openreach

ISIS directive
For Openreach

SFY/HSH/D053

Issue 33, 03-Mar-2023
Use until 03-Mar-2024

Published by Openreach Governance and Assurance

Privacy- None

Minimum Standards for Excavation Works in Openreach

Including Planning, Hazardous Pipeline and Zone of Interest Process (HPP & ZOI)

About this document ...

Author

The author of this document may be contacted at:

Andrew Anderson
Accident Investigation & Operational Support Manager
Openreach (BX1)
Post Point HWH587PO Box 78961
1 Braham Street
London
E1W 9TD

Telephone: +447710018648
Fax:
Email: andrew.anderson@openreach.co.uk

Content approval

This is the Issue 33 of this document.
The information contained in this document was approved on 03-Mar-2023 by Joanne Benson, Senior Manager, Safety Programmes & Reporting

Version History

Version No.	Date	Author	Comments
Issue 33	03-Mar-2023	Andrew Anderson	Removal of typo's, clarification on the need for SSRF for works near HV and addition of EHV&UHV.
Issue 32	03-Mar-2023	Andrew Anderson	Full review and addition of field requirements
Issue 31	02-Feb-2023	Andrew Anderson	Change to appendix 11.4
Issue 30	10-Nov-2022	Andrew Anderson	Clarification in section 4.4
Issue 29	22-Mar-2022	Andrew Anderson	Change to snip link for openreach excavation process doc.
Issue 28	03-Dec-2021	Andrew Anderson	Addition of retention period for SSRF, rectifying errors.
Issue 27	04-Nov-2021	Andrew Anderson	Change of Approver. Addition of guidance on jobs with multiply work points where ZOI rules apply. Inclusion of Managing excavation process document and removal of LoB specific practices.
Issue 26	02-Aug-2021	Andrew Anderson	Change of author and approver. Further changes to HV policy.
Issue 25	23-Jun-2021	Tom Foord	Clarification on when a HV cable must follow the full PZOIA and SSRF process.
Issue 24	28-Jan-2021	Tom Foord	Addition of new Frame & cover process added (section 6) & appendix – 11.14 Addition of SITE MEETING REQUEST - OPENREACH STANDARD REFUSAL LETTER (SRL) – 2.5 & appendix – 11.5 Addition of Trust block – 2.11 & appendix – 11.10
Issue 23	18-Nov-2020	Tom Foord	Updated
Issue 22	03-Nov-2020	Tom Foord	Approval to dig – 2.4 description and instruction added. Also added as Appendix (10.4) Change in description – Gas pipes changed to High-Pressure Fuel Pipes through out document Inclusion of Oil and

			Chemical mains
Issue 21	13-Oct-2020	Tom Foord	Complete document review
Issue 20	13-Nov-2019	Luke Scott	Additional Section 7 Annex N SBUD - Northern Ireland
Issue 19	30-Oct-2019	Luke Scott	Additional Section 7 Annex L Morrow Hot Job Process
Issue 18	11-Jul-2019	Ellis Catherall	Amendment to sections 3.2 and 3.3 to include all lines of business in Openreach.
Issue 17	05-Nov-2018	Ellis Catherall	On the advice of Keith Woodroff amendments to Section 2 Planning for network acess, Section 3 Planner Responsibilities and Updated Section 7 Annex processes for Telent, Lightsource, Insourcing Civils and MJ Quinn
Issue 16	25-Jun-2018	Ellis Catherall	Section 3.1 Removal of 5 day greater than 75 metres date calculator concession and Amendment to Section 7 Annex 7.1 Poling Hot Job Process
Issue 15	23-Apr-2018	Ellis Catherall	Additional Section 7 Annex G updated , J and K procedures added
Issue 14	24-Apr-2017	Ellis Catherall	Update to Sections 1, 2 and 3 and Update Annex F Procedures
Issue 13	18-May-2016	Ellis Catherall	Update to Annex F - Openreach Civils Hot Job Process
Issue 12	16-Feb-2016	Ellis Catherall	Annex D & F Updated
Issue 11	26-Nov-2015	Ellis Catherall	Update to Annex B and C
Issue 10	06-Aug-2015	Ellis Catherall	Update to sections 3.2 and 3.3
Issue 9	28-Apr-2015	Ellis Catherall	Amendment to other gas suppliers control actions, change to governance arrangements and inclusion of Suppliers HPP procedures.
Issue 8	07-Mar-2015	Document Manager T	Document migrated onto new platform with no content change
Issue 8	6-Jan-2015	Ellis Catherall	Changes to planner responsibility and hyperlink update
Issue 7	28-May-2014	Ellis Catherall	Move to LSBUD
Issue 6	23-Feb-2011	E Catherall	Migration to ISIS

Table of Content

1 *Minimum Standards for Excavation Works in Openreach.*

1.1 Introduction

The purpose of this instruction is to highlight hazards relating to Hazardous pipelines and other high-risk assets in the vicinity of proposed Openreach works where excavation is required, it will detail the **MANDATORY** safe system of work to reduce the level of risk to Openreach employees, contractors, members of the public and to Openreach as an organisation from those works.

The agreed Openreach process document for the safe management of excavation tasks is included in the Appendix – section 9.11.

1.2 Scope

The process provided within this document applies to all excavation works where assets or high-risk plant may be present in a Zone of Interest. All excavation work by Openreach will follow this process to identify and control the risk of working in the vicinity of a high-pressure pipeline or high-risk plant.

Openreach partners carrying out excavation works on behalf of Openreach must have their own policy to manage the risks associated with work in the vicinity of high risk assets. For partners this document should be viewed as the minimum acceptable standard for managing those risks.

1.3 Failure reporting

Where the requirements of this document are not followed the risk of injury to Openreach people and the public increases significantly. Any instance where excavation works are planned, allocated or executed without all the requirements of this document being followed should be considered as a failure to follow a safe working practice; however, the level of risk and therefore the actions required to rectify will be defined by the point at which the failure is identified.

- Job Pack ready for issue doesn't contain all mandatory checks/ is incomplete in other way or is too complex for the work (see section 7) – but was identified by a quality check/AMS check or other pre-issue check. Record the issue on an AMS check (currently 812) and coach as appropriate with the job builder.
- Defective Job Pack (see section 7) issued to the field identified as defective and returned without any works being completed. Field team manager should raise a near miss – informing the control manager and the central safety investigation team. A thorough investigation should be completed to understand the reason a defective job pack was issued.

- Excavation works carried out without the requirements of this document being fully complied with. Field team manager should raise an incident, contact the BU senior safety manager. BU safety team to ensure that a full investigation is carried out (involving all relevant people) to ensure that a true root cause is identified and actions to rectify are carried out.
- 3rd party report of works in progress/completed affecting major hazard pipeline. Openreach investigation team, on notification, will take control of the investigation to ensure that impartial assessment of all potential failures is carried out.

