

Document Cover Sheet



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Click on the *bookmarks* to go directly to the indicated content

P&ID REF

Plant Tag No.

Description

PROCESS & INSTRUMENTATION DIAGRAMS (P&IDs)

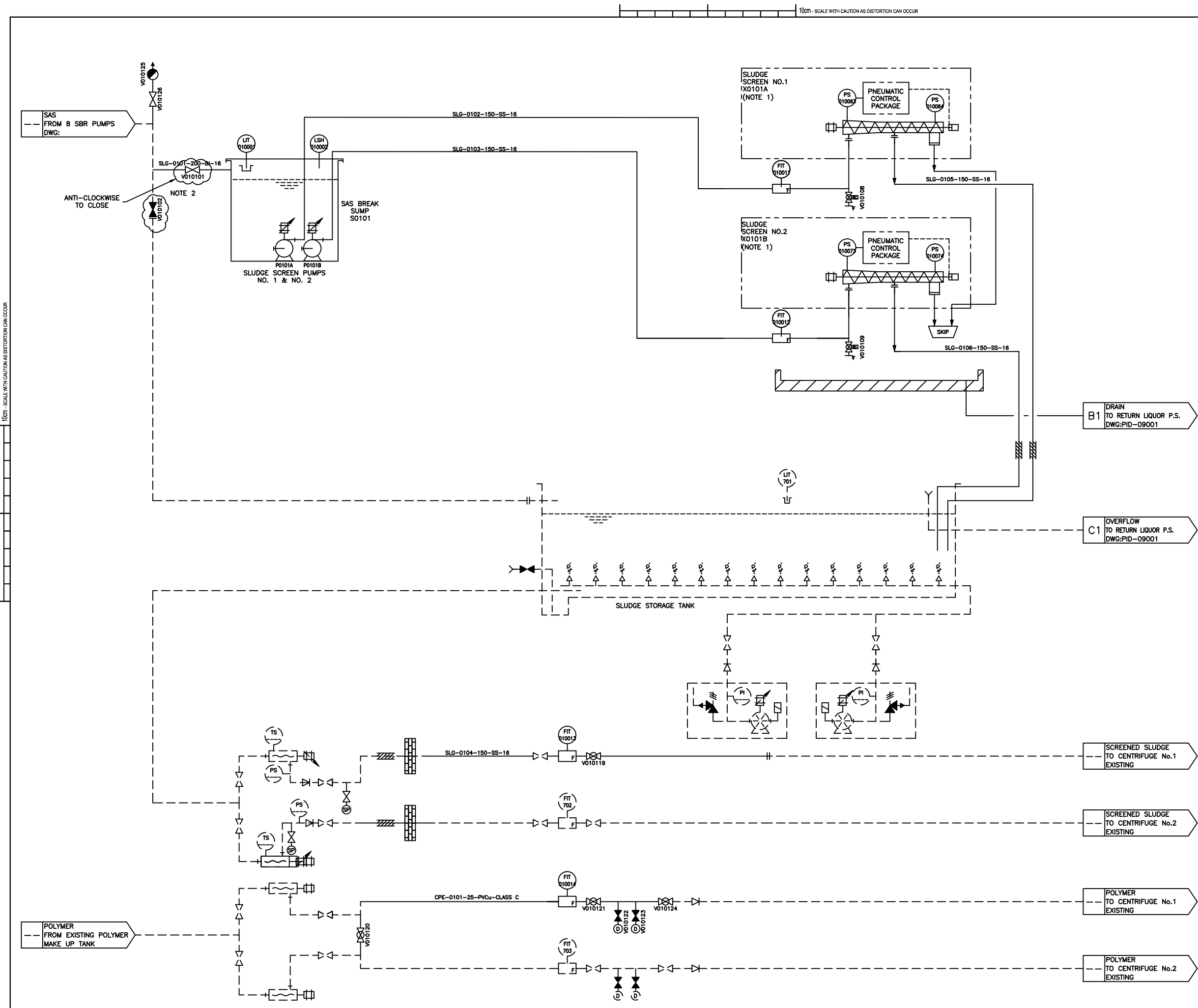
Manufacturer/Author

IMTECH

P&IDs

DRAWING No	DESCRIPTION	AREA
SWK-53154-SLT-PID-01001	SAS SCREENING	AREA_01
SWK-53154-SLT-PID-02001	CAKE IMPORTS	AREA_02
SWK-53154-SLT-PID-02002	THP FEED SILOS INDIGENOUS CAKE SILOS AND PUMPS	AREA_02
SWK-53154-SLT-PID-04001	SLUDGE DIGESTION SHEET 1 OF 2	AREA_04
SWK-53154-SLT-PID-04002	SLUDGE DIGESTION SHEET 2 OF 2	AREA_04
SWK-53154-SLT-PID-05001	GAS STORAGE & WASTE GAS SYSTEM	AREA_05
SWK-53154-SLT-PID-06001	STEAM SYSTEM	AREA_06
SWK-53154-SLT-PID-06002	PRIMARY HOT WATER SYSTEM	AREA_06
SWK-53154-SLT-PID-06003	CHP No.01	AREA_06
SWK-53154-SLT-PID-06004	CHP No.02	AREA_06
SWK-53154-SLT-PID-06006	STEAM BOILER No.01	AREA_06
SWK-53154-SLT-PID-06007	STEAM BOILER No.02	AREA_06
SWK-53154-SLT-PID-06009	BOILER WATER TREATMENT	AREA_06
SWK-53154-SLT-PID-06010	BOILER FEED TANK	AREA_06
SWK-53154-SLT-PID-06011	BOILER ROOM ANCILLIARIES	AREA_06
SWK-53154-SLT-PID-06012	Area 06: PID Natural Gas System	AREA_06
SWK-53154-SLT-PID-08001	POST DIGESTION STORAGE TANK & FEED PUMP	AREA_08
SWK-53154-SLT-PID-08002	DEWATERING BELT PRESSES	AREA_08
SWK-53154-SLT-PID-08003	DEWATERING POLYMER DOSING SYSTEM	AREA_08
SWK-53154-SLT-PID-09001	RETURN LIQUORS PUMPING STATION	AREA_09
SWK-53154-SLT-PID-11001	SERVICE WATER SYSTEM SHEET SHEET 1/3	AREA_11
SWK-53154-SLT-PID-11002	SERVICE WATER SYSTEM SHEET SHEET 2/3	AREA_11
SWK-53154-SLT-PID-11003	SERVICE WATER SYSTEM SHEET SHEET 3/3	AREA_11
SWK-53154-SLT-PID-13001	ODOUR CONTROL UNIT No1	AREA_13
SWK-53154-SLT-PID-13002	ODOUR CONTROL UNIT No2	AREA_13

100m - SCALE WITH CAUTION AS DISTORTION CAN OCCUR



NOTES:
ALL DIMENSIONS IN MILLIMETRES AND ALL LEVELS IN METRES UNLESS OTHERWISE STATED.
NOTE 1: SEE HUBER'S P & ID FOR PACKAGE DETAIL-40E0226
NOTE 2: IN CIVIL SCOPE

HEALTH & SAFETY INFORMATION BOX			
REV	CONSTRUCTION/COMMISSIONING RISKS	MAINTENANCE/OPERATING RISKS	DEMOLITION/ADAPTATION RISKS
X00	TANK TO BE CLEANED BEFORE ENTRY. CONFINED SPACE. TRAINED ENTRY TEAM. SUPPORT FRAME FROM FLOOR OF TANK. NO WORKING ON TANK WALL.	TANK TO BE CLEANED BEFORE ENTRY. CONFINED SPACE. TRAINED ENTRY TEAM. SUPPORT FRAME FROM FLOOR OF TANK. NO WORKING ON TANK WALL. HEIGHT RESTRICTION FOR DELIVERY AND REMOVAL OF SCREENING RIMS. RESIDUAL PRESSURE IN PRESSURE RELIEF VALVES WHEN NOT OPERATING.	EXISTING STORAGE TANK. EXISTING SUCTION PIPELINE TO BE MODIFIED AND VALVED.



NOTE:
1) PLEASE REFER TO AREA 01 & ELECTRICAL DESIGN HARA FOR DETAIL OF THE ABOVE RISKS
2) CONSTRUCTION METHOD STATEMENT AND RISK ASSESSMENT TO BE COMPLETED

CHANGES ON REV X00			
DESCRIPTION	ROD' BY	CHD' BY	DATE
PS010063, PS010064, PS010023 & PS010074 PAR NUMBERS ADDED	GT	GT	04/01/2011
REMOVED-V010110-V010113 ADDED-NOTE 2, TAG LIT701, LAGGING OF SLG-0105, SLG-0106, EXISTING LINE FROM V010102 TO SLUDGE STORAGE TANK, POLYMER SYSTEM DETAIL	DV	GM	14/06/2010
ADDED-V010125 & V010126, LINE TAG CPE-0101	DV	GM	11/08/2010

X00	AS BUILT	GM	GT	GT	04/01/11
C00	FOR CONSTRUCTION	GM	AP	DV	24/12/09
R01	VALVES REMOVED	PW	AP	DV	09/11/09
R00	PRE CONSTRUCTION	PW	AP	BB	22/09/09
T00	FIRST ISSUE	GM	JM	TS	21/5/9
Rev.	Description	Drawn	Ch'k'd	App'd	Date

Drawing Status: **AS BUILT**

Project Partners/Client:



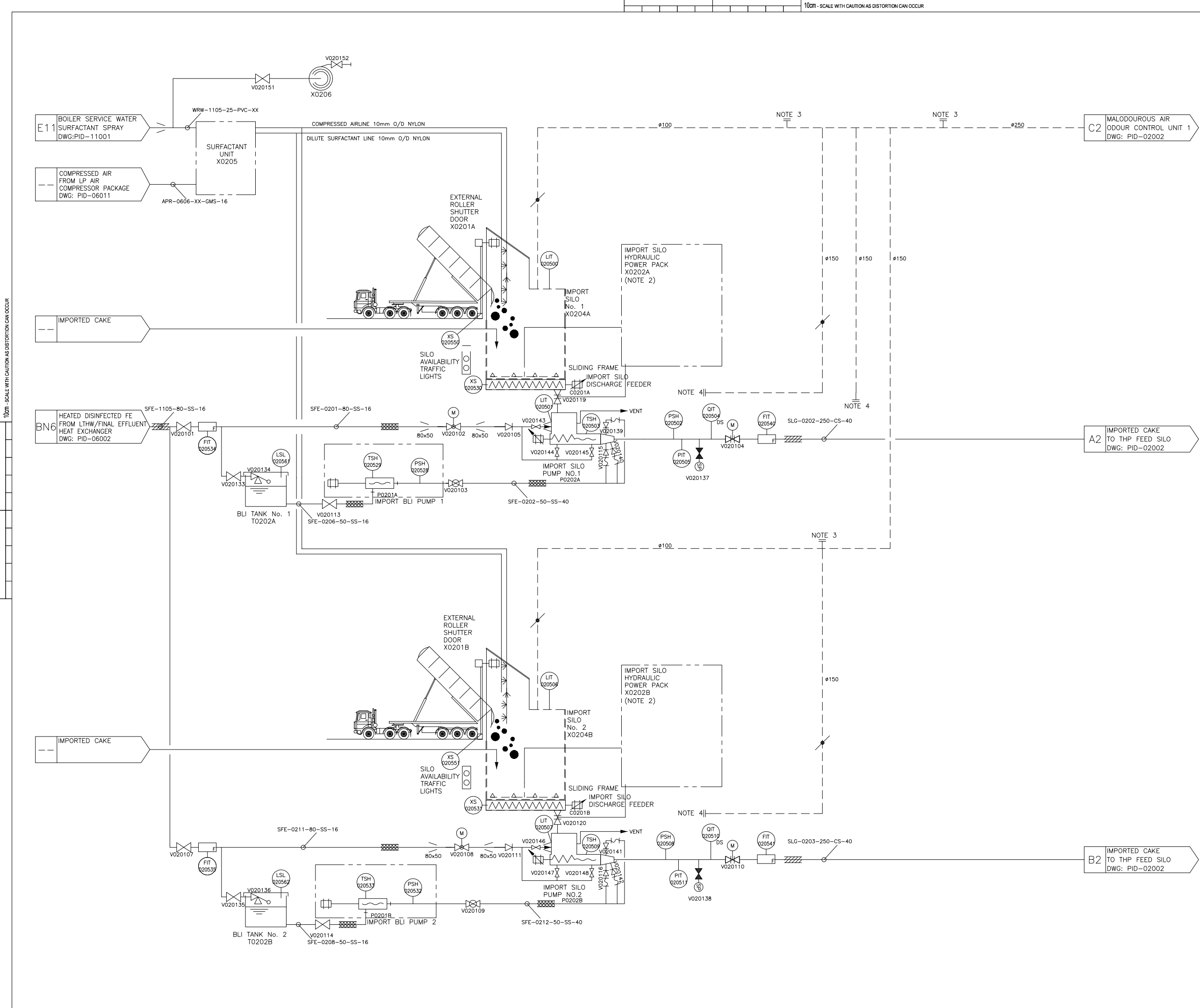
Project Title: **AFAN ADVANCED DIGESTION - P1759**

Drawing Title: **AREA 01: PID SAS SCREENING**

Coordinator: AP, Lead Design Eng: DV, Originator: AP, Project Manager: AB, Scale: NTS, Paper Scale: A1

Project Drawing No.: **SWK-53154-SLT-PID-01001**, Rev.: **X00**

SET Scheme No.: **2U/CM210M**, Drawing No.: **101001**



NOTES:
ALL DIMENSIONS IN MILLIMETRES AND ALL LEVELS IN METRES UNLESS OTHERWISE STATED.

NOTE 2: SEE CFP P & ID FOR PACKAGE DETAIL-16493-1
NOTE 3: SAMPLE/TEST POINT CONNECTION
NOTE 4: EXTRACTION FROM BASE OF CHAMBER & PUMP SUMP

HEALTH & SAFETY INFORMATION BOX

REV	CONSTRUCTION/ COMMISSIONING RISKS	MAINTENANCE/ OPERATING	DEMOLITION/ ADAPTATION RISKS
X00	CONFINED SPACE ENTRY AND WORKING AT HEIGHT - ACCESS TO IMPORT BUNKER AND THP SILO. FALLS FROM HEIGHT - INSTALLATION OF ENCLOSURE COVERS. REMOVAL OF EXISTING SLUDGE PIPEWORK / CONTACT WITH SLUDGE. SLIPS AND TRIPS - CAKE SPILLAGE AND WASHDOWN. HIGH PRESSURE OIL LEAKS - HYDRAULIC POWER SYSTEMS. SCALDS AND BURNS - HOT DILUTION WATER. ELECTRICAL WORKS. EXPLOSIVE ATMOSPHERES - REFER TO DOCUMENT P1759/6/12/001 AND DRAWINGS SWK-53154-SLT-PEX-0001 AND 02001.	CONFINED SPACE ENTRY AND WORKING AT HEIGHT - ACCESS TO IMPORT BUNKER AND THP SILO. FALLS FROM HEIGHT - DEMOLITION OF ENCLOSURE COVERS. WEIL'S DISEASE - REMOVAL OF EXISTING SLUDGE PIPEWORK / CONTACT WITH SLUDGE. SLIPS AND TRIPS - CAKE SPILLAGE AND WASHDOWN. ELECTRICAL WORKS. EXPLOSIVE ATMOSPHERES - REFER TO DOCUMENT P1759/6/12/001 AND DRAWINGS SWK-53154-SLT-PEX-0001 AND 02001.	CONFINED SPACE ENTRY AND WORKING AT HEIGHT - ACCESS TO IMPORT BUNKER AND THP SILO. FALLS FROM HEIGHT - DEMOLITION OF ENCLOSURE COVERS. WEIL'S DISEASE - REMOVAL OF EXISTING SLUDGE PIPEWORK / CONTACT WITH SLUDGE. SLIPS AND TRIPS - CAKE SPILLAGE AND WASHDOWN. ELECTRICAL WORKS. EXPLOSIVE ATMOSPHERES - REFER TO DOCUMENT P1759/6/12/001 AND DRAWINGS SWK-53154-SLT-PEX-0001 AND 02001.




