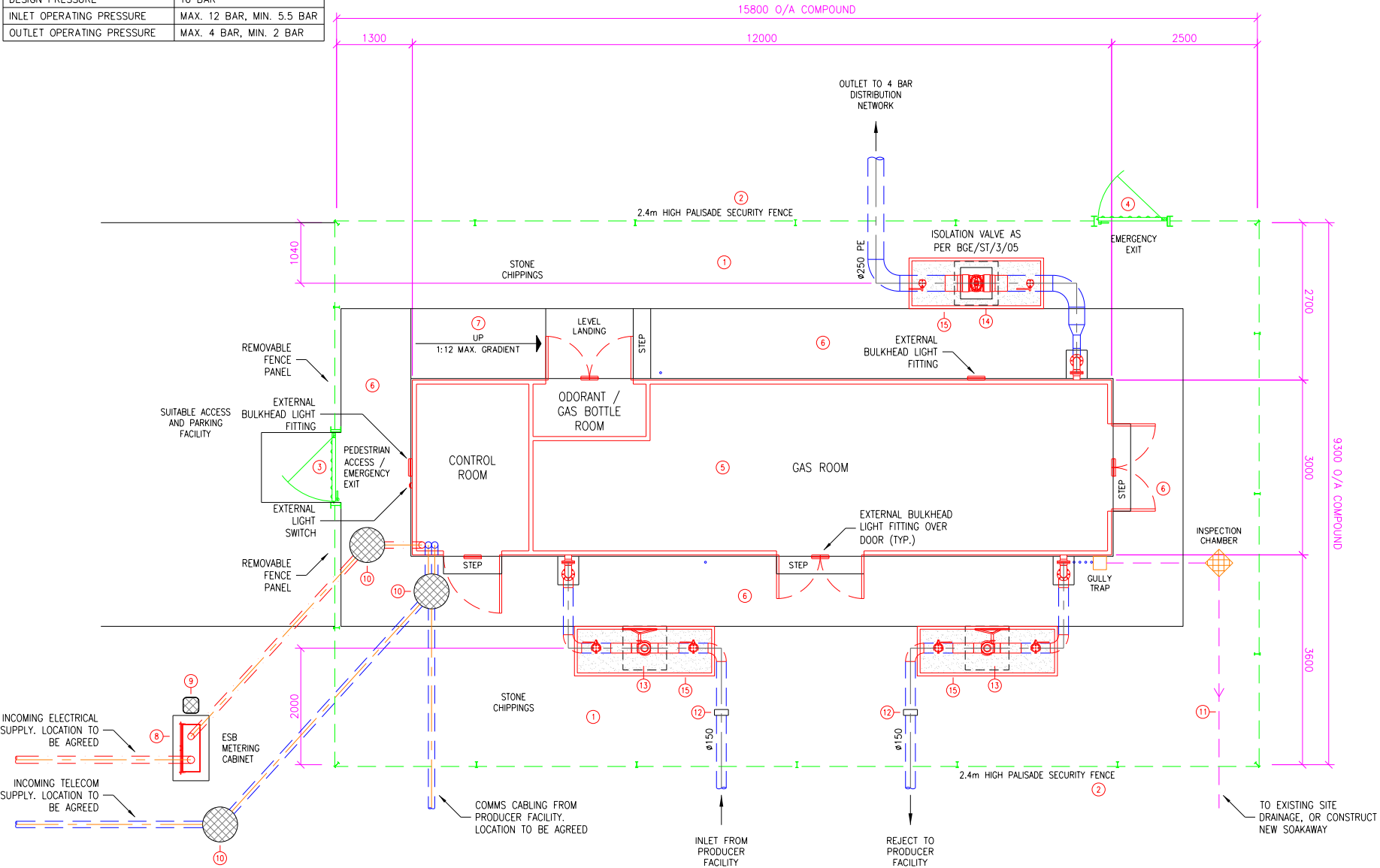


Biomethane direct connection to the distribution network

Customer technical information booklet

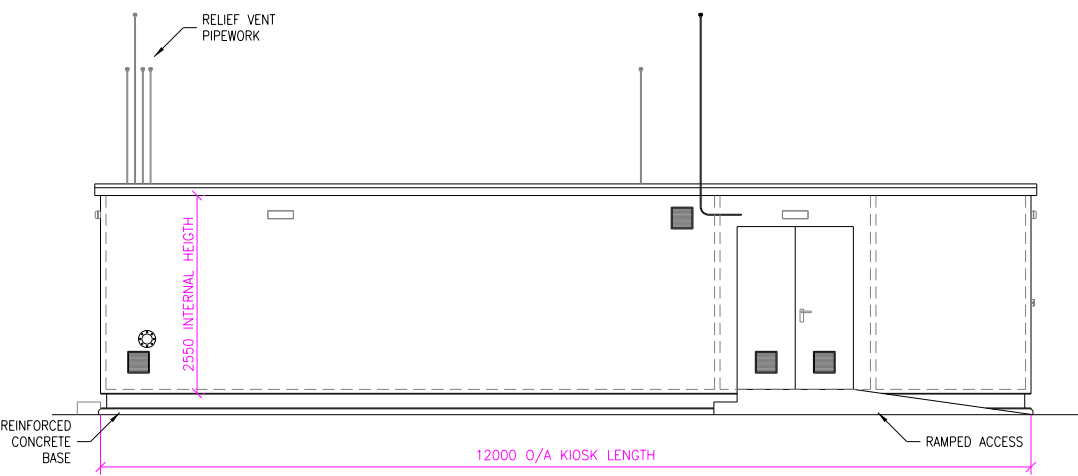
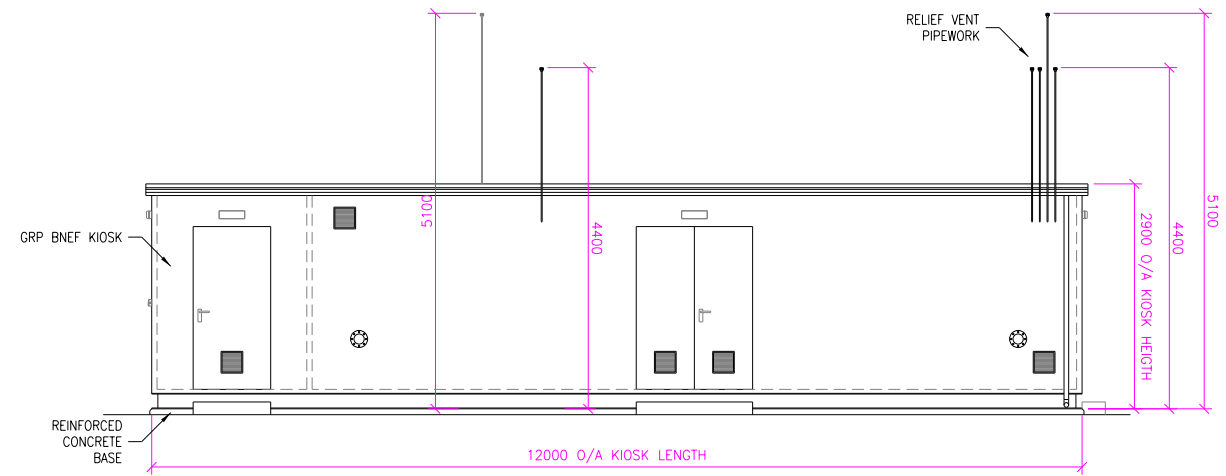
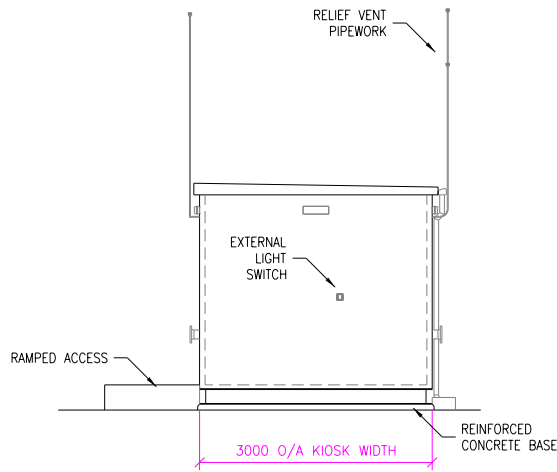
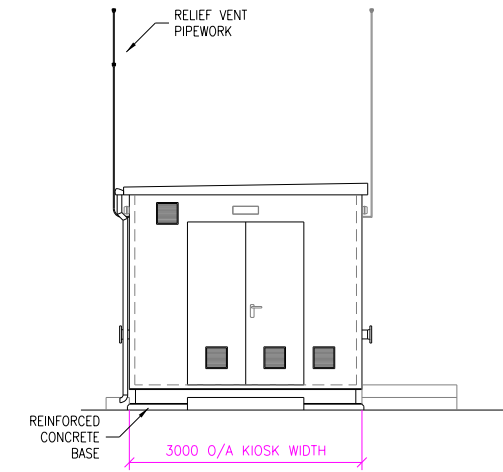


DESIGN PARAMETERS	
DESIGN FLOWRATE	3,400 SCMH
DESIGN PRESSURE	16 BAR
INLET OPERATING PRESSURE	MAX. 12 BAR, MIN. 5.5 BAR
OUTLET OPERATING PRESSURE	MAX. 4 BAR, MIN. 2 BAR



LEGEND		
No.	TITLE	Org.No./Ref:
1	STONE CHIPPING AREA	GNI/AD/SP/005
2	2.4m HIGH PALISADE SECURITY FENCE	BS 1722-12:2006
3	1.2m WIDE PEDESTRIAN ACCESS/EXIT GATE	BS 1722-12:2006
4	1.2m WIDE EMERGENCY EXIT GATE	BS 1722-12:2006
5	REINFORCED CONCRETE BASE FOR BNEF KIOSK	GNI/AD/SP/005
6	1200 WIDE CONCRETE FOOTPATH	GNI/AD/SP/005
7	RAMPED ACCESS TO GAS BOTTLE ROOM	-
8	CONCRETE BASE FOR ELECTRICAL METERING CABINET	BGE/ST/3050
9	EARTH PIT	BGE/ST/3050
10	Ø600 INT. DUCT CHAMBER	-
11	Ø150 u-PVC SURFACE WATER DRAINAGE PIPE (Min.GRADE 1:80)	BGE/ST/2007
12	M28 TEST POST	BGE/ST/3001
13	BURIED R.C. SUPPORT FOR DN150 BALL VALVE	BGE/ST/2006
14	BURIED R.C. SUPPORT FOR DN200 GATE VALVE	BGE/D/3/05
15	GROUND LEVEL PIPE PROTECTION	BGE/ST/2004

- NOTES:
- ALL DIMENSIONS IN MILLIMETERS. CONTRACTOR TO ASSESS & VERIFY, ALL DIMENSIONS PRIOR TO FABRICATION. SITE CHECK ALIGNMENT, ORIENTATION ETC. OF CONNECTING PIPEWORK & EQUIPMENT PRIOR TO FABRICATION.
 - ALL PAINTING TO COMPLY WITH AD/SP/009.
 - PRODUCER TO PROVIDE SUITABLE GRAVEL ACCESS ROAD AND PARKING AREA TO SITE.
 - SURFACE WATER DRAINAGE TO TIE INTO EXISTING SITE DRAINAGE SYSTEM, OR NEW SOAKAWAY TO BE CONSTRUCTED. 1m³ SOAKAWAY BASED ON SITE WITH GOOD INFILTRATION. CONTRACTOR TO INSTALL ACCORDINGLY BASED ON SITE CONDITIONS.