2 Definitions

2.1 Zone of Interest (ZOI)

Openreach define the ZOI as an area where excavations, either wholly or partly, are planned within a 75-metre radius of a listed asset. This is identified when carrying out either a LinesearchbeforeUdig (LSBUD) search, or safe dig print searches through utility owner(s) direct portal(s).

2.2 Hot Job

Hot Jobs are any works that are in a Zone of interest of an asset deemed to be hazardous and requiring additional controls to be implemented before work may commence (see site supervision requirements form SSRFsection 2.3).

No work can proceed without further consultation with the hazardous asset owner(s) and all hot jobs must be quarantined from operations immediately.

All Hot Jobs will be managed by the Hot Job Team (Works allocation) who will oversee all works to ensure that they are planned and controlled before any job pack is authorised for release.

For job packs with multiple work points (WP) where one or more WP is affected by a ZOI the whole of the job must be quarantined and only released once the asset owner(s) have been consulted and actions e.g., site meeting completed.

2.3 Site Supervision Requirements Form (SSRF)

SSRF captures instructions from hazardous asset owner(s). This could be via a site meeting or written instruction. All excavation works carried out by, or on the behalf of, Openreach which are within a ZOI must have a completed SSRF attached to the job before releasing the job from quarantine. Where multiple assets have been identified, each asset must have a completed SSRF before release.

Some asset owner(s) may also provide their own Approval to Proceed or Permission to Work forms. Where permissions are provided, they must also be attached to the job pack before release.

SSRF forms must be retained within the completed job pack; job packs can be retained for up to 10 years for financial audit purposes.

2.4 Safe Digging Authority to Proceed Form

Any lines of business within Openreach that do not have a one stop IT allocation solution e.g., Deponet, Opal etc., will need to manually create suitable job packs (see section 7) when carrying out excavation tasks. These job packs should be accompanied by a Safe Digging Authority to Proceed Form (Appendix 9.4). The purpose of this form is to provide, at any time during the planning and excavation phases, a single easily understandable synopsis of any major or significant hazards affecting the excavation zone. The authority to proceed form should not be used to progress excavation tasks in the absence of rapid/timely responses from asset owner(s). Openreach has a duty to consult with any asset owner whose asset maybe affected by our work and reasonable time must be given for the asset owner to respond.

2.4.1 Jobs on hold

As far as practical excavation works should not be issued without a complete set of prints from any affected asset owner(s). There will be occasions where, for reason outside of our control, asset owner(s) suffer delays/don't respond to request for information and result in jobs being "on hold", HSG47 section "Planning the Work" provides some advice on this. Where jobs are on hold the Safe Digging Authority to Proceed form can be used, alongside where appropriate the SSRF, to record actions taken to manage the risk from specific assets and provide additional information on missing prints and specific control measures to the field team.

Note: Where a Safe Digging Authority to proceed form is used in the absence of a specific asset owner(s) print/response it is the responsibility of the job builder to make sure that information relating to the service including any surveys by/on behalf of Openreach are include on the form and specific controls to manage the risk form the missing information are documented.

2.5 Site Meeting Request - Openreach standard refusal letter (SRL)

Openreach is committed to preventing damage to asset(s) and will ensure that all excavation works are carried out in line with HSG47. If in accordance with PZOIA, (section 3.2) it is identified that a site meeting is not required but the asset owner requests one, the SRL (Appendix 9.5) is to be sent outlining Openreach's intentions.

2.6 LinesearchbeforeUdig (LSBUD)

LSBUD is a free to use online search service that any individual ("User") can use to check their works against multiple asset owners' ("Members") utility assets. These assets include hundreds of thousands of kilometres of underground and overhead pipelines and cables in the electricity, gas, high pressure fuel/oil, heating, water, and fibre optic networks.

Note: "Users" in Openreach are planners or job builders that create job packs for field use – field teams must not access their own dig prints. Openreach Northern Ireland see section 2.7 for SBUD requirements.

> **Warning:** Not all assets are registered on LSBUD, further searches may be required.

Section 4.3 provides information on the limited situations where an exemption exists and the process that must be followed in these circumstances.

2.7 SBUD (Search Before You Dig)

SBUD is a one stop system within Northern Ireland (NI) with a similar operation to the underground registers that are being trialled in other parts of Great Brittan currently. SBUD is a register of **all** utility assets within NI and is intended as a point of use system which is layer based. This means asset details are contained within the system and accessed by tapping or clicking on the asset position. Any print provided through the SBUD system will be missing the asset information that is currently contained on legacy prints used in other parts of GB. For this reason, excavations carried out where no dig activities are planned prior to the visit by the Openreach NI team will not be required to be returned to desk teams to create a job pack. However, where works are identified to be in the ZOI of a HPP works must be stopped and the task passed back to ensure that all relevant approvals are received.

> **Warning:** All dig activities within 75mtrs of a Hazardous asset must be passed to the Hot Job Team and the full requirements of the Positive Zone Of Interest Actions (PZOIA) section 3.2 completed.

Where there is an expectation that excavations activities will be required (works in "hard" surfaces, poling activities, planned network expansion, etc.) that task must be fully planned, and appropriate job packs created. A specific exemption to the job pack requirement has been made for SBUD users (section 7.1). Where a job pack is created this will not remove the need for the attending Openreach people to check the SBUD system prior to any excavation works commencing.

2.8 Hazardous Pipeline

A Hazardous pipeline is defined within The Pipeline Safety Regulations 1996 and relates to high pressure pipelines.

This is further split into **Major Accident Hazardous (MAH) pipelines** (mainly gas and explosive fluids); petroleum pipelines are covered under the same regulations as standard duties.

Hazardous pipelines are usually buried between 0.9 and 1.5 metres underground and can be as shallow as 200mm in some areas; these are usually identified by surface marker posts.

Contact with the Hazardous Pipeline owner(s) **MUST** be made before any excavation is started within the ZOI (75-metre radius). The site supervision requirement form (SSRF), **MUST** be used if intending to work near any hazardous pipelines, including Local High Pressure and Intermediate Gas Pressure mains, to record instructions and permissions communicated by the asset owner(s).

2.9 Major Accident Hazardous Pipelines

These are used to transfer a wide range of fluids including oils and other petrochemicals, ethylene, oxygen, nitrogen, and similar industrial gases as well as several other chemicals. These pipelines can sometimes be found in residential areas. They run across rural areas and often near chemical and petrochemical installations.

Cross-country pipelines (including Major Hazard Pipelines) are also found in agricultural land. They usually cross-roads, railways, and motorways etc. at right angles.

These pipelines will usually be welded steel and normally protected by:

- Coaltar/bitumen (coloured black sometimes with traces of white lime wash) or
- Polyethylene cladding (yellow) or,
- Fusion bonded epoxy powder (usually green or beige).

At site level, signs indicating the presence of buried pipelines should be looked for. For example, marker posts often show where pipelines cross-roads and other boundaries. Both the landowner(s) and local authority should be contacted for further information. **Anyone planning an excavation in these areas must contact the relevant pipeline operator before starting work.**

> **Warning:** Important: Please note where pipelines run across fields, never assume they run in straight lines between fence line pipeline marker posts.