NOTE:
1) PLEASE REFER TO AREA 02 & ELECTRICAL DESIGN HARA FOR DETAIL OF THE ABOVE RISKS
2) CONSTRUCTION METHOD STATEMENT AND RISK ASSESSMENT TO BE COMPLETED

CHANGES ON REV. X00

DESCRIPTION		RQD' BY	CHD' BY	DATE	
ADDED-V020139-V020142 SUPPLIED BY IPS, LAGGING AND TRACE HEATING DETAILS, NOTE 3, NOTE 4, LSL020561 & LSL020562 CHANGED-V020103, V020109 TO BALL VALVES, LSH TO LIT020501, 020507		DV	GM	14/06/2010	
CONFIRMED-ODOUR PIPEWORK ADDED-V020246-V020252, SUFFACTANT UNIT, HOSE REEL CHANGED-IMPORT SILO TAG MOVED-FIT'S AFTER VALVES		JJ/DV/ SITE	GM	16/08/2010	
X00	AS BUILT	AE	GT	GT	26/01/11
C01	FOR CONSTRUCTION	GM	JM	TS	15/01/10
C00	CONSTRUCTION ISSUE	PW	JM	TS	23/11/09
ROO	PRE CONSTRUCTION	PW	JM	TS	22/09/09
T00	FIRST ISSUE	GM	JM	TS	21/5/9
Rev.	Description	Drawn	Ch'k'd	App'd	Date



Drawing Status
AS BUILT

Project Partners/Client

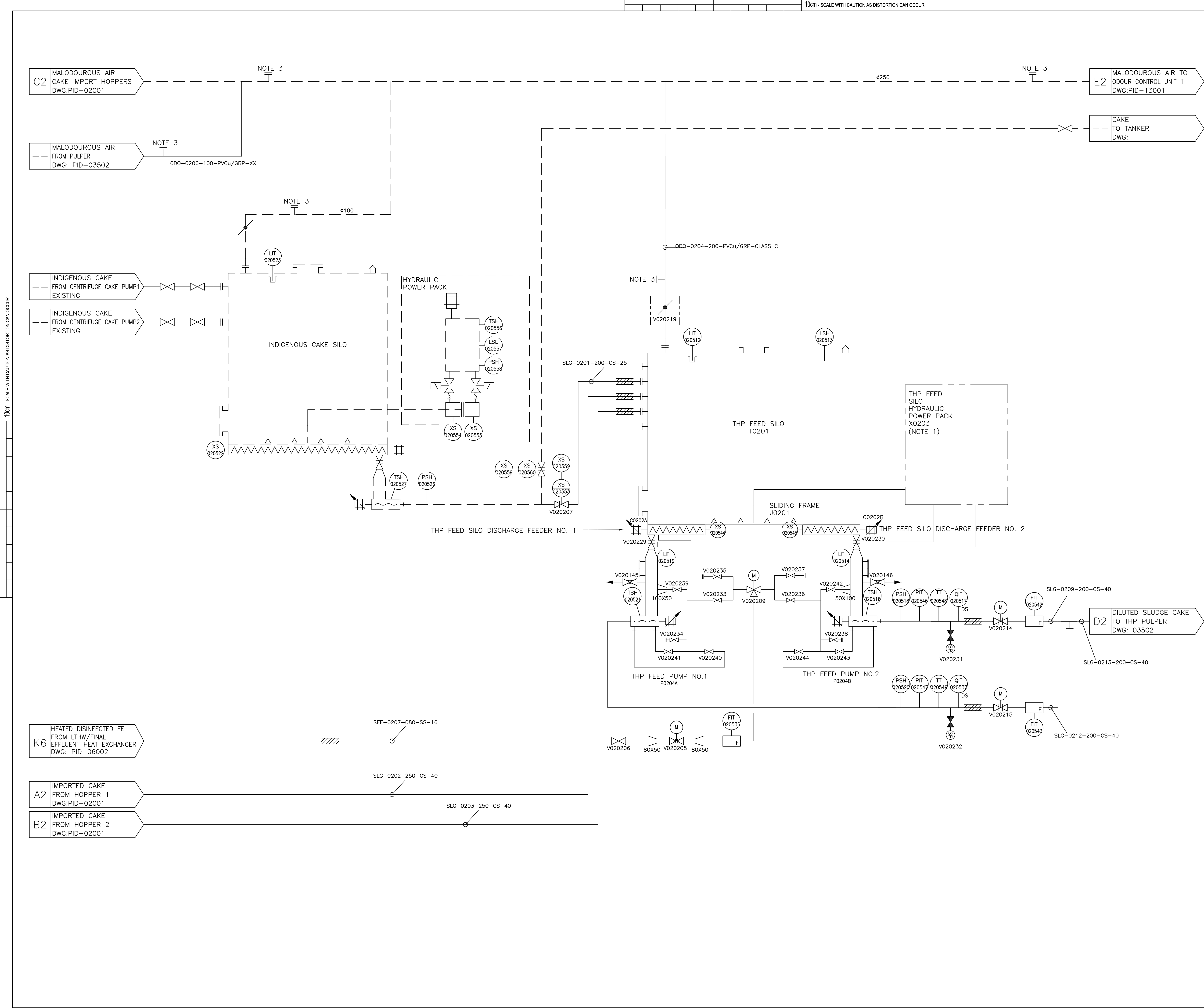


Project Title
**AFAN
ADVANCED DIGESTION
-
P1759**

Drawing Title
**AREA 02: PID
CAKE IMPORTS**



Coordinator	AP	Lead Design Eng	DV
Originator	AP	Project Manager	AB
Scale	NTS	Paper Scale	A1
Project Drawing No.	SWK-53154-SLT-PID-02001	Rev.	X00
SET Scheme No.	2U/CM210M	Drawing No.	0102001



NOTES:
ALL DIMENSIONS IN MILLIMETRES AND ALL LEVELS IN METRES UNLESS OTHERWISE STATED.
NOTE 1: SEE SPIRAC DRAWING FOR DETAIL. DRG. NO. 09-118.P&ID
NOTE 2: CONNECTION FOR COMMISSIONING SEED SLUDGE TO PID-08001
NOTE 3: SAMPLE/TEST POINT CONNECTION

HEALTH & SAFETY INFORMATION BOX			
REV	CONSTRUCTION/COMMISSIONING RISKS	MAINTENANCE/OPERATING	DEMOLITION/ADAPTATION RISKS
X00	CONFINED SPACE ENTRY AND WORKING AT HEIGHT - ACCESS TO IMPORT BUNKER AND THP SILO. FALLS FROM HEIGHT - ACCESS TO THP FEED FLOWMETERS. CARBON MONOXIDE - EXHAUST FUMES FROM VEHICLES. VEHICLE MOVEMENTS - LORRIES REVERSING. PIPEWORK / CONTACT WITH SLUDGE. SLIPS AND TRIPS - CAKE SPILLAGE AND WASHDOWN. ELECTRICAL WORKS. EXPLOSIVE ATMOSPHERES - REFER TO DOCUMENT P1759/6/12/001 AND DRAWINGS SWK-53154-SLT-PE X-00001 AND 02001.	CONFINED SPACE ENTRY AND WORKING AT HEIGHT - ACCESS TO IMPORT BUNKER AND THP SILO. WORKING AT HEIGHT - ACCESS TO THP FEED FLOWMETERS. CARBON MONOXIDE - EXHAUST FUMES FROM VEHICLES. VEHICLE MOVEMENTS - LORRIES REVERSING. SLIPS AND TRIPS - CAKE SPILLAGE AND WASHDOWN. PRESSURE OIL LEAKS - HYDRAULIC POWER SYSTEMS. SCALDS AND BURNS - HOT DILUTION WATER. ELECTRICAL WORKS. EXPLOSIVE ATMOSPHERES - REFER TO DOCUMENT P1759/6/12/001 AND DRAWINGS SWK-53154-SLT-PEX-00001 AND 02001.	CONFINED SPACE ENTRY AND WORKING AT HEIGHT - ACCESS TO IMPORT BUNKER AND THP SILO. FALLS FROM HEIGHT - DEMOLITION OF ENCLOSURE COVERS. WEIL'S DISEASE - REMOVAL OF EXISTING SLUDGE PIPEWORK / CONTACT WITH SLUDGE. SLIPS AND TRIPS - CAKE SPILLAGE AND WASHDOWN. ELECTRICAL WORKS. EXPLOSIVE ATMOSPHERES - REFER TO DOCUMENT P1759/6/12/001 AND DRAWINGS SWK-53154-SLT-PEX-00001 AND 02001.
NOTE: 1) PLEASE REFER TO AREA 02 & ELECTRICAL DESIGN HARA FOR DETAIL OF THE ABOVE RISKS 2) CONSTRUCTION METHOD STATEMENT AND RISK ASSESSMENT TO BE COMPLETED			

CHANGES ON REV. X00			
DESCRIPTION	RQD' BY	CHD' BY	DATE
ADDED-V020233-V020238,ODO-02 06, NOTES 1-3 CHANGED-TAG V020231 & V020232, ACTUATOR ON V020207 TO XS SWITCHES	DV	GM	27/05/2010
ADDED-EXISTING HYDRAULIC POWER PACK INSTRUMENT TAGS CHANGED-VALVES V020233-38 TO GATE VALVES	DV	GM	13/07/2010
ADDED-V020239-V020246, NOTE 2 DETAIL MOVED-FIT'S TO AFTER VALVES & ORDER OF QIT'S & TT'S	DV/SITE	GM	11/08/2010

X00	AS BUILT	AE	GT	GT	07/01/11
C01	UPDATE	GM	JM	TS	24/12/09
C00	CONSTRUCTION	GC	JM	TS	24/11/09
ROO	PRE CONSTRUCTION	PS	JM	TS	18/09/09
T00	FIRST ISSUE	GM	JM	TS	21/05/09
Rev.	Description	Drawn	Ch'k'd	App'd	Date

Drawing Status

AS BUILT

Project Partners/Client

Project Title

AFAN
ADVANCED DIGESTION
-
P1759

Drawing Title

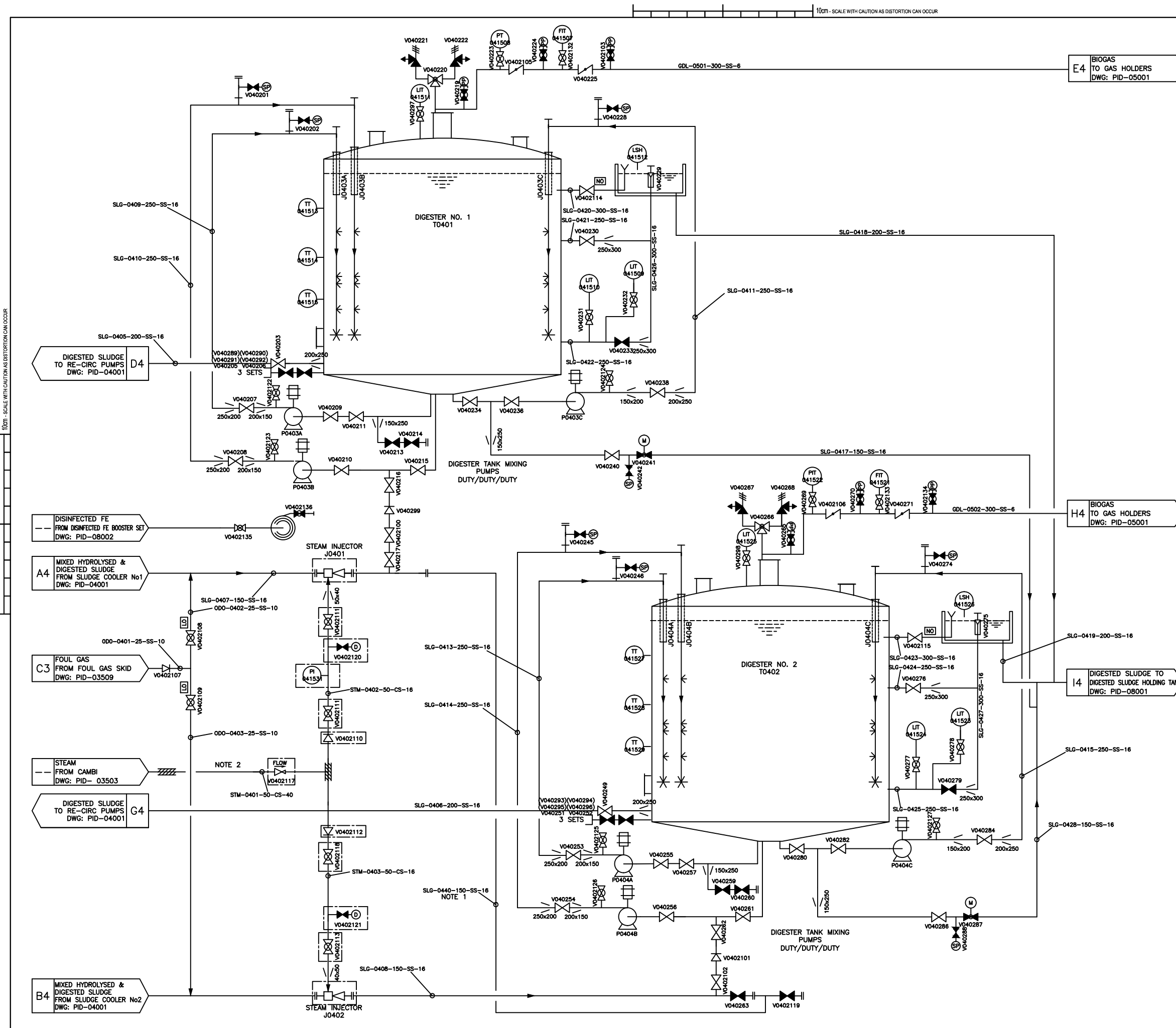
AREA 02: PID
THP FEED SILOS
INDIGENOUS CAKE SILOS AND PUMPS

The Willowford, Trefforest Ind. Est.
Pontypridd, CF37 5UR
Tel: 01443 844794

Coordinator	AP	Lead Design Eng	DV
Originator	AP	Project Manager	AB
Scale	NTS	Paper Scale	A1

Project Drawing No.	SWK-53154-SLT-PID-02002	Rev.	X00
SET Scheme No.	2U/CM210M	Drawing No.	102002

10mm - SCALE WITH CAUTION AS DISTORTION CAN OCCUR



NOTES:
ALL DIMENSIONS IN MILLIMETRES AND ALL LEVELS IN METRES UNLESS OTHERWISE STATED.
NOTE 1: FOR DIGESTER BALANCING DURING COMMISSIONING
NOTE 2: MAXIMUM FLOW 500kg/h OF STEAM

HEALTH & SAFETY INFORMATION BOX

REV	CONSTRUCTION/COMMISSIONING RISKS	MAINTENANCE/OPERATING	DEMOLITION/ADAPTATION RISKS
X00	CRUSHING AND LIFTING FAILURES - REMOVAL OF MIXING EQUIPMENT, PIPEWORK, STEELWORK AND DRAW OFF BOXES AT HIGH LEVEL. CONFINED SPACE ENTRY - INSTALLATION OF EQUIPMENT IN DIGESTERS, WORKING AT HEIGHT - DIGESTER ROOF AND STEELWORK. ELECTRICAL WORKS. EXPLOSIVE ATMOSPHERES - REFER TO DOCUMENT P1759/6/12/001 AND DRAWINGS SWK-53154-SLT-PEX-00001 AND 04001.	BIOGAS ESCAPE FROM DIGESTERS - REMOVAL OF MIXING LANCES, FALLS FROM HEIGHT - MAINTENANCE OF EQUIPMENT AT HIGH LEVEL. FLOODING OF POST DIGESTION STORAGE TANK - DRAINING DOWN OF DIGESTER TANKS. CONFINED SPACE ENTRY - ACCESS INTO DIGESTERS. ELECTRICAL WORKS. EXPLOSIVE ATMOSPHERES - REFER TO DOCUMENT P1759/6/12/001 AND DRAWINGS SWK-53154-SLT-PEX-00001 AND 04001.	CRUSHING AND LIFTING FAILURES - REMOVAL OF EQUIPMENT, PIPEWORK, STEELWORK AND DRAW OFF BOXES AT HIGH LEVEL. BIOGAS ESCAPE FROM DIGESTERS - REMOVAL OF MIXING LANCES, CONFINED SPACE ENTRY - REMOVAL OF EQUIPMENT IN DIGESTERS, WORKING AT HEIGHT - DIGESTER ROOF AND STEELWORK. FLOODING OF POST DIGESTION STORAGE TANK - DRAINING DOWN OF DIGESTER TANKS. ELECTRICAL WORKS. EXPLOSIVE ATMOSPHERES - REFER TO DOCUMENT P1759/6/12/001 AND DRAWINGS SWK-53154-SLT-PEX-00001 AND 04001.

