The Great Grid Upgrade

Sea Link

Design Drawings

Version A

October 2023

To assist with understanding these drawings please see the **Guide to Interacting with the Consultation Plans and Drawings**

nationalgrid

Contents

01. Onshore Design Drawings

To assist with understanding these drawings please see the **Guide to Interacting with the Consultation Plans and Drawings**

nationalgrid

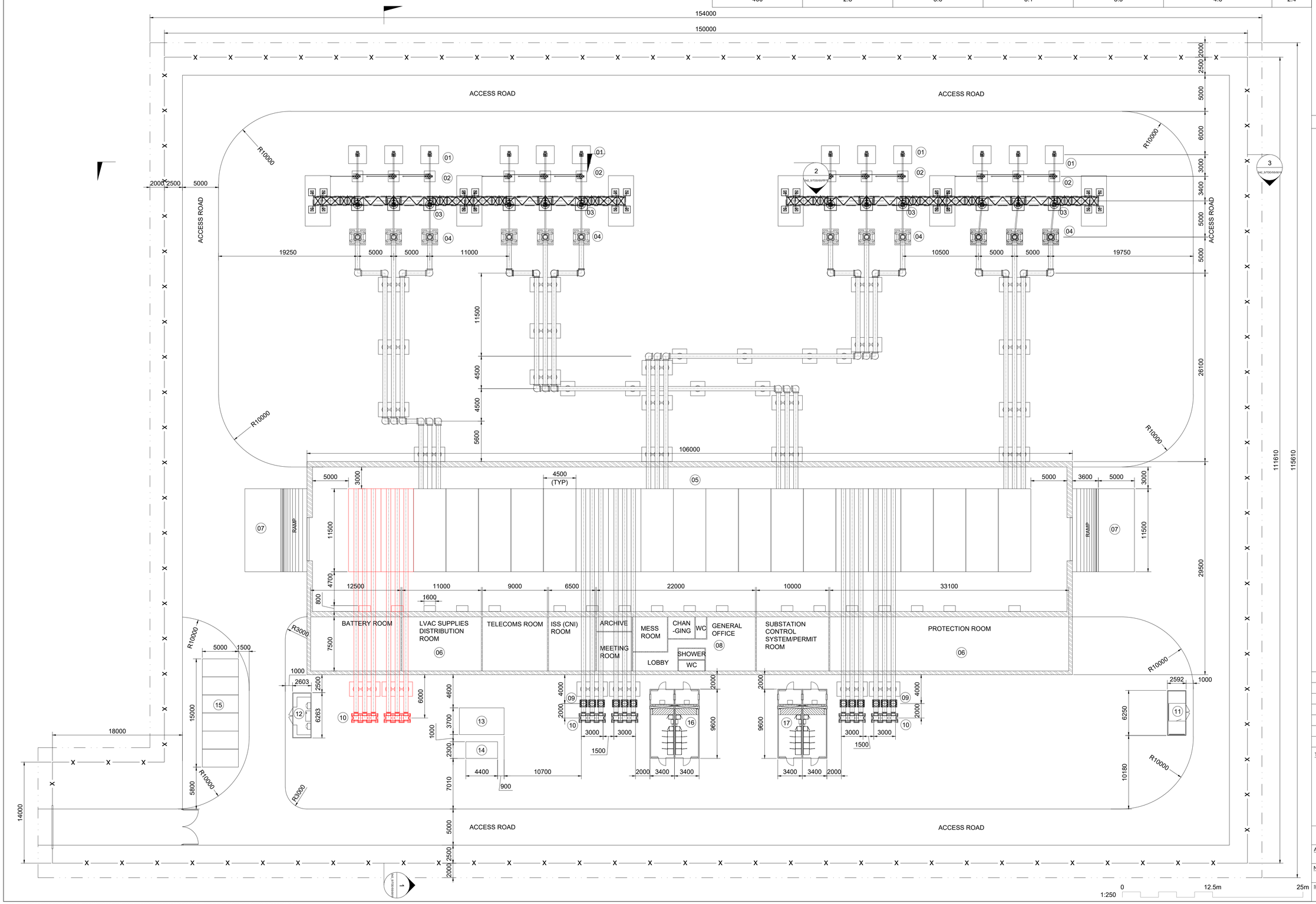
01-01. Friston 400kV Substation

Drawing Category Name	Plan Title	Scheme	Drawing Numbers
Friston 400kV Substation	Typical Sea Link works should Friston 400kV GIS substation be developed by others	Suffolk Onshore Scheme	S42_S/TDD/SS/0001
	Typical Friston 400kV GIS substation in scenario where not construction by third party	Suffolk Onshore Scheme	S42_S/TDD/SS/0003
	Typical Friston 400kV GIS substation - elevation drawing	Suffolk Onshore Scheme	S42_S/TDD/SS/0019

To assist with understanding these drawings please see the **Guide to Interacting with the Consultation Plans and Drawings**

THE NATIONAL GRID ELECTRICITY TRANSMISSION PLC (SEA LINK) ORDER
DESIGN DRAWINGS FOR CONSULTATION
TYPICAL SEA LINK WORKS SHOULD FRISTON 400kV GIS SUBSTATION BE DEVELOPED BY OTHERS
SHEET 1 OF 1

NOMINAL SYSTEM VOLTAGE	PHASE TO EARTH	PHASE TO PHASE	SAFETY DISTANCE (FROM NATIONAL GRID SAFETY RULES)	DESIGN CLEARANCE FOR SAFETY (VERTICAL) Ds	DESIGN CLEARANCE FOR SAFETY (HORIZONTAL) Dsh	INSULATION HEIGHT Ih
kV	M	M	M	M	M (SEE POINT ii FROM NOTE 6)	M
400	2.8	3.6	3.1	5.5	4.6	2.4



Notes

For statutory consultation purposes only.

1. These plans show the Draft Order Limits and Draft Cable Alignment and potential pylon locations. Due to the need for future flexibility, National Grid will be applying for Order Limits and Limits of Deviation within its Development Consent Order, within which any final alignment (including pylon locations) would lie. Therefore the Draft Cable Alignment and pylon locations should be treated as indicative only. Further information is provided in our 'Guide to interacting with our consultation plans' document.
2. For further information on construction please refer to the construction section of the Preliminary Environmental Impact Report, Volume 1, Part 1, Chapter 4.
3. Abbreviations
   - AIS - Air Insulated Switchgear
   - CVT - Capacitive Voltage Transformer
   - GIS - Gas Insulated Switchgear
   - ISS - Integrated Security Solutions
   - CNI - Critical National Infrastructure
   - LVAC - Low Voltage Alternating Current
4. Elevation sections relate to S42_S/TDD/SS/0019.

Legend

- EXISTING EQUIPMENT
- NEW EQUIPMENT
- LIMIT OF LAND
- X FENCE

ID	DESCRIPTION
01	400kV AIS CVT
02	400kV AIS EARTH SWITCH
03	400kV AIS SURGE ARRESTOR
04	400kV GIS / AIR BUSHING
05	400kV GIS HALL
06	400kV ANNEX BUILDING
07	HARDSTANDING AREA
08	AMENITIES BLOCK
09	400kV GIS SURGE ARRESTOR
10	400kV GIS / CABLE INTERFACE
11	STORAGE
12	WORKSHOP
13	EMERGENCY DIESEL GENERATOR
14	DIESEL TANK
15	PARKING
16	DISTRIBUTED RELAY ROOM (OFTO EA2)
17	DISTRIBUTED RELAY ROOM (OFTO EA1N)

Issue	Date	Remarks	Drawn	Checked	Approved
A	07/09/2023	FINAL	SC	JW	KJ

Title

THE NATIONAL GRID ELECTRICITY TRANSMISSION PLC (SEA LINK) ORDER
DESIGN DRAWINGS FOR CONSULTATION

TYPICAL SEA LINK WORKS SHOULD FRISTON 400KV GIS SUBSTATION BE DEVELOPED BY OTHERS
SHEET 1 of 1

nationalgrid

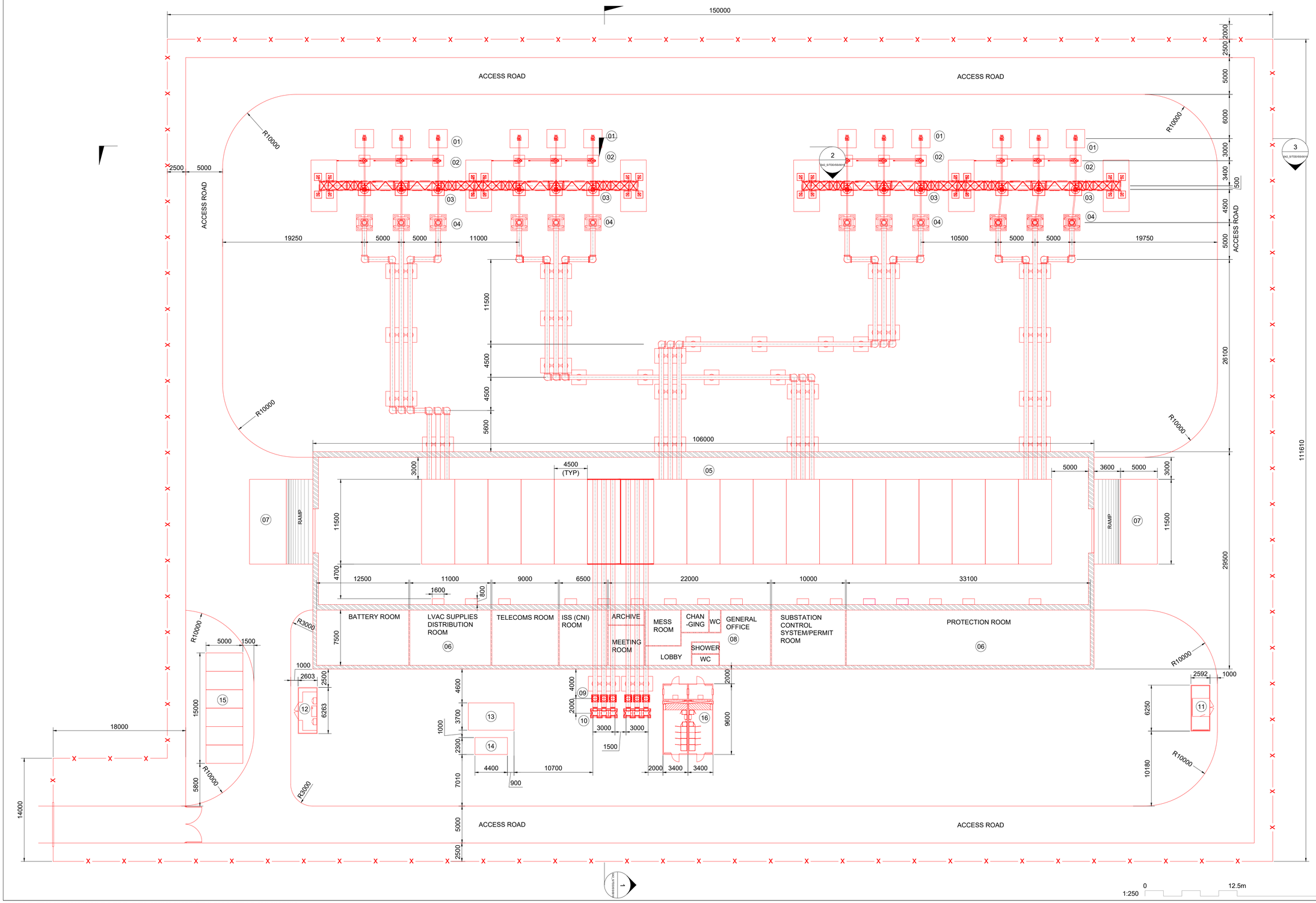
Application Number: EN020026

National Grid Drawing Reference: S42_S/TDD/SS/0001

Scale	Sheet Size	Sheet	Issue
1:250	A1	SHEET 1 OF 1	A

THE NATIONAL GRID ELECTRICITY TRANSMISSION PLC (SEA LINK) ORDER
DESIGN DRAWINGS FOR CONSULTATION
TYPICAL FRISTON 400kV GIS SUBSTATION IN SCENARIO WHERE NO CONSTRUCTION BY THIRD PARTY
SHEET 1 OF 1

NOMINAL SYSTEM VOLTAGE	PHASE TO EARTH	PHASE TO PHASE	SAFETY DISTANCE (FROM NATIONAL GRID SAFETY RULES)	DESIGN CLEARANCE FOR SAFETY (VERTICAL) Ds	DESIGN CLEARANCE FOR SAFETY (HORIZONTAL) Dsh	INSULATION HEIGHT Ih
kV	M	M	M	M	M (SEE POINT ii FROM NOTE 6)	M
400	2.8	3.6	3.1	5.5	4.6	2.4



Notes

For statutory consultation purposes only.

1. These plans show the Draft Order Limits and Draft Cable Alignment and potential pylon locations. Due to the need for future flexibility, National Grid will be applying for Order Limits and Limits of Deviation within its Development Consent Order, within which any final alignment (including pylon locations) would lie. Therefore the Draft Cable Alignment and pylon locations should be treated as indicative only. Further information is provided in our 'Guide to interacting with our consultation plans' document.
2. For further information on construction please refer to the construction section of the Preliminary Environmental Impact Report, Volume 1, Part 1, Chapter 4.
3. Abbreviations
   - AIS - Air Insulated Switchgear
   - CVT - Capacitive Voltage Transformer
   - GIS - Gas Insulated Switchgear
   - ISS - Integrated Security Solutions
   - CNI - Critical National Infrastructure
   - LVAC - Low Voltage Alternating Current
4. Elevation sections relate to S42_S/TDD/SS/0019.

Legend

- X — FENCE
- NEW INFRASTRUCTURE EQUIPMENT

ID	DESCRIPTION
01	400kV AIS CVT
02	400kV AIS EARTH SWITCH
03	400kV AIS SURGE ARRESTOR
04	400kV GIS / AIR BUSHING
05	400kV GIS HALL
06	400kV ANNEX BUILDING
07	HARDSTANDING AREA
08	AMENITIES BLOCK
09	400kV GIS SURGE ARRESTOR
10	400kV GIS / CABLE INTERFACE
11	STORAGE
12	WORKSHOP
13	EMERGENCY DIESEL GENERATOR
14	DIESEL TANK
15	PARKING
16	DISTRIBUTED RELAY ROOM (OFTO EA2)
17	DISTRIBUTED RELAY ROOM (OFTO EA1N)

Issue	Date	Remarks	Drawn	Checked	Approved
A	08/09/2023	FINAL	SC	JW	KJ

Title

THE NATIONAL GRID ELECTRICITY TRANSMISSION PLC (SEA LINK) ORDER
DESIGN DRAWINGS FOR CONSULTATION
TYPICAL FRISTON 400kV GIS SUBSTATION IN SCENARIO WHERE NO CONSTRUCTION BY THIRD PARTY
SHEET 1 OF 1

nationalgrid

Application Number: EN020026

National Grid Drawing Reference: S42_S/TDD/SS/0003

Scale	Sheet Size	Sheet	Issue
1:250	A1	SHEET 1 OF 1	A

THE NATIONAL GRID ELECTRICITY TRANSMISSION PLC (SEA LINK) ORDER

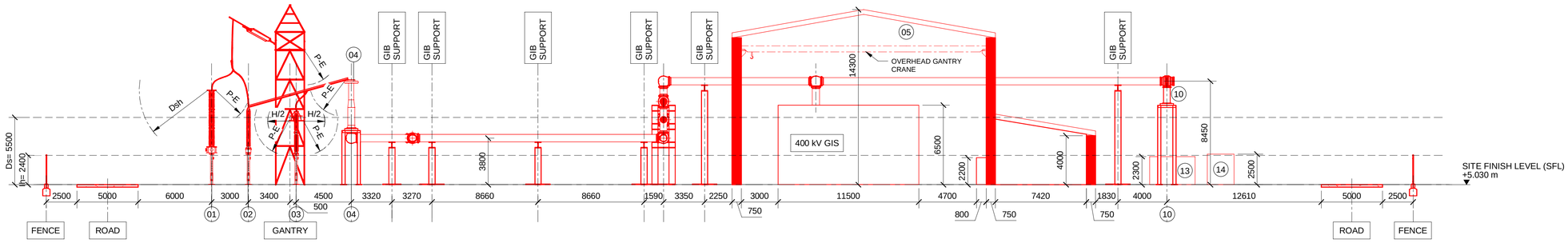
DESIGN DRAWINGS FOR CONSULTATION

TYPICAL FRISTON 400kV GIS SUBSTATION - ELEVATION DRAWING

SHEET 1 of 1

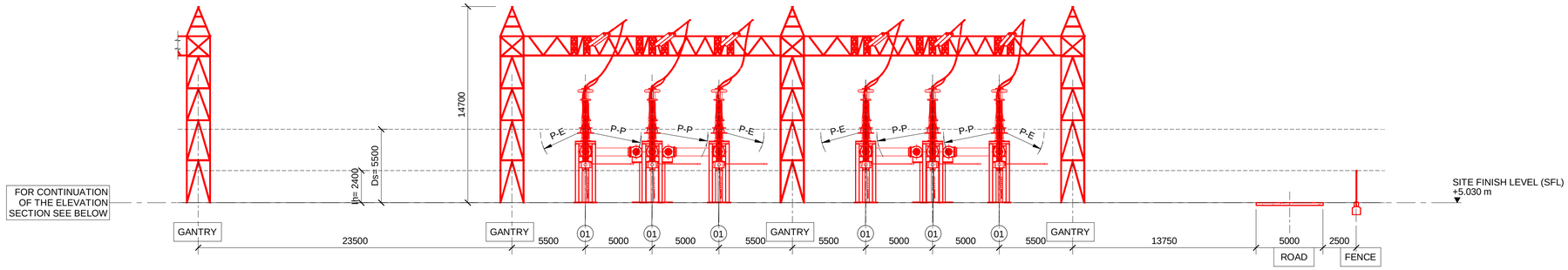
SUBSTATION MINIMUM ELECTRICAL CLEARANCES

REF	CLEARANCE (mm)	NOMINAL SYSTEM VOLTAGE
		400kV
P-E	PHASE TO EARTH	2800
P-P	PHASE TO PHASE	3600
SD	SAFETY DISTANCE NATIONAL GRID SAFETY RULES	3100
Ds	DESIGN CLEARANCE FOR SAFETY (VERTICAL)	5500
Dsh	DESIGN CLEARANCE FOR SAFETY (HORIZONTAL)	4600
Ih	INSULATION HEIGHT	2400



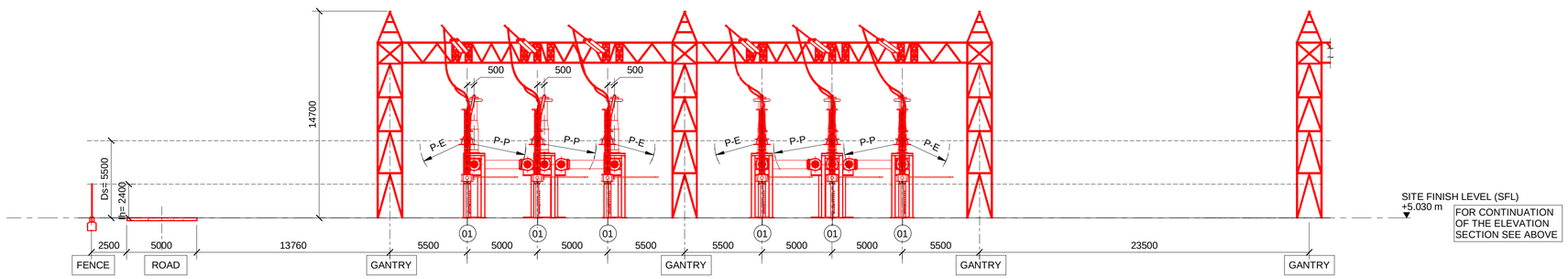
ELEVATION 1

1 : 200



ELEVATION 2

1 : 200



ELEVATION 3

1 : 200

Notes

FOR STATUTORY CONSULTATION PUPOSES ONLY.

1. THESE PLANS SHOW THE DRAFT ORDER LIMITS AND DRAFT CABLE ALIGNMENT AND POTENTIAL PYLON LOCATIONS. DUE TO THE NEED FOR FUTURE FLEXIBILITY, NATIONAL GRID WILL BE APPLYING FOR ORDER LIMITS AND LIMITS OF DEVIATION WITHIN ITS DEVELOPMENT CONSENT ORDER, WITHIN WHICH ANY FINAL ALIGNMENT (INCLUDING PYLON LOCATIONS) WOULD LIE. THEREFORE THE DRAFT CABLE ALIGNMENT AND PYLON LOCATIONS SHOULD BE TREATED AS INDICATIVE ONLY. FURTHER INFORMATION IS PROVIDED IN OUR 'GUIDE TO INTERACTING WITH OUR CONSULTATION PLANS' DOCUMENT.

2 FOR FURTHER INFORMATION ON CONSTRUCTION PLEASE REFER TO THE CONSTRUCTION SECTION OF THE PRELIMINARY ENVIRONMENTAL IMPACT REPORT, VOLUME 1, PART 1, CHAPTER 4.

3. ABBREVIATION

PLC - POWER LINE CARRIER
AIS - AIR INSULATED SWITCHGEAR
CVT - CAPACITIVE VOLTAGE TRANSFORMER
GIS - GAS INSULATED SWITCHGEAR
PIR - PRE INSERTION RESISTOR
LCC - LOCAL CONTROL CUBICLE
PH - PHASE
GIB - GAS INSULATED BUSDUCT

Legend

New Equipment

Equipment Schedule

Item	Description
01	400kV AIS SURGE ARRESTOR
02	400kV AIS EARTH SWITCH
03	400kV AIS CVT
04	400kV GIS / AIR BUSHING
05	AMENITIES BUILDING
10	WORKSHOP
13	400 kV HARMONIC FILTER - CURRENT TRANSFORMER
14	400 kV HARMONIC FILTER - CAPACITOR

Issue	Date	Remarks	Drawn	Checked	Approved
A	08/09/2023	FINAL	MS	JW	KJ

Title

THE NATIONAL GRID ELECTRICITY TRANSMISSION PLC (SEA LINK) ORDER

DESIGN DRAWINGS FOR CONSULTATION

TYPICAL FRISTON 400kV GIS SUBSTATION - ELEVATION DRAWING

SHEET 1 of 1

nationalgrid

Application Number

EN020026

National Grid Drawing Reference

S42_S/TDD/SS/0019

Scale	Sheet Size	Sheet	Issue
1 : 200	A1	SHEET 1 of 1	A

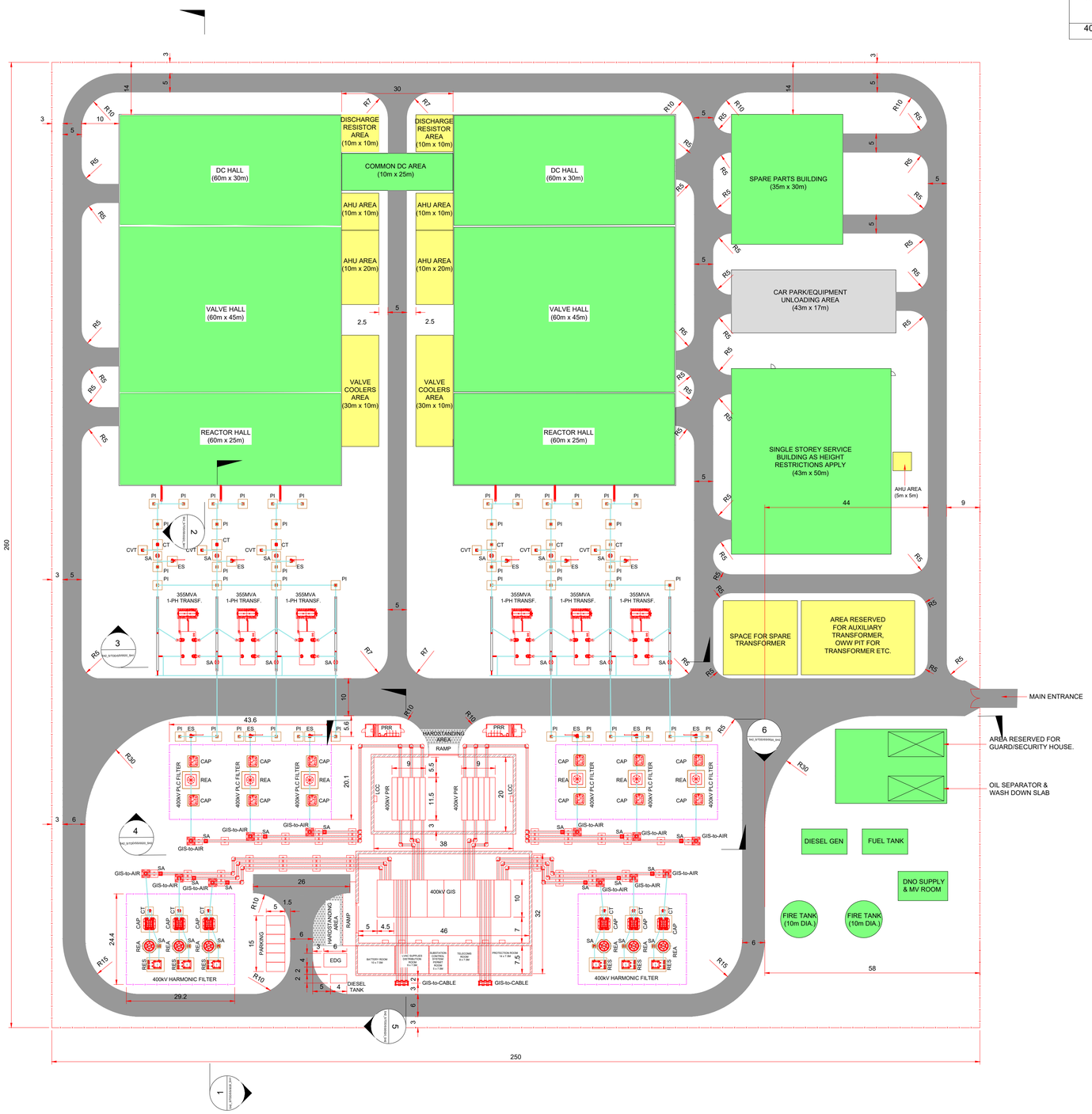
01-02. Saxmundham Converter Station

Drawing Category Name	Plan Title	Scheme	Drawing Numbers
Saxmundham Converter Station	Typical Saxmundham converter station layout plan (GIS)	Suffolk Onshore Scheme	S42_S/TDD/SS/0015
	Typical Saxmundham converter station - elevation drawing	Suffolk Onshore Scheme	S42_S/TDD/SS/0020_SH1 S42_S/TDD/SS/0020_SH2

To assist with understanding these drawings please see the **Guide to Interacting with the Consultation Plans and Drawings**

THE NATIONAL GRID ELECTRICITY TRANSMISSION PLC (SEA LINK) ORDER
DESIGN DRAWINGS FOR CONSULTATION
TYPICAL SAXMUNDHAM CONVERTER STATION LAYOUT PLAN (GIS)
SHEET 1 of 1

NOMINAL SYSTEM VOLTAGE	PHASE TO EARTH	PHASE TO PHASE	SAFETY DISTANCE (FROM NATIONAL GRID SAFETY RULES)	DESIGN CLEARANCE FOR SAFETY (VERTICAL) Ds	DESIGN CLEARANCE FOR SAFETY (HORIZONTAL) Dsh	INSULATION HEIGHT Ih
kV	M	M	M	M	M (SEE POINT ii FROM NOTE 10)	M
400	2.8	3.6	3.1	5.5	4.6	2.4



Notes

For statutory consultation purposes only.

1. These plans show the Draft Order Limits and Draft Cable Alignment and potential pylon locations. Due to the need for future flexibility, National Grid will be applying for Order Limits and Limits of Deviation within its Development Consent Order, within which any final alignment (including pylon locations) would lie. Therefore the Draft Cable Alignment and pylon locations should be treated as indicative only. Further information is provided in our 'Guide to interacting with our consultation plans' document.
2. For further information on construction please refer to the construction section of the Preliminary Environmental Impact Report, Volume 1, Part 1, Chapter 4.
3. Abbreviations
   - PIR - Pre-Insertion Resistor
   - CAP - Capacitor
   - RES - Resistor
   - REA - Reactor
   - PI - Post Insulator
   - CT - Current Transformer
   - CVT - Capacitive Voltage Transformer
   - ES - Earth Switch
   - SA - Surge Arrester
   - PRR - Portable Relay Room
   - LCC - Local Control Cubicle
4. Elevation sections relate to S42_S/TDD/SS/0020_SH1 & S42_S/TDD/SS/0020_SH2.

Legend

- PERIMETER FENCE
- INTERNAL FENCE
- BUILDINGS
- EXTERNAL EQUIPMENT AREAS
- CAR PARK

Issue	Date	Remarks	Drawn	Checked	Approved
A	01/09/2023	FINAL	SC	JW	KJ

Title

THE NATIONAL GRID ELECTRICITY TRANSMISSION PLC (SEA LINK) ORDER
DESIGN DRAWINGS FOR CONSULTATION
TYPICAL SAXMUNDHAM CONVERTER STATION LAYOUT PLAN (GIS)
SHEET 1 of 1

nationalgrid

Application Number: EN020026

National Grid Drawing Reference: S42_S/TDD/SS/0015

Scale	Sheet Size	Sheet	Issue
NTS	A1	SHEET 1 OF 1	A

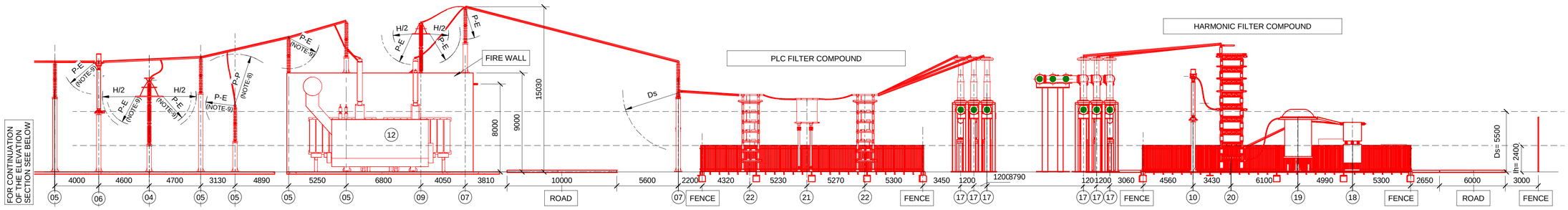
THE NATIONAL GRID ELECTRICITY TRANSMISSION PLC (SEA LINK) ORDER
DESIGN DRAWINGS FOR CONSULTATION

TYPICAL SAXMUNDHAM CONVERTER STATION -ELEVATION DRAWING

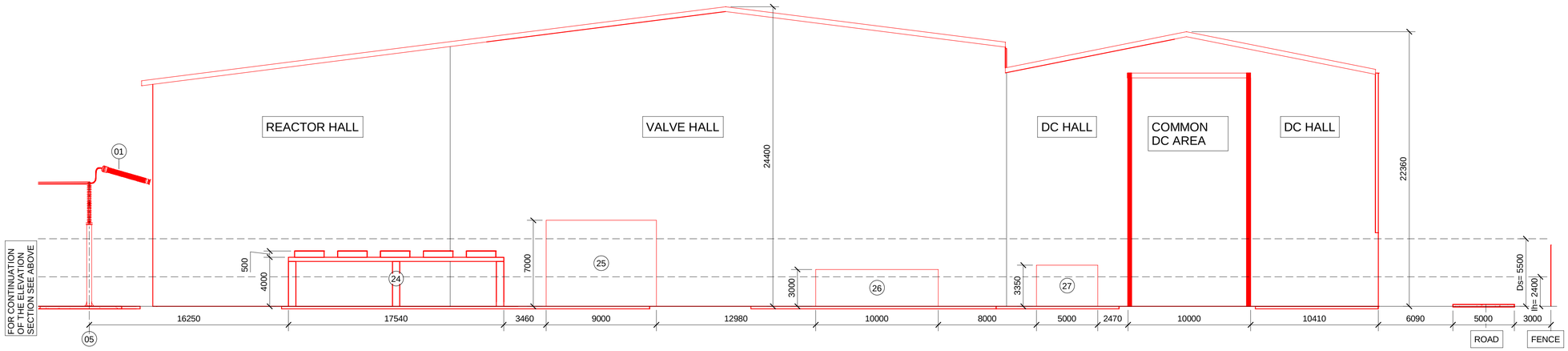
SHEET 1 OF 2

SUBSTATION MINIMUM ELECTRICAL CLEARANCES

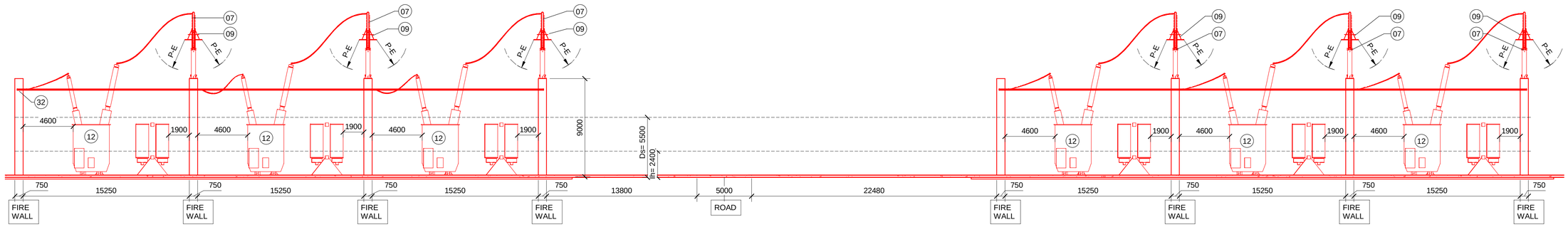
REF	CLEARANCE (mm)	NOMINAL SYSTEM VOLTAGE
		400kV
P-E	PHASE TO EARTH	2800
P-P	PHASE TO PHASE	3600
SD	SAFETY DISTANCE NATIONAL GRID SAFETY RULES	3100
Ds	DESIGN CLEARANCE FOR SAFETY (VERTICAL)	5500
Dsh	DESIGN CLEARANCE FOR SAFETY (HORIZONTAL)	4600
Ih	INSULATION HEIGHT	2400



ELEVATION 1
1 : 200



ELEVATION 2
1 : 200



ELEVATION 3
1 : 200

Notes

FOR STATUTORY CONSULTATION PUPOSES ONLY.

