openreach

ISIS directive
For BT people and Contractors

EPT/UGP/F021

Issue 22, 30-Mar-2023 Use until 30-Mar-2025

Published by Technical Documentation - Openreach

Privacy- None

Gully Sucking, De-Silting and Jetting By Contract and Direct Labour

details the process to be used and associated actions to be taken

About this document ...

Author

The author of this document may be contacted at:

Carl Morrell
Underground Specialist & Civils Field Project Manager
Openreach (BOCE13)
Post Point HW M4901 Braham Street
London

E1W 9TD

Telephone: +447801623998

Fax:

Email: carl.morrell@openreach.co.uk

Content approval

This is the Issue 22 of this document.

The information contained in this document was approved on 30-Mar-2023 by Andy Debbage, CE Network Build Engineering - Civils Senior Programme

Version History

Version No.	Date	Author	Comments
Issue 22	30-Mar-2023	Carl Morrell	FAQ update
Issue 21	22-Mar-2023	Carl Morrell	9.8 standpipes
Issue 20	22-Jun-2022	Carl Morrell	Privacy removed
Issue 19	17-Jun-2022	Carl Morrell	Appendix 10.2.2
Issue 18	05-Apr-2022	Carl Morrell	Section 10, Appendix C
Issue 17	01-Feb-2022	Carl Morrell	RA updated
Issue 16	13-Jul-2021	Carl Morrell	Change of terms to include
15500 10	13-301-2021	Carrivionen	jetting
Issue 15	28-Jun-2021	Carl Morrell	Sections 9.2.2 & 9.5 updated
Issue 14	18-Jun-2021	Carl Morrell	Section 9.1 update
Issue 13	10-Nov-2020	Carl Morrell	Appendix B for DL desilting
Issue 12	18-Feb-2020	Carl Morrell	Section 2, ppg20 ref removed
Issue 11	17-Jan-2020	Carl Morrell	Links to ordering process updated
Issue 10	19-Jul-2017	Chief Engineer's Office Technical Documentation Team	New Approver. Addition to par 2 re. PPG20
Issue 9	03-Mar-2015	Document Manager T	Document migrated onto new platform with no content change
Issue 9	14-Dec-2012	Chief Engineer's Office Technical Documentation Team	Introduction changed to advise of use
Issue 8	13-Feb-2012	Chief Engineer's Office Technical Documentation Team	Links in Sections 4.4, 5, 6, 7.1 amended and NRSWA CoP link added in Section 8.12.1. DCC013/SH.
Issue 7	22-Apr-2010	Chief Engineer AEI Technical Documentation team	Document reviewed.Para. 4.3.1 & 8.8 revised. (DCC759PD)
Issue 6	1-Sep-2009	Chief Engineer AEI Technical Documentation team	section 4.4 and 5 now refer out to another document. Section 7.1 is a new section and Appendix B has been deleted DCC370
Issue 5	19-May-2009	Chief Engineer AEI Technical Documentation team	Document reviewed.Para. 4.3.3 Note 2 amended (DCC220)
Issue 4	12-Jan-2009	Chief Engineer AEI Technical Documentation Team	Change of Author & Approver
Issue 3	11-Mar-2005	Murray Hayes	Updated
Issue 2	31-Jul-2003	Murray Hayes	Change of Author/Approver
Issue 1	14-Jul-2000	Tim Bunker	First issue
Issue Draft 0b	3-Jul-2000	Tim Bunker	New document

Table of Content

1	INT	RODUCTION	6
2	sco	PE	6
3	ACT	ION TO BE TAKEN WHEN A CONTAMINATION IS SUSPECTED	7
	3.1	INFORMATION FOR LOCAL FIELD MANAGER UNITS, LOCAL MANAGER UNITS AND FIELD MANAGERS	
	3.2	By The Control Centre	7
	3.3	By Incident Manager	
	3.4	Investigations and Negotiations	
	3.5	REMOVAL OF CONTAMINANT	
	3.6	TRACING SOURCE OF LEAKAGE	10
4	PRO	OCEDURES	11
	4.1	CONTRACT PLACEMENT	11
	4.2	LOCAL INFORMATION	11
	4.3	GULLY SUCKING, JETTING & DE-SILTING CONTRACT - EXTRACT OF TERMS AND CONDITIONS	11
	4.4	ORDERING PROCEDURES	13
5	TEN	IPLATE DEFINITION	13
6	CHA	ANGE REQUESTS	13
7	QU	ALITY	13
	7.1	Quality Review and audit	13
8	APF	PENDIX A - CONTRACTUAL REQUIREMENTS	13
	8.1	Introduction	· 14
	8.2	GULLY EMPTYING AND WASHING STANDARD MANHOLE/CARRIAGEWAY/FOOTWAY BOX	14
	8.3	JETTING/DE-SILTING STANDARD BT DUCT	
	8.4	GULLY EMPTYING, JETTING AND DE-SILTING	14
	8.5	GULLY SUCKING EQUIPMENT	15
	8.6	Pressure Washers	15
	8.7	JETTING/DE-SILTING EQUIPMENT	15
	8.8	Traffic Management	16
	8.9	Work in Underground Structures	
	8.10	CUSTOMER SITE SECURITY (INC. MINISTRY OF DEFENCE)	
	8.11	Operatives	
	8.12	CUSTOMER CONTACT	
	8.13	DUTY OF CARE	18
9	APF	PENDIX B – DIRECT LABOUR DESILTING	18
	9.1	Introduction	
	9.2	SAFETY	
	9.3	Training	
	9.4	OPERATING INSTRUCTIONS	
	9.5	EQUIPMENT & SPECIFICATIONS	
	9.6	FAMILIARISATION	
	9.7	JETTING/DE-SILTING PRACTICES & METHODS	
	9.8	Frequently Asked Questions	
	9.9	TECHNICAL SUPPORT	37

10 API	PENDIX C – FLOWPLANT MINI DE-SILTER MK2	37
10.1	Introduction	37
10.2	SAFETY	37
10.3	Training	38
10.4	OPERATING INSTRUCTIONS	
10.5	EQUIPMENT AND SPECIFICATIONS	39
10.6	Stores	4(
10.7	TECHNICAL SUPPORT	4(
11 APF	PENDIX D – WATER COMPANIES (AQUAM WATER SERVICES)	41

1 Introduction

The wide range of environmental legislation is impacting on all BT external network activities that require the removal and disposal of waste water and water borne waste products. The legislation requires high levels of disposal control and management that can only be provided by properly licensed operators. It is absolutely essential for BT to establish an audit waste trail to meet its' obligations under the Environmental Protection Act 1990 and this can only be achieved by having centrally placed mandatory contracts

This document gives guidance to managers and works control functions on the actions to be taken when underground plant is, found to be, or expected to be contaminated. It also describes the operational procedure to be used by zones for the operation of the national Gully Sucking, Jetting and De-silting Contract. Having these services and equipment provided by the contractor means they are responsible for providing suitable equipment and managing the disposal of the waste to agreed standards.

Additionally, Appendix B of this document also covers the introduction of Desilting Equipment from 2017 for use by Direct Labour. The appendix provides details of the equipment, operating procedues, best-practices and risks.

Note that the gully sucking contract has two uses. The contractor may be engaged by BT when waste water and water borne was products are considered benign but due to the large volume of waste involved the contractors specialist equipment is required to deal with the removal. Alternatively, where any waste, regardless of volume, is considered to be contaminated the contractor should be engaged to dispose of the waste in accordance with the processes in this ISIS thus ensuring compliance with the appropriate environmental legislation.

Within this ISIS are process diagrams and a form for ordering Gully sucking, jetting and De-silting services.