NOTE:
1) PLEASE REFER TO AREA 04 & ELECTRICAL DESIGN HARA FOR DETAIL OF THE ABOVE RISKS
2) CONSTRUCTION METHOD STATEMENT AND RISK ASSESSMENT TO BE COMPLETED

CHANGES ON REV. X00				
DESCRIPTION	REV	BY	CHKD	DATE
PI041531 & P141530 REMOVED	GT	GT	GT	04/01/2010
DELETED-PI041502-PI041518, V040201 ADDED-V0402122-V0402127, LAGGING ON STM-0401-0403, PI041531, TAGS ON MIXING LANCES J0403A-C, J0404A-C, MOVED-V040218, V040226, V040217, V040216, V040218, V040210, V040212	DV	GM	GM	14/06/2010
ADDED-HOSE POINT, VALVES V0402132-V0402136, REMOVED-V040204V040218, V040226, V040250, V040264, V040272	DV/SI	GM	GM	27/08/2010

Rev.	Description	Drawn	Chk'd	App'd	Date
X00	AS BUILT	AE	GT	GT	04/01/11
C00	FOR CONSTRUCTION	GM	JM	TS	25/02/10
R00	PRE CONSTRUCTION	GM	JM	TS	25/09/09
T00	FIRST ISSUE	GM	JM	TS	21/5/9

Drawing Status

AS BUILT

Project Partners/Client

MORGAN SINDALL

Dŵr Cymru

Welsh Water

Project Title

AFAN

ADVANCED DIGESTION

P1759

Drawing Title

AREA 04: PID

SLUDGE DIGESTION

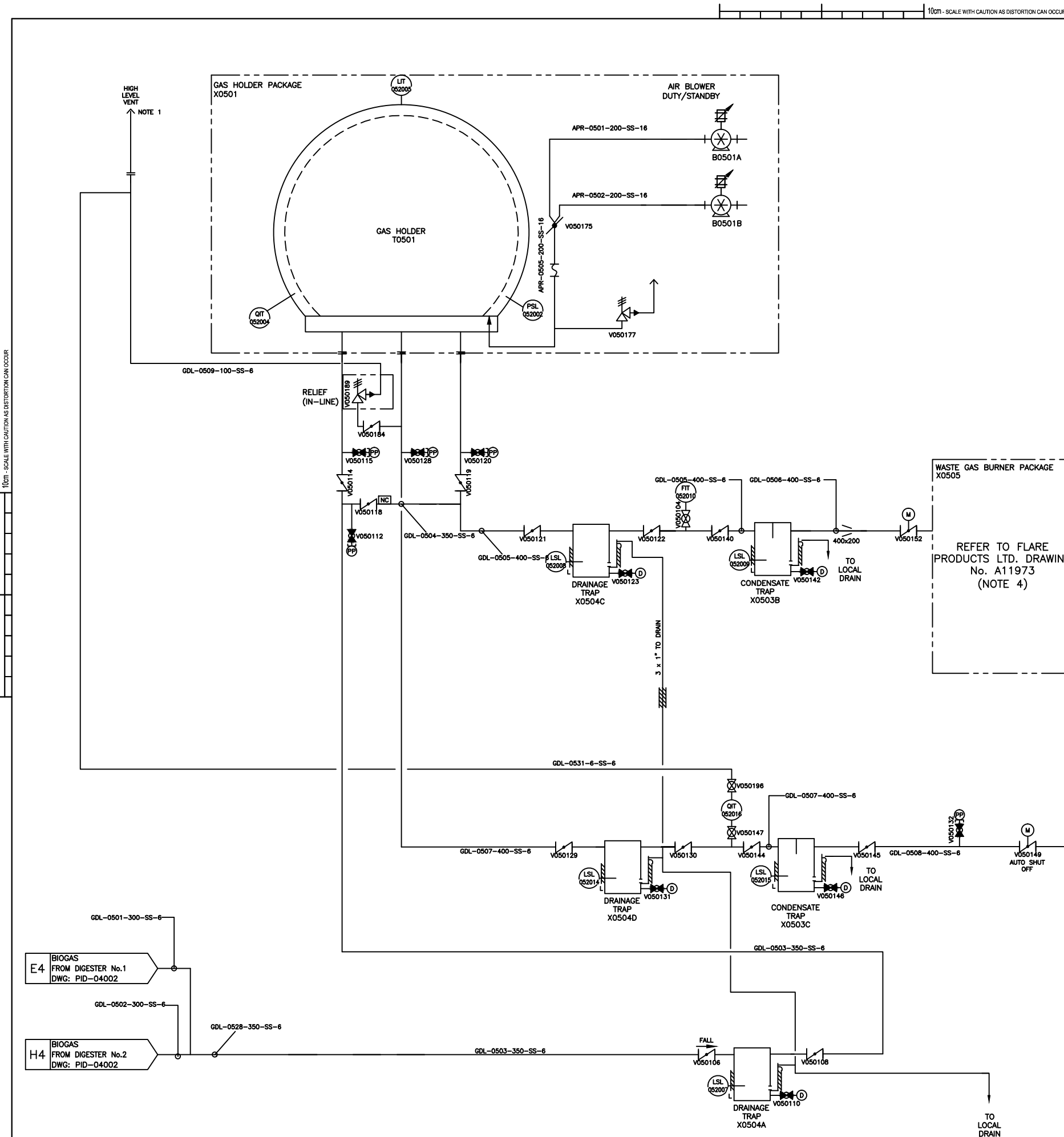
SHT 2/2

The Willowford, Treforest Ind. Est.
Pontypridd, CF37 5UR
Tel: 01443 844794

Coordinator	MR	Lead Design Eng	DV
Originator	MR	Project Manager	AB
Scale	NTS	Paper Scale	A1

Project Drawing No.	SWK-53154-SLT-PID-04002	Rev.	X00
SET Scheme No.	2U/CM210M	Drawing No.	104002

10mm - SCALE WITH CAUTION AS DISTORTION CAN OCCUR



NOTES:
ALL DIMENSIONS IN MILLIMETRES AND ALL LEVELS IN METRES UNLESS OTHERWISE STATED.
NOTE 1: HIGH LEVEL VENT TO BE ROUTED BETWEEN DIGESTERS IN AN ALREADY ZONED AREA.
NOTE 2: VALVES TO BE LOCKABLE.
NOTE 4: SEE FLARE PRODUCTS P & ID FOR PACKAGE DETAIL- A11973

HEALTH & SAFETY INFORMATION BOX

REV	CONSTRUCTION/ COMMISSIONING RISKS	MAINTENANCE/ OPERATING	DEMOLITION/ ADAPTATION RISKS
X00	CONFINED SPACE ENTRY - ACCESS INTO GAS HOLDER MEMBRANE. ELECTRICAL WORKS. EXPLOSIVE ATMOSPHERES - REFER TO DOCUMENT P1759/6/12/001 AND DRAWINGS SWK-53154-SLT-PEX-00001 AND 05001).	CONFINED SPACE ENTRY - ACCESS INTO GAS HOLDER MEMBRANE. ELECTRICAL WORKS. EXPLOSIVE ATMOSPHERES - REFER TO DOCUMENT P1759/6/12/001 AND DRAWINGS SWK-53154-SLT-PE X-00001 AND 05001).	CONFINED SPACE ENTRY - ACCESS INTO GAS HOLDER MEMBRANE. ELECTRICAL WORKS. EXPLOSIVE ATMOSPHERES - REFER TO DOCUMENT P1759/6/12/001 AND DRAWINGS SWK-53154-SLT-PEX -00001 AND 05001).

NOTE:
1) PLEASE REFER TO AREA 05 & ELECTRICAL DESIGN HARA FOR DETAIL OF THE ABOVE RISKS
2) CONSTRUCTION METHOD STATEMENT AND RISK ASSESSMENT TO BE COMPLETED

CHANGES ON REV. X00			
DESCRIPTION	RQD' BY	CHD' BY	DATE
P052002 MOVED TO GAS HOLDER T0501. V050189 CHANGE TO ANGLE RELIEF VALVE & LOCATED BELOW GAS HOLDER T0501. X0504C, X0504D & X0504A LINKED BY 1" OVERFLOW DRAIN PIPE. OVERFLOW PIPES ADDED TO X0503B, X0504C & X0504A. AREA 6 BUILDING BOUNDARY ADDED. V05016 REMOVED.	GT	GT	06/01/2011
CHANGED-LSL & QIT ARRANGEMENT, LINE SIZES-GDL-0604, GDL-0605 DELETED-V050173, V050174, X0503A, V050101, V050102 & LSL052006 ADDED-V050196	DV	GM	14/06/2010
ADDED-LAGGING TO CONDENSATE & DRAINAGE TRAPS MOVED-V050104, V050132, V050175 & V050176	DV	GM	11/08/2010

X00	AS BUILT	AE	GT	GT	21/12/10
C00	FOR CONSTRUCTION	GM	JM	TS	26/02/10
R00	PRE CONSTRUCTION	GM	JM	TS	25/09/09
T00	FIRST ISSUE	GM	JM	TS	21/5/9
Rev.	Description	Drawn	Ch'k'd	App'd	Date

Drawing Status

AS BUILT

Project Partners/Client

Project Title

AFAN
ADVANCED DIGESTION
-
P1759

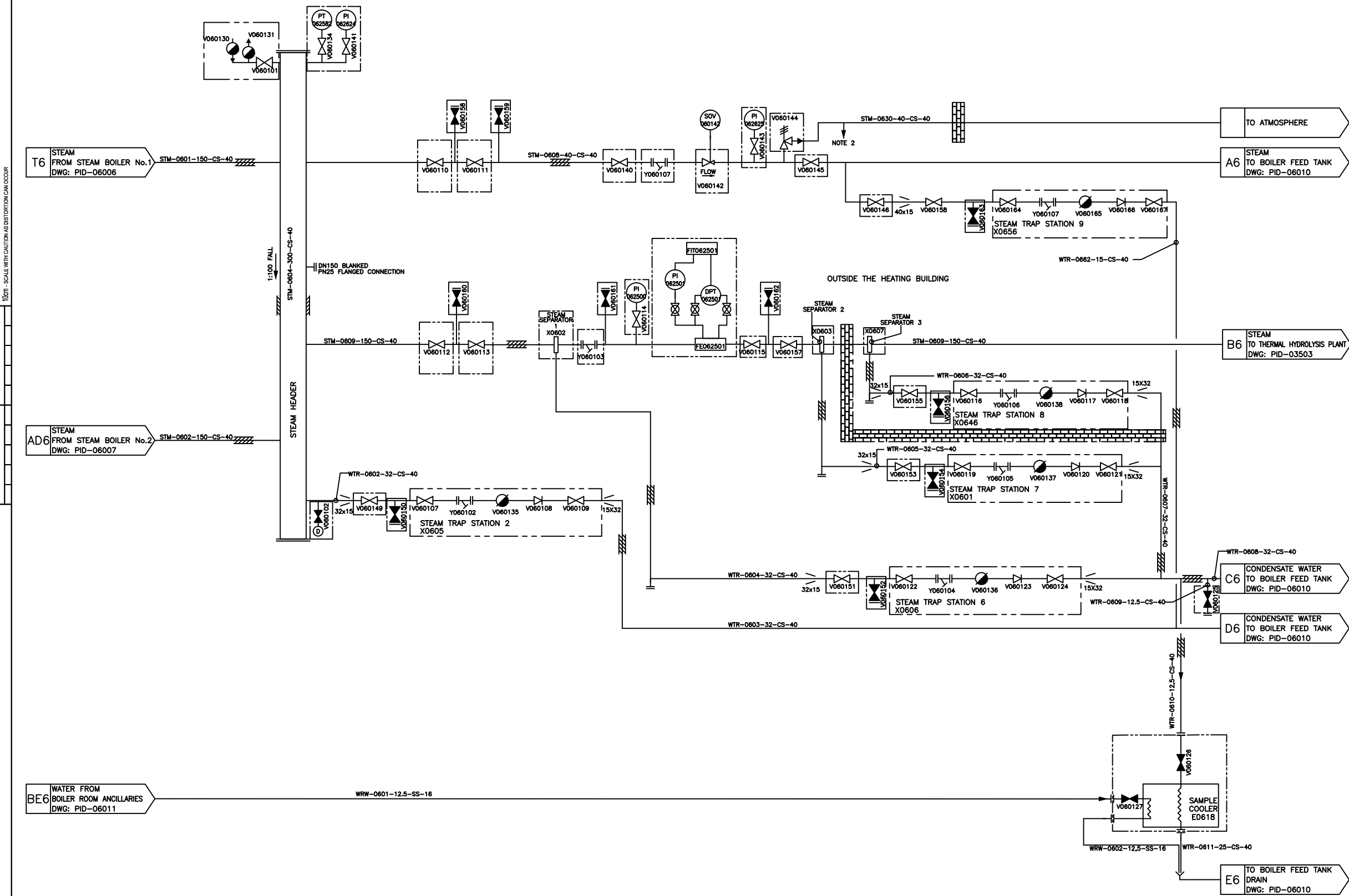
Drawing Title

AREA 05: PID
GAS STORAGE
AND WASTE GAS SYSTEM

The Willowford, Treforest Ind. Est.
Pontypridd, CF37 5UR
Tel: 01443 844794

Coordinator	MR	Lead Design Eng	DV
Originator	MR	Project Manager	AB
Scale	NTS	Paper Scale	A1

Project Drawing No.	SWK-53154-SLT-PID-05001	Rev.	X00
SET Scheme No.	2U/CM210M	Drawing No.	105001



HEALTH & SAFETY INFORMATION BOX			
REV	CONSTRUCTION/ INSTALLATION/ COMMISSIONING RISKS	MAINTENANCE/OPERATING	DEMOLITION/ ADAPTATION RISKS
X00	<p>NOISE - CHP, BOILER PLANT AND VENTILATION SYSTEM. CRUSHING AND LIFTING FAILURES -</p> <p>INSTALLATION OF EQUIPMENT, PIPEWORK AND STEELWORK AT HIGH LEVEL. WORKING AT HEIGHT. FALLING OBJECTS. RESTRICTED HEADROOM - ACCESS TO TOP OF BOILER NO 1 (FREQUENT).</p> <p>UNPLANNED RELEASE OF STORED ENERGY. STEAM, NATURAL GAS AND COMPRESSED AIR. CHEMICAL SPILLAGE. RISK OF CHEMICAL DOSING SYSTEM.</p> <p>SCALDS/BURNS - HOT WATER SYSTEM. MANUAL HANDLING - WATER TREATMENT AND CHEMICAL DOSING SYSTEMS (BULK DELIVERY ADVISED FOR CHEMICAL DOSING TANKS). ROLES - COMPETENT PERSONNEL ONLY. ELECTRICAL WORKERS. EXPLOSIVE ATMOSPHERES - ZONES OF EXHAUST FROM ROOM AT HIGH LEVEL AS PER DEGREE ASSESSMENT REFER TO DOCUMENT P1759/8/12/001 AND DRAWINGS SWK-53154-SLT-PEX-00001 AND 02001.</p>	<p>NOISE - CHP, BOILER PLANT, ANCHORAGE PLANT AND VENTILATION SYSTEM. WORKING AT HEIGHT AND FALLING OBJECTS. RESTRICTED HEADROOM (UNPLANNED RELEASE AT HEIGHT). FALLING STEAM, NATURAL GAS AND COMPRESSED AIR. CHEMICAL SPILLAGE. RISK OF CHEMICAL DOSING SYSTEM.</p> <p>SCALDS/BURNS - HOT WATER SYSTEMS. MANUAL HANDLING - WATER TREATMENT AND CHEMICAL DOSING SYSTEMS (BULK DELIVERY ADVISED FOR CHEMICAL DOSING TANKS). CONFINED SPACE ENTRY - TANK INSPECTION. LACK OF COMBUSTION AIR TO BOILERS - VENTILATION TO COMPLY WITH BRITISH STANDARDS. ROLES - COMPETENT PERSONNEL ONLY. ELECTRICAL WORKERS. EXPLOSIVE ATMOSPHERES - REFER TO DOCUMENT P1759/8/12/001 AND DRAWINGS SWK-53154-SLT-PEX-00001 AND 02001.</p>	<p>NOISE - CHP, BOILER PLANT, ANCHORAGE PLANT AND VENTILATION SYSTEM. CRUSHING AND LIFTING FAILURES -</p> <p>INSTALLATION OF EQUIPMENT, PIPEWORK AND STEELWORK AT HIGH LEVEL. WORKING AT HEIGHT. FALLING OBJECTS. RESTRICTED HEADROOM - ACCESS TO TOP OF BOILER NO 1 (FREQUENT).</p> <p>UNPLANNED RELEASE OF STORED ENERGY. STEAM, NATURAL GAS AND COMPRESSED AIR. CHEMICAL SPILLAGE. RISK OF CHEMICAL DOSING SYSTEM.</p> <p>SCALDS/BURNS - HOT WATER SYSTEMS. MANUAL HANDLING - WATER TREATMENT AND CHEMICAL DOSING SYSTEMS (BULK DELIVERY ADVISED FOR CHEMICAL DOSING TANKS). ELECTRICAL WORKERS. EXPLOSIVE ATMOSPHERES REFER TO DOCUMENT P1759/8/12/001 AND DRAWINGS SWK-53154-SLT-PEX-00001 AND 02001.</p>