It is likely that **no excavation work would be allowed within seventy-five metres** (75m) either side of these pipelines. Contact must be made with the owner(s) of the pipeline. In addition, Openreach classifies Extra high voltage (EHV) electrical cables (>275kv) and high pressure/large diameter water pipes as hazardous pipelines.

2.10 Soft Dig Activities

Any excavation activity predominantly, but not limited to works in a customer's premise where the excavation doesn't require disturbing any mechanically compacted surface or sub-base (flagged area, block paving, asphalt, compacted gravel, etc.) or the breaking of a

cement/concrete surface can be considered to be a soft dig. Soft dig excavation activities must only be completed using none powered hand tools. No soft dig activities should take place in the ZOI of an identified hazardous asset or in the vicinity of HV electric cable of 33kV or greater (see PZIOA section 3.2).

> **Warning:** Some verge works – specifically verges without kerbs – will require compaction to carriageway standards for the parts of the verge that support the carriageway. If there is any doubt over works in verges without kerbs impacting the stability of the road **stop** and seek advice.
>
> **Warning:** On no account should soft dig works interfere with any roadside kerbs including kerb haunching's.

2.11 Electric Cables

Electrical cables both underground and overhead pose significant danger through direct contact and arcing of electricity. These cables can be found in any geographical area.

Low Voltage (LV) 50V – 1,000V

High Voltage (HV) > 1,000V

2.11.1 Extra & Ultra High Voltage Cables

There exist, in certain areas, a small number of EHV & UHV cables these cables range in voltage from 275kV to over 500kV. These cable must be treated as major hazard assets and follow the full PZOIA process.

2.12 Gas Pipes

Depending on the activity being undertaken and the gas mains or services you are working within the vicinity of, there are different safe distances that MUST be adhered to. The response from the affected gas distributor will contain specific instructions on what further actions need to be taken.

These gas pipes can be found in any geographical area.

Gas mains in the United Kingdom fall into the following types:

High pressure mains operating between 7bar and above averaging 66 bar (1000PSI)

Intermediate pressure mains operating between 2 and 7 bar (29PSI – 101PSI) and constructed from either steel or polyethylene pipe.

Medium pressure mains operating between 75mbar and 2bar and constructed from either steel. polyethylene cast iron or ductile iron pipe.

Low pressure mains operating at approximately 30mbar and up to pressures of 75mbar and constructed of polyethylene, cast iron or ductile iron pipe.

High pressure and Intermediate pressure mains MUST follow the Hot job process, medium and low follow **HSG47**

2.13 Water

Medium, High pressure and Large Diameter Water Pipelines can if damaged, cause excavation collapse, damage to property and drowning. These pipelines can be found in any geographical area.

2.13.1 Thrust blocks

Commonly found in water and drainage applications, a Thrust block is a concrete pipe restraint. The block is utilised to prevent pipe joints separating under the force of carried fluids traversing a bend or tee junction. If damage is caused to the Thrust block you must inform the asset owner immediately.

2.14 Telecom services

Telecoms: Dark fibre, Fibre optic and copper cables or similar.

3 *ZOI policy*

3.1 Zone of Interest Process

The purpose of this process is to give guidance when identifying assets within the zone of interest and must be used in conjunction with the “Hot job” Process including **ALL** results from LinesearchbeforeUdig (LSBUD) and any local utility providers not provided by LSBUD.

> **Warning:** Before issuing any works out to the field, the job pack must contain safe dig prints (full colour where provided) which have been reviewed and risk assessed by your organisation which determines if it is safe to proceed.

Safe dig prints **MUST** include a minimum of one positive or negative LSBUD search **AND** three of the high-risk assets for the proposed excavation area which are:

- Gas
- Electric
- Water

Should an asset owner(s) not provide safe dig prints; you **MUST** demonstrate and record you have attempted to make contact through the asset owner(s) approved process, allowing suitable time for the asset owner(s) to respond. The evidence of this **MUST** be obtained and

uploaded to the job pack (see section 2.4.1). You may then proceed with extreme caution utilising **HSG47** practices.

All employees and suppliers **MUST** ensure that at the Planning and Operational stages they take in to account the following specific situational requirements and review **ALL** LSBUD and service prints advised within this document.

LSBUD is used to check for underground utility assets. These assets include Gas, Electric, Water, High-pressure fuel, and Fibre optic networks.

When it is required to replace a frame and cover LSBUD provides a service “BT Lid and Frame”. This will only be used where no excavation is required This service will inform asset owner(s), that you are carrying out works in the vicinity of their asset, but works will not place them at risk of damage. Following and on-site risk assessment it is identified that excavation is required, a FULL LSBUD search is required. Please see appendix (9.13 Frame and Cover Process)

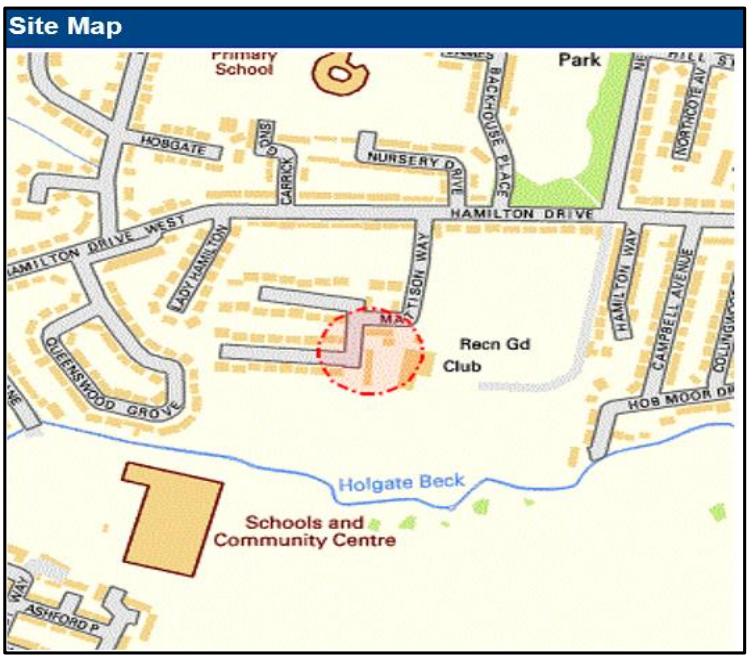
Additional points to note:

Not all asset owner(s)’s are registered with LSBUD.

The ‘HOT JOB TEAM’ (Works allocation) must ensure they check all utility prints to verify there are no high-risk assets. The Zone of interest process gives guidance when identifying assets within the ZOI.