LEGEND	
NEW PIPEWORK	—
NEW EQUIPMENT	—

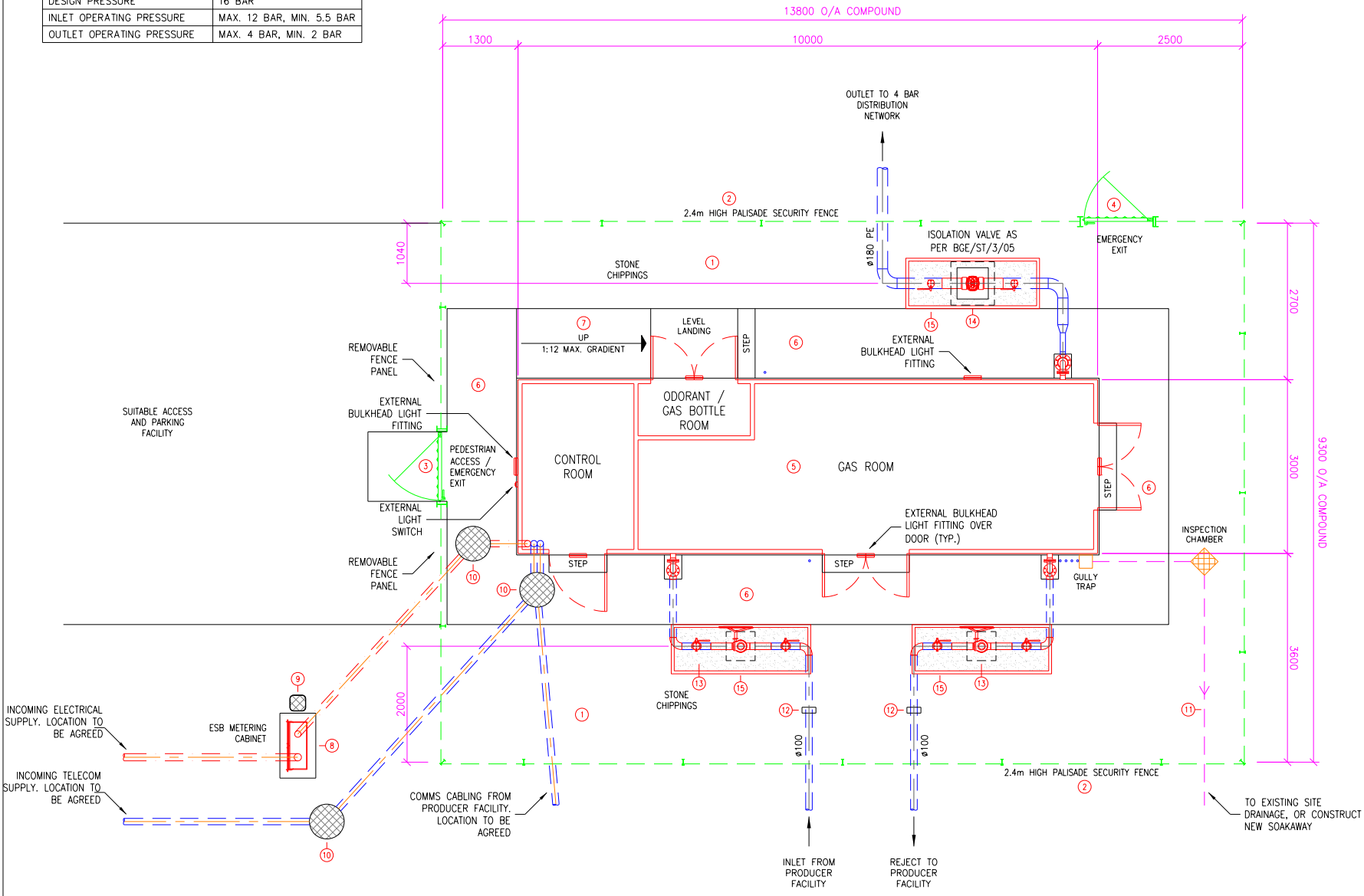
STANDARD DESIGN

FOR INFORMATION



GENERAL ARRANGEMENT - DN100 BNEF PACKAGE

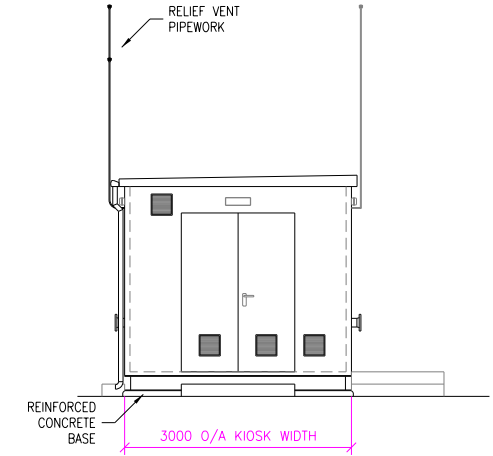
DESIGN PARAMETERS	
DESIGN FLOWRATE	2,000 SCMH
DESIGN PRESSURE	16 BAR
INLET OPERATING PRESSURE	MAX. 12 BAR, MIN. 5.5 BAR
OUTLET OPERATING PRESSURE	MAX. 4 BAR, MIN. 2 BAR



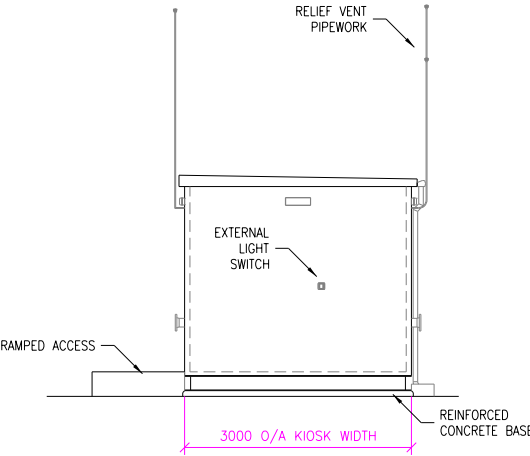
PLAN OF BNEF COMPOUND
(Scale 1:50)

LEGEND		
No.	TITLE	Drq.No./Ref:
1	STONE CHIPPING AREA	GNI/AD/SP/005
2	2.4m HIGH PALISADE SECURITY FENCE	BS 1722-12:2006
3	1.2m WIDE PEDESTRIAN ACCESS/EXIT GATE	BS 1722-12:2006
4	1.2m WIDE EMERGENCY EXIT GATE	BS 1722-12:2006
5	REINFORCED CONCRETE BASE FOR BNEF KIOSK	GNI/AD/SP/005
6	1200 WIDE CONCRETE FOOTPATH	GNI/AD/SP/005
7	RAMPED ACCESS TO GAS BOTTLE ROOM	-
8	CONCRETE BASE FOR ELECTRICAL METERING CABINET	BGE/ST/3050
9	EARTH PIT	BGE/ST/3050
10	Ø600 INT. DUCT CHAMBER	-
11	Ø150 u-PVC SURFACE WATER DRAINAGE PIPE (Min.GRADIENT 1:80)	BGE/ST/2007
12	M28 TEST POST	BGE/ST/3001
13	BURIED R.C. SUPPORT FOR DN100 BALL VALVE	BGE/ST/2006
14	BURIED R.C. SUPPORT FOR DN150 GATE VALVE	BGE/D/3/05
15	GROUND LEVEL PIPE PROTECTION	BGE/ST/2004

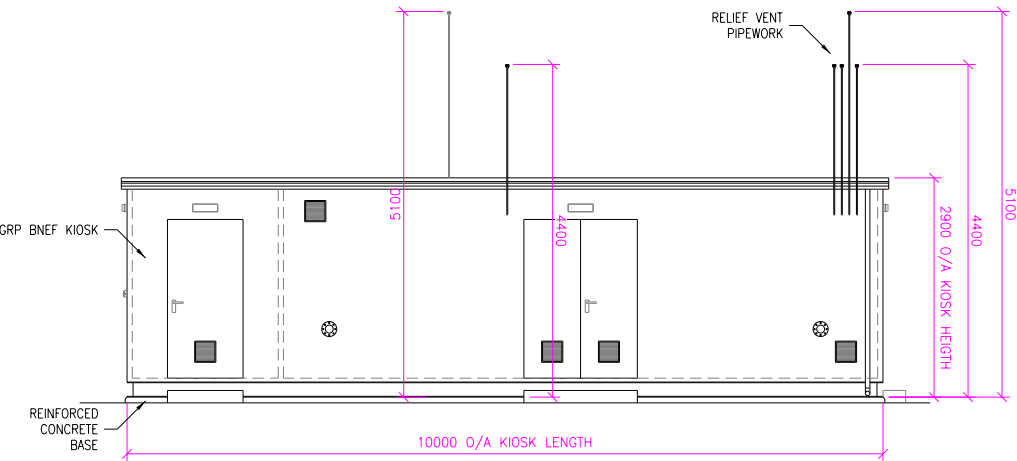
- NOTES:
- ALL DIMENSIONS IN MILLIMETERS. CONTRACTOR TO ASSESS & VERIFY, ALL DIMENSIONS PRIOR TO FABRICATION. SITE CHECK ALIGNMENT, ORIENTATION ETC. OF CONNECTING PIPEWORK & EQUIPMENT PRIOR TO FABRICATION.
 - ALL PAINTING TO COMPLY WITH AD/SP/009.
 - PRODUCER TO PROVIDE SUITABLE GRAVEL ACCESS ROAD AND PARKING AREA TO SITE.
 - SURFACE WATER DRAINAGE TO TIE INTO EXISTING SITE DRAINAGE SYSTEM, OR NEW SOAKAWAY TO BE CONSTRUCTED. 1m³ SOAKAWAY BASED ON SITE WITH GOOD INFILTRATION. CONTRACTOR TO INSTALL ACCORDINGLY BASED ON SITE CONDITIONS.



