Establishment: Bristol Horfield ARC ACF

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Defence Infrastructure Organisation

# Gas Safety Management Plan (Section A)

# **Bristol Horfield ARC ACF**

# 15/04/2025

# Produced to meet the requirements of the Gas Safety (Installation and Use) Regulations 1998

(Gas Safety Management Plan (Section B) covers the requirements of the Gas Safety (Management) Regulations 1996

# **ESTABLISHMENT KEY PERSONALITIES (GAS) CONTACTS**

Role	Name	Tel No.	Email
Head of	Lt Col Lee Crompton	07846820884	Lee.crompton575@mod.gov.uk
Establishment			
Establishment's SHEF	W01 Matthew Robertson	07710 452749	Matthew.Robertson881@mod.gov.uk
Establishments	W01 Matthew Robertson	07710 452749	Matthew.Robertson881@mod.gov.uk
4C's Coordinator			
Senior DIO Estate	Mark Cubitt	07955 280440	wx-est-hd@rfca.mod.uk
Representative or			
Equivalent			
Site DIO Estate	Mark Armstrong	07508 129987	wx-est-mgr3@rfca.mod.uk
Representative or			
Equivalent			
MMO Site Manager	Paul Wakeford	07356101565	Paul.wakeford@vivodefence.com
or equivalent			
Gas Safety Manager	Justin Westcott	07793222820	Justin.westcott@vivodefence.com
(GSM)			
Gas Responsible	Jason Cuthbert	07592112763	Jason.cuthbert@vivodefence.com
Person (GRP)			

The Content of this Gas Safety Management Plan (GSMP) have been Approved by the Gas Safety Manager:

Signature:

JP Westcott

Date: 15/04/2025

#### Authorisation for Implementation

The content and format of this GSMP has been agreed and authorised for implementation by Defence Infrastructure Organisation Technical Services Principal Gas Engineer (DIO TS PGE) and a unique reference number has been generated to support this.

#### Approved – J Obbard PGE – 28<sup>th</sup> Oct 2022

The Content of this GSMP have been agreed by the Senior DIO Estate Representative or Equivalent and future works following the findings will be supported:

Signature:

Date: 23/04/2025

The content of this GSMP have been agreed by the Head of Establishment and future works following the findings will be supported.

Signature:... L. Crompton......Date:...23 Apr 25.

M Cubitt

# **REVIEWS AND AMMENDMENTS**

GSMPs are 'living documents' that should be subject to continual review and updating as required. Although the level of attention required will vary considerably depending on the size and complexity of each site, GSMPs should be reviewed at least once per quarter by the GRP, unless otherwise agreed by the PGE. Although it is likely that changes are not required at each review, the date of review and any changes made should be indicated on the tables below. The review of the GSMP will include a site visit to ensure that the site and the content of the GSMP remain valid. The reviews and amendments made will be deleted during the DIO TS three yearly review when the GSMP is re-authorised by the PGE.

Date	Page No.	Amendment
31/05/2022	All	Initial Development
13/01/2023	9 & 14	Added Site Gas Network Drawing Details, Icon & Drawing
27/07/2023		
21101/2023	3,4,6,7,8 & 12	Added Details from New QM Building
27/07/2023	ii and 1	Added New HoE Details
31/10/2023	N/A	No Amendments Required
17/01/2024	N/A	No Amendments Required
16/04/2024	N/A	No Amendments Required
11/07/2024	All	Removed Reference to Workshop Supply as Gas to this Building
		is Now Capped at the Main
18/10/2024	ii & 1, 12	Added New Head of Estates Details, Added SSOV Information
18/10/2024		GSM re-authorisation (previously authorised 31/05/2022)
18/02/2025	Various	Updated document to reflect VIVO as MMO and now also responsible for Gas Safety management. RP/GSM.