1. THESE PLANS SHOW THE DRAFT ORDER LIMITS AND DRAFT CABLE ALIGNMENT AND POTENTIAL PYLON LOCATIONS. DUE TO THE NEED FOR FUTURE FLEXIBILITY, NATIONAL GRID WILL BE APPLYING FOR ORDER LIMITS AND LIMITS OF DEVIATION WITHIN ITS DEVELOPMENT CONSENT ORDER, WITHIN WHICH ANY FINAL ALIGNMENT (INCLUDING PYLON LOCATIONS) WOULD LIE. THEREFORE THE DRAFT CABLE ALIGNMENT AND PYLON LOCATIONS SHOULD BE TREATED AS INDICATIVE ONLY. FURTHER INFORMATION IS PROVIDED IN OUR 'GUIDE TO INTERACTING WITH OUR CONSULTATION PLANS' DOCUMENT.
2. FOR FURTHER INFORMATION ON CONSTRUCTION PLEASE REFER TO THE CONSTRUCTION SECTION OF THE PRELIMINARY ENVIRONMENTAL IMPACT REPORT, VOLUME 1, PART 1, CHAPTER 4.
3. ABBREVIATION

PLC - POWER LINE CARRIER
AIS - AIR INSULATED SWITCHGEAR
CVT - CAPACITIVE VOLTAGE TRANSFORMER
GIS - GAS INSULATED SWITCHGEAR
PIR - PRE INSERTION RESISTOR
LCC - LOCAL CONTROL CUBICLE
PH - PHASE
GIB - GAS INSULATED BUSDUCT

Legend

New Equipment

Equipment Schedule

Item	Description
01	AIR BUSHING WALL PENETRATION
02	550KV AIS CVT
03	550KV AIS EARTH SWITCH
04	550KV AIS SURGE ARRESTOR
05	550KV POST INSULATOR
06	550KV CURRENT TRANSFORMER
07	400 kV AIS POST INSULATOR
08	400 kV AIS EARTH SWITCH
09	400 kV AIS SURGE ARRESTOR
10	400 kV AIS CURRENT TRANSFORMER
11	400 kV GIS
12	400 kV 1PH TRANSFORMER
13	400 kV GIS / CABLE INTERFACE
14	400 kV GIS SURGE ARRESTOR
15	EMERGENCY DIESEL GENERATOR
16	DIESEL TANK
17	400 kV GIS / AIR BUSHING
18	400 kV HARMONIC FILTER - RESISTOR
19	400 kV HARMONIC FILTER - REACTOR
20	400 kV HARMONIC FILTER - CAPACITOR
21	400 kV PLC FILTER - REACTOR
22	400 kV PLC FILTER - CAPACITOR
23	HARMONIC FILTER - SURGE ARRESTOR
24	EXTERNAL FIN FAN COOLER
25	BUILDING FOR PUMP SKID COOLING SYSTEM
26	AHU FOR REACTOR & VALVE HALL BUILDING
27	AHU FOR DC HALL BUILDING
28	PORTABLE RELAY ROOM
29	400 kV PIR
30	400 kV LCC
31	ROLLING SHUTTER DOOR
32	11kV POST INSULATOR

Issue	Date	Remarks	Drawn	Checked	Approved
A	08/09/2023	FINAL	MS	JW	KJ

Title
THE NATIONAL GRID ELECTRICITY TRANSMISSION PLC (SEA LINK) ORDER
DESIGN DRAWINGS FOR CONSULTATION
TYPICAL SAXMUNDHAM CONVERTER STATION -ELEVATION DRAWING
SHEET 1 OF 2

nationalgrid

Application Number
EN020026

National Grid Drawing Reference
S42_S/TDD/SS/0020

Scale	Sheet Size	Sheet	Issue
1 : 200	A1	SHEET 1 OF 2	A

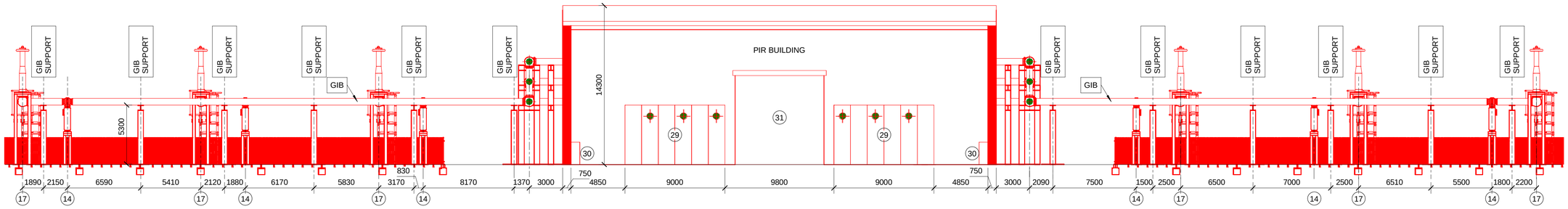
THE NATIONAL GRID ELECTRICITY TRANSMISSION PLC(SEA LINK)
DESIGN DRAWINGS FOR CONSULTATION

TYPICAL SAXMUNDHAM CONVERTER STATION -ELEVATION DRAWING

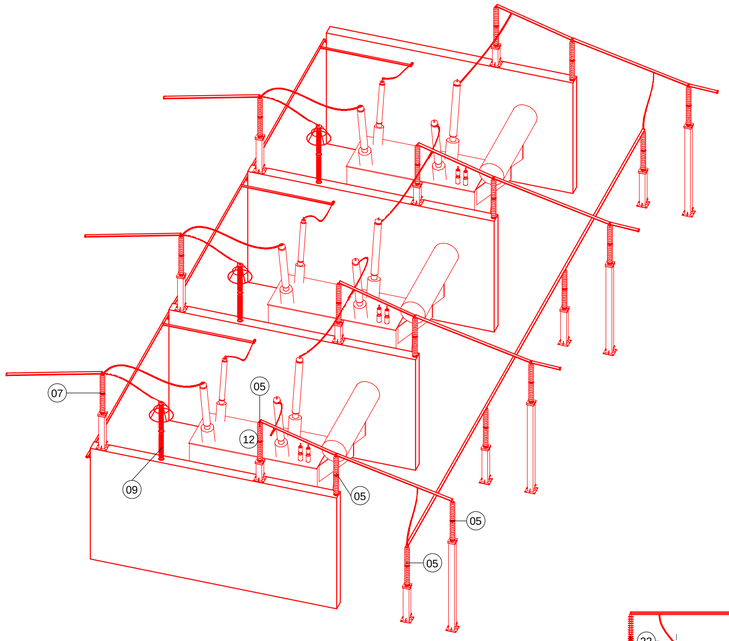
SHEET 2 OF 2

SUBSTATION MINIMUM ELECTRICAL CLEARANCES

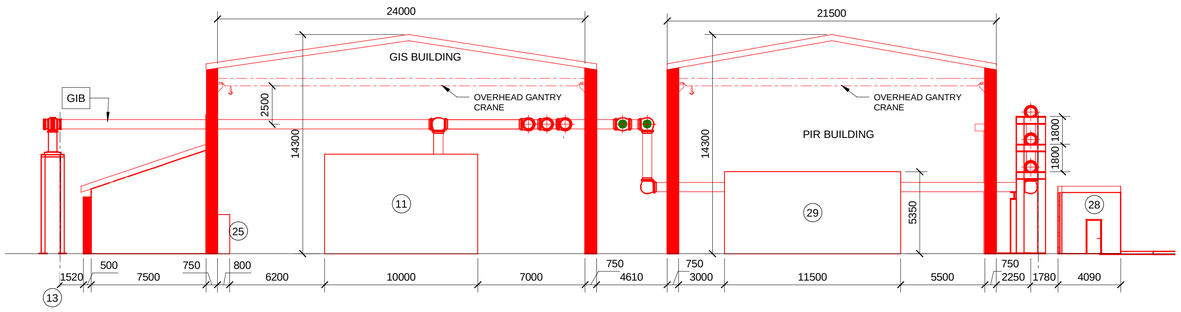
REF	CLEARANCE (mm)	NOMINAL SYSTEM VOLTAGE
		400kV
P-E	PHASE TO EARTH	2800
P-P	PHASE TO PHASE	3600
SD	SAFETY DISTANCE NATIONAL GRID SAFETY RULES	3100
Ds	DESIGN CLEARANCE FOR SAFETY (VERTICAL)	5500
Dsh	DESIGN CLEARANCE FOR SAFETY (HORIZONTAL)	4600
Ih	INSULATION HEIGHT	2400



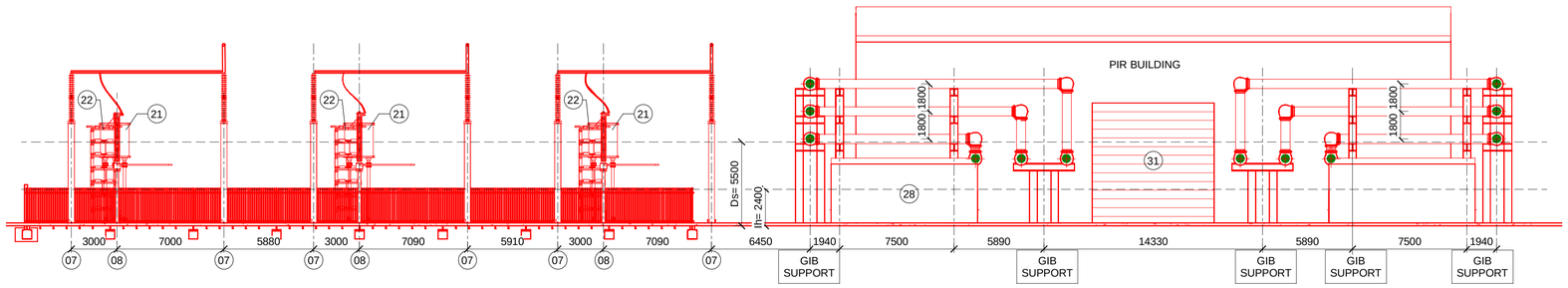
ELEVATION 4
1 : 200



Transformer Area ISO View



ELEVATION 5
1 : 200



ELEVATION 6
1 : 200

Notes

FOR STATUTORY CONSULTATION PUPOSES ONLY.

1. THESE PLANS SHOW THE DRAFT ORDER LIMITS AND DRAFT CABLE ALIGNMENT AND POTENTIAL PYLON LOCATIONS. DUE TO THE NEED FOR FUTURE FLEXIBILITY, NATIONAL GRID WILL BE APPLYING FOR ORDER LIMITS AND LIMITS OF DEVIATION WITHIN ITS DEVELOPMENT CONSENT ORDER, WITHIN WHICH ANY FINAL ALIGNMENT (INCLUDING PYLON LOCATIONS) WOULD LIE. THEREFORE THE DRAFT CABLE ALIGNMENT AND PYLON LOCATIONS SHOULD BE TREATED AS INDICATIVE ONLY. FURTHER INFORMATION IS PROVIDED IN OUR 'GUIDE TO INTERACTING WITH OUR CONSULTATION PLANS' DOCUMENT.
2. FOR FURTHER INFORMATION ON CONSTRUCTION PLEASE REFER TO THE CONSTRUCTION SECTION OF THE PRELIMINARY ENVIRONMENTAL IMPACT REPORT, VOLUME 1, PART 1, CHAPTER 4.
3. ABBREVIATION

PLC - POWER LINE CARRIER
AIS - AIR INSULATED SWITCHGEAR
CVT - CAPACITIVE VOLTAGE TRANSFORMER
GIS - GAS INSULATED SWITCHGEAR
PIR - PRE INSERTION RESISTOR
LCC - LOCAL CONTROL CUBICLE
PH - PHASE
GIB - GAS INSULATED BUSDUCT

Legend

New Equipment

Equipment Schedule

Item	Description
01	AIR BUSHING WALL PENETRATION
02	550KV AIS CVT
03	550KV AIS EARTH SWITCH
04	550KV AIS SURGE ARRESTOR
05	550KV POST INSULATOR
06	550KV CURRENT TRANSFORMER
07	400 kV AIS POST INSULATOR
08	400 kV AIS EARTH SWITCH
09	400 kV AIS SURGE ARRESTOR
10	400 kV AIS CURRENT TRANSFORMER
11	400 kV GIS
12	400 kV 1PH TRANSFORMER
13	400 kV GIS / CABLE INTERFACE
14	400 kV GIS SURGE ARRESTOR
15	EMERGENCY DIESEL GENERATOR
16	DIESEL TANK
17	400 kV GIS / AIR BUSHING
18	400 kV HARMONIC FILTER - RESISTOR
19	400 kV HARMONIC FILTER - REACTOR
20	400 kV HARMONIC FILTER - CAPACITOR
21	400 kV PLC FILTER - REACTOR
22	400 kV PLC FILTER - CAPACITOR
23	HARMONIC FILTER - SURGE ARRESTOR
24	EXTERNAL FIN FAN COOLER
25	BUILDING FOR PUMP SKID COOLING SYSTEM
26	AHU FOR REACTOR & VALVE HALL BUILDING
27	AHU FOR DC HALL BUILDING
28	PORTABLE RELAY ROOM
29	400 kV PIR
30	400 kV LCC
31	ROLLING SHUTTER DOOR
32	11kV POST INSULATOR

Issue	Date	Remarks	Drawn	Checked	Approved
A	08/09/2023	FINAL	MS	JW	KJ

Title
THE NATIONAL GRID ELECTRICITY TRANSMISSION PLC(SEA LINK)
DESIGN DRAWINGS FOR CONSULTATION
TYPICAL SAXMUNDHAM CONVERTER STATION -ELEVATION DRAWING
SHEET 2 OF 2

nationalgrid

Application Number
EN020026

National Grid Drawing Reference
S42_S/TDD/SS/0020

Scale	Sheet Size	Sheet	Issue
1 : 200	A1	SHEET 2 OF 2	A

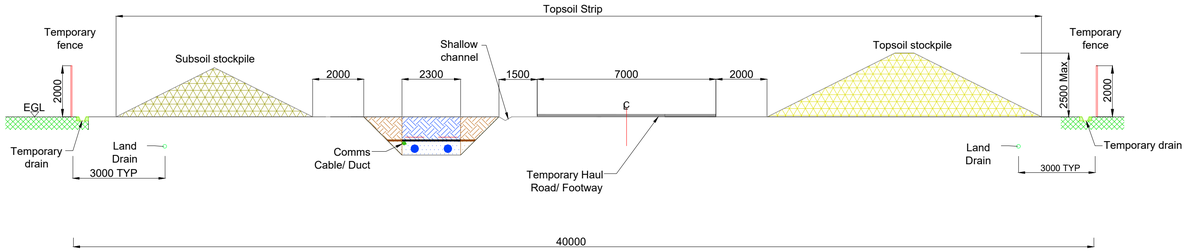
01-03.

Suffolk Only - HVDC & HVAC Cross Sections for Sea Link plus ducts for up to two other projects

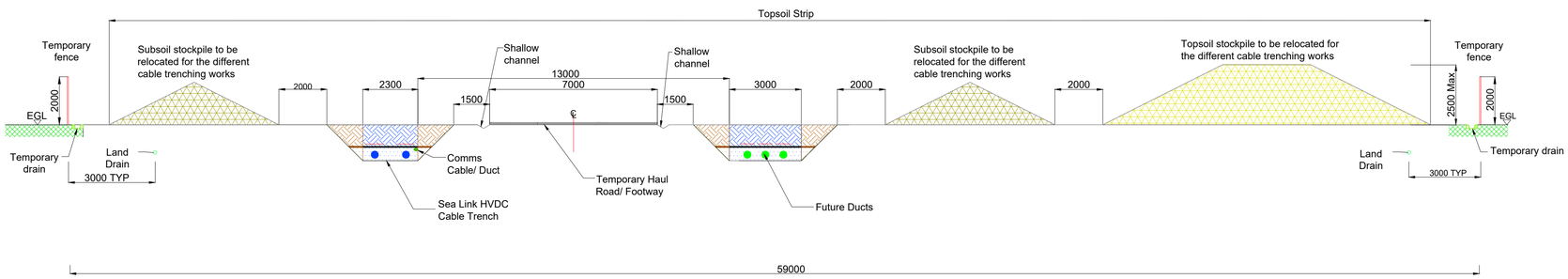
Drawing Category Name	Plan Title	Scheme	Drawing Numbers
Suffolk Only - HVDC & HVAC Cross Sections for Sea Link plus ducts for up to two other projects	Typical HVDC construction area for Sea Link plus ducts for up to two further projects	Suffolk Onshore Scheme	S42_S/TDD/SS/0018
	Typical HVAC construction area for Sea Link plus ducts for up to two further projects	Suffolk Onshore Scheme	S42_S/TDD/SS/0013
	Typical HVAC and HVDC combined construction area for Sea Link plus ducts for up to two further projects	Suffolk Onshore Scheme	S42_S/TDD/SS/0014

To assist with understanding these drawings please see the **Guide to Interacting with the Consultation Plans and Drawings**

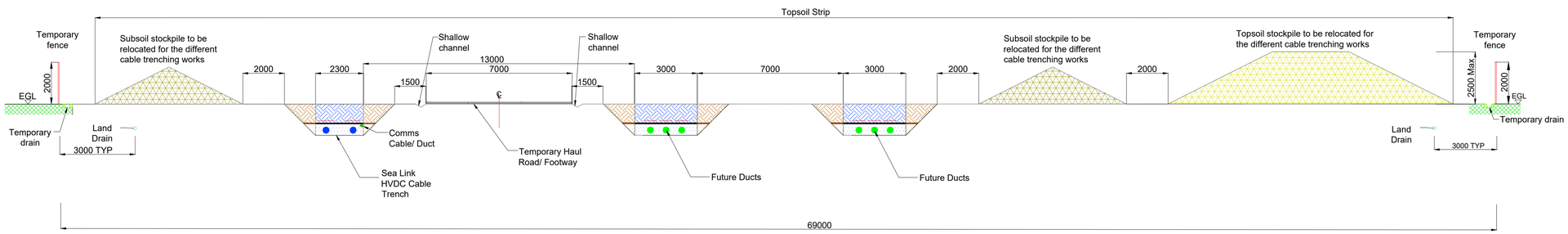
THE NATIONAL GRID ELECTRICITY TRANSMISSION PLC (SEA LINK) ORDER
DESIGN DRAWINGS FOR CONSULTATION
TYPICAL HVDC CONSTRUCTION AREA FOR SEA LINK PLUS DUCTS FOR UP TO TWO FURTHER PROJECTS
SHEET 1 OF 1



Typical HVDC Construction Area - Sea Link
Scale 1:150



Typical HVDC Construction Area - Sea Link + One Further Project
Scale 1:150



Typical HVDC Construction Area - Sea Link + Two Further Projects
Scale 1:150

SCALE BAR (METRES)

1:150 — 0 — 7.5m — 15m

Notes

For statutory consultation purposes only.

These plans show the Draft Order Limits and Draft Cable Alignment and potential pylon locations. Due to the need for future flexibility, National Grid will be applying for Order Limits and Limits of Deviation within its Development Consent Order, within which any final alignment (including pylon locations) would lie. Therefore the Draft Cable Alignment and pylon locations should be treated as indicative only. Further information is provided in our 'Guide to interacting with our consultation plans' document.

For further information on construction please refer to the construction section of the Preliminary Environmental Impact Report, Volume 1, Part 1, Chapter 4.

Legend

- Well-compacted thermally suitable backfill
- Well-compacted thermally suitable backfill (Splayed Excavation)
- Cement-bound sand cable surround
- Cement-bound sand cable surround (Splayed Excavation)
- Cable protection tiles
- Cable warning tape
- Topsoil stockpile
- Subsoil stockpile
- Existing Ground
- Temporary Haul Road/ Footway

Sheet X Centroid Coordinate: Sheet Y Centroid Coordinate:

Issue	Date	Remarks	Drawn	Checked	Approved
A	01/09/2023	FINAL	SC	JW	KJ

Title

THE NATIONAL GRID ELECTRICITY TRANSMISSION PLC (SEA LINK) ORDER
DESIGN DRAWINGS FOR CONSULTATION
TYPICAL HVDC CONSTRUCTION AREA FOR SEA LINK PLUS DUCTS FOR UP TO TWO FURTHER PROJECTS
SHEET 1 OF 1

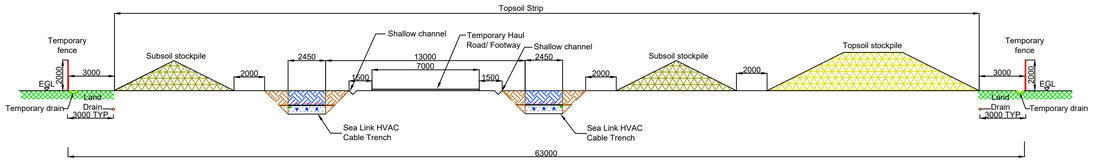
nationalgrid

Application Number: EN020026

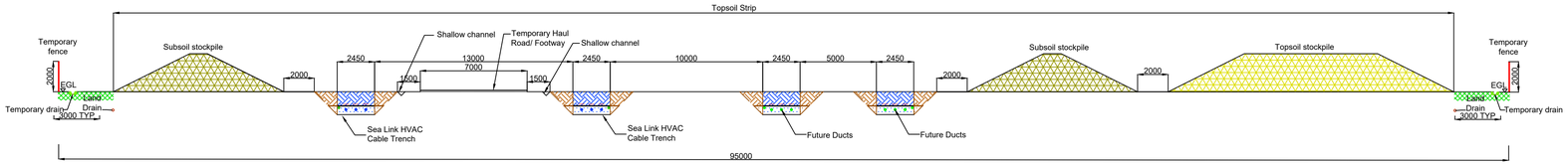
National Grid Drawing Reference: S42_S/TDD/SS/0018

Scale	Sheet Size	Sheet	Issue
AS SHOWN	A1	SHEET 1 OF 1	A

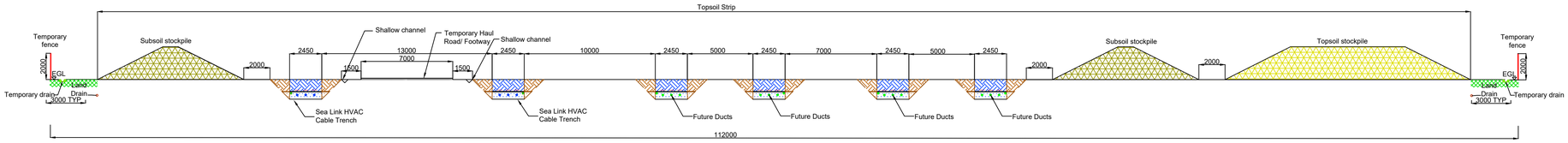
THE NATIONAL GRID ELECTRICITY TRANSMISSION PLC (SEA LINK) ORDER
DESIGN DRAWINGS FOR CONSULTATION
TYPICAL HVAC CONSTRUCTION AREA FOR SEA LINK PLUS DUCTS FOR UP TO TWO FURTHER PROJECTS
SHEET 1 OF 1



Typical Construction Area - Sea Link
Scale 1:200



Typical Construction Area - Sea Link + One Further Project
Scale 1:200



Typical Construction Area - Sea Link + Two Further Projects
Scale 1:200

SCALE BAR (METRES)

1:200 0 10m 20m

Notes

For statutory consultation purposes only.
These plans show the Draft Order Limits and Draft Cable Alignment and potential pylon locations. Due to the need for future flexibility, National Grid will be applying for Order Limits and Limits of Deviation within its Development Consent Order, within which any final alignment (including pylon locations) would lie. Therefore the Draft Cable Alignment and pylon locations should be treated as indicative only. Further information is provided in our 'Guide to interacting with our consultation plans' document.

For further information on construction please refer to the construction section of the Preliminary Environmental Impact Report, Volume 1, Part 1, Chapter 4.

Legend

- Well-compacted thermally suitable backfill
- Well-compacted thermally suitable backfill (Splayed Excavation)
- Cement-bound sand cable surround
- Cement-bound sand cable surround (Splayed Excavation)
- Cable protection tiles
- Cable warning tape
- Topsoil stockpile
- Subsoil stockpile
- Existing Ground
- Temporary Haul Road/ Footway

Sheet X Centroid Coordinate: Sheet Y Centroid Coordinate:

Issue	Date	Remarks	Drawn	Checked	Approved
A	01/09/2023	FINAL	SC	JW	KJ

Title

THE NATIONAL GRID ELECTRICITY TRANSMISSION PLC (SEA LINK) ORDER
DESIGN DRAWINGS FOR CONSULTATION
TYPICAL HVAC CONSTRUCTION AREA FOR SEA LINK PLUS DUCTS FOR UP TO TWO FURTHER PROJECTS
SHEET 1 OF 1

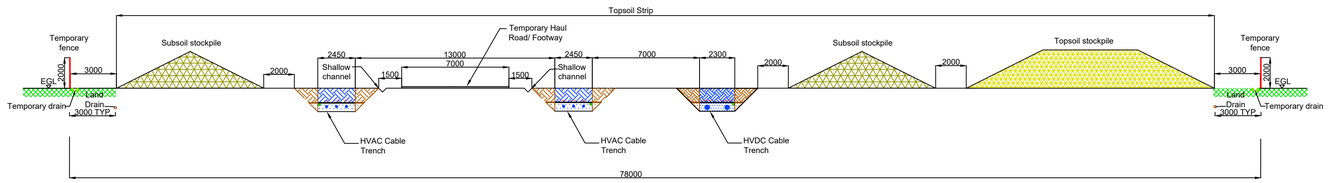
nationalgrid

Application Number: EN020026

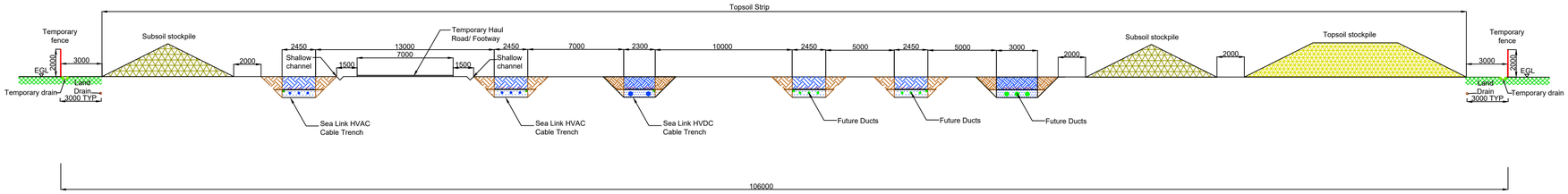
National Grid Drawing Reference: S42_S/TDD/SS/0013

Scale	Sheet Size	Sheet	Issue
AS SHOWN	A1	SHEET 1 OF 1	A

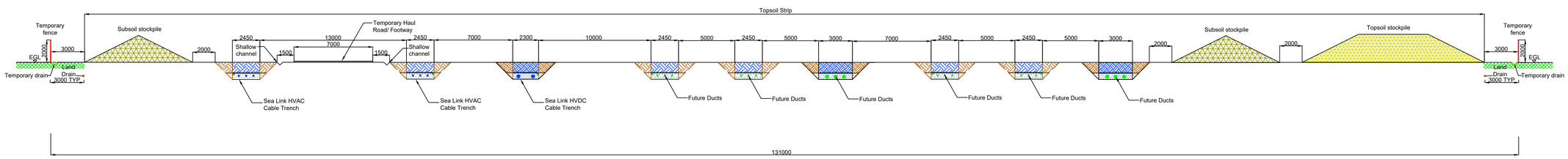
THE NATIONAL GRID ELECTRICITY TRANSMISSION PLC (SEA LINK) ORDER
DESIGN DRAWINGS FOR CONSULTATION
TYPICAL HVAC AND HVDC COMBINED CONSTRUCTION AREA
FOR SEA LINK PLUS DUCTS FOR UP TO TWO FURTHER PROJECTS
SHEET 1 OF 1



Typical Construction Area - Sea Link
Scale 1:200



Typical Construction Area - Sea Link + One Further Project
Scale 1:200



Typical Construction Area - Sea Link + Two Further Projects
Scale 1:200

SCALE BAR (METRES)

1:200 0 10m 20m

Notes

For statutory consultation purposes only.

These plans show the Draft Order Limits and Draft Cable Alignment and potential pylon locations. Due to the need for future flexibility, National Grid will be applying for Order Limits and Limits of Deviation within its Development Consent Order, within which any final alignment (including pylon locations) would lie. Therefore the Draft Cable Alignment and pylon locations should be treated as indicative only. Further information is provided in our 'Guide to interacting with our consultation plans' document.

For further information on construction please refer to the construction section of the Preliminary Environmental Impact Report, Volume 1, Part 1, Chapter 4.

Legend

- Well-compacted thermally suitable backfill
- Well-compacted thermally suitable backfill (Splayed Excavation)
- Cement-bound sand cable surround
- Cement-bound sand cable surround (Splayed Excavation)
- Cable protection tiles
- Cable warning tape
- Topsoil stockpile
- Subsoil stockpile
- Existing Ground
- Temporary Haul Road/ Footway

Sheet X Centroid Coordinate: Sheet Y Centroid Coordinate:

Issue	Date	Remarks	Drawn	Checked	Approved
A	01/09/2023	FINAL	SC	JW	KJ

Title
THE NATIONAL GRID ELECTRICITY TRANSMISSION PLC (SEA LINK) ORDER
DESIGN DRAWINGS FOR CONSULTATION
TYPICAL HVAC AND HVDC COMBINED CONSTRUCTION AREA
FOR SEA LINK PLUS DUCTS FOR UP TO TWO FURTHER PROJECTS
SHEET 1 OF 1

nationalgrid

Application Number
EN020026

National Grid Drawing Reference
S42_S/TDD/SS/0014

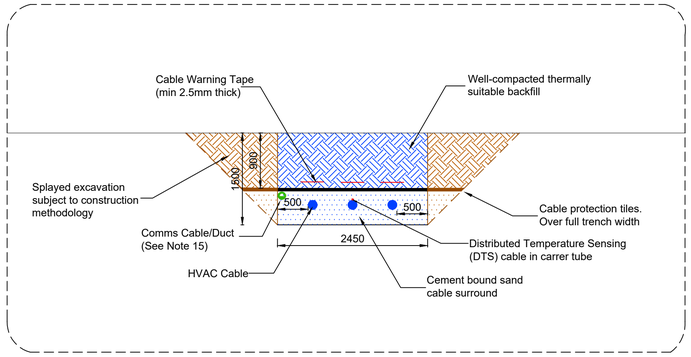
Scale	Sheet Size	Sheet	Issue
AS SHOWN	A1	SHEET 1 OF 1	A

01-04. HVDC & HVAC Arrangement & Cross Sections

Drawing Category Name	Plan Title	Scheme	Drawing Numbers
HVDC & HVAC Arrangement & Cross Sections	Typical HVAC direct buried cross section and construction area	Suffolk Onshore Scheme	S42_S/TDD/SS/0010
	Typical 400kv HVAC joint bay arrangement	Suffolk Onshore Scheme	S42_S/TDD/SS/0011
	Typical HVAC direct buried cross section and construction area	Onshore Schemes	S42_T/TDD/SS/3001
	Typical HVAC joint bay arrangements	Onshore Schemes	S42_T/TDD/SS/3003
	Typical HVAC and HVDC combined construction area	Suffolk Onshore Scheme	S42_S/TDD/SS/0012

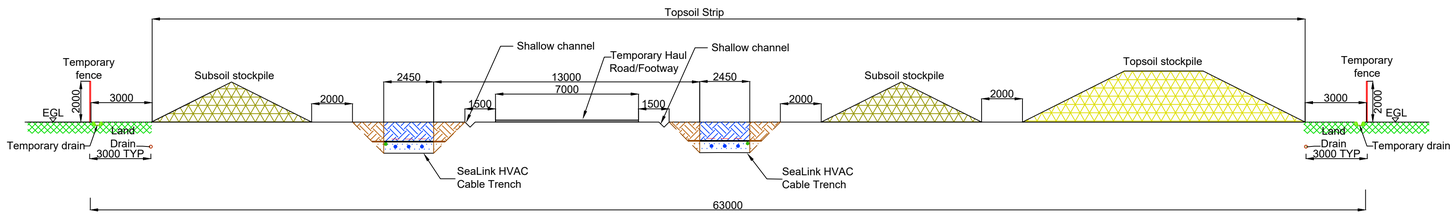
To assist with understanding these drawings please see the **Guide to Interacting with the Consultation Plans and Drawings**

THE NATIONAL GRID ELECTRICITY TRANSMISSION PLC (SEA LINK) ORDER
DESIGN DRAWINGS FOR CONSULTATION
TYPICAL HVAC DIRECT BURIED CROSS SECTION AND CONSTRUCTION AREA
SHEET 1 OF 1



Direct Buried Cable Cross Section

Scale 1:50



Typical Construction Area - Two Trenches

Scale 1:150

Notes

For statutory consultation purposes only.

These plans show the Draft Order Limits and Draft Cable Alignment and potential pylon locations. Due to the need for future flexibility, National Grid will be applying for Order Limits and Limits of Deviation within its Development Consent Order, within which any final alignment (including pylon locations) would lie. Therefore the Draft Cable Alignment and pylon locations should be treated as indicative only. Further information is provided in our 'Guide to interacting with our consultation plans' document.

For further information on construction please refer to the construction section of the Preliminary Environmental Impact Report, Volume 1, Part 1, Chapter 4.

Legend

- Well-compacted thermally suitable backfill
- Well-compacted thermally suitable backfill (Splayed Excavation)
- Cement-bound sand cable surround
- Cement-bound sand cable surround (Splayed Excavation)
- Cable protection tiles
- Cable warning tape
- Topsoil stockpile
- Subsoil stockpile
- Existing Ground
- Temporary Haul Road/ Footway

1:50 0 2.5m 5m

1:150 0 7.5m 15m

Sheet X Centroid Coordinate: Sheet Y Centroid Coordinate:

Issue	Date	Remarks	Drawn	Checked	Approved
A	01/09/2023	FINAL	SC	JW	KJ

Title

THE NATIONAL GRID ELECTRICITY TRANSMISSION PLC (SEA LINK) ORDER
DESIGN DRAWINGS FOR CONSULTATION

TYPICAL HVAC DIRECT BURIED CROSS SECTION AND CONSTRUCTION AREA
SHEET 1 OF 1

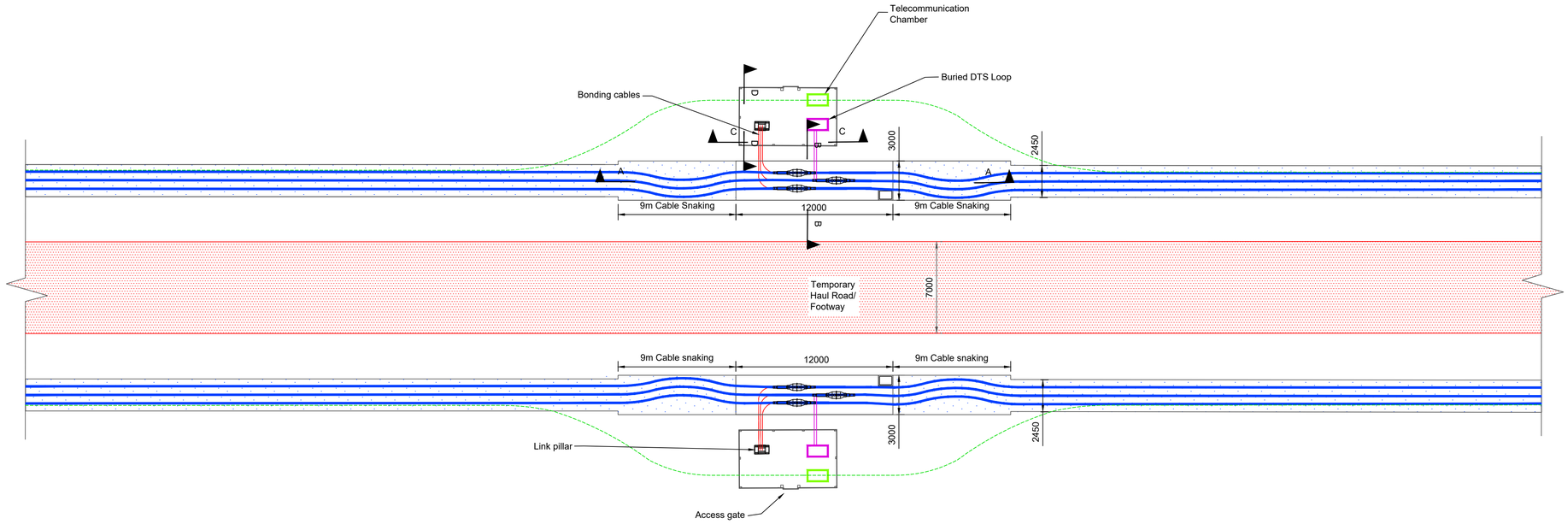
nationalgrid

Application Number: EN020026

National Grid Drawing Reference: S42_S/TDD/SS/0010

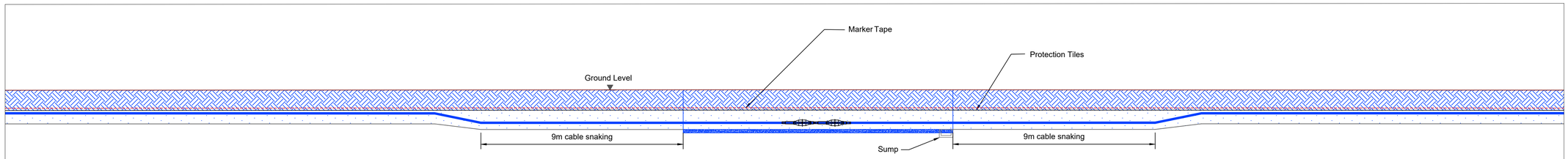
Scale	Sheet Size	Sheet	Issue
AS SHOWN	A1	SHEET 1 OF 1	A

THE NATIONAL GRID ELECTRICITY TRANSMISSION PLC (SEA LINK) ORDER
DESIGN DRAWINGS FOR CONSULTATION
TYPICAL 400kV HVAC JOINT BAY ARRANGEMENT
SHEET 1 OF 1



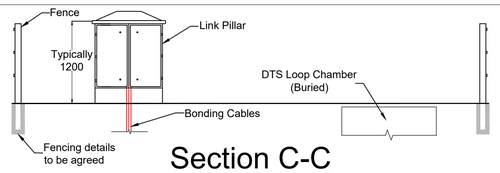
Typical HVAC Cable Joint Bay Layout

Scale 1:200



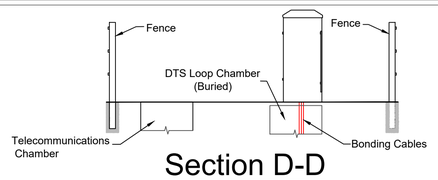
Section A-A
Typical HVAC Cable Joint Bay Long Section

Scale 1:100



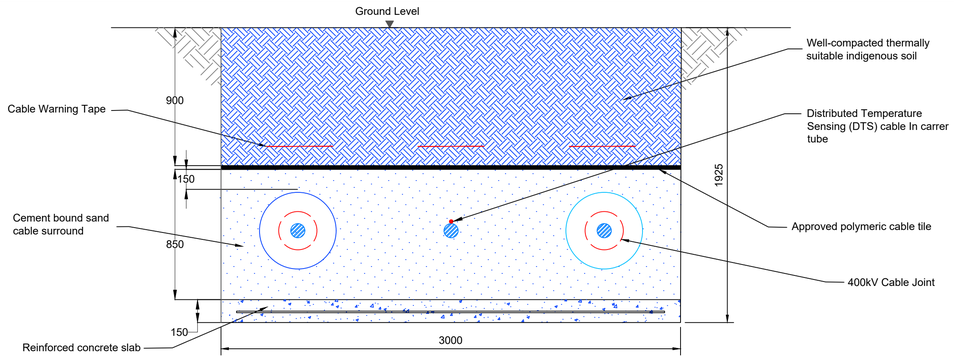
Section C-C
Typical Link Pillar Cross Section

Scale 1:50



Section D-D
Typical Link Pillar Cross Section

Scale 1:50



Section B-B
Typical HVAC Cable Joint Bay Cross Section

Scale 1:20

SCALE BAR (METRES)

1:20 — 0, 1m, 2m
1:50 — 0, 2.5m, 5m
1:100 — 0, 5m, 10m
1:200 — 0, 10m, 20m

Notes

For statutory consultation purposes only.
These plans show the Draft Order Limits and Draft Cable Alignment and potential pylon locations. Due to the need for future flexibility, National Grid will be applying for Order Limits and Limits of Deviation within its Development Consent Order, within which any final alignment (including pylon locations) would lie. Therefore the Draft Cable Alignment and pylon locations should be treated as indicative only. Further information is provided in our 'Guide to interacting with our consultation plans' document.

For further information on construction please refer to the construction section of the Preliminary Environmental Impact Report, Volume 1, Part 1, Chapter 4.