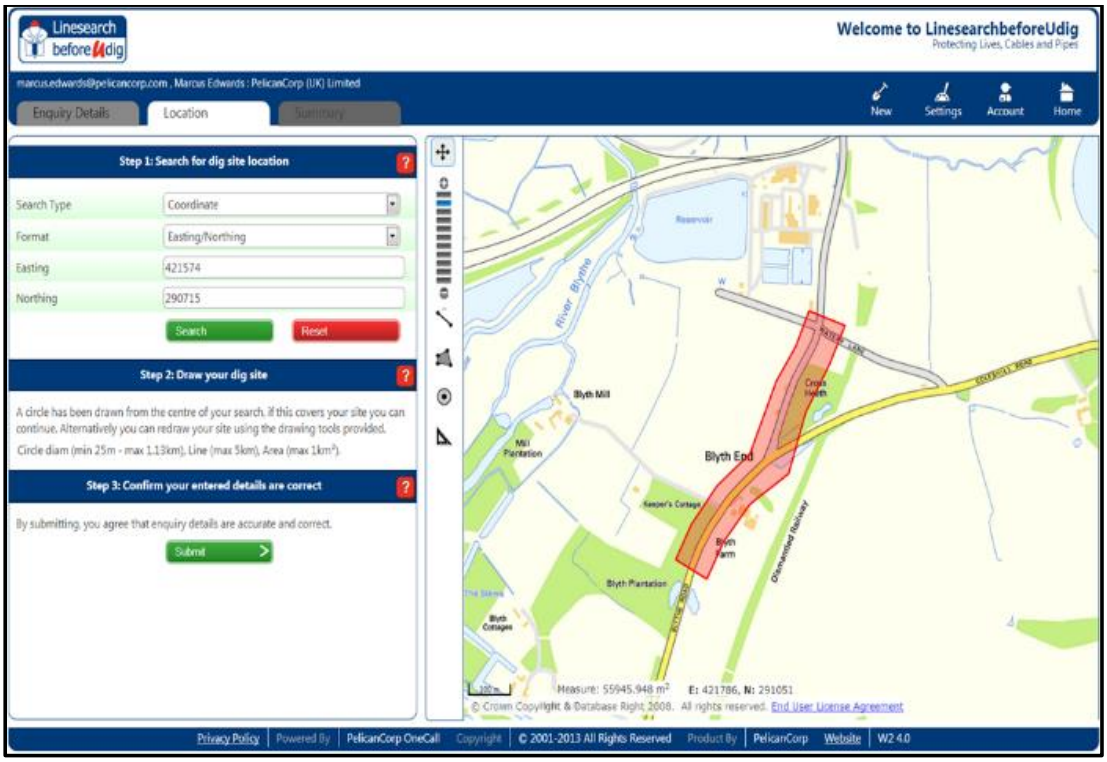
3.1.1 For all single points of work

The circle search tool must be used, with a 100-metre diameter circle around your searched location. This 100-metre diameter search distance includes a hidden 25-metre buffer zone around the circumference which increases the search distance to 150-metre Diameter equal to a 75-metre radius.



3.1.2 Multi point and long length trench work

For excavations, (e.g., duct routes, direct in ground cabling, track work) greater than 50-metres length or multi point excavations (poling multiple poles, excavation of multiple blockages) the preferred search method is to use the polygon search tool along the length of the route set at the width of the road incorporating a 25-metre buffer zone.



3.1.3 Northern Ireland SBUD use

All Openreach people involved in planning or delivery of excavation tasks in Northern Ireland must have access to and refer to the SBUD system. The mandatory requirements for the use of the SBUD system for excavation are included in section 9.12.

For further information or queries about the SBUD system and its use contact: Lavery,P,Paul,BIF1 R <paul.lavery@openreach.co.uk>

3.2 Positive Zone of Interest Actions

3.2.1 High-Pressure Fuel Pipes (including chemical pipelines)

All HPP's within a ZOI will require further consultation with the asset owner; no work in the vicinity of the HPP(s) is to be undertaken until agreement on safe method has been reached with the asset owner(s) and documented on the SSRF.

Where there are multiple asset owners an SSRF is required for each asset owner – the conditions in the SSRF's **must not** be contradictory.

The SSRF(s) can then be added to the job pack and work can proceed in accordance with the conditions in the SSRF and following HGS47 guidance.

3.2.2 Intermediate-Pressure (IP) and High-Pressure (HP) Pipeline

The response from the affected gas distributor will contain specific instructions on what further actions need to be taken – these will range from provision of the prints with no further action up to requiring a site meeting. The job builder/ hot job team must ensure that they have read and understood any additional request from the gas distribution operator and make sure that it is actioned promptly.

IP: Mains operating between 2 and 7 bar and constructed from either steel or polyethylene pipe

HP: Mains that are above 7 Bar

Due to the risks, they pose, the following shall not be undertaken without consultation with the gas pipe owner(s):

- Work within 75 metres Intermediate (IP) and High Pressure (HP) Pipelines
- Piling or vertical boring within 15 metres of any gas pipe
- Excavation work within 10 metres of any above-ground gas installation
- Building a manhole, chamber or, other structure over around or, under a gas or Oil pipe
- Work which results in a reduction of cover or, protection over a pipe
- Work close to pipe restraints and/or, thrust blocks close to gas mains

Note: If welding or, other hot work involving naked flames is to be carried out within 10 metres of exposed gas plant, the plant owner(s) shall be asked to check the atmosphere before work begins and monitoring shall continue during the work. Care shall be taken to ensure that no damage occurs, particularly to plastic gas pipes or to the protective coatings on other gas pipes.

Record the search reference details in the job pack. The work can ONLY proceed once direct consultation or instruction from the asset owner is obtained, details are to be recorded on the SSRF which MUST be added to the job pack. You may then proceed using safe dig prints and safe digging techniques as instructed by the asset owner(s).

3.2.3 Gas main below 2 Bar

Note: For some GNO's in Northern Ireland the requirement is for pipelines of 4 bar or greater. Planners and field teams in Northern Ireland must consult the SBUD document (section 9.12) to confirm the intermediate operating pressure for the gas asset owner affected by their works.

The response from the affected gas distributor will contain specific instructions on what further actions need to be taken – these will range from provision of the prints with no further action up to requiring a joint site visit. The job builder/ hot job team must ensure that they have read and understood any additional request from the gas distribution operator and make sure that it is actioned promptly.

Record the search reference details in the job pack including any action or requirement from the asset owner. The work can proceed with caution using safe dig prints and safe digging techniques.

3.2.4 Electric Cables

3.2.4.1 High Voltage (HV) above 1000v

Underground cables pose significant danger through direct contact and arcing of electricity. These cables can be found in any geographical area.

3.2.4.2 High Voltage (HV) 33kV and greater

Record the search reference details in the job pack. Where an underground HV cable is expected to be greater than 5mtrs from the maximum extension of the proposed excavation works (this should be checked on GeoHUB); the work can proceed with caution with a warning note (the safe digging authority to proceed form can be used for this) attached in the job pack. For works where the HV cable, of 33kV or greater, will be less than 5mtrs from the excavation works these jobs will be considered for soft dig teams as "Hot Jobs", and passed to OR civils or a civils supplier, there will though be no requirement to contact the asset owner – the lightning bolt watermark must be applied to the job to warn of the proximity of the HV cable.