2 Scope

All people in BT involved with external network activities in England, Scotland and Wales must comply with the Environmental Protection Act and the "Duty of Care" placed upon BT. Under normal circumstances BT people will pump surface water out of underground structures and dispose of it via the surface water drainage system and clear silt from blocked ductwork using normal methods. There will be occasions, however, when condition are such that normal methods cannot be employed and the services of a specialist contractor will be required. This ISIS gives guidance on the action to be taken when contamination is suspected or present and describes the process by

Gully Sucking, De-Silting and Jetting By Contract and Direct Labour Action to Be Taken When a Contamination Is Suspected

which Gully Sucking, jetting and De-silting services are supplied by an appointed contractor for Fast Response and Planned Work Situations within Zone in support of BT people.

Note: For further information and understanding see Environment Agency guidance Temporary dewatering from excavations to surface water

3 Action to Be Taken When a Contamination Is Suspected

3.1 Information for Local Field Manager Units, Local Manager Units and Field Managers

Ensure that staff have undertaken the following tests:

- Standard Tests for Flammable Gas and Asphyxiating Gas In Underground Plant And Similar Work Spaces, In Accordance With SFY/HSH/D050.
- 2. Standard Test for Polluted Water or Excessive Silt in Water in Underground Plant Prior To Any Pumping Operations, In Accordance With SFY/HSH/D051.

Additional tests for toxic gas (es).

Where risk assessment has identified the need, or non-BT instructions require them:

Additional tests for toxic gas will be necessary. The standard BT Gas Detection Unit (GDU) may be enhanced to include one or two additional sensors for toxic gases. These sensors will be deployed by the GDU for both sample testing and for continuous monitoring - all the gas detection channels equipped with a gas sensor will activate at the same time once the GDU is turned on.

Where required, contact the manufacturer, via your Gas Equipment Testing Station (GETS) with details of what additional gas detection facilities are needed.

3.2 By The Control Centre

- Record all information reported
- Inform the following:

Action to Be Taken When a Contamination Is Suspected

- The emergency services, if appropriate, and if not already informed by the field staff
- The local Field Manager, the Field Operations Manager and Network Control Manager where appropriate
- Arrange for an Incident Manager to be appointed An Incident Manager would normally be a local manager with knowledge of the contaminated site. He must however have authority to deal with the extent of contamination reported.

3.3 By Incident Manager

The Incident Manager should take charge of the incident and carry out the following actions as appropriate:

- Contact Group Legal Services (GLS) for advice where there is a likelihood of legal action either by or against BT. Legal action is likely if someone has been injured, property damaged, or where pollutants have entered inland or tidal waterways. Pollutants include large quantities of silt.
- Identify the contamination and its source, where possible. Contact BT Safety Services for assistance telephone their help desk on 0800 780 783.
- Inform the Local Authority Environmental Health Department (LAEHD), Environmental Agency (EA) Scottish Environmental Protection Agency (SEPA), as appropriate, by telephone and advise them that a possible hazard exists.
- Arrange for the clearance and disposal of the contaminant. See Section 6 for information on removal of contaminants. Where the site has to be quarantined, i.e. the site cannot be cleansed immediately or BT is advised to allow a period of time to ensure the problem has not recurred, act as Quarantine Manager and give daily reports to the Control Centre.
- **Give permission to resume work** when satisfied that the contamination has been cleared or made safe following risk assessment (see paragraph 3.1, when to resume work).
- Ensure that all appropriate steps have been taken to protect the health of people working on the site. Arrange urgent referral to hospital for any individual who reports adverse symptoms or shows signs of acute toxic effect following exposure to a suspected contaminant (for example, altered consciousness, nausea and vomiting, respiratory difficulty, etc.).
- If a hazard to health has been identified, or where advice on recovery and subsequent fitness to resume work is required, contact the BT Occupational Health Service on their helpline 0800 800 992. The examining Occupational Health Doctor will require a clear statement of the advice required and full details of the incident and the contaminants including any subsequent investigation reports.

■ If the contaminant has produced an explosive atmosphere, ensure that the appropriate procedure described in SFY/HSH/D050 has been followed. See also EPT/PPS/A034 for Control Centre procedures for gas.

3.4 Investigations and Negotiations

** You **must not** undertake investigations into liability arising from a contamination incident, or enter negotiations with non-BT agencies or organisations, without first consulting BT Group Legal Services (GLS) **

GLS will provide advice relating to investigations that need to be carried out in ascertaining the source of the contamination, and where appropriate, provide input into any discussions with regulatory bodies such as the Environmental Agency (EA) and Scottish Environmental Protection Agency (SEPA).

GLS will also take responsibility for handling the recovery of costs incurred by BT in locating and/or removing the contaminant.

3.5 Removal of Contaminant

3.5.1 General

Minor contamination such as small amounts of refuse may be removed by BT staff, provided appropriate protective clothing including overalls, gloves and rubber boots if needed is worn.

Hypodermic needles may also be removed - see SFY/CSP/B064 for information on safe handling and disposal of clinical waste within BT.

BT Staff **must not** remove contamination unless it is minor as above. A specialist company must remove any significant contamination. The Local Purchasing Unit will advise if there is a contract in place for this purpose; if not, refer to RAL/ENV/B010 for advice on the selection of a suitable waste disposal contractor.

3.5.2 Petrol

Where petrol is present in any jointing chamber or excavation the Local Authority Petroleum Officer should be informed and the petrol should be removed by a specialist contractor, details obtained as in clause 5.1 above. See also SFY/HSH/D050 section 7.

3.5.3 Vapours and Gases

These may be cleared from plant by the use of air blowers. Uncontaminated water should be pumped from the plant and blowing continued once repeat gas tests have been made - see SFY/HSH/D050 section 7. If water in the

Action to Be Taken When a Contamination Is Suspected

contaminated plant also appears to be contaminated it should be removed by a specialist contractor, details obtained as in paragraph 5.1.

3.6 Tracing Source of Leakage

** You **must not** undertake investigations into liability arising from a contamination incident, or enter negotiations with non-BT agencies or organisations, without first consulting BT Group Legal Services (GLS) **

3.6.1 By Local Authority Petroleum Officer

The Local Authority Petroleum Officer will implement the testing of storage tanks, petroleum interceptor drains and other installations suspected of being the source of petrol leaks.

3.6.2 By BT Personnel

Normally, the location of the source of any dangerous contaminant is undertaken by the Local Authority and BT should give them all possible assistance. The manager involved should keep in touch with the Local Authority Representative concerned, throughout.

When attempts by the Local Authority to locate any source of leakage fail or are not within their province, it is essential that BT should continue to attempt to trace the source.

The following should be included in any investigation made by BT personnel to trace the source of the contaminant.

- Adjacent jointing chambers should be checked for similar contamination
- Level of ground should be observed, as the contaminant may be carried to affected site by movement of groundwater
- Discreet enquiries should be made locally, but only where legal advice deems it appropriate, for the possible location of the source of the contaminant, for example:
 - Fuel oil oil central heating storage tanks of adjacent domestic, office or industrial premises
 - Petrol petrol storage tanks of private firms including BT owned tanks
 - Cleaning fluids use, storage and disposal at dry cleaning establishments or industrial premises
 - Other liquids industrial premises involved in chemical processes

3.6.3 Records

Records of all action taken to deal with a contamination incident should be filed locally by the Control Centre for further reference. Details of leaks, which have not been located, should similarly be recorded together with all the relevant information.

4 Procedures

4.1 Contract Placement

Supply Management has placed a National Contract. An extract of the Terms and Conditions of the contract negotiated is reproduced in this instruction. (Para 3.3)

4.2 Local Information

Zones will provide local documentation necessary to facilitate the day to day running of the contract.

Items such as the BT geographic area, names, addresses and telephone numbers of contact points etc, will need to be communicated to BT people and the contractor. Similarly, the contractors details, i.e. name, address, telephone number, 24 hours call-out number, etc will need to be recorded in Zone Instructions.