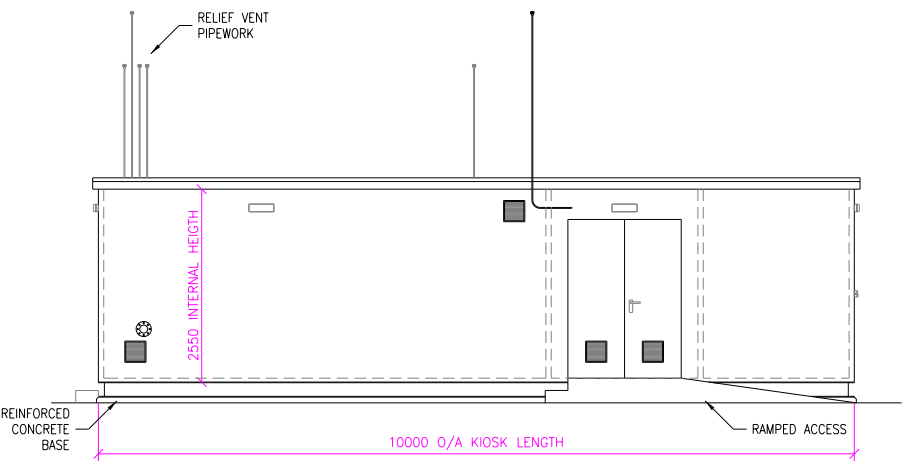
RIGHT GABLE WALL ELEVATION
(Scale 1:50)



LEFT GABLE WALL ELEVATION
(Scale 1:50)



FRONT WALL ELEVATION
(Scale 1:50)



REAR WALL ELEVATION
(Scale 1:50)

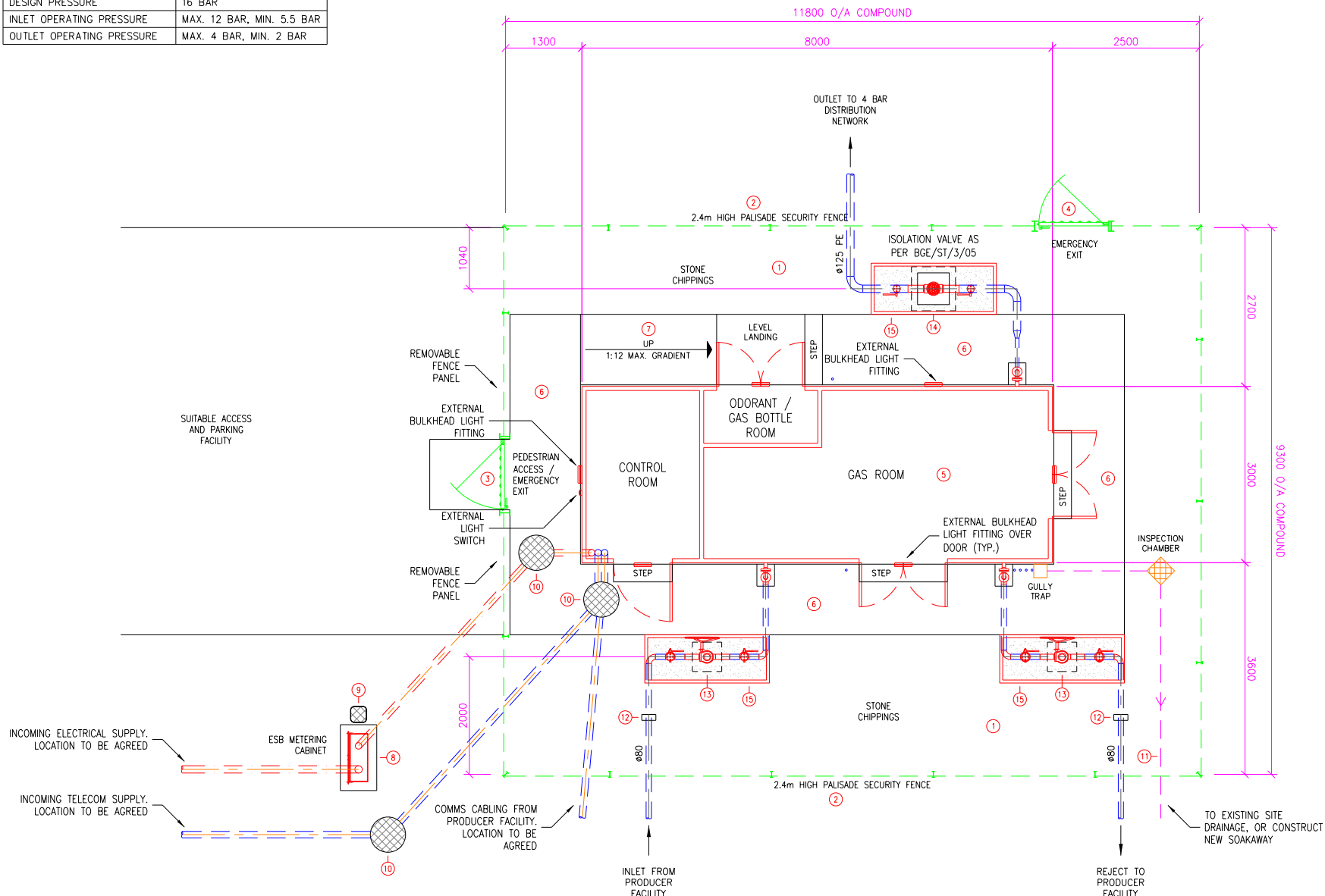
LEGEND	
NEW PIPEWORK	—
NEW EQUIPMENT	—

STANDARD DESIGN
FOR INFORMATION



GENERAL ARRANGEMENT - DN80 BNEF PACKAGE

DESIGN PARAMETERS	
DESIGN FLOWRATE	800 SCM/H
DESIGN PRESSURE	16 BAR
INLET OPERATING PRESSURE	MAX. 12 BAR, MIN. 5.5 BAR
OUTLET OPERATING PRESSURE	MAX. 4 BAR, MIN. 2 BAR

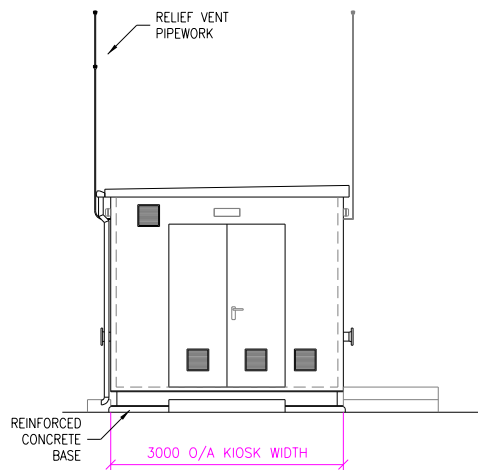


PLAN OF BNEF COMPOUND
(Scale 1:50)

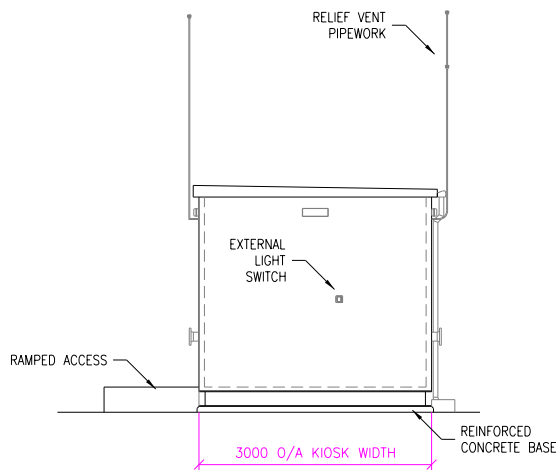
<u>LEGEND</u>		
No.	TITLE	Drg.No./Ref:
1	STONE CHIPPING AREA	GNI/AD/SP/005
2	2.4m HIGH PALISADE SECURITY FENCE	BS 1722-12/2006
3	1.2m WIDE PEDESTRIAN ACCESS/EXIT GATE	BS 1722-12/2006
4	1.2m WIDE EMERGENCY EXIT GATE	BS 1722-12/2006
5	REINFORCED CONCRETE BASE FOR BNEF KIOSK	GNI/AD/SP/005
6	1200 WIDE CONCRETE FOOTPATH	GNI/AD/SP/005
7	RAMPED ACCESS TO GAS BOTTLE ROOM	-
8	CONCRETE BASE FOR ELECTRICAL METERING CABINET	BGE/ST/3050
9	EARTH PIT	BGE/ST/3050
10	Ø600 INT. DUCT CHAMBER	-
11	Dis.150 u-PVC SURFACE WATER DRAINAGE PIPE (Min.GRAIENT 1:80)	BGE/ST/2007
12	M28 TEST POST	BGE/ST/3001
13	BURIED R.C. SUPPORT FOR DN50 BALL VALVE	BGE/ST/2006
14	BURIED R.C. SUPPORT FOR DN100 GATE VALVE	BGE/D/3/05
15	GROUND LEVEL PIPE PROTECTION	BGE/ST/2004

NOTES:

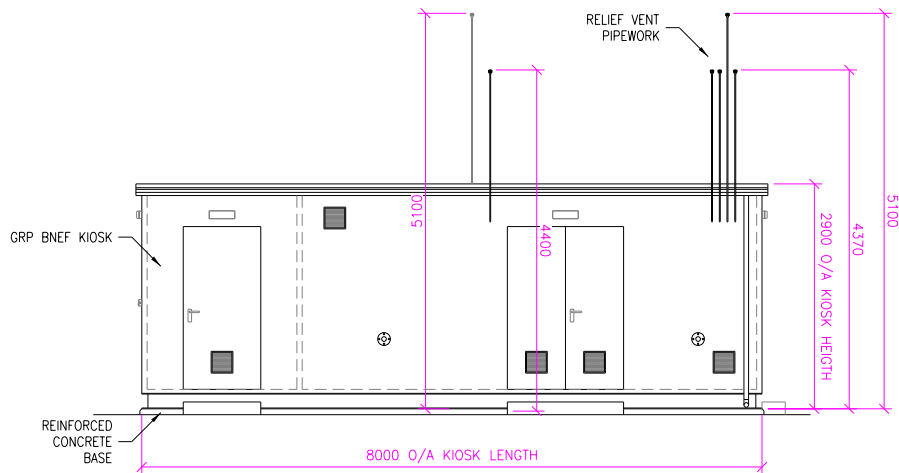
1. ALL DIMENSIONS IN MILLIMETERS.
CONTRACTOR TO ASSESS & VERIFY, ALL DIMENSIONS PRIOR TO FABRICATION.
SITE CHECK ALIGNMENT, ORIENTATION ETC. OF CONNECTING PIPEWORK & EQUIPMENT
PRIOR TO FABRICATION.
2. ALL PAINTING TO COMPLY WITH AD/SP/009.
3. PRODUCER TO PROVIDE SUITABLE GRAVEL ACCESS ROAD AND PARKING AREA TO
SITE.
4. SURFACE WATER DRAINAGE TO TIE INTO EXISTING SITE DRAINAGE SYSTEM, OR NEW
SOAKAWAY TO BE CONSTRUCTED. 1m³ SOAKAWAY BASED ON SITE WITH GOOD
INFILTRATION. CONTRACTOR TO INSTALL ACCORDINGLY BASED ON SITE CONDITIONS.