Date	Reviewed by	Authorised by	Comments
31/05/2022	M Fenwick	N King	Initial Review
13/01/2023	M Fenwick	M Fenwick	Quarterly Review
27/04/2023	M Fenwick	M Fenwick	Quarterly Review
27/07/2023	M Fenwick	M Fenwick	Quarterly Review
31/10/2023	M Fenwick		Annual Review
17/01/2024	M Fenwick	M Fenwick	Quarterly Review
16/04/2024	M Fenwick	M Fenwick	Quarterly Review
11/07/2024	M Fenwick	M Fenwick	Quarterly Review
18/10/2024	M Fenwick		Annual Review
18/10/2024	Neville King	Neville King	GSM re-authorisation
27/01/2025	M Fenwick	M Fenwick	DNV De-Mobilisation Review / Handover
18/02/2025	J Cuthbert	J Westcott	Update and Quarterly review
15/04/2025	J Westcott	J Westcott	Initial review/approval

# FORWARD

MOD, as a gas conveyor within Great Britain, has submitted an Exemplar Gas Safety Case (MOD GSC) to demonstrate compliance with the Gas Safety (Management) Regulations 1996 (GS(M)R). Maintenance Management Organisations (MMO's) are engaged who have the overall contractual responsibility to operate and maintain the gas network assets under their Contract, including the management of the safe flow of gas within the system and the provision of an emergency service. The MOD delegate specific duties to the MMO but accountability for gas safety on each site rests with the Head of Establishment.

Whilst gas downstream of the Emergency Control Valve (ECV) fall outside of the scope of (GS(M)R) similar criteria as those referred to above must be accommodated within an appropriate management system. The specific criteria required to adequately manage gas infrastructure downstream of the ECV are described in the Gas Safety (Installation and Use) Regulations 1998 (GS(IU)R).

The MOD GSC considers all parts of the MOD estates gas supply system that forms part of the gas supply network. This includes all parts of the MOD gas network from the Bulk Primary Meter Installation to the individual gas appliances and the safe release of the products of combustion. The MOD GSC considers primarily those matters that relate to the management of the safe flow of gas within the system and the provision of an emergency service for all aspects of the gas system.

Following initial approval of the Gas Safety Management Plans (GSMPs) by the DIO Principal Gas Engineer (PGE), the Gas Safety Manager (GSM) is required to reapprove this GSMP annually. GSMPs must be submitted to DIO PGE every three years for authorisation.

GSMP Section A document contains site specific details of the establishments utilisation infrastructure to assist with measures to ensure compliance with the GS(IU)R for installation pipework and associated components.

GSMP Section B documents contain site specific details and arrangements as a direct annex to the MOD GSC in line with the Gas Safety (Management) Regulations 1996 (GS(M)R).

GSMP Section C document contains site specific details and requirements of the establishment's LPG networks.

Although the legal status of this document applies in the UK only, the MOD apply the same requirements to the management of gas on its overseas estate, in accordance with the currently published Secretary of State's Health and Safety policy statement.

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# 1 THE DUTY HOLDER AND ESTABLISHMENT LEVEL KEY PERSONALITIES

# 1.1. Gas Safety Case Duty Holder.

The duty holder for the MOD Gas Safety Case is the Permanent Under Secretary for Defence (PUS). However, day to day responsibility for the preparation and maintenance of the document is delegated to the DIO TS Head of Engineering and Construction, who also has the responsibility for managing the system in accordance with the Safety Case. PUS delegates maintenance responsibility to the Top-Level Budget Holders (TLB's), to manage safety of the gas network. The TLB's utilise MOD Contracts i.e. MMOs who have responsibility for maintaining the gas network on behalf of the MOD.

Name:	Permanent Under Secretary
Address:	Main Building
	Horse Guards Parade
	Whitehall
	London
	SW1A 2HB

# 1.2. DIO Technical Services Principal Gas Engineer (PGE).

The PGE assumes the role of Senior Authorising Authority which is a term used within the MOD to recognise the authority of the person responsible for overseeing the appointment of, and auditing Authorising Engineers (AEs). For Gas the AEs are replaced by Gas Safety Managers (GSMs).

Jeremy Obbard
DIO HQ
Whittington Barracks
Lichfield
WS14 9TJ
07748 903260
Jeremy.obbard100@mod.gov.uk

# 1.3. Establishment Personalities.

1.3. Establishment Personalities.			
Name of Establishment: Bristol Horfield ARC ACF			
Establishment Address:	ess: Bristol Horfield ARC ACF Dorian Road Horfield Bristol BS7 0XL		
Head of Establishment (HoE) (This is the most senior MOD person identified, by the chain of command, as responsible for the establishment. The HoE holds accountability for	Name: Position: Organisation: Address:	93 Signal Squadron Regimental Headquarters Horfield Army Reserve Centre Dorian Road Bristol BS7 0XL	
ensuring site compliance with the requirements of GSMR and the MOD GSC, including this GSMP.)	¶: ⊠:	Lee.crompton575@mod.gov.uk	

