



PIA
(PHYSICAL INFRASTRUCTURE ACCESS)
MANUAL

TD-GD-S-002

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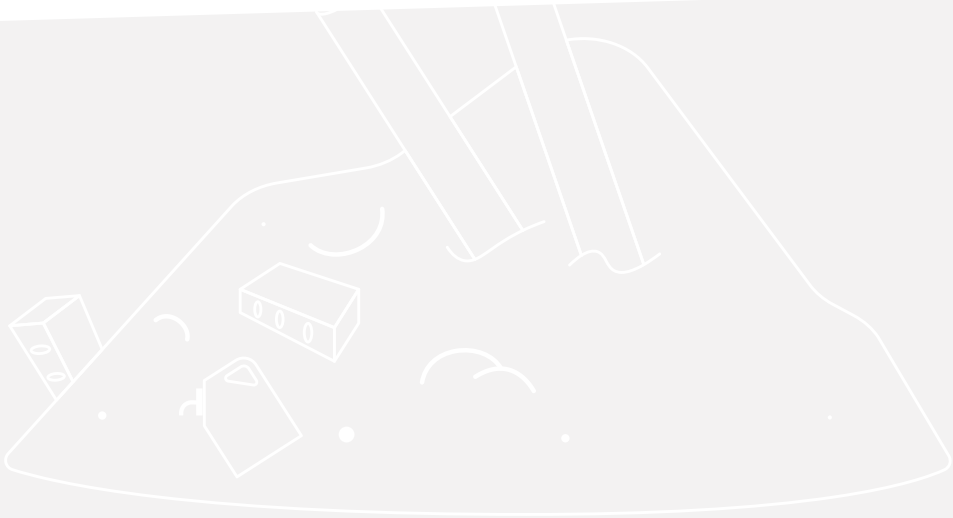
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PIA INTRODUCTION

Physical Infrastructure Access (PIA) enables Communications Providers (CPs) to share Openreach’s (OR) existing access network infrastructure. CPs can now utilise this existing infrastructure to deploy their own fibre networks across the UK. PIA consists primarily of duct and pole sharing to eliminate the need for traditional construction methods.

Although these assets are utilised by different CPs they are still owned and managed by Openreach. This means, in the course of installing using these assets, will need to adhere to a specific set of procedures and conditions.

Working with PIA brings a different set of risks and considerations across safety and quality to manage day to day compared to traditional construction methods.



COMPETENCE

GENERAL REQUIREMENTS

A certain level of competence is required to gain OR approval to work on the PIA network. There is an array of separate accreditations for different types of work and different types of asset.

Generally, these are split into Survey, Overhead and Underground. You will need to gain the correct accreditation for the tasks you are looking to undertake. These accreditations will outline the OR safe working practices that must be adhered to when working on their network.

Standard accreditations needed within these areas are:

SURVEY	OVERHEAD	UNDERGROUND/CIVILS
S6 - PIA Duct Survey	SA001 - Safety Overhead	SA002 - Safety Underground
S5 - PIA Pole Survey	S8 - PIA Overhead Cable Installation	S7 - PIA Sub-Duct and Cable Installation
	S9 - PIA Pole Stepping on Congested Poles	G01 - General Operatives 1
		G02 - General Operatives 2 (Supervisor)
		CD1 - Core Drilling

SMART AWARDS (NOPS)

NOPS (Network Operators Passport Scheme) is a scheme, ran by Smart awards, that consolidated all accreditations concerning PIA into a central database that can be view by CPs and Contractors. Once registered you will gain a Passport card with your details and accreditations.

You must have one of these cards to work on the network with any one of our clients and it must be with you at all times. Anyone can request to see this on a site visit and your work will be stopped if you do not have your accreditation with you.

If there are any issues or concerns with your NOPS card, our training department is available to contact.



WORKING WITH OPENREACH

NOTICE OF INTENT (NOI)

A Notice of Intents (NOI) is a form of request submitted to Openreach as part of the planning stage of network build. The NOI states what the CP has planned to build, on what assets and between what times. These act as a permit and will be approved or rejected based on content, clashes with other CP or any other reasons.

NOI's must be submitted and approved for all physical work (including proving and build) taking place on the OR's network. Surveying with no physical works aside from opening/ lifting chambers can take place without an NOI however the whereabouts must be submitted to OR with at least one working days' notice. As the Contractor, we are responsible for ensuring NOI's are in place and approved.

WHEREABOUTS

Whereabouts is another OR process whereby anyone working on the PIA network must provide the whereabouts of all activities to OR with a minimum of 2 working days before commencing. This information must also be communicated to the Client through the process they have outline within the framework.