X00	AS BUILT	SN	GT	GT	08.03.11
C01	MODIFICATIONS	MLD	JM	DV	24/04/10
C00	FOR CONSTRUCTION	GC	JM	TS	9/12/09
ROO	PRE-CONSTRUCTION	GM		TS	22/09/09
T00	FIRST ISSUE	GM	JM	TS	21/05/09
P00	FOR INFORMATION	JC		TS	28/01/09
Rev.	Description	Drawn	Ch'k'd	App'd	Date

Drawing Status	AS BUILT
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**MORGAN
SINDALL**

IrishTech :: ::
IrishTech Process

**Dŵr Cymru
Welsh Water**

Project Title

AFAN
ADVANCED DIGESTION
-
P1759

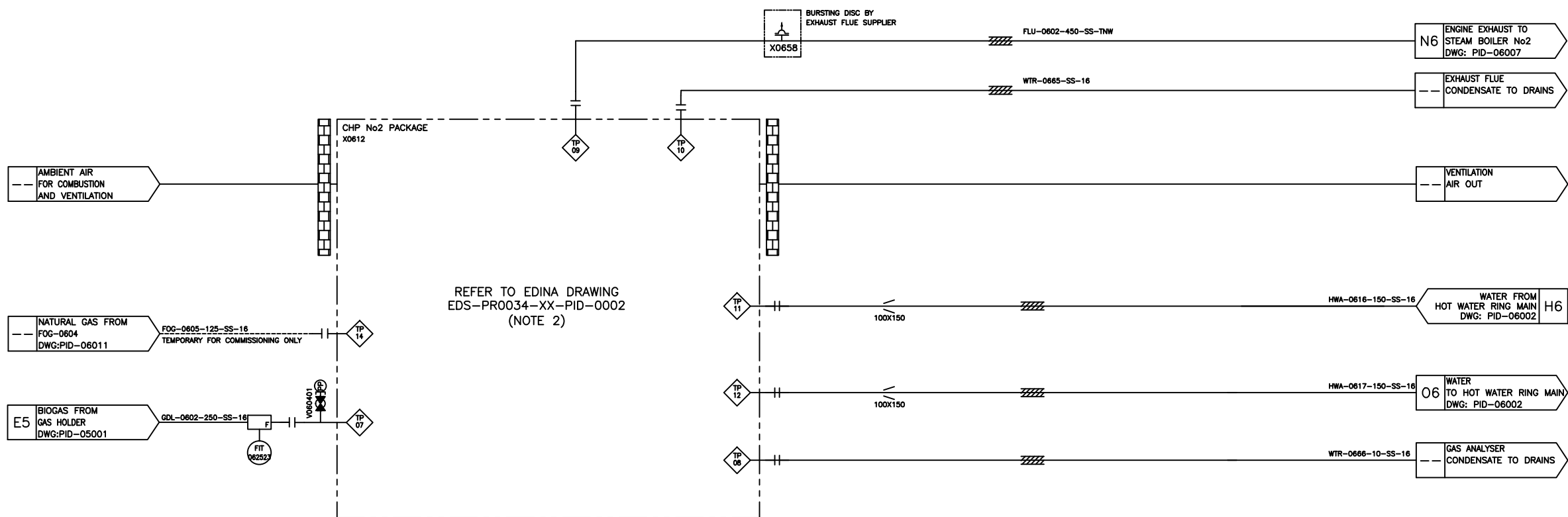
Drawing Title

AREA 06: PID
STEAM SYSTEM

100% GUARANTEE ■ ■ ■ The Willowford, Trefforest Ind. Est.
Pontypridd, CF37 5UR
Tel: 01443 844794

Coordinator	GT	Lead Design Eng	DV
Originator	GT	Project Manager	AB
Scale	NTS	Paper Scale	A1

Project Drawing No.		Rev.
SWK-53154-SLT-PID-06001		X00
SET Scheme No.	Drawing No.	
2U/CM210M	106001	



NOTES:

ALL DIMENSIONS IN MILLIMETRES AND ALL LEVELS IN METRES UNLESS OTHERWISE STATED.

1. REFER TO SWK-53154-SLT-PID-0000 FOR LEGEND
2. SEE SUPPLIER P&ID FOR PACKAGE DETAILS

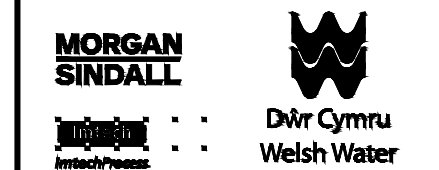
HEALTH & SAFETY INFORMATION BOX			
REV	CONSTRUCTION/ INSTALLATION/ COMMISSIONING RISKS	MAINTENANCE/OPERATION	DEMOLITION/ ADAPTATION RISKS
X00	<p>NOISE - CHP, BOILER PLANT, ANGLAR PLANT AND VENTILATION SYSTEM, CRUSHING AND LIFTING</p> <p>INSTALLATION OF EQUIPMENT, PIPEWORK AND TIEE WORK AT HIGH LEVEL, WORKING AT HEIGHT, FALLING OBJECTS, RESTRICTED HEADROOM - ACCESS TO TOP OF BOILER NO 1 (FREQUENT) UNPLANNED RELEASE OF STORED ENERGY</p> <p>SCALDS/BURNS - HOT WATER, NATURAL GAS AND COMPRESSED AIR, CHEMICAL SPILLAGE</p> <p>BOILER CHEMICAL DOSING SYSTEM.</p> <p>SCALDS/BURNS - HOT WATER SYSTEMS.</p> <p>MANUAL HANDLING WATER TREATMENT AND CHEMICAL DOSING SYSTEMS (BULK DELIVERY ADVISED FOR CHEMICAL DOSING TANKS). BOILER OPERATION - COMPETENT PERSONNEL ONLY.</p> <p>ELECTRICAL WORK, EXPLOSIVE ATMOSPHERES - ZONES OF POTENTIAL OF DANGER ROOM AT HIGH LEVEL AS PER DSEAR ASSIGNMENT REFER TO DOCUMENT</p> <p>P1759/612/001 AND DRAWINGS</p> <p>SWK-53154-SLT-PEX-00001 AND 02001.</p>	<p>NOISE - CHP, BOILER PLANT, ANGLAR PLANT AND VENTILATION SYSTEM, WORKING AT HEIGHT, FALLING OBJECTS, RESTRICTED HEADROOM - UNFREQUENT ACCESS TO TOP OF BOILER NO 1. UNPLANNED RELEASE OF STORED ENERGY</p> <p>SCALDS/BURNS - HOT WATER, NATURAL GAS AND COMPRESSED AIR, CHEMICAL SPILLAGE</p> <p>BOILER CHEMICAL DOSING SYSTEM.</p> <p>SCALDS/BURNS - HOT WATER SYSTEMS.</p> <p>MANUAL HANDLING WATER TREATMENT AND CHEMICAL DOSING SYSTEMS (BULK DELIVERY ADVISED FOR CHEMICAL DOSING TANKS). CONFINED SPACE ENTRY - TANK INSPECTIONS, LACK OF COMBUSTION AIR TO BOILERS - VENTILATION TO COMPLY WITH REQUIREMENTS OF BOARDS.</p> <p>BOILER OPERATION - COMPETENT PERSONNEL ONLY.</p> <p>ELECTRICAL WORK, EXPLOSIVE ATMOSPHERES - REFER TO DOCUMENT</p> <p>P1759/612/001 AND DRAWINGS</p> <p>SWK-53154-SLT-PEX-00001 AND 02001.</p>	<p>NOISE - CHP, BOILER PLANT, ANGLAR PLANT AND VENTILATION SYSTEM, CRUSHING AND LIFTING</p> <p>INSTALLATION OF EQUIPMENT, PIPEWORK AND TIEE WORK AT HIGH LEVEL, WORKING AT HEIGHT, FALLING OBJECTS, RESTRICTED HEADROOM - ACCESS TO TOP OF BOILER NO 1 (FREQUENT) UNPLANNED RELEASE OF STORED ENERGY</p> <p>SCALDS/BURNS - HOT WATER, NATURAL GAS AND COMPRESSED AIR, CHEMICAL SPILLAGE</p> <p>BOILER CHEMICAL DOSING SYSTEM.</p> <p>SCALDS/BURNS - HOT WATER SYSTEMS.</p> <p>MANUAL HANDLING - WATER TREATMENT AND CHEMICAL DOSING SYSTEMS (BULK DELIVERY ADVISED FOR CHEMICAL DOSING TANKS). ELECTRICAL WORK, EXPLOSIVE ATMOSPHERES REFER TO DOCUMENT</p> <p>P1759/612/001 AND DRAWINGS</p> <p>SWK-53154-SLT-PEX-00001 AND 02001.</p>

CHANGES ON REV. X00			
DESCRIPTION	RDD' BY	CHD' BY	DATE
ADDED - TAGS X0658 & WTR-0665-0666	GT	GM	19/07/2010
ADDED--V060401	GT	GM	03/09/2010

X00	AS BUILT	SN	GT	GT	08.03.11
C01	MODIFICATIONS	MLD	JM	DV	24/04/10
C00	FOR CONSTRUCTION	PW	JM	TS	02/12/09
ROO	PRE CONSTRUCTION	GM	JM	TS	22/09/09
TOO	FIRST ISSUE	GM	JM	TS	21/5/9
P00	FOR INFORMATION	JC	TS	TS	28/01/05
Rev.	Description	Drawn	Ch'k'd	App'd	Date

Drawing Status	AS BUILT
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Project Partners/Client

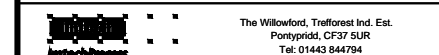


Project Title	AFAN ADVANCED DIGESTION - P1759
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Drawing Title

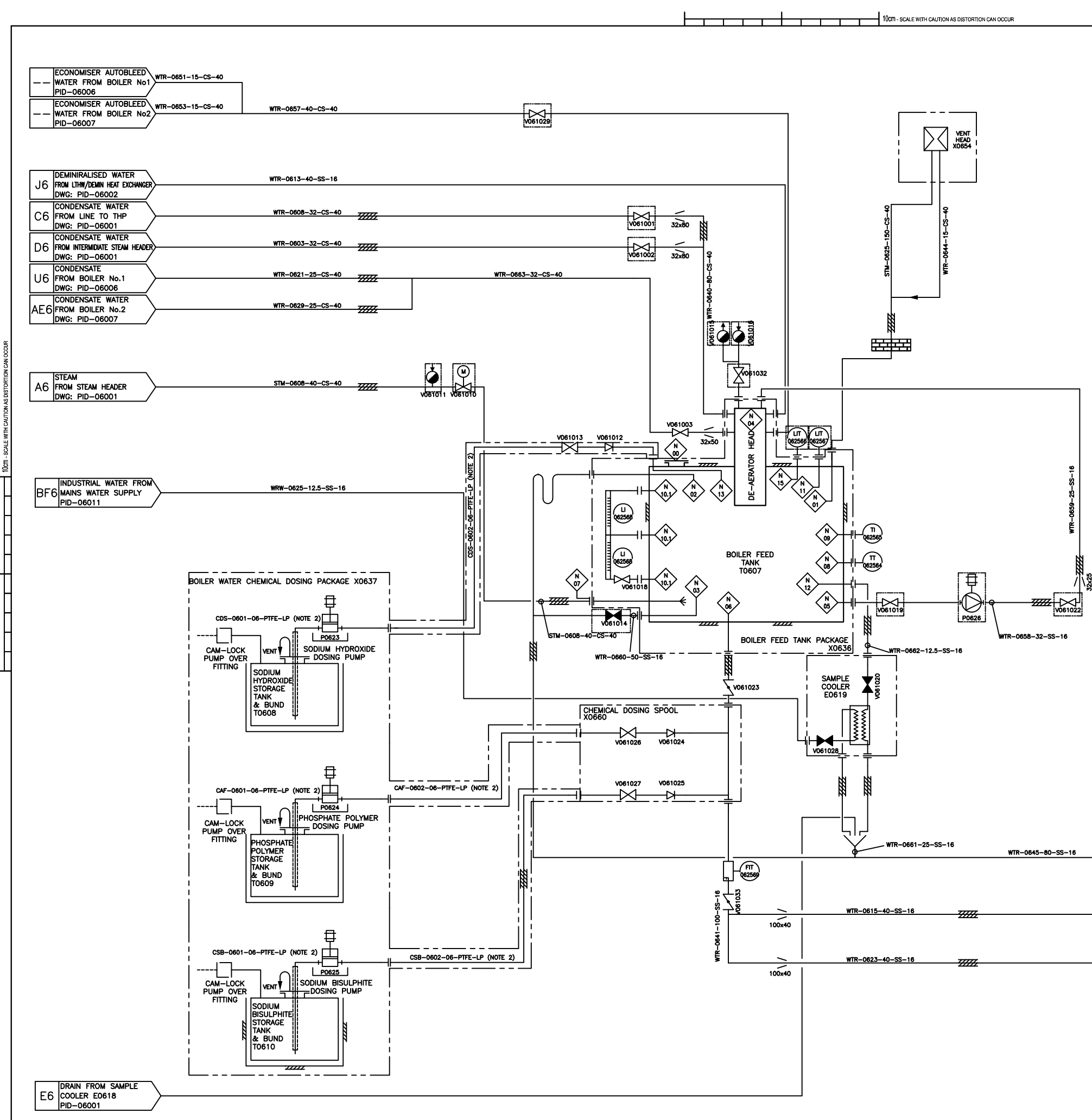
AREA 06: PID

CHP No2



Coordinator	GT	Lead Design Eng	DV
Originator	GT	Project Manager	AB
Scale	NTS	Paper Scale	A1

Project Drawing No.		Rev.
SWK-53154-SLT-PID-06004		X00
SET Scheme No.	Drawing No.	
2U/CM210M	106004	



NOTES:

ALL DIMENSIONS IN MILLIMETRES AND ALL LEVELS IN METRES UNLESS OTHERWISE STATED.

1. REFER TO SWK-53154-SLT-PID-00000 FOR LEGEND
2. SECONDARY CONTAINED PIPEWORK
3. REFER TO SPIRAX SARCO DRAWING No: 406801 REV/C01 FOR CONNECTION DETAILS N00-N15

HEALTH & SAFETY INFORMATION BOX

REV	CONSTRUCTION/ INSTALLATION/ COMMISSIONING RISKS	MAINTENANCE/OPERATING G	DEMOLITION/ ADAPTATION RISKS
X00	<p>NOISE - CHP, BOILER PLANT, ANCHILARY PLANT AND VENTILATION SYSTEM. WORKING AT HEIGHT - FALLING FAILURES</p> <p>INSTALLATION OF EQUIPMENT, PIPEWORK AND STEELWORK AT HIGH LEVEL. WORKING AT HEIGHT. FALLING OBJECTS. RESTRICTED HEADROOM - ACCESS TO TOP OF BOKER NO 1 (OVERHEAD).</p> <p>UNPLANNED RELEASE OF STORED ENERGY STEAM, NATURAL GAS AND COMPRESSED AIR - CHEMICAL SPILLAGE - BOLLER CHEMICAL DOSING SYSTEM.</p> <p>SCALDS/BURNS - HOT WATER SYSTEMS. MANUAL HANDLING - WATER TREATMENT AND CHEMICAL DOSING SYSTEMS (BULK DELIVERY ADVISED FOR CHEMICAL DOSING TANKS). BOLLER OPERATION - COMPACT PERSONNEL ONLY. ELECTRICAL WORKS. EXPLOSIVE ATMOSPHERES REFER TO DOCUMENT P1759-54/12/001 AND DRAWINGS</p> <p>SWK-53154-SL-PEX-00001 AND 02001.</p>	<p>NOISE - CHP, BOLLER PLANT, ANCHILARY PLANT AND VENTILATION SYSTEM. WORKING AT HEIGHT - FALLING OBJECTS.</p> <p>RESTRICTED HEADROOM - ACCESS TO TOP OF BOLLER NO 1. UNPLANNED RELEASE OF STORED ENERGY STEAM, NATURAL GAS AND COMPRESSED AIR. CHEMICAL SPILLAGE - BOLLER CHEMICAL DOSING SYSTEM.</p> <p>SCALDS/BURNS - HOT WATER SYSTEMS. MANUAL HANDLING - WATER TREATMENT AND CHEMICAL DOSING SYSTEMS (BULK DELIVERY ADVISED FOR CHEMICAL DOSING TANKS). CONFIRMED SPACE ENTRY - TANK INSPECTIONS. LACK OF COMBUSTION AIR. LOCK OF BOLLER OPERATION TO COMPLY WITH BRITISH STANDARDS. BOLLER OPERATION - COMPACT PERSONNEL ONLY. ELECTRICAL WORKS. EXPLOSIVE ATMOSPHERES REFER TO DOCUMENT P1759-54/12/001 AND DRAWINGS</p> <p>SWK-53154-SL-PEX-00001 AND 02001.</p>	<p>NOISE - CHP, BOLLER PLANT, ANCHILARY PLANT AND VENTILATION SYSTEM. WORKING AT HEIGHT - FALLING FAILURES</p> <p>INSTALLATION OF EQUIPMENT, PIPEWORK AND STEELWORK AT HIGH LEVEL. WORKING AT HEIGHT. FALLING OBJECTS. RESTRICTED HEADROOM - ACCESS TO TOP OF BOLLER NO 1 (OVERHEAD).</p> <p>UNPLANNED RELEASE OF STORED ENERGY STEAM, NATURAL GAS AND COMPRESSED AIR. CHEMICAL SPILLAGE - BOLLER CHEMICAL DOSING SYSTEM.</p> <p>SCALDS/BURNS - HOT WATER SYSTEMS. MANUAL HANDLING - WATER TREATMENT AND CHEMICAL DOSING SYSTEMS (BULK DELIVERY ADVISED FOR CHEMICAL DOSING TANKS). ELECTRICAL WORKS. EXPLOSIVE ATMOSPHERES REFER TO DOCUMENT P1759-54/12/001 AND DRAWINGS</p> <p>SWK-53154-SL-PEX-00001 AND 02001.</p>