Senior DIO representative	Name:	Mark Cubitt	
or equivalent	Position:	Head of Estates	
	Organisation:	Wessex Reserve Forces' & Cadets'	
(This may be the SEFM,	-	Association	
but will vary depending on	Address:	Mount House	
the contract this		Mount Street	
establishment falls under)		Taunton	
		Somerset	
		TA1 3QE	
	<b>2</b> :	07955 280440	
	$\bowtie$ :	wx-est-hd@rfca.mod.uk	

1.4. Maintenance Management Organisation (MMO).			
The MMO for this es	tablishment is:	VIVO Defence Services	
Gas Emergency Helpdesk (Typically, MMO Helpdesk) (24 Hours)	Organisation:	VIVO Helpdesk Helpdesk 25 Goodlass Road Hunts Cross	
<b>Note:</b> Please do not contact the general public National Gas Emergency Service for suspected gas escapes on RFCA infrastructure.	<b>2</b> :	Liverpool L24 9HJ 0800 030 9320	
Gas Safety Manager (GSM)	Name: Organisation: Address: <b>2:</b> <b>2:</b>	Bldg. 003, CTCRM Lympstone Nr Exmouth Devon EX8 5AR 07725 038039	
Gas Responsible Person (GRP)	Name: Organisation: Address: <b>2</b> : <b>2</b> :	Jason Cuthbert Vivo Defence Imjin Barracks Innsworth Gloucester Gloucestershire	

1.5. Additional Gas Contacts.			
External Gas Distribution Network (EGDN)	Organisation: Address: <b>2:</b> <b>2:</b>	Wales & West Utilities Wales & West House, Spooner Close, Celtic Close Coedkernew Newport NP10 8FZ 0800 912 2999	
Gas Supplier	Organisation: Address: <b>**</b> <b>*</b> :		
LPG Supplier	Organisation: Address: <b>2:</b> <b>2:</b>	Not Applicable, no bulk LPG on site.	
Meter Asset Manager (MAM)	Organisation: Address: <b>2</b> : ⊠:	Energy Assets Ltd 6 Almond vale Business Park Almond vale Way Livingston Scotland. EH54 6GA 01506 405 405 box.ngm.meteringdataenguries@nationalgrid .com	
National Gas Emergency Centre (24 Hours)	<b>2</b> :	0800 111 999	

# 2 SITE SPECIFIC DETAILS

# 2.1 Site Overview.

A brief description of the establishment and its current use. This should include how many separate sites are present and the number of buildings being supplied by gas.

Bristol Horfield ARC ACF is a single site establishment with four buildings on site, three of which are supplied with gas –

- The main building supplied direct from the EGDN network.
- QM Building supplied direct from the EGDN network.
- MT Garage supplied direct from the MoD network 01.

The main Building is used for Office Space, Kitchen, Drill Hall (including events), stores, Gymnasium, classrooms and a bar/lounge.

The QM building is used for stores and offices.

The MT garages are currently used for storage,

The site is currently the headquarters of the 7<sup>th</sup> Military Intelligence Battalion, Military Intelligence Corps, 71 Military Intelligence Company and also occupied by The Royal Signals, 93 Support Squadron 39<sup>th</sup> Signal Regiment, The Horfield Army Reserve Recruitment Centre and the Horfield Detachment of the Army Cadet Force.

Day to Day there are around 10-15 people on site and there can be up to 100 people on site when there are functions, events or parades.

#### 2.2 Natural Gas.

A brief description of the natural gas installations, including how many MOD networks are present, the number of buildings each MOD network supplies and how many buildings are supplied direct from the EGDN. This should also include any demarcations in place between stakeholders and responsibilities.

There are three gas meters on site at Bristol Horfield ARC ACF.

There are two single EGDN gas supplies onto site.

There is a third EGDN supply onto site to the GRP meter box at the North end of the site just inside the perimeter fence and there is a 63mm PE service entry into this meter box. This is Bulk Fiscal Primary Meter 01 and this supplies MoD Network 01.

The EGDN supply continues through the site and enters the Northeast side of the main building, into the meter cupboard within the plant room in 2"steel via a below ground entry. This gas supply feeds the Single Supply Meter 01.

The bulk fiscal meter is a single stream meter fed at Low pressure by the EGDN network (Wales & West Utilities). This meter then supplies the MoD network at 23.8 mbar with one building (MT Garages) fed from the MoD network.

The single supply meters are single stream meters fed at Low pressure by the EGDN network (Wales & West Utilities). These meters then supply: The main building installation pipework at 22.6 mbar. The QM building installation at 21.8 mbar.