Legend

- Cable protection cover
- 400 kV Power Cable
- Bonding Cable
- Cement-bound Sand (CBS)
- Well-compacted thermally suitable indigenous soil
- Concrete
- Temporary Haul Road/ Footway
- Cable Warning Tape
- Telecommunication Chamber
- Distributed Temperature Sensing (DTS) Loop
- Timber Fence
- DTS Cables
- Communication Cable Duct

Sheet X Centroid Coordinate: Sheet Y Centroid Coordinate:

Issue	Date	Remarks	Drawn	Checked	Approved
A	01/09/2023	FINAL	SC	JW	KJ

Title
THE NATIONAL GRID ELECTRICITY TRANSMISSION PLC (SEA LINK) ORDER
DESIGN DRAWINGS FOR CONSULTATION

TYPICAL 400kV HVAC JOINT BAY ARRANGEMENT
SHEET 1 OF 1

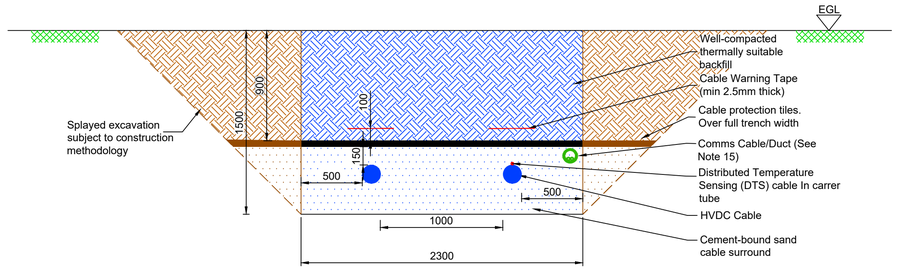
nationalgrid

Application Number: EN020026

National Grid Drawing Reference: S42_S/TDD/SS/0011

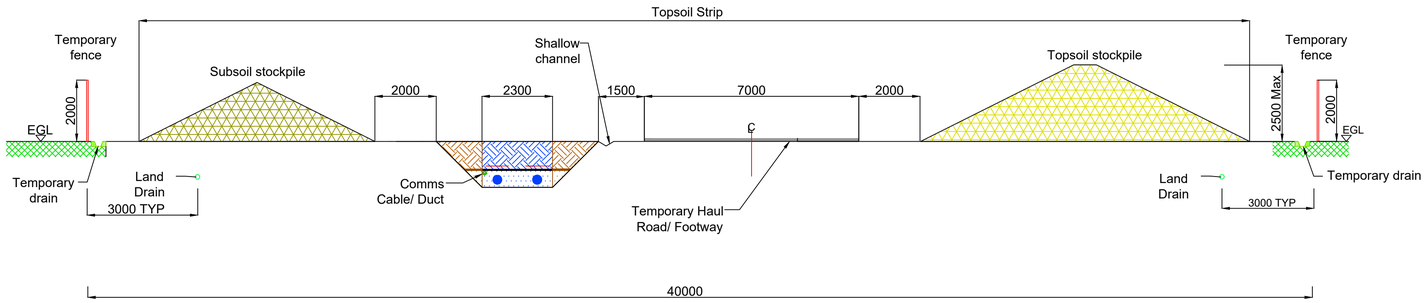
Scale	Sheet Size	Sheet	Issue
AS SHOWN	A1	SHEET 1 OF 1	A

THE NATIONAL GRID ELECTRICITY TRANSMISSION PLC (SEA LINK) ORDER
DESIGN DRAWINGS FOR CONSULTATION
TYPICAL HVDC DIRECT BURIED CABLE
CROSS SECTION AND CONSTRUCTION AREA
SHEET 1 OF 1



Direct Buried Cable Cross Sections - One Trench

Scale 1:25



Typical Construction Area - One Trench

Scale 1:100

SCALE BAR (METRES)

1:25 — 0 — 1.250m — 2.5m

1:100 — 0 — 5m — 10m

Notes

For statutory consultation purposes only.

These plans show the Draft Order Limits and Draft Cable Alignment and potential pylon locations. Due to the need for future flexibility, National Grid will be applying for Order Limits and Limits of Deviation within its Development Consent Order, within which any final alignment (including pylon locations) would lie. Therefore the Draft Cable Alignment and pylon locations should be treated as indicative only. Further information is provided in our 'Guide to interacting with our consultation plans' document.

For further information on construction please refer to the construction section of the Preliminary Environmental Impact Report, Volume 1, Part 1, Chapter 4.

Legend

- Well-compacted thermally suitable backfill
- Well-compacted thermally suitable backfill (Splayed Excavation)
- Cement-bound sand cable surround
- Cement-bound sand cable surround (Splayed Excavation)
- Cable protection tiles
- Cable warning tape
- Topsoil stockpile
- Subsoil stockpile
- Existing Ground
- Temporary Haul Road/ Footway

Sheet X Centroid Coordinate: Sheet Y Centroid Coordinate:

Issue	Date	Remarks	Drawn	Checked	Approved
A	01/09/2023	FINAL	SC	JW	KJ

Title

THE NATIONAL GRID ELECTRICITY TRANSMISSION PLC (SEA LINK) ORDER
DESIGN DRAWINGS FOR CONSULTATION

TYPICAL HVDC DIRECT BURIED CABLE
CROSS SECTION AND CONSTRUCTION AREA
SHEET 1 OF 1

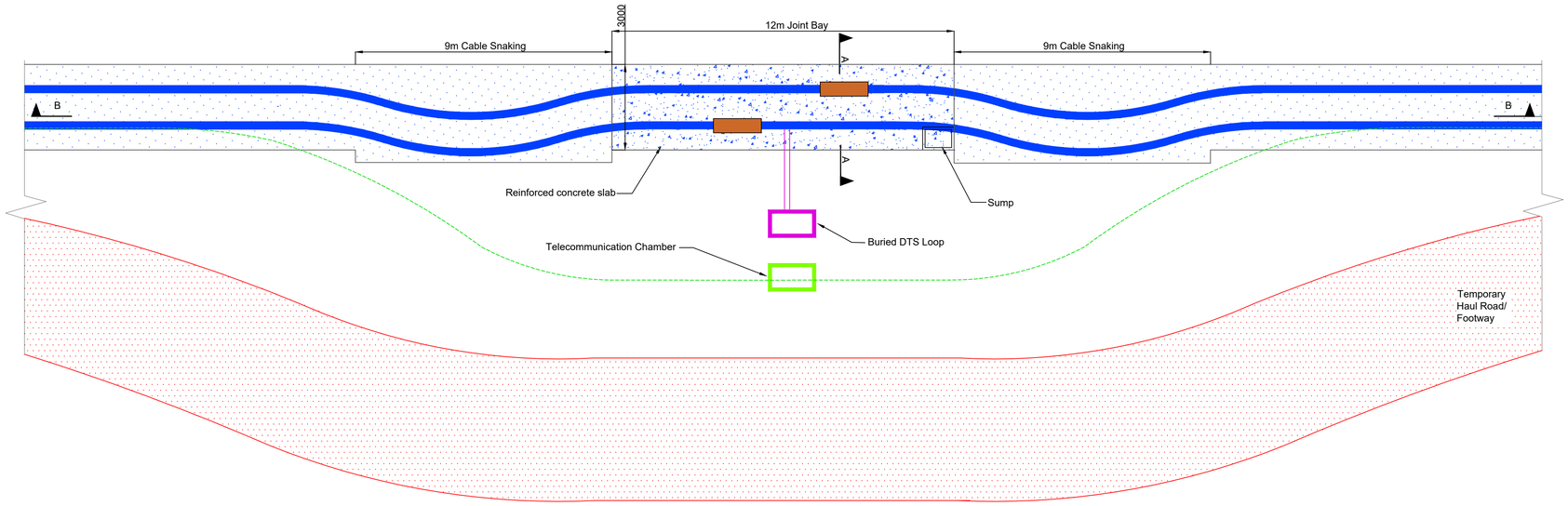
nationalgrid

Application Number: EN020026

National Grid Drawing Reference: S42_T/TDD/SS/3001

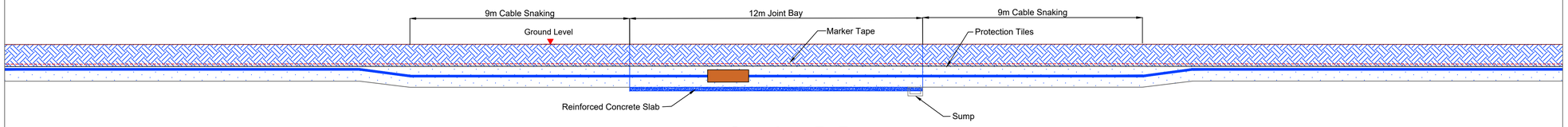
Scale	Sheet Size	Sheet	Issue
AS SHOWN	A1	SHEET 1 OF 1	A

THE NATIONAL GRID ELECTRICITY TRANSMISSION PLC (SEA LINK) ORDER
DESIGN DRAWINGS FOR CONSULTATION
TYPICAL HVDC JOINT BAY ARRANGEMENT
SHEET 1 OF 1



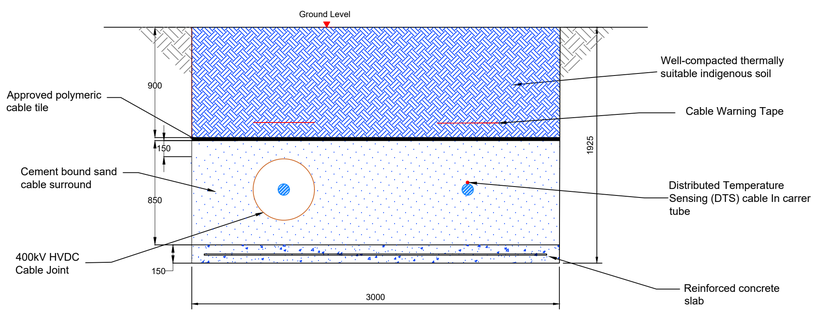
Typical HVDC Cable Joint Bay Layout

Scale 1:100



Section B-B
Typical HVDC Cable Joint Bay Long Section

Scale 1:100



Section A-A
Typical HVDC Cable Joint Bay Cross Section

Scale 1:25

SCALE BAR (METRES)

1:25 — 0 — 1.250m — 2.5m

1:100 — 0 — 5m — 10m

Notes

For statutory consultation purposes only.

These plans show the Draft Order Limits and Draft Cable Alignment and potential pylon locations. Due to the need for future flexibility, National Grid will be applying for Order Limits and Limits of Deviation within its Development Consent Order, within which any final alignment (including pylon locations) would lie. Therefore the Draft Cable Alignment and pylon locations should be treated as indicative only. Further information is provided in our 'Guide to interacting with our consultation plans' document.

For further information on construction please refer to the construction section of the Preliminary Environmental Impact Report, Volume 1, Part 1, Chapter 4.

Legend

- Cable protection tiles
- HVDC Cable
- 400kV HVDC Cable Joint
- Cement-bound Sand (CBS)
- Well-compacted thermally suitable backfill
- Concrete
- Temporary Haul Road/ Footway
- Cable Warning Tape
- Telecommunication Chamber
- Distributed Temperature Sensing (DTS) Loop
- DTS Cables
- Communication Cable Duct

Sheet X Centroid Coordinate: Sheet Y Centroid Coordinate:

Issue	Date	Remarks	Drawn	Checked	Approved
A	01/09/2023	FINAL	SC	JW	KJ

Title

THE NATIONAL GRID ELECTRICITY TRANSMISSION PLC (SEA LINK) ORDER
DESIGN DRAWINGS FOR CONSULTATION

TYPICAL HVDC JOINT BAY ARRANGEMENT
SHEET 1 OF 1

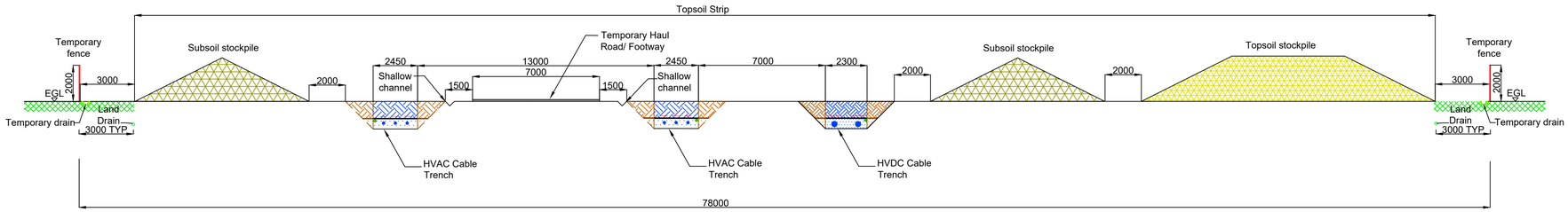
nationalgrid

Application Number: EN020026

National Grid Drawing Reference: S42_T/TDD/SS/3003

Scale	Sheet Size	Sheet	Issue
AS SHOWN	A1	SHEET 1 OF 1	A

THE NATIONAL GRID ELECTRICITY TRANSMISSION PLC (SEA LINK) ORDER
DESIGN DRAWINGS FOR CONSULTATION
TYPICAL HVAC AND HVDC COMBINED CONSTRUCTION AREA
SHEET 1 OF 1



Typical Construction Area - HVAC + HVDC

Scale 1:150

SCALE BAR (METRES)

1:150 0 7.5m 15m

Notes

For statutory consultation purposes only.

These plans show the Draft Order Limits and Draft Cable Alignment and potential pylon locations. Due to the need for future flexibility, National Grid will be applying for Order Limits and Limits of Deviation within its Development Consent Order, within which any final alignment (including pylon locations) would lie. Therefore the Draft Cable Alignment and pylon locations should be treated as indicative only. Further information is provided in our 'Guide to interacting with our consultation plans' document.

For further information on construction please refer to the construction section of the Preliminary Environmental Impact Report, Volume 1, Part 1, Chapter 4.

Legend

- Well-compacted thermally suitable backfill
- Well-compacted thermally suitable backfill (Splayed Excavation)
- Cement-bound sand cable surround
- Cement-bound sand cable surround (Splayed Excavation)
- Cable protection tiles
- Cable warning tape
- Topsoil stockpile
- Subsoil stockpile
- Existing Ground
- Temporary Haul Road/ Footway

Sheet X Centroid Coordinate: Sheet Y Centroid Coordinate:

Issue	Date	Remarks	Drawn	Checked	Approved
A	01/09/2023	FINAL	SC	JW	KJ

Title

THE NATIONAL GRID ELECTRICITY TRANSMISSION PLC (SEA LINK) ORDER
DESIGN DRAWINGS FOR CONSULTATION

TYPICAL HVAC AND HVDC COMBINED CONSTRUCTION AREA
SHEET 1 OF 1

nationalgrid

Application Number
EN020026

National Grid Drawing Reference
S42_S/TDD/SS/0012

Scale	Sheet Size	Sheet	Issue
AS SHOWN	A1	SHEET 1 OF 1	A

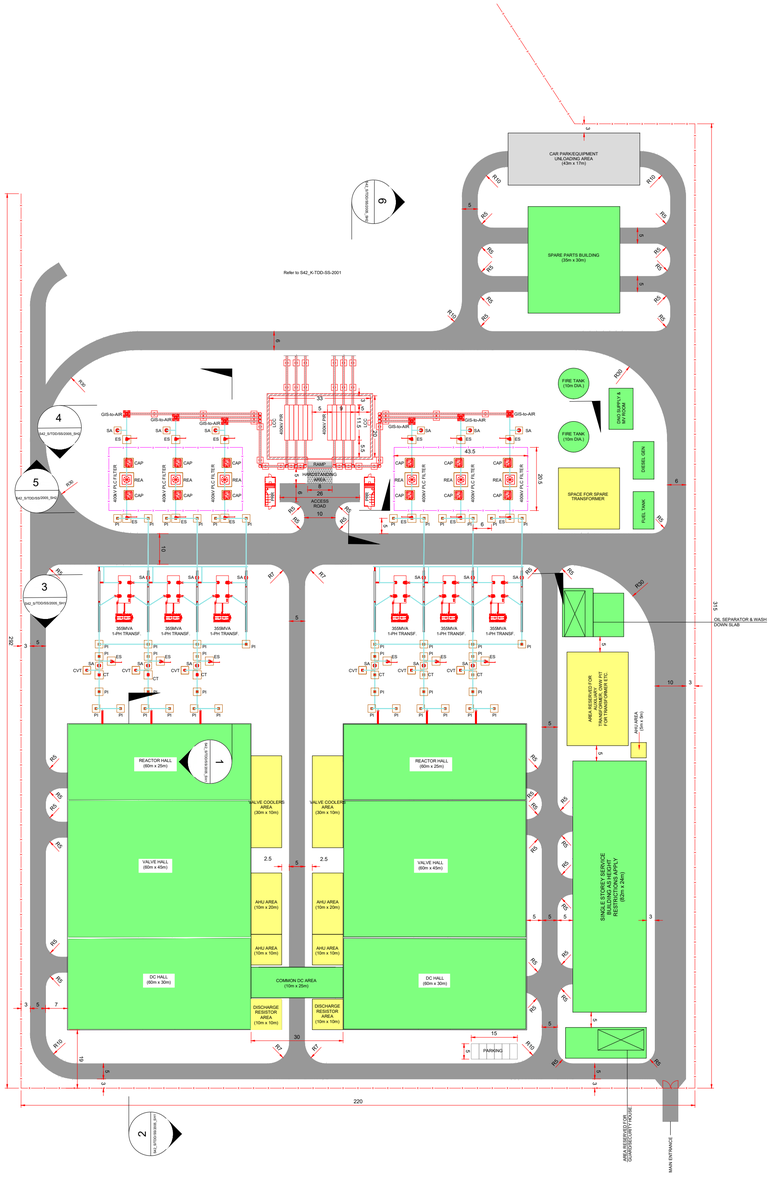
01-05. Minster Converter Station

Drawing Category Name	Plan Title	Scheme	Drawing Numbers
Minster Converter Station	Typical Minster converter station - layout plan (GIS)	Kent Onshore Scheme	S42_K/TDD/SS/2002
	Typical minster converter station - elevation drawing	Kent Onshore Scheme	S42_K/TDD/PS/2005_SH1 S42_K/TDD/PS/2005_SH2

To assist with understanding these drawings please see the **Guide to Interacting with the Consultation Plans and Drawings**

THE NATIONAL GRID ELECTRICITY TRANSMISSION PLC (SEA LINK) ORDER
DESIGN DRAWINGS FOR CONSULTATION
TYPICAL MINSTER CONVERTER STATION - LAYOUT PLAN (GIS)
SHEET 1 of 1

NOMINAL SYSTEM VOLTAGE	PHASE TO EARTH	PHASE TO PHASE	SAFETY DISTANCE (FROM NATIONAL GRID SAFETY RULES)	DESIGN CLEARANCE FOR SAFETY (VERTICAL) Ds	DESIGN CLEARANCE FOR SAFETY (HORIZONTAL) Dsh	INSULATION HEIGHT Ih
kV	M	M	M	M	M (SEE POINT ii FROM NOTE 10)	M
400	2.8	3.6	3.1	5.5	4.6	2.4



Notes

For statutory consultation purposes only.

1. These plans show the Draft Order Limits and Draft Cable Alignment and potential pylon locations. Due to the need for future flexibility, National Grid will be applying for Order Limits and Limits of Deviation within its Development Consent Order, within which any final alignment (including pylon locations) would lie. Therefore the Draft Cable Alignment and pylon locations should be treated as indicative only. Further information is provided in our 'Guide to interacting with our consultation plans' document.
2. For further information on construction please refer to the construction section of the Preliminary Environmental Impact Report, Volume 1, Part 1, Chapter 4.
3. Abbreviations
   - PIR - Pre-Insertion Resistor
   - CAP - Capacitor
   - RES - Resistor
   - REA - Reactor
   - PI - Post Insulator
   - CT - Current Transformer
   - CVT - Capacitive Voltage Transformer
   - ES - Earth Switch
   - SA - Surge Arrester
   - PRR - Portable Relay Room
   - LCC - Local Control Cubicle
4. Elevation sections relate to S42_S/TDD/SS/2005_SH1 & S42_S/TDD/SS/2005_SH2.

Legend

- PERIMETER FENCE
- INTERNAL FENCE
- BUILDINGS
- EXTERNAL EQUIPMENT AREAS
- CAR PARK

Issue	Date	Remarks	Drawn	Checked	Approved
A	01/09/2023	FINAL	SC	JW	KJ

Title

THE NATIONAL GRID ELECTRICITY TRANSMISSION PLC (SEA LINK) ORDER
DESIGN DRAWINGS FOR CONSULTATION
TYPICAL MINSTER CONVERTER STATION - LAYOUT PLAN (GIS)
SHEET 1 of 1

nationalgrid

Application Number: EN020026

National Grid Drawing Reference: S42_K/TDD/SS/2002

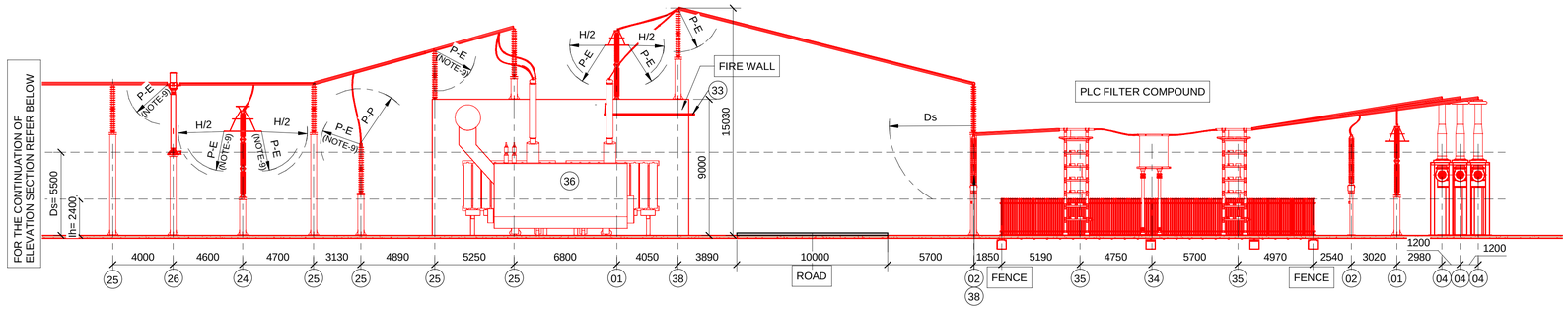
Scale	Sheet Size	Sheet	Issue
NTS	A1	SHEET 1 OF 1	A

THE NATIONAL GRID ELECTRICITY TRANSMISSION PLC (SEA LINK) ORDER

DESIGN DRAWINGS FOR CONSULTATION

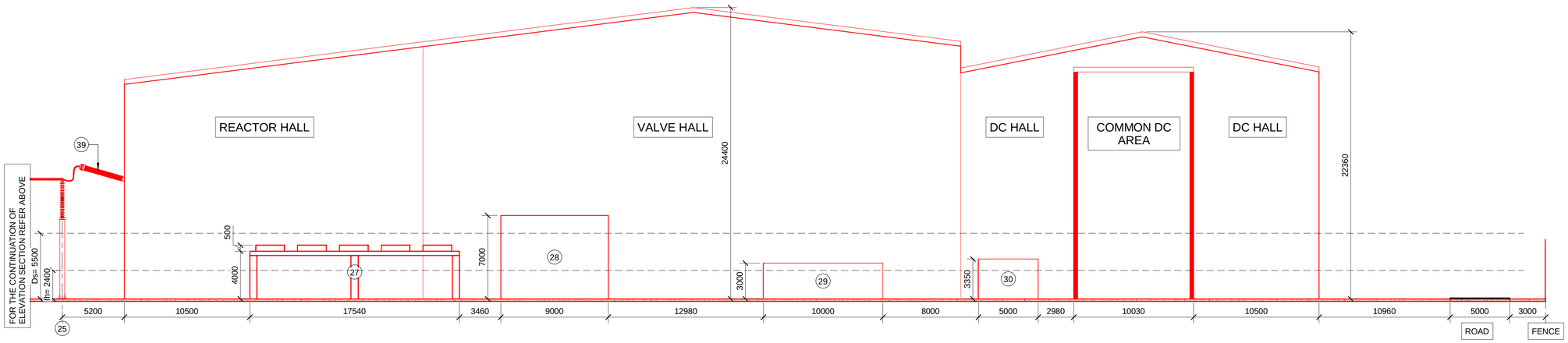
TYPICAL MINSTER CONVERTER STATION - ELEVATION DRAWING

SHEET 1 OF 2



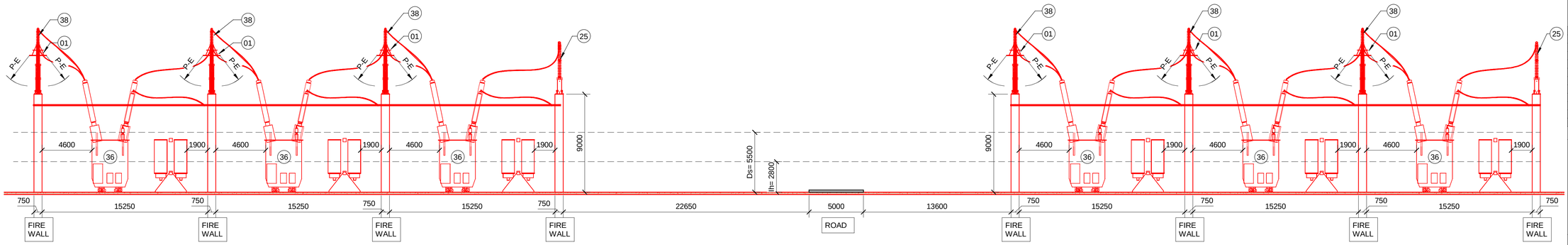
ELEVATION 1

1 : 200



ELEVATION 2

1 : 200



ELEVATION 3

1 : 200

SUBSTATION MINIMUM ELECTRICAL CLEARANCES

REF	CLEARANCE (mm)	NOMINAL SYSTEM VOLTAGE
		400kV
P-E	PHASE TO EARTH	2800
P-P	PHASE TO PHASE	3600
SD	SAFETY DISTANCE NATIONAL GRID SAFETY RULES	3100
Ds	DESIGN CLEARANCE FOR SAFETY (VERTICAL)	5500
Dsh	DESIGN CLEARANCE FOR SAFETY (HORIZONTAL)	4600
Ih	INSULATION HEIGHT	2400

Notes

FOR STATUTORY CONSULTATION PUPOSES ONLY.

1. THESE PLANS SHOW THE DRAFT ORDER LIMITS AND DRAFT CABLE ALIGNMENT AND POTENTIAL PYLON LOCATIONS. DUE TO THE NEED FOR FUTURE FLEXIBILITY, NATIONAL GRID WILL BE APPLYING FOR ORDER LIMITS AND LIMITS OF DEVIATION WITHIN ITS DEVELOPMENT CONSENT ORDER, WITHIN WHICH ANY FINAL ALIGNMENT (INCLUDING PYLON LOCATIONS) WOULD LIE. THEREFORE THE DRAFT CABLE ALIGNMENT AND PYLON LOCATIONS SHOULD BE TREATED AS INDICATIVE ONLY. FURTHER INFORMATION IS PROVIDED IN OUR 'GUIDE TO INTERACTING WITH OUR CONSULTATION PLANS' DOCUMENT.
2. FOR FURTHER INFORMATION ON CONSTRUCTION PLEASE REFER TO THE CONSTRUCTION SECTION OF THE PRELIMINARY ENVIRONMENTAL IMPACT REPORT, VOLUME 1, PART 1, CHAPTER 4.
3. ABBRIVIATION

PLC - POWER LINE CARRIER
AIS - AIR INSULATED SWITCHGEAR
CVT - CAPACITIVE VOLTAGE TRANSFORMER
GIS - GAS INSULATED SWITCHGEAR
PIR - PRE INSERTION RESISTOR
LCC - LOCAL CONTROL CUBICLE
PH - PHASE
GIB - GAS INSULATED BUSDUCT

Legend

New Equipment

Equipment Schedule

Item	Description
01	400kV AIS SURGE ARRESTOR
02	400kV AIS EARTH SWITCH
03	400kV AIS CVT
04	400kV GIS / AIR BUSHING
06	400kV GIS HALL
20	LCC
21	ROLLING SHUTTER
22	550KV AIS CVT
23	550KV AIS EARTH SWITCH
24	550KV AIS SURGE ARRESTOR
25	550KV POST INSULATOR
26	550KV CURRENT TRANSFORMER
27	EXTERNAL FIN FAN COOLER
28	BUILDING FOR PUMP SKID COOLING SYSTEM
29	AHU FOR REACTOR & VALVE HALL BUILDING
30	AHU FOR DC HALL BUILDING
31	PORTABLE RELAY ROOM
32	400 kV PIR
33	11kV POST INSULATOR
34	400 kV PLC FILTER - REACTOR
35	400 kV PLC FILTER - CAPACITOR
36	400 kV 1PH TRANSFORMER
38	400 kV AIS POST INSULATOR
39	AIR BUSHING WALL PENETRATION

Issue	Date	Remarks	Drawn	Checked	Approved
A	08/09/2023	FINAL	MS	JW	KJ

Title

THE NATIONAL GRID ELECTRICITY TRANSMISSION PLC (SEA LINK) ORDER

DESIGN DRAWINGS FOR CONSULTATION

TYPICAL MINSTER CONVERTER STATION - ELEVATION DRAWING

SHEET 1 OF 2

nationalgrid

Application Number: EN020026

National Grid Drawing Reference: S42_K/TDD/PS/2005

Scale	Sheet Size	Sheet	Issue
1 : 200	A1	SHEET 1 OF 2	A

THE NATIONAL GRID ELECTRICITY TRANSMISSION PLC (SEA LINK) ORDER

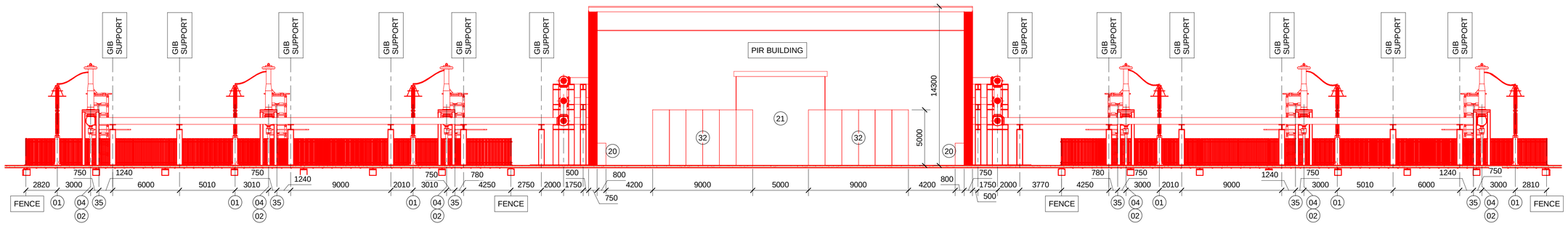
DESIGN DRAWINGS FOR CONSULTATION

TYPICAL MINSTER CONVERTER STATION - ELEVATION DRAWING

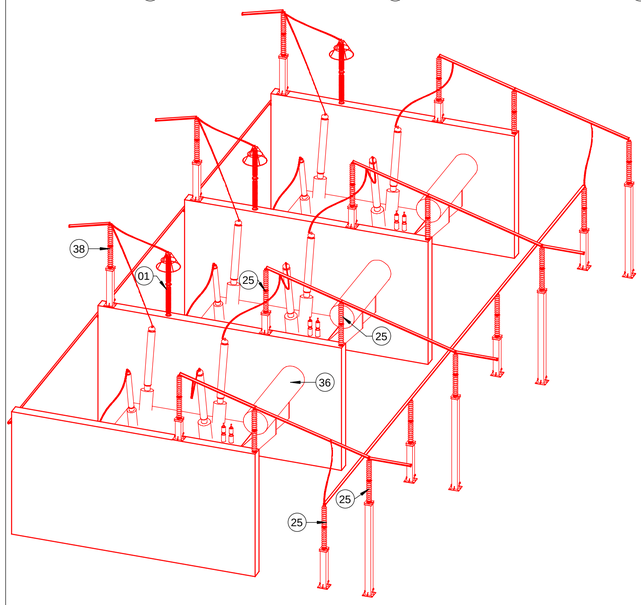
SHEET 2 OF 2

SUBSTATION MINIMUM ELECTRICAL CLEARANCES

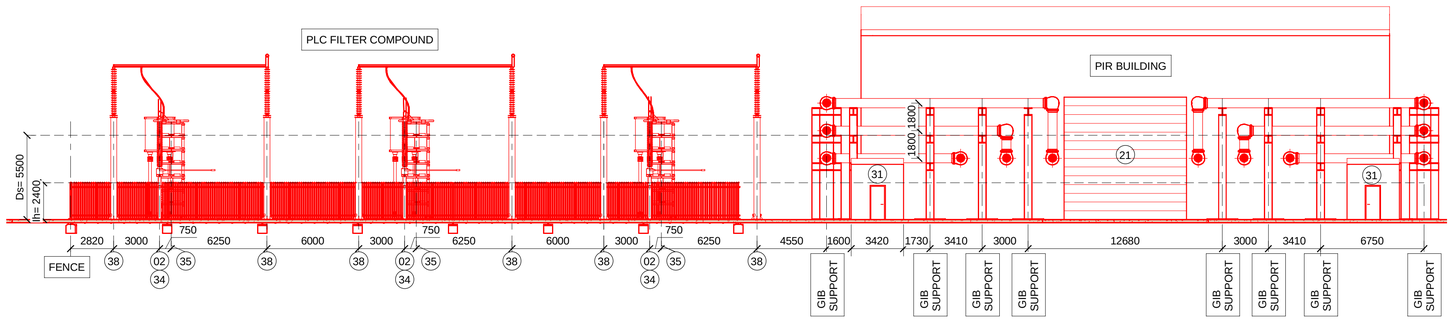
REF	CLEARANCE (mm)	NOMINAL SYSTEM VOLTAGE
		400kV
P-E	PHASE TO EARTH	2800
P-P	PHASE TO PHASE	3600
SD	SAFETY DISTANCE NATIONAL GRID SAFETY RULES	3100
Ds	DESIGN CLEARANCE FOR SAFETY (VERTICAL)	5500
Dsh	DESIGN CLEARANCE FOR SAFETY (HORIZONTAL)	4600
Ih	INSULATION HEIGHT	2400



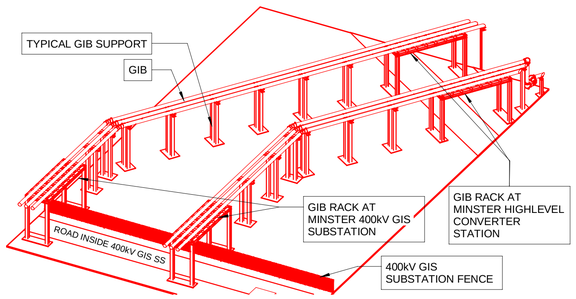
ELEVATION 4
1 : 200



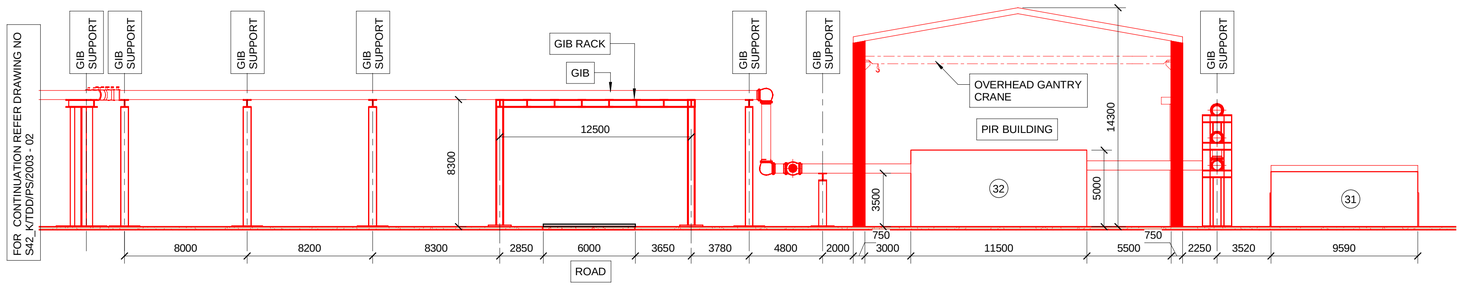
Transformer Area Isometric View



ELEVATION 5
1 : 200



Isometric View for GIB connection between Minster 400 kV Substation and HVDC converter station



ELEVATION 6
1 : 200

Notes

FOR STATUTORY CONSULTATION PUPOSES ONLY.