CHANGES ON REV. X00

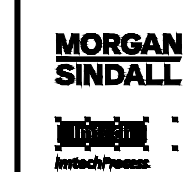
DESCRIPTION	RQD' BY	CHD' BY	DATE
ADDED—LINE NO'S, CHEMICAL DOSING SPOOL NO., BOXED	GT	SN	08/03/2011

X00	AS BUILT	SN	GT	GT	08.03.11
C01	MODIFICATIONS	MLD	JM	DV	25/04/10
C00	CONSTRUCTION	PW	JM	TS	09/12/09
ROO	PRE CONSTRUCTION	PW	JM	TS	22/09/09
TOO	FIRST ISSUE	GM	JM	TS	21/05/09
P00	FOR INFORMATION	JC	TS	TS	28/01/09
Rev.	Description	Drawn	Ch'k'd	App'd	Date

Drawing Status	
1	1
2	2
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AS BUILT

Project Partners/Client



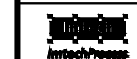
**Dŵr Cymru
Welsh Water**

Project Title	
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AFAN
ADVANCED DIGESTION
-
P1759

Drawing Title

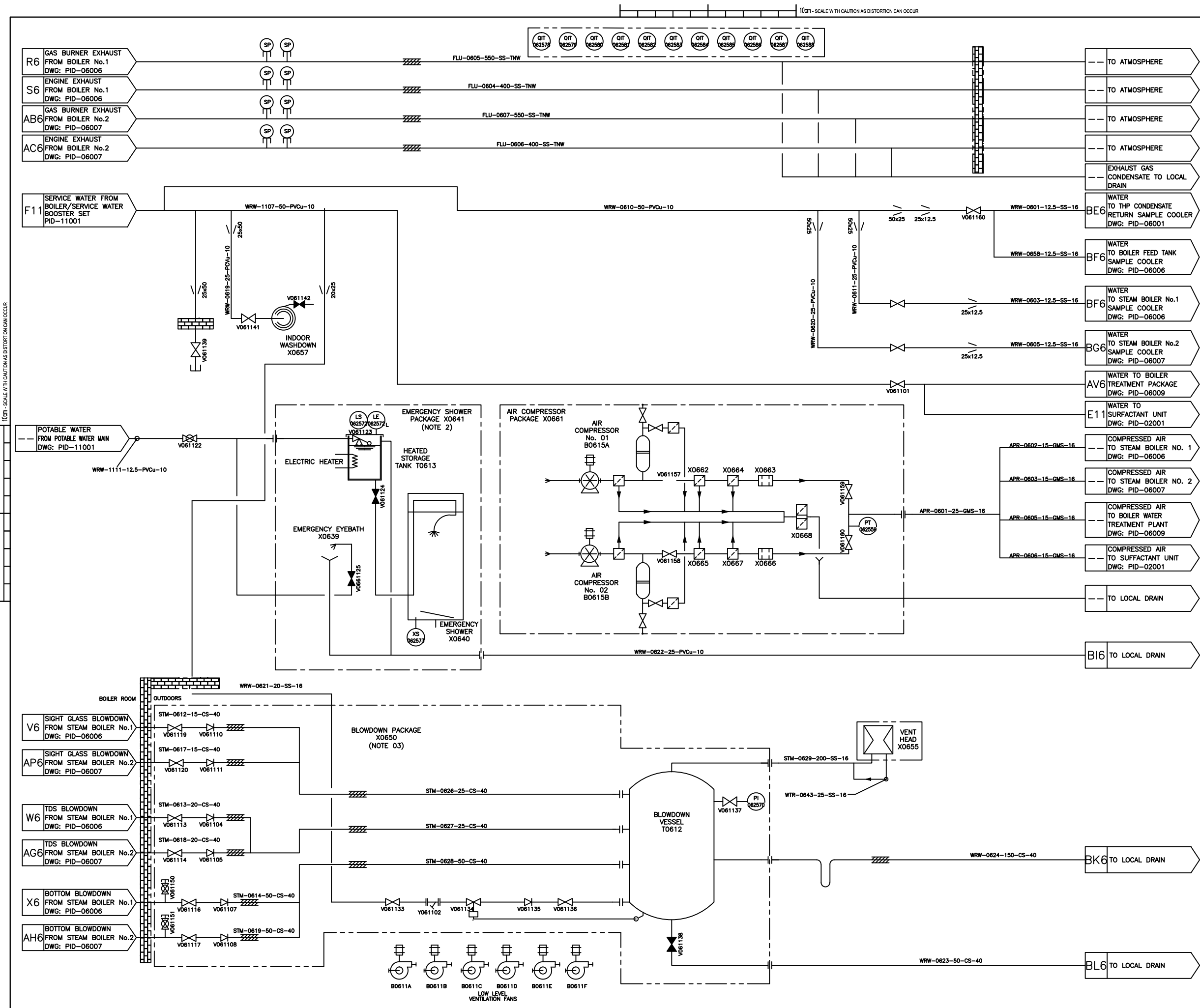
AREA 06: PID
BOILER FEED TANK



The Willowford, Trefforest Ind. Est.
Pontypridd, CF37 5UR
Tel: 01443 844794

Coordinator		GT	Lead Design Eng	DV
Originator		GT	Project Manager	AB
Scale NTS			Paper Scale A1	
Project Drawing No. SWK-53154-SLT-PID-06010				Rev. X00
SET Scheme No. 2U/CM210M		Drawing No. 106010		

100m - SCALE WITH CAUTION AS DISTORTION CAN OCCUR



NOTES:

ALL DIMENSIONS IN MILLIMETRES AND ALL LEVELS IN METRES UNLESS OTHERWISE STATED.

1. REFER TO SWK-53154-SLT-PID-0000 FOR LEGEND

2. REFER TO EMERGENCY SHOWER COMPANY DRAWING No.ES03915

3. REFER TO SPIRAX SARCO DRAWING No.406983 REV000

4. FOR DETAIL / GENERAL ARRANGEMENT

5. GAS PIPEWORK IN ACCORDANCE WITH IGEUP/2 AND IGEUP/1

HEALTH & SAFETY INFORMATION BOX

REV	CONSTRUCTION/INSTALLATION/COMMISSIONING RISKS	MAINTENANCE/OPERATING RISKS	DEMOLITION/ADAPTATION RISKS
X00	NOISE - CHP, BOILER PLANT, ANCHORAGE AND VENTILATION SYSTEM. CRUSHING AND LIFTING FAILURES. INSTALLATION OF EQUIPMENT, PIPEWORK AND STEELWORK AT HIGH LEVEL. WORKING AT HEIGHT. FALLING OBJECTS. RESTRICTED HEADROOM - ACCESS TO TOP OF BOILER NO.1 (INFREQUENT). UNPLANNED RELEASE OF STORED ENERGY. STEAM, NATURAL GAS AND COMPRESSED AIR. CHEMICAL SPILLAGE - BOILER CHEMICAL DOSING SYSTEM. SCALDS/BURNS - HOT WATER SYSTEMS. MANUAL HANDLING - WATER TREATMENT AND CHEMICAL DOSING SYSTEMS (BULK DELIVERY ADVISED FOR CHEMICAL DOSING TANKS). BOILER OPERATION - COMPETENT PERSONNEL ONLY. ELECTRICAL WORKS. EXPLOSIVE ATMOSPHERES - ZONES EXTERNAL OF BOILER ROOM AT HIGH LEVEL AS PER DEAR ASSESSMENT REFER TO DOCUMENT P1759/6/12/001 AND DRAWINGS SWK-53154-SLT-PEX-00001 AND 02001.	NOISE - CHP, BOILER PLANT, ANCHORAGE AND VENTILATION SYSTEM. WORKING AT HEIGHT. FALLING OBJECTS. RESTRICTED HEADROOM - ACCESS TO TOP OF BOILER NO.1 (INFREQUENT). UNPLANNED RELEASE OF STORED ENERGY. STEAM, NATURAL GAS AND COMPRESSED AIR. CHEMICAL SPILLAGE - BOILER CHEMICAL DOSING SYSTEM. SCALDS/BURNS - HOT WATER SYSTEMS. MANUAL HANDLING - WATER TREATMENT AND CHEMICAL DOSING SYSTEMS (BULK DELIVERY ADVISED FOR CHEMICAL DOSING TANKS). BOILER OPERATION - COMPETENT PERSONNEL ONLY. ELECTRICAL WORKS. EXPLOSIVE ATMOSPHERES - REFER TO DOCUMENT P1759/6/12/001 AND DRAWINGS SWK-53154-SLT-PEX-00001 AND 02001.	NOISE - CHP, BOILER PLANT, ANCHORAGE AND VENTILATION SYSTEM. CRUSHING AND LIFTING FAILURES. INSTALLATION OF EQUIPMENT, PIPEWORK AND STEELWORK AT HIGH LEVEL. WORKING AT HEIGHT. FALLING OBJECTS. RESTRICTED HEADROOM - ACCESS TO TOP OF BOILER NO.1 (INFREQUENT). UNPLANNED RELEASE OF STORED ENERGY. STEAM, NATURAL GAS AND COMPRESSED AIR. CHEMICAL SPILLAGE - BOILER CHEMICAL DOSING SYSTEM. SCALDS/BURNS - HOT WATER SYSTEMS. MANUAL HANDLING - WATER TREATMENT AND CHEMICAL DOSING SYSTEMS (BULK DELIVERY ADVISED FOR CHEMICAL DOSING TANKS). ELECTRICAL WORKS. EXPLOSIVE ATMOSPHERES REFER TO DOCUMENT P1759/6/12/001 AND DRAWINGS SWK-53154-SLT-PEX-00001 AND 02001.

CHANGES ON REV. X00

DESCRIPTION	RD' BY	CHD' BY	DATE
REVISED WATER TO BOILER LINES. REVISED AIR COMPRESSOR PACKAGE	GT	SN	08/03/2011

Rev.	Description	Drawn	Ch'k'd	App'd	Date
X00	AS BUILT	SN	GT	GT	08.03.11
C01	MODIFICATIONS	MLD	JM	DV	25/04/10
C00	CONSTRUCTION	PW	JM	TS	09/12/09
R00	PRE CONSTRUCTION	GM	JM	TS	22/09/09
T00	FIRST ISSUE	GM	JM	TS	21/5/9
P00	FOR INFORMATION	JC	JM	TS	28/01/09

Drawing Status

AS BUILT

Project Partners/Client

MORGAN SINDALL

Dŵr Cymru Welsh Water

Project Title

AFAN

ADVANCED DIGESTION

P1759

Drawing Title

AREA 06: PID

BOILER ROOM ANCILLARIES

Coordinator GT **Lead Design Eng** DV

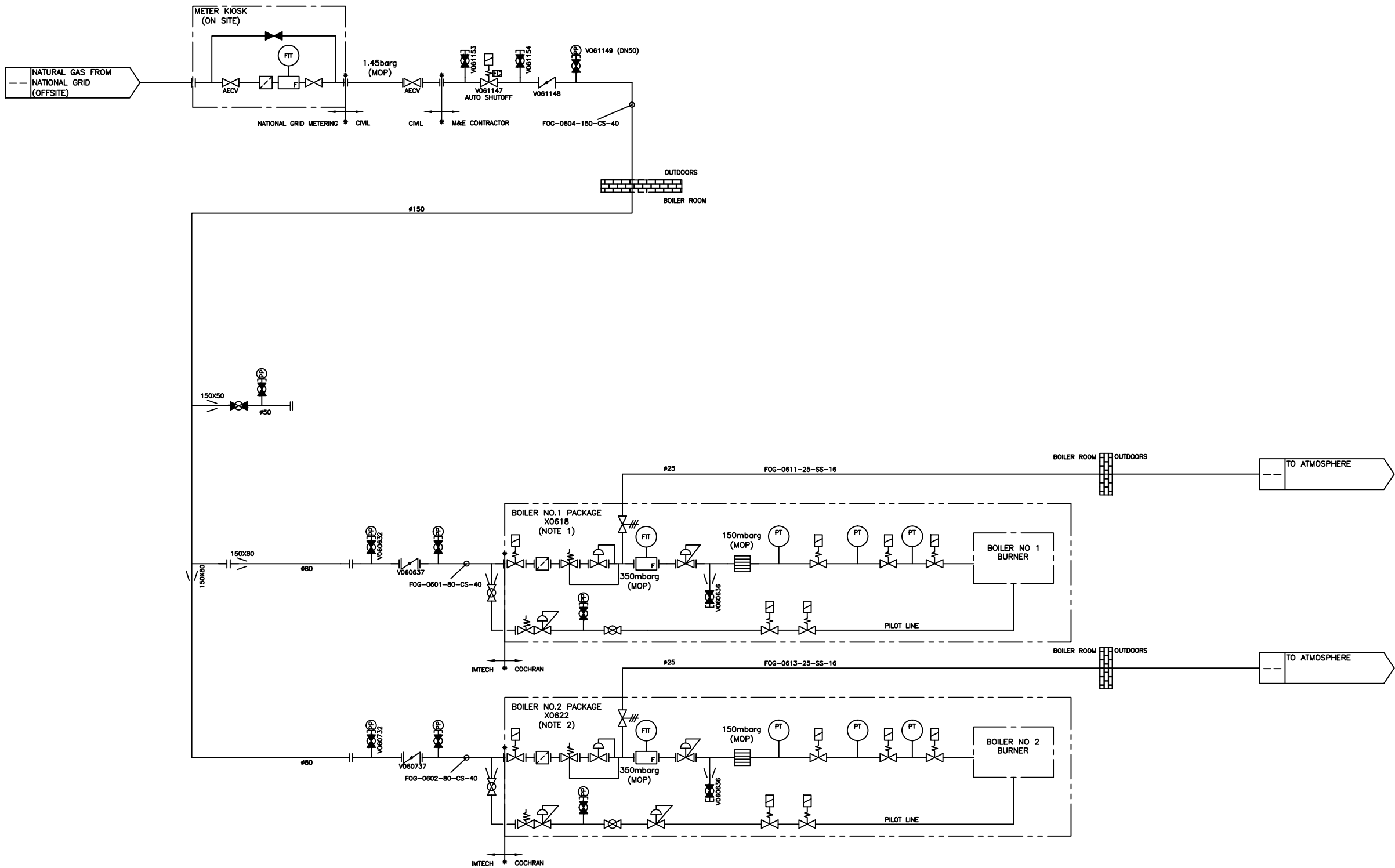
Originator GT **Project Manager** AB

Scale NTS **Paper Scale** A1

Project Drawing No. SWK-53154-SLT-PID-06011 **Rev.** X00

SET Scheme No. 2U/CM210M **Drawing No.** 106011

100m - SCALE WITH CAUTION AS DISTORTION CAN OCCUR



- NOTES:**
- ALL DIMENSIONS IN MILLIMETRES AND ALL LEVELS IN METRES UNLESS OTHERWISE STATED.
 - REFER TO PID-06006
 - REFER TO PID-06007
 - ALL PIPEWORK AT 0.5 TO 5barg TO MEET IGMUP/2 EDITION 2, IGMUP/1, PED AND PSSR.
 - ALL PIPEWORK UNDER 0.5barg TO MEET BS EN 1775
 - REFER TO SWK-53154-SLT-PID-0000 FOR LEGEND
 - PIPELINE PRESSURES INDICATED ARE MAXIMUM OPERATING PRESSURE (MOP)



