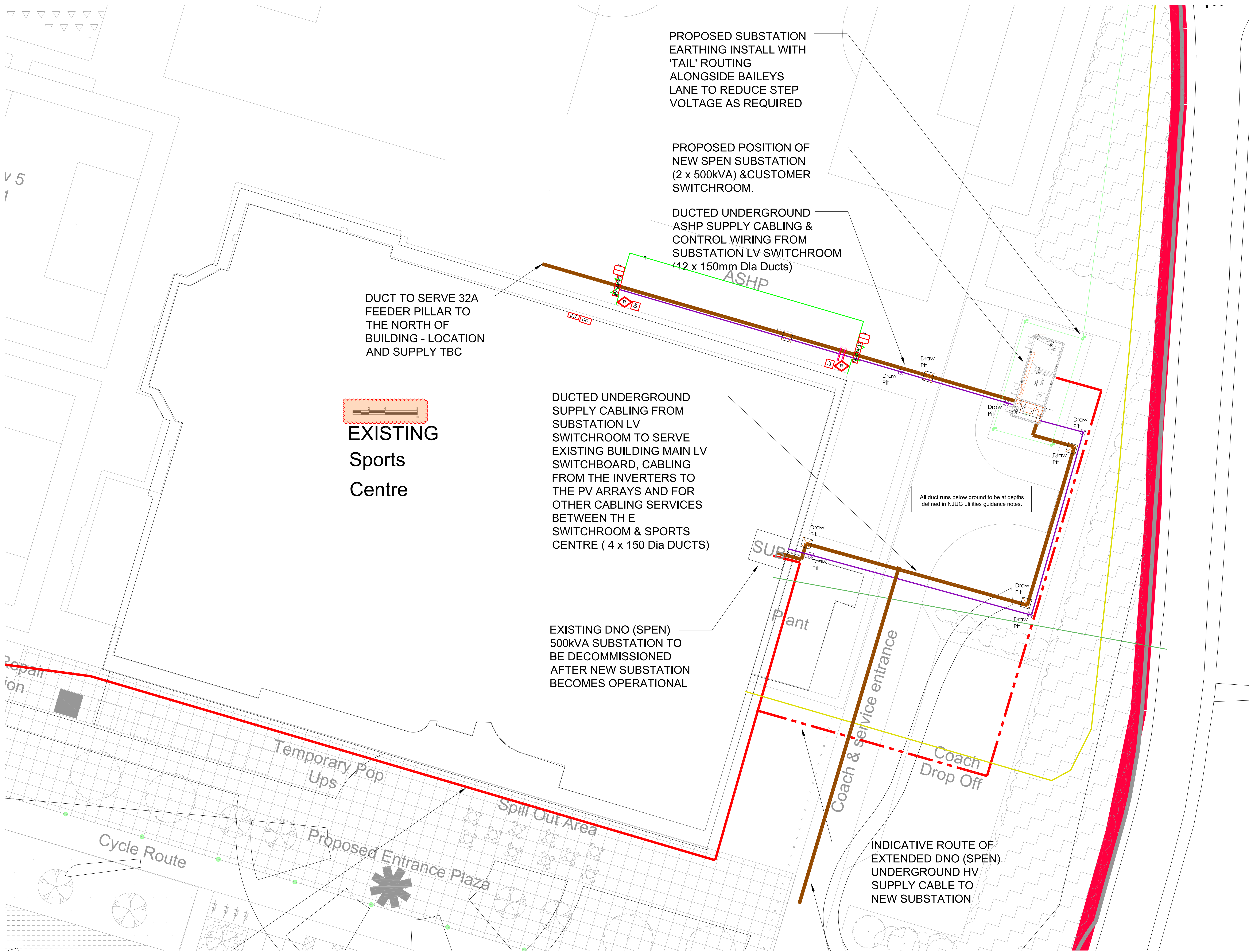
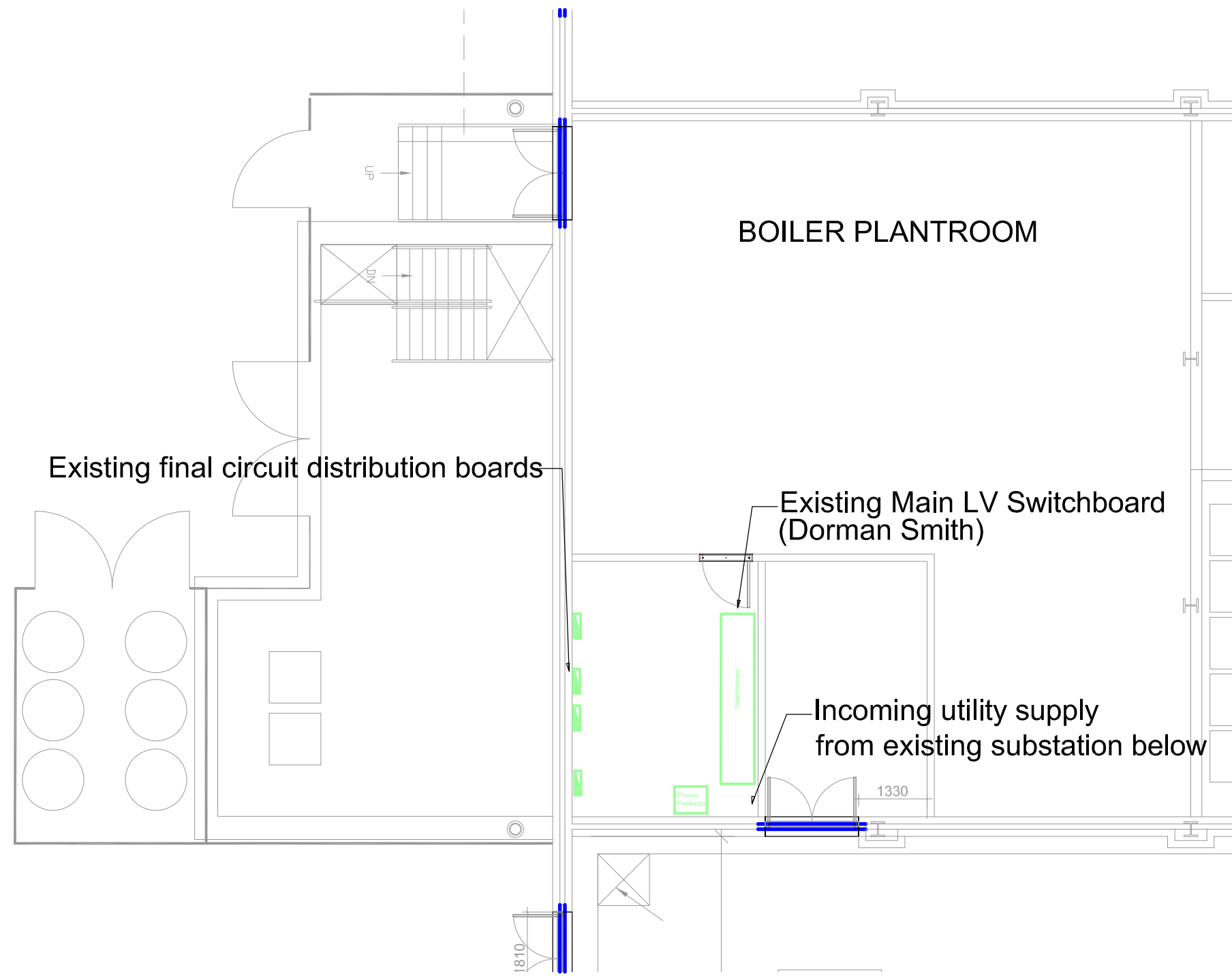
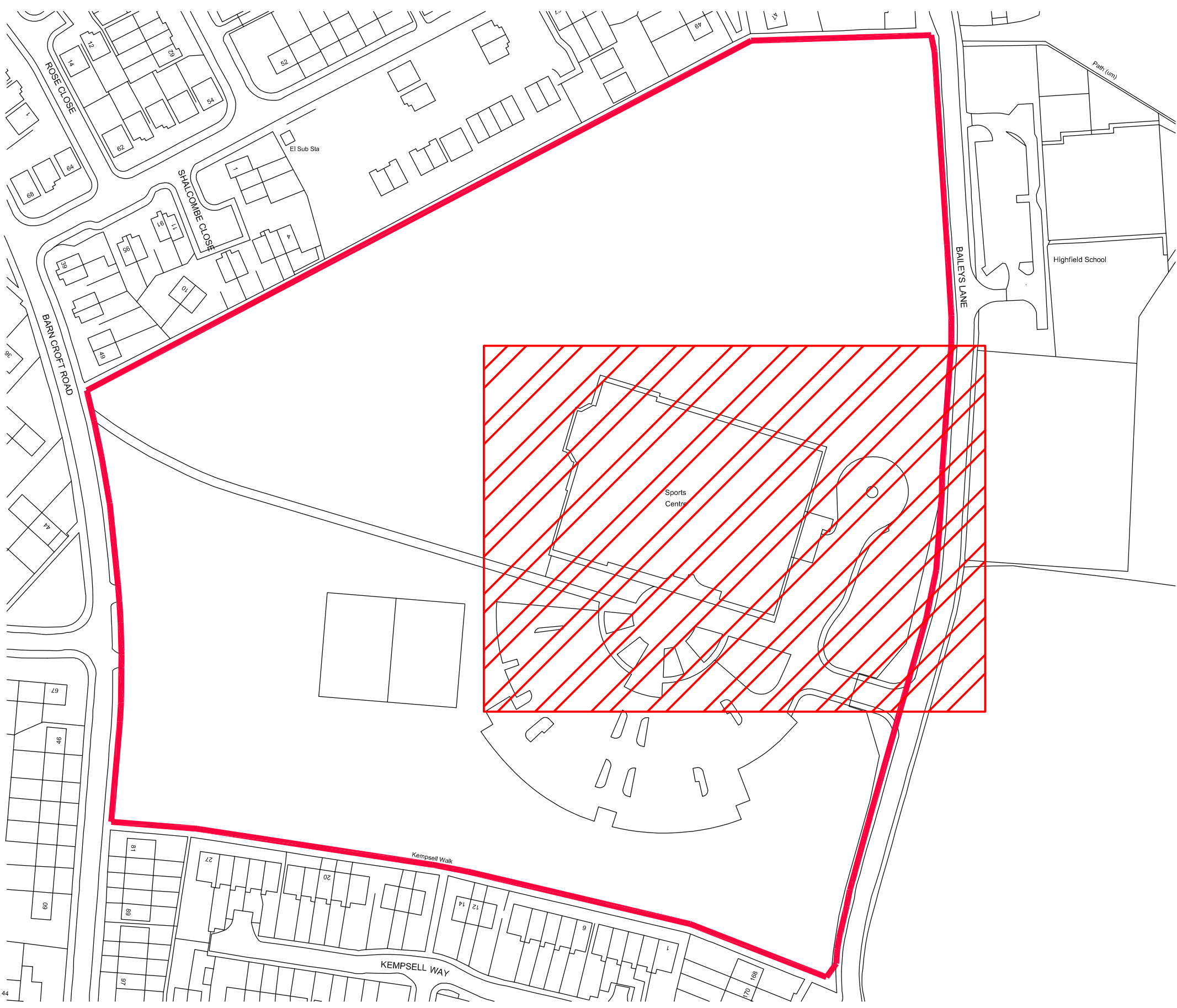




Boiler Plantroom & LV Switchroom