#### MoD Network 01

Bulk Fiscal Meter – Elster BK-G25M				
S/N – M 040 K02249 14 D6				
40 m/3hr				
MPRN - 9116702408				

#### MT Workshop

This section of network has now been disconnected and abandoned and capped at the main on 01/05/2024.

#### MT Garage

The gas enters the building via a 90mm PE riser. On entry the gas runs through a low level ECV and rises to high level through a meter and meter outlet valve to feed three warm air heaters.

The MoD network begins after the Bulk Fiscal meter outlet valve. The MoD is responsible from the Bulk Fiscal meter outlet valve up to and including the appliances in the buildings. The buried sections to the two buildings are thought to be PE transitioning to steel before the building inlet risers.

A pipeline survey was undertaken by DNVGL which identified the diameters to be 90mm and 63mm PE, this allowed the creation of the site drawings.

There is one utilisation gas meter on this site, installed at high level within the MT Garages.

The MoD network pipework is thought to have been installed in the late 2000's. There is a mix of steel and PE pipe within the network.

The Gas Safety Management Plan Part B will contain all Network information.

#### Single Supply Meter 01 - Main Building

Single Supply Meter 01 – Sclumberger R5 S/N – 8018374 S 100 m/3hr MPRN - TBC

The EGDN gas network enters the meter cupboard (within the plant room) via a below ground entry in 2" steel. The gas continues through the EGDN ECV and MAM owned and operated gas meter increasing to 3" steel after the ECV. The gas exits the meter in 3" steel through a meter outlet valve and interlocking solenoid.

#### Main Plant Room

The gas pipe continues into the plant room in 3" steel with a  $2\frac{1}{2}$ " outlet tee to feed the rest of the main building. The pipework reduces to 2" steel on the  $2^{nd}$  tee outlet to feed the two heating boilers, reducing to  $1\frac{1}{2}$ " and through an appliance isolation valve.

#### **Gents Toilets**

The gas supply drops from high level into the water heater cupboard via a 1<sup>1</sup>/<sub>4</sub>" steel pipe and passes through a manual isolation valve, an interlocking solenoid valve before feeding the single storage water heater.

## <u>Kitchen</u>

The gas continues above the kitchen ceiling where it flows through the interlocking solenoid and drops into the Kitchen through a manual isolation valve and feeds three catering appliances.

# Single Supply Meter 02 - QM Building

Single Supply Meter 02 – Honeywell BK-G4M S/N – G4 K0007461 22 01 6 m/3hr MPRN - 9393814602

The EGDN gas network enters external wall mounted GRP meter box via a 25mm PE riser fed direct from the EGDN network. The gas continues through the EGDN ECV and MAM owned and operated gas meter transitioning to 32mm steel on the meter outlet.

#### <u>Store</u>

The gas pipe enters the stores in 32mm steel and continues through an AECV and solenoid and runs at high level to supply a single warm air heater. At the heater there is a tee section with the 2<sup>nd</sup> outlet running into the kitchen.

#### Kitchen

The gas supply drops from high level into the kitchen in 22mm copper to feed a single combi boiler.

#### 2.3 LPG Gas.

A brief description of the LPG installations, including how many compounds are at the establishment, condition and make up of each compound, the number and size (kg) of vessels in each compound, the number of LPG MOD networks, the number of buildings supplied from the LPG MOD networks, how many buildings are supplied direct and not from an LPG MOD network. Details of the LPG pipework after the first stage regulator up to the building(s).

Note: The demarcation agreement between the LPG supplier and the MOD has been agreed and the MOD take responsibility from the outlet of the first stage regulator. The LPG supplier is responsible for the vessel, vessel associated components (excluding any earth bonding) pipework up to and including the first stage regulator.

No LPG on this establishment

## 2.4 External Installation Pipework.

A brief description of the external installation pipework (above or below ground) on each building. This is from the ECV to where it enters the building(s), the material, diameter, lengths, supports, conditions etc.

None

#### 2.5 Details of buildings served.

A list of the buildings being supplied by gas via an MOD network, LPG compound or directly from the EGDN and the usage of the gas (catering, hot water, heating, fire training, etc) at the building.