4.3 Gully Sucking, Jetting & De-Silting Contract - Extract of Terms and Conditions

The Contract has been let nationally and the order items have been categorised to cover the normal activities as detailed in Section 2 (SCOPE).

4.3.1 The Contractor's Obligations Are:

■ Two Tier Service Targets Based On:

- 1. Planned work requiring a minimum of one normal working days notice to Contractor (7 days per week)
- Unplanned and unforeseen work defined by BT as URGENT Contractor to arrive on site within a maximum of FOUR HOURS, unless otherwise stated on the order

Note: For Planned Works, the Contractor must be given as much advance notice as possible: especially if the work requires NR & SWA notice to be issued

Gully Sucking, De-Silting and Jetting By Contract and Direct Labour

- The Contractor is committed to carrying out gully sucking, jetting and desilting work as required plus any 'Mobile Works' signing and guarding needed to accomplish the task
- The contractor is committed to provide service 365 days a year, on a 24-hour basis, without the assistance of BT staff. Normal working hours for the contractor will be MON SAT 7AM TO 7PM (not including Bank Holidays). Out of hours service will be available at an additional premium
- The Contractor must rectify any reported problems or defects with the service provided to BT within TWO HOURS of notification at nil cost to BT and on a 24 hour, 365 days per year basis
- The cost of any loss or damage to equipment will be borne by the Contractor (unless caused by BT staff or operations)
- It is the contractors responsibility to provide the following service and equipment described in appendix A
- It is not the Contractor's responsibility to guard the whole work site and 'SAFETY ZONE' as this will be arranged by Openreach
- It is the responsibility of the contractor to complete the work to the requirements of the order, regardless of the time. Additions and amendments to the order can only be accepted when authorised by the order originator or their manager

4.3.2 BT's Contract Obligations Include:

- To give the appropriate periods of notice when placing orders
- BT Signing Lighting and Guarding equipment must not be mixed with or used to supplement Contractor's equipment, If BT staff are working on site prior to the arrival of the contractor it will be the responsibility of BT to guard the site
- When the decision is taken to opt for use of a contractor for gully sucking, jetting and de-silting services, ALL ORDERS must be placed under the national contract

4.3.3 BT Staff - Work Site Responsibility

The contractor has the responsibility for carrying out the work detailed in the order. They must leave the site clean tidy and in a safe working condition. It is the responsibility of BT people on site to satisfy themselves that the Contractor has met the standard before starting work. In the event of a dispute, the normal management escalation procedures should be followed.

Note: 1 - If the normal ordering point is closed, the appropriate out of hours emergency control will deal with the request and contact the Gully Sucking, jetting and De-silting Contractors out of hours ordering point. The normal daytime control will make arrangements for an order to be generated to cover

the out of hours request - (on the next working day), as advised by the emergency control.

Note: 2 - Waste products can only be disposed of on authorised disposal sites. The contractor must obtain "Hazardous Consignment notes" (where appropriate), as required by the Hazardous Waste Regulations 2005 to provide a waste audit trail from producer to disposal facility. Consignment Notes must be sent to the address shown on the GS&D Contract order form section 'B'.

Note: 3 - A copy of the signed of waste disposal documentation (as detailed in note 2) and the invoice must be sent together to the normal ordering point otherwise payment will not be authorised.

4.4 **Ordering Procedures**

The DAN (Dig, Aux, Noticing) team processes de-silting/jetting services for operational teams. They provide estimates built onto ORWFMT.

5 Template Definition

The details for the template definition required when preparing an order should be submitted to the DAN team.

Change Requests

All document change requests must be submitted to the Approver of this document.

7 Quality

The BT ordering point will maintain a locally designed log of all issues relating to the quality of service provided under the contract. This log will be made available to the zone manager responsible for management of this contract.

7.1 Quality Review and audit

For details of audits of the supplier's performance see CANDID 'Quality & Audit Standards'

Appendix A - Contractual 8 Requirements

Contractual Requirements For Gully Sucking, Jetting and De-silting

8.1 Introduction

It is the responsibility of the Contractor to provide the following services and equipment to BT described in the following appendix.

8.2 Gully Emptying and Washing Standard Manhole/Carriageway/Footway Box

This will require the use of a gully emptier unit and an auxiliary pressure hose and lance. On arrival at the work site it will be the responsibility of the Supplier to guard the site in accordance with the new roads and street works act 1991. Remove the covers from the structure ensuring that all relevant safety precautions are taken i.e. gas testing before work commences. The Supplier will be required to remove all contaminated water and solids from the structure. This will include hosing down the content of the structure and its' walls to leave it clean and safe for commencement of work by BT staff. Manhole and footway covers shall be fitted correctly and the site left, clean and tidy. If medical needles are found in or around the structure the Supplier shall undertake their disposal. The Supplier shall have in place a procedure for safe containment and incineration of medical needles.

8.3 Jetting/De-Silting Standard BT Duct

This will require the use of high-pressure water jetting unit use for clearing land drains and a lance. On arrival at the work location it will be the responsibility of the Supplier to guard the site in accordance with the new roads and street works act. Remove the covers from the structure ensuring that all relevant safety precautions are taken i.e. gas testing before work commences. The Supplier will be required to use high-pressure water jetting equipment to locate and clear blockages from BT ductwork. The majority of duct is 105mm diameter plastic, however, some steel and earthen wear ducts are in the network and ducts may be found in smaller diameters. When the blockage has been cleared the duck work shall be jetted through from end to end and the withdrawal of the jet used to install a draw rope. The entire residue and derbies from the work shall be cleared from the structure. The structure shall be left clean and safe to work in, the cover shall be fitted correctly and leave the site clean and tidy. If medical needles are found in or around the structure the Supplier shall undertake their disposal. The Supplier shall have in place a procedure for safe containment and incineration of medical needles.

8.4 Gully Emptying, jetting and De-Silting

This work will be a combination of the work described above.

8.5 Gully Sucking Equipment

8.5.1 Description

This shall be a gully/cesspool unit. It shall be capable of removing silt and water from carriageway boxes and manholes; in addition it shall be used for cleaning purposes in such boxes and manholes.

8.5.2 Requirements

8.5.2.1 Capacity

The Supplier shall supply unit/units of sufficient capacity to do the work. Clean Water: The unit shall have an auxiliary water tank or have access to clean water for washing down boxes and manholes.

8.5.2.2 Washing Down

The unit shall be fitted with an auxiliary water pump hose reel and pressure lance for washing down boxes and manholes. The system pressure of the auxiliary water pump shall not exceed 6.5 bar (1000 psi.) and it is recommended that the hose reel shall be equipped with a hose of 15 metres minimum length.

8.5.2.3 Lift Capacity

The exhauster shall be able to deliver a minimum vacuum of 0.875 bar (28 inches of mercury)

8.5.2.4 Suction Lift Hoses

It is recommended that the unit is equipped with a suction hose of 75mm minimum diameter and 9 metres minimum length.

8.6 Pressure Washers

The pressure washing facility may be provided as part of the gully emptier unit or as an ancillary with an electric or internal combustion engine to power the unit. It shall meet the same requirements are detail in 'Washing Down'.

8.7 Jetting/De-Silting Equipment

8.7.1 Description

The equipment shall consist of a water tank, which supplies water to a highpressure pump, which in turn feeds water under pressure through a hose to a metal nozzle. The nozzle has rearward and forward facing jets. The rearward facing jets push the nozzle forward with sufficient force to pull the hose through the duct and flush the silt back out of the duct, the forward facing nozzle brakes down the blockage. The equipment shall be referred to as a 'jetter or de-silter'.

8.7.2 Requirements

8.7.2.1 Duct Length

The jetting/de-silter shall be equipped with a water tank and hose reel to give sufficient capacity to clear a minimum duct length of 230 metres.

8.7.2.2 Nozzle

It shall be equipped with one forward facing jet and a minimum of three rearward facing jets.