HEALTH & SAFETY INFORMATION BOX			
REV	CONSTRUCTION/INSTALLATION/COMMISSIONING RISKS	MAINTENANCE/OPERATING RISKS	DEMOLITION/ADAPTATION RISKS
X00	NOISE - CHP, BOILER PLANT, ANCILLARY PLANT AND VENTILATION SYSTEM. CRUSHING AND LIFTING FAILURES - INSTALLATION OF EQUIPMENT, PIPEWORK AND STEELWORK AT HIGH LEVEL. WORKING AT HEIGHT. FALLING OBJECTS. RESTRICTED HEADROOM - ACCESS TO TOP OF BOILER NO.1 (INFREQUENT). UNPLANNED RELEASE OF STORED ENERGY. SCALDS/BURNS - HOT WATER SYSTEMS. MANUAL HANDLING - WATER TREATMENT AND CHEMICAL DOSING SYSTEMS (BULK DELIVERY ADVISED FOR CHEMICAL DOSING TANKS). BOILER OPERATION - COMPETENT PERSONNEL ONLY. ELECTRICAL WORKS. EXPLOSIVE ATMOSPHERES - ZONES EXTERNAL OF BOILER ROOM AT HIGH LEVEL AS PER DEAR ASSESSMENT REFER TO DOCUMENT P1759/6/12/001 AND DRAWINGS SWK-53154-SLT-PEX-00001 AND 02001.	NOISE - CHP, BOILER PLANT, ANCILLARY PLANT AND VENTILATION SYSTEM. WORKING AT HEIGHT. FALLING OBJECTS. RESTRICTED HEADROOM - INFREQUENT ACCESS TO TOP OF BOILER NO.1. UNPLANNED RELEASE OF STORED ENERGY. SCALDS/BURNS - HOT WATER SYSTEMS. MANUAL HANDLING - WATER TREATMENT AND CHEMICAL DOSING SYSTEMS (BULK DELIVERY ADVISED FOR CHEMICAL DOSING TANKS). CONFINED SPACE ENTRY - TANK INSPECTIONS. LACK OF COMBUSTION AIR TO BOILERS - VENTILATION TO COMPLY WITH BRITISH STANDARDS. BOILER OPERATION - COMPETENT PERSONNEL ONLY. ELECTRICAL WORKS. EXPLOSIVE ATMOSPHERES - REFER TO DOCUMENT P1759/6/12/001 AND DRAWINGS SWK-53154-SLT-PEX-00001 AND 02001.	NOISE - CHP, BOILER PLANT, ANCILLARY PLANT AND VENTILATION SYSTEM. CRUSHING AND LIFTING FAILURES - INSTALLATION OF EQUIPMENT, PIPEWORK AND STEELWORK AT HIGH LEVEL. WORKING AT HEIGHT. FALLING OBJECTS. RESTRICTED HEADROOM - ACCESS TO TOP OF BOILER NO.1 (INFREQUENT). UNPLANNED RELEASE OF STORED ENERGY. SCALDS/BURNS - HOT WATER SYSTEMS. MANUAL HANDLING - WATER TREATMENT AND CHEMICAL DOSING SYSTEMS (BULK DELIVERY ADVISED FOR CHEMICAL DOSING TANKS). ELECTRICAL WORKS. EXPLOSIVE ATMOSPHERES - REFER TO DOCUMENT P1759/6/12/001 AND DRAWINGS SWK-53154-SLT-PEX-00001 AND 02001.



CHANGES ON REV. X00			
DESCRIPTION	RD' BY	CHD' BY	DATE
REMOVED-CONNECTIONS TO CHP No.1 & CHP No.2	GT	SN	08/07/2010

X00	AS BUILT	GM	GT	GT	08.03.11
C01	FOR CONSTRUCTION	GM	GT	--	27/08/10
C00	FOR CONSTRUCTION & COMMISSIONING CHP'S & BOILER NO.1 ON NATURAL GAS	GM	GT	DV	11/08/10
Rev.	Description	Drawn	Ch'k'd	App'd	Date

Drawing Status
AS BUILT

Project Partners/Client





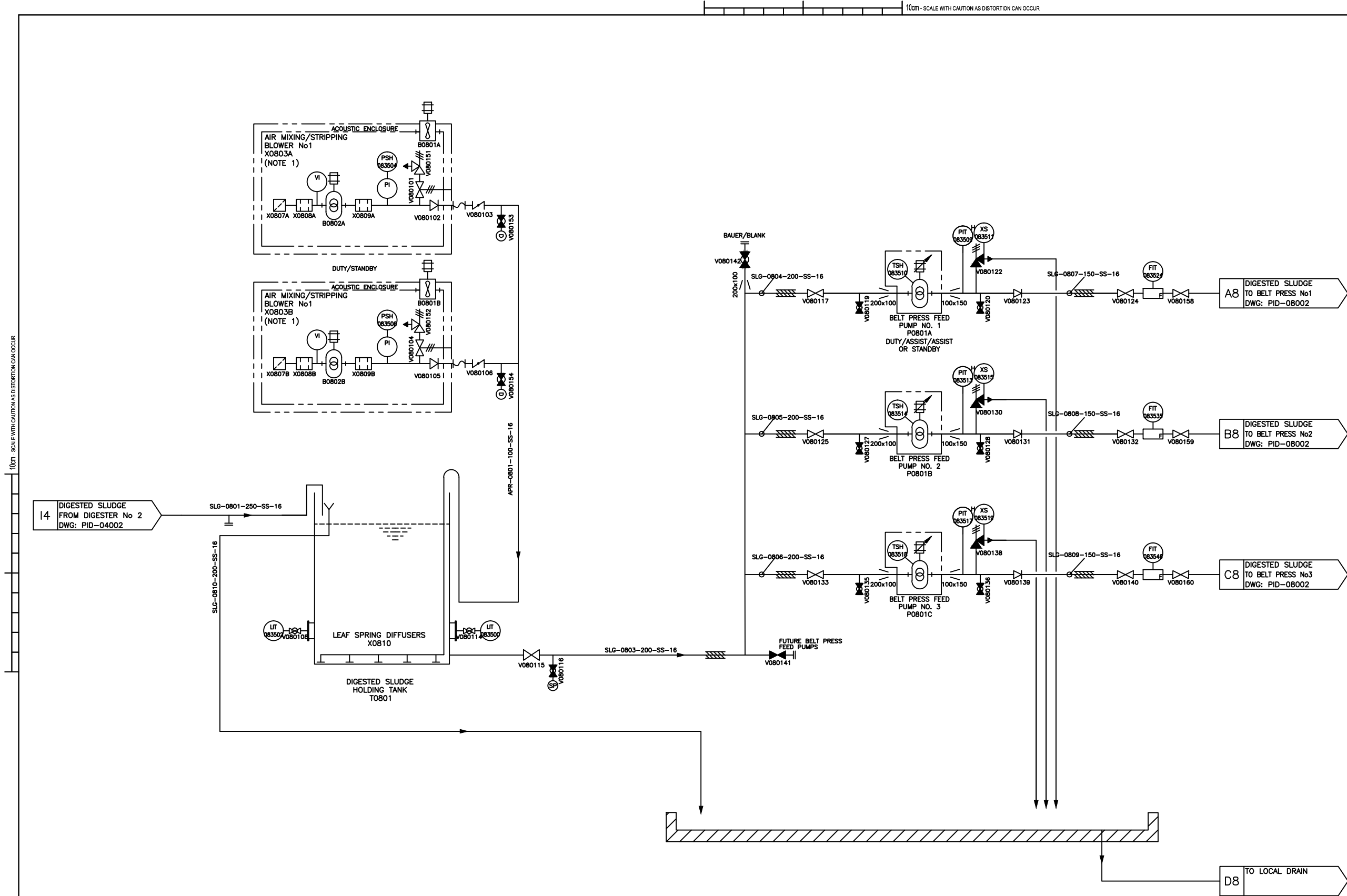
Project Title
**AFAN
ADVANCED DIGESTION
-
P1759**

Drawing Title
**AREA 06: PID
NATURAL GAS SYSTEM**

 The Willowford, Treforest Ind. Est.
Pontypridd, CF37 5UR
Tel: 01443 844794

Coordinator	GT	Lead Design Eng	DV
Originator	GT	Project Manager	AB
Scale	NTS	Paper Scale	A1

Project Drawing No.	SWK-53154-SLT-PID-06012	Rev.	X00
SET Scheme No.	2U/CM210M	Drawing No.	106012



NOTES:
ALL DIMENSIONS IN MILLIMETRES AND ALL LEVELS IN METRES UNLESS OTHERWISE STATED.

NOTE1: SEE HOWDEN P&ID FOR PACKAGE DETAILS
DRAWINGS NO. 4D/10/002BX
NOTE2: LAGGING FOR HUMAN PROTECTION

HEALTH & SAFETY INFORMATION BOX			
REV	INSTALLATION/ COMMISSIONING RISKS	MAINTENANCE/OPERATING	DEMOLITION/ ADAPTATION RISKS
X00	CRUSHING AND LIFTING FAILURES - INSTALLATION OF BELT PRESSES, WORKING WITH OVERHEAD TRAVELLING CRANE. NOISE - BELT PRESS PLANT. ELECTRICAL WORKS.	CRUSHING AND LIFTING FAILURES - WORKING WITH OVERHEAD TRAVELLING CRANE. WORKING AT HEIGHT, FALLING MATERIALS - OPERATING/MAINTAINING BELT PRESSES ROLLERS AND BELTS. SLIPS AND TRIPS - CAKE SPILLAGE AND WASHDOWN. NOISE - BELT PRESS PLANT. ELECTRICAL WORKS.	CRUSHING AND LIFTING FAILURES - INSTALLATION OF BELT PRESSES, WORKING WITH OVERHEAD TRAVELLING CRANE. NOISE - BELT PRESS PLANT. ELECTRICAL WORKS.

NOTE:
1) PLEASE REFER TO AREA 08 & ELECTRICAL DESIGN HARA FOR DETAIL OF THE ABOVE RISKS
2) CONSTRUCTION METHOD STATEMENT AND RISK ASSESSMENT TO BE COMPLETED

CHANGES ON REV. X00			
DESCRIPTION	ROD' BY	CHD' BY	DATE
COMMISSIONING PIPEWORK FROM AREA 02 REMOVED	GT	GT	31.01.2011
COMMISSIONING PIPEWORK FROM AREA 04 REMOVED	GT	GT	31.01.2011
CHANGED-ENTRANCE TO TANK, B0802 NO LONGER VARIABLE SPEED	DV	GM	19/07/2010
ADDED-SEED SLUDGE DETAILS, V080154 MOVED-V080153 REMOVED-V080110 & V080112	DV	GM	11/08/2010
REMOVED-HOSE REEL NOW SUPPLIED BY CAMBI	DV	GM	03/09/2010

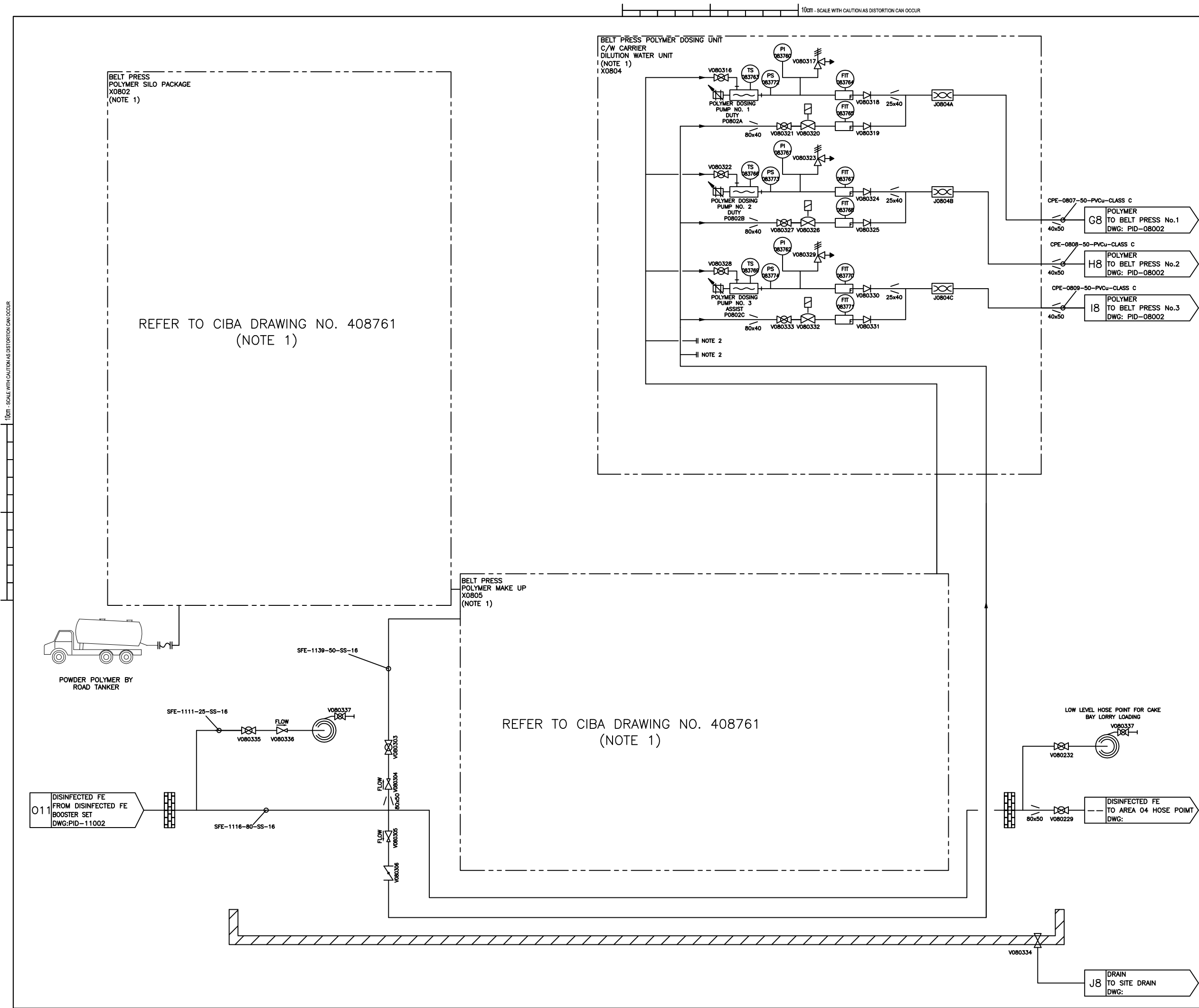
X00	AS BUILT	AE	GT	GT	07/01/11
C01	UPDATE	GM			
C00	FOR CONSTRUCTION	GM	JM	TS	03/03/10
R00	PRE CONSTRUCTION	GM	JM	TS	29/09/09
T00	FIRST ISSUE	GM	JM	TS	21/5/9
P00	FOR INFORMATION	JC		TS	28/01/09
Rev.	Description	Drawn	Ch'k'd	App'd	Date

Drawing Status
AS BUILT

Project Partners/Client

Project Title
**AFAN
ADVANCED DIGESTION
-
P1759**

Drawing Title			
AREA 08 : PID POST DIGESTION STORAGE TANK & FEED PUMP			
The Willowford, Trellforest Ind. Est. Pontypridd, CF37 5UR Tel: 01443 844794			
Coordinator	MR	Lead Design Eng	DV
Originator	MR	Project Manager	AB
Scale	NTS	Paper Scale	A1
Project Drawing No. SWK-53154-SLT-PID-08001			Rev. X00
SET Scheme No. 2U/CM210M		Drawing No. 108001	



NOTES:
ALL DIMENSIONS IN MILLIMETRES AND ALL LEVELS IN METRES UNLESS OTHERWISE STATED.

NOTE1: SEE CIBA P&ID FOR PACKAGE DETAILS-DRAWING NO. 408761

NOTE2: PROVISION FOR FUTURE POLY PUMP No 04

HEALTH & SAFETY INFORMATION BOX			
REV	INSTALLATION/COMMISSIONING RISKS	MAINTENANCE/OPERATING	DEMOLITION/ADAPTATION RISKS
X00	CRUSHING AND LIFTING FAILURES - WORKING WITH OVERHEAD TRAVELLING CRANE, WORKING AT HEIGHT, FALLING MATERIALS - OPERATING/MAINTAINING BELT PRESSES ROLLERS AND BELTS, SLIPS AND TRIPS - CAKE SPILLAGE AND WASHDOWN, NOISE - BELT PRESS PLANT, ELECTRICAL WORKS.	CRUSHING AND LIFTING FAILURES - WORKING WITH OVERHEAD TRAVELLING CRANE, WORKING AT HEIGHT, FALLING MATERIALS - OPERATING/MAINTAINING BELT PRESSES ROLLERS AND BELTS, SLIPS AND TRIPS - CAKE SPILLAGE AND WASHDOWN, NOISE - BELT PRESS PLANT, ELECTRICAL WORKS.	CRUSHING AND LIFTING FAILURES - INSTALLATION OF BELT PRESSES, WORKING WITH OVERHEAD TRAVELLING CRANE, NOISE - BELT PRESS PLANT, ELECTRICAL WORKS.

