

















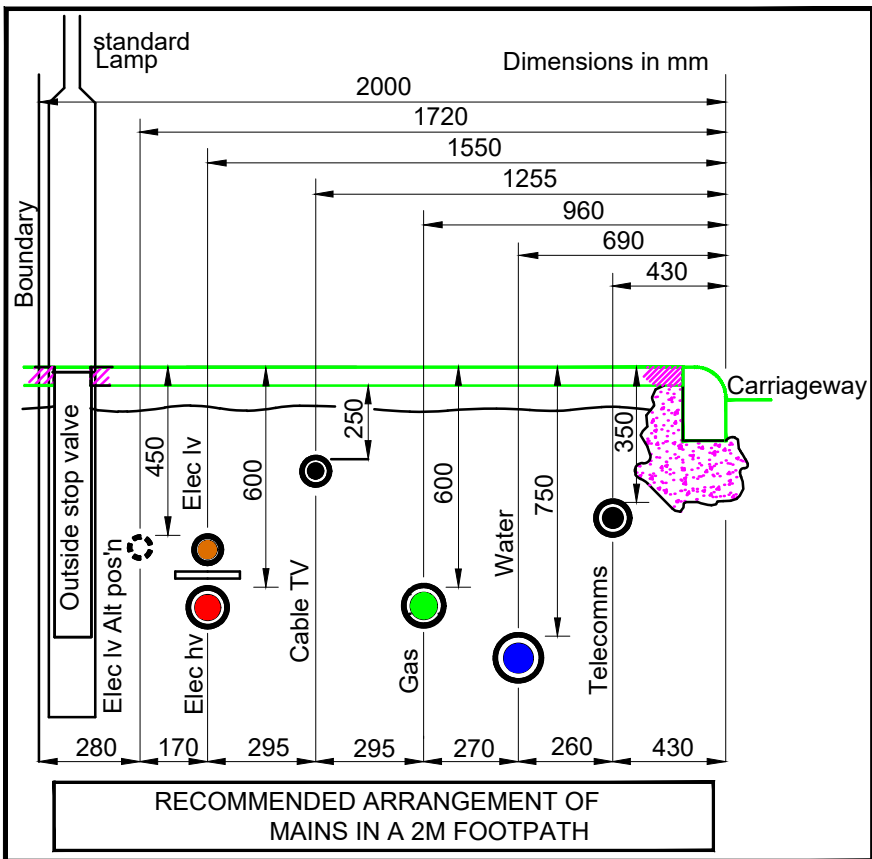
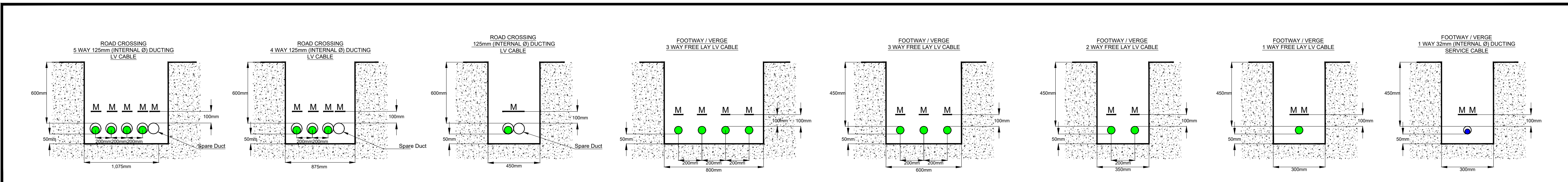
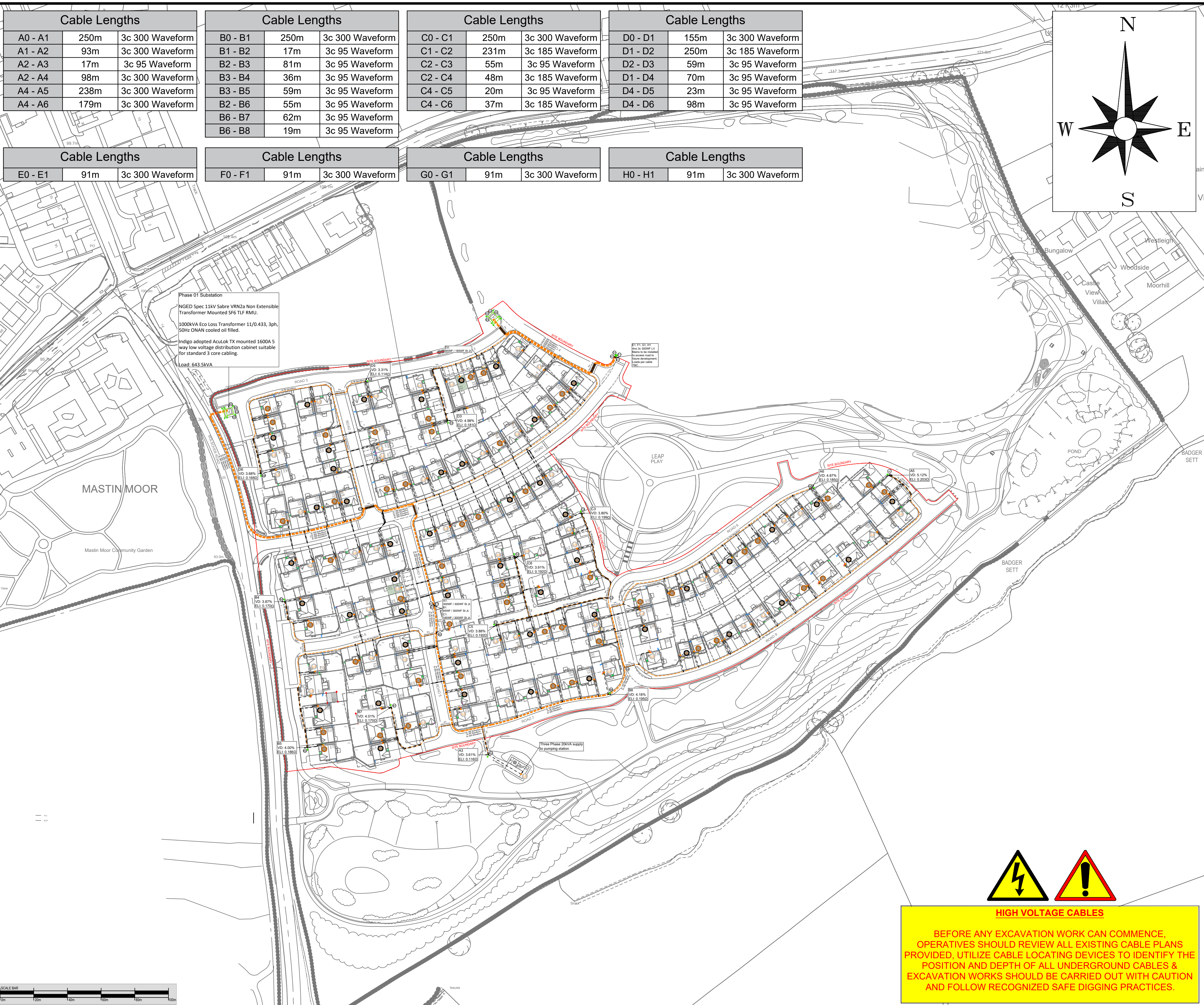
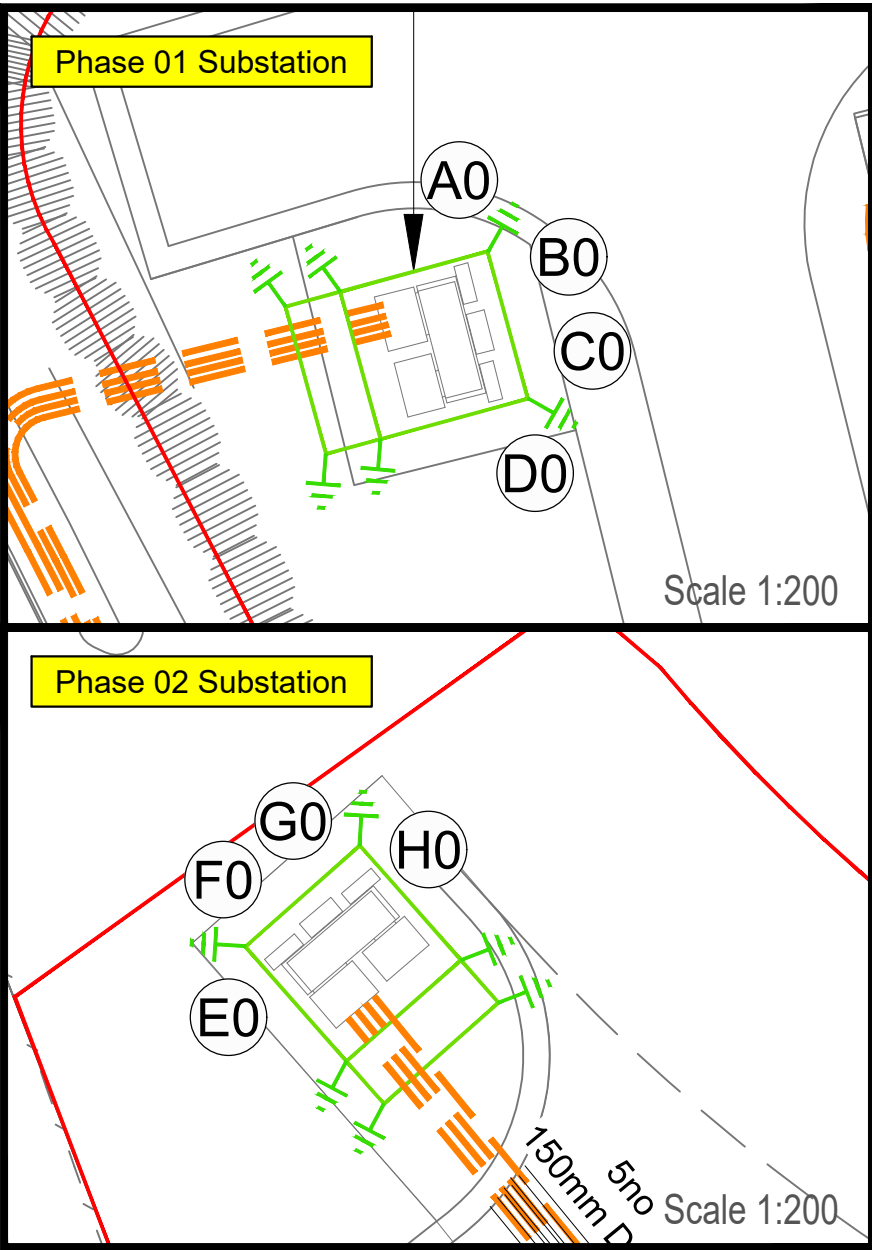


LEGEND

	132kV EXISTING CABLE
	132kV PROPOSED CABLE
	66kV EXISTING CABLE
	66kV PROPOSED CABLE
	33kV EXISTING CABLE
	33kV PROPOSED CABLE
	11kV EXISTING CABLE
	11kV PROPOSED CABLE
	6.6kV EXISTING CABLE
	6.6kV PROPOSED CABLE
	LV EXISTING CABLE
	LV PROPOSED CABLE
	LV PROPOSED DUCTED SERVICE
	LV PROPOSED DUCTED
	PROPOSED EARTH CABLE
	BREECH JOINT
	BOTTLE END / POT END
	METER LOCATION / PHASES



Indigo Ref: E-IND1603 R1
NGED Ref: 4564387
POC Load: 1220kVA



Project Overview
 Mastin Moor, Cheshfield
 Hannon Homes Ltd have appointed Utility Infrastructure Solutions Limited to build the adoptable Electrical Infrastructure.

Utility Infrastructure Solutions Ltd have appointed MCD Utility Solutions Limited to carry out the electrical Infrastructure design.

HV Point of Connection
 The National Grid Electricity Distribution (NGED) have approved a looped HV point of connection off the existing 0.1kV 11W location off Bolsover Road.
 Final closing point to be carried out by the DNO NGED.

Load Breakdown:
 Total Site Address 1,220kVA
 • Dwellings @ 3.8kVA/kA each
 • 150no Future Development Dwellings @ 3.8kVA/kA each
 • Three phase I&C supply @ 20kVA (location T8)
 • Three phase Pumping Station supply @ 20kVA
 • Three phase road spreadership supply for load breakdown.
 All LV mains have been designed to Indigo Networks standard using the industry recognized volt drop, Prospective Short Circuit Current (P-NH), and EUL have been calculated for all key points on the system in accordance with the Indigo Networks Design requirements.
 All design details, design complies with the max / min parameters stated in the design manual.

LV Cable:
 31 000mm² Wavform Cable (CNE).
 31 185mm² Wavform Cable (CNE).
 31 95mm² Wavform Cable (CNE).

LV Service Cable:
 Single phase 35mm CNE Service Cable (P1061 1 - 147)
 Three phase 35mm CNE Service Cable (Pumping Station & I&C Unit)

Ducts

All IDNO LV mains cable ducts shall be 125mm internal diameter black twin walled corrugated rigid duct to ENATS 12-24 embossed "electric cable duct" on opposing sides.

All service ducting to be 38mm and laid direct from the meter box to the boundary of the property.

Meter Position

Electric meters for plots 1 - 147 are located on the gable ends and should not be installed behind a fence or a gate. Minimum height of 450mm from ground level to the bottom of the meter box - to reduce the risk of water entering the box in the event of flooding or fire-fighting activities.

Electric meter for the Pumping Station is located on the gable end of the pumping station housing and should not be installed behind a fence or a gate. Minimum height of 450mm from ground level to the bottom of the meter box - to reduce the risk of water entering the box in the event of flooding or fire-fighting activities.

Service cables must run vertically into the meter box, and must be installed within a service duct. This duct may be surface mounted or installed within the wall cavity, to suit the type of meter box, provided that it is secured in position.

MPAN number for the electric meter are to be requested / obtained by Utility Infrastructure Solutions Ltd.

Electric meter for plots 1 - 147, Pumping Station. Total 148no are to be installed by the client nominated shipper.

Civil Works
All on site & off site civil works to be carried out by Utility Infrastructure Solutions Ltd.

Supply Exit Points & Metering
The supply exit point for plots 1 - 147 shall be a 100A single phase cutout fused at 80A for all of the domestic properties (147). The Cutouts will be housed within a external semi-recessed metering enclosure.

The supply exit point for the Pumping Station shall be a 100A three phase cutout fused at 80A. The Cutout will be housed within a external semi-recessed metering enclosure.

LV Earthing Availability
PME Earthing.

MCD Utility Solutions Ltd,
Unit 22, Edge Lane Street,
Royton, Oldham, OL2 6DS
Tel: 07467 026075



Utility Infrastructure Solutions Ltd
Unit 3, Portland Grove, Chinley,
High Peak, Derbyshire, SK23 6AX
Tel: 0333 344 6068



X: 445624 , Y: 375510

PROJECT	Mastin Moor, Chesterfield, S43 3DN
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DRAWING TITLE
PHASE 1 LV DESIGN DRAWING

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CLIENT No.	MCD No.	DATE	SCALE
UIS557	MCD447	26/03/2023	1:1250 @ A1

DRAWING No.	REV.
UIS557-LV-PH1	-