1. THESE PLANS SHOW THE DRAFT ORDER LIMITS AND DRAFT CABLE ALIGNMENT AND POTENTIAL PYLON LOCATIONS. DUE TO THE NEED FOR FUTURE FLEXIBILITY, NATIONAL GRID WILL BE APPLYING FOR ORDER LIMITS AND LIMITS OF DEVIATION WITHIN ITS DEVELOPMENT CONSENT ORDER, WITHIN WHICH ANY FINAL ALIGNMENT (INCLUDING PYLON LOCATIONS) WOULD LIE. THEREFORE THE DRAFT CABLE ALIGNMENT AND PYLON LOCATIONS SHOULD BE TREATED AS INDICATIVE ONLY. FURTHER INFORMATION IS PROVIDED IN OUR 'GUIDE TO INTERACTING WITH OUR CONSULTATION PLANS' DOCUMENT.
2. FOR FURTHER INFORMATION ON CONSTRUCTION PLEASE REFER TO THE CONSTRUCTION SECTION OF THE PRELIMINARY ENVIRONMENTAL IMPACT REPORT, VOLUME 1, PART 1, CHAPTER 4.
3. ABBRIVIATION

PLC - POWER LINE CARRIER
AIS - AIR INSULATED SWITCHGEAR
CVT - CAPACITIVE VOLTAGE TRANSFORMER
GIS - GAS INSULATED SWITCHGEAR
PIR - PRE INSERTION RESISTOR
LCC - LOCAL CONTROL CUBICLE
PH - PHASE
GIB - GAS INSULATED BUSDUCT

Legend

New Equipment

Equipment Schedule

Item	Description
01	400kV AIS SURGE ARRESTOR
02	400kV AIS EARTH SWITCH
03	400kV AIS CVT
04	400kV GIS / AIR BUSHING
06	400kV GIS HALL
20	LCC
21	ROLLING SHUTTER
22	550KV AIS CVT
23	550KV AIS EARTH SWITCH
24	550KV AIS SURGE ARRESTOR
25	550KV POST INSULATOR
26	550KV CURRENT TRANSFORMER
27	EXTERNAL FIN FAN COOLER
28	BUILDING FOR PUMP SKID COOLING SYSTEM
29	AHU FOR REACTOR & VALVE HALL BUILDING
30	AHU FOR DC HALL BUILDING
31	PORTABLE RELAY ROOM
32	400 kV PIR
33	11kV POST INSULATOR
34	400 kV PLC FILTER - REACTOR
35	400 kV PLC FILTER - CAPACITOR
36	400 kV 1PH TRANSFORMER
38	400 kV AIS POST INSULATOR
39	AIR BUSHING WALL PENETRATION

Issue	Date	Remarks	Drawn	Checked	Approved
A	08/09/2023	FINAL	MS	JW	KJ

Title

THE NATIONAL GRID ELECTRICITY TRANSMISSION PLC (SEA LINK) ORDER

DESIGN DRAWINGS FOR CONSULTATION

TYPICAL MINSTER CONVERTER STATION - ELEVATION DRAWING

SHEET 2 OF 2

nationalgrid

Application Number: EN020026

National Grid Drawing Reference: S42_K/TDD/PS/2005

Scale	Sheet Size	Sheet	Issue
1 : 200	A1	SHEET 2 OF 2	A

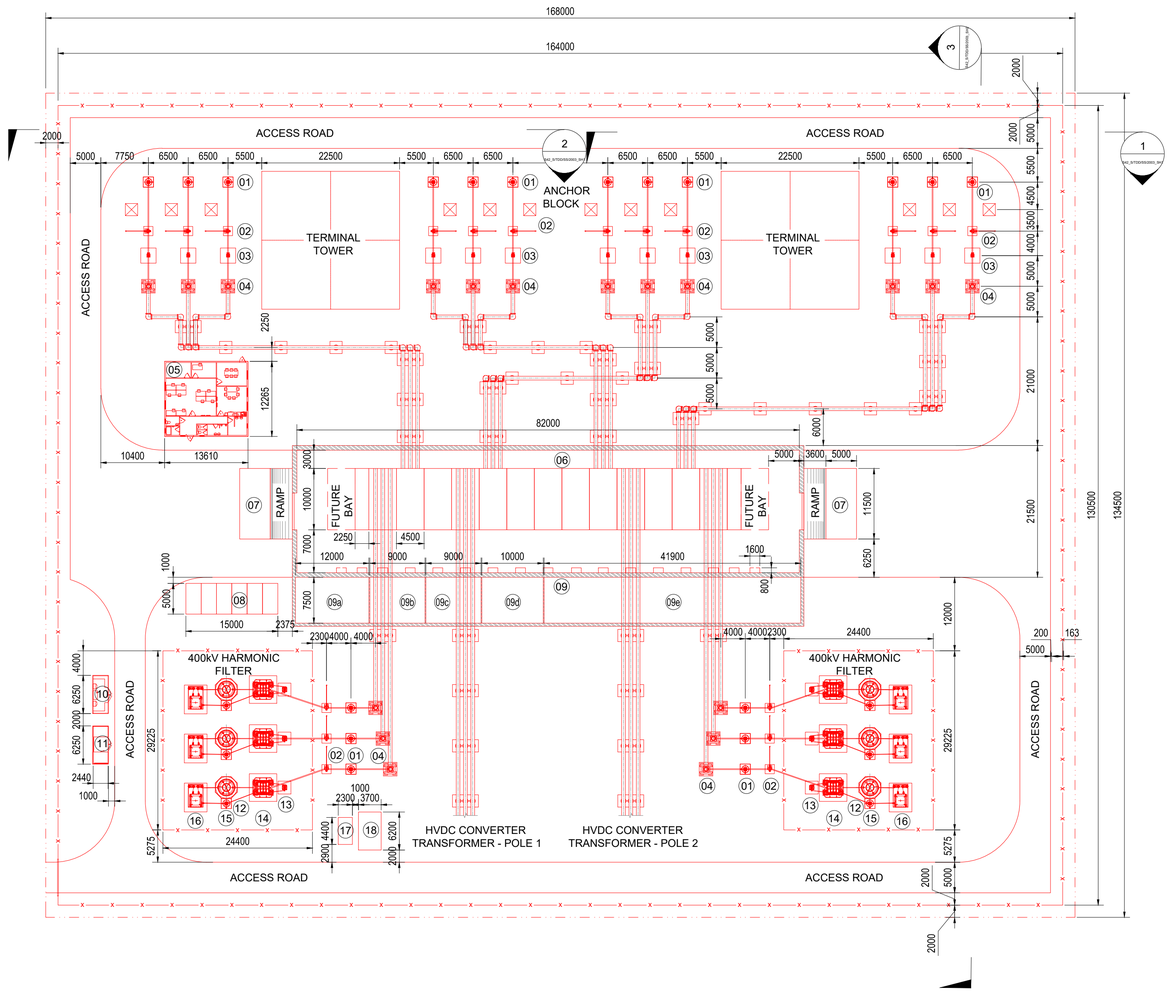
01-06. Minster 400kV Substation

Drawing Category Name	Plan Title	Scheme	Drawing Numbers
Minster 400kV Substation	Typical Minster 400kV GIS substation - overall layout	Kent Onshore Scheme	S42_K/TDD/SS/2001
	Typical 400kV GIS substation - elevation drawing	Kent Onshore Scheme	S42_K/TDD/PS/2003_SH1 S42_K/TDD/PS/2003_SH2

To assist with understanding these drawings please see the **Guide to Interacting with the Consultation Plans and Drawings**

THE NATIONAL GRID ELECTRICITY TRANSMISSION PLC (SEA LINK) ORDER
DESIGN DRAWINGS FOR CONSULTATION
TYPICAL MINSTER 400KV GIS SUBSTATION - OVERALL LAYOUT
SHEET 1 of 1

NOMINAL SYSTEM VOLTAGE	PHASE TO EARTH	PHASE TO PHASE	SAFETY DISTANCE (FROM NATIONAL GRID SAFETY RULES)	DESIGN CLEARANCE FOR SAFETY (VERTICAL) Ds	DESIGN CLEARANCE FOR SAFETY (HORIZONTAL) Dsh	INSULATION HEIGHT Ih
kV	M	M	M	M	M (SEE POINT ii FROM NOTE 6)	M
400	2.8	3.6	3.1	5.5	4.6	2.4



Notes

For statutory consultation purposes only.

1. These plans show the Draft Order Limits and Draft Cable Alignment and potential pylon locations. Due to the need for future flexibility, National Grid will be applying for Order Limits and Limits of Deviation within its Development Consent Order, within which any final alignment (including pylon locations) would lie. Therefore the Draft Cable Alignment and pylon locations should be treated as indicative only. Further information is provided in our 'Guide to interacting with our consultation plans' document.
2. For further information on construction please refer to the construction section of the Preliminary Environmental Impact Report, Volume 1, Part 1, Chapter 4.
3. Abbreviations
   AIS - Air Insulated Switchgear
   CVT - Capacitive Voltage Transformer
   GIS - Gas Insulated Switchgear
   LVAC - Low Voltage Alternating Current
   HVDC - High Voltage Direct Current
4. Elevation sections relate to S42_S/TDD/SS/2003_SH1 & S42_S/TDD/SS/2003_SH2.

Legend

LIMIT OF LAND
FENCE
NEW EQUIPMENT

ID	DESCRIPTION
01	400kV AIS SURGE ARRESTOR
02	400kV AIS EARTH SWITCH
03	400kV AIS CVT
04	400kV GIS / AIR BUSHING
05	AMENITIES BUILDING
06	400kV GIS HALL
07	HARDSTANDING AREA
08	PARKING
09	400kV ANNEX BUILDING
09a	BATTERY ROOM
09b	LVAC SUPPLIES DISTRIBUTION ROOM
09c	TELECOMS ROOM
09d	SUBSTATION CONTROL SYSTEM/PERMIT ROOM
09e	PROTECTION ROOM
10	WORKSHOP
11	STORAGE
12	SURGE ARRESTOR
13	CURRENT TRANSFORMER
14	CAPACITOR
15	REACTOR
16	RESISTOR
17	DIESEL TANK
18	EMERGENCY DIESEL GENERATOR

Issue	Date	Remarks	Drawn	Checked	Approved
A	01/09/2023	FINAL	SC	JW	KJ

Title

THE NATIONAL GRID ELECTRICITY TRANSMISSION PLC (SEA LINK) ORDER
DESIGN DRAWINGS FOR CONSULTATION
TYPICAL MINSTER 400KV GIS SUBSTATION - OVERALL LAYOUT
SHEET 1 of 1

nationalgrid

Application Number: EN020026

National Grid Drawing Reference: S42_K/TDD/SS/2001

Scale	Sheet Size	Sheet	Issue
1:500	A1	SHEET 1 OF 1	A

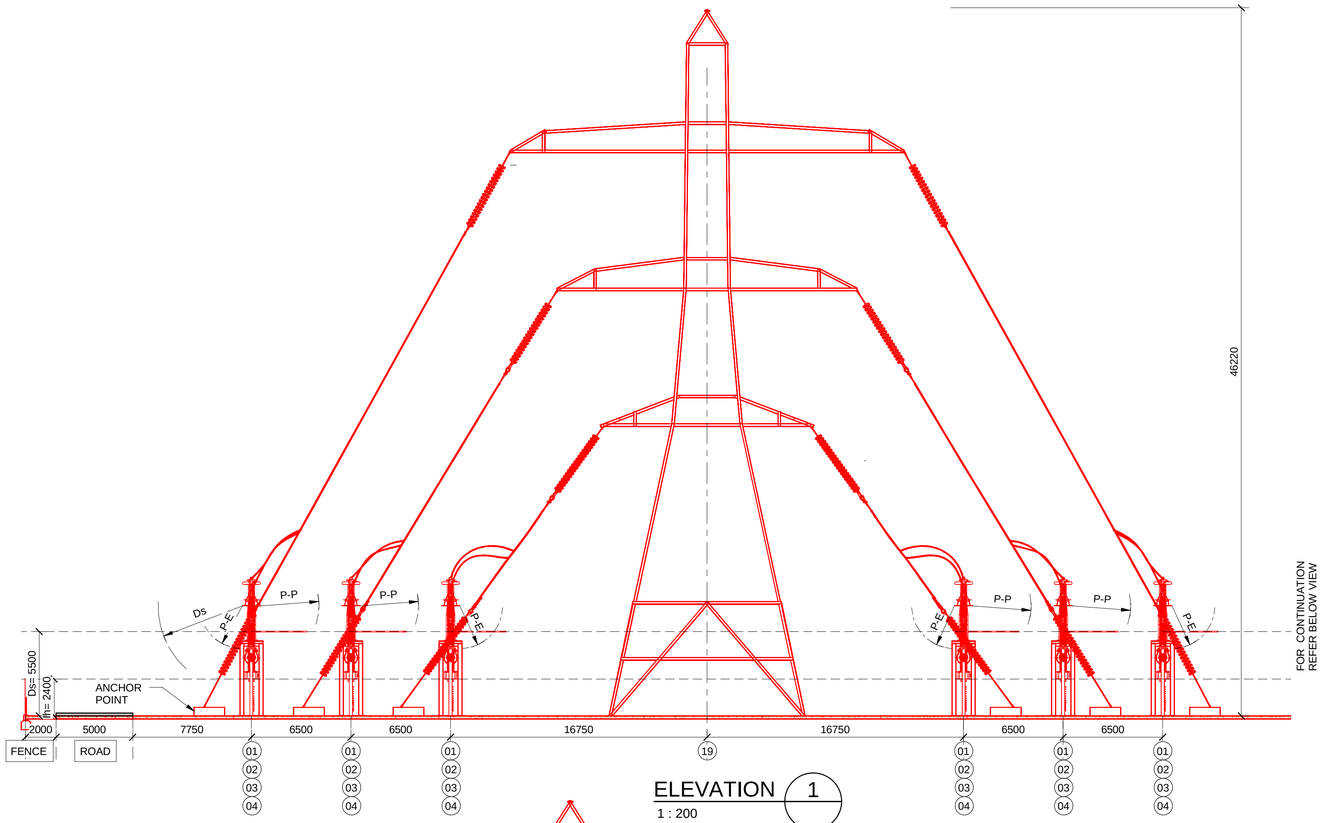
1:500 0 25m 50m

THE NATIONAL GRID ELECTRICITY TRANSMISSION PLC (SEA LINK) ORDER

DESIGN DRAWINGS FOR CONSULTATION

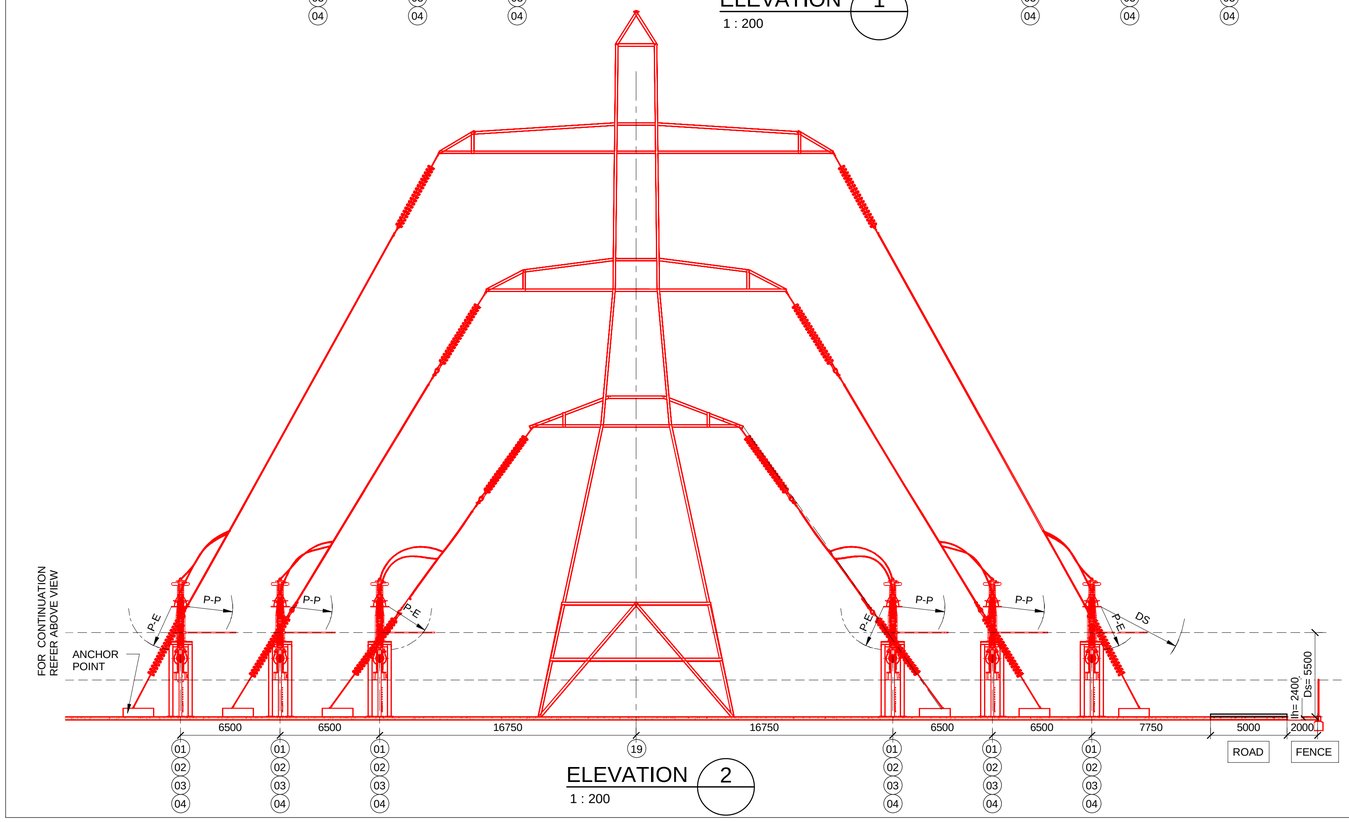
TYPICAL 400kV GIS SUBSTATION - ELEVATION DRAWING

SHEET 1 of 2



ELEVATION 1

1 : 200



ELEVATION 2

1 : 200

SUBSTATION MINIMUM ELECTRICAL CLEARANCES

REF	CLEARANCE (mm)	NOMINAL SYSTEM VOLTAGE
		400kV
P-E	PHASE TO EARTH	2800
P-P	PHASE TO PHASE	3600
SD	SAFETY DISTANCE NATIONAL GRID SAFETY RULES	3100
Ds	DESIGN CLEARANCE FOR SAFETY (VERTICAL)	5500
Dsh	DESIGN CLEARANCE FOR SAFETY (HORIZONTAL)	4600
Ih	INSULATION HEIGHT	2400

Notes

FOR STATUTORY CONSULTATION PUPOSES ONLY.

1. THESE PLANS SHOW THE DRAFT ORDER LIMITS AND DRAFT CABLE ALIGNMENT AND POTENTIAL PYLON LOCATIONS. DUE TO THE NEED FOR FUTURE FLEXIBILITY, NATIONAL GRID WILL BE APPLYING FOR ORDER LIMITS AND LIMITS OF DEVIATION WITHIN ITS DEVELOPMENT CONSENT ORDER, WITHIN WHICH ANY FINAL ALIGNMENT (INCLUDING PYLON LOCATIONS) WOULD LIE. THEREFORE THE DRAFT CABLE ALIGNMENT AND PYLON LOCATIONS SHOULD BE TREATED AS INDICATIVE ONLY. FURTHER INFORMATION IS PROVIDED IN OUR 'GUIDE TO INTERACTING WITH OUR CONSULTATION PLANS' DOCUMENT.

2 FOR FURTHER INFORMATION ON CONSTRUCTION PLEASE REFER TO THE CONSTRUCTION SECTION OF THE PRELIMINARY ENVIRONMENTAL IMPACT REPORT, VOLUME 1, PART 1, CHAPTER 4.

3. ABBRIVIATION

PLC - POWER LINE CARRIER
AIS - AIR INSULATED SWITCHGEAR
CVT - CAPACITIVE VOLTAGE TRANSFORMER
GIS - GAS INSULATED SWITCHGEAR
PIR - PRE INSERTION RESISTOR
LCC - LOCAL CONTROL CUBICLE
PH - PHASE
GIB - GAS INSULATED BUSDUCT

Legend

New Equipment

Equipment Schedule

Item	Description
01	400kV AIS SURGE ARRESTOR
02	400kV AIS EARTH SWITCH
03	400kV AIS CVT
04	400kV GIS / AIR BUSHING
06	400kV GIS HALL
13	400 kV HARMONIC FILTER - CURRENT TRANSFORMER
14	400 kV HARMONIC FILTER - CAPACITOR
15	400 kV HARMONIC FILTER - REACTOR
16	400 kV HARMONIC FILTER - RESISTOR
19	400kV TERMINAL TOWER
20	LCC

Issue	Date	Remarks	Drawn	Checked	Approved
A	08/09/2023	FINAL	MS	JW	KJ

Title

THE NATIONAL GRID ELECTRICITY TRANSMISSION PLC (SEA LINK) ORDER

DESIGN DRAWINGS FOR CONSULTATION

TYPICAL 400kV GIS SUBSTATION - ELEVATION DRAWING

SHEET 1 of 2

nationalgrid

Application Number: EN020026

National Grid Drawing Reference: S42_K/TDD/PS/2003

Scale	Sheet Size	Sheet	Issue
1 : 200	A1	SHEET 1 of 2	A

THE NATIONAL GRID ELECTRICITY TRANSMISSION PLC (SEA LINK) ORDER

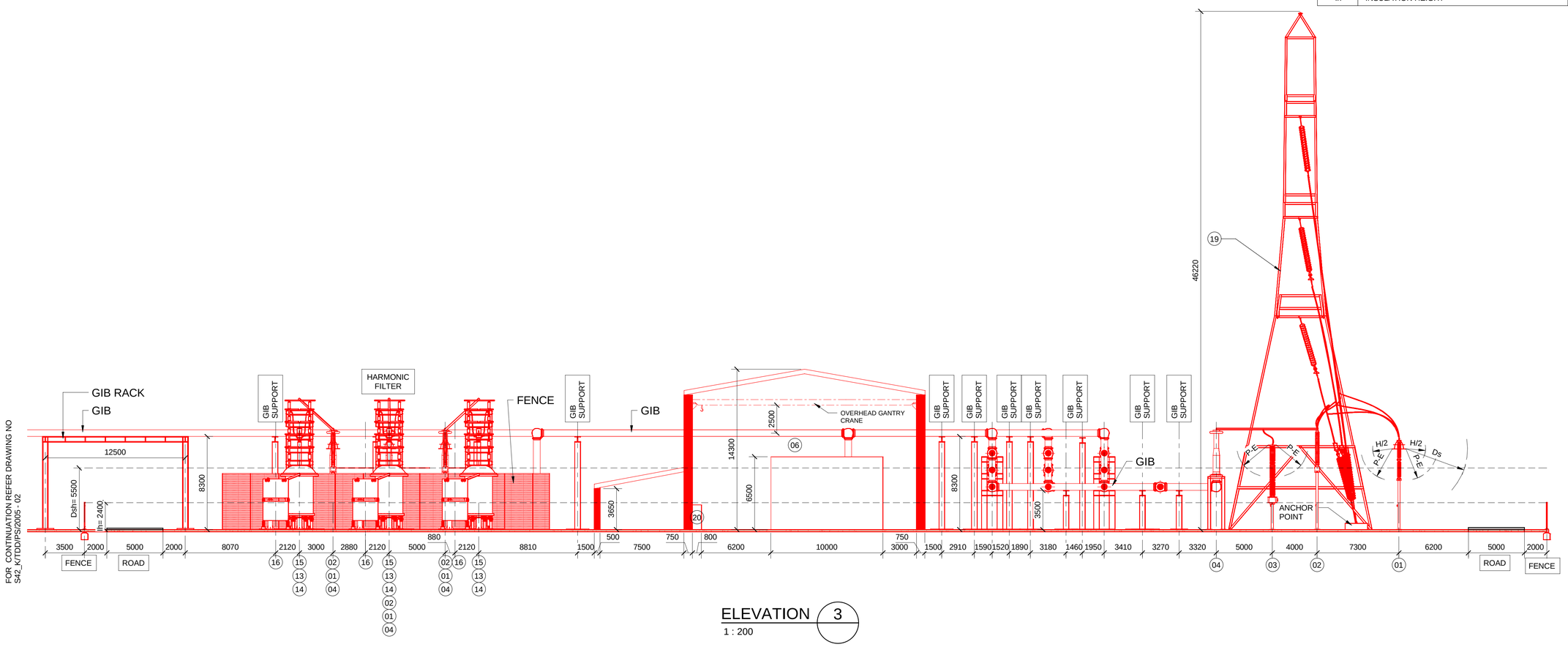
DESIGN DRAWINGS FOR CONSULTATION

TYPICAL 400kV GIS SUBSTATION - ELEVATION DRAWING

SHEET 2 OF 2

SUBSTATION MINIMUM ELECTRICAL CLEARANCES

REF	CLEARANCE (mm)	NOMINAL SYSTEM VOLTAGE
		400kV
P-E	PHASE TO EARTH	2800
P-P	PHASE TO PHASE	3600
SD	SAFETY DISTANCE NATIONAL GRID SAFETY RULES	3100
Ds	DESIGN CLEARANCE FOR SAFETY (VERTICAL)	5500
Dsh	DESIGN CLEARANCE FOR SAFETY (HORIZONTAL)	4600
Ih	INSULATION HEIGHT	2400



FOR CONTINUATION REFER DRAWING NO S42_K/TDD/PS/2005 - 02

ELEVATION 3

1 : 200

Notes

FOR STATUTORY CONSULTATION PUPOSES ONLY.

1. THESE PLANS SHOW THE DRAFT ORDER LIMITS AND DRAFT CABLE ALIGNMENT AND POTENTIAL PYLON LOCATIONS. DUE TO THE NEED FOR FUTURE FLEXIBILITY, NATIONAL GRID WILL BE APPLYING FOR ORDER LIMITS AND LIMITS OF DEVIATION WITHIN ITS DEVELOPMENT CONSENT ORDER, WITHIN WHICH ANY FINAL ALIGNMENT (INCLUDING PYLON LOCATIONS) WOULD LIE. THEREFORE THE DRAFT CABLE ALIGNMENT AND PYLON LOCATIONS SHOULD BE TREATED AS INDICATIVE ONLY. FURTHER INFORMATION IS PROVIDED IN OUR 'GUIDE TO INTERACTING WITH OUR CONSULTATION PLANS' DOCUMENT.
2. FOR FURTHER INFORMATION ON CONSTRUCTION PLEASE REFER TO THE CONSTRUCTION SECTION OF THE PRELIMINARY ENVIRONMENTAL IMPACT REPORT, VOLUME 1, PART 1, CHAPTER 4.
3. ABBRIVIATION

PLC - POWER LINE CARRIER
AIS - AIR INSULATED SWITCHGEAR
CVT - CAPACITIVE VOLTAGE TRANSFORMER
GIS - GAS INSULATED SWITCHGEAR
PIR - PRE INSERTION RESISTOR
LCC - LOCAL CONTROL CUBICLE
PH - PHASE
GIB - GAS INSULATED BUSDUCT

Legend

New Equipment

Equipment Schedule

Item	Description
01	400kV AIS SURGE ARRESTOR
02	400kV AIS EARTH SWITCH
03	400kV AIS CVT
04	400kV GIS / AIR BUSHING
06	400kV GIS HALL
13	400 kV HARMONIC FILTER - CURRENT TRANSFORMER
14	400 kV HARMONIC FILTER - CAPACITOR
15	400 kV HARMONIC FILTER - REACTOR
16	400 kV HARMONIC FILTER - RESISTOR
19	400kV TERMINAL TOWER
20	LCC

Issue	Date	Remarks	Drawn	Checked	Approved
A	08/09/2023	FINAL	MS	JW	KJ

Title

THE NATIONAL GRID ELECTRICITY TRANSMISSION PLC (SEA LINK) ORDER

DESIGN DRAWINGS FOR CONSULTATION

TYPICAL 400kV GIS SUBSTATION - ELEVATION DRAWING

SHEET 2 OF 2

nationalgrid

Application Number: EN020026

National Grid Drawing Reference: S42_K/TDD/PS/2003

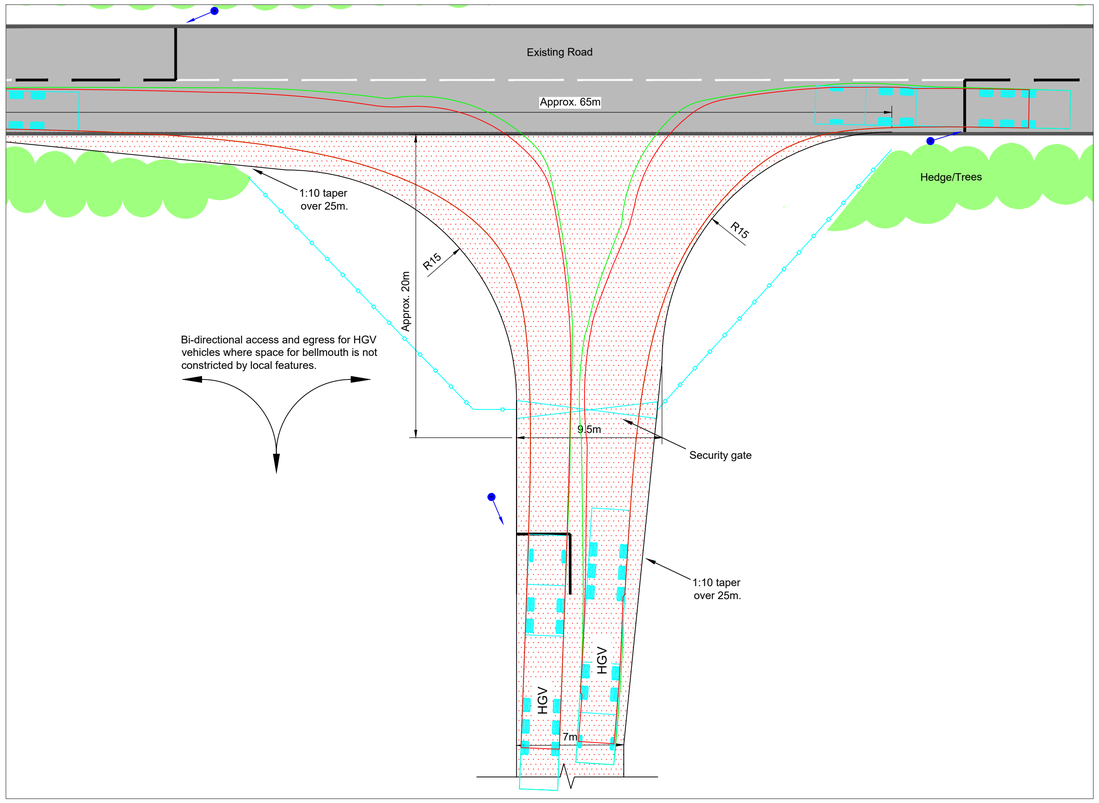
Scale	Sheet Size	Sheet	Issue
1 : 200	A1	SHEET 2 OF 2	A

01-07. Bellmouths, Compounds & Pylon Types

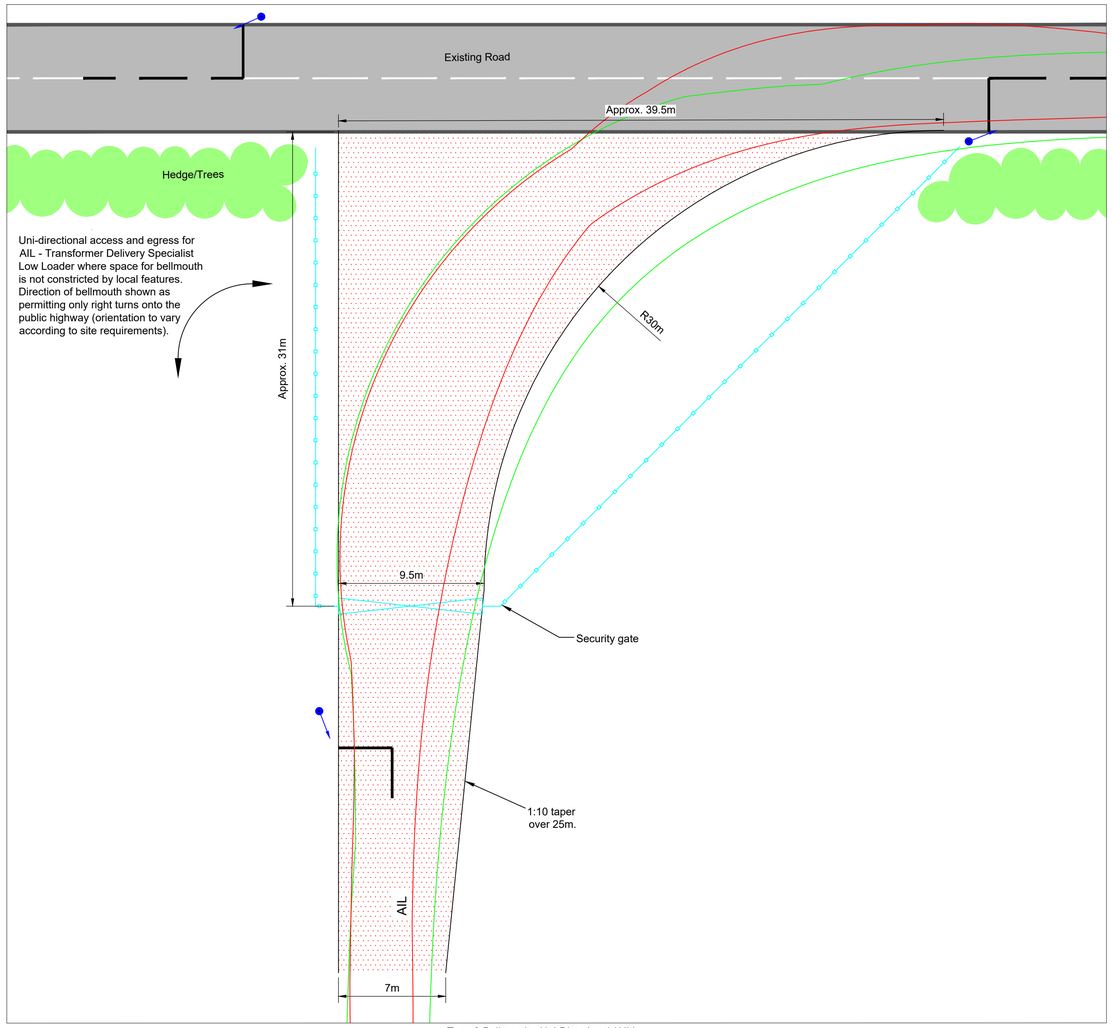
Drawing Category Name	Plan Title	Scheme	Drawing Numbers
Compounds, Bellmouths & Pylon Types	Typical bellmouth arrangement details	Onshore Schemes	S42_T/TDD/SS/3002
	Typical OHL and construction works construction compound	Onshore Schemes	S42_T/TDD/SS/3004
	Typical converter and substation works construction compounds	Onshore Schemes	S42_T/TDD/SS/3005
	Typical OHL pylon detail	Onshore Schemes	S42_T/TDD/SS/3006

To assist with understanding these drawings please see the **Guide to Interacting with the Consultation Plans and Drawings**

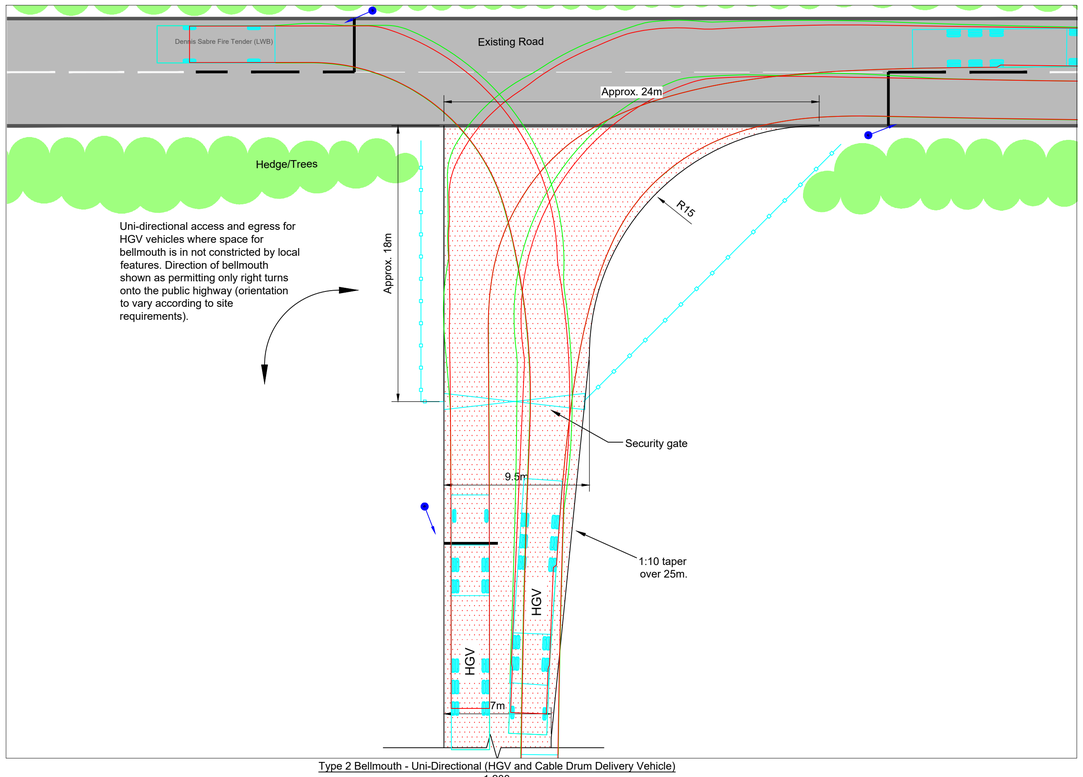
THE NATIONAL GRID ELECTRICITY TRANSMISSION PLC (SEA LINK) ORDER
DESIGN DRAWINGS FOR CONSULTATION
TYPICAL BELLMOUTH ARRANGEMENT DETAILS
SHEET 1 OF 1



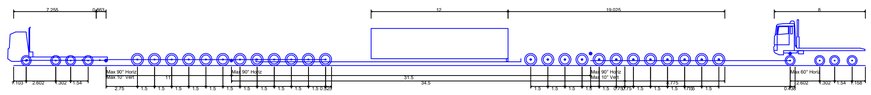
Type 1 Bellmouth - Bi-Directional (HGV and Cable Drum Delivery Vehicle)
1:200



Type 3 Bellmouth - Uni-Directional (AIL)
1:200

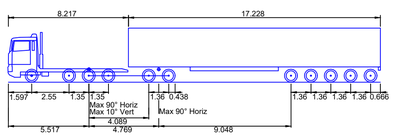


Type 2 Bellmouth - Uni-Directional (HGV and Cable Drum Delivery Vehicle)
1:200



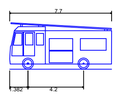
Abnormal Indivisible Load (AIL)- AL50 Girder 12 Axial (with trailer)

Overall Length	74.720m
Overall Width	5.336m
Overall Body Height	4.020m
Min Body Ground Clearance	0.337m
Max Track Width	3.000m
Lock to lock time	6.00s
Wall to Wall Turning Radius	11.550m



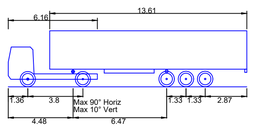
CABLE DRUM DELIVERY VEHICLE 25.44m

Overall Length	25.440m
Overall Width	4.500m
Overall Body Height	3.695m
Min Body Ground Clearance	0.332m
Track Width	2.500m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	14.500m



Dennis Sabre Fire Tender (LWB)

Overall Length	7.700m
Overall Width	2.430m
Overall Body Height	3.512m
Min Body Ground Clearance	0.397m
Track Width	2.380m
Lock to lock time	5.00s
Kerb to Kerb Turning Radius	7.400m



Heavy Goods Vehicle (HGV) DESIGN ARTICULATED VEHICLE (2016)

Overall Length	16.480m
Overall Width	2.550m
Overall Body Height	3.870m
Min Body Ground Clearance	0.515m
Max Track Width	2.470m
Lock to lock time	3.00s
Kerb to Kerb Turning Radius	6.600m

Autotrack Model
NTS

1:200 0 10m 20m

Notes

For statutory consultation purposes only.
These plans show the Draft Order Limits and Draft Cable Alignment and potential pylon locations. Due to the need for future flexibility, National Grid will be applying for Order Limits and Limits of Deviation within its Development Consent Order, within which any final alignment (including pylon locations) would lie. Therefore the Draft Cable Alignment and pylon locations should be treated as indicative only. Further information is provided in our 'Guide to interacting with our consultation plans' document.