NOTE:
1) PLEASE REFER TO AREA 08 & ELECTRICAL DESIGN HARA FOR DETAIL OF THE ABOVE RISKS
2) CONSTRUCTION METHOD STATEMENT AND RISK ASSESSMENT TO BE COMPLETED

CHANGES ON REV. C01				
DESCRIPTION	RQD' BY	CHD' BY	DATE	
NOTE 2 ADDED	GT	GT	03.02.11	
VALVE TAGS ADDED - V080232 & V080229	GT	GT	31.01.2011	
CHANGED-VALVE SYMBOLS FOR V080303, V080306 ADDED-SFE-1139	MR	GM	26/03/2010	
MOVED-HOSE POINT AND ASSOCIATED VALVES FROM PID-11003, CHANGED NO'S FROM V10311,12&38 TO V080335,36&37	DV	GM	03/09/2010	

	AS BUILT	AE	GT	GT	07/01/11
C01	UPDATE	GM			
C00	FOR CONSTRUCTION	GM	JM	TS	03/03/10
R00	PRE CONSTRUCTION	GM	JM	TS	29/09/09
T00	FIRST ISSUE	GM	JM	TS	21/5/9
P00	FOR INFORMATION	JC		TS	28/01/09

Rev.	Description	Drawn	Ch'k'd	App'd	Date

Drawing Status

AS BUILT

Project Partners/Client

MORGAN SINDALL

Imtech
ImtechProcess

Dŵr Cymru
Welsh Water

Project Title

AFAN
ADVANCED DIGESTION
-
P1759

Drawing Title

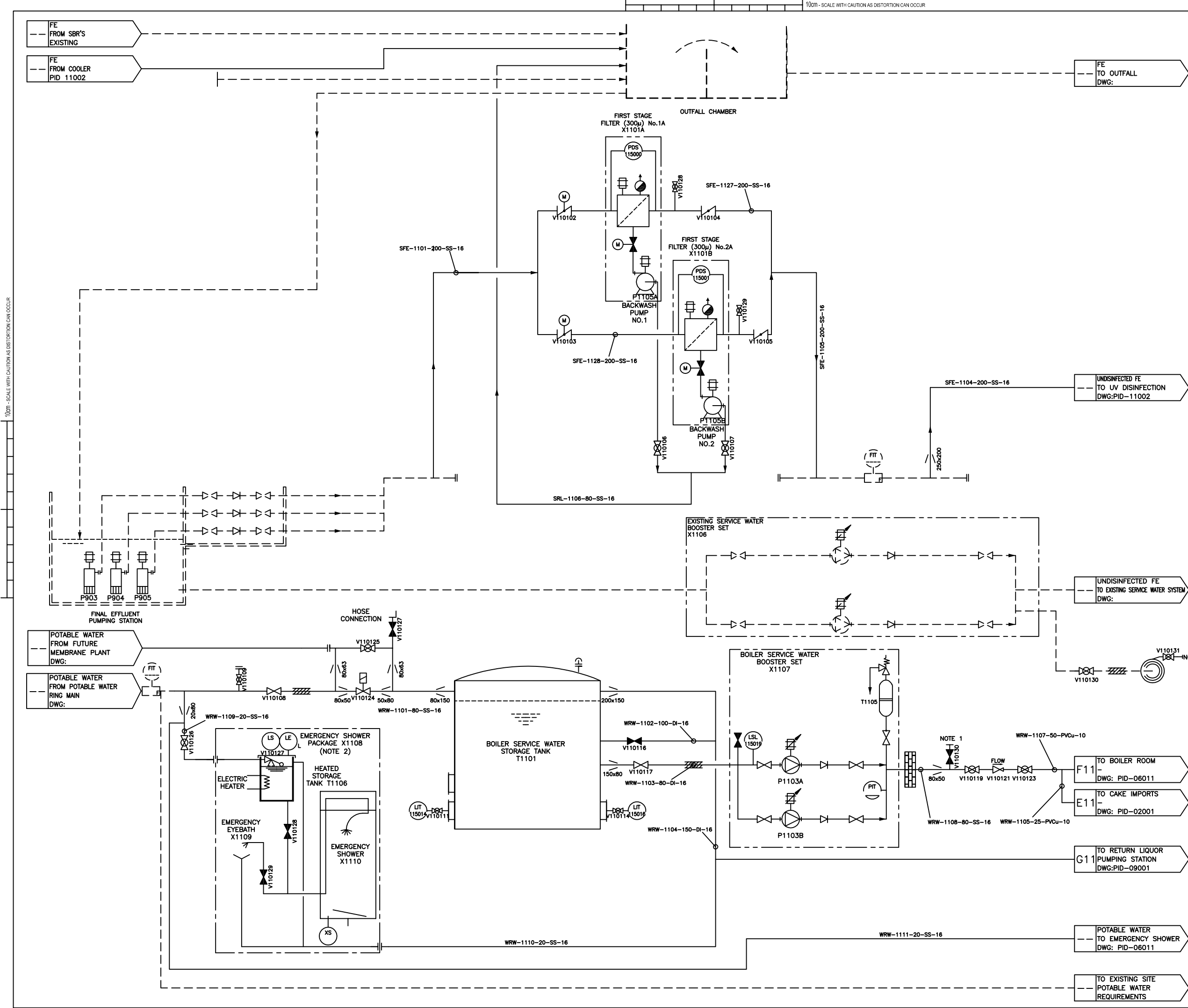
AREA 08: PID
DEWATERING POLYMER
DOSING SYSTEM

Imtech
ImtechProcess

The Willowford, Trefforest Ind. Est.
Pontypridd, CF37 5UR
Tel: 01443 844784

Coordinator	MR	Lead Design Eng	DV
Originator	MR	Project Manager	AB

Scale	NTS	Paper Scale	A1
Project Drawing No.	SWK-53154-SLT-PID-08003		Rev. X00
SET Scheme No.	2U/CM210M		
Drawing No.	108003		



NOTES:

ALL DIMENSIONS IN MILLIMETRES AND ALL LEVELS IN METRES UNLESS OTHERWISE STATED.

NOTE 1: FUTURE MEMBRANE BACKWASH CONNECTION

NOTE 2: ASSOCIATED WITH OCU NO. 2 ACID DOSING SYSTEM

NOTE 4: HOSE TO SERVE AREA 5

HEALTH & SAFETY INFORMATION BOX

REV	CONSTRUCTION/COMMISSIONING RISKS	MAINTENANCE/OPERATING	DEMOLITION/ADAPTATION RISKS
X00	CRUSHING AND LIFTING FAILURE - INSTALLATION OF DISINFECTED FINAL EFFLUENT TANK. SCALDS AND BURNS - NOT DILUTION WATER. ELECTRICAL WORKS.	SCALDS AND BURNS - HOT DILUTION WATER. ELECTRICAL WORKS.	CRUSHING AND LIFTING FAILURE - INSTALLATION OF DISINFECTED FINAL EFFLUENT TANK. SCALDS AND BURNS - NOT DILUTION WATER. ELECTRICAL WORKS.

NOTE:
1) PLEASE REFER TO AREA 11 & ELECTRICAL DESIGN HARA FOR DETAIL OF THE ABOVE RISKS
2) CONSTRUCTION METHOD STATEMENT AND RISK ASSESSMENT TO BE COMPLETED

CHANGES ON REV. X00

DESCRIPTION	RQD' BY	CHD' BY	DATE
REMOVED NOTE 3, PSL 115019, PSL115018, P1115061, P1115060, V110118, V110120, V110122, ADDED LSL115019, V110130, HOSE REEL, HOSE CONNECTION - V110127/8 BLEED VALVE TO X1107, LABEL 'FE FROM COOLERS PID 11002' TO OUTFALL CHAMBER, LABEL F11 CHANGED FROM DRG; PID-06009 TO 06011. PIPES WRW-1105 & WRW-1107 CHANGED TO PVCu.	GT	GT	07/01/2011
ADDED-EMERGENCY SHOWER PACKAGE & ASSOCIATED VALVES, V110124 & V110125 CHANGED-T1101 TO BOILER SERVICE WATER STORAGE TANK	DV	GM	01/07/2010
ADDED-FUTURE MEMBRANE PLANT CONNECTIONS, NOTE 1	DV	GM	19/07/2010
REMOVED-V110113, DISINFECTED FE TO OUTFALL CHAMBER ADDED-V110109, WRW-1111, NOTE 2 & 3 CHANGED-X1107 TO BOILER WATER BOOSTER SET	DV	GM	13/08/2010
ADDED-HOSE POINT & ASSOCIATED VALVES FROM POTABLE WATER RING MAIN	DV	GM	03/09/2010

X00	AS BUILT	AE	GT	GT	07/01/11
C01	UPDATED	GM			
C00	FOR CONSTRUCTION	GM	JM	DV	23/03/10
R00	PRE CONSTRUCTION	GM	JM	TS	29/09/09
T00	FIRST ISSUE	GM	JM	TS	21/5/9
P01	WORK IN PROGRESS	JC	NP	TS	28/01/09
P00	FOR INFORMATION	JC	DV	---	20/10/08
Rev.	Description	Drawn	Ch'k'd	App'd	Date

Drawing Status

AS BUILT

Project Partners/Client

MORGAN SINDALL

Imtech
ImtechProcess

Dŵr Cymru
Welsh Water

Project Title

AFAN
ADVANCED DIGESTION
-
P1759

Drawing Title

AREA 11: PID
SERVICE WATER SYSTEM
SHEET 1/3

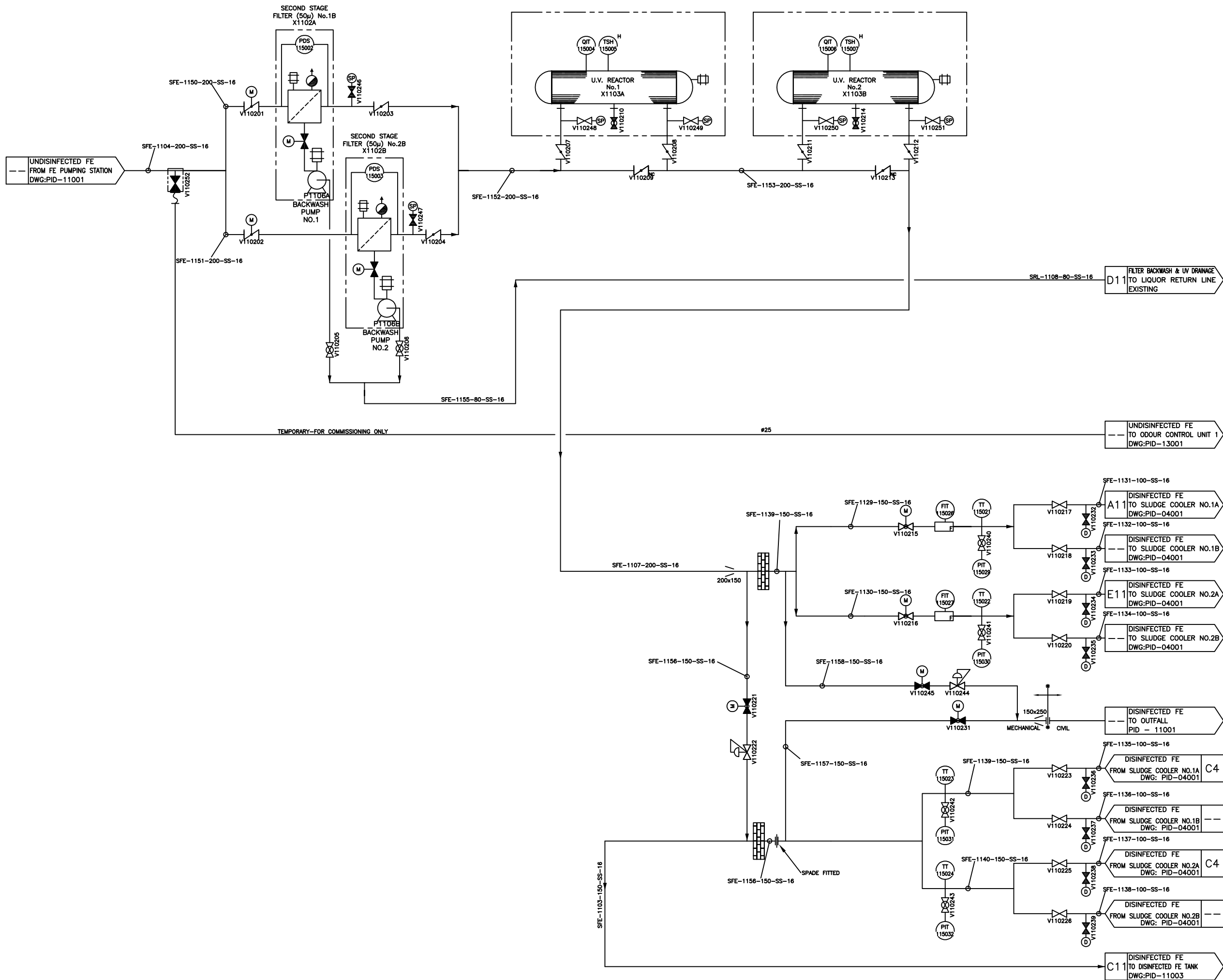
Imtech
ImtechProcess

The Wilkowlford, Treforest Ind. Est.
Pontypridd, CF37 5UR
Tel: 01443 844794

Coordinator	AP	Lead Design Eng	DV
Originator	AP	Project Manager	AB
Scale	NTS	Paper Scale	A1
Project Drawing No.	SWK-53154-SLT-PID-11001	Rev.	X00
SET Scheme No.	2U/CM210M	Drawing No.	111001

100m - SCALE WITH CAUTION AS DISTORTION CAN OCCUR

100m - SCALE WITH CAUTION AS DISTORTION CAN OCCUR



NOTES:
ALL DIMENSIONS IN MILLIMETRES AND ALL LEVELS IN METRES UNLESS OTHERWISE STATED.

HEALTH & SAFETY INFORMATION BOX

REV	CONSTRUCTION/ COMMISSIONING RISKS	MAINTENANCE/ OPERATING	DEMOLITION/ ADAPTATION RISKS
X00	CRUSHING AND LIFTING FAILURE - INSTALLATION OF DISINFECTED FINAL EFFLUENT TANK. SCALDS AND BURNS - NOT DILUTION WATER. ELECTRICAL WORKS.	SCALDS AND BURNS - HOT DILUTION WATER. ELECTRICAL WORKS.	CRUSHING AND LIFTING FAILURE - INSTALLATION OF DISINFECTED FINAL EFFLUENT TANK. SCALDS AND BURNS - NOT DILUTION WATER. ELECTRICAL WORKS.