DEFECTS



A1024 safety defects is an OR process that allows reporting of Safety defects that pose a risk to Engineers or members of the public due to wear and tear of assets.

A1024 Quality defects are similar to Safety defects but report issues usually based around the incorrect, untidy installation that do not meet installation specifications.

Example of these are:

A1024 Safety Defects

- Pole defects (e.g. leaking poles, missing steps, renew stay wire)
- PCP/DSLAM defects (e.g. graffiti, defective PCP shell, missing locks, sheared door)
- Joint box/frame & cover defects (e.g. defective/missing locks, reset joint box)
- Low aerial cables/drop wires

A1024 Quality Defects

- Untidy, but not unsafe, wiring
- Brackets missing or defective
- Incorrect closure fitted
- Pole step missing
- Cables routed around climbing steps (but not unsafe to enter chamber/climb ladder)
- Blown fibre tubing defective/short
- Defective joint

All Client specific build standards are available within the team pack to view on PDF at any time.

All defects must be reported through to Openreach. Once through to Openreach, you will be asked specific questions regarding the asset so make sure you are close by or have it to hand. Once this has been formally logged with Openreach, you also need to notify the Client by giving the A1024 reference number. For every A1024 logged, a label must be connected and visible to the asset with the BT reference logged.

HEALTH, SAFETY AND ENVIRONMENT REPORTING

Accidents, incidents or near misses that occur on PIA works are to be reported as per the standard Avonline process. Once this is complete, notification is made to Openreach as soon as possible, but within 24hrs, in addition to standard reporting to the Client. Investigation reports will need to be provided to Openreach within 7 days along with the standard Client requirement.

Environmental incidents also need to be reported to OR so need to be raised through the standard incident line process.

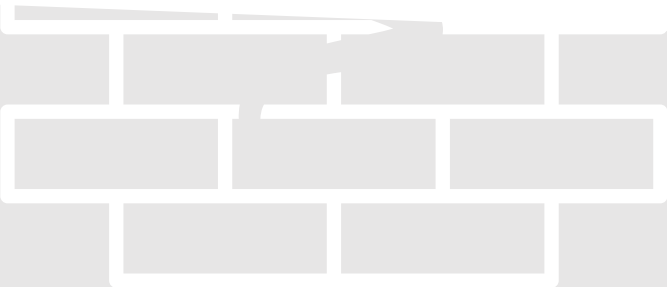
UNDERGROUND INSTALLATION

ACCESSING CHAMBERS AND PITS

When accessing underground chambers or pits, it is important to follow the Standard method statement within the team pack. When the lifting of lids, the use of a calibrated date gas detector unit (GDU) is required to determine the presence of harmful gases and/or lack of oxygen. If the atmosphere is unsuitable, the pit must not be accessed.

If the alarm continues to sound after the initial test, a leak may be present and the gas supplier must be immediately contacted and the surrounding area cordoned off from pedestrians and other workers. Naked flames must be kept clear at all times.

When accessing pits, manual handling must be considered at all times. Correct lifting equipment should be used whenever lifting a pit or mechanical lifting where deemed necessary.



INSTALLING IN EXISTING DUCTS

Installing in existing ducts usually follow the 'rod and rope' technique. This is outlined in the model method statement 'cable pulling' on the Team pack. When adopting this technique, it is important to consider manual handling and ergonomics as the pulling can cause strains or other Musculoskeletal disorders.

If the duct is too congested or there is a blockage, this will need to be dealt with through Civil methods.

CLEARING BLOCKAGES (A55)

As part of the surveying process, it is important to test ducting before installation to ensure there are no blockages and there is room to install. A common method for this is 'rod and rope' where a fibreglass rodding system is pushed down a duct to detect any issues and test the viability.

Blockages of the ducts (potentially caused by foreign objects such as silt) need to be reported to Openreach so they can be rectified. An A55 should be raised with Openreach including all relevant information and location details. Based on the submission, an agreement will begin regarding dates and the civil method of rectification.



OVERHEAD INSTALLATION

CHECKING OVERHEAD LINE TYPE AND HEIGHTS

Before climbing or working on any pole, we need to measure the clearance of all wires and aerial cables attached to that pole where they cross the carriageway. We need to ensure that whilst up a pole, workers will not be in danger of potential contact.

Drop wires and cables sag and they may have sagged below the safe height.

Only ultrasonic height measurement devices are to be used for measuring cables and must only be used at ground level before works commencing.

If a measurement is needed from the carriageway this should only be attempted when the speed, visibility and level of traffic permit it. If it is not possible to measure the wire height because it is unsafe, assume the wires to be low and refer to your line manager and if appropriate the owner of the pole.