For further information on construction please refer to the construction section of the Preliminary Environmental Impact Report, Volume 1, Part 1, Chapter 4.

Legend

- Hedges/Trees
- Temporary 3 or 4 Way Traffic Lights
- Security Gate
- Access Track and Bellmouth
- Security Fence
- Stop Line
- Vehicle total width swept path
- Vehicle wheelbase swept path

Sheet X Centroid Coordinate: Sheet Y Centroid Coordinate:

Issue	Date	Remarks	Drawn	Checked	Approved
A	01/09/2023	FINAL	SC	JW	KJ

Title

THE NATIONAL GRID ELECTRICITY TRANSMISSION PLC (SEA LINK) ORDER
DESIGN DRAWINGS FOR CONSULTATION

TYPICAL BELLMOUTH ARRANGEMENT DETAILS
SHEET 1 OF 1

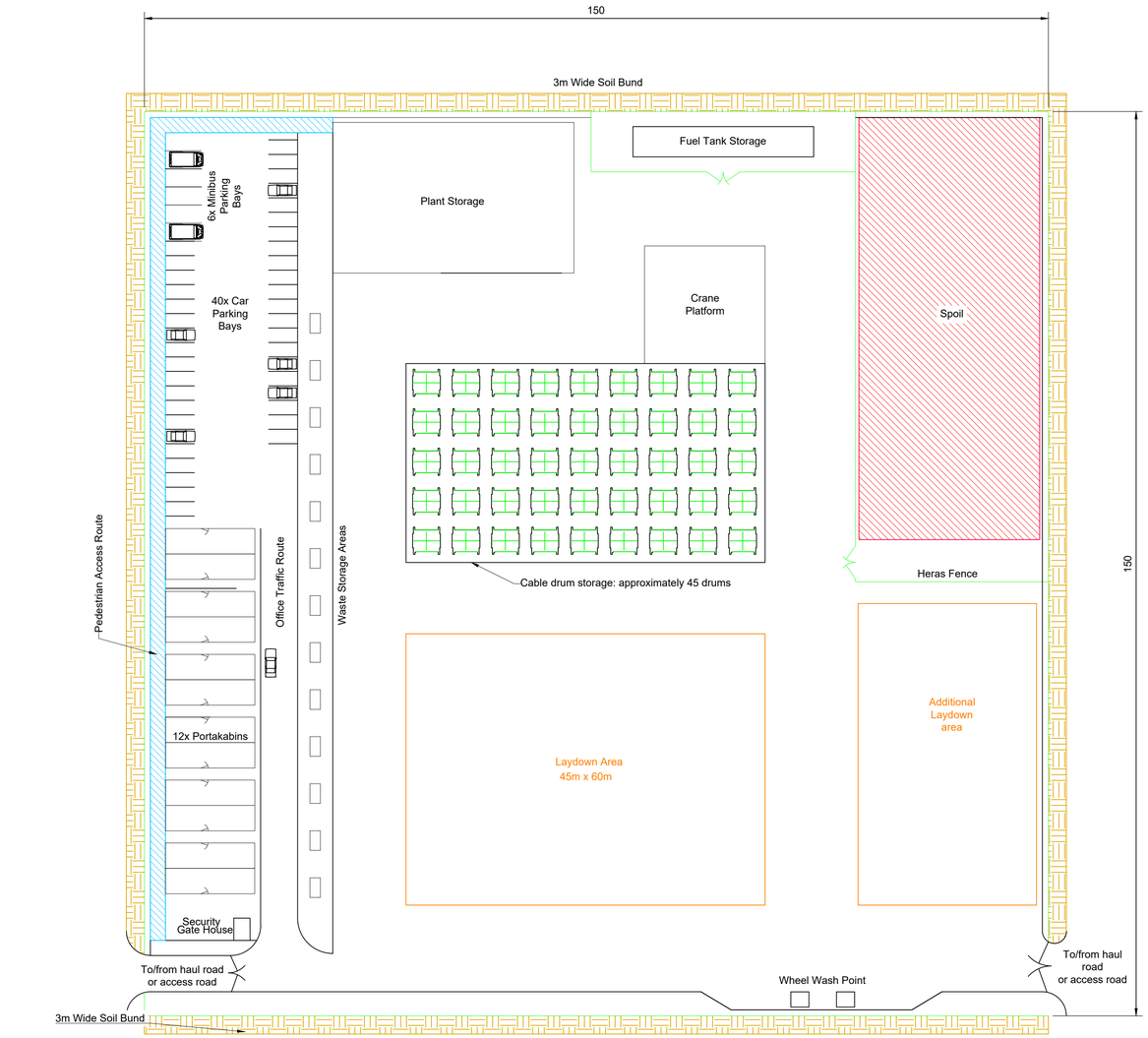
nationalgrid

Application Number
EN020026

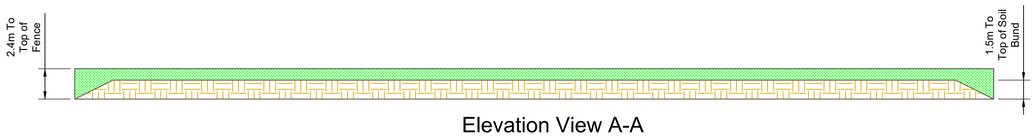
National Grid Drawing Reference
S42_T/TDD/SS/3002

Scale	Sheet Size	Sheet	Issue
AS SHOWN	A1	SHEET 1 OF 1	A

THE NATIONAL GRID ELECTRICITY TRANSMISSION PLC (SEA LINK) ORDER
DESIGN DRAWINGS FOR CONSULTATION
TYPICAL OHL AND CONSTRUCTION WORKS CONSTRUCTION COMPOUND
SHEET 1 OF 1



Typical Cable Construction Layout Plan
1:500



Elevation View A-A
1:500

1:500 0 25m 50m

Notes

For statutory consultation purposes only.

These plans show the Draft Order Limits and Draft Cable Alignment and potential pylon locations. Due to the need for future flexibility, National Grid will be applying for Order Limits and Limits of Deviation within its Development Consent Order, within which any final alignment (including pylon locations) would lie. Therefore the Draft Cable Alignment and pylon locations should be treated as indicative only. Further information is provided in our 'Guide to interacting with our consultation plans' document.

For further information on construction please refer to the construction section of the Preliminary Environmental Impact Report, Volume 1, Part 1, Chapter 4.

Legend

- Pedestrian Access
- Soil Bund
- Spoil
- Laydown Area

Sheet X Centroid Coordinate: Sheet Y Centroid Coordinate:

Issue	Date	Remarks	Drawn	Checked	Approved
A	01/09/2023	FINAL	SC	JW	KJ

Title

THE NATIONAL GRID ELECTRICITY TRANSMISSION PLC (SEA LINK) ORDER
DESIGN DRAWINGS FOR CONSULTATION
TYPICAL OHL AND CONSTRUCTION WORKS CONSTRUCTION COMPOUND
SHEET 1 OF 1

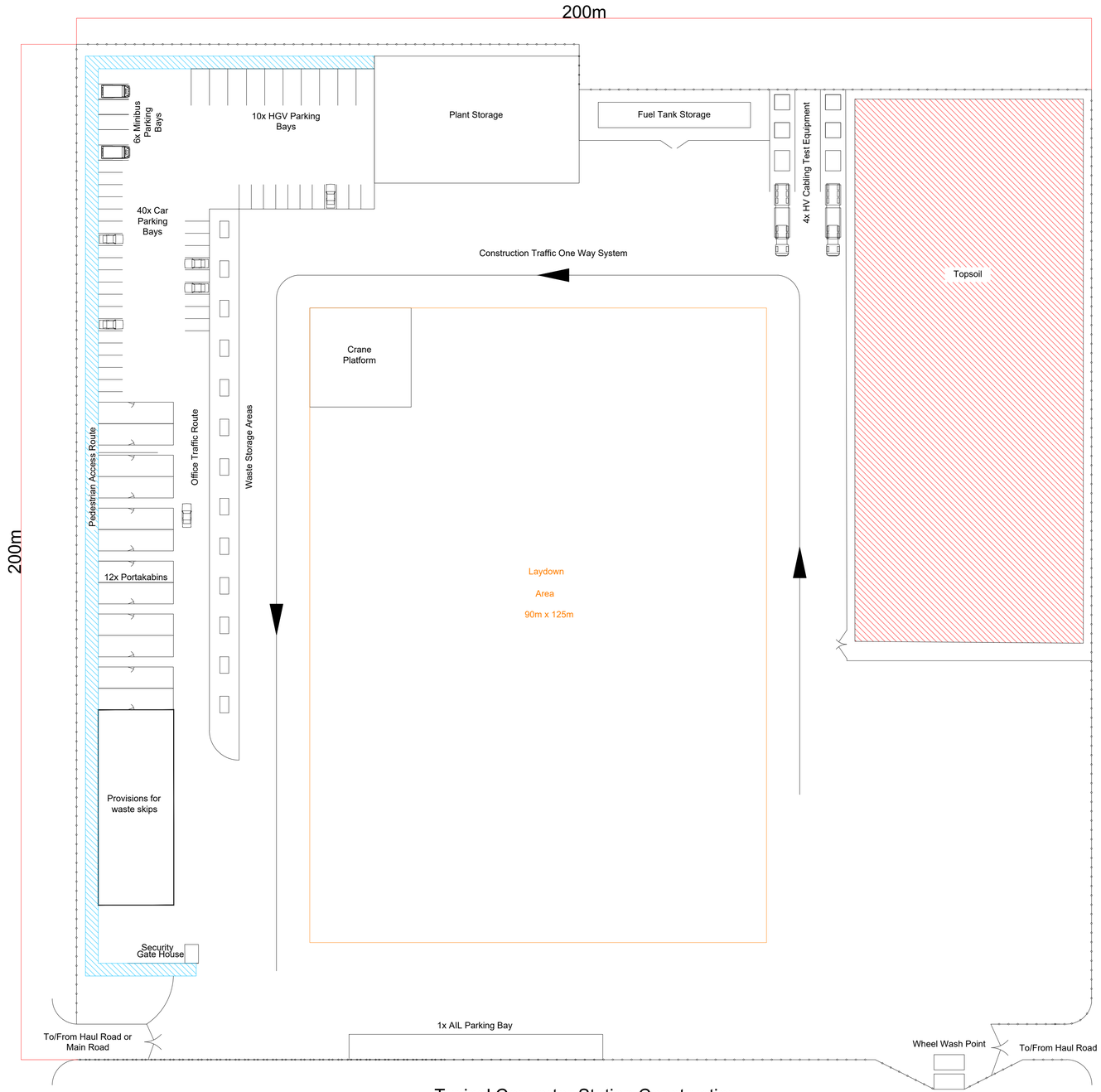
nationalgrid

Application Number: EN020026

National Grid Drawing Reference: S42_T/TDD/SS/3004

Scale	Sheet Size	Sheet	Issue
As shown	A1	SHEET 1 OF 1	A

THE NATIONAL GRID ELECTRICITY TRANSMISSION PLC (SEA LINK) ORDER
DESIGN DRAWINGS FOR CONSULTATION
TYPICAL CONVERTER AND SUBSTATION WORKS CONSTRUCTION COMPOUNDS
SHEET 1 of 1



Typical Convertor Station Construction Layout Plan

Elevation View A-A

1:500 0 25m 50m

Notes

For statutory consultation purposes only.

1. These plans show the Draft Order Limits and Draft Cable Alignment and potential pylon locations. Due to the need for future flexibility, National Grid will be applying for Order Limits and Limits of Deviation within its Development Consent Order, within which any final alignment (including pylon locations) would lie. Therefore the Draft Cable Alignment and pylon locations should be treated as indicative only. Further information is provided in our 'Guide to interacting with our consultation plans' document.

2. For further information on construction please refer to the construction section of the Preliminary Environmental Impact Report, Volume 1, Part 1, Chapter 4.

3. Abbreviations
   AIL - Abnormal Indivisible Loads
   HGV - Heavy Goods Vehicle
   HV - High Voltage

Legend

- Pedestrian Access
- Topsoil
- Security Fence

Sheet X Centroid Coordinate: Sheet Y Centroid Coordinate:

Issue	Date	Remarks	Drawn	Checked	Approved
A	01/09/2023	FINAL	MS	JW	KJ

Title

THE NATIONAL GRID ELECTRICITY TRANSMISSION PLC (SEA LINK) ORDER
DESIGN DRAWINGS FOR CONSULTATION
TYPICAL CONVERTER AND SUBSTATION WORKS CONSTRUCTION COMPOUNDS
SHEET 1 of 1

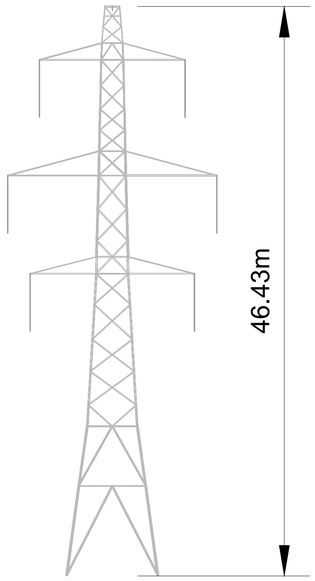
nationalgrid

Application Number: EN020026

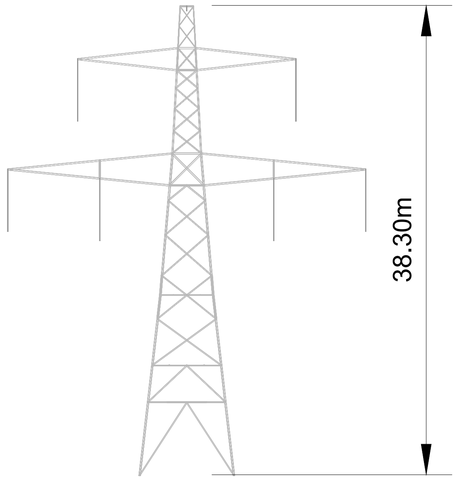
National Grid Drawing Reference: S42_T/TDD/SS/3005

Scale	Sheet Size	Sheet	Issue
AS SHOWN	A1	SHEET 1 OF 1	A

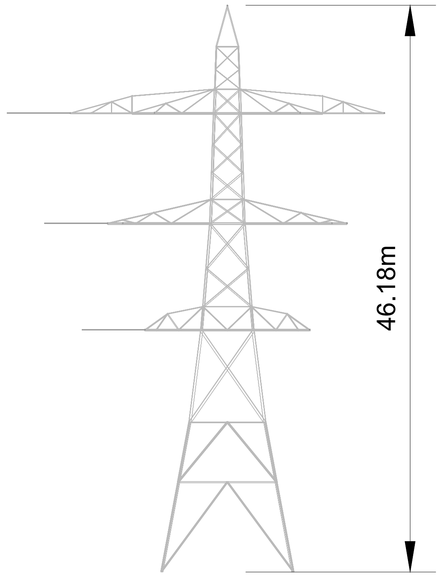
THE NATIONAL GRID ELECTRICITY TRANSMISSION PLC (SEA LINK) ORDER
DESIGN DRAWINGS FOR CONSULTATION
TYPICAL OHL PYLON DETAIL
SHEET 1 of 1



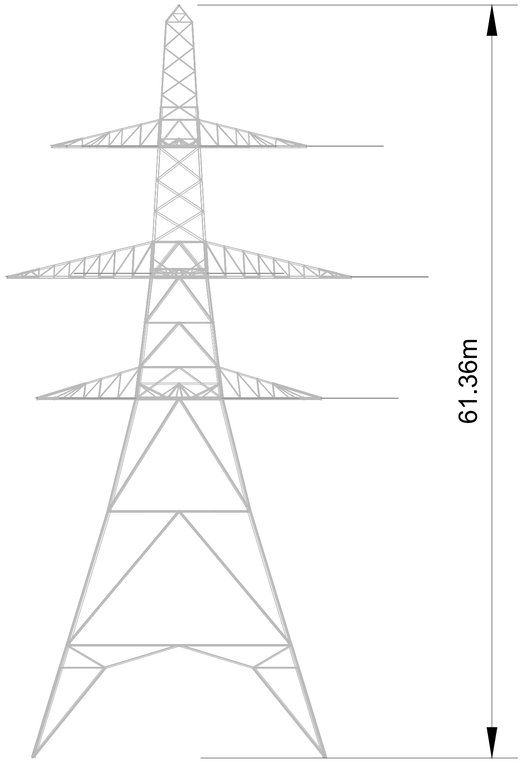
L8 D STD: Suspension Tower



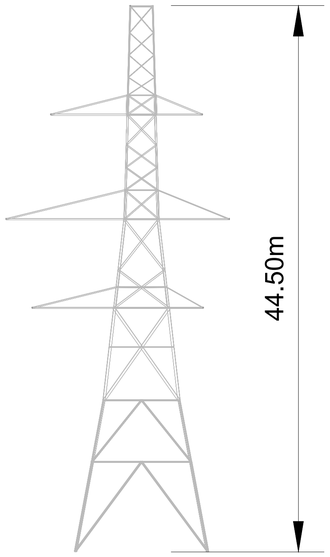
L12 LD E3: Suspension Tower



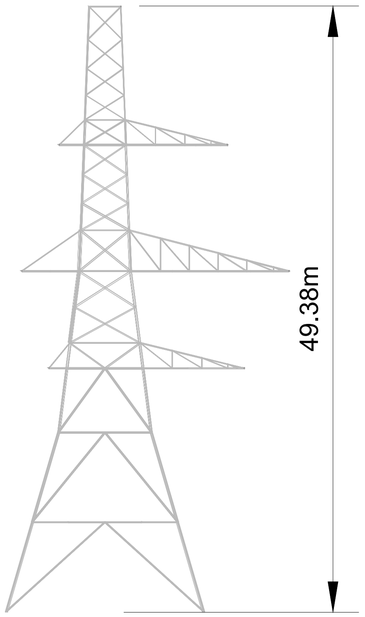
L8 DT STD (Extended Cross Arms): Tension Tower



L6 DJT E3: Tension Tower



L8 D60 STD: Tension Tower



L8 D90 STD: Tension Tower

1:250 0 12.5m 25m

Notes

For statutory consultation purposes only.
These plans show the Draft Order Limits and Draft Cable Alignment and potential pylon locations. Due to the need for future flexibility, National Grid will be applying for Order Limits and Limits of Deviation within its Development Consent Order, within which any final alignment (including pylon locations) would lie. Therefore the Draft Cable Alignment and pylon locations should be treated as indicative only. Further information is provided in our 'Guide to interacting with our consultation plans' document.

For further information on construction please refer to the construction section of the Preliminary Environmental Impact Report, Volume 1, Part 1, Chapter 4.

Issue	Date	Remarks	Drawn	Checked	Approved
A	01/09/2023	FINAL	MS	JW	KJ

Title

THE NATIONAL GRID ELECTRICITY TRANSMISSION PLC (SEA LINK) ORDER
DESIGN DRAWINGS FOR CONSULTATION
TYPICAL OHL PYLON DETAIL
SHEET 1 of 1

nationalgrid

Application Number
EN020026

National Grid Drawing Reference
S42_T/TDD/SS/3006

Scale	Sheet Size	Sheet	Issue
1:250	A1	SHEET 1 OF 1	A

02. Offshore Design Drawings

To assist with understanding these drawings please see the **Guide to Interacting with the Consultation Plans and Drawings**

nationalgrid

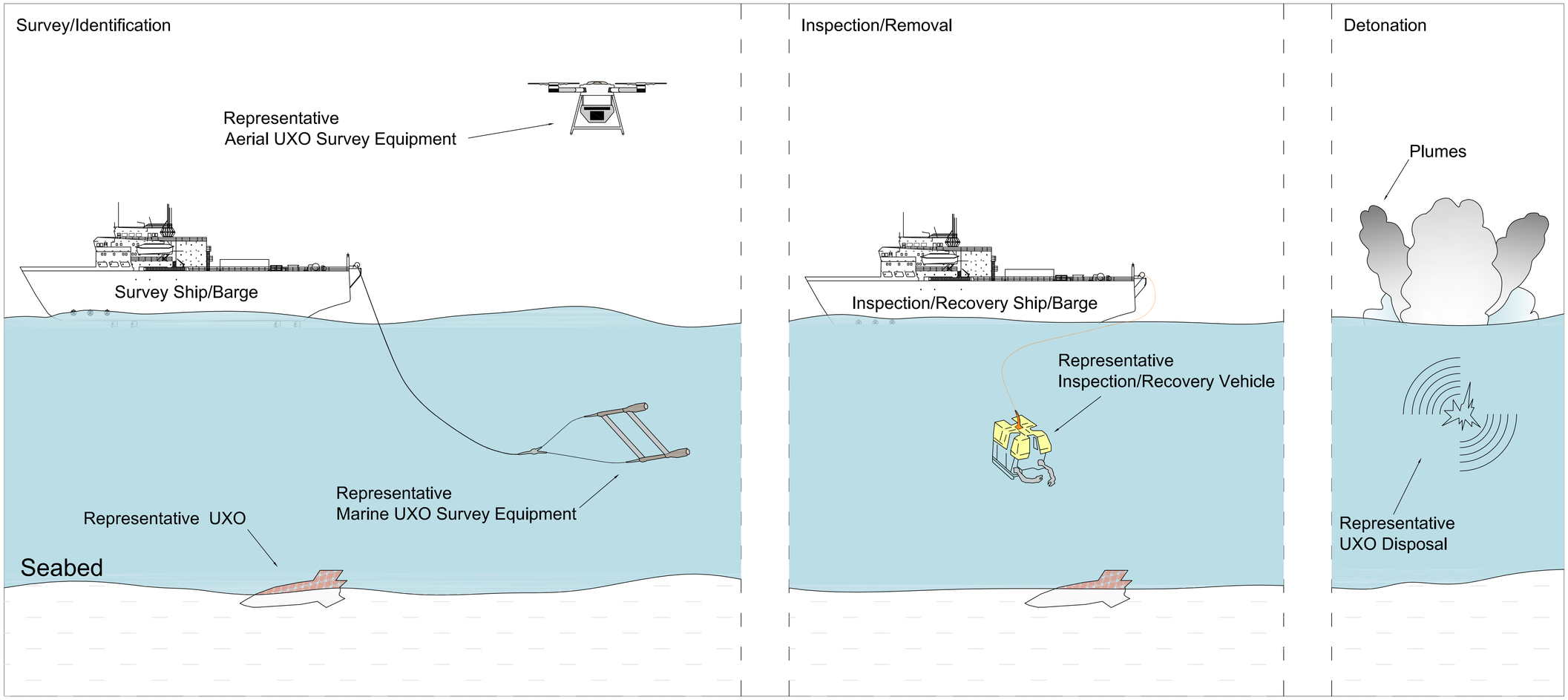
02-01. Pre-Cable Installation Works

Drawing Category Name	Plan Title	Scheme	Drawing Numbers
Pre-Cable Installation Works	Illustration of unexploded ordnance, removal and detonation	Offshore Scheme	S42_M/TDD/SS/1030
	Illustration of boulder clearance	Offshore Scheme	S42_M/TDD/SS/1027
	Illustration of pre-lay grapnel run	Offshore Scheme	S42_M/TDD/SS/1028
	Illustration of indicative pre-sweeping and sidecasting	Offshore Scheme	S42_M/TDD/SS/1029

To assist with understanding these drawings please see the **Guide to Interacting with the Consultation Plans and Drawings**

THE NATIONAL GRID ELECTRICITY TRANSMISSION PLC (SEA LINK) ORDER
DESIGN DRAWINGS FOR CONSULTATION

ILLUSTRATION OF
UNEXPLODED ORDNANCE, REMOVAL AND DETONATION
SHEET 1 of 1



Notes

For statutory consultation purposes only

1. Do not scale from this drawing.
2. All dimensions are in metres/millimetres unless otherwise stated.
3. This drawing is to be read in conjunction with all relevant documents and drawings.
4. No unauthorised disclosure, storage or copying.
5. Detailed design, including final dimensions, to be decided at a later date.
6. UXO = Unexploded Ordnance
7. For further explanation of these plans see the Guide to the Plans Document.
8. For further information on construction please refer to the construction section of the Preliminary Environmental Impact Report, Volume 1, Part 1, Chapter 4

Legend

Water

Seabed Sediment

Sheet X Centroid Coordinate: N/A Sheet Y Centroid Coordinate:N/A

Issue	Date	Remarks	Drawn	Checked	Approved
A	24/10/2023	FINAL	AMN	FSS	KG

Title

THE NATIONAL GRID ELECTRICITY TRANSMISSION PLC (SEA LINK) ORDER

DESIGN DRAWINGS FOR CONSULTATION
ILLUSTRATION OF
UNEXPLODED ORDNANCE, REMOVAL AND DETONATION
SHEET 1 of 1

nationalgrid

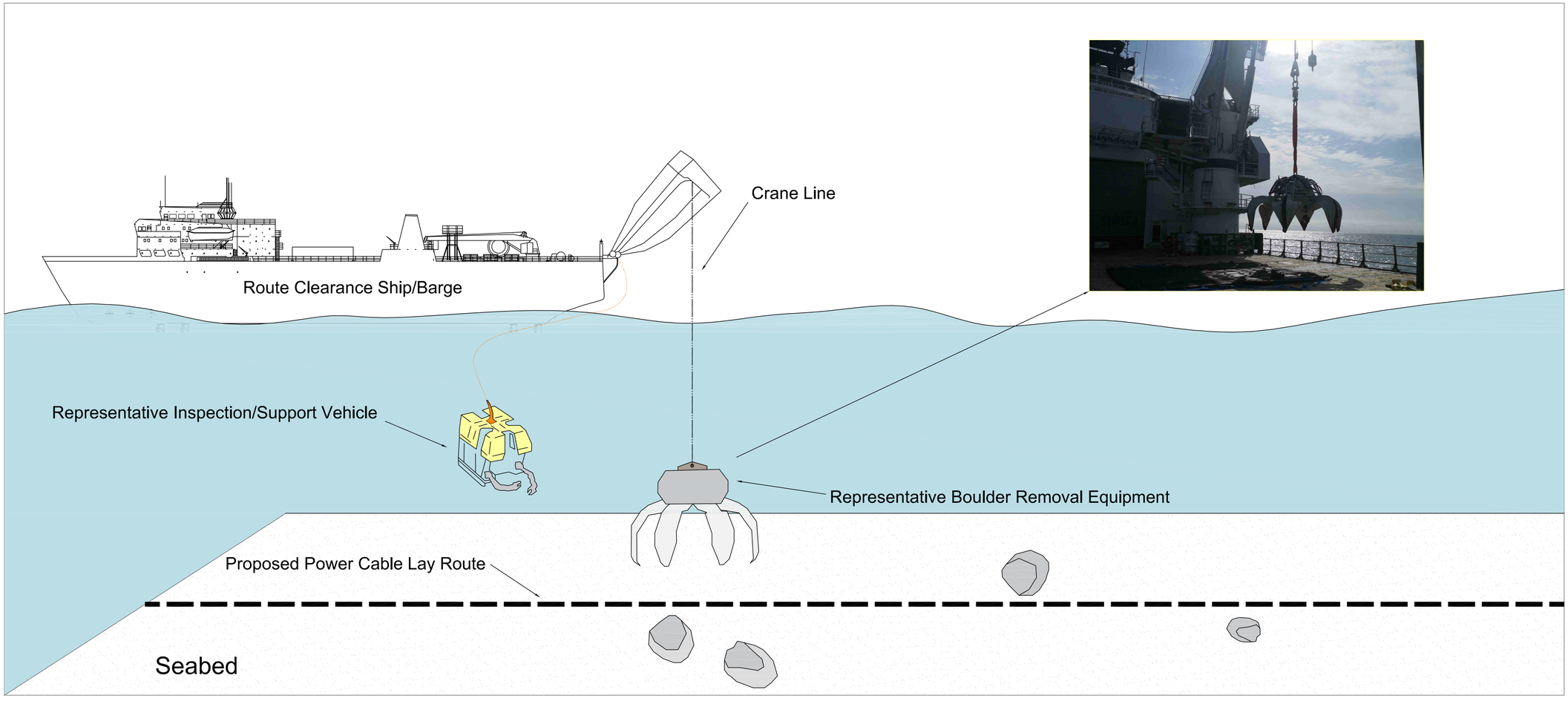
Application Number
-

National Grid Drawing Reference
S42_M/TDD/SS/1030

Scale	Sheet Size	Sheet	Issue
NTS	A1	SHEET 1 OF 1	A

THE NATIONAL GRID ELECTRICITY TRANSMISSION PLC (SEA LINK) ORDER
DESIGN DRAWINGS FOR CONSULTATION

ILLUSTRATION OF BOULDER CLEARANCE
SHEET 1 of 1



Notes

For statutory consultation purposes only

1. Do not scale from this drawing.
2. All dimensions are in metres/millimetres unless otherwise stated.
3. This drawing is to be read in conjunction with all relevant documents and drawings.
4. No unauthorised disclosure, storage or copying.
5. Detailed design, including final dimensions, to be decided at a later date.
6. For further explanation of these plans see the Guide to the Plans Document.
7. For further information on construction please refer to the construction section of the Preliminary Environmental Impact Report, Volume 1, Part 1, Chapter 4

Legend

Water

Seabed Sediment

Boulder

Sheet X Centroid Coordinate: N/A Sheet Y Centroid Coordinate:N/A

Issue	Date	Remarks	Drawn	Checked	Approved
A	24/10/2023	FINAL	AMN	FSS	KG

Title

THE NATIONAL GRID ELECTRICITY TRANSMISSION PLC (SEA LINK) ORDER

DESIGN DRAWINGS FOR CONSULTATION

ILLUSTRATION OF BOULDER CLEARANCE
SHEET 1 of 1

nationalgrid

Application Number

-

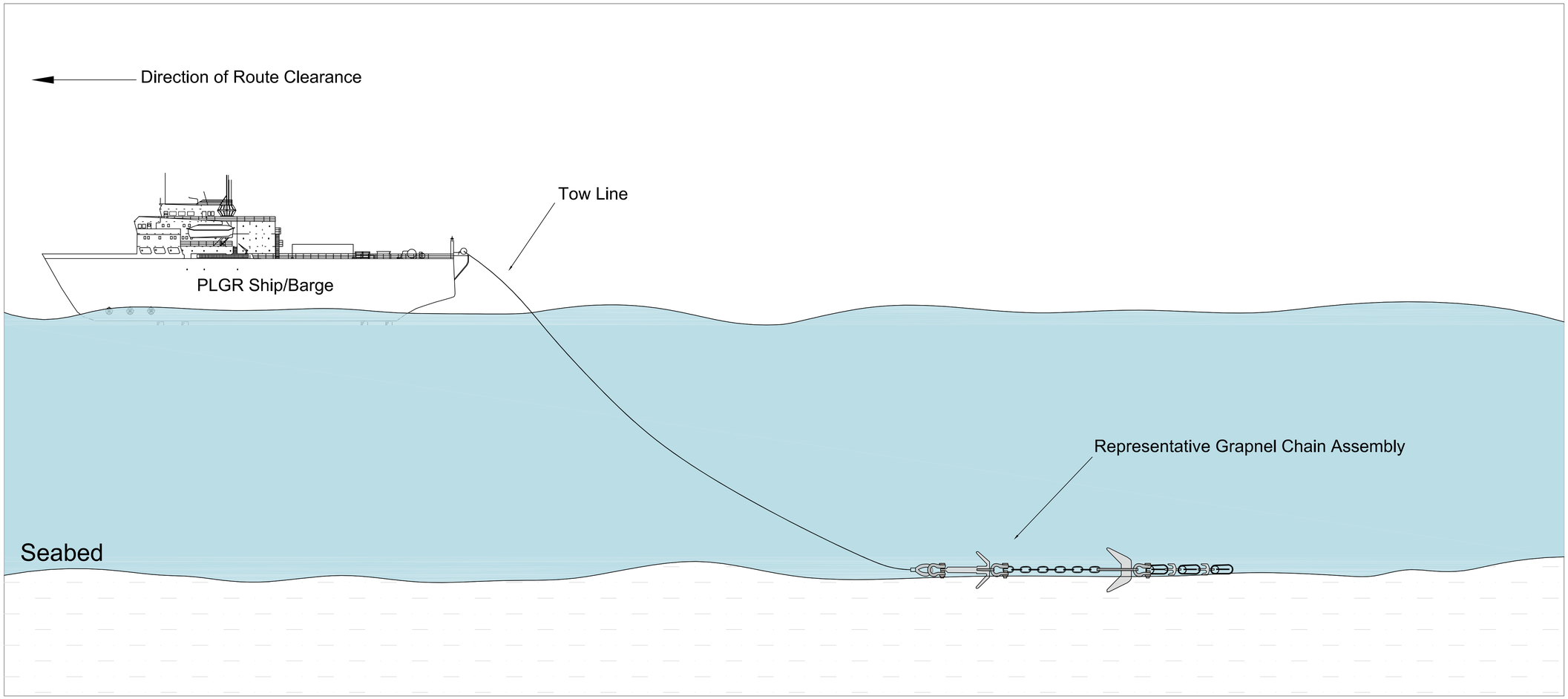
National Grid Drawing Reference

S42_M/TDD/SS/1027

Scale	Sheet Size	Sheet	Issue
NTS	A1	SHEET 1 OF 1	A

THE NATIONAL GRID ELECTRICITY TRANSMISSION PLC (SEA LINK) ORDER
DESIGN DRAWINGS FOR CONSULTATION

ILLUSTRATION OF
PRE LAY GRAPNEL RUN
SHEET 1 of 1



Notes

For statutory consultation purposes only

1. Do not scale from this drawing.
2. All dimensions are in metres/millimetres unless otherwise stated.
3. This drawing is to be read in conjunction with all relevant documents and drawings.
4. No unauthorised disclosure, storage or copying.
5. Detailed design, including final dimensions, to be decided at a later date.
6. PLGR = Pre Lay Grapnel Run
7. For further explanation of these plans see the Guide to the Plans Document.
8. For further information on construction please refer to the construction section of the Preliminary Environmental Impact Report, Volume 1, Part 1, Chapter 4

Legend

Water

Seabed Sediment

Sheet X Centroid Coordinate: N/A Sheet Y Centroid Coordinate:N/A

Issue	Date	Remarks	Drawn	Checked	Approved
A	24/10/2023	FINAL	AMN	FSS	KG

Title

THE NATIONAL GRID ELECTRICITY TRANSMISSION PLC (SEA LINK) ORDER

DESIGN DRAWINGS FOR CONSULTATION
ILLUSTRATION OF
PRE LAY GRAPNEL RUN
SHEET 1 of 1

nationalgrid

Application Number

-

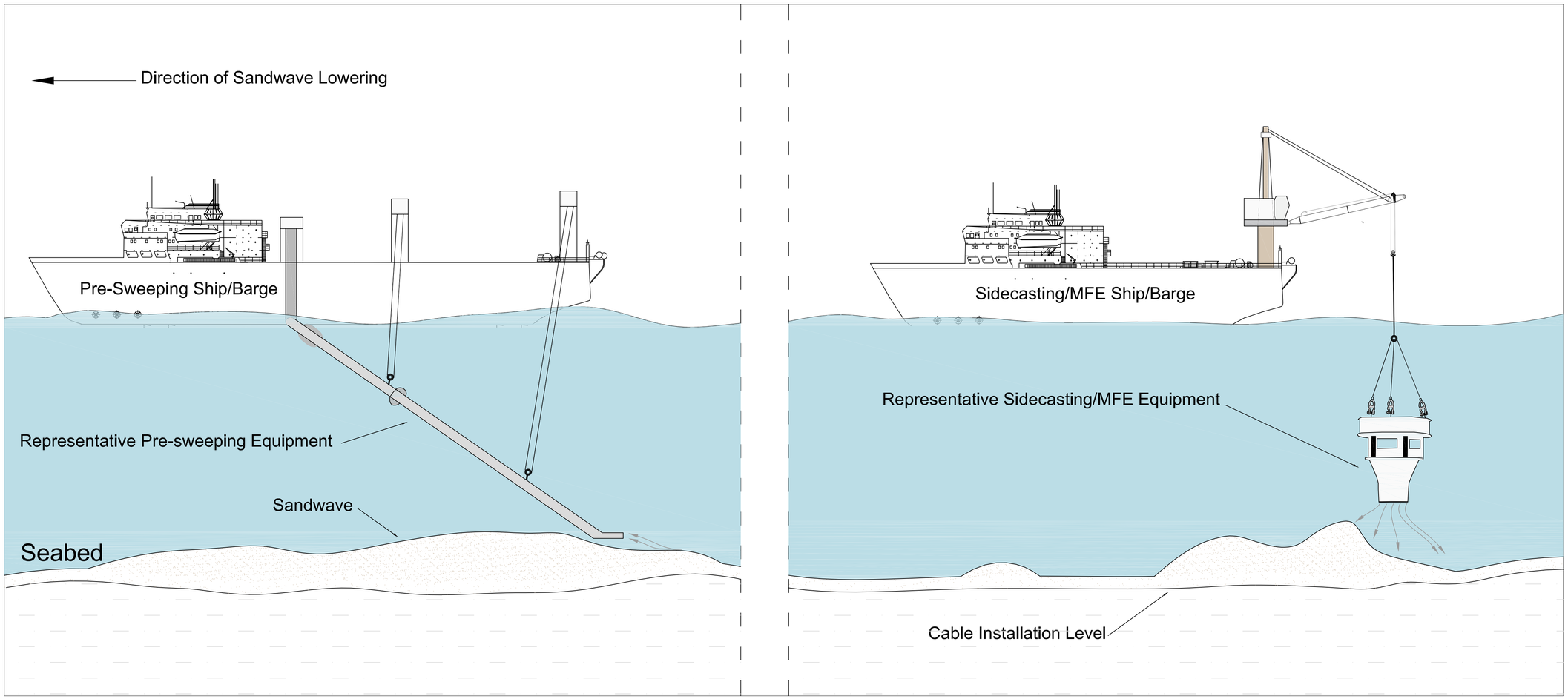
National Grid Drawing Reference

S42_M/TDD/SS/1028

Scale	Sheet Size	Sheet	Issue
NTS	A1	SHEET 1 OF 1	A

THE NATIONAL GRID ELECTRICITY TRANSMISSION PLC (SEA LINK) ORDER
DESIGN DRAWINGS FOR CONSULTATION

ILLUSTRATION OF
INDICATIVE PRE-SWEEPING AND SIDECASTING
SHEET 1 of 1



Notes

For statutory consultation purposes only

1. Do not scale from this drawing.
2. All dimensions are in metres/millimetres unless otherwise stated.
3. This drawing is to be read in conjunction with all relevant documents and drawings.
4. No unauthorised disclosure, storage or copying.
5. Detailed design, including final dimensions, to be decided at a later date.
6. MFE = Mass Flow Excavator.
7. For further explanation of these plans see the Guide to the Plans Document.
8. For further information on construction please refer to the construction section of the Preliminary Environmental Impact Report, Volume 1, Part 1, Chapter 4

