to Jacks		✓	Yes	No	N/A
6.6 Shutters operating correctly		✓	Yes	No	N/A
6.7 Shields terminated	6.7.1 Jacks		Yes	No	✓ N/A
	6.7.2 Patch Panels		Yes	No	✓ N/A
6.8 Patch cord used	✓ Stranded		Solid Core		
6.9 Patch cord used	✓ Booted		Un-booted		
6.10 Manufacturer approved/guaranteed patch cords		✓	Yes	No	
6.11 Patch cord - Correct use of UTP/Shielded		✓	Yes	No	N/A

7 Fibre Terminations

7.1 Is this section applicable (refer to section 2)		✓	Yes	No	
7.2 Sufficient slack	7.2.1 Outlet	✓	Yes	No	N/A
	7.2.2 Panel	✓	Yes	No	N/A
7.3 Are the fibres supported to gland		✓	Yes	No	N/A
7.4 Fibre secured with a gland to Patch Panel		✓	Yes	No	N/A
7.5 Continuity of fibre type		✓	Yes	No	N/A
7.6 Termination type	✓ Pigtailed		PTF		Onsite
	✓ Fusion		Mechanical		
7.7 Type	7.7.1 Fibre	✓	Multi Mode		Single Mode
	7.7.2 Connector	✓	SC	ST	FC
	7.7.3 Bulkhead adapter	✓	Multi Mode	✓	Single Mode
7.8 Dust caps fitted	7.8.1 to unused connectors	✓	Yes	No	N/A
	7.8.2 to unused bulkhead adapters	✓	Yes	No	N/A
	7.8.3 to unused blown fibre tubing	✓	Yes	No	N/A
7.9 Fibre optic warning labels fitted		✓	Yes	No	N/A
7.10 Adapters and connectors contaminant free		✓	Yes	No	N/A

8 Labelling

8.1 Cabinets/Frames		✓	Yes	No	N/A
8.2 Patch Panel/Module		✓	Yes	No	N/A
8.3 Cable at Patch Panel/Module		✓	Yes	No	N/A
8.4 Outlet		✓	Yes	No	N/A
8.5 Cable at Outlet		✓	Yes	No	N/A
8.6 Labelling legible & permanent		✓	Yes	No	N/A
8.7 Housekeeping	8.7.1 Labelling matches at each end of cable	✓	Yes	No	N/A
	8.7.2 Consistent style	✓	Yes	No	N/A
	8.7.3 Aesthetically presentable	✓	Yes	No	N/A

9 Copper Testing

9.1 Level III tester used		✓	Yes	No	N/A
9.2 Configuration		✓	Perm Link	Channel	
9.2.1 Details	<i>uk101360.01</i>				
9.3 Standard			TIA	ISO	✓ EN
9.4 Correct NVP		✓	Yes	No	N/A
9.5 Test adapters used		<i>PM 06</i>			
9.5.1 Usage		<i>500</i>			
9.6 Firmware/Software version		<i>3.41</i>			

10 Optical Fibre Testing

10.1 Equipment used	Light source	✓	Light source & power meter	✓	OTDR
	✓ 850 nm	✓	1310 nm		1550 nm
10.2 Fibre Type		✓	MM		SM

11 Test Results

11.1 100% Tested	✓	Yes	No	N/A
11.2 Tester within calibration	✓	Yes	No	N/A
11.3 Results saved on CD	✓	Yes	No	N/A
11.3.1 In appropriate Cable Management Software format. e.g. Fluke LinkWare	✓	Yes	No	N/A
11.4 Correct set-up (Site details, company name, operator, cable ID, etc.)	✓	Yes	No	N/A
10.5 Operator competent	✓	Yes	No	N/A

12 Containment

12.1 Type		<input checked="" type="checkbox"/> Tray	<input type="checkbox"/> Basket	<input type="checkbox"/> Dado	<input type="checkbox"/> None		
		12.1.1 If 'none', is matting used			<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
12.2 Condition	12.2.1 Adequate	<input checked="" type="checkbox"/>	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	N/A
	12.2.2 Securely fixed	<input checked="" type="checkbox"/>	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	N/A
	12.2.3 Lids fitted securely	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>	N/A
	12.2.4 Cosmetically acceptable	<input checked="" type="checkbox"/>	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	N/A
13.3 Loading	13.3.1 Depth acceptable	<input checked="" type="checkbox"/>	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	N/A
	13.3.2 Future expansion	<input checked="" type="checkbox"/>	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	N/A
13.4 Fit for purpose		<input checked="" type="checkbox"/>	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	N/A
13.5 Earth Bonding in accordance with BS 6701		<input checked="" type="checkbox"/>	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	N/A

14 Additional Information

Section Code	
4.12	Fire Stopping: To be completed by: A.N. Other Builders
5.2	Copper Voice: One pair modulation achieved
6.7.1	Copper Data: Shields – UTP cable installed
6.7.2	Copper Data: Shields – UTP cable installed
12.2.3	Containment: Lids not required with tray work