Jetting Action; shall be a constant pressure or pulse jetting action. All jetting systems to be used shall have proven manufactures test results to prove the performance of the unit meets the distance and pressure requirements.

8.7.2.3 **Pressure**

The maximum system jetting pressure shall not exceed 138 bar (2000 psi.). the equipment shall be fitted with a pressure regulating device and pressure indicator that will enable the system pressure to be regulated accurately.

8.8 Traffic Management

It will be the responsibility of the Supplier/Contractor to provide any 'Mobile Works' signing and guarding required when carrying out gully sucking, jetting and de-silting work without additional cost to BT. It is not the Supplier/Contractor's responsibility to guard the whole work site and 'SAFETY ZONE' as this will be arranged by Openreach.

8.9 Work in Underground Structures

The Supplier must demonstrate and satisfy BT that any operatives working in or around BT maintained or other underground structure is trained, accredited and competent to do the work. This will entail compliance with the Confined Spaces Regulations 1997, and evidence that its requirement form part of their safety management system.

8.10 Customer Site Security (Inc. Ministry of Defence)

As work may be required at customer sites of high security the Supplier must be prepared to conform to individual, site specific, security regulations and working practices. In addition Field Operatives may be required to undergo security screening and attend safety induction courses for potential hazardous work sites (some specific work sites require all operatives to undergo an induction course before they are allowed on site).

8.11 Operatives

Field Operatives will be fully compliant with have the ability to safely:

- Remove And Replace Covers For All Types Of BT Underground Structures Correctly
- 2. Guarding footway and carriageway boxes correctly for the protection of the public
- Use the correct methods of gas testing for the safe entry of BT underground structures
- 4. Operate all equipment used for gully emptying, jetting and de-silting to proficiency and standard required by the equipment manufacturer
- 5. Use high-pressure water cleaning, jetting and de-silting equipment safely while working around plastic and lead sheathed cables
- 6. To have knowledge of the limitations of high-pressure water jetting equipment in the BT_network
- 7. To locate and clear blockages in BT ductwork using jetter/de-silting equipment

8.12 Customer Contact

8.12.1 Responsibilities

The Supplier, working on behalf of BT, must respect the rights of the general public. It is incumbent upon the Supplier to maintain good working relations with BT's customers, potential customers and members of the general public. The general public and BT's customers should not perceive a different standard of service from that which BT's direct labour people would have provided (including responsiveness). The Supplier should ensure that their appearance is consistent with the BT image and in no way detracts from the company's standing in the community. Suppliers & their vehicles must be clearly identifiable and shall display a sign that meets the requirements of and clearly indicates, the information detailed in the Safety at Street Works and Road Works, a Code of Practice – available HERE

8.12.2 Security

Suppliers operatives must have their company identification cards available at all times which will include a free-phone telephone number for ID validation purposes and show NR&SW Act accreditation. The free phone number shall be displayed on an information board at all time while work is in progress.

8.13 Duty of Care

The contractor shall ensure that they and their sub-suppliers comply with all statutory and other UK regulations related to the handling, transportation, storage and disposal of any waste.

They shall complete Waste Transfer Notes and/or Consignment Notes. They shall demonstrating that the supplier and any relevant Sub Supplier who handle, store or transfer the waste, is: registered as a carrier of controlled waste under section 2 of the Control of Pollution (Amended) Act 1989 and is either

- 1. the holder of a disposal license under Section 5 of the Control of Pollution Act 1974, or
- the holder of a waste management license under section 35 of the Environmental Protection Act 1990 or
- Has received an exemption from waste management license under the Waste Management Licensing Regulations 1994, or the waste Management Licensing (Amended etc) Regulations 1995

9 Appendix B – Direct Labour Desilting

9.1 Introduction

The use of portable desilting equipment over ducts lengths between 50 and up to 300m, has allowed Openreach to clear blockages and avoid the associated civils costs between 65-85% of time in various locations around the UK.

All approved equipment is manufactured and supplied by Flowplant Group Ltd, who also provide detailed 'Water Jetting Association' training to the appropriate standards and ongoing technical support, servicing and repairs.

This section should be read in conjunction with the following ISIS

NWK/LNK/C322 - Duct Blockage Process

SFY/HSH/D051 - Water Test

Policy Briefing 775 - desilting - 'check before you jet'

and Environmental Agency waste/recycling notice

Temporary dewatering from excavations to surface water

Gully Sucking, De-Silting and Jetting By Contract and Direct Labour Appendix B - Direct Labour Desilting

Flowplant Desilters have been designed to the highest standards so that they will work safely and reliably for many years. It is important that you understand how to operate this unit correctly, ensuring your safety and its longevity. This document is only intended to assist you as a quick reference guide and reminder of the operational actions required. For full details and instructions please refer to the Operation & Maintenance Manual.



Flowplant Group Ltd

Gemini House, Brunel Road, Churchfields Industrial Estate, Salisbury, Wiltshire, SP2 7PU. UK • Telephone: +44 (0)1722 325424 • Fax: +44 (0)1722 411329 • Email: sales@flowplant.com • Internet: http://www.flowplant.com



9.2 Safety

9.2.1 **PPE** and safety measures

- Operators must be trained and competent in all aspects of the desilting procedure before commencing work
- All operators must read the general risk assessment and the site-specific risk assessment (to be stored on the engineer's laptop for no less than 30 days) prepared by the job supervisor
- All operators must have full PPE including steel toe capped boots, waterproof suit, gloves, safety helmet with ear protection and face protection
- A minimum of 2 x trained operators are required at all times during the operation
- All operators must have read and understood the operator's instruction manual

Gully Sucking, De-Silting and Jetting By Contract and Direct Labour
Appendix B – Direct Labour Desilting

 Suitable barriers should be set up around working area and all boxes/manholes to prevent unauthorised access

9.2.2 Risk Assessment

A Risk Assessment is attached (22/06/21)



9.3 Training

Desilting of ducts must only be carried out by persons who have attended a Flowplant Water Jetting Association duct desilting course

This is carried out by Flowplant and is available either on site at your own Openreach location or an Openreach training centre. This is a 2-day course, classroom based on the first day and a practical session actually using the duct desilting machine under site conditions on the second day. PPE is required for this course.

Contact for booking Flowplant Duct Desilting Training

Flowplant 'Ash Clifford'

Tel: +44 (0)1722 344 096

Email: ash.clifford@flowplant.com

9.4 Operating Instructions

Here are the supplier's equipment Operating Instructions. Hard copies should be available and the latest version referred to at all times. Issue 6, 09/2017 is attached below.



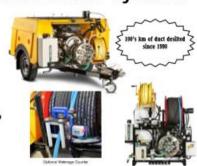
9.5 Equipment & Specifications

For other equipment options, see the following supplier sites:

Harben® Cable Duct Desilter Systems

Available on a range of Harben units

- Up to 300m cleaning range from one entry
- Low pressure / low flow operation for safety
- Cable ducts from 100mm to 250mm diameter
- Unblock, desilt and rope in one operation
- New heavy duty Harben LB "Jump Jet" pump
- High capacity hose reel
- Lightweight low friction desilter hose
- High efficiency desilter nozzles



Flowplant Desilter Trailer

http://www.flowplant.com/wp-content/uploads/2019/12/Desilter.pdf



Harben® Cable Duct Desilter Systems

Available on a range of Harben units

- Up to 300m cleaning range from one entry
- Low pressure / low flow operation for safety Cable ducts from 75mm to 250mm
- Unblock, desilt and rope in one operation
 - Heavy duty Harben LB "Jump Jet" pump High capacity hose reel
- Lightweight low friction desilter hose High efficiency desilter nozzles



Flowplant Desilter Van Pack

http://www.flowplant.com/wp-content/uploads/2019/12/Desilter VP.pdf

Flowplant Desilting Equipment

http://www.flowplant.com/product-category/duct-desilting/

The distribution and location of Openreach <u>Jetter/De-Silting Trailers</u> can be found in the attached document.