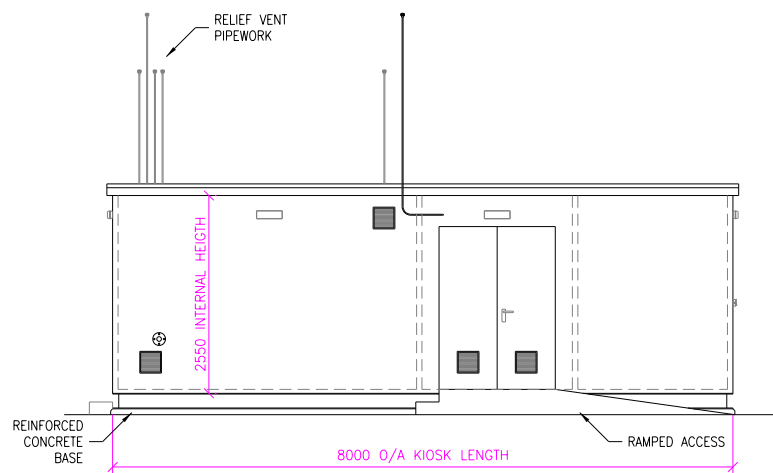
RIGHT GABLE WALL ELEVATION
(Scale 1:50)



LEFT GABLE WALL ELEVATION
(Scale 1:50)



FRONT WALL ELEVATION
(Scale 1:50)



REAR WALL ELEVATION
(Scale 1:50)

LEGEND

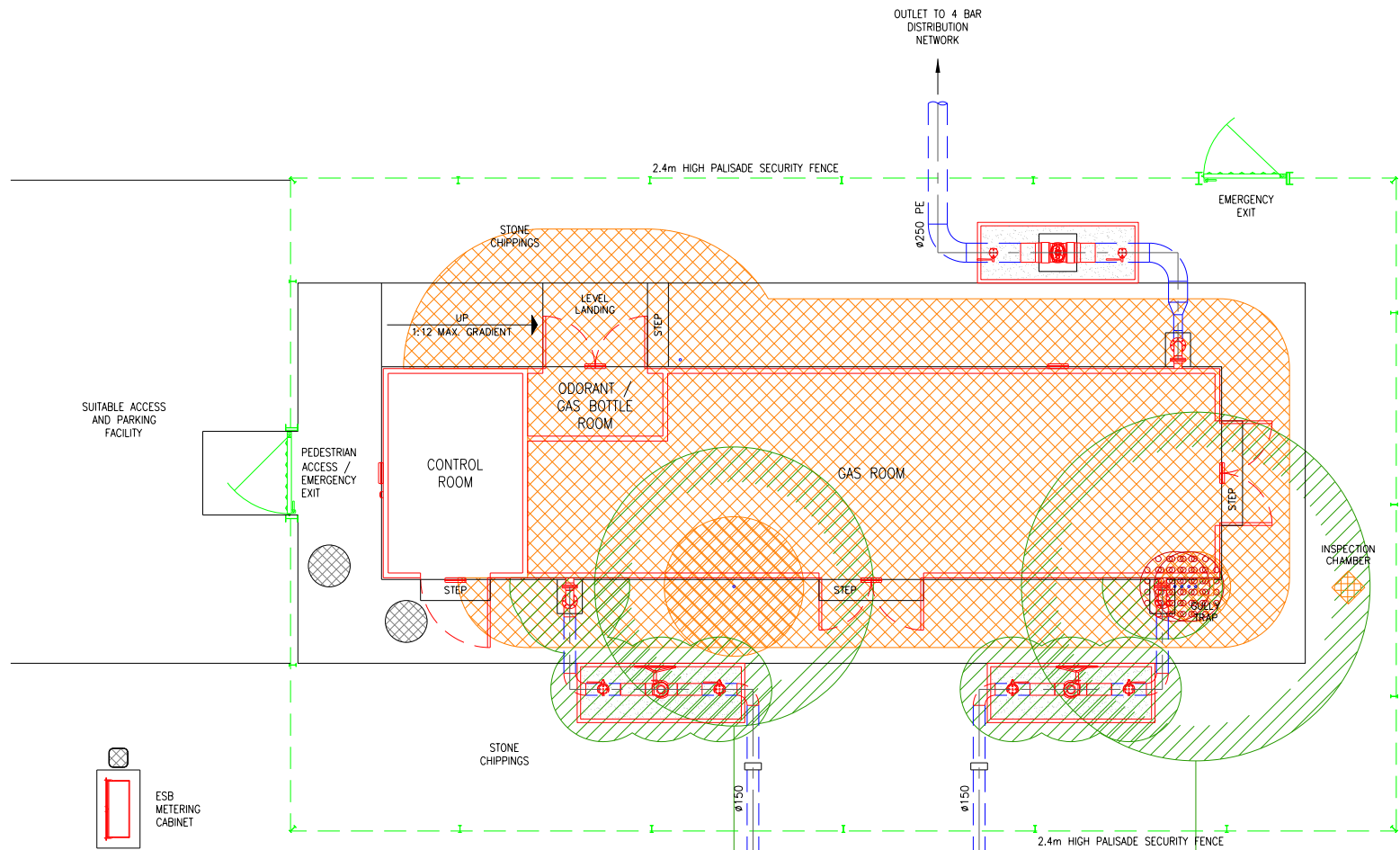
NEW PIPEWORK —————

NEW EQUIPMENT —————

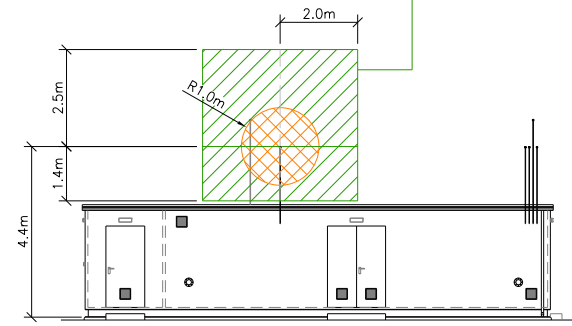
STANDARD DESIGN FOR INFORMATION



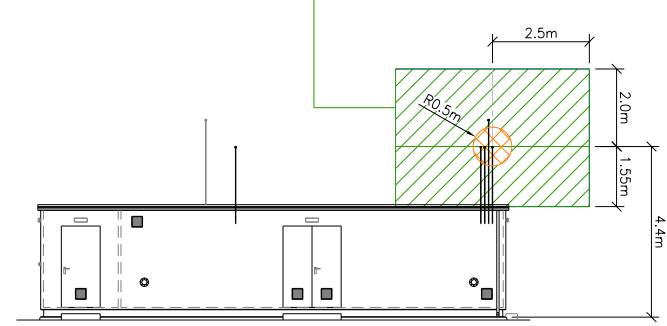
GENERAL ARRANGEMENT - DN50 BNEF PACKAGE



PLAN OF BNEF COMPOUND
(Scale 1:50)



ELEVATION – NTS
FILTER VENT VALVE



ELEVATION – NTS
SLAM SHUT RELIEF VALVE SSRV

LEGEND
NEW PIPEWORK
NEW EQUIPMENT

1. RELIEF VALVE

SLAM SHUT RELIEF VALVE SSRV

METERS									
P bar	d mm	X _r	X _h	X _k	X _L	X _S	0.2h _s	X _m	X _c
4.6	25	2.5	2.0	2.5	0.05	0.5	0.874	0.625	1.55

GAS ANALYSER CALIBRATION & TEST GAS BOTTLE VENTS

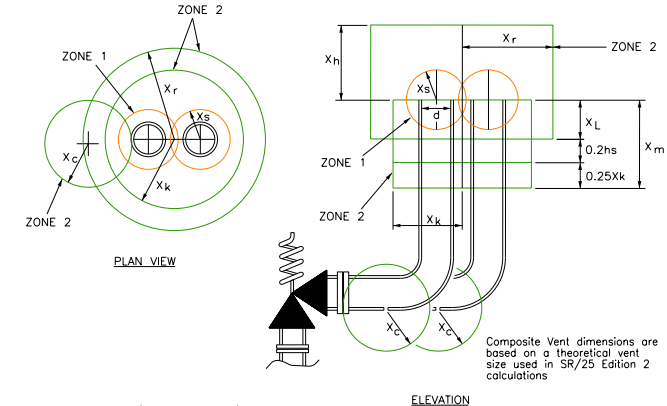
METERS									
P bar	d mm	X _r	X _h	X _k	X _L	X _S	0.2h _s	X _m	X _c
3.3	15	0.5	0.25	0.5	0.03	0.5	0.87	N/A	0.5

FILTER VENT VALVE

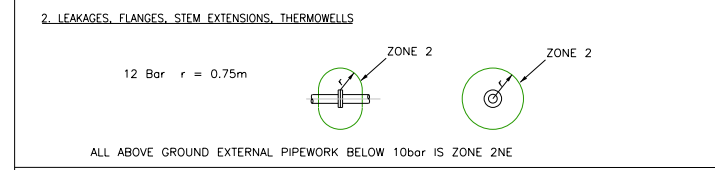
METERS									
P bar	d mm	X _r	X _h	X _k	X _L	X _S	0.2h _s	X _m	X _c
12	15	2.0	2.5	2.0	0.03	1.0	0.87	0.5	1.4

GAS ANALYSER

METERS									
P bar	d mm	X _r	X _h	X _k	X _L	X _S	0.2h _s	X _m	X _c
3.3	15	0.5	0.25	0.5	0.03	N/A	N/A	N/A	N/A

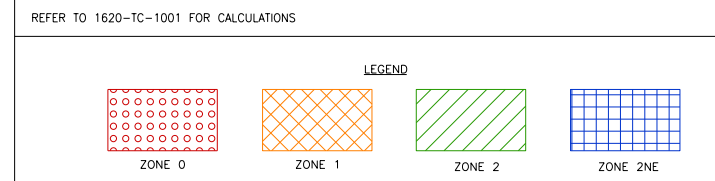


Note: X = Zoning Distance (see Above Tables),
d = Nominal Diameter
* For Burst Discs, Zoning Distance to be taken from center of vent tip as Composite Hazardous Area does not apply