Ser	Building Number	Building description	Supplied by	Gas usage
1	Main Building	Office space, meeting/conference rooms, stores, drill hall and a lounge/bar.	EGDN Network	Heating, Hot Water, Catering
2	MT Garage	Storage	MoD Network 01	Heating
3	QM Building	Storage and Offices	EGDN Network	Heating and Hot Water

# 2.6 Additional details of buildings being served.

Any additional detail about a building that may be required or useful in an emergency or requires more details than captured above.

NOTE: This section is to be used to capture the Service Family Accommodation (SFA) properties where it is not practical to fit above.

N/A

Establishment: Bristol Horfield ARC ACF

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METER DETAILS

# 3

# 3.1 Primary Meter Details.

The following table describes the basic arrangement of the primary meter installation(s). (These are the responsibility of the MAM)

Number of prima	ry meter insta	allations:	3						
Meter Name / ID	MPRN	Supplying (MOD network ID or Bldg number)		Incoming pressure tier – HP, IP, MP, LP	P tier – HP, IP, MP, LP	Outlet Pressure (mbar)	pipeline Material	Diameter (mm)	Max Flow (M³ hr)
Bristol Horfield ARC ACF Bulk Fiscal Meter 01	9116702408	Network 01	Standalone GRP Meter Cabinet to the North Side of the site within the perimeter fence	LP	LP	23.8	Steel	50	40
Bristol Horfield ARC ACF Single Supply Meter 01	TBC	Main Building	Within cupboard in the Plant Room in Main Building	LP	LP	22.6	Steel	80	100
Bristol Horfield ARC ACF Single Supply Meter 02	9393814602	QM Building	Wall Mounted GRP Meter Box at Back of QM Building	LP	LP	21.8	Steel	32	6
			oplied directly from the MOD ga						
The following tak	ole describes	the basic arran	ngement of the utilisation meter	r installation	(s). (These	are the re	sponsibility	of the MOE	))
Number of utilisa	tion meter in	stallations:	1 (All Buildings Supplied b	y MoD Net	work are sho	own)			
Inlet pipeline Outlet pipework									
Matax Nama / ID	Deine eunelie		Natarial Material	Discussion		Durana	Manta al al	Diama at an	

		Inlet pipeline			Outlet pipework					
Meter Name / ID	Being supplied from (MOD	P tier – HP,	Pressure	Material	Diameter	P tier – HP,	Pressure	Material	Diameter	Max Flow
	network ID)	IP, MP, LP	(mbar)		(mm)	IP, MP, LP	(mbar)		(mm)	(M <sup>3</sup> hr)
MT Garage	Network 001	LP	NTP	Steel	80	LP	NTP	Steel	80	Not Visible

# 4 DIAGRAMS AND DRAWINGS

## 4.1 Line diagrams for building(s) internal gas installation pipework.

This section is to contain line diagrams for building internal installation pipework and associated components. This diagram should be fixed to the building at a practical and accessible location as well as within any associated document centres. It may be embedded as a PDF to this document for online use.

NOTE: Drawings are only required for commercial installations or for installation in commercial settings (non-domestic use). This may mean more installations than listed in IGEM/UP/2 Edition 3 (4.2.14), depending on the installations intended use.

Drawing Number	Building	Comments				
WX16-A-A3	Garages	NTS Gas Line Drawing				
WX16-A-A3	Main Building	NTS Gas Line Drawing				
		WX16-A-A3.pdf				
4.2 Additional drawings.						

This section is to contain any additional drawings that may be required or may be of benefit to this GSMP or emergency procedures.

Drawing Number	Building	Comments
WX16-B-A1	Sitewide	Site Gas Network Layout
		WX16-B-A1.pdf

# 5 GAS INCIDENTS

## 5.1 Site reporting procedures for dealing with gas incidents.

This section is to contain the establishment's site-specific procedure for dealing with reports of gas incidents with regards the external installation pipework, internal installation pipework and equipment. Details of all individuals with responsibilities under this procedure should be included.

Procedure for an incident involving the gas installation on site:

- Call the VIVO helpdesk on 0800 030 9320, open 24 hours per day
- The helpdesk will contact the EGDN emergency service who shall attend and make safe a gas incident.
- The helpdesk will inform the site team and also send a text and Teams message to inform the Gas RP team.