Caution: This means that BU's without an approved electronic workflow system, such as Depotnet or Opal, for hot jobs will need to pass the job to an approved supplier or Openreach civils.

You may then proceed using safe dig prints and safe digging techniques.

3.2.4.3 Electric cables below 33kV

Record the search reference details in the job pack including any action or requirement from the asset owner. The work can proceed with caution using safe dig prints and safe digging techniques.

Caution:	A notice of the proximity of the works to an underground HV cable must be added to the Authority to Dig form sent to the excavation team for soft dig tasks.

3.2.4.4 Extra & Ultra High Voltage Cables

These cable must be treated as major hazard assets and follow the full Hot Job process. Work should only after full consutation with the asset owner. An SSRF must be include; detail all precautions for the protection of cable required by the owner must be documented.

3.2.5 Water: Medium, High pressure and Large Diameter Water Pipes

Medium, High pressure and Large Diameter Water Pipelines can. if damaged, cause excavation collapse, damage to property and drowning. These pipelines can be found in any geographical area.

Water mains: Low pressure main or prints not provided by asset owner(s)

Record the search reference details in the job pack including any action or requirement from the asset owner. The work can proceed with caution using safe dig prints and safe digging techniques**.**

Should an asset owner(s) not provide safe dig prints; you **MUST** demonstrate and record you have attempted to make contact through the asset owner(s) approved process, allowing suitable time for the asset owner(s) to respond. The evidence of this **MUST** be obtained and uploaded to the job pack (see section 2.4.1). You may then proceed with extreme caution utilising **HSG47** practices.

3.2.6 Telecoms services

Telecoms: Dark fibre, Fibre optic and copper cables

Record the search reference details in the job pack. The work can proceed with caution using safe dig prints and safe digging techniques. For overhead proceed using safe working practices.

3.2.7 Site meetings

If in accordance with PZOIA requirements contained in this section it is identified that a site meeting is not required but the asset owner requests one, the SRL (Appendix 9.5) is to be sent outlining Openreach’s intentions

3.3 Hot Job Process

Where a planned excavation is within the ZOI of a hazardous asset and with a requirement by that asset owner(s) for additional controls to be implemented, then Openreach, specifically the Works allocation team, will pause the BAU process for Civils job pack distribution.

All parties involved within the work will be informed and no further work will be undertaken until expressly advised and approved by the 'Hot Job Team'. At this point the Job Pack will be quarantined from operations and strictly controlled by the Hot Job Team based in Works allocation.

The Hot Job team is to refer to the Positive Zone of Interest Actions (PZOIA) process to determine whether the job requires further consultation with the asset owner or if the job can proceed using safe digging techniques following HSG47.

If the Hot Job Team controller using the PZOIA determines that the task requires further consultation, they will liaise with the appropriate Local Authority and asset Owner(s)/Pipeline Operator and contact the asset Owner(s)/Pipeline Operator at least 7 days before the start of any work.

These tasks **MUST** not be allocated to Service Delivery, Fibre Network Delivery or Chief engineer teams. They **MUST** only be allocated to our insourcing Civils, Poling Teams or our Suppliers after following the below instructions.

Works will not commence until information is received and instructions from the asset Owner(s) have been complied with. If a site meeting takes place, details are to be recorded on the SSRF. If this information, for any reason, is not available prior to works, the Job Pack will **NOT** be sent and will remain quarantined.

The search will identify positive and negative assets as part of the LSBUD. A copy of the search **MUST ALWAYS** be contained within the job pack including any instructions as to how and when the works are to proceed. If for any reason this information is not contained within the job pack, works are not to proceed.

If a site meeting is requested by the hazardous apparatus asset owner, the Hot Job Team will arrange for a competent Hot Job Monitor to meet with the respective asset owner(s) and where necessary, the Highways Authority, onsite. The meeting will include arrangements for specific controls to be in place of the identified plant prior to commencement of works.

All instructions and precautions e.g. exclusion zones, will be adhered to with respective plant prior to any work commencing.

Note: Line searches are only valid for 28 days.

Process notes:

Safe Dig prints **MUST** be in the job pack.

HOT JOBS must be easily identified with a Skull and Cross bones (Appendix – 9.2) on the front page, this image must then watermark the document in its entirety. A Warning Skull and Cross Bone Notice will be issued with Job Packs that are within the vicinity of a hazardous assets.

The safe dig SPOC for query or, any other issue, is the Hot Job Team

The Hot Job Monitor that completed the initial site meeting or an alternative Hot Job Monitor that has been well briefed on agreements made at the initial site meeting, **MUST** be on site during any works that are near of any Hazardous Pipelines to ensure that a Safe System of Work is being adhered to and where instructed on the SSRF, a representative from the pipeline asset Owner(s) must also be on site.

ALL operatives working for or on behalf of Openreach **MUST** be briefed on the above information.

4 *Network Planning*

4.1 Planning for Access Network Work

4.1.1 Manual Planning

It is mandatory that all works originators (i.e. the person raising an estimate) planning work that involves excavation carry out an LSBUD search on the planned routes for the presence of Hazardous apparatus before issuing jobs.

All work originators must complete CBT **ORLBD001** which explains the process to follow when completing a LSBUD search and how to interpret results from the enquiry.

Each job pack must contain clear evidence that a LSBUD search has been completed before the estimate is issued.

The search distance for the work activity must be set at a minimum distance of 50m either side of the work location which includes a 25-metre hidden buffer zone therefore searching 150 metres in diameter total.

For proposed longer excavation distances i.e. proposed duct routes, excavation of multiple blockages and installation of overhead pole routes (i.e. more than one pole), LSBUD has an additional Polygon search tool (see section 7, Zone of interest process) which allows the enquirer to search along the linear route of the proposed work incorporating a set buffer zone.

On issue of the estimate, the works originator will add the following to the job pack:

- If the Linesearch result returns “Not in Zone of interest” the enquiry number must be recorded in the notes field along with the statement “**LinesearchbeforeUdig Not in Zone of interest, enquiry LS-XXXX-RV-146-XSI”, w**ith a clear statement on the grid reference(s) used to produce that return.
- If the LSBUD result returns a positive **“Within the zone of interest”** associated with a known hazardous apparatus the facing sheet should

have a clear warning **"Within ZOI**" and the details of the LSBUD enquiry should be detailed on a dedicated sheet within the job pack.

Additional time should be added, a minimum of an additional 5 working days allowed in the Required by date (RBD) calculation. The supplier is required to run the check again at the point when they are about to complete the works and will use their confirmation email as part of their validation of works checking procedure.

- Use of JPPA to prepare works estimates and their job packs is strongly recommended because it ensures compliance with this process, as well as being more efficient.
- On building the estimate into N/ORWMT. The "**Engineering Sensitive**" Flag must be shown as Yes. On calculating the RBD or the estimate 5 days should be added to the calculated date to allow the supplier to manage accordingly. In using the RBD Calculator the ZOI details should be added in the input screen.