Legend

Water

Sandwave

Sheet X Centroid Coordinate: N/A Sheet Y Centroid Coordinate:N/A

Issue	Date	Remarks	Drawn	Checked	Approved
A	24/10/2023	FINAL	AMN	FSS	KG

Title

THE NATIONAL GRID ELECTRICITY TRANSMISSION PLC (SEA LINK) ORDER

DESIGN DRAWINGS FOR CONSULTATION
ILLUSTRATION OF
INDICATIVE PRE-SWEEPING AND SIDECASTING
SHEET 1 of 1

nationalgrid

Application Number
-

National Grid Drawing Reference
S42_M/TDD/SS/1029

Scale	Sheet Size	Sheet	Issue
NTS	A1	SHEET 1 OF 1	A

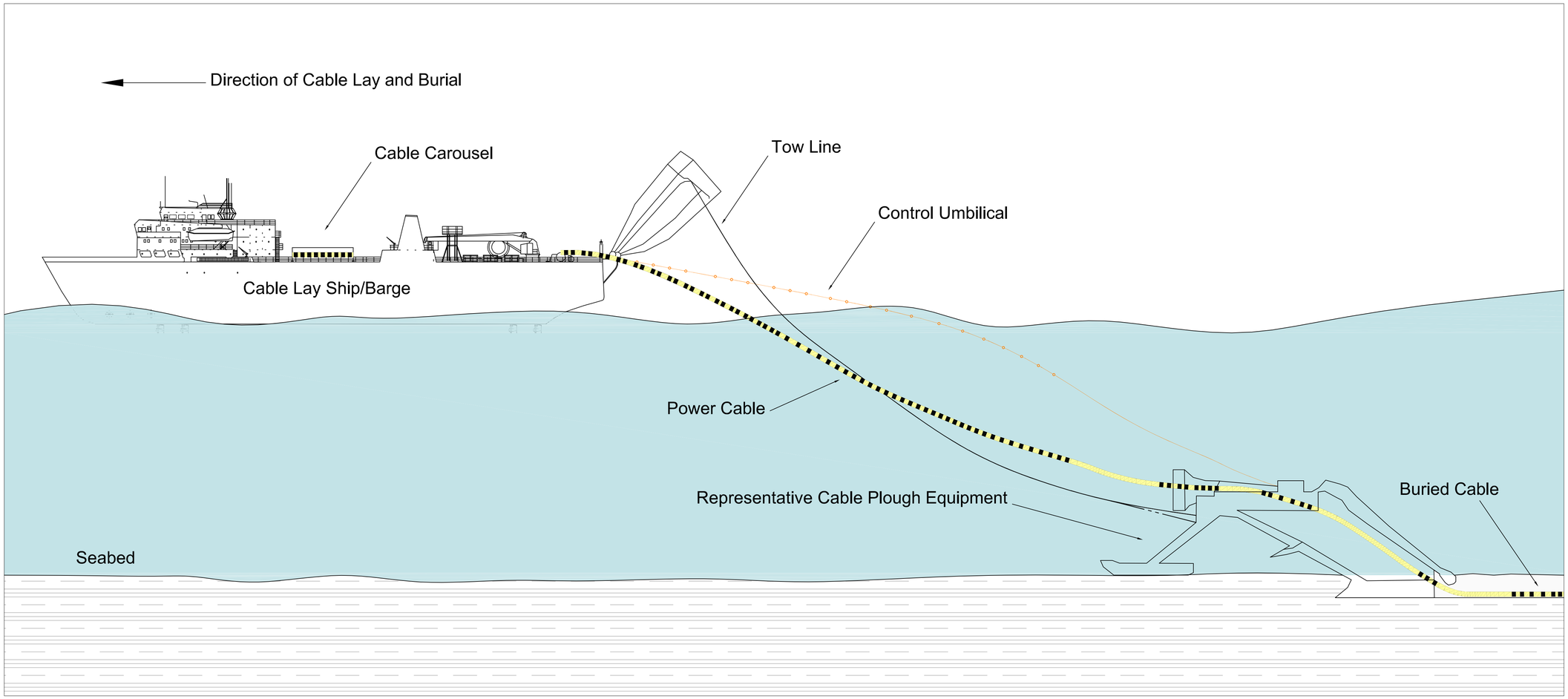
02-02. Cable Installation Works

Drawing Category Name	Plan Title	Scheme	Drawing Numbers
Cable Installation Works	Illustration of simultaneous lay and burial	Offshore Scheme	S42_M/TDD/SS/1032
	Illustration of lay and post-lay burial	Offshore Scheme	S42_M/TDD/SS/1033
	Illustration of illustration of omega and inline joint	Offshore Scheme	S42_M/TDD/SS/1031

To assist with understanding these drawings please see the **Guide to Interacting with the Consultation Plans and Drawings**

THE NATIONAL GRID ELECTRICITY TRANSMISSION PLC (SEA LINK) ORDER
DESIGN DRAWINGS FOR CONSULTATION

ILLUSTRATION OF
SIMULTANEOUS LAY AND BURIAL
SHEET 1 of 1



Notes

For statutory consultation purposes only

1. Do not scale from this drawing.
2. All dimensions are in metres/millimetres unless otherwise stated.
3. This drawing is to be read in conjunction with all relevant documents and drawings.
4. No unauthorised disclosure, storage or copying.
5. Detailed design, including final dimensions, to be decided at a later date.
6. For further explanation of these plans see the Guide to the Plans Document.
7. For further information on construction please refer to the construction section of the Preliminary Environmental Impact Report, Volume 1, Part 1, Chapter 4

Legend

- Water
- Seabed Sediment
- Control Umbilical of Burial Equipment
- Tow Line of Burial Equipment
- New HVDC Bundle

Sheet X Centroid Coordinate: N/A Sheet Y Centroid Coordinate:N/A

Issue	Date	Remarks	Drawn	Checked	Approved
A	24/10/2023	FINAL	AMN	FSS	KG

Title

THE NATIONAL GRID ELECTRICITY TRANSMISSION PLC (SEA LINK) ORDER

DESIGN DRAWINGS FOR CONSULTATION
ILLUSTRATION OF
SIMULTANEOUS LAY AND BURIAL
SHEET 1 of 1

nationalgrid

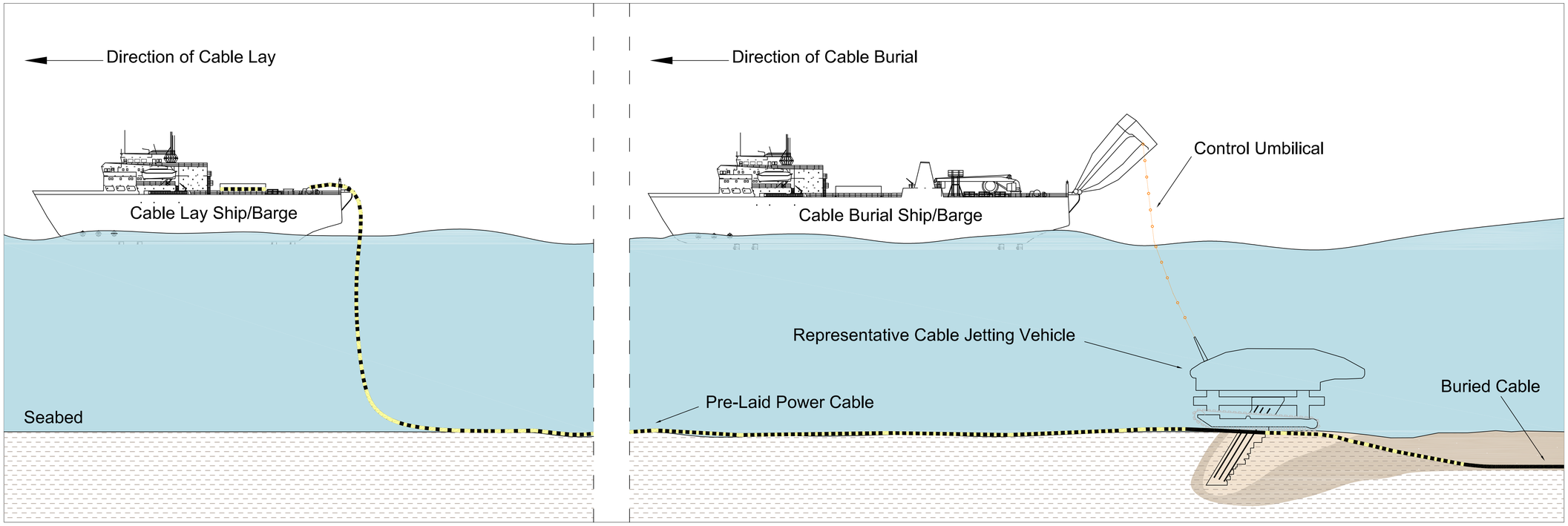
Application Number
-

National Grid Drawing Reference
S42_M/TDD/SS/1032

Scale	Sheet Size	Sheet	Issue
NTS	A1	SHEET 1 OF 1	A

THE NATIONAL GRID ELECTRICITY TRANSMISSION PLC (SEA LINK) ORDER
DESIGN DRAWINGS FOR CONSULTATION

ILLUSTRATION OF
LAY AND POST-LAY BURIAL
SHEET 1 of 1



Notes

For statutory consultation purposes only

1. Do not scale from this drawing.
2. All dimensions are in metres/millimetres unless otherwise stated.
3. This drawing is to be read in conjunction with all relevant documents and drawings.
4. No unauthorised disclosure, storage or copying.
5. Detailed design, including final dimensions, to be decided at a later date.
6. For further explanation of these plans see the Guide to the Plans Document.
7. For further information on construction please refer to the construction section of the Preliminary Environmental Impact Report, Volume 1, Part 1, Chapter 4

Legend

- Water
- Seabed Sediment
- Fluidization Area
- Sedimentation Area
- Control Umbilical of Burial Equipment
- New HVDC Bundle

Sheet X Centroid Coordinate: N/A Sheet Y Centroid Coordinate:N/A

Issue	Date	Remarks	Drawn	Checked	Approved
A	24/10/2023	FINAL	AMN	FSS	KG

Title

THE NATIONAL GRID ELECTRICITY TRANSMISSION PLC (SEA LINK) ORDER

DESIGN DRAWINGS FOR CONSULTATION
ILLUSTRATION OF
LAY AND POST-LAY BURIAL
SHEET 1 of 1

nationalgrid

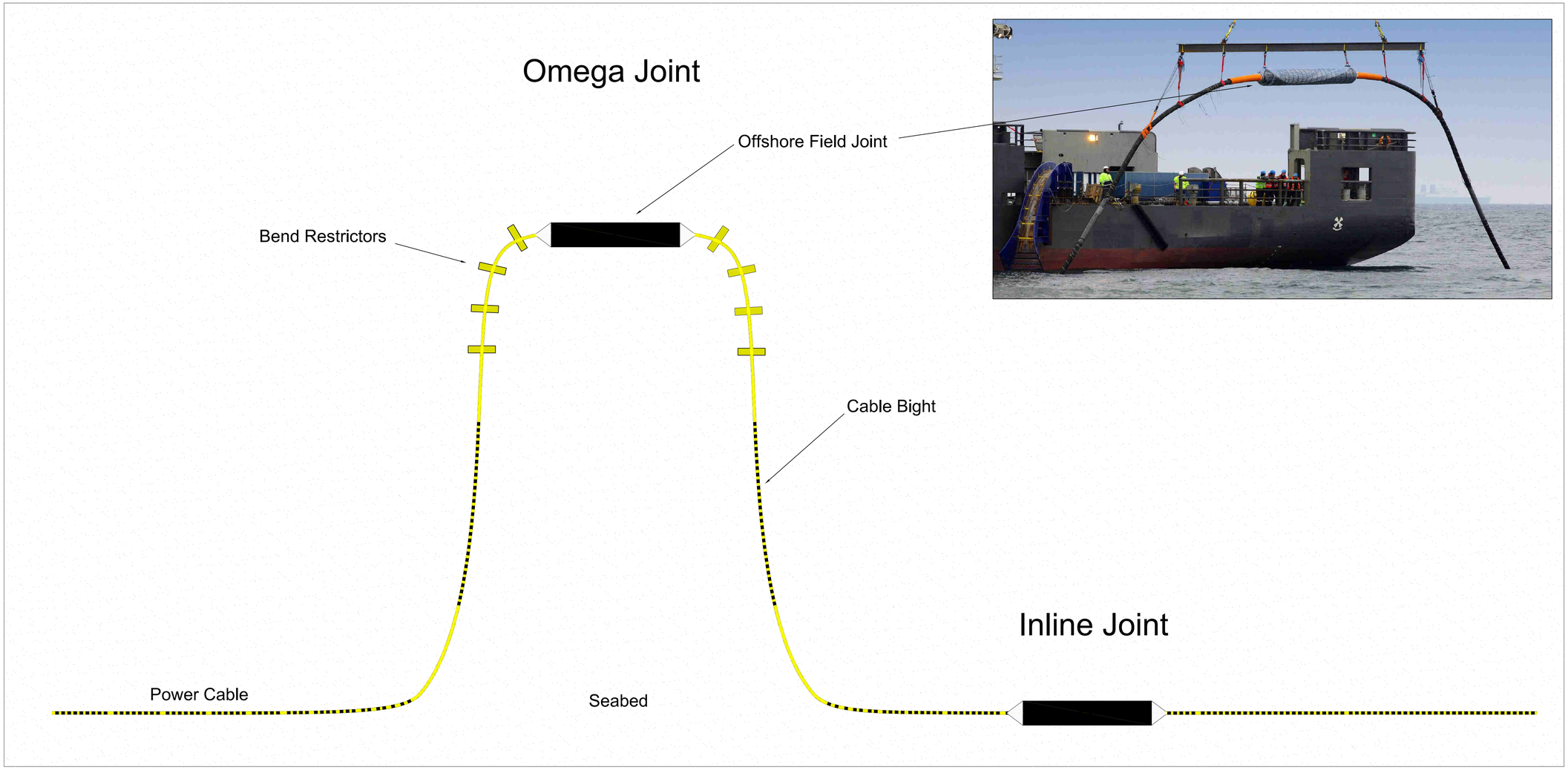
Application Number
-

National Grid Drawing Reference
S42_M/TDD/SS/1033

Scale	Sheet Size	Sheet	Issue
NTS	A1	SHEET 1 OF 1	A

THE NATIONAL GRID ELECTRICITY TRANSMISSION PLC (SEA LINK) ORDER
DESIGN DRAWINGS FOR CONSULTATION

ILLUSTRATION OF
OMEGA AND INLINE JOINT
SHEET 1 of 1



Notes

For statutory consultation purposes only

1. Do not scale from this drawing.
2. All dimensions are in metres/millimetres unless otherwise stated.
3. This drawing is to be read in conjunction with all relevant documents and drawings.
4. No unauthorised disclosure, storage or copying.
5. Detailed design, including final dimensions, to be decided at a later date.
6. Infield joint is a joint made on board a cable laying vessel or barge, or in the beach areas, between cable lengths which have been armoured. They are generally used to connect two delivery lengths offshore creating a continuous linear 'in-line' asset.
7. Omega joint is a joint made during cable lay or during a cable repair. The joint get its name because it results in a bight of cable laid to the side of the main cable route and looks like an 'Ω' when viewed from above.
8. For further explanation of these plans see the Guide to the Plans Document.
9. For further information on construction please refer to the construction section of the Preliminary Environmental Impact Report, Volume 1, Part 1, Chapter 4

Legend

- Seabed Sediment
- New HVDC Bundle
- Inline/Omega Joint

Sheet X Centroid Coordinate: N/A Sheet Y Centroid Coordinate:N/A

Issue	Date	Remarks	Drawn	Checked	Approved
A	24/10/2023	FINAL	AMN	FSS	KG

Title

THE NATIONAL GRID ELECTRICITY TRANSMISSION PLC (SEA LINK) ORDER

DESIGN DRAWINGS FOR CONSULTATION
ILLUSTRATION OF
OMEGA AND INLINE JOINT
SHEET 1 of 1

nationalgrid

Application Number
-

National Grid Drawing Reference
S42_M/TDD/SS/1031

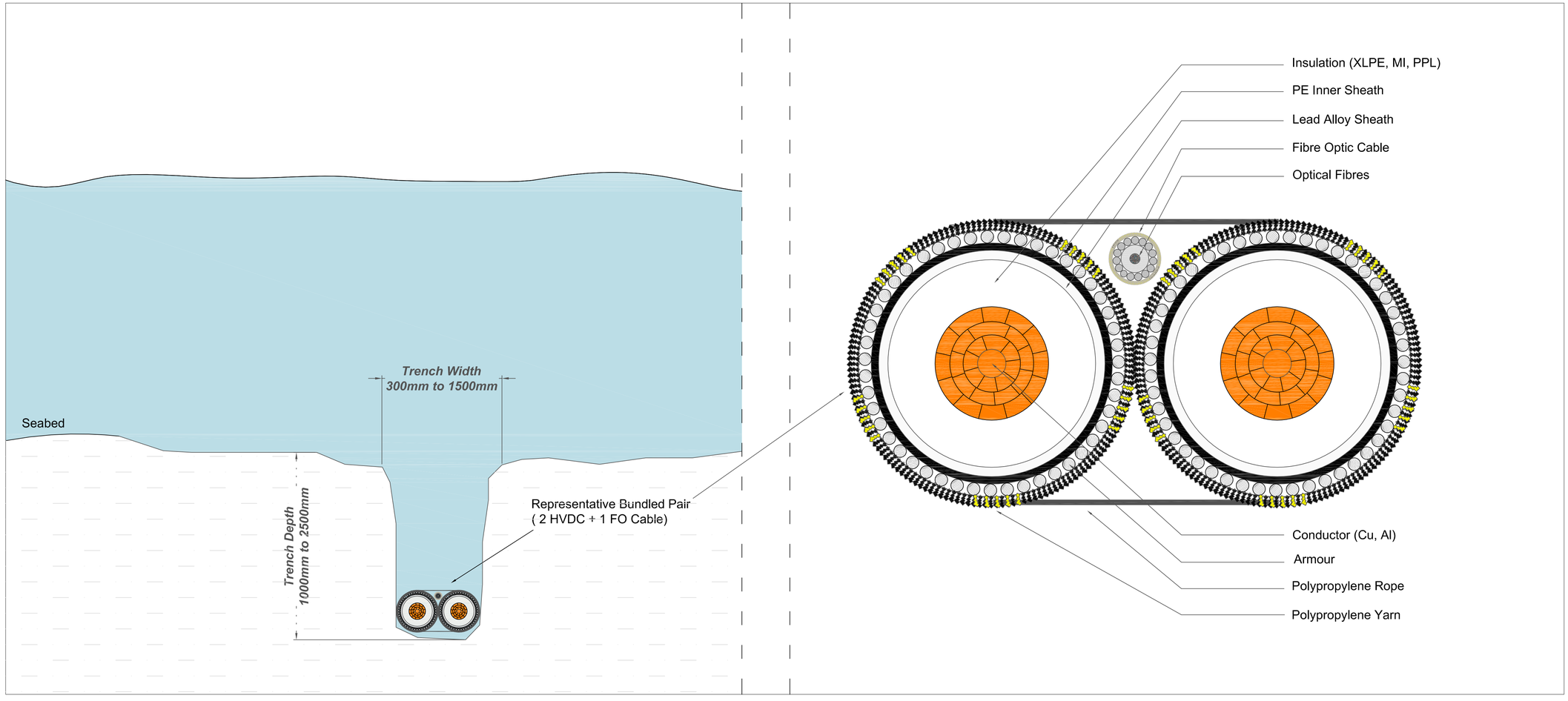
Scale	Sheet Size	Sheet	Issue
NTS	A1	SHEET 1 OF 1	A

02-03. Cable Configuration and Trench Profiles

Drawing Category Name	Plan Title	Scheme	Drawing Numbers
Cable Configuration and Trench Profiles	Illustration of bundled cable profile/ configuration	Offshore Scheme	S42_M/TDD/SS/1026
	Illustration of typical marine trench profiles	Offshore Scheme	S42_M/TDD/SS/1036

To assist with understanding these drawings please see the **Guide to Interacting with the Consultation Plans and Drawings**

THE NATIONAL GRID ELECTRICITY TRANSMISSION PLC (SEA LINK) ORDER
DESIGN DRAWINGS FOR CONSULTATION
ILLUSTRATION OF
HVDC BUNDLED CABLE PROFILE / CONFIGURATION
SHEET 1 of 1



Notes

For statutory consultation purposes only

1. Do not scale from this drawing.
2. All dimensions are in metres/millimetres unless otherwise stated.
3. This drawing is to be read in conjunction with all relevant documents and drawings.
4. No unauthorised disclosure, storage or copying.
5. Detailed design, including final dimensions, to be decided at a later date.
6. The possibility of 'V' shaped trench due to shallow soil types and/or trench collapse cannot be ruled out.
7. For further explanation of these plans see the Guide to the Plans Document.
8. For further information on construction please refer to the construction section of the Preliminary Environmental Impact Report, Volume 1, Part 1, Chapter 4

Legend

Water

Sub-seabed Sediment

Sheet X Centroid Coordinate: N/A Sheet Y Centroid Coordinate:N/A

Issue	Date	Remarks	Drawn	Checked	Approved
A	24/10/2023	FINAL	AMN	FSS	KG

Title

THE NATIONAL GRID ELECTRICITY TRANSMISSION PLC (SEA LINK) ORDER

DESIGN DRAWINGS FOR CONSULTATION
ILLUSTRATION OF
HVDC BUNDLED CABLE PROFILE / CONFIGURATION
SHEET 1 of 1

nationalgrid

Application Number
-

National Grid Drawing Reference
S42_M/TDD/SS/1026

Scale	Sheet Size	Sheet	Issue
NTS	A1	SHEET 1 OF 1	A

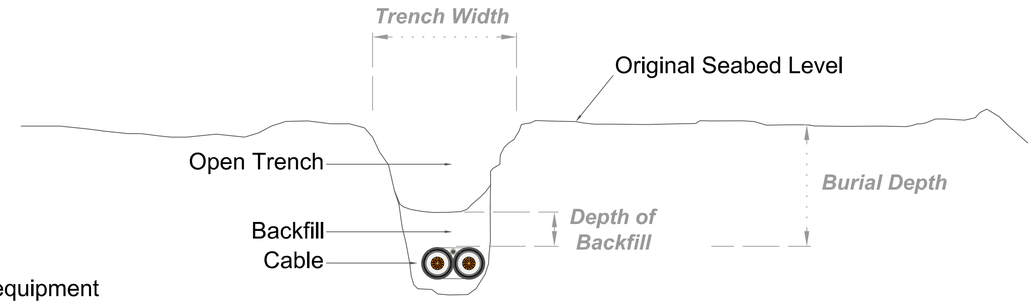
THE NATIONAL GRID ELECTRICITY TRANSMISSION PLC (SEA LINK) ORDER
DESIGN DRAWINGS FOR CONSULTATION

ILLUSTRATION OF
TYPICAL MARINE TRENCH PROFILES
SHEET 1 of 1

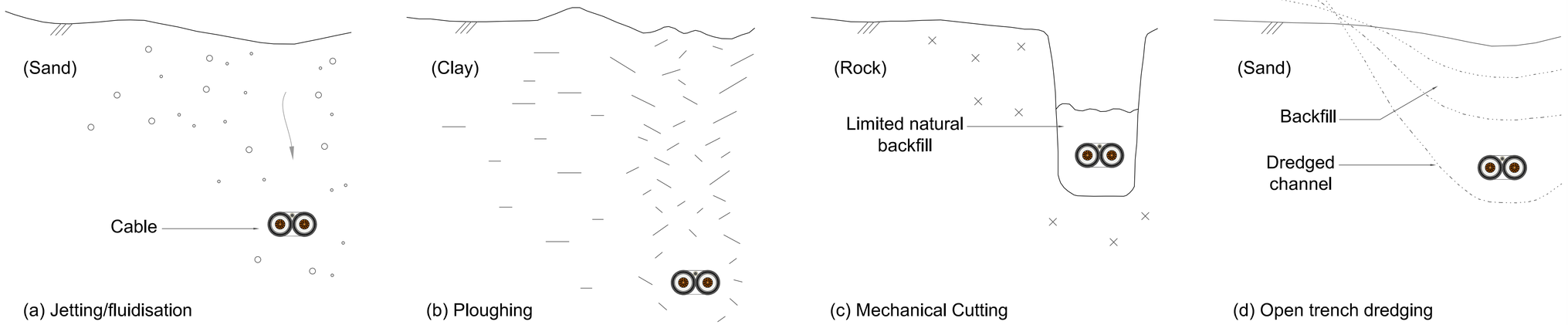
Notes
For statutory consultation purposes only

1. Do not scale from this drawing.
2. All dimensions are in metres/millimetres unless otherwise stated.
3. This drawing is to be read in conjunction with all relevant documents and drawings.
4. No unauthorised disclosure, storage or copying.
5. Detailed design, including final dimensions, to be decided at a later date.
6. For further explanation of these plans see the Guide to the Plans Document.
7. For further information on construction please refer to the construction section of the Preliminary Environmental Impact Report, Volume 1, Part 1, Chapter 4

Typical Trench Profile



Trench profiles from different installation equipment



(a) Jetting/fluidisation

(b) Ploughing

(c) Mechanical Cutting

(d) Open trench dredging

(after: Subsea power cables in shallow water, DNVGL-RP-0360)

Legend

Sand

Clay

Rock

Sheet X Centroid Coordinate: N/A Sheet Y Centroid Coordinate:N/A

Issue	Date	Remarks	Drawn	Checked	Approved
A	24/10/2023	FINAL	AMN	FSS	KG

Title

THE NATIONAL GRID ELECTRICITY TRANSMISSION PLC (SEA LINK) ORDER

DESIGN DRAWINGS FOR CONSULTATION
ILLUSTRATION OF
TYPICAL MARINE TRENCH PROFILES
SHEET 1 of 1

nationalgrid

Application Number
-

National Grid Drawing Reference
S42_M/TDD/SS/1036

Scale	Sheet Size	Sheet	Issue
NTS	A1	SHEET 1 OF 1	A

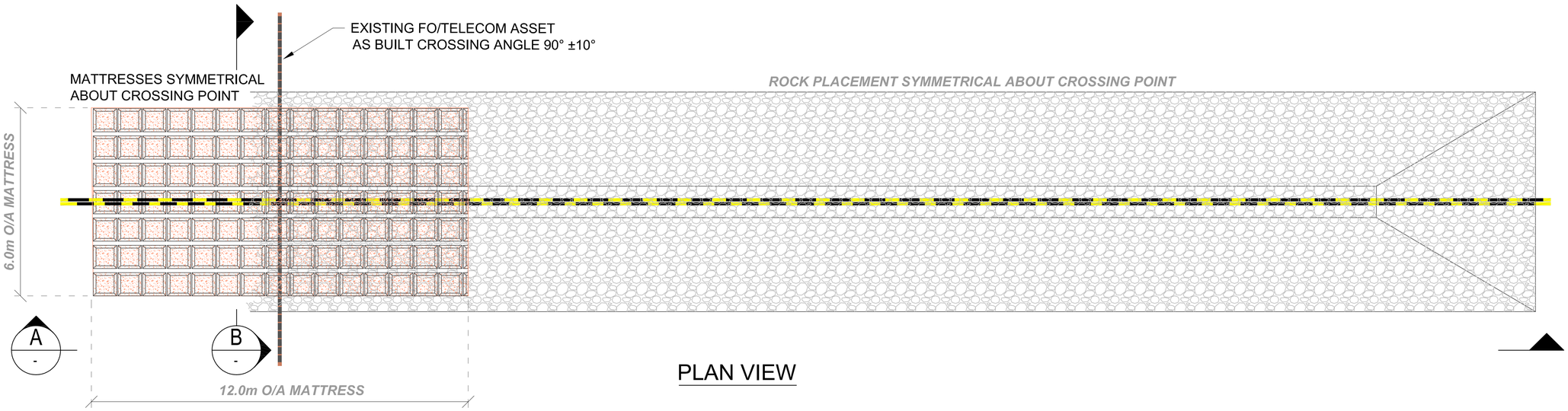
02-04. Cable Crossings and Protection

Drawing Category Name	Plan Title	Scheme	Drawing Numbers
Cable Crossings and Protection	Indicative HVDC bundled cable crossing over unburied fibre optic/telecoms asset	Offshore Scheme	S42_M/TDD/SS/1021
	Indicative HVDC bundled cable crossing over buried FO/telecoms asset	Offshore Scheme	S42_M/TDD/SS/1022
	Indicative HVDC bundled cable crossing over buried power cable asset	Offshore Scheme	S42_M/TDD/SS/1023
	Indicative HVDC bundled cable crossing over pre lay berm	Offshore Scheme	S42_M/TDD/SS/1024
	Indicative rock berm schematics pre lay and post lay	Offshore Scheme	S42_M/TDD/SS/1025
	Illustration of cable protective systems	Offshore Scheme	S42_M/TDD/SS/1034
	Illustration of rock placement sections	Offshore Scheme	S42_M/TDD/SS/1035

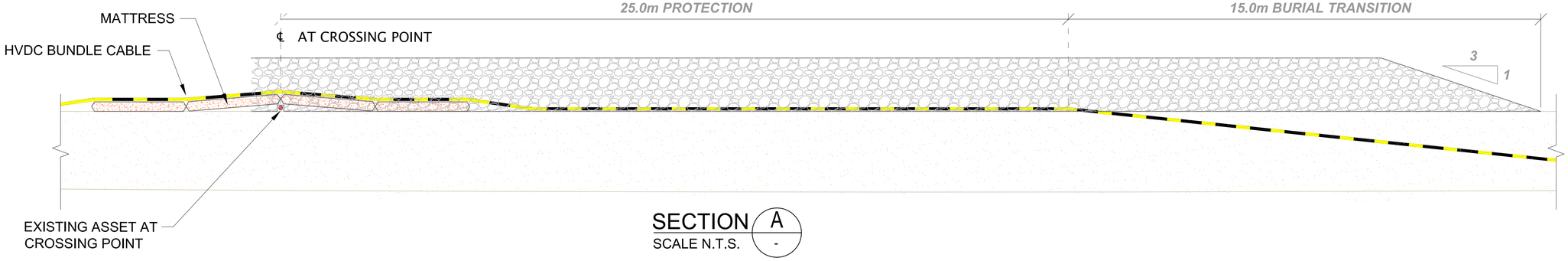
To assist with understanding these drawings please see the **Guide to Interacting with the Consultation Plans and Drawings**

THE NATIONAL GRID ELECTRICITY TRANSMISSION PLC (SEA LINK) ORDER
DESIGN DRAWINGS FOR CONSULTATION

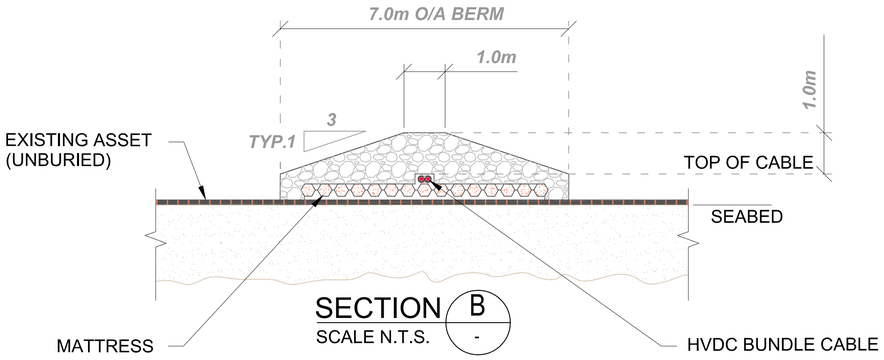
INDICATIVE HVDC BUNDLED CABLE CROSSING
OVER UNBURIED FO/TELECOMS ASSET
SHEET 1 of 1



PLAN VIEW



SECTION A
SCALE N.T.S.



SECTION B
SCALE N.T.S.

Notes

For statutory consultation purposes only

1. Do not scale from this drawing.
2. All dimensions are in metres/millimetres unless otherwise stated.
3. This drawing is to be read in conjunction with all relevant documents and drawings.
4. No unauthorised disclosure, storage or copying.
5. Detailed design, including final dimensions, to be agreed during crossing agreement discussions with third parties including burial technique.
6. For further explanation of these plans see the Guide to the Plans Document.
7. For further information on construction please refer to the construction section of the Preliminary Environmental Impact Report, Volume 1, Part 1, Chapter 4

Legend

- Post Lay Rock Berm
- Mattress (Plan View)
- Mattress (Section A)
- Mattress (Section B)
- Existing Asset
- New HVDC Bundle

Sheet X Centroid Coordinate: N/A Sheet Y Centroid Coordinate:N/A

Issue	Date	Remarks	Drawn	Checked	Approved
A	24/10/2023	FINAL	AMN	FSS	KG

Title

THE NATIONAL GRID ELECTRICITY
TRANSMISSION PLC (SEA LINK) ORDER

DESIGN DRAWINGS FOR CONSULTATION
INDICATIVE HVDC BUNDLED CABLE CROSSING
OVER UNBURIED FO/TELECOMS ASSET
SHEET 1 of 1

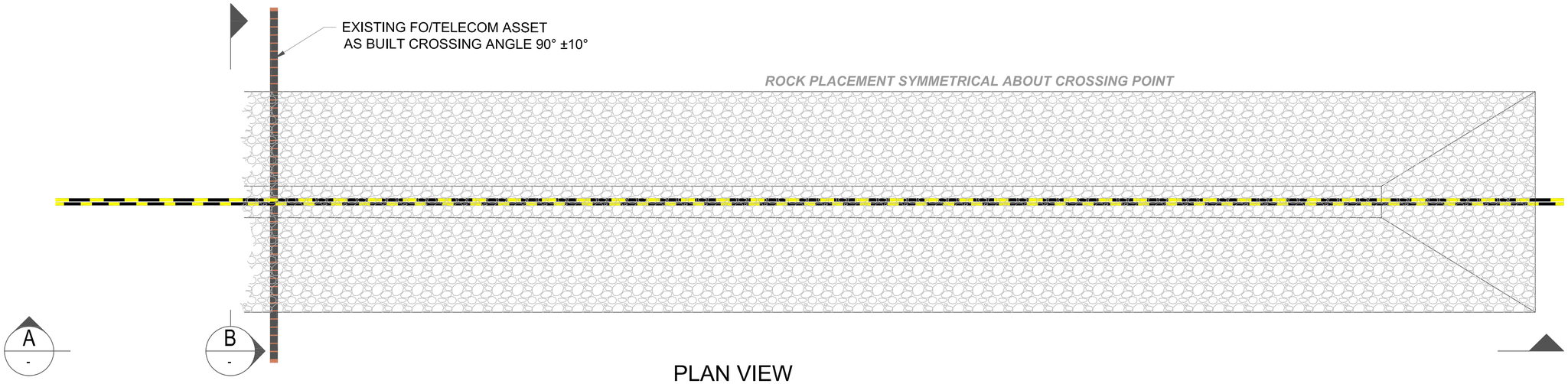
nationalgrid

Application Number
-

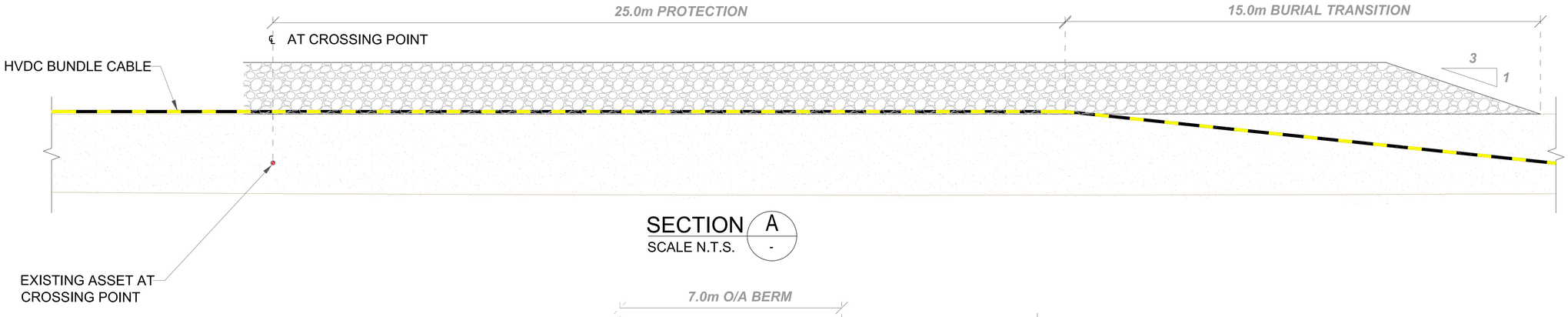
National Grid Drawing Reference
S42_M/TDD/SS/1021

Scale	Sheet Size	Sheet	Issue
NTS	A1	SHEET 1 OF 1	A

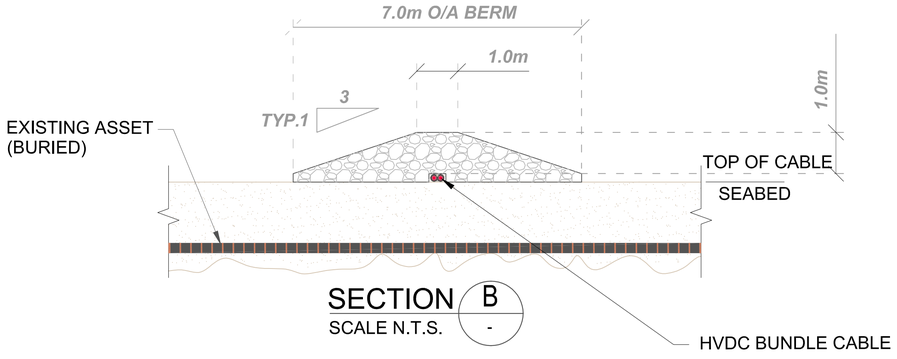
THE NATIONAL GRID ELECTRICITY TRANSMISSION PLC (SEA LINK) ORDER
DESIGN DRAWINGS FOR CONSULTATION
INDICATIVE HVDC BUNDLED CABLE CROSSING
OVER BURIED FO/TELECOMS ASSET
SHEET 1 of 1



PLAN VIEW



SECTION A
SCALE N.T.S.