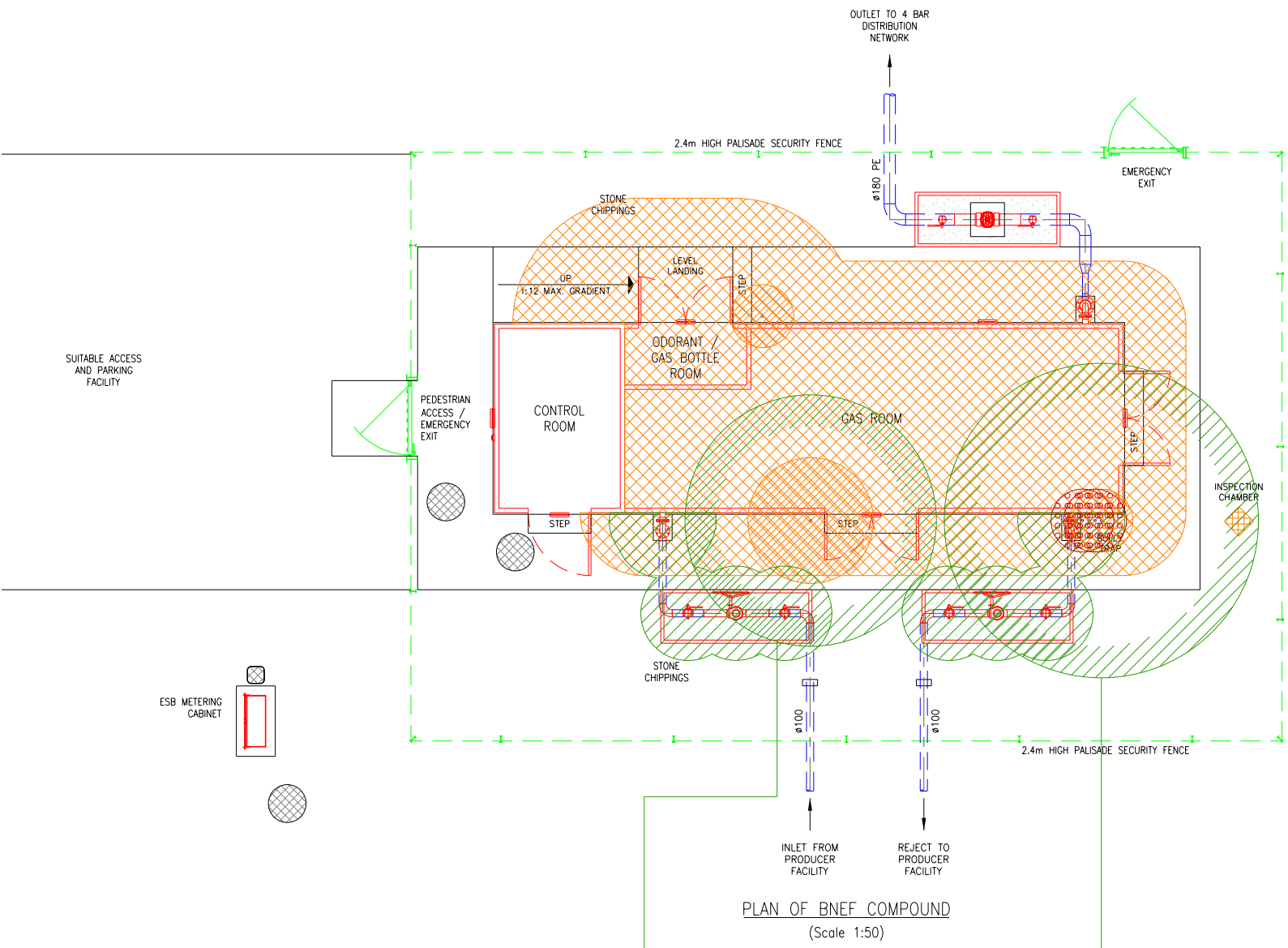
3. NOTE
- (a) ZONES ARE THREE DIMENSIONAL
 - (b) DESIGNED IN ACCORDANCE WITH IGE/SR/25 (Edition 2)
 - (c) INLET PRESSURE : 12bar
OUTLET PRESSURE : 4bar
 - (d) DOUBLE ARROW HEAD INDICATES A HAZARDOUS AREA DISTANCE THAT IS GREATER THAN THE DISTANCE BETWEEN VENT TIP AND GROUND LEVEL
- EXAMPLE:
-
- (e) HAZARDOUS AREA ZONING OF BNEF KIOSK IS INDICATIVE ONLY PENDING RECEIPT OF VENDOR INFORMATION AT DETAILED DESIGN.

4. OPERATING PROCEDURES
- (a) VENTING TO BE IN ACCORDANCE WITH IGE/SR/23 – VENTING OF NATURAL GAS
 - (b) DOORS TO BUILDING TO BE SET IN OPEN POSITION WHENEVER BUILDING IS OCCUPIED.
5. OVERLAPPING HAZARDOUS AREAS
- HAZARDOUS AREA AS SHOWN, ARE INDICATIVE ONLY AND WILL BE FINALISED WHEN BNEF VENDOR DESIGN IS CONFIRMED.



STANDARD DESIGN
FOR INFORMATION

HAZARDOUS AREA DRAWING - DN100 BNEF PACKAGE



LEGEND	
NEW PIPEWORK	—
NEW EQUIPMENT	—

1. RELIEF VALVE

SLAM SHUT RELIEF VALVE SSVW

METERS										
P bar	d mm	X _r	X _h	X _k	X _L	X _S	0.2h _s	0.25X _k	X _m	X _c
4.6	25	2.5	2.0	2.5	0.05	0.5	0.874	0.625	1.55	N/A

GAS ANALYSER CALIBRATION & TEST GAS BOTTLE VENTS

METERS										
P bar	d mm	X _r	X _h	X _k	X _L	X _S	0.2h _s	0.25X _k	X _m	X _c
3.3	15	0.5	0.25	0.5	0.03	0.5	0.87	N/A	0.5	N/A

FILTER VENT VALVE

METERS										
P bar	d mm	X _r	X _h	X _k	X _L	X _S	0.2h _s	0.25X _k	X _m	X _c
12	15	2.0	2.5	2.0	0.03	1.0	0.87	0.5	1.4	N/A

GAS ANALYSER

METERS										
P bar	d mm	X _r	X _h	X _k	X _L	X _S	0.2h _s	0.25X _k	X _m	X _c
3.3	15	0.5	0.25	0.5	0.03	N/A	N/A	N/A	N/A	N/A

PLAN VIEW

ELEVATION

Note: X = Zoning Distance (see Above Tables),
d = Nominal Diameter
* For Burst Discs, Zoning Distance to be taken from center of vent tip as Composite Hazardous Area does not apply

Composite Vent dimensions are based on a theoretical vent size used in SR/25 Edition 2 calculations

2. LEAKAGES, FLANGES, STEM EXTENSIONS, THERMOWELLS

12 Bar r = 0.75m

ALL ABOVE GROUND EXTERNAL PIPEWORK BELOW 10bar IS ZONE 2NE

3. NOTE

(a) ZONES ARE THREE DIMENSIONAL
(b) DESIGNED IN ACCORDANCE WITH IGE/SR/25 (Edition 2)
(c) INLET PRESSURE : 12bar
OUTLET PRESSURE : 4bar
(d) DOUBLE ARROW HEAD INDICATES A HAZARDOUS AREA DISTANCE THAT IS GREATER THAN THE DISTANCE BETWEEN VENT TIP AND GROUND LEVEL
EXAMPLE:
6.1m
GL
(e) HAZARDOUS AREA ZONING OF BNEF KIOSK IS INDICATIVE ONLY PENDING RECEIPT OF VENDOR INFORMATION AT DETAILED DESIGN.

4. OPERATING PROCEDURES

(a) VENTING TO BE IN ACCORDANCE WITH IGE/SR/23 – VENTING OF NATURAL GAS
(b) DOORS TO BUILDING TO BE SET IN OPEN POSITION WHENEVER BUILDING IS OCCUPIED.

5. OVERLAPPING HAZARDOUS AREAS

HAZARDOUS AREA AS SHOWN, ARE INDICATIVE ONLY AND WILL BE FINALISED WHEN BNEF VENDOR DESIGN IS CONFIRMED.