After work is completed a height check must also be taken again to check that new cables are over the 5.9/5.6m.

On joint user poles, there may be electricity wires so ensure workers are aware of the voltage and that they do not look low/sag. If they are, inform the appropriate owner. If unsure works must not proceed.

Although wood poles last on average more than 40 years, decay can occasionally occur quite early in the life of a pole. Workers must not assume that because the pole is not old it will not be decayed or vice versa.

PRE-CLIMB CHECKS AND LABELLING

Testing the pole and doing the visual checks is designed to satisfy the climber of the condition of the pole to deem it safe to be climbed and worked on. The test will enable workers to spot a pole that is so seriously affected by decay or damage that there is a significant risk of failure of the pole if the loading is changed or the pole is climbed.

Pre-climb test sheets/ formal checklists must be completed and available for inspection on site.

Poles that lean more than 15° must not be climbed even if they do not have a D label.

Labels on a pole can be one of the following:

'D' Label

This is a square red label, approx. 40mm square, with an embossed 'D'. Poles with a 'D' label must not be climbed and will be replaced. Do not Climb or work on these poles

'SD' Label

This is a square red label, approx. 40mm square, with an embossed 'SD'. These poles must not be climbed but may remain in service.

'C' Label

This is a square green label, approx. 40mm square, with an embossed 'C'. These poles can be climbed provided ALL the guidance in this memo is followed.

CLIMBING OVERHEAD LINES

If our works interfere with the free movement of members of public or vehicles traffic you must sign, guard and light before you start work. Pedestrian barriers, cones and signs should be used to protect yourself and the general public. A ladder should only be erected in the carriageway if it is absolutely necessary to do so. A ladder erected/placed in the carriageway should, whenever possible, be protected by a vehicle.

For more details on guarding see Code of Practice (CoP) Safety at Streetworks (Red Book). There may be cases where it will be necessary to have a consultation with Police and/or Highways Authorities before starting work, due to exceptional traffic problems or particular road conditions. The Authority may require that traffic control measures will need to be used.

Both hands must be free when climbing, all hand tools must be secured in your tool bag or tethered to your harness. Climbing with tools in your hand is prohibited.

Whenever possible aim to climb on the side of the pole from which you intend to work. Look for problems before you start.

- Climb unencumbered
- Use the ladder-climbing technique of moving your foot and hand on the same side together.
- Grip the ladder rungs, not the stiles.
- When your shoulders are about the same level as the top of the ladder, you must lash the ladder to the pole

When you reach the pole steps, you can use them as handholds and steps. However, you must test every step before you put your weight on them. Always check for loose or badly corroded pole steps as you climb. Look for and replace any steps marked 1CDD88.

INSTALLING USING OVERHEAD POLES

Work on the overhead network can only be undertaken by people who have been trained and assessed as being competent. Before any work is undertaken an on-site risk assessment must be completed and communicated to all those involved in the works.

Consideration must be given to the following

- Guarding the worksite.
- Checking the Pole and attachments for Safety.
- Safe accessing of the Pole.
- Having been trained in the operational requirements to undertake the task at hand.
- Awareness of safety of colleagues and the public whether on foot or in vehicles

All work carried out on poles must be done while secured to the pole. In all cases this will require the use of both the fall arrest lanyard and the work positioning belt; ladders used to access the pole will need to be correctly positioned and secured to allow for the full use of the belt.

Any pole which has wire's or cables with less than 5.2m of clearance across a carriageway must NOT be climbed. The only acceptable method of working on a pole with ANY wire below 5.2m is by Mobile Elevating Work Platform (MEWP) or by scaffolding.

Any Openreach wires below 5.2m must be immediately reported for defect reporting to Openreach and the Client via the A1024 process.

All wires must be erected and maintained to achieve the required clearance from Overhead Power Lines.

The clearances and specifications are published in Energy Networks Association Document - Technical Specification PO5 which is available from the ENA.