SECTION B
SCALE N.T.S.

Notes

For statutory consultation purposes only

1. Do not scale from this drawing.
2. All dimensions are in metres/millimetres unless otherwise stated.
3. This drawing is to be read in conjunction with all relevant documents and drawings.
4. No unauthorised disclosure, storage or copying.
5. Detailed design, including final dimensions, to be agreed during crossing agreement discussions with third parties including burial technique.
6. For further explanation of these plans see the Guide to the Plans Document.
7. For further information on construction please refer to the construction section of the Preliminary Environmental Impact Report, Volume 1, Part 1, Chapter 4

Legend

- Post Lay Rock Berm
- Existing Asset
- New HVDC Bundle

Sheet X Centroid Coordinate: N/A Sheet Y Centroid Coordinate:N/A

Issue	Date	Remarks	Drawn	Checked	Approved
A	24/10/2023	FINAL	AMN	FSS	KG

Title

THE NATIONAL GRID ELECTRICITY TRANSMISSION PLC (SEA LINK) ORDER

DESIGN DRAWINGS FOR CONSULTATION
INDICATIVE HVDC BUNDLED CABLE CROSSING
OVER BURIED FO/TELECOMS ASSET
SHEET 1 of 1

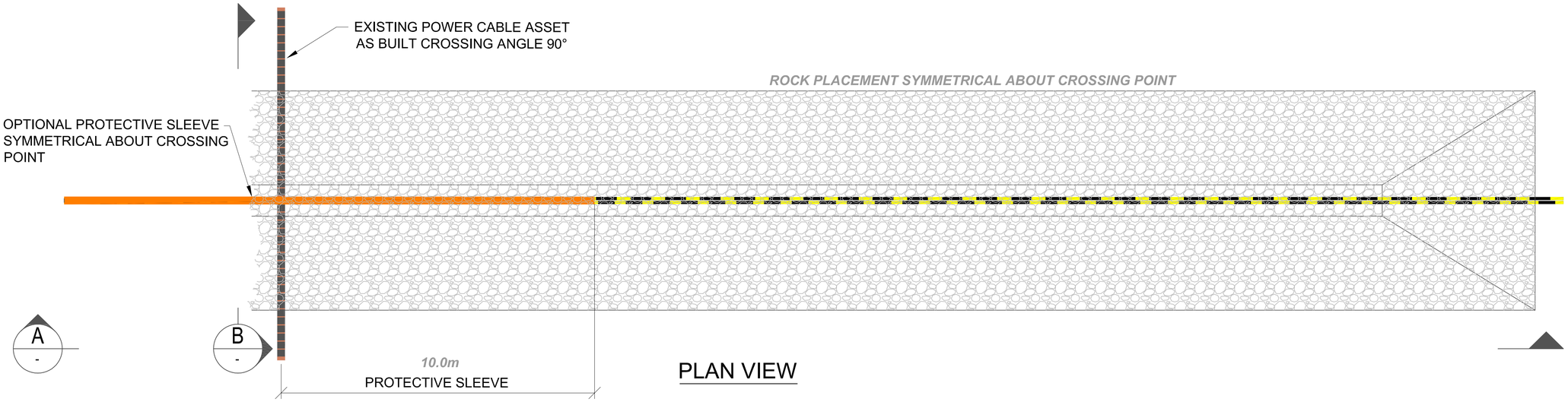
nationalgrid

Application Number
-

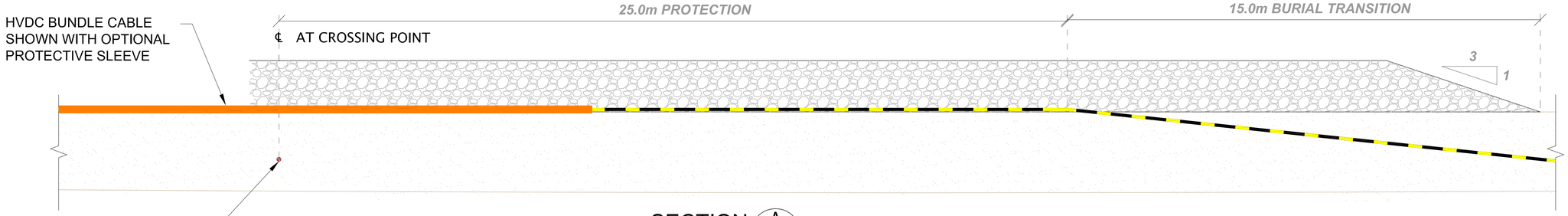
National Grid Drawing Reference
S42_M/TDD/SS/1022

Scale	Sheet Size	Sheet	Issue
NTS	A1	SHEET 1 OF 1	A

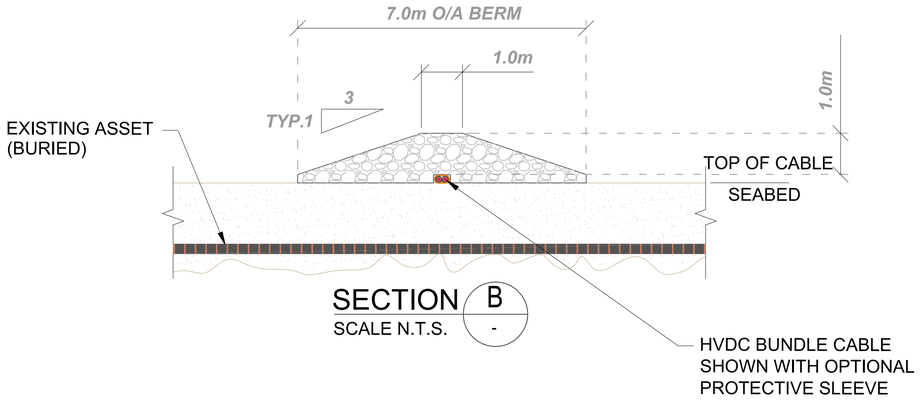
THE NATIONAL GRID ELECTRICITY TRANSMISSION PLC (SEA LINK) ORDER
DESIGN DRAWINGS FOR CONSULTATION
INDICATIVE HVDC BUNDLED CABLE CROSSING
OVER BURIED POWER CABLE ASSET
SHEET 1 of 1



PLAN VIEW



SECTION A
SCALE N.T.S.



SECTION B
SCALE N.T.S.

Notes

For statutory consultation purposes only

1. Do not scale from this drawing.
2. All dimensions are in metres/millimetres unless otherwise stated.
3. This drawing is to be read in conjunction with all relevant documents and drawings.
4. No unauthorised disclosure, storage or copying.
5. Detailed design, including final dimensions, to be agreed during crossing agreement discussions with third parties including burial technique.
6. Minimum vertical offset between the crossing power cables to be agreed as part of crossing agreement.
7. Protective sleeves can be added ±10m from crossing point, if required as part of crossing agreement.
8. For further explanation of these plans see the Guide to the Plans Document.
7. For further information on construction please refer to the construction section of the Preliminary Environmental Impact Report, Volume 1, Part 1, Chapter 4

Legend

- Post Lay Rock Berm
- Existing Asset
- New HVDC Bundle
- Protective Sleeve

Sheet X Centroid Coordinate: N/A Sheet Y Centroid Coordinate:N/A

Issue	Date	Remarks	Drawn	Checked	Approved
A	24/10/2023	FINAL	AMN	FSS	KG

Title

THE NATIONAL GRID ELECTRICITY TRANSMISSION PLC (SEA LINK) ORDER

DESIGN DRAWINGS FOR CONSULTATION
INDICATIVE HVDC BUNDLED CABLE CROSSING
OVER BURIED POWER CABLE ASSET
SHEET 1 of 1

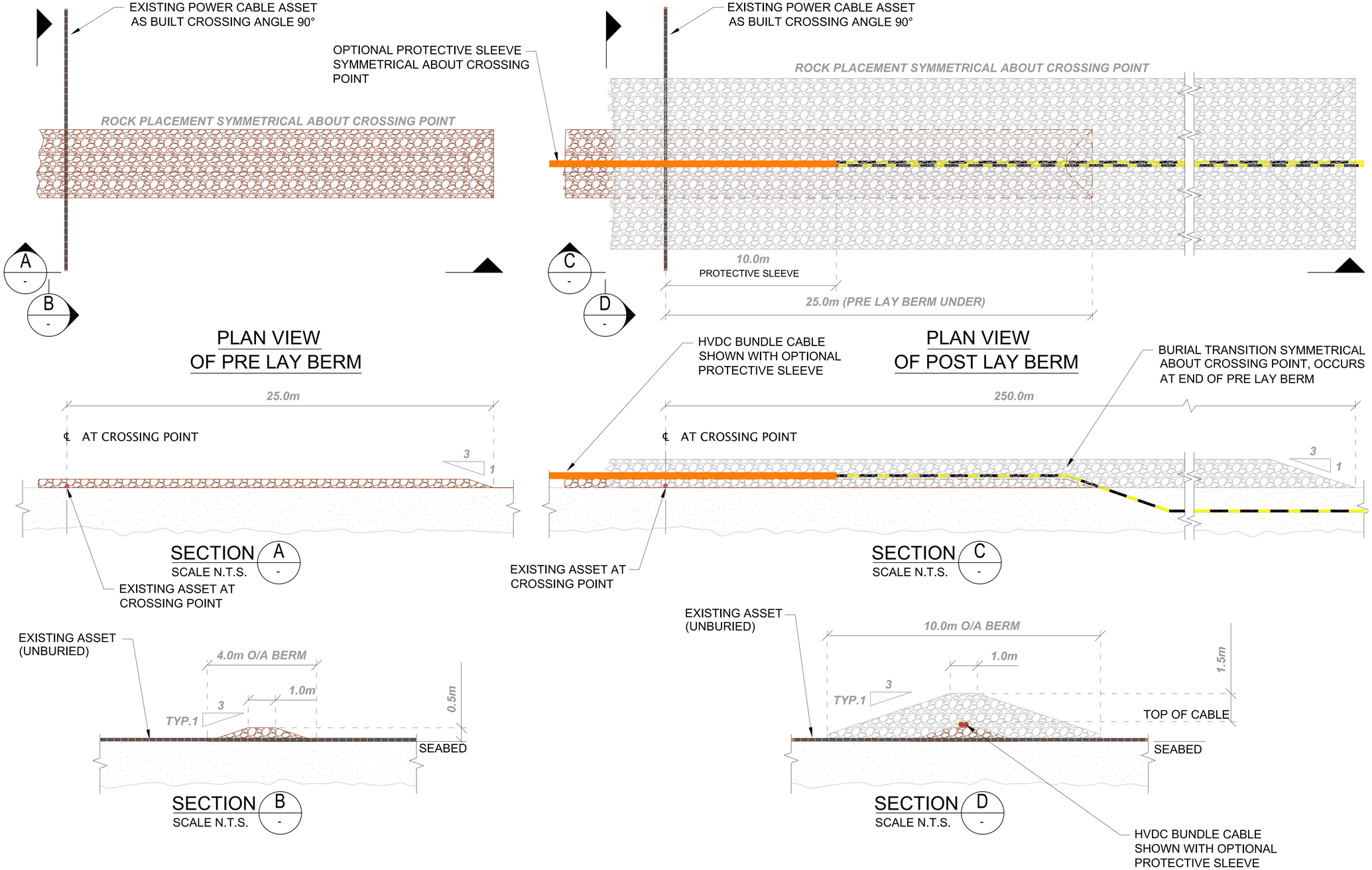
nationalgrid

Application Number
-

National Grid Drawing Reference
S42_M/TDD/SS/1023

Scale	Sheet Size	Sheet	Issue
NTS	A1	SHEET 1 OF 1	A

THE NATIONAL GRID ELECTRICITY TRANSMISSION PLC (SEA LINK) ORDER
DESIGN DRAWINGS FOR CONSULTATION
INDICATIVE HVDC BUNDLED CABLE CROSSING
OVER PRE LAY BERM
SHEET 1 of 1



Notes

For statutory consultation purposes only

1. Do not scale from this drawing.
2. All dimensions are in metres/millimetres unless otherwise stated.
3. This drawing is to be read in conjunction with all relevant documents and drawings.
4. No unauthorised disclosure, storage or copying.
5. Detailed design, including final dimensions, to be agreed during crossing agreement discussions with third parties including burial technique.
6. Protective sleeves can be added ±10m from crossing point, if required as part of crossing agreement.
7. For further explanation of these plans see the Guide to the Plans Document.
8. For further information on construction please refer to the construction section of the Preliminary Environmental Impact Report, Volume 1, Part 1, Chapter 4

Legend

- Post Lay Rock Berm
- Pre Lay Rock Berm
- Existing Asset
- New HVDC Bundle
- Protective Sleeve

Sheet X Centroid Coordinate: N/A Sheet Y Centroid Coordinate:N/A

Issue	Date	Remarks	Drawn	Checked	Approved
A	24/10/2023	For Information	AMN	FSS	KG

Title

THE NATIONAL GRID ELECTRICITY TRANSMISSION PLC (SEA LINK) ORDER

DESIGN DRAWINGS FOR CONSULTATION
INDICATIVE HVDC BUNDLED CABLE CROSSING
OVER PRE LAY BERM
SHEET 1 of 1

nationalgrid

Application Number
-

National Grid Drawing Reference
S42_M/TDD/SS/1024

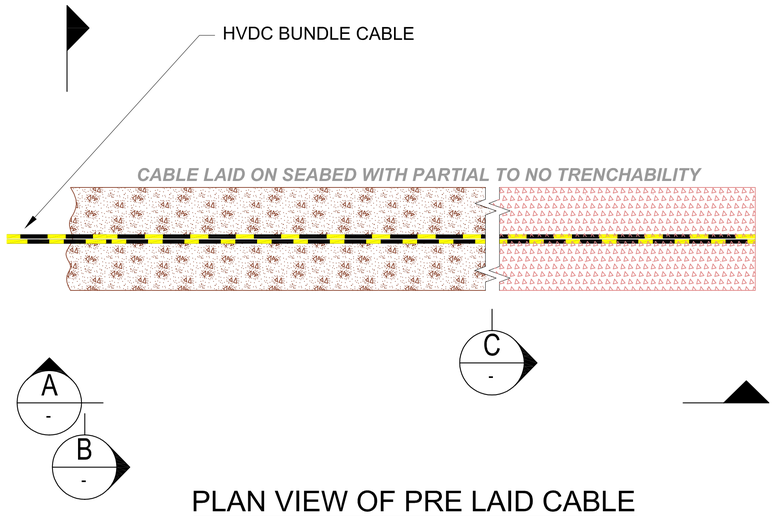
Scale	Sheet Size	Sheet	Issue
NTS	A1	SHEET 1 OF 1	A

THE NATIONAL GRID ELECTRICITY TRANSMISSION PLC (SEA LINK) ORDER
DESIGN DRAWINGS FOR CONSULTATION
INDICATIVE ROCK BERM SCHEMATICS
PRE LAY AND POST LAY
SHEET 1 of 1

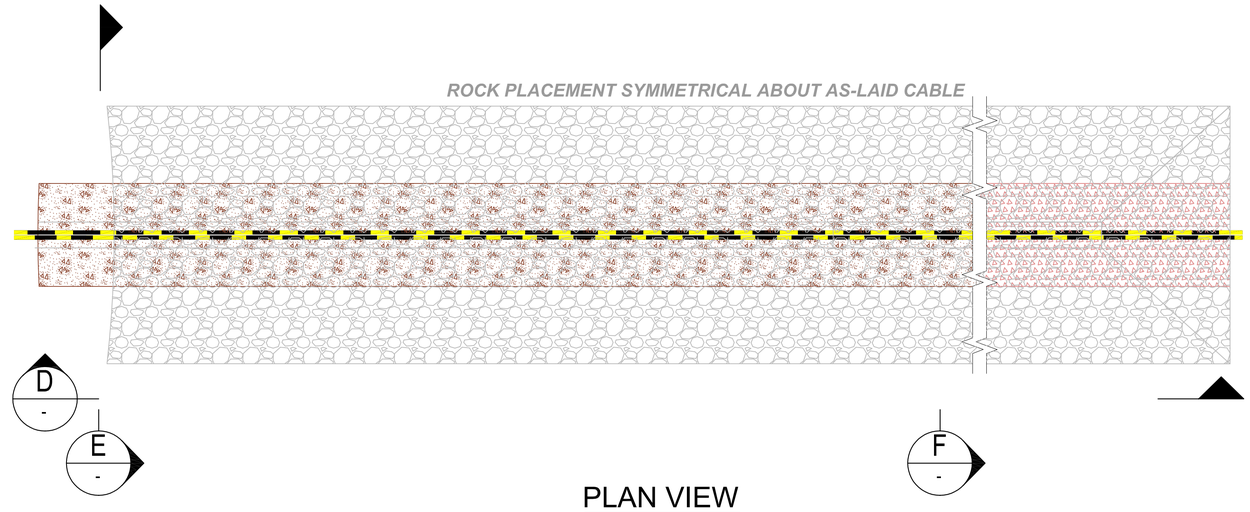
Notes

For statutory consultation purposes only

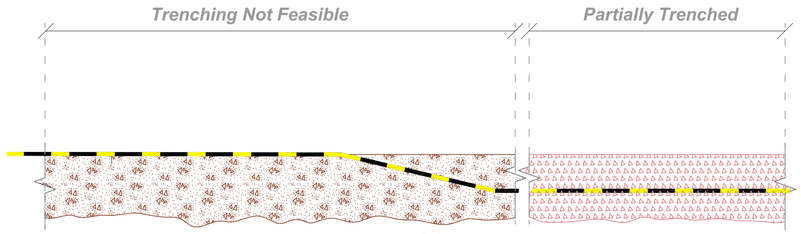
1. Do not scale from this drawing.
2. All dimensions are in metres/millimetres unless otherwise stated.
3. This drawing is to be read in conjunction with all relevant documents and drawings.
4. No unauthorised disclosure, storage or copying.
5. Detailed design, including final dimensions, to be agreed during crossing agreement discussions with third parties including burial technique.
6. Height of berms dependent on water depth, grade of rock & tonnage of rock required for protection.
7. For further explanation of these plans see the Guide to the Plans Document.
8. For further information on construction please refer to the construction section of the Preliminary Environmental Impact Report, Volume 1, Part 1, Chapter 4



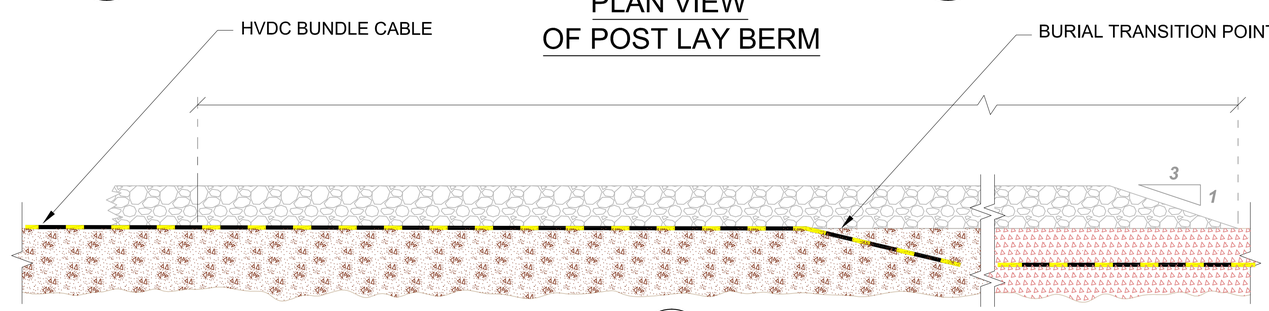
PLAN VIEW OF PRE LAID CABLE
TARGET TRENCH DEPTH NOT ACHIEVED



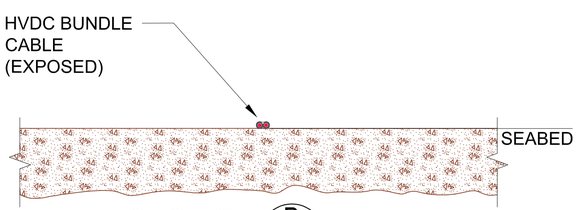
PLAN VIEW
OF POST LAY BERM



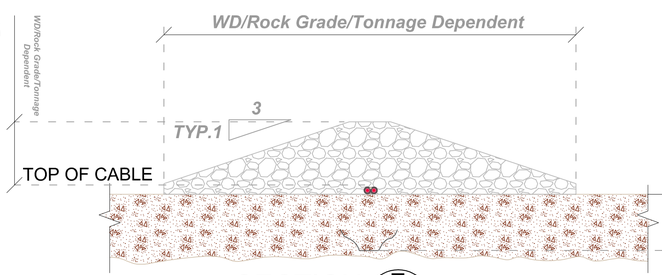
SECTION A
SCALE N.T.S. -



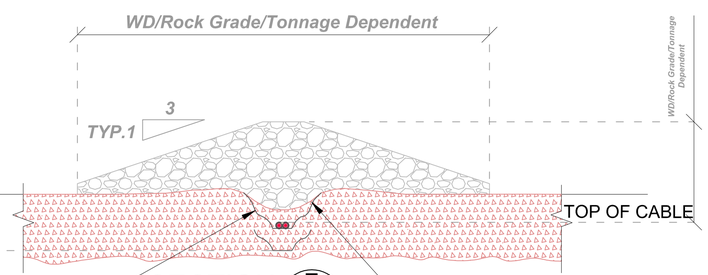
SECTION D
SCALE N.T.S. -



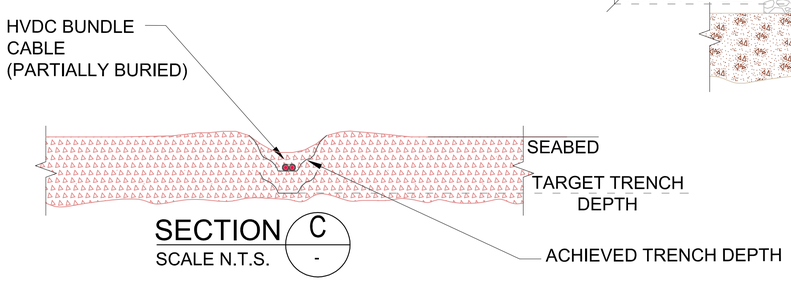
SECTION B
SCALE N.T.S. -



SECTION E
SCALE N.T.S. -



SECTION F
SCALE N.T.S. -



SECTION C
SCALE N.T.S. -

ACHIEVED TRENCH DEPTH

NATURAL BACKFILL

Legend

- Post Lay Rock Berm
- Non-Trenchable Soil
- Semi-Trenchable Soil
- New HVDC Bundle

Sheet X Centroid Coordinate: N/A Sheet Y Centroid Coordinate:N/A

Issue	Date	Remarks	Drawn	Checked	Approved
A	24/10/2023	FINAL	AMN	FSS	KG

Title

THE NATIONAL GRID ELECTRICITY TRANSMISSION PLC (SEA LINK) ORDER

DESIGN DRAWINGS FOR CONSULTATION
INDICATIVE ROCK BERM SCHEMATICS
PRE LAY AND POST LAY
SHEET 1 of 1

nationalgrid

Application Number
-

National Grid Drawing Reference
S42_M/TDD/SS/1025

Scale	Sheet Size	Sheet	Issue
NTS	A1	SHEET 1 OF 1	A

THE NATIONAL GRID ELECTRICITY TRANSMISSION PLC (SEA LINK) ORDER
DESIGN DRAWINGS FOR CONSULTATION

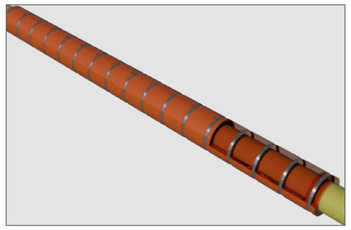
ILLUSTRATION OF
CABLE PROTECTION SYSTEMS
SHEET 1 of 1

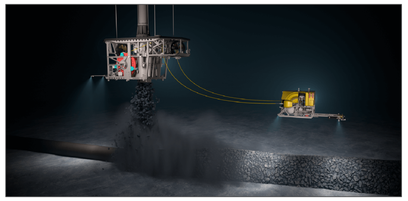
Notes

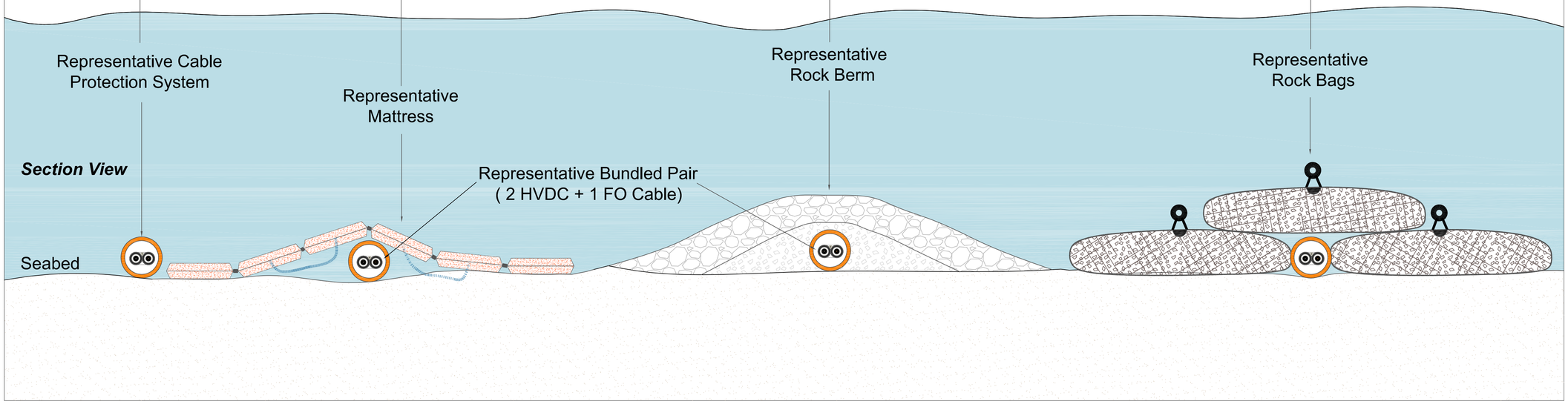
For statutory consultation purposes only

1. Do not scale from this drawing.
2. All dimensions are in metres/millimetres unless otherwise stated.
3. This drawing is to be read in conjunction with all relevant documents and drawings.
4. No unauthorised disclosure, storage or copying.
5. Detailed design, including final dimensions, to be decided at a later date.
6. For further explanation of these plans see the Guide to the Plans Document.
7. For further information on construction please refer to the construction section of the Preliminary Environmental Impact Report, Volume 1, Part 1, Chapter 4

Representative images of various Cable Protection Methodologies







Legend

- Water
- Seabed Sediment
- Mattress
- Rock Berm
- Rock Bag

Sheet X Centroid Coordinate: N/A Sheet Y Centroid Coordinate:N/A

Issue	Date	Remarks	Drawn	Checked	Approved
A	24/10/2023	FINAL	AMN	FSS	KG

Title

THE NATIONAL GRID ELECTRICITY TRANSMISSION PLC (SEA LINK) ORDER

DESIGN DRAWINGS FOR CONSULTATION
ILLUSTRATION OF
CABLE PROTECTION SYSTEMS
SHEET 1 of 1

nationalgrid

Application Number
-

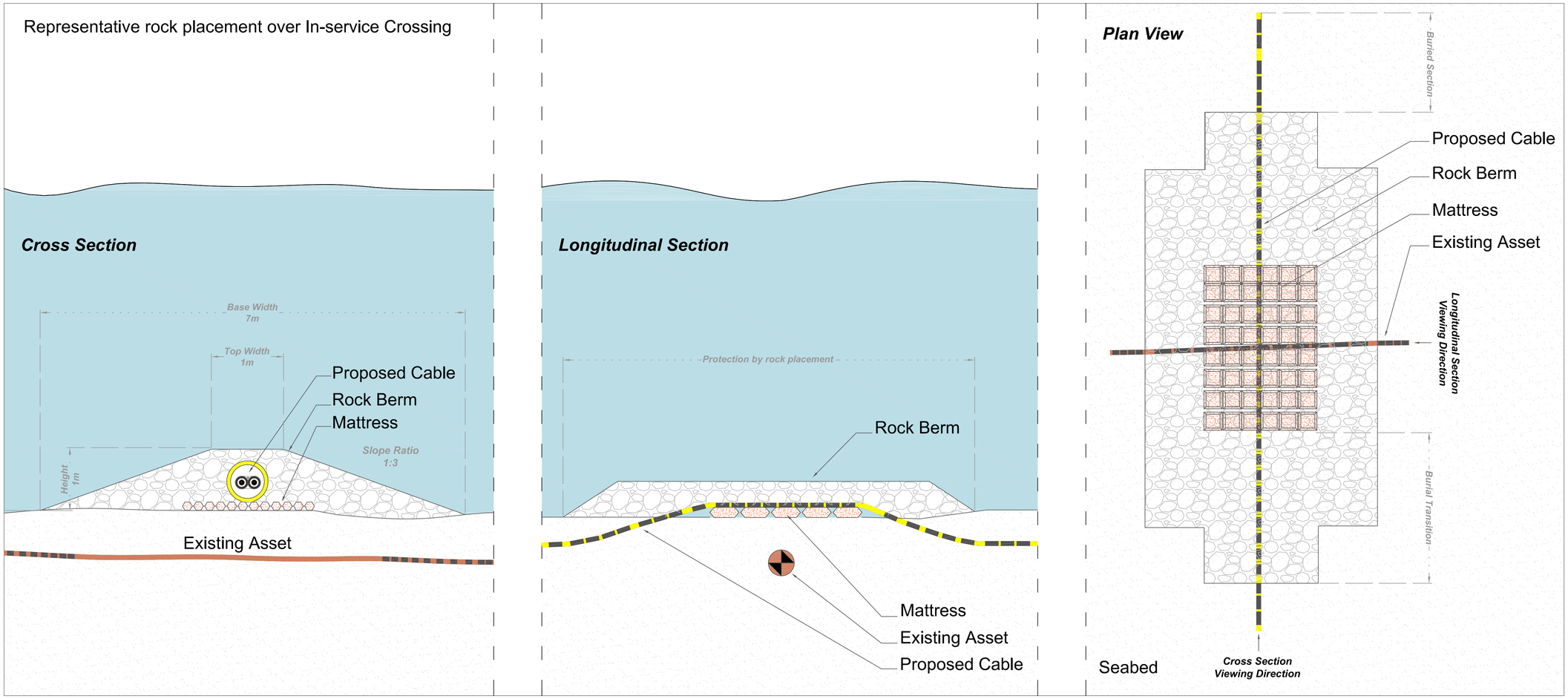
National Grid Drawing Reference
S42_M/TDD/SS/1034

Scale	Sheet Size	Sheet	Issue
NTS	A1	SHEET 1 OF 1	A

THE NATIONAL GRID ELECTRICITY TRANSMISSION PLC (SEA LINK) ORDER
DESIGN DRAWINGS FOR CONSULTATION

ILLUSTRATION OF
ROCK PLACEMENT SECTIONS
SHEET 1 of 1

Representative rock placement over In-service Crossing



Notes

For statutory consultation purposes only

1. Do not scale from this drawing.
2. All dimensions are in metres/millimetres unless otherwise stated.
3. This drawing is to be read in conjunction with all relevant documents and drawings.
4. No unauthorised disclosure, storage or copying.
5. Detailed design, including final dimensions, to be agreed during crossing agreement discussions with third parties including burial technique.
6. For further explanation of these plans see the Guide to the Plans Document.
7. For further information on construction please refer to the construction section of the Preliminary Environmental Impact Report, Volume 1, Part 1, Chapter 4

Legend

- Water
- Seabed Sediment
- Mattress (Plan View)
- Mattress (Longitudinal Section)
- Mattress (Cross Section)
- Rock Berm
- Existing Asset
- New HVDC Bundle

Sheet X Centroid Coordinate: N/A Sheet Y Centroid Coordinate:N/A

Issue	Date	Remarks	Drawn	Checked	Approved
A	24/10/2023	FINAL	AMN	FSS	KG

Title

THE NATIONAL GRID ELECTRICITY TRANSMISSION PLC (SEA LINK) ORDER

DESIGN DRAWINGS FOR CONSULTATION
ILLUSTRATION OF
ROCK PLACEMENT SECTIONS
SHEET 1 of 1

nationalgrid

Application Number
-

National Grid Drawing Reference
S42_M/TDD/SS/1035

Scale	Sheet Size	Sheet	Issue
NTS	A1	SHEET 1 OF 1	A

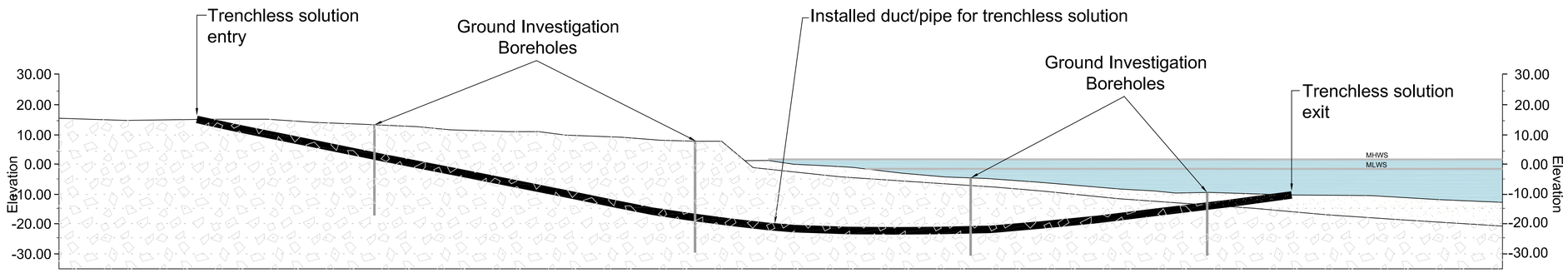
02-05. Landfall Trenchless Installation Technique

Drawing Category Name	Plan Title	Scheme	Drawing Numbers
Landfall Trenchless Installation Technique	Illustration of typical HDD landfall	Offshore Schemes	S42_M/TDD/SS/1043

To assist with understanding these drawings please see the **Guide to Interacting with the Consultation Plans and Drawings**

THE NATIONAL GRID ELECTRICITY TRANSMISSION PLC (SEA LINK) ORDER
DESIGN DRAWINGS FOR CONSULTATION

ILLUSTRATION OF
TYPICAL HDD LANDFALL
SHEET 1 of 1



Notes

For statutory consultation purposes only

1. Do not scale from this drawing.
2. All dimensions are in metres/millimetres unless otherwise stated.
3. This drawing is to be read in conjunction with all relevant documents and drawings.
4. No unauthorised disclosure, storage or copying.
5. Detailed design, including final dimensions, to be decided at a later date.
6. Typical lengths for example can vary between 800m to 1500m, depending on the local geological ground conditions.
7. HDD = Horizontal Directional Drilling
8. DP = Direct Pipe
9. A trenchless solution may utilise either Horizontal Directional Drilling or Direct Pipe.
10. MHWS = Mean High Water Springs
11. MLWS = Mean Low Water Springs
12. For further explanation of these plans see the Guide to the Plans Document.
13. For further information on construction please refer to the construction section of the Preliminary Environmental Impact Report, Volume 1, Part 1, Chapter 4