Location of Flowplant Desilting Trailers.pdf

Guideline Standards for Jetting Equipment

Definitions

Joint Operations: Detailed copper or fibre jointing works taking place within the chambers as joint cannot be accessed/removed and restrained.

General cabling: Point to point cable installation, without protracted 'jointing operations'

Gully Sucking, De-Silting and Jetting By Contract and Direct Labour Appendix B - Direct Labour Desilting

Gully Sucking:-

- Required for removal of contaminated water and/or solids that obstruct duct access. duct length clearance, or access for protracted 'jointing operations'
- Waste-water and water borne waste products are considered benign but due to the large volume of waste involved, specialist equipment is required to deal with the removal.
- Any waste, regardless of volume, is considered to be contaminated, specialist equipment should be engaged to dispose of the waste in accordance with the appropriate environmental legislation.

Jetting: Also referred to as De-Silting. Equipment that provides a suitable flow rate and pressure of water for removal/clearance of foreign matter and blockages within the duct network. For guidance, 3 generic levels are defined below.

Dewatering: Pumping out and discharge of uncontaminated water, which is wholly or mainly rainwater, from a structure or excavation.

Entry-level

Applications: Portable low-cost, Industrial jetting equipment with high pressure pipe cleaning hoses. Regulated max pressure of 138 bar (2000 psi). 15m hose length. At least 15m and up to 30m in small bore pipe, residential drops or easy blockages within 20-30m on jointbox

Flowrate: Approx 10 litres/min flow rate (2 gallons/min)

Jetting Time: 10 minute jetting time

Equipment is typically portable (25kg lift or trolley mounted)

Weight: <50kg

Training: No specialist or familiarisation training required.

Costs: <£1k each with specialist hoses











Intermediate / Industrial level

Applications: Higher pressure, longer distance, compact, trolley or skid steer mounted equipment. Singleton operations up to 100m

Suitable for Duct 56 or smaller,

Flowrate: 36 litres/min

Jetting Time: Up to 15mins in relatively short distance and often, but not exclusively,

50mm or less residential duct and DP/pole feeds

Training: Minimal familiarisation training required from specialist supplier.

Gully Sucking, De-Silting and Jetting By Contract and Direct Labour
Appendix B – Direct Labour Desilting

Examples: Flowplant 115 Series or mini-jetter

Costs: <£5k















Advanced Level

Applications: Largebore duct, long distances, high pressure (jump jet facility, venturi

water pump etc)

Training: Full WJA Accredited training required.

Example, Trailer mounted Harben 500

Flowrate: 55 litres/min

Max Working Distance: up to 120m

Cost: >£40k



9.6 Familiarisation

9.6.1 Controls & Features

- Water capacity: 500 litres Work rate: Typically 100 metre length of duct per
 250 litres of water (dependant on duct condition)
- Ignition panel: Start/stop procedure / pre heat / hours run / ignition can time out if left switched in 'ON' position without starting
- Water pressure selector valve
- Throttle operation: To be in 'tick over' position prior to starting the engine
- Water pressure gauge
- Hydraulic hose reel operation: Speed control of hose reel / free wheel / hose reel crushing / misuse / connection to reel. Hose should NEVER be tightly wound onto the hose reel drum when the hose is not pressurised, as might occur when the hose has become trapped.
- Emergency stop operation / reset
- Tool box storage
- Work lamp
- Flashing beacon
- Burst discs: Location / colour / checking / changing / replacing on a 6 monthly basis

9.6.2 Operation & Start-Up Procedure

- Filling of water tanks / inlet hose reel / water hydrant filling
- Bleeding of the high pressure pump
- RED water tank valve operation & positions: Run / drain / anti-freeze / shut off positions
- Placing of the Desilter hose, safety leader hose, extension bar and correct nozzle into the duct prior to engine start-up

9.6.3 Operation & Start-Up Procedure Cont'd:

- Start-up procedure
- Water pressure selector valve to be in the OFF position prior to starting the engine

Gully Sucking, De-Silting and Jetting By Contract and Direct Labour
Appendix B – Direct Labour Desilting

- Throttle operation: To be in 'tick over' position prior to starting the engine
- Jump jet valve: To be in 'ON' position
- Ignition panel operation

9.6.4 Operating Pressures / Jump Jet Operation

The Jump Jet valve must be in the 'ON' position at all times when cables are present within the duct. This puts a 'pulse' into the system enabling long distance desilting from one box to another, up to 300 metres, allowing for roping of future cables.

Jump Jet valve 'ON': Maximum operating pressure of up to 2000 psi (140 bar) when cables are present inside the duct.

Jump Jet valve 'OFF': Only when NO cables are present. Maximum operating pressure of up to 4000 psi (275 bar) when no cables are present inside the duct.

Do not touch the hose whilst the jump jet is in operation unless it is to avert a hazardous situation from arising. Reducing the jetter engine speed from maximum to 1/2 or 2/3 revs will decrease vibration levels.

IMPORTANT: When operating the Desilter unit always use it at the lowest possible working pressure for effective desilting.

9.6.5 Anti-freeze Procedure

Never Attempt to start a frozen machine. So you forgot to take precautions. If the pump is frozen, it should on no account be started until it is thoroughly thawed out.

See instruction handout or refer to the Operation & Maintenance Manual for full details / instructions.

Frost Precautions

During cold periods there is a risk of freezing overnight or when travelling on the road. Damage caused by freezing is expensive to repair and IS NOT COVERED UNDER WARRANTY. Take the following precautions to avoid frost damage:

To Anti-Freeze the machine with an antifreeze tank

1. The valves to control the antifreeze procedure are located to the front of the unit. (See picture below).



2. Put the tank drain valve (Red) into the DRAIN position and drain the water tanks. When the tanks have drained move the valve to the SHUT OFF position.



3. Put jump jet valve into the 'off' position, see below.



4. Open the yellow valve from the tank marked ANTIFREEZE. This tank must be full of an antifreeze mixture with strength of no less than a 50/50 mix.



Gully Sucking, De-Silting and Jetting By Contract and Direct Labour Appendix B - Direct Labour Desilting

- 5. Remove the gun or any jetting nozzle from end of the hose and unreel 3m of hose.
- 6. Switch the selector from DUMP to HIGH PRESSURE
- 7. Hold the open-ended hose away from the body pointing it to the ground and away from any by-standers.
- 8. Start the engine and run at idle speed. Water will come from the end of the high-pressure hose. (Note: It may be necessary to bleed the pump if water flow is very slow)
- 9. After a minute or two the blue antifreeze mixture will start to come out of the high-pressure hose. IMMEDIATELY SWITCH OFF THE ENGINE.
- 10. Place the end of the high-pressure hose into the antifreeze tank. If the hose is clean you may remove the strainer in the tank lid to make it easier.
- 11. Restart the engine and allow the antifreeze to circulate. Briefly (about 2 seconds) move the selector valve from HIGH PRESSURE to DUMP and back to HIGH PRESSURE. Briefly (about 4 seconds) put the 'jump jet' valve into the 'On' position and then return to the 'Off' position. See picture below



- 12. Stop the engine by switching the ignition switch off. Leave the selector on HIGH PRESSURE.
- 13. Manually rewind the hose back on the reel and lock in position,

To De-Antifreeze the machine:

- 1. Shut off the 2-way antifreeze valve.
- 2. Place the 3-way valve into the RUN Position. See picture below.



- 3. Re-fill the water storage tank.
- 4. Put jump jet valve into the 'off' position, see below.