REFER TO 1620–TC–1001 FOR CALCULATIONS

LEGEND

ZONE 0

ZONE 1

ZONE 2

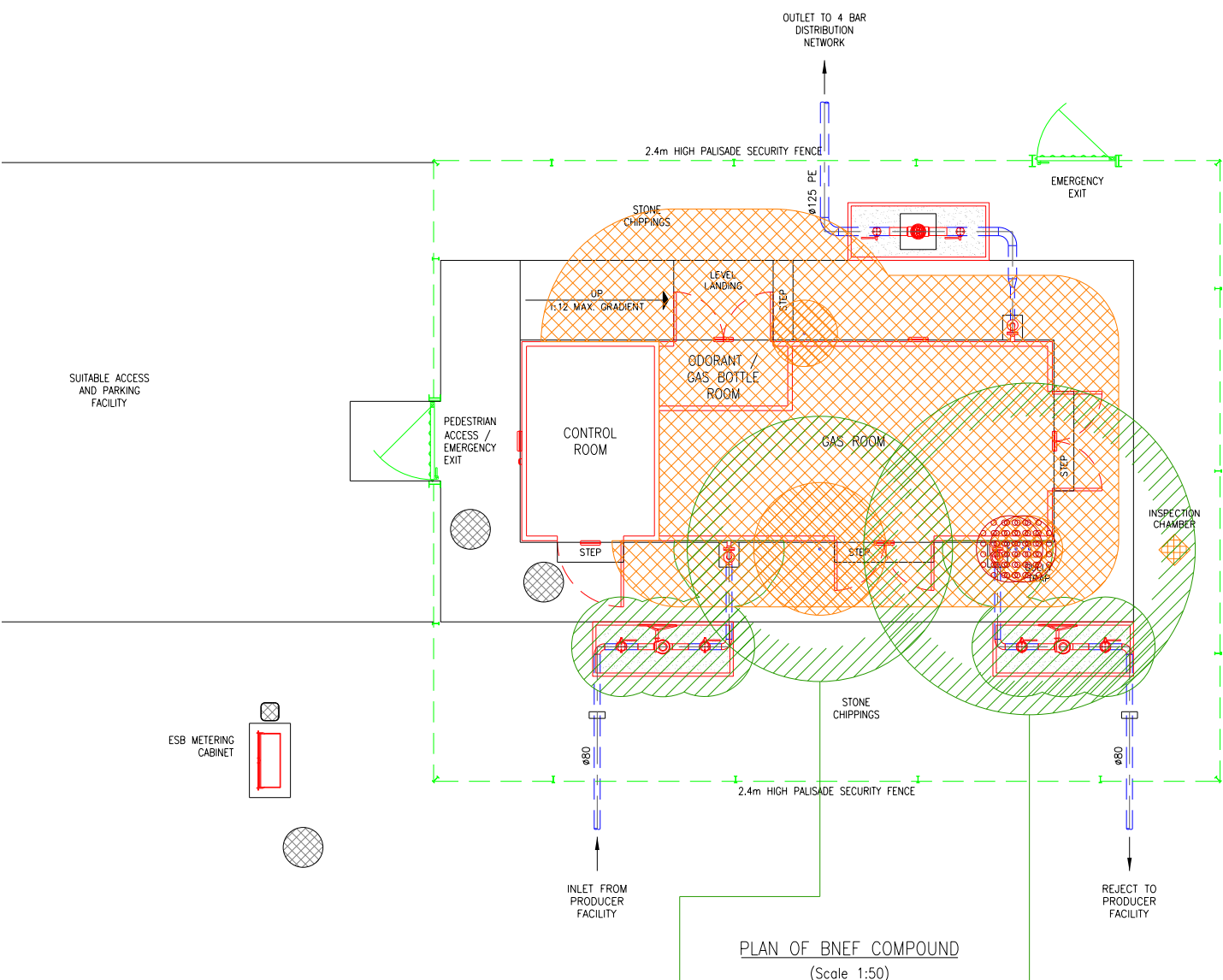
ZONE 2NE

STANDARD DESIGN

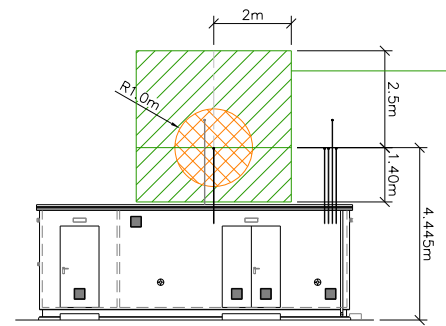
FOR INFORMATION

HAZARDOUS AREA DRAWING - DN80 BNEF PACKAGE

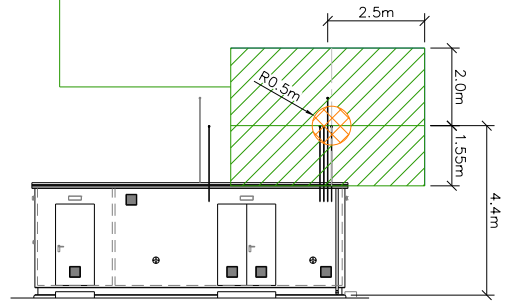




PLAN OF BNEF COMPOUND
(Scale 1:50)



ELEVATION – NTS
FILTER VENT VALVE



ELEVATION – NTS
SLAM SHUT RELIEF VALVE SSVRV

LEGEND
NEW PIPEWORK ———
NEW EQUIPMENT ———

STANDARD DESIGN
FOR INFORMATION

HAZARDOUS AREA DRAWING - DN50 BNEF PACKAGE

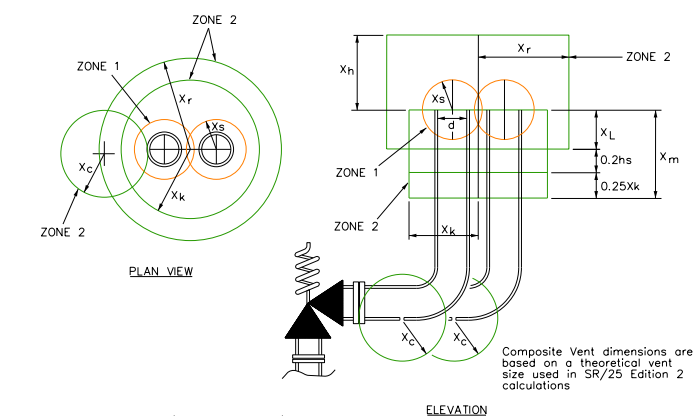
1. RELIEF VALVE

SLAM SHUT RELIEF VALVE SSVRV									
METERS									
P bar	d mm	X _r	X _h	X _k	X _L	X _S	0.2h _s	0.25X _k	X _m
4.6	25	2.5	2.0	2.5	0.05	0.5	0.874	0.625	1.55

GAS ANALYSER CALIBRATION & TEST GAS BOTTLE VENTS									
METERS									
P bar	d mm	X _r	X _h	X _k	X _L	X _S	0.2h _s	0.25X _k	X _m
3.3	15	0.5	0.25	0.5	0.03	0.5	0.87	N/A	0.5

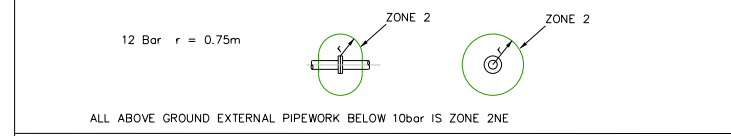
FILTER VENT VALVE									
METERS									
P bar	d mm	X _r	X _h	X _k	X _L	X _S	0.2h _s	0.25X _k	X _m
12	15	2.0	2.5	2.0	0.03	1.0	0.87	0.5	1.4

GAS ANALYSER									
METERS									
P bar	d mm	X _r	X _h	X _k	X _L	X _S	0.2h _s	0.25X _k	X _m
3.3	15	0.5	0.25	0.5	0.03	N/A	N/A	N/A	N/A



Note: X = Zoning Distance (see Above Tables),
d = Nominal Diameter
* For Burst Discs, Zoning Distance to be taken from center of vent tip as Composite Hazardous Area does not apply

2. LEAKAGES, FLANGES, STEM EXTENSIONS, THERMOWELLS



3. NOTE

- (a) ZONES ARE THREE DIMENSIONAL
- (b) DESIGNED IN ACCORDANCE WITH IGE/SR/25 (Edition 2)
- (c) INLET PRESSURE : 12bar
OUTLET PRESSURE : 4bar
- (d) DOUBLE ARROW HEAD INDICATES A HAZARDOUS AREA DISTANCE THAT IS GREATER THAN THE DISTANCE BETWEEN VENT TIP AND GROUND LEVEL.
EXAMPLE:
- (e) HAZARDOUS AREA ZONING OF BNEF KIOSK IS INDICATIVE ONLY PENDING RECEIPT OF VENDOR INFORMATION AT DETAILED DESIGN.

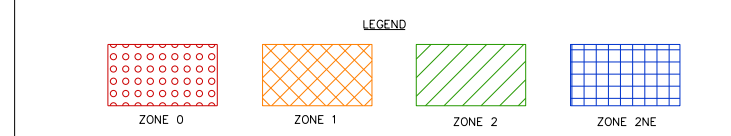
4. OPERATING PROCEDURES

- (a) VENTING TO BE IN ACCORDANCE WITH IGE/SR/23 – VENTING OF NATURAL GAS
- (b) DOORS TO BUILDING TO BE SET IN OPEN POSITION WHENEVER BUILDING IS OCCUPIED.