NOTE:
1) PLEASE REFER TO AREA 11 & ELECTRICAL DESIGN HARA FOR DETAIL OF THE ABOVE RISKS
2) CONSTRUCTION METHOD STATEMENT AND RISK ASSESSMENT TO BE COMPLETED




CHANGES ON REV. X00

DESCRIPTION	RQD' BY	CHD' BY	DATE
REMOVED FEATURES FROM X1103A & X1103B. REMOVED P1115062, P1115083, V110230. ADDED SPADE, V110205, V110206 V110248.L V110210, V110249, V110250, V110214, V110251.	GT	GT	07/01/2011
ADDED-SFE-1158, V110244, V110245SFE-1157 DN150, LIMITS OF BUILDING	DV	GM	01/07/2010
ADDED-TEMPORARY CONNECTION TO OCU NO1, V110246 P1115062 & P1115063 CHANGED-SFE-1103, SFE-1157 TO #150 REMOVED-V110205, V110206, V110210, V110211	JJ	GM	13/08/2010
MOVED-FIT'S 115026 & 115027	SITE	GM	03/09/2010

X00	AS BUILT	AE	GT	GT	07/01/11
C01	UPDATED		GM		
C00	FOR CONSTRUCTION		GM	JM	DV
ROO	PRE CONSTRUCTION		GM	JM	TS
TOO	FIRST ISSUE		GM	JM	TS
P00	FOR INFORMATION		JC		TS
Rev.	Description	Drawn	Ch'k'd	App'd	Date


Drawing Status
AS BUILT

Project Partners/Client



Project Title
**AFAN
ADVANCED DIGESTION
-
P1759**

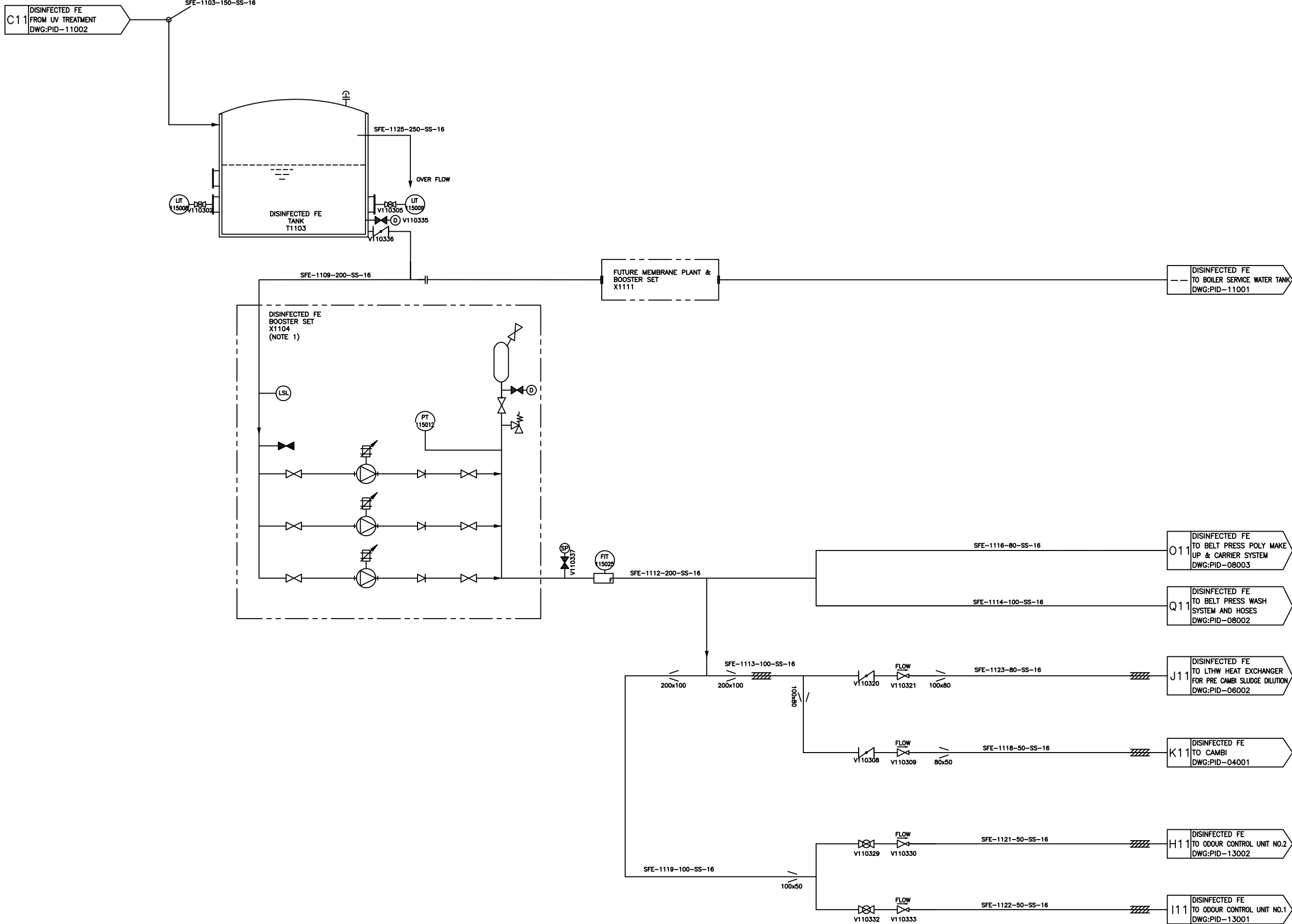
Drawing Title
**AREA 11: PID
SERVICE WATER SYSTEM
SHEET 2/3**

 The Wilkford, Trefford Ind. Est.
Pontypridd, CF37 5UR
Tel: 01443 844794

Coordinator	AP	Lead Design Eng	DV
Originator	AP	Project Manager	AB
Scale	NTS	Paper Scale	A1
Project Drawing No.	SWK-53154-SLT-PID-11002	Rev.	X00
SET Scheme No.	2U/CM210M	Drawing No.	111002

100m - SCALE WITH CAUTION AS DISTORTION CAN OCCUR

100m - SCALE WITH CAUTION AS DISTORTION CAN OCCUR



NOTES:
ALL DIMENSIONS IN MILLIMETRES AND ALL LEVELS IN METRES UNLESS OTHERWISE STATED.

NOTE 1: SEE KGN PILLINGER P & ID - 24100 FOR PACKAGE DETAILS

HEALTH & SAFETY INFORMATION BOX

REV	CONSTRUCTION/ COMMISSIONING RISKS	MAINTENANCE/ OPERATING	DEMOLITION/ ADAPTATION RISKS
X00	CRUSHING AND LIFTING FAILURE - INSTALLATION OF DISINFECTED FINAL EFFLUENT TANK. SCALDS AND BURNS - NOT DILUTION WATER. ELECTRICAL WORKS.	SCALDS AND BURNS - HOT DILUTION WATER. ELECTRICAL WORKS.	CRUSHING AND LIFTING FAILURE - INSTALLATION OF DISINFECTED FINAL EFFLUENT TANK. SCALDS AND BURNS - NOT DILUTION WATER. ELECTRICAL WORKS.

NOTE:
1) PLEASE REFER TO AREA 11 & ELECTRICAL DESIGN HARA FOR DETAIL OF THE ABOVE RISKS
2) CONSTRUCTION METHOD STATEMENT AND RISK ASSESSMENT TO BE COMPLETED

CHANGES ON REV. X00

DESCRIPTION	RQD' BY	CHD' BY	DATE
REMOVED PIPE SFE-1125-250-SS-16. MOVED SFE-1113-100-SS-16. CHANGED SFE-118-80-SS-16 TO SFE-118-50-SS-16. ADDED BLEED VALVE AND LSL TO X1104	GT	GT	07/01/2011
ADDED-LAGGING DETAIL AND 80MM REDUCER	DV	GM	01/07/2010
ADDED-FUTURE MEMBRANE PLANT REMOVED-V110301, V110304, V110337 CHANGED-SITE DRAINAGE TO RETURN LIQUORS P.S	DV/ JJ	GM	13/08/2010
MOVED-HOSE POINT & ASSOCIATED VALVES TO PID-08003	DV	GM	03/09/2010

X00	AS BUILT	AE	GT	GT	07/01/11
C01	UPDATED	GM			
C00	FOR CONSTRUCTION	GM	JM	DV	24/03/10
R00	PRE CONSTRUCTION	GM	JM	TS	29/09/09
T00	FIRST ISSUE	GM	JM	TS	21/5/9
P00	FOR INFORMATION	JC		TS	28/01/09
Rev.	Description	Drawn	Ch'k'd	App'd	Date

Drawing Status

AS BUILT

Project Partners/Client

**MORGAN
SINDALL**

Imtech
ImtechProcess



**Dwr Cymru
Welsh Water**

Project Title

**AFAN
ADVANCED DIGESTION
-
P1759**

Drawing Title

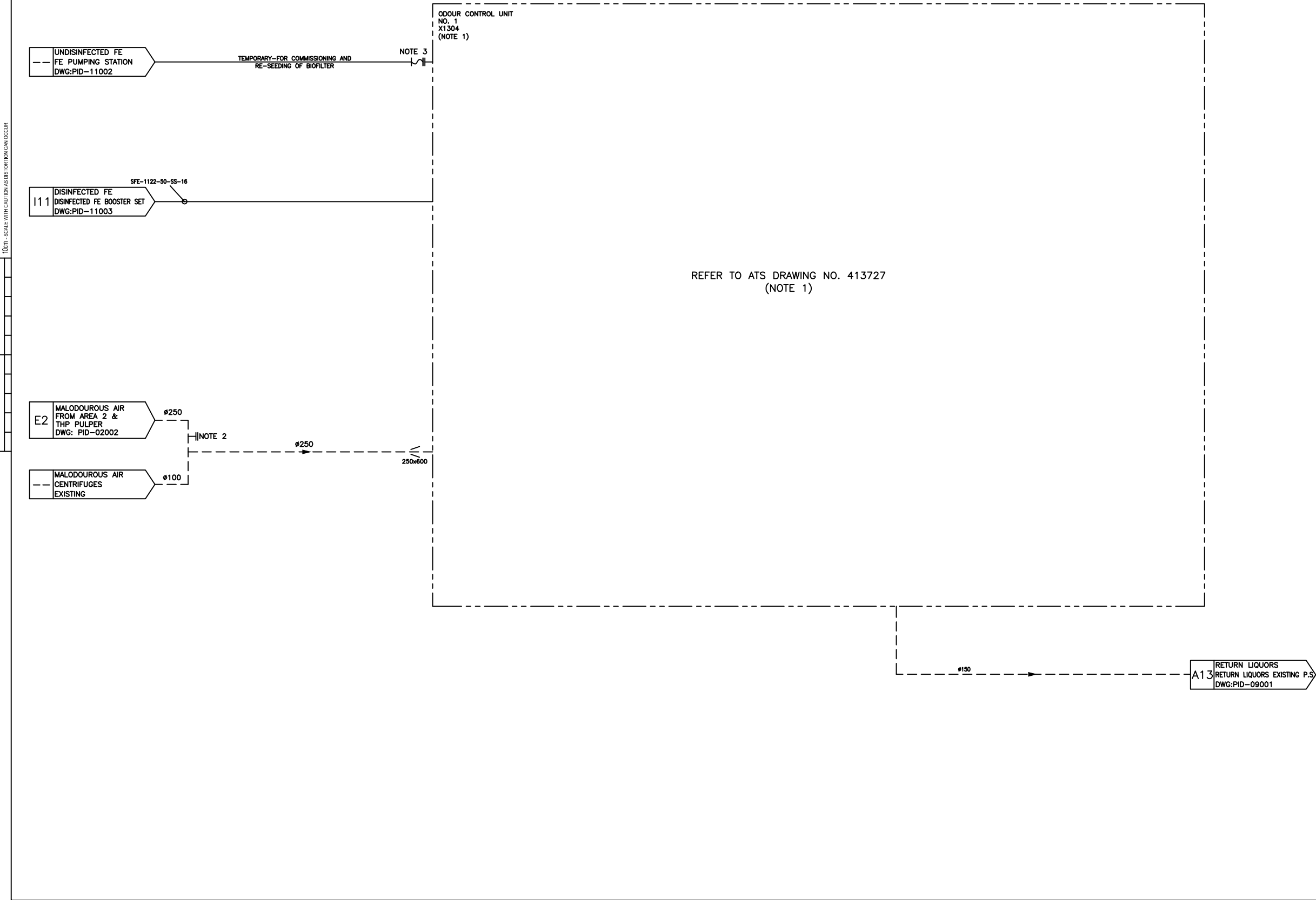
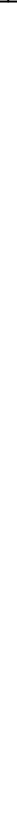
**AREA 11: PID
SERVICE WATER SYSTEM
SHEET 3/3**

Imtech
ImtechProcess

The Willowford, Trefforest Ind. Est.
Pontypridd, CF37 5UR
Tel: 01443 844794

Coordinator	AP	Lead Design Eng	DV
Originator	AP	Project Manager	AB
Scale	NTS	Paper Scale	A1
Project Drawing No.	SWK-53154-SLT-PID-11003		Rev. X00
SET Scheme No.	2U/CM210M	Drawing No.	111003

100m - SCALE WITH CAUTION AS DISTORTION CAN OCCUR



NOTES:
ALL DIMENSIONS IN MILLIMETRES AND ALL LEVELS IN METRES UNLESS OTHERWISE STATED.
NOTE 1 : SEE ATS DRAWING NO. 413725 FOR DETAIL
NOTE 2 : SAMPLE/TEST POINT CONNECTION
NOTE 3: TEMPORARY CONNECTION FROM FE PIPELINE FOR SEEDING BIOFILTER

HEALTH & SAFETY INFORMATION BOX			
REV	CONSTRUCTION/ INSTALLATION/ COMMISSIONING RISKS	MAINTENANCE/OPERATING	DEMOLITION/ ADAPTATION RISKS
X00	SLIPS TRIPS AND FALLS - INADVERTENT REMOVAL OF FLOOR DRAIN COVERS. CONFINED SPACES - MODIFICATION OF SUMP. WORKING/FALLS FROM HEIGHT - INSTALLATION OF DUCTWORK AND DAMPERS. CONTACT WITH ODOROUS AIR AND FE - CONNECTION WITH LIVE SERVICES. ELECTRICAL WORKS.	BURNS FROM CONTACT WITH ACID - CHEMICAL DELIVERIES. SLIPS, TRIPS AND FALLS - CHEMICAL SPLASH, FLOOR DRAINS, ABOVE GROUND PIPE AND CABLE RUNS. CONFINED SPACES - CLEANING OF SUMP. VEHICLE MOVEMENTS - COLLISION. INJURY TO PERSONNEL WORKING AT HEIGHT - INSPECTION OF BIO-FILTER AND SCRUBBERS. INHALATION OF TOXIC GASES - IF FAILURE OF ODOUR CONTROL UNIT AND VENTILATION SYSTEM IN CAKE TRAYS.	SLIPS TRIPS AND FALLS - INADVERTENT REMOVAL OF FLOOR DRAIN COVERS. CONFINED SPACES - MODIFICATION OF SUMP. WORKING/FALLS FROM HEIGHT - REMOVAL OF DUCTWORK AND DAMPERS. CONTACT WITH ODOROUS AIR AND FE - DISCONNECTION FROM LIVE SERVICES. ELECTRICAL WORKS.

CHANGES ON REV. X00			
DESCRIPTION	ROD' BY	CHD' BY	DATE
REMOVED-PACKAGE X1304 DETAIL, ADDED-NOTE 2, HOLD CLOUD	JJ	GM	14/06/2010
ADDED-NOTE 3, LINE SIZES REMOVED-ODOUR FROM CAKE IMPORT HOPPERS (C2) CHANGED-(E2) ODOUR FROM AREA 2, (I1) DISINFECTED FE, EXISTING DUCTING	JJ	GM	13/08/2010

X00	AS BUILT	AE	GT	GT	09.03.11
T00	FIRST ISSUE	GM	JM	TS	21/5/9
P00	FOR INFORMATION	JC	TS	TS	28/01/09
Rev.	Description	Drawn	Ch'k'd	App'd	Date

Drawing Status

AS BUILT

Project Partners/Client

Project Title

AFAN
ADVANCED DIGESTION
-
P1759

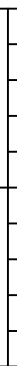
Drawing Title

AREA 13: PID
ODOUR CONTROL UNIT No1

The Willowford, Treforest Ind. Est.
Pontypridd, CF37 5UR
Tel: 01443 844794

Coordinator	AP	Lead Design Eng	DV
Originator	AP	Project Manager	AB
Scale	NTS	Paper Scale	A1



Project Drawing No.	SWK-53154-SLT-PID-13001	Rev.	X00
SET Scheme No.	2U/CM210M	Drawing No.	113001



HEALTH & SAFETY INFORMATION BOX			
REV	CONSTRUCTION/ INSTALLATION/ COMMISSIONING RISKS	MAINTENANCE/OPERATING	DEMOLITION/ ADAPTATION RISKS
X00	SLIPS TRIPS AND FALLS - IMMEDIATE REMOVAL OF FLOOR DRAIN COVERS CONFINED SPACES - MODIFICATION OF SUMP, WORKING/FALLS FROM HEIGHT - INSTALLATION OF JUSTICE AND DAMPERS CONTACT WITH ODOROUS AIR AND FE - CONNECTION WITH LINE SERVICES, ELECTRICAL WORKS.	BURNS FROM CONTACT WITH AC - CHEMICAL DELIVERIES. SLIPS, TRIPS AND FALLS ODOROUS, SPILLAGE, FLOOR DRAINS, ABOVE GROUND PIPES, CONFINED SPACES - CLEANING OF SUMP, VEHICLE MOVEMENTS COLLISION INJURY TO PERSONNEL, WORKING FROM HEIGHT - INSPECTION OF H2O-ENTER AND INHALATION OF TOXIC GASES - BURNING OF OTHER CONTROL UNIT AND VENTILATION SYSTEM IN CASE TROUBLE.	SLIPS TRIPS AND FALLS - IMMEDIATE REMOVAL OF FLOOR DRAIN COVERS. CONFINED SPACES - MODIFICATION OF SUMP, WORKING/FALLS FROM HEIGHT - REMOVAL OF JUSTICE AND DAMPERS, CONTACT WITH ODOROUS AIR AND FE - DISCONNECTION FROM LINE SERVICES, ELECTRICAL WORKS.

X00	AS BUILT	AE	GT		09.03.11
T00	FIRST ISSUE	GM	JM	TS	21/5/9
P00	FOR INFORMATION	JC		TS	28/01/0
Rev.	Description	Drawn	Ch'k'd	App'd	Date

Project Partners/Client

MORGAN SINDALL	
 ■ ■	Dŵr Cymru
ImtechProcess ■ ■	Welsh Water

Drawing Title

AREA 13: PID
ODOUR CONTROL UNIT No2

Coordinator	AP	Lead Design Eng	DV
Originator	AP	Project Manager	AB
Scale	NTS	Paper Scale	A1

Project Drawing No. SWK-53154-SLT-PID-13002		Rev. X00
SET Scheme No. 2U/CM210M	Drawing No. 113002	