Gully Sucking, De-Silting and Jetting By Contract and Direct Labour Appendix B - Direct Labour Desilting



- 5. Place the high-pressure hose (NO NOZZLE ATTACHED!) into the antifreeze tank.
- 6. Start the engine with the selector on 'HIGH PRESSURE'.
- 7. Pump out the antifreeze solution from the high-pressure hose back into the container.
- 8. As the antifreeze mix reaches the top of the tank turn engine off. (Regularly check the strength of the antifreeze mixture ensuring it is at least a 50/50 mix)
- 9. Place the jump jet valve in the on position.
- 10. The machine can now be used in the normal manner.

DID YOU FORGOT TO TAKE PRECAUTIONS? IF THE PUMP IS FROZEN UP - IT SHOULD ON NO ACCOUNT BE STARTED UNTIL IT IS THOROUGHLY THAWED OUT

9.6.6 **Maintenance & Checks**

Checks must be completed daily prior to the operating the Desilter. Please refer to section 6 of the Operation & Maintenance Manual for full details / instructions.

- Engine oil level
- Pump oil level
- Gearbox oil level
- Radiator level
- Cleanliness of water filter
- Anti-freeze check
- High pressure hose condition
- Loose nuts and bolts or damaged items

9.6.7 **Desilting Team & Training**

Minimum of 2 x fully trained operators at all times. All personnel involved with the desilting operation in any capacity must have attended and gained full certified formal training by Flowplant or compeletd the Desilter familisiarisation training with Flowplant if certificated training has been undertaken with another supplier.

9.6.8 Personal Protective Equipment

All fully trained operators to wear full PPE, to include as a minimum:

- Safety helmet with visor, chin guard & ear-muffs
- Steel toe capped boots
- Waterproof suit
- Gloves

All PPE requirements to be risk assessed (to be stored on the engineer's laptop for no less than 30 days)

9.6.9 Site Set-Up / Signals

- Barriers and warning signs to be in place around the working area prior to beginning the desilting process, as per the risk assessment and method statement.
- Set of hand signals to be in place prior to desilting
- Prevention of unauthorised persons into the working area



9.6.10 Desilting Techniques

Progressive cleaning and desilting of the duct is very important, i.e. 100 metre section, cleaning/desilting in 25-30 metre sections at a time, retrieving back to box each time in order to remove silt and reducing risk of the hose getting trapped. Extension bar to reduce the risk of the desilting hose and nozzle leaving a collapsed duct.

9.6.11 Servicing

- Servicing to be carried out by trained Flowplant personnel. Please see information label for schedules and contact information.
- Set of hand signals to be in place prior to desilting
- Prevention of unauthorised persons into the working area

9.6.12 **Operation & Maintenance Manual**

All operators must have access to the Operation and Maintenance for the Flowplant Desilter. This is also available as an ISIS document.

9.6.13 **Accessories & Tools**

- Safety leader hose (blue)
- Jet extension bar: To reduce the risk of the desilting nozzle and hose exiting the duct where a collapse may have occurred.



- Standard nozzles: For general desilting on short duct runs
- High efficiency nozzles: For general desilting on longer duct runs
- Plough jet nozzle: For heavy desilting on short duct runs
- Silt bomb nozzle: For heavy desilting on longer duct runs
- Mini jet kit: For the opening up of heavily silted ducts with numerous cables present
- Primus nozzle: For the removal of concrete from an empty duct with no cables present
- Suction jet pump: Emptying of boxes / pits / flooded exchanges
- Tiger tail hose protector
- Cleaning of nozzles

Gully Sucking, De-Silting and Jetting By Contract and Direct Labour
Appendix B – Direct Labour Desilting







For further info on spares & accessories contact sales@flowplant.com Neil.Whettleton@flowplant.com 01722 325424

9.6.14 High Pressure Desilting Hoses

All hoses, including end fittings, must be checked for damage prior to starting the unit. Do not attempt to rectify any leaks or damage that occur whilst the unit is running before it is safely shut down. Tools with serrated jaws, such as Stillson type wrenches or mole grips should not be used on the hose or fittings.

Types of hoses:

- Stauffshield: Heavy duty and durable type hose for normal everyday applications, 2 x 90 metre lengths
- Tuffskin: Very lightweight for use on long duct runs, 1 x 90 metre length. Only to be used as an 'extension' hose, connected on the front of the Stauffshield hose.

Hose adaptors, for the coupling together of hoses, and a Tiger tail protector will also be required.



9.6.15 Use of Standpipes

Standpipes should only be used in exceptional circumstances.

If they are required to fill desilters then they must be hired from the relevant area water company.

Note: It is the Line Manager's responsibility for maintaining a local record of the following: Who is trained/licenced, annual licence issued/expiry dates, which Standpipe Type, which Waterboard they are hired from (see Appendix D) and ensure that the necessary CALM course or Risk Assessment has been completed. Records must be readily available on request for audit purposes.

Only approved standpipes should be used i.e. under section 174 (3) of the Water Industry Act it is a criminal offence to connect any unauthorised equipment (Report Hydrant Misuse - Aquam Water Services)

9.7 Jetting/De-Silting Practices & Methods

Desilting of Ducts with the Flowplant DTB 500 Desilter Trailer



9.7.1 On commencement of the task

- Ensure the DTB 500 Desilter trailer is connected to the towing vehicle and it is located in a safe and suitable location near to the box or manhole
- To prevent access by any unauthorised persons check all barriers are in place around all open boxes, manholes and surrounding work area as per the site specific risk assessment
- Ensure all desilting hoses are contained safely within the restricted work area and that they are routed neatly to reduce the risk of trip hazards
- Check all operators are wearing PPE as per the risk assessment

Gully Sucking, De-Silting and Jetting By Contract and Direct Labour Appendix B - Direct Labour Desilting

- Connect the inlet filling reel to the water supply and fill the DTB 500 Desilter water tanks
- Prior to starting the engine bleed the high pressure pump via bleed valves on
- If water doesn't flow freely from the bleed valves during the bleeding procedure it is necessary to confirm that:
 - A) The pump isn't frozen by removing the water filter and checking the flow of water from water tanks.

Warning: DANGER - If frozen do not attempt to start the engine.

- B) The water filter isn't blocked by dirt
- C) The red handled water diverter valve to the pump is in the RUN position
- Place red handled water diverter valve at the front of trailer to the RUN position – see label
- When water is flowing freely from the bleed valves close them hand tight.

Warning: DANGER - Never open the bleed valves when the pump is running on high pressure

- Push the hydraulic hose reel handle fully towards the machine into the 'free wheel' position enabling retraction of a suitable length of desilting hose/safety leader hose.
- Never allow the hose to become kinked as this can damage the hose reinforcing layer
- Select a suitable nozzle and check it is clean and all holes are clear. Check all the connection threads are clean and then screw the nozzle to the extension bar and the extension bar to the safety leader hose, using the correct sized spanner to tighten all connections securely.
- Pass the hose assembly through the Tigers Tail hose protector and locate the hose protector around any rough edges of the pit/duct. Further hose protectors can be supplied if necessary
- Place the nozzle approximately 1m into the duct entrance prior to starting the desilting machine
- Check hoses for damage prior to start up
- Pull hydraulic hose reel handle back to the central position
- Ensure Jump jet handle is in the ON position
- Ensure water on/off valve is in the OFF position
- Start-up the engine on tickover

Gully Sucking, De-Silting and Jetting By Contract and Direct Labour Appendix B - Direct Labour Desilting

- Turn water pressure valve to ON position
- Increase engine speed slowly to achieve the desired water pressure do not exceed 2000 psi (140 bar) when cables are present within the duct. Always use the lowest pressure that will produce the desired clean
- Allow the desilting nozzle to travel a short way into the duct before using the hydraulic reel to pull the hose back until you can see the safety leader hose and the water/silt mix flowing freely into the box.

Warning: DANGER - Never retract the nozzle assembly fully into the box when the high pressure water jet is switched on.