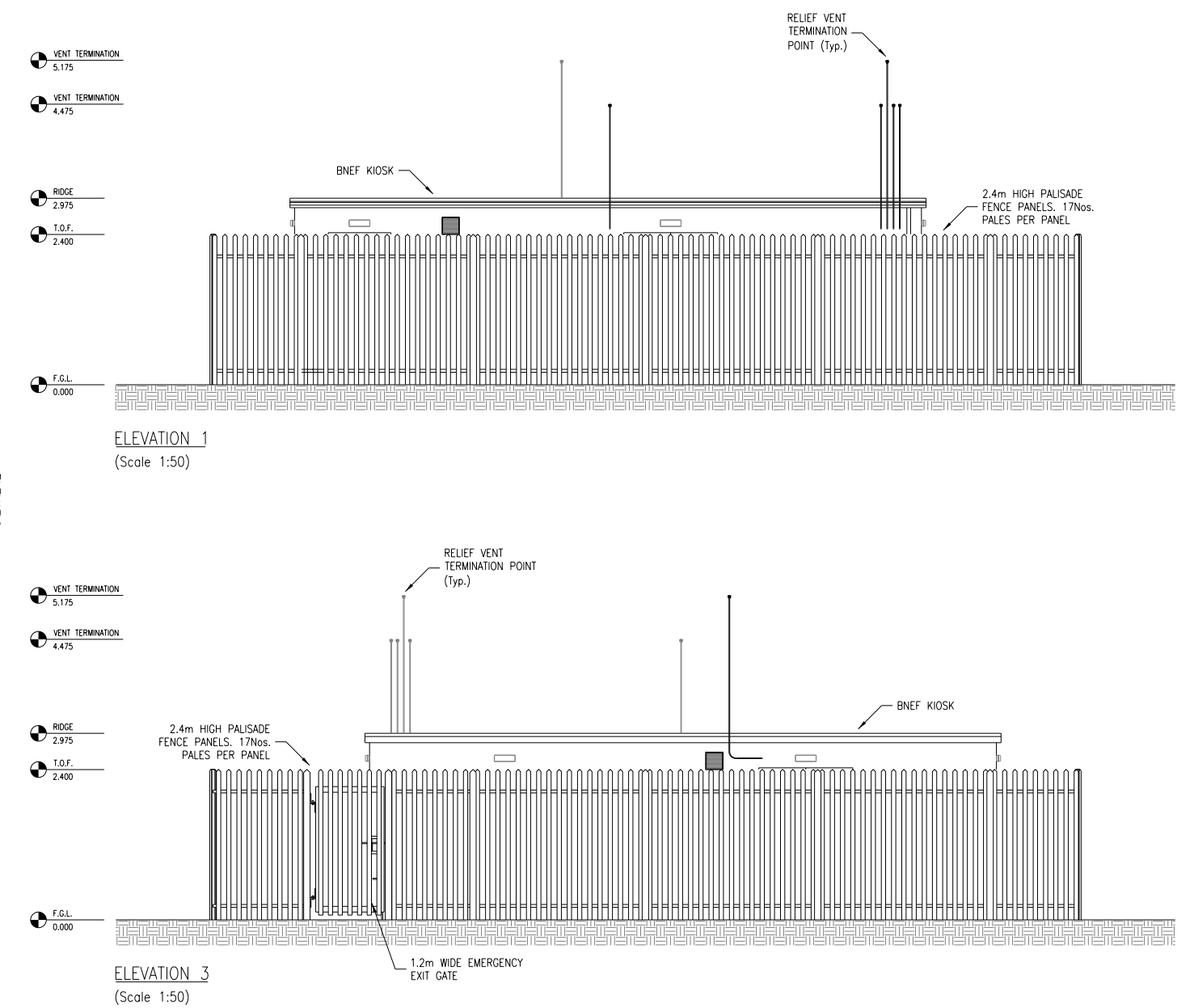
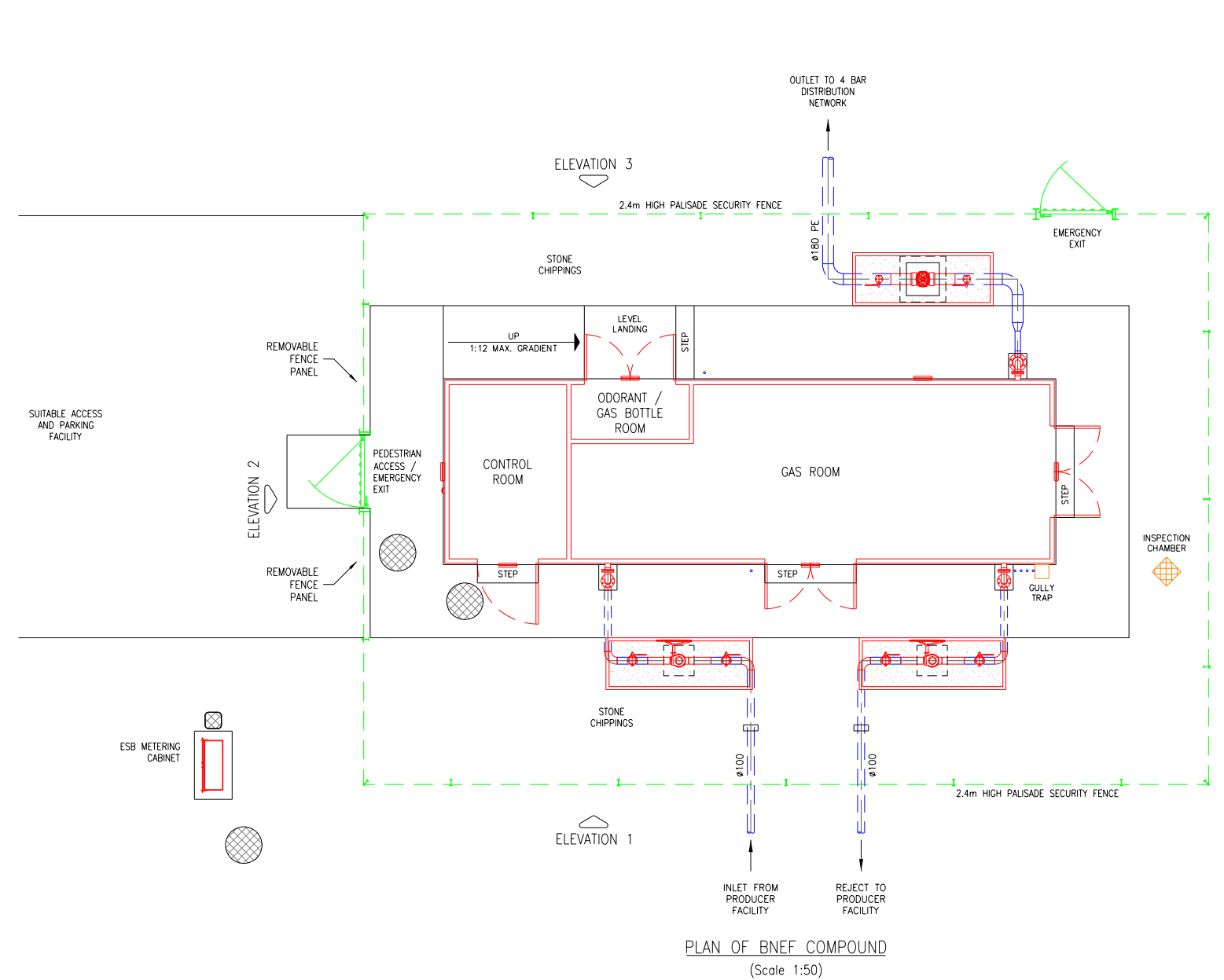
5. OVERLAPPING HAZARDOUS AREAS

HAZARDOUS AREA AS SHOWN, ARE INDICATIVE ONLY AND WILL BE FINALISED WHEN BNEF VENDOR DESIGN IS CONFIRMED.

REFER TO 1620–TC–1001 FOR CALCULATIONS



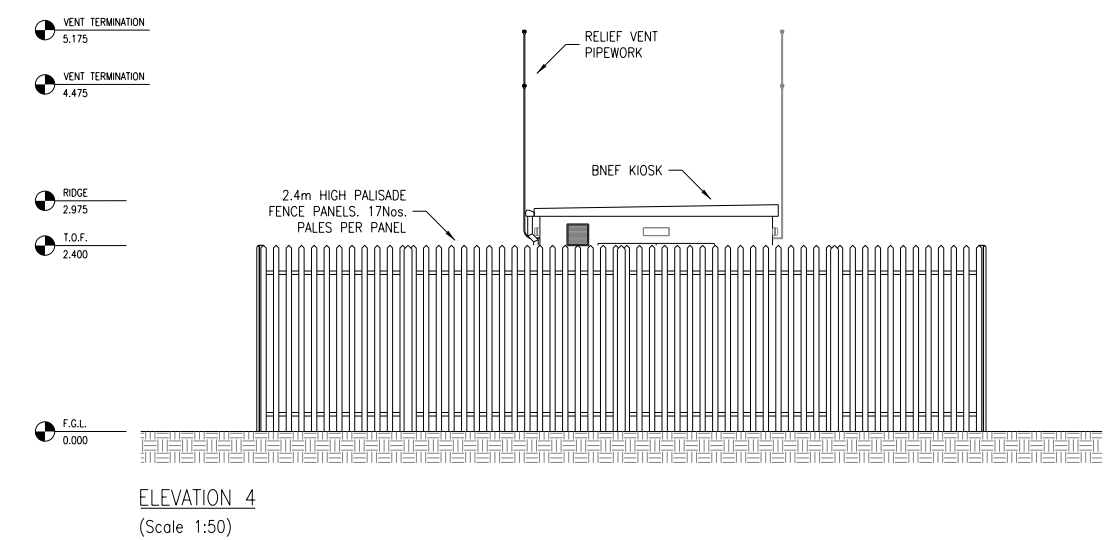
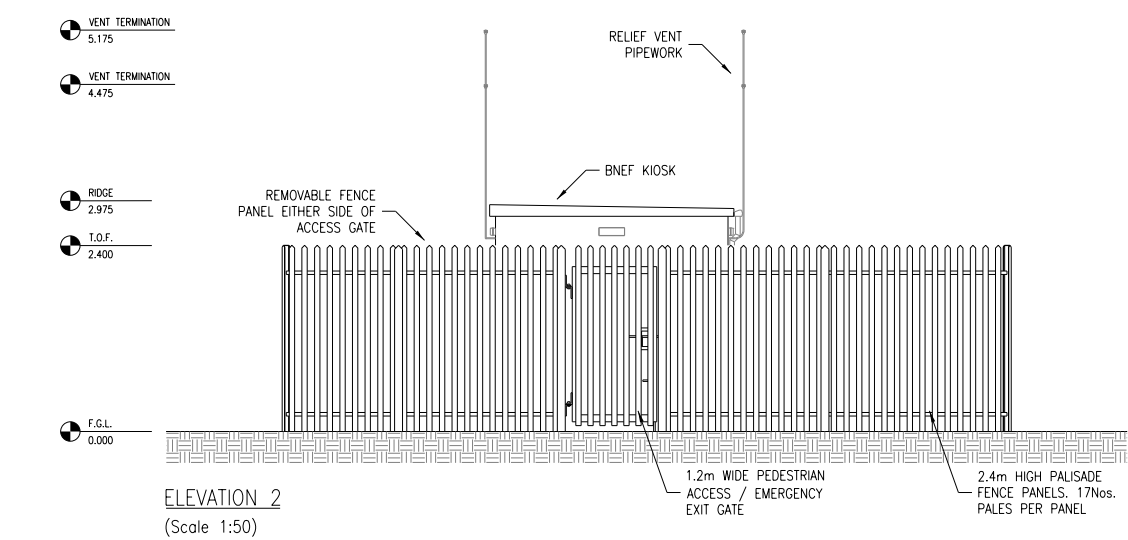