OVERHEAD LINE CLEARANCE



Crossing Type	Minimum Clearance	
Cable or Drop wire crossing a carriageway (Public or Private)	5.9m Preferred	
Private drives, with access to other properties	Absolute Minimum: <ul style="list-style-type: none">• Dropwires 5.5m• Aerial Cables 5.6m	
Field Entrances and access to private land from Carriageway with unrestricted vehicular access		
Private drive (No access to other properties)	As high as reasonably practical, taking into account foreseeable hazards/risks and any requiremenets of the landowner.	
Private land (owned by the Property being served)		
Private Land being ‘Flown Over’	See Electronic Communications Code	
Footpath, Bridleway, Cycle route or Towpath	3.7m	
Railway, light railway, tramway or trolley vehicle system crossings	7.0m above the rails	NB: Railways wirh overhead power catenaries must NOT be crossed with Drop wire/Aerial cables
Railway crossings in goods yards where mobile cranes operate	9.1m above the rails	
Canals and other navigable waterways	Install as required by authorities responsible for waterways and shipping	
Non-navigable waterways	5.0m	
For any other circumstances	Contact the SA for Guidance	

GLOSSARY OF TERMS

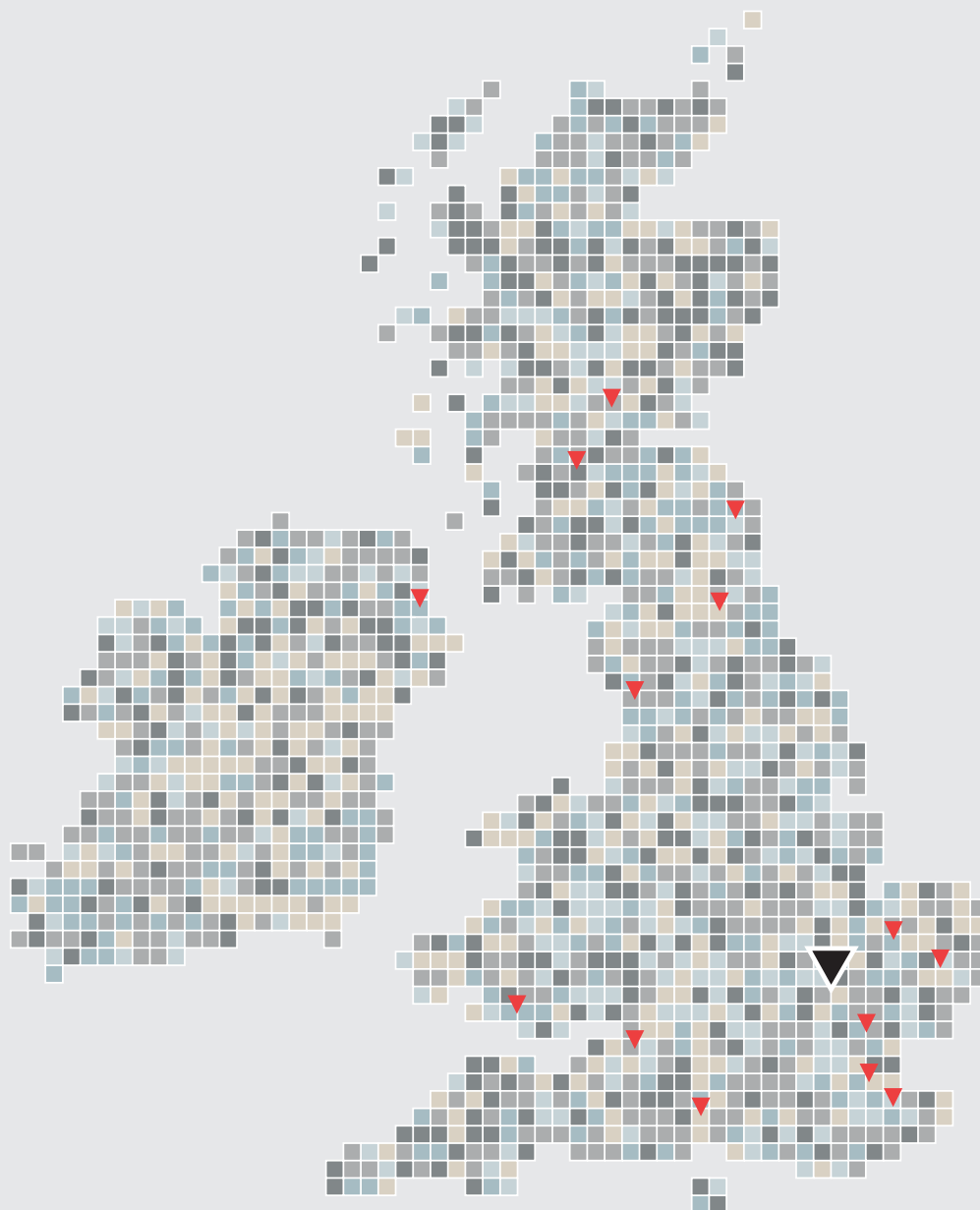
PIA - Physical infrastructure Access

OR - Open Reach

CP - Communication Partner

NOPS - Network Operators Passport Scheme

NOI - Notice of Intent



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