- Allow the desilting nozzle to travel further into the duct going a few more metres before retracting again. Always clean and remove silt from the duct in short sections on each pass as this will help ensure then hose never gets stuck
- If the hose becomes stuck in the duct never attempt to retract it with the high pressure water switched off as this will allow the hose to stretch and become damaged. Keep the hose pressurised, the Jump jet switched on and slowly use the hydraulic reel to retract
- Ensure regular rotation of team members to avoid fatigue
- Always use well-fitting gloves and limit handling of the high pressure hose when in Jump jet mode so as not to exceed HAV guidelines on EAV & ELV. (See operators manual for details)

9.7.2 On Completion of task

- Reduce engine speed back to tick-over
- Turn water pressure valve to OFF position
- Switch off the engine
- Remove desilting hose and nozzle assembly from duct
- Remove nozzle assembly from safety leader hose and store safely
- Start the engine
- Use the in/out hydraulic hose reel control handle and rewind the hose neatly back onto hose reel. The hose reel speed control knob can be screwed in or out to speed up and slow down the hose reel rotation. Screw the open end of the hose onto the location fitting
- Ensure all box/manhole lids are safely replaced and remove all barriers
- Clear site. Leave it safe and tidy

When there is a risk of freezing conditions carry out the anti-freeze procedure as per the manual. In extreme cold conditions the DTB 500 Desilter may freeze up between job sites

9.8 Frequently Asked Questions

How do we fill the desilters with water

These should be filled up using Bowsers.

After completing a Water Test to prove no contamination present, how do we empty a full box or manhole.

 Using a Flowplant Suction Jet Pump allows the non-contaminated water to be pumped from the box or manhole to a suitable area, this connects onto the desilt hose and doesn't require any external power to operate. These are also very effective for flooded exchanges.

What types of desilter are available?

• Both trailer mounted and van mounted desilters are available from Flowplant.

At what pressure do we operate the desilters?

 When cables are present within the duct, the Flowplant 'jump jet system' should be switched on keeping the pressure at no more than 2000psi (140bar). This ensures no damage occurs to cables within the duct.

How many engineers are required to operate the desilters.

• A minimum of 2 x 'Flowplant Trained' engineers are required.

What PPE is required to operate the desilters?

- Steel toe capped boots, waterproof suit, gloves, helmet with ear protection and face visor are required.
- The following items with codes are available from the stores.
- JSP helmet screen carrier item code 093387
- JSP helmet face screen item code 093388
- JSP helmet ear defender item code 093393

Will the desilter pump be damaged if we run out of water whilst in use.

 No, the Flowplant pump has run dry Harben pump fitted, so no damage will occur.

How do we reduce the risk of getting the desilting hose stuck within the duct?

 Cleaning the sections of duct in numerous passes reduces this risk as it avoids a build-up of debris or silt behind the desilting nozzle. As an

Gully Sucking, De-Silting and Jetting By Contract and Direct Labour
Appendix B – Direct Labour Desilting

example, on a 100 metre blocked duct section, the nozzle with both forward and rear facing jets should be used & allowed to travel 25-30 metres, then retrieved back to the box or manhole before travelling up to 60 – 70 metres and again return it to the box or manhole.

How do we rope the duct section following the cleaning and unblocking?

— Allow the desilting nozzle to unblock & travel into the next box, then switch off the desilter and attach the Flowplant 'Tow Jet' nozzle, this allows the rope to be then pulled backwards with the duct, whilst giving a final flush and clean on retraction back to the entry box.

How can we check how far the nozzle has travelled within the duct?

 Use of the optional Flowplant 'Hose Reel Distance Counter' shows engineers how far the nozzle has actually travelled within the duct identifying a potential problem.

How do we avoid the desilting hose getting trapped on a dropped collar, collapse or damaged duct?

 Using the Flowplant 'Rigid Extension Bar' between the blue safety leader hose and desilt nozzle creates a 'bridge' reducing the risk of getting the hose and jet trapped.

What other tools might help us get the nozzle through a collapse or dropped collar?

 Using the Flowplant 'Marrying Jet Tool' is very effective for this application, this allows a rod to attach to the marrying jet tool to assist in pulling it through the duct.

How do we remove roots from within a duct?

 Flowplant have specialist hoses and rotating nozzles which are effective for the removal of roots within the duct within causing cable damage.

How do we remove concrete or tarmac from within the duct?

 Flowplant supply a rotating Warthog spinning type nozzle for the removal of concrete or tarmac – Note: this must only be used on empty ducts where no cables are present.

What distances can be achieved using the Flowplant Desilters?

 Up to and well over 300 metres can be achieved from one access point using the desilters – in some cases over 560 metre has been achieved.

How do we control how fast the desilting nozzle travels within the duct?

 The desilters are equipped with a variable speed hydraulic hose reel which allows the engineer to control the speed of travel within the duct ensuring all silt & debris is removed.

How do we fill the desilters with water?

 Using a standpipe allows the engineer to fill the desilters, these are available to rent from the relevant area water company.

Note: It the Line Manager's responsibility for maintaining a local record of who is trained/licenced, annual licence issued/expiry dates, which Standpipe Type, which

Gully Sucking, De-Silting and Jetting By Contract and Direct Labour

Appendix C – Flowplant Mini De-silter Mk2

Waterboard they are hired from (see Appendix D) and ensure that the necessary CALM course or Risk Assessment has been completed.

Note: Only approved standpipes should be used i.e. under section 174 (3) of the Water Industry Act it is a criminal offence to connect any unauthorised equipment (Report Hydrant Misuse | Aquam Water Services.

How do we prevent the desilters from freezing in the winter periods?

The Flowplant desilters are fitted with a built-in anti-freeze system to prevent freezing of the equipment.

9.9 Technical Support

For firther advice and information on the equip[ment, practices, ancillaries and accessories, contact the supplier, <u>Flowplant Group</u> Ltd (South West), Gemini House, Brunel Rd, Salisbury SP2 7PU

Mark Preston, Sales Manager, Flowplant Group Ltd

mark.preston@flowplant.com Tel: +44 (0)1722 325 424 Mobile: +44 (0)7768 530 371

Booking training courses

Flowplant 'Ash Clifford' Tel: +44 (0)1722 344 096 Email: ash.clifford@flowplant.com

Maintenance & Repair on Flowplant Desilters

Contact: service@flowplant.com 01722 325424

Spares & aAccessories

contact sales@flowplant.com Neil.Whettleton@flowplant.com 01722 325424

10 Appendix C – Flowplant Mini Desilter Mk2

10.1 Introduction

The Flowplant Mini Desilter is a self-contained and fully portable duct desilting system. A flexible hose with special high pressure water jet gently removes blockages from small bore ducts (maximum 50mm diameter) up to 20m long. It comes on a wheeled trolley for movement once on ground.

10.2 Safety

Frame motor and pump 58kg, Frame and pump only is 26kg.

10.2.1 PPE and safety measures

- Operators must be trained and competent in all aspects of the desilting procedure before commencing work
- All operators must read the general risk assessment and the site-specific risk assessment (to be stored on the engineer's laptop for no less than 30 days) prepared by the job supervisor
- All operators must have full PPE including steel toe capped boots, waterproof suit, gloves, safety helmet with ear protection and face protection
- A minimum of 2 x trained operators are required at all times during the operation
- All operators must have read and understood the operator's instruction manual

10.2.2 Risk Assessment and WERA

A risk assessment is attached (16/06/22)



Jetting RAMS.docx

WERA available (10/12/21)

WERA

10.3 **Training**

- Operators must be trained and competent in all aspects of the desilting procedure before commencing work
- All operators must read the general risk assessment and the site-specific risk assessment (to be stored on the engineer's laptop for no less than 30 days) prepared by the job supervisor
- All operators must have full PPE including steel toe capped boots, waterproof suit, gloves, safety helmet with ear protection and face protection
- A minimum of 2 x trained operators are required at all times during the operation
- All operators must have read and understood the operator's instruction manual
- Suitable barriers should be set up around working area and all boxes/manholes to prevent unauthorised access

Desilting of ducts must only be carried out by persons who have attended a Flowplant Water Jetting Association duct desilting course

This is carried out by Flowplant and is available either on site at your own Openreach location or an Openreach training centre. This is a 2-day course, classroom based on the first day and a practical session actually using the duct desilting machine under site conditions on the second day. PPE is required for this course.