4.1.2 Robotic Planning

Where works estimates are created by automated systems it will not be possible for an initial LSBUD searches to be completed. In these cases, all the requirements in 4.1.1 will fall to the validation team in the BU or partner receiving the estimate. No works requiring excavation are allowed to proceed past validation without a competent person completing all required LSBUD and other utility searches.

Where an estimate is identified as in the ZOI of a hazardous asset and the BU or partner do not have an approved electronic workflow system, with an assessed method to quarantine the estimate, the estimate should be returned to the originator for manual planning and re-issue to a BU or partner suitably assessed to work on ZOI tasks.

4.2 Re-planning or deviation of works: process key stages

Where a deviation from the original planned works is needed or the job has to be re planned in its entirety e.g. cabinet position/pole/box/duct having to be moved more than 3-metres from the original planned position and has been confirmed as positive within the ZOI; no work will be undertaken until the following occurs:

Warning: Repeat the ZOI process with new LSBUD and safe dig print searches, job **MUST** go back to works allocation for this to happen.

Warning: Where the excavation is NOT within the ZOI the same LSBUD search may be used to a distance up to, but no more that 25 metres so long as the safe dig prints cover the same area.

If your role involves direct contact with our partners and their subcontractors and there is any deviation from the original task allocated to them, then the task must go back through the Tier 1 Partners validation process to ensure all the correct permissions, way leaves and safe

dig prints are associated e.g. High pressure Pipelines, safe dig prints, Network Rail, Highway Authorities etc.

4.3 Exemptions

4.3.1 Frame and Cover Process

LSBUD provides a service for works to replace a frame and cover in the easement of an HPP or another high-risk asset (LSBUD works type “BT Lid and Frame”). This must only be used where there is no requirement for excavation. This service will inform asset owner(s), that you are carrying out works in the vicinity of their asset and that works will not place them at risk of damage. Following an on-site risk assessment, should it be identified that excavation is required, you MUST complete a FULL LSBUD search and pass to the Hot Job team. Please see appendix (9.13 Frame and Cover Process)

4.3.2 Pole testing

Pole tests requiring an excavation are generally only 300mm deep and around visible existing plant. In addition to the safe digging practices contained in HSG47.

- Pole tester must complete a visual inspection of the area surrounding the pole for pipeline markers (section 9.7); at least 50mtrs around the pole.
- Where a pipeline marker is discovered –
  - Contact the asset owner and inform them of the work to be carried out. Stating the exact location of the pole and the size and depth of the excavation.
  - If permission to proceed is given by the asset owner representative; record the name of the asset owners rep, the reference number provided for the work and the time and date of the call in the notes field for the pole.
  - Where the asset owner doesn’t provide a reference number the pole tester must request an e-mail confirming the permission to dig. This e-mail must be kept locally by the pole tester or with the pole test control in a specific folder marked as “HPP responses”.
  - **No excavation is to be carried out until the e-mail is received.**

If the asset owner declines permission to dig the pole test must be returned to control – requesting that further contact is made with the asset owner.

4.3.3 Buried boxes

A box will be considered to be buried where no part of the frame, cover or edging is visible without disturbing the ground – including overgrowth by vegetation. Where a box can be considered to be buried the requirements of this policy must be followed. Where the location

of the box can be visually identified prior to any excavation activity taking place work to clear vegetation overgrowth, only, can be carried out without any of the requirements of this policy applying. However where the works to clear the box require the removal of a changed ground surface, either natural or manmade, all requirements of this policy apply.

5 *Roles and Responsibilities*

5.1 Openreach Work Originator Responsibilities

As work originators, you must give as much information as possible about any difficulties that may be encountered. All dangers and hazards must be highlighted, and where possible plan the work to minimise any risk.

Should a search find that a pipeline or HV electric is in the vicinity, the work originator must:

- Review the planned scheme to see if a Hazardous Pipeline or HV electric cable is in the proposed route of the works. If it is, you should consider re-planning the scheme e.g. laying duct on the opposite side of the road or erecting the pole in a different position.
- In the "Zone of Interest" but less than 75 meters' (including the hidden 25 metre buffer zone), allow 5 working days on the Required by Date.
- On the Data Input screen of JPPA the work originator should select YES from the Engineering Sensitive (Yes/No) drop down.
- On the JPPA Data Input screen, you need to enter the line search reference and select (Yes/No) as appropriate to indicate if in Zone of Interest.
- In the notes field enter normal information but also enter 'WARNING WITHIN THE ZONE OF INTEREST OF HAZARDOUS PIPELINE FOR (enter name of pipeline operator) allowing additional 5 working days' notice for the necessary meeting with the asset owner to take place. OR when the build of the job pack is managed through JPPA, the sheet created by the automation is fully compliant.

Should the work originator not be using Auto Load for any reason, the work originator is responsible when building the estimate to check that the Engineering Sensitive marker is checked as appropriate and for creating a place holder in ORWFMT where the line search details must be added.

5.2 Service Delivery, Fibre Network Delivery and Chief Engineer LOB's (Excluding Insourcing Civils and Poling Teams)

Only Openreach line of business with an approved electronic workflow/allocation system are permitted to carry out any "Hard Dig" excavations. Other BU's must pass the job to Openreach Insourcing Civil Team, Openreach Poling or Openreach approved Civils Suppliers.

No lines of business within Openreach are permitted to carry out any "Soft Dig" excavations where there are hazardous assets within the Zone of interest, or where there is a requirement by that asset owner(s) for additional controls to be implemented before work may commence. These could be; instruction to hand dig only, a site meet, isolation of an asset or monitored excavation.

If there are other assets within the Zone of Interest, you must refer to the PZOIA process within this document which will give you further instruction - i.e. LV cables, then work can proceed in accordance with **HSG47** safe digging practices. However, the Zone of Interest process must be followed to identify a minimum of the three high risk assets (Gas, Electric and Water)

If in accordance with PZOIA, it is identified that a site meeting is not required and the asset owner requests a meeting, the SRL (Appendix 9.5) is to be sent outlining Openreach's intentions

If during the Linesearch stage or whilst on site, the engineer finds pipeline markers within 75M of the proposed worksite the job **MUST** be stopped and passed to Openreach insourced civils or our current approved Civils suppliers

No excavation can begin until the engineer on site has double checked the LSBUD prints to ensure that they are not working within the Zone of Interest and they must have completed a visual search for pipeline markers.

They must also check the Safe Digging Authority to Proceed form, safe dig prints and use a CAT & Genny to check the area for other hazards, in accordance with **HSG47** safe digging practices.

5.3 Service Delivery, Fibre Network Delivery and Chief Engineer Works allocation

The works allocation/desk-based co-ordinators must complete a new LSBUD search, ensuring they have a **MINIMUM** of one LSBUD search contained within the job pack and that the search has been completed for the correct location. Any LSBUD or utility print over 28 days old must be renewed. Ensuring that all safe digging information is refreshed at the same time reduce confusion at the job build stage.