Establishment: Bristol Horfield ARC ACF

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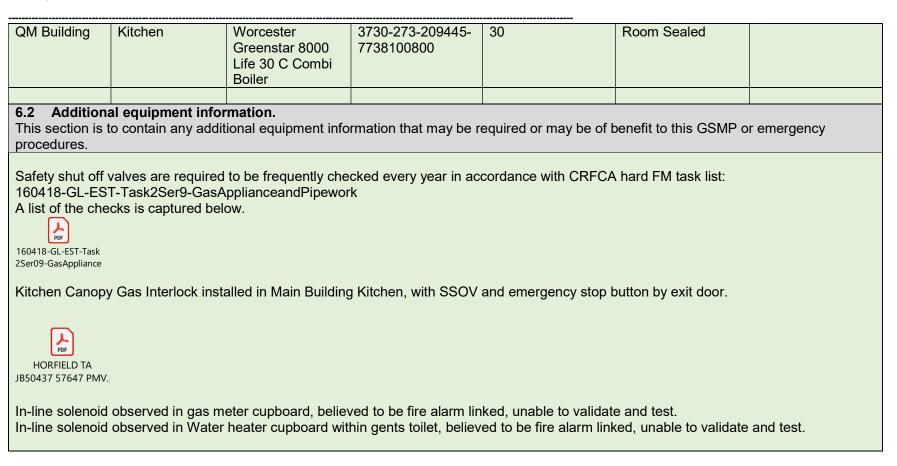
# 6 GAS EQUIPMENT

6.1 Equipme	nt List.								
This section is t	to include details of		nt being used at the e	stablishment.					
Building Equipment number location		Equipment type (make, model)	Serial Number	Appliance kW rating	Flue classification	Comments			
Fed from Mol	D Network 01								
Main Building	MT Garages	Ambi Rad Unit Heater	Not Visible	Not Visible	Room Sealed	Heater No.1			
Main Building	MT Garages	Ambi Rad Unit Heater	Not Visible	Not Visible	Room Sealed	Heater No.2			
Main Building	MT Garages	Ambi Rad Unit Heater	Not Visible	Not Visible	Room Sealed	Heater No.3			
Fed from Sin	gle Supply Meter	r 01							
Main Building	Boiler Room	Ideal IMAX Plus F200 Boiler	04C00083	200	Open Flue	Heating Boiler No.1			
Main Building	Boiler Room	Ideal IMAX Plus F200 Boiler	04C00062	200	Open Flue	Heating Boiler No.2			
Main Building	Gents Toilet	Andrews CSC93GB Water Heater	AD 4571655	106	Room Sealed				
Main Building	Kitchen	Falcon G2532 Grill	F387948	6.65	Flueless – Canopy Extract				
Main Building	Kitchen	Falcon G2865 Deep Fat Fryer	F403075	23	Flueless – Canopy Extract				
Main Building	Kitchen	Falcon G3101 6 Burner Range with Oven	F605498	38.9	Flueless – Canopy Extract				
Fed from Single Supply Meter 02									
QM Building	Stores	Gaz Industrie ULSA Warm Air Heater	Not Visible – High Level	25 (Assumed)	Room Sealed				

#### **VIVO Business**

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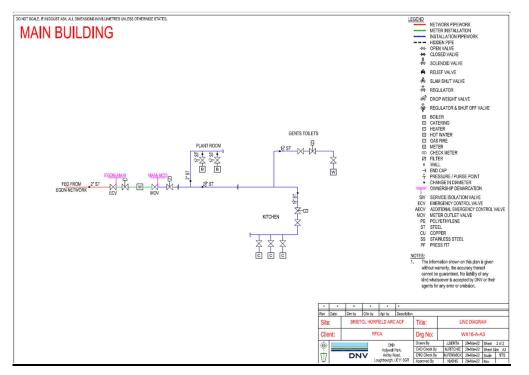
#### Establishment: Bristol Horfield ARC ACF



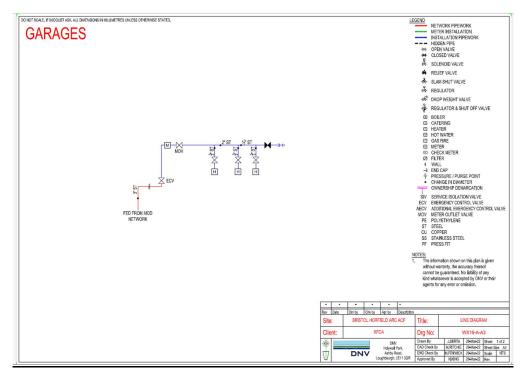
# 7 ANNEXES

#### Gas Line Drawings

#### Main Building - Fed from EGDN Network



#### Garages - Fed from MoD Network



# Gas Network Drawing