Legend

- Water
- Seabed Sediment
- Bedrock

Sheet X Centroid Coordinate: N/A Sheet Y Centroid Coordinate:N/A

Issue	Date	Remarks	Drawn	Checked	Approved
A	24/10/2023	FINAL	AMN	FSS	KG

Title

THE NATIONAL GRID ELECTRICITY TRANSMISSION PLC (SEA LINK) ORDER

DESIGN DRAWINGS FOR CONSULTATION
ILLUSTRATION OF
TYPICAL HDD LANDFALL
SHEET 1 of 1

nationalgrid

Application Number
-

National Grid Drawing Reference
S42_M/TDD/SS/1043

Scale	Sheet Size	Sheet	Issue
NTS	A1	SHEET 1 OF 1	A

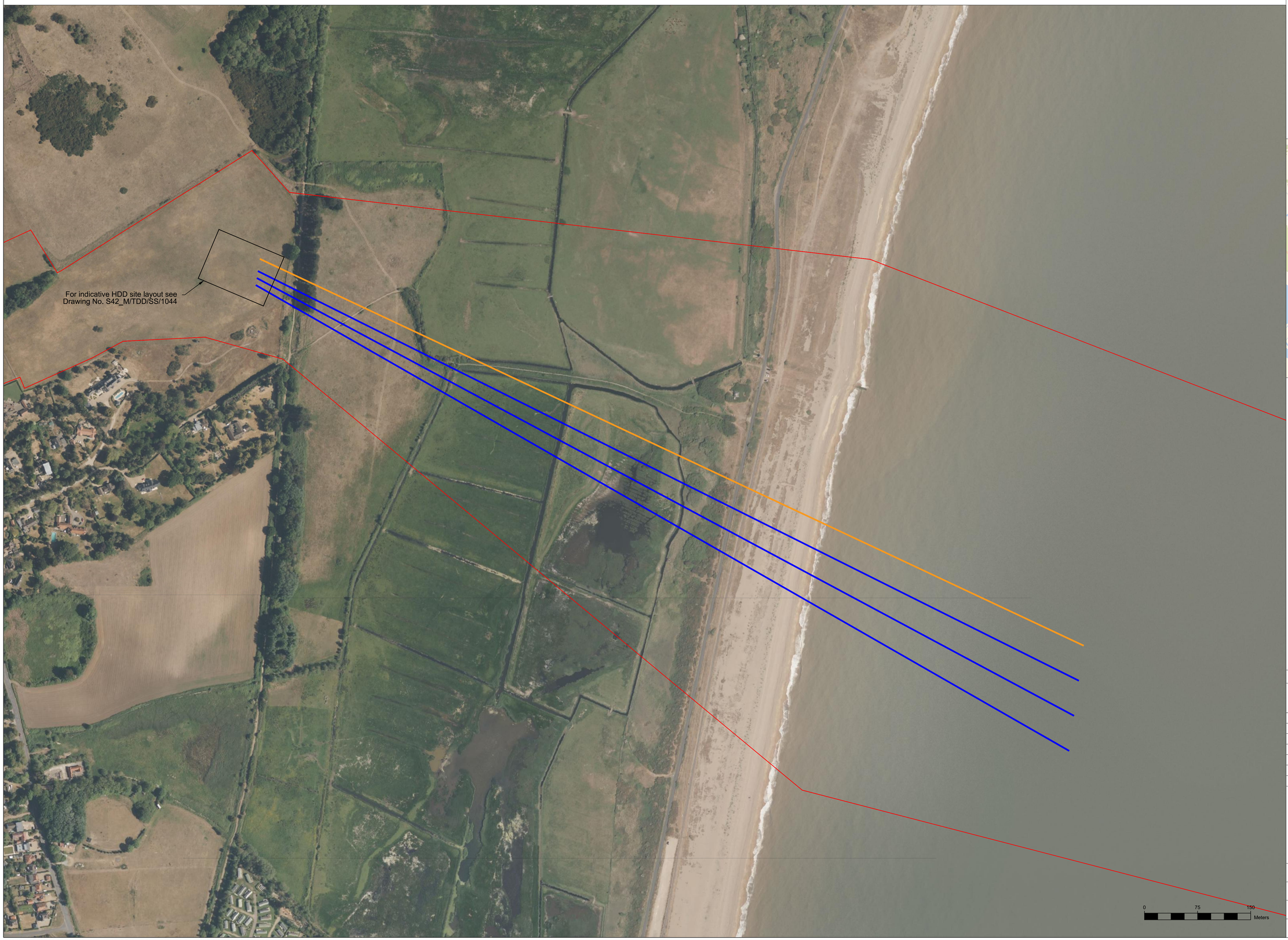
02-06. Landfall Installation - Aldeburgh For Sea Link Only

Drawing Category Name	Plan Title	Scheme	Drawing Numbers
Landfall Installation - Aldeburgh For Sea Link Only	Indicative horizontal direction drill solution for sea link only Aldeburgh	Suffolk Onshore Scheme	S42_M/TDD/SS/1042
	Indicative layout of HDD construction compound for sea link only Aldeburgh	Suffolk Onshore Scheme	S42_M/TDD/SS/1044

To assist with understanding these drawings please see the **Guide to Interacting with the Consultation Plans and Drawings**

THE NATIONAL GRID ELECTRICITY TRANSMISSION PLC (SEA LINK) ORDER
DESIGN DRAWINGS FOR CONSULTATION

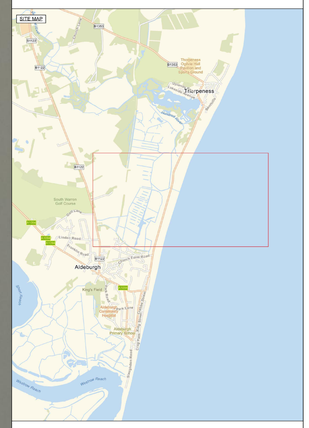
INDICATIVE HORIZONTAL DIRECTIONAL DRILL SOLUTION FOR SEA LINK ONLY ALDEBURGH
SHEET 1 of 1



Notes

For statutory consultation purposes only

1. Do not scale from this drawing.
2. All dimensions are in metres/millimetres unless otherwise stated.
3. This drawing is to be read in conjunction with all relevant documents and drawings.
4. No unauthorised disclosure, storage or copying.
5. Detailed design, including final dimensions, to be decided at a later date.
6. For further explanation of these plans see the Guide to the Plans Document.
7. For further information on construction please refer to the construction section of the Preliminary Environmental Impact Report, Volume 1, Part 1, Chapter 4.
8. Background Bing Maps aerial photography from Spatial Manager application, © 2019 Microsoft.
10. HDD = Horizontal Directional Drill.



Legend

- Indicative Sea Link HDD Alignment
- Indicative Reserve HDD Alignment - duct only
- Draft Order Limit

Sheet X Centroid Coordinate: N/A Sheet Y Centroid Coordinate: N/A

Issue	Date	Remarks	Drawn	Checked	Approved
A	25/08/2023	FINAL	TR	FS	KG

Title: THE NATIONAL GRID ELECTRICITY TRANSMISSION PLC (SEA LINK) ORDER

DESIGN DRAWINGS FOR CONSULTATION

INDICATIVE HORIZONTAL DIRECTIONAL DRILL SOLUTION FOR SEA LINK ONLY ALDEBURGH

SHEET 1 of 1

nationalgrid

Application Number: -

National Grid Drawing Reference: S42_M/TDD/SS/1042

Scale	Sheet Size	Sheet	Issue
NTS	A1	SHEET 1 OF 1	01

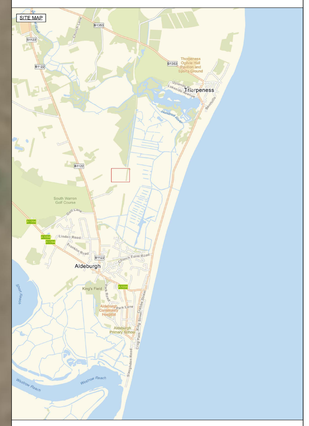
THE NATIONAL GRID ELECTRICITY TRANSMISSION PLC (SEA LINK) ORDER
DESIGN DRAWINGS FOR CONSULTATION

INDICATIVE LAYOUT OF HDD CONSTRUCTION COMPOUND FOR SEA LINK ONLY ALDEBURGH
SHEET 1 of 1

Notes

For statutory consultation purposes only

1. Do not scale from this drawing.
2. All dimensions are in metres/millimetres unless otherwise stated.
3. This drawing is to be read in conjunction with all relevant documents and drawings.
4. No unauthorised disclosure, storage or copying.
5. Detailed design, including final dimensions, to be decided at a later date.
6. For further explanation of these plans see the Guide to the Plans Document.
7. For further information on construction please refer to the construction section of the Preliminary Environmental Impact Report, Volume 1, Part 1, Chapter 4.
8. Background Bing Maps aerial photography from Spatial Manager application, © 2019 Microsoft.
9. For indicative HDD alignments see Drawing No. S42_M/TDD/SS/1042
10. HDD = Horizontal Directional Drill.



Legend

- Indicative Sea Link HDD Alignment
- Indicative Reserve HDD Alignment - duct only
- Draft Order Limit

Sheet X Centroid Coordinate: N/A Sheet Y Centroid Coordinate: N/A

Issue	Date	Remarks	Drawn	Checked	Approved
A	25/08/2023	FINAL	TR	FS	KG

Title
THE NATIONAL GRID ELECTRICITY TRANSMISSION PLC (SEA LINK) ORDER

DESIGN DRAWINGS FOR CONSULTATION

INDICATIVE LAYOUT OF HDD CONSTRUCTION COMPOUND FOR SEA LINK ONLY ALDEBURGH

SHEET 1 of 1

nationalgrid

Application Number
-

National Grid Drawing Reference
S42_M/TDD/SS/1044

Scale	Sheet Size	Sheet	Issue
NTS	A1	SHEET 1 OF 1	01

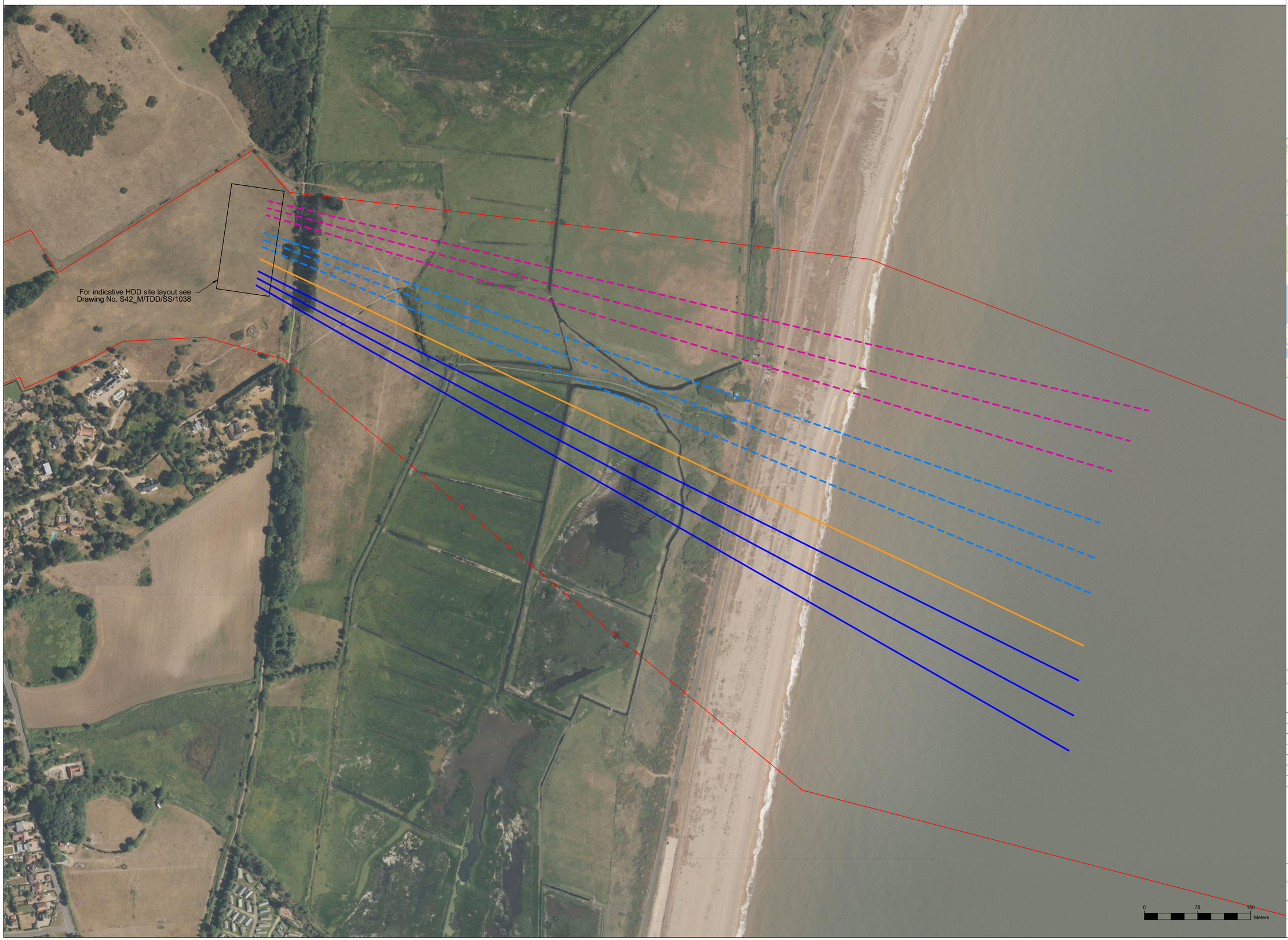
02-07. Landfall Installation - Aldeburgh For Sea Link Plus Ducts for up to two further projects

Drawing Category Name	Plan Title	Scheme	Drawing Numbers
Landfall Installation - Aldeburgh For Sea Link Plus Ducts for up to two further projects	Indicative horizontal directional drill solution for sea link plus ducts for up to two further projects Aldeburgh	Suffolk Onshore Scheme	S42_M/TDD/SS/1041
	Indicative layout of HDD construction compound for sea link plus ducts for up to two further projects Aldeburgh	Suffolk Onshore Scheme	S42_M/TDD/SS/1038

To assist with understanding these drawings please see the **Guide to Interacting with the Consultation Plans and Drawings**

THE NATIONAL GRID ELECTRICITY TRANSMISSION PLC (SEA LINK) ORDER
DESIGN DRAWINGS FOR CONSULTATION

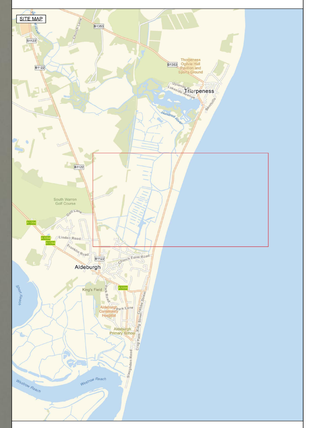
INDICATIVE HORIZONTAL DIRECTIONAL DRILL SOLUTION FOR SEA LINK PLUS DUCTS FOR UP TO TWO FURTHER PROJECTS ALDEBURGH
SHEET 1 of 1



Notes

For statutory consultation purposes only

1. Do not scale from this drawing.
2. All dimensions are in metres/millimetres unless otherwise stated.
3. This drawing is to be read in conjunction with all relevant documents and drawings.
4. No unauthorised disclosure, storage or copying.
5. Detailed design, including final dimensions, to be decided at a later date.
6. For further explanation of these plans see the Guide to the Plans Document.
7. For further information on construction please refer to the construction section of the Preliminary Environmental Impact Report, Volume 1, Part 1, Chapter 4.
8. Background Bing Maps aerial photography from Spatial Manager application, © 2019 Microsoft.
10. HDD = Horizontal Directional Drill.



Legend

- Indicative Sea Link HDD Alignment
- Indicative Reserve HDD Alignment - duct only
- Indicative Additional Co-Location Ducts
- Indicative Additional Co-Location Ducts
- Draft Order Limit

Sheet X Centroid Coordinate: N/A Sheet Y Centroid Coordinate: N/A

Issue	Date	Remarks	Drawn	Checked	Approved
A	25/08/2023	FINAL	TR	FS	KG

Title: THE NATIONAL GRID ELECTRICITY TRANSMISSION PLC (SEA LINK) ORDER

DESIGN DRAWINGS FOR CONSULTATION

INDICATIVE HORIZONTAL DIRECTIONAL DRILL SOLUTION FOR SEA LINK PLUS DUCTS FOR UP TO TWO FURTHER PROJECTS ALDEBURGH

SHEET 1 of 1

nationalgrid

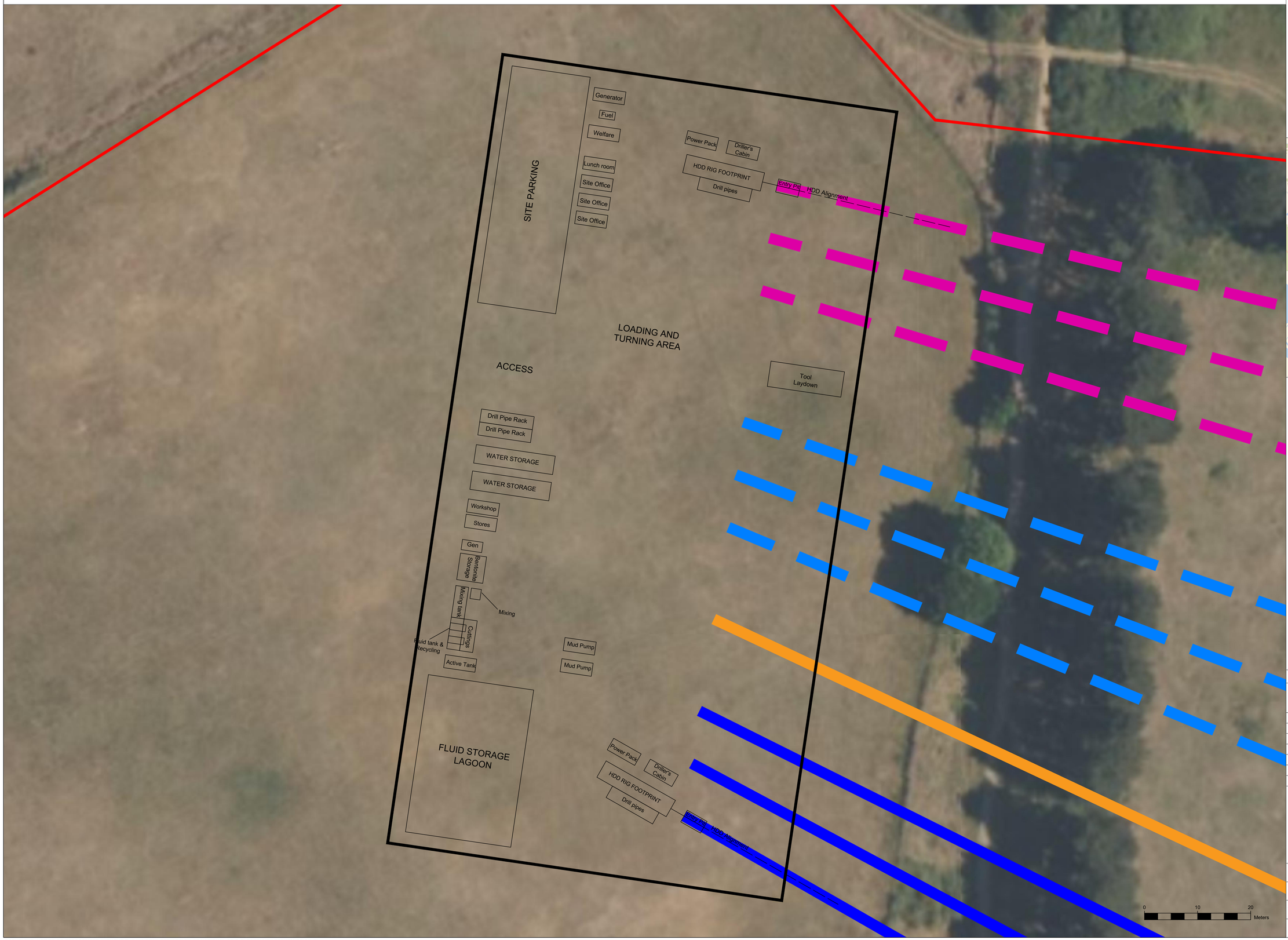
Application Number: -

National Grid Drawing Reference: S42_M/TDD/SS/1041

Scale	Sheet Size	Sheet	Issue
NTS	A1	SHEET 1 OF 1	01

THE NATIONAL GRID ELECTRICITY TRANSMISSION PLC (SEA LINK) ORDER
DESIGN DRAWINGS FOR CONSULTATION

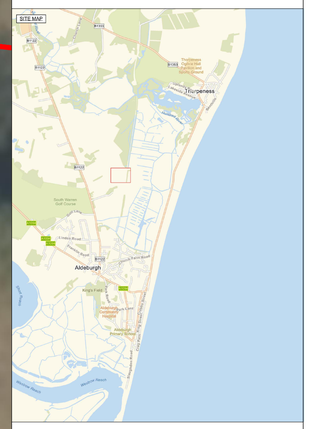
INDICATIVE LAYOUT OF HDD CONSTRUCTION COMPOUND FOR SEA LINK PLUS DUCTS FOR UP TO TWO FURTHER PROJECTS ALDEBURGH
SHEET 1 of 1



Notes

For statutory consultation purposes only

1. Do not scale from this drawing.
2. All dimensions are in metres/millimetres unless otherwise stated.
3. This drawing is to be read in conjunction with all relevant documents and drawings.
4. No unauthorised disclosure, storage or copying.
5. Detailed design, including final dimensions, to be decided at a later date.
6. For further explanation of these plans see the Guide to the Plans Document.
7. For further information on construction please refer to the construction section of the Preliminary Environmental Impact Report, Volume 1, Part 1, Chapter 4.
8. Background Bing Maps aerial photography from Spatial Manager application, © 2019 Microsoft.
9. For indicative HDD alignments see Drawing No. S42_M/TDD/SS/1041
10. HDD = Horizontal Directional Drill.



Legend

- Indicative Sea Link HDD Alignment
- Indicative Reserve HDD Alignment - duct only
- Indicative Additional Co-Location Ducts
- Indicative Additional Co-Location Ducts
- Draft Order Limit

Sheet X Centroid Coordinate: N/A Sheet Y Centroid Coordinate: N/A

Issue	Date	Remarks	Drawn	Checked	Approved
A	25/08/2023	FINAL	TR	FS	KG

Title: THE NATIONAL GRID ELECTRICITY TRANSMISSION PLC (SEA LINK) ORDER

DESIGN DRAWINGS FOR CONSULTATION

INDICATIVE LAYOUT OF HDD CONSTRUCTION COMPOUND FOR SEA LINK PLUS DUCTS FOR UP TO TWO FURTHER PROJECTS ALDEBURGH

SHEET 1 of 1

nationalgrid

Application Number: -

National Grid Drawing Reference: S42_M/TDD/SS/1038

Scale	Sheet Size	Sheet	Issue
NTS	A1	SHEET 1 OF 1	01

02-08. Landfall Installation - Pegwell Bay

Drawing Category Name	Plan Title	Scheme	Drawing Numbers
Landfall Installation - Pegwell Bay	Indicative horizontal directional drill solution Pegwell bay	Kent Onshore Scheme	S42_M/TDD/SS/1039
	Indicative layout of HDD construction compound Pegwell bay	Kent Onshore Scheme	S42_M/TDD/SS/1037
	Indicative direct pipe solution Pegwell bay	Kent Onshore Scheme	S42_M/TDD/SS/1040

To assist with understanding these drawings please see the **Guide to Interacting with the Consultation Plans and Drawings**

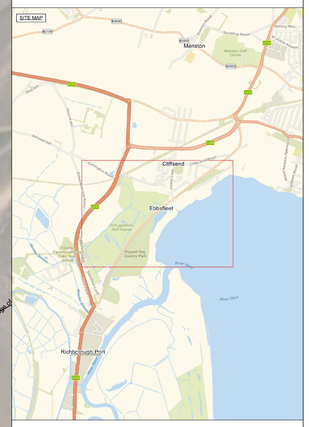
THE NATIONAL GRID ELECTRICITY TRANSMISSION PLC (SEA LINK) ORDER
DESIGN DRAWINGS FOR CONSULTATION

INDICATIVE HORIZONTAL DIRECTIONAL DRILL SOLUTION PEGWELL BAY
SHEET 1 of 1

Notes

For statutory consultation purposes only

1. Do not scale from this drawing.
2. All dimensions are in metres/millimetres unless otherwise stated.
3. This drawing is to be read in conjunction with all relevant documents and drawings.
4. No unauthorised disclosure, storage or copying.
5. Detailed design, including final dimensions, to be decided at a later date.
6. For further explanation of these plans see the Guide to the Plans Document.
7. For further information on construction please refer to the construction section of the Preliminary Environmental Impact Report, Volume 1, Part 1, Chapter 4.
8. Background Bing Maps aerial photography from Spatial Manager application, © 2019 Microsoft.
9. HDD = Horizontal Directional Drill.



Legend

- Indicative HDD Alignment
- Indicative Reserve HDD Alignment - duct only
- Indicative HDD duct stringing for pushed installation
- Draft Order Limit
- Historic Landfill

Sheet X Centroid Coordinate: N/A Sheet Y Centroid Coordinate: N/A

Issue	Date	Remarks	Drawn	Checked	Approved
A	25/08/2023	FINAL	TR	FS	KG

Title: THE NATIONAL GRID ELECTRICITY TRANSMISSION PLC (SEA LINK) ORDER

DESIGN DRAWINGS FOR CONSULTATION

INDICATIVE HORIZONTAL DIRECTIONAL DRILL SOLUTION PEGWELL BAY

SHEET 1 of 1

nationalgrid

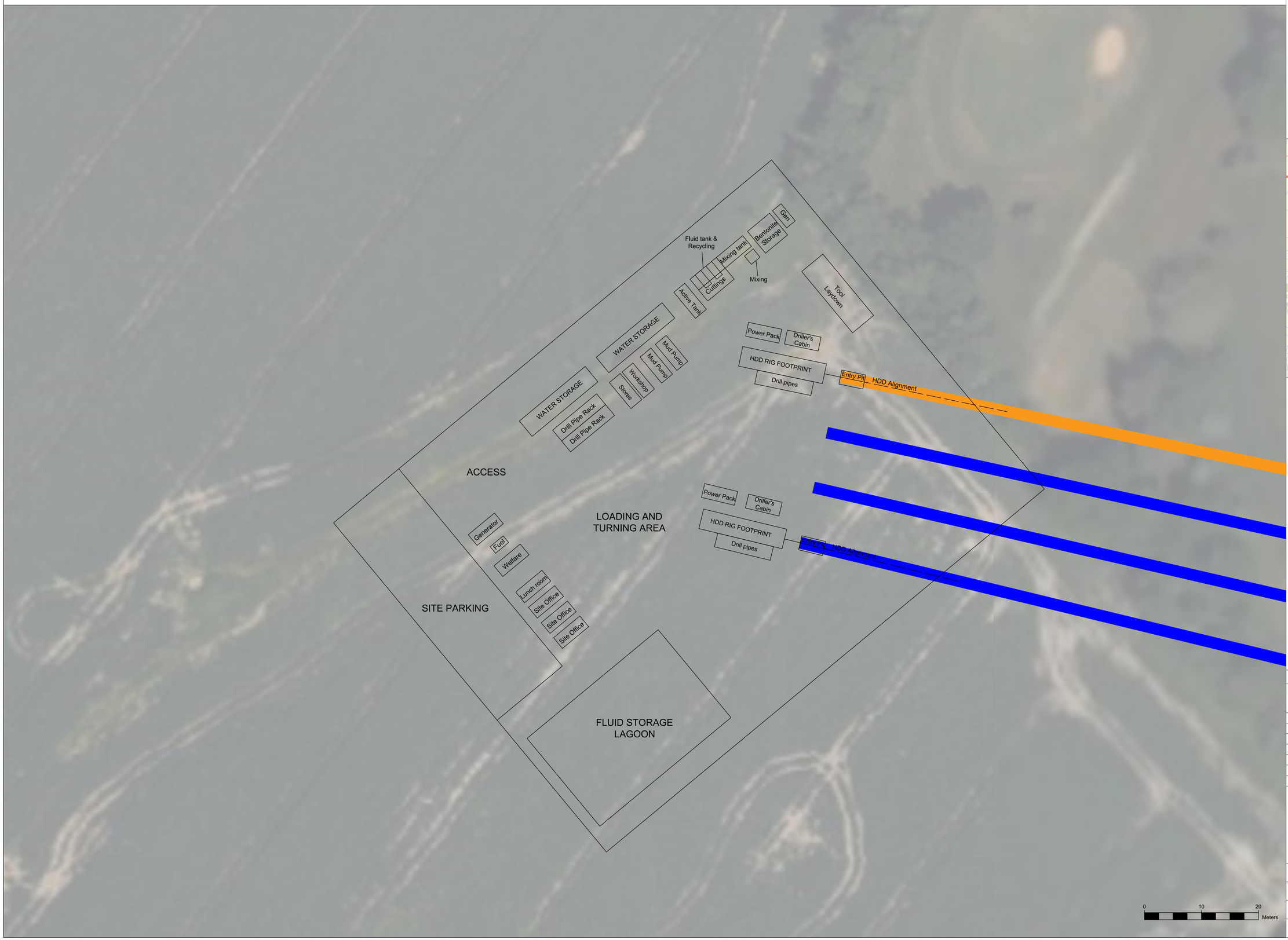
Application Number: -

National Grid Drawing Reference: S42_M/TDD/SS/1039

Scale	Sheet Size	Sheet	Issue
NTS	A1	SHEET 1 OF 1	01

THE NATIONAL GRID ELECTRICITY TRANSMISSION PLC (SEA LINK) ORDER
DESIGN DRAWINGS FOR CONSULTATION

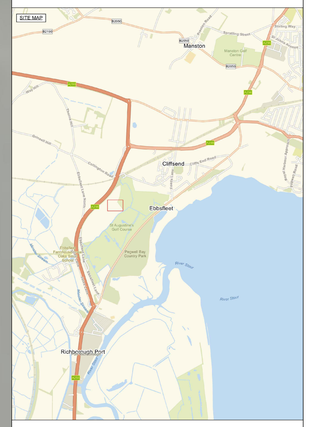
INDICATIVE LAYOUT OF HDD CONSTRUCTION COMPOUND PEGWELL BAY
SHEET 1 of 1



Notes

For statutory consultation purposes only

1. Do not scale from this drawing.
2. All dimensions are in metres/millimetres unless otherwise stated.
3. This drawing is to be read in conjunction with all relevant documents and drawings.
4. No unauthorised disclosure, storage or copying.
5. Detailed design, including final dimensions, to be decided at a later date.
6. For further explanation of these plans see the Guide to the Plans Document.
7. For further information on construction please refer to the construction section of the Preliminary Environmental Impact Report, Volume 1, Part 1, Chapter 4.
8. Background Bing Maps aerial photography from Spatial Manager application, © 2019 Microsoft.
9. For indicative HDD alignments see Drawing No. S42_M/TDD/SS/1039
10. For General Arrangement Plan see Drawing No. S42_K/IGA/PS/2003
11. HDD = Horizontal Directional Drill.



Legend

- Indicative HDD Alignment
- Indicative Reserve HDD Alignment - duct only
- Draft Order Limit

Sheet X Centroid Coordinate: N/A Sheet Y Centroid Coordinate: N/A

Issue	Date	Remarks	Drawn	Checked	Approved
A	25/08/2023	FINAL	TR	FS	KG

Title: THE NATIONAL GRID ELECTRICITY TRANSMISSION PLC (SEA LINK) ORDER

DESIGN DRAWINGS FOR CONSULTATION

INDICATIVE LAYOUT OF HDD CONSTRUCTION COMPOUND PEGWELL BAY

SHEET 1 of 1

nationalgrid

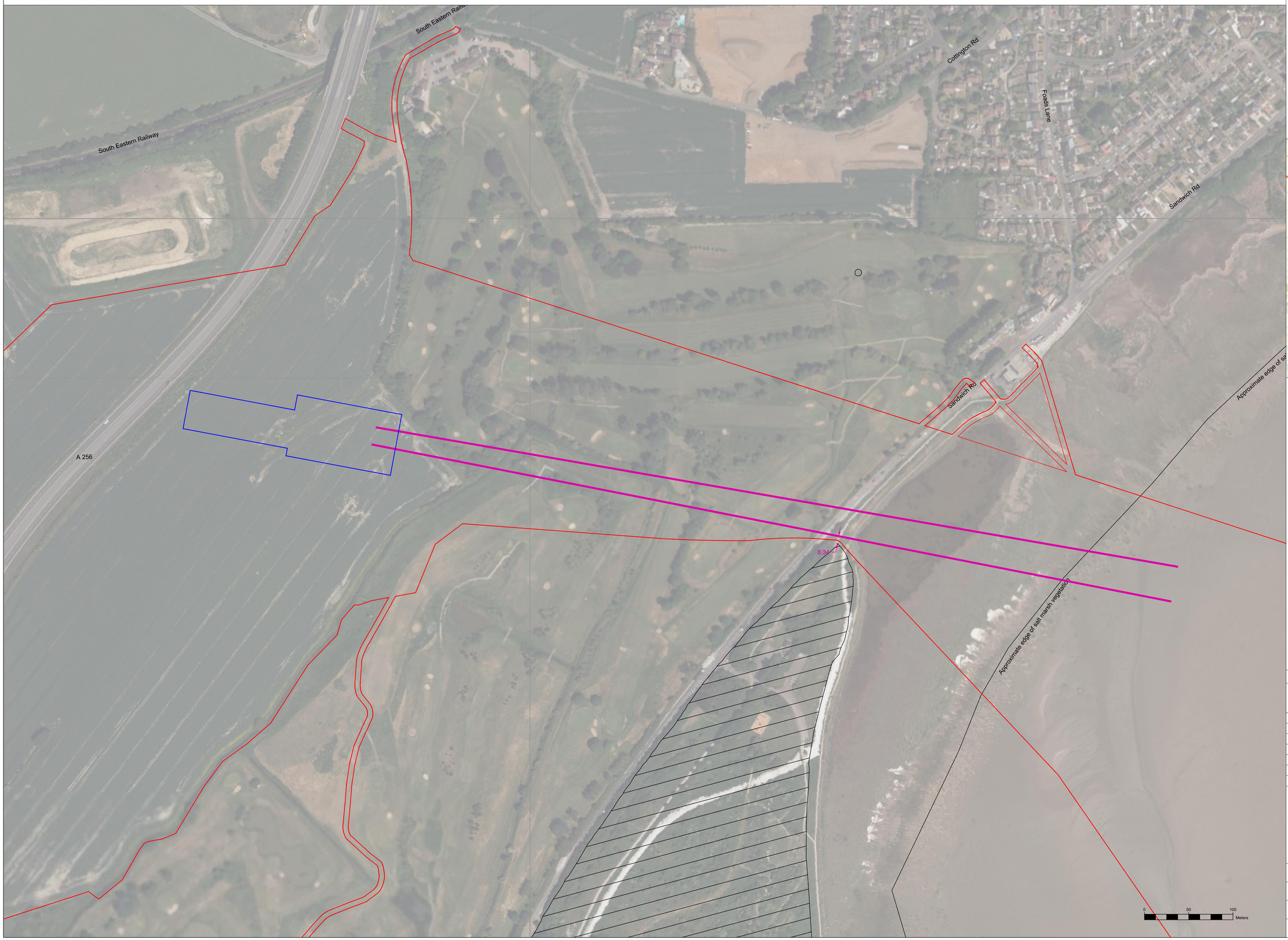
Application Number: -

National Grid Drawing Reference: S42_M/TDD/SS/1037

Scale	Sheet Size	Sheet	Issue
NTS	A1	SHEET 1 OF 1	01

THE NATIONAL GRID ELECTRICITY TRANSMISSION PLC (SEA LINK) ORDER
DESIGN DRAWINGS FOR CONSULTATION

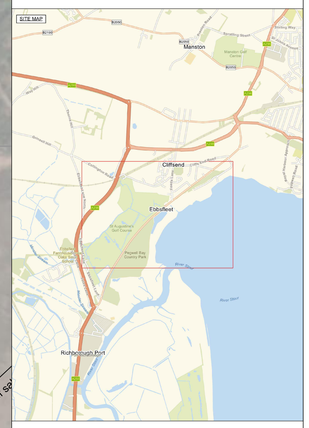
INDICATIVE DIRECT PIPE SOLUTION PEGWELL BAY
SHEET 1 of 1



Notes

For statutory consultation purposes only

1. Do not scale from this drawing.
2. All dimensions are in metres/millimetres unless otherwise stated.
3. This drawing is to be read in conjunction with all relevant documents and drawings.
4. No unauthorised disclosure, storage or copying.
5. Detailed design, including final dimensions, to be decided at a later date.
6. For further explanation of these plans see the Guide to the Plans Document.
7. For further information on construction please refer to the construction section of the Preliminary Environmental Impact Report, Volume 1, Part 1, Chapter 4.
8. Background Bing Maps aerial photography from Spatial Manager application, © 2019 Microsoft.



Legend

- Indicative Direct Pipe Alignment
- Indicative Direct Pipe Working Area
- Draft Order Limit
- Historic Landfill

Sheet X Centroid Coordinate: N/A Sheet Y Centroid Coordinate: N/A

Issue	Date	Remarks	Drawn	Checked	Approved
A	25/08/2023	FINAL	TR	FS	KG

Title: THE NATIONAL GRID ELECTRICITY TRANSMISSION PLC (SEA LINK) ORDER

DESIGN DRAWINGS FOR CONSULTATION

INDICATIVE DIRECT PIPE SOLUTION PEGWELL BAY

SHEET 1 of 1

nationalgrid

Application Number: -

National Grid Drawing Reference: S42_M/TDD/SS/1040

Scale	Sheet Size	Sheet	Issue
NTS	A1	SHEET 1 OF 1	01