Contact for booking Flowplant Duct Desilting Training

Flowplant 'Ash Clifford'

Tel: +44 (0)1722 344 096

Email: ash.clifford@flowplant.com

10.4 Operating Instructions

Here are the suppliers operating instructions (Issue 5, 29/03/22)

Operators safety document

10.5 Equipment and Specifications







The Micro Jetter strapped in to the van

The Micro Jetter disassembled for use

Gully Sucking, De-Silting and Jetting By Contract and Direct Labour

Appendix C – Flowplant Mini De-silter Mk2

Specification

Name: Micro Duct Desilter

PSI: 2200

Flow Rate: 9l/min with pulse system

Power Source: Petrol

Complete Unit

(fully skidded inc. motor & pump)

Weight - apx 65.8kg

Footprint - apx 500 x 500mm

Motor & Pump

Weight - apx 29.5kg

Footprint - apx 380 x 230mm

Tank & Frame

Weight - apx 160kg

Footprint - apx 565 x 565mm



See here for technical drawing and data sheet (28/01/22)

Technical Drawing Sheet

10.6 Stores

ITEM QTY PART NUMBER DESCRIPTION

- 1.1. 055-1878 HOSE 3/4" TRICOFLEX
- 2.2. 013-064 HOSE CLIP DIA 30-50 JCS HI-TORQUE
- 3.2. 015-099 SEAL BONDED 3/4" BSP 400-827-4490-74
- 4.2. 023-1853 ADAPTOR 3/4" BSPM HOSE TAIL INSERT
- 5.2. 023-1852 QUICK RELEASE FITTING 3/4"

10.7 Technical support

For firther advice and information on the equip[ment, practices, ancillaries and accessories, contact the supplier, <u>Flowplant Group</u> Ltd (South West), Gemini House, Brunel Rd, Salisbury SP2 7PU

Mark Preston, Sales Manager, Flowplant Group Ltd

mark.preston@flowplant.com Tel: +44 (0)1722 325 424 Mobile: +44 (0)7768 530 371

Gully Sucking, De-Silting and Jetting By Contract and Direct Labour Appendix D – Water Companies (Aquam Water Services)

Booking training courses

Flowplant 'Ash Clifford' Tel: +44 (0)1722 344 096 Email: ash.clifford@flowplant.com

Maintenance & Repair on Flowplant Desilters

Contact: service@flowplant.com 01722 325424

Spares & aAccessories

contact sales@flowplant.com Neil.Whettleton@flowplant.com 01722 325424

11 Appendix D – Water Companies (Aquam Water Services)

Water Company	Use Aquam Water Services Yes/No?	Standpipe Process
Anglian Water	Yes	Can only hire Standpipe from Aquam Water Services. Please note that only approved standpi ourselves may be used within the Anglian Water network and the use of any other equipmen nor legal and could result in prosecution
Southern Water	Yes	Can only hire Standpipe from Aquam Water Services. Please note that only approved standpi ourselves may be used within the Southern Water network and the use of any other equipme nor legal and could result in prosecution
Thames Water	Yes	Mentions that Licences are required. Please note that only approved standpipes obtained the Ltd are authorised to be used on the Thames Water network and the use of any other equipmed compliant nor legal and could result in prosecution.
Wessex Water	Yes	Can only hire Standpipe from Aquam Water Services. Please note that only approved standpi ourselves may be used within the Wessex Water network and the use of any other equipmen nor legal and could result in prosecution
South West Water	Yes	Can only hire Standpipe from Aquam Water Services. Please note that only approved standpi ourselves may be used within the Southern Water network and the use of any other equipme nor legal and could result in prosecution
Welsh Water	Yes	Can only hire Standpipe from Aquam Water Services. Please note that only approved standpi ourselves may be used within the Welsh Water network and the use of any other equipment legal and could result in prosecution

Gully Sucking, De-Silting and Jetting By Contract and Direct Labour Appendix D – Water Companies (Aquam Water Services)

Severn Trent Water	Yes	Can only hire Standpipe from Aquam Water Services. Please note that only approved standpi ourselves may be used within the Severn Trent Water network and the use of any other equiposempliant nor legal and could result in prosecution
Yorkshire Water	Yes	Can only hire Standpipe from Aquam Water Services. Please note that only approved standpi ourselves may be used within the Yorkshire Water network and the use of any other equipme nor legal and could result in prosecution
Hafren Dyfrdwy - Severn Dee	Yes	Can only hire Standpipe from Aquam Water Services. Please note that only approved standpi ourselves may be used within the Welsh Water network and the use of any other equipment legal and could result in prosecution
Northumbrian Water	No	Standpipes can be hired by contacting the Northumbrian Water Business Income Team via state be collected from 2 depots. Standpipes can only be used on washout hydrants.
Bournemouth Water	Yes	Can only hire Standpipe from Aquam Water Services. Please note that only approved standpi ourselves may be used within the Bournemouth Water network and the use of any other equ compliant nor legal and could result in prosecution
Essex & Suffolk Water	No	Standpipes can be hired by contacting the Northumbrian Water Business Income Team via stacan be collected from 2 depots in Essex. Standpipes can only be used on washout hydrants.
Affinity Water (Central & Southern)	No	We are currently unable to provide standpipes for hire or sale. However we operate with unnalways allowed customers to use their own standpipe(s). The standpipe(s) must be in good coworking double check valve.
South East Water	Yes	Can only hire Standpipe from Aquam Water Services. Please note that only approved standpi ourselves may be used within the South East Water network and the use of any other equipr compliant nor legal and could result in prosecution
United Utilities	Yes	Can only hire Standpipe from Aquam Water Services. Please note that only approved standpi ourselves may be used within the United Utilities Water network and the use of any other eq compliant nor legal and could result in prosecution

Gully Sucking, De-Silting and Jetting By Contract and Direct Labour Appendix D – Water Companies (Aquam Water Services)

South Staffs Water	No	In order to hire a standpipe, users must first undergo a risk assessment and agree to South St conditions. A successful application allows users to hire a South Staffs Water issued standpipe of our hydrants. All our standpipes include a backflow protection device to reduce the risk of public supply.
Portsmouth Water	Yes	Can only hire Standpipe from Aquam Water Services. Please note that only approved standpi ourselves may be used within the Portsmouth Water network and the use of any other equip compliant nor legal and could result in prosecution
Sutton and East Surrey	Yes	Can only hire Standpipe from Aquam Water Services. Please note that only approved standpi ourselves may be used within the Sutton and East Surrey Water network and the use of any obe compliant nor legal and could result in prosecution
Cambridge Water	No	In order to hire a standpipe, users must first undergo a risk assessment and agree to Cambrid conditions. In some circumstances where the level of risk is greater than the standpipe can guapply conditions. A successful application allows users to hire a Cambridge Water issued stan any of our hydrants. All our standpipes include a backflow protection device to reduce the rist the public supply.
Bristol Water	No	Contact Bristol Water. You can hire a stand pipe connected to certain fittings on our mains.
Northern Ireland Water	No	NI Water can provide persons who have a legitimate need to obtain water from a public water licence, which grants you prior permission to obtain direct access to our water supply networ subject to any local operating restrictions (such as local or national hosepipe restrictions), autidirect access to our watermains and draw water from hydrants using a portable standpipe su
Scottish Water	No	Standpipes can be hired direct from Scottish Water. But you must complete the licence form Standpipeservicedesk@scottishwater.co.uk.

END OF DOCUMENT	
END OF DOCUMENT	