LEGEND	
NEW PIPEWORK	—
NEW EQUIPMENT	—

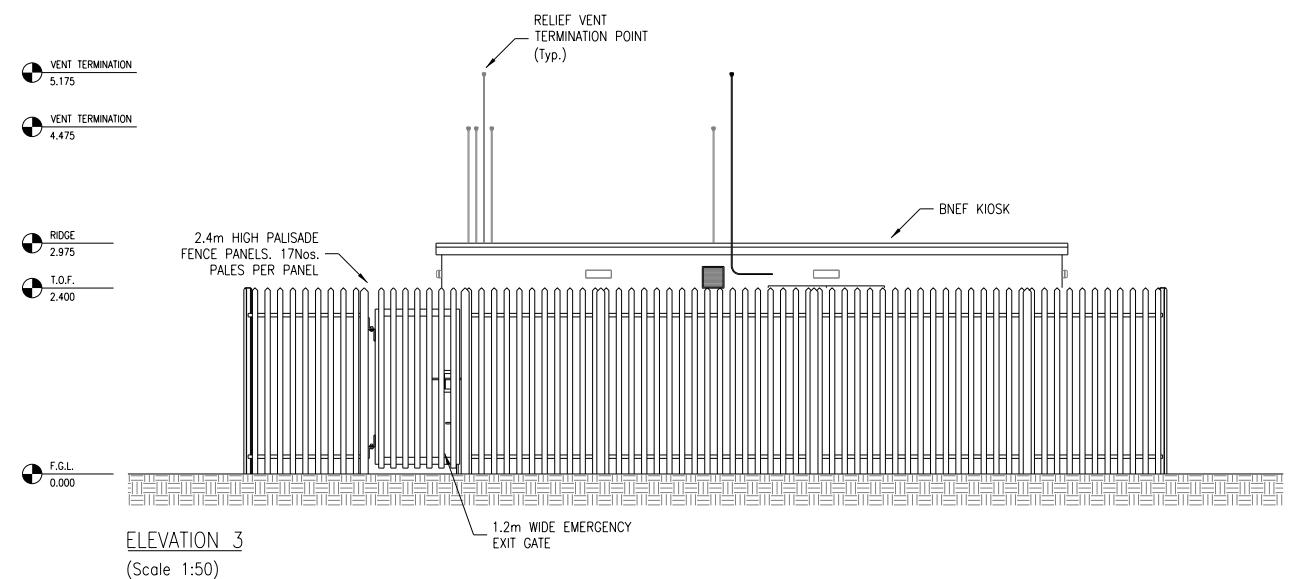
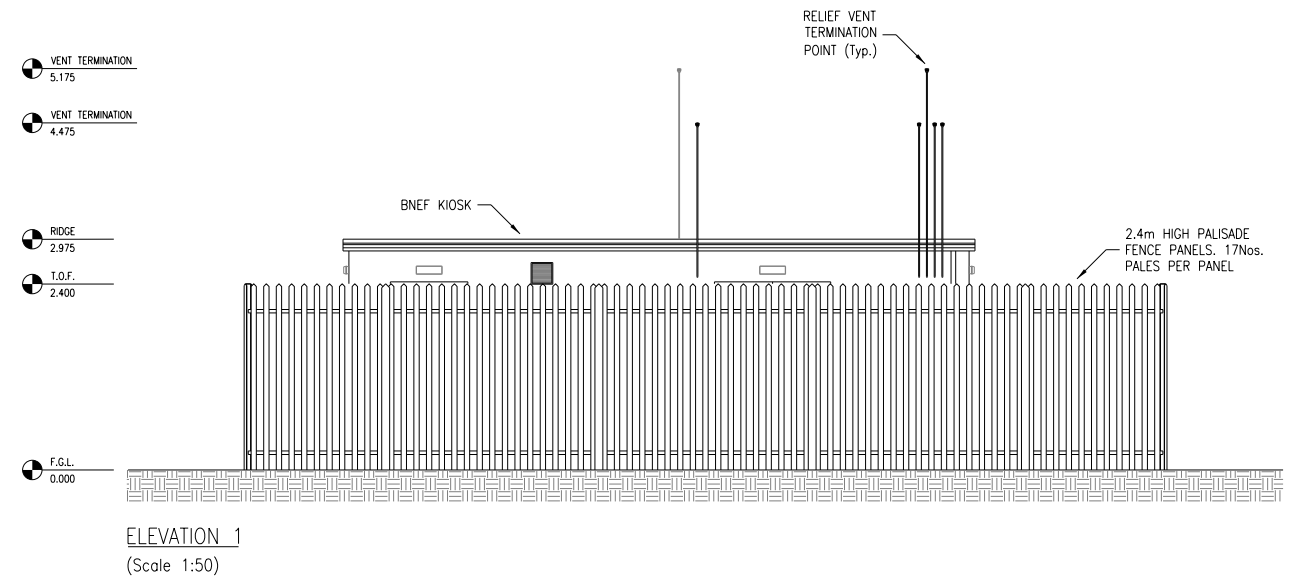
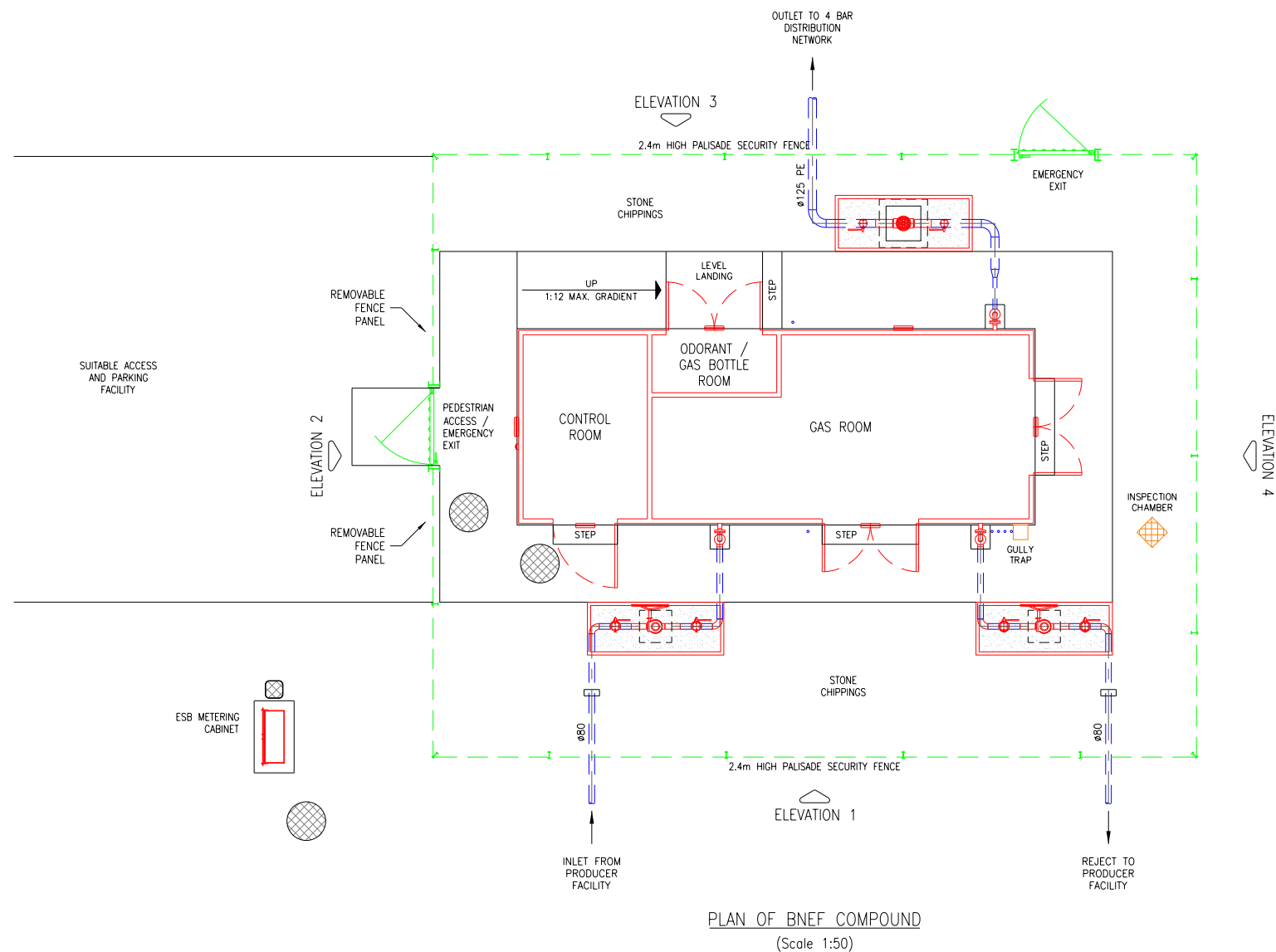
STANDARD DESIGN

FOR INFORMATION



PROPOSED SITE ELEVATIONS - DN80 BNEF PACKAGE

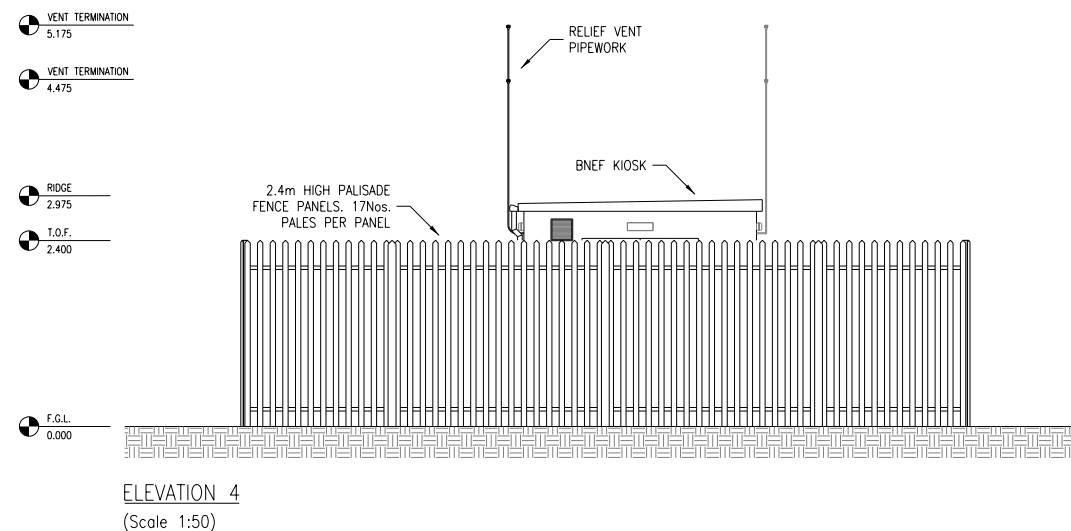
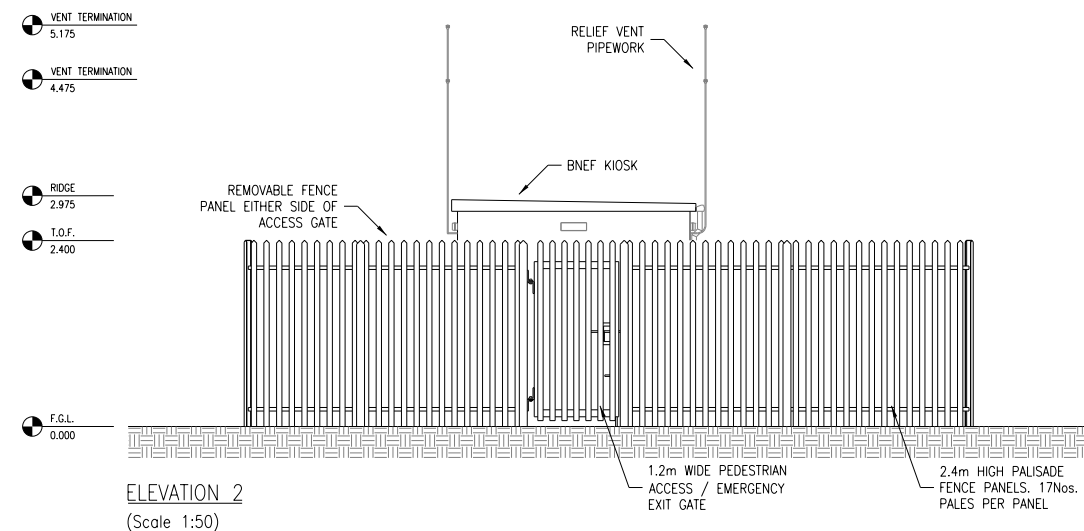




LEGEND	
NEW PIPEWORK	—
NEW EQUIPMENT	—

STANDARD DESIGN

FOR INFORMATION



PROPOSED SITE ELEVATIONS - DN50 BNEF PACKAGE



The main contact details for
Gas Networks Ireland are:

E Enquiries

1800 464 464

Lines open Monday to Friday 8am – 8pm
and Saturday 9am – 5.30pm

24 Hour Emergency Service

1800 20 50 50

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