Before issuing the job pack to Openreach direct labour teams, the allocator must also as part of the Hot Job Process obtain and review **ALL** Safe Dig prints to check if the proposed work is in the vicinity of any of the three high risk assets (Gas, Electric and Water). If the line of business within Openreach does not have a one stop IT allocation solution e.g. Deponet, Opal etc they will confirm that any risks from those assets are recorded on the Safe Excavation Authority to Dig form (Appendix 10.4). If so, you have a duty to return the job to the Hot Job team to make contact with asset owner and seek their permission before executing the work which may include the need for onsite supervision by the asset owner.

Medium and low gas pressure pipes can be safely worked on in the vicinity using safe digging techniques which incorporates use of safe digging prints, use of CAT and Genny, excavation of pilot holes and hand dig near the asset, in accordance with **HSG47** safe digging practices.

Any job within the ZOI of a High, Intermediate gas, Oil, Chemical main or HV cables must be passed to the 'Hot Job' team within allocation to manage.

The 'Hot Job' team will be responsible for registering the job, contacting the asset owner, arranging any site meetings, recording the output of meetings and ensuring that the requirements of the asset owner are met. A copy of the approved record of the joint site meeting document can be found Appendix – 9.3 titled "Site Supervision Requirement Form".

Note: Where controls are suitably set up the actual arrangement required can be completed by other members of the work allocation team. The Hot Job Team with though retain the responsibility for ensuring that all required meetings take place, that all responses are returned, and that all documentation is completed to the required standard.

If in accordance with PZOIA, (section 3.2) it is identified that a site meeting is not required but the asset owner requests one, the SRL (Appendix 9.5) is to be sent outlining Openreach's intentions

5.4 Hot Job Team within allocation

All members of the Hot Job team and their supervisors must complete CBT **ORLBD001** which explains the process to follow when completing a LSBUD search and how to interpret results from the enquiry.

Responsible for holding all Zone of Interest works and orders affected by hazardous apparatus as "Hot Job" until permission to proceed has been gained from the asset owner(s).

The Hot Job Team will make an enquiry to the affected operator, to either obtain permission to proceed, or initiate the Hot Job Process.

If in accordance with PZOIA, (section 3.2) it is identified that a site meeting is not required but the asset owner requests one, the SRL (Appendix 9.5) is to be sent outlining Openreach's intentions.

They will ensure the holding of Hot Jobs as "Hot Job" until the appropriate Hot Job process has been followed by all parties and will jeopardy manage all Hot Jobs.

The Hot Job team must keep all orders within the internal system Job status “Hot Job” up to date at all times.

Responsible for identifying and separating the assets recorded on LSBUD or other utility plant searches that are deemed to be hazardous apparatus and those others outside the hazardous apparatus process i.e. fibre cables where work can safely commence using safe digging techniques in accordance with HSG47 guidelines.

The Hot Job team are responsible for creating a clear basis of comments on internal system which can be followed by any party wishing to look at the history/progression of an order and are also responsible for providing updates and jeopardy managing any outstanding orders in the work stack.

> **Warning:** It is essential that where there are multiple assets within the ZOI that each asset is dealt with separately and the job pack is not released until there is a SSRF form for every asset.

5.5 Contractor process

All contractors who carry out digging on behalf of Openreach must implement a ‘Hot Job’ process. Once agreed with Openreach these processes must not be modified without the authority of the Openreach Director of Health & Safety. All contractors must notify Openreach if they are using a 3rd party to carry out line searches. These processes are subject to regular audit by the Openreach contractor safety team.

6 *LinesearchbeforeUdig (LSBUD) results summary*

After submitting the search, you will be taken to a page summarising the results of your enquiry:

(a) - **Affected LSBUD Members (The Red box)**

This list summarises the LSBUD Members that have assets registered on the LSBUD service in the vicinity of your search area. They are broken down into two types:

- **“Await Response”** - you will receive a response from the LSBUD Member shortly.
- **“Email Additional Info”** - email the LSBUD Member with further information about the works you intend to carry out, via the email as shown in the summary.

  No works should be attempted before responses from all the listed asset owners are received and assessed by the work allocator or hot job team member.

(b) - **Not affected LSBUD Members (The Green box)**

This list summarises the LSBUD Members who do not have assets registered on the LSBUD service in the vicinity of your search area.

These asset owners will not be informed by LSBUD.

(c) - **Non LSBUD Members (The Blue box)**

This list summarises non LSBUD Members who may have assets within your search area. Please note this list is not exhaustive, and all details are provided as a guide only.

> **Warning:** It's **your responsibility** to identify and consult with all asset owner(s) before proceeding with any works.

Important: Due to the risks they pose, if any of the three High-Risk asset types (Gas, Electric and Water) are **NOT** identified/provided by an LSBUD search (the Red box). Works **MUST NOT** be undertaken; until consultation with any missing asset owner(s) is complete or sufficient auditable proof of efforts to obtain safe dig prints is available.

Once discovered the responses must follow the PZOIA process to determine if high risk asset(s) are in the ZOI, where high risk asset(s) exist the asset(s) MUST be marked as a Hot Job and quarantined. Openreach categorises **all hazardous pipelines and a selection of commercial risk assets as a Hot Job.**

All pipelines covered by Line Watch are recorded on LSBUD. By using the LSBUD service, the pipeline operator is alerted and will make an appropriate response, this is critical when work will be in the pipeline easement.

LSBUD Example of returned search results (See appendix – Useful documents: LSBUD Results)

6.1 High-Risk assets Not identified by LSBUD

LSBUD search is **not a guaranteed way of identifying all assets and hazards** associated with them. Should any of the three High-Risk assets (Gas, Electric and Water) required not be present, it's the **duty of all Openreach allocators and Openreach suppliers to carry out an in-depth search** using the local network asset owner(s) to obtain the relevant site arrangements, supervision and prints to safely carry out the task.

> **Caution:** Should an asset owner(s) not provide safe dig prints; you **MUST** demonstrate and record you have attempted to make contact through the asset owner(s) approved process, allowing suitable time for the asset owner(s) to respond.

The evidence of this **MUST** be obtained and uploaded to the job pack. You may then proceed with extreme caution utilising HSG47 practices.

6.1.1 Dial Before You Dig

If you're planning to carry out any excavation works or development, you **MUST** contact all the relevant utility companies to find out what other pipes, cables, wires, lines or apparatus exist near the excavation site.

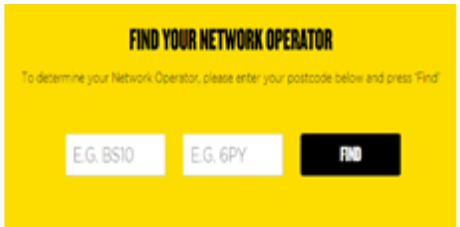
The contact details can vary depending on whereabouts in the UK you're intending to dig. If you're unsure which company looks after the planned geographic area of work, then start with the following to **assist** in identifying the three High-Risk asset owner(s) for Gas, Electric and Water.

Gas

Most of the UK's gas is delivered by Cadent Gas, Northern Gas Networks, SGN or Wales & West Utilities. To find out who supplies gas within your excavation site, go to Fin++/+d My Supplier

Information can be found using the **Energy Networks Association** ENA Who Is My Network Operator?

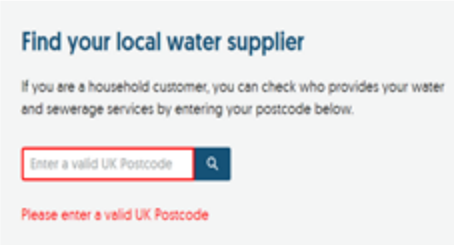
Electricity



The UK electricity network is split into regions and each region has a local distribution company. They keep a record of who supplies electricity to every home in their area. If you need to find out who your supplier is then you need to contact your local distribution company.

In addition to ENA Who Is My Network Operator? you could search the Find My Network Operator search tool at Power Cut 105

Water For guidance with identifying your local water supplier you could use water.org.uk



7 Job Pack Standards

The job pack is the main method of getting safety information relating to the excavation to the field team. It is therefore critical that the job pack meets a standard that provides the information in a concise, simple, and easily understandable way, Appendix 9.11 has a section on the preferred layout of a job pack.

In all case though a job pack must contain only –

- The latest version of the work instructions (containing the original LSBUD search)
- The latest LSBUD search – where previous searches have been completed, they should be removed from the job pack before being issued to the field – not applicable to Openreach NI.
- In date utility prints for, as a minimum gas, water, and electricity; older expired versions should be removed. For Openreach NI see section 7.1.
- Where utility prints are missing a safe digging authority to proceed form.
  - Unless the job pack is being distributed outside of a managed IT system (Depotnet/Opal) – in these cases each job pack must have a safe digging authority to proceed form attached.
- Where required an SSRF form for each asset owner with hazardous assets in the ZOI. The SSRF should have all the appropriate sections comprehensively completed, providing as much information as possible on the agreed methods for working in the vicinity of the hazardous asset.

7.1 Job packs for SBUD users

The SBUD system in use by Openreach NI for the provision of underground asset information does not, when provided as an offline version (PDF, printed copy, etc.), contain information on the makeup of the asset. This will mean that in all cases where excavation is required by Openreach NI teams the engineers on site must complete a point of use search for assets in the area to enable access to critical asset information. This will effectively mean that the inclusion of utility prints in a job pack will add little value; though the duty to, where possible, plan out risk remains. Those involved in planning or building task that contain excavation activities must continue to carryout searches and checks of the area of the excavation for high risk assets – a completed "Safe Excavation Authority to Dig" form should be completed and included in the job pack in place of the in date utility prints from the list above.

8 *Minimum Standards for Field Operations*

All Openreach people that excavate must have access while onsite to HSG47 Avoidance of Underground Apparatus.

8.1 Training

All Openreach people involved in excavation tasks (team members, supervisors or managers) must have completed ORLBD001 to understand the minimum safety requirements for excavation works.

Anyone carrying out excavations for Openreach must hold the appropriate NRSWA qualification for the excavation they undertake. NRSWA qualifications are –

As a minimum anyone excavating for Openreach (Soft Dig) must hold, in date, units 1-4.

- Unit 1(LA) - Location and avoidance of underground apparatus.
- Unit 2(O1) - Signing, lighting and guarding.
- Unit 3(O2) - Excavation in the highway.
- Unit 4(O3) - Reinstatement and compaction of backfill materials.

Additional units are required for reinstatements using different materials and must be held if reinstating in those materials.

- Unit 5(O4) - Reinstatement of sub-base and road base in non-bituminous materials.
- Unit 6(O5) - Reinstatement in cold-lay bituminous materials.
- Unit 7(O6) - Reinstatement in hot-lay bituminous materials.

- Unit 8(O7) - Reinstatement of concrete slabs.
- Unit 9(O8) - Reinstatement of modular surfaces and concrete footways.

8.2 Equipment

8.2.1 Locators

Suitable Cable Avoidance Tools (CAT's) must be available Guide to Buried Plant Locators provides details of currently approved CAT's in use in Openreach. Anyone excavating for Openreach must hold a CAT, Genny and a full range of connection devices, these items must be recorded on esi-TEST and be within inspection date.

8.2.2 Hand tools (all excavation works)

All spades, shovels, digging bars, rabbiters, and punners used for excavation or re-instatement tasks must be of an insulated construction rated to at least 1kV. Currently this is the JAFCO Shocksafe range see the approved tools list. Openreach excavation teams must only use Openreach provided digging tools for excavation activities. Only tools specifically provided for excavation should be used.

8.2.3 Power tools (for use when excavating compacted materials)

Only tools on the approved tools list, that have been risk assessed and have had noise and vibration assessments carried out, can be used.

8.3 PPE

All Openreach people engaged in excavation activities must have appropriate PPE for the task they are undertaking. For "soft dig "teams Openreach standard PPE – including FR coveralls and FR high visibility jackets – should be suitable and must be worn when digging. Openreach provided work boots (with ankle support), eye shields and gloves are also required for excavation tasks.

Where excavations require the use of power tools (handheld or vehicle mounted) to break the surface/ground ARC flash clothing should be made available to the excavation team. ARC clothing should have a minimum protection value of 8 calories per square centimetre in **all** protection layers to provide suitable protection from the higher energy cables likely to be encountered by these excavation teams

8.4 Occupational Health

Openreach teams regularly involved in excavations in hard ground requiring the use of power tools to break or re-instate the ground must have regular health reviews. These must include baseline assessments for vibration related conditions and noise induced hearing loss conducted within 90 days of beginning works involving the breaking hard ground.

Ongoing assessments will be via health questionnaire, contact with a medical professional via a phone call/virtual appointment or face to face depending on exposure or medical history.

9 *Appendix*

9.1 LSBUD results

LSBUD results.PDF

9.2 Skull & Cross Bones

Skull and crossbones.docx

9.3 Site Supervision Requirement Form (SSRF)

Site supervision Requirements Form.d

9.4 Safe Excavation Authority to Dig

Safe Excavation Authority to Dig Form

9.5 Site meeting Request – Openreach Standard refusal letter (SRL)

Site meeting letter V3.docx

9.6 HSG47

HSG47

9.7 Pipeline Markers

Pipeline Markers.docx

9.8 Toolbox Talk Working near HPP

Toolbox Talk Working near high pr

9.9 Works Originators Job Pack Examples

Works Origenators Job Pack examples.d

9.10 Thrust block example

Thrust block.png

9.11 Openreach HPP & Managing Excavation process (all LoB's)

http://snip.bt.com/OEPD

9.12 SBUD - Openreach NI Policy

2023_02_27 SBUD - Openreach NI Policy.c

9.13 Frame and Cover Process

Frame and cover process.pdf

END OF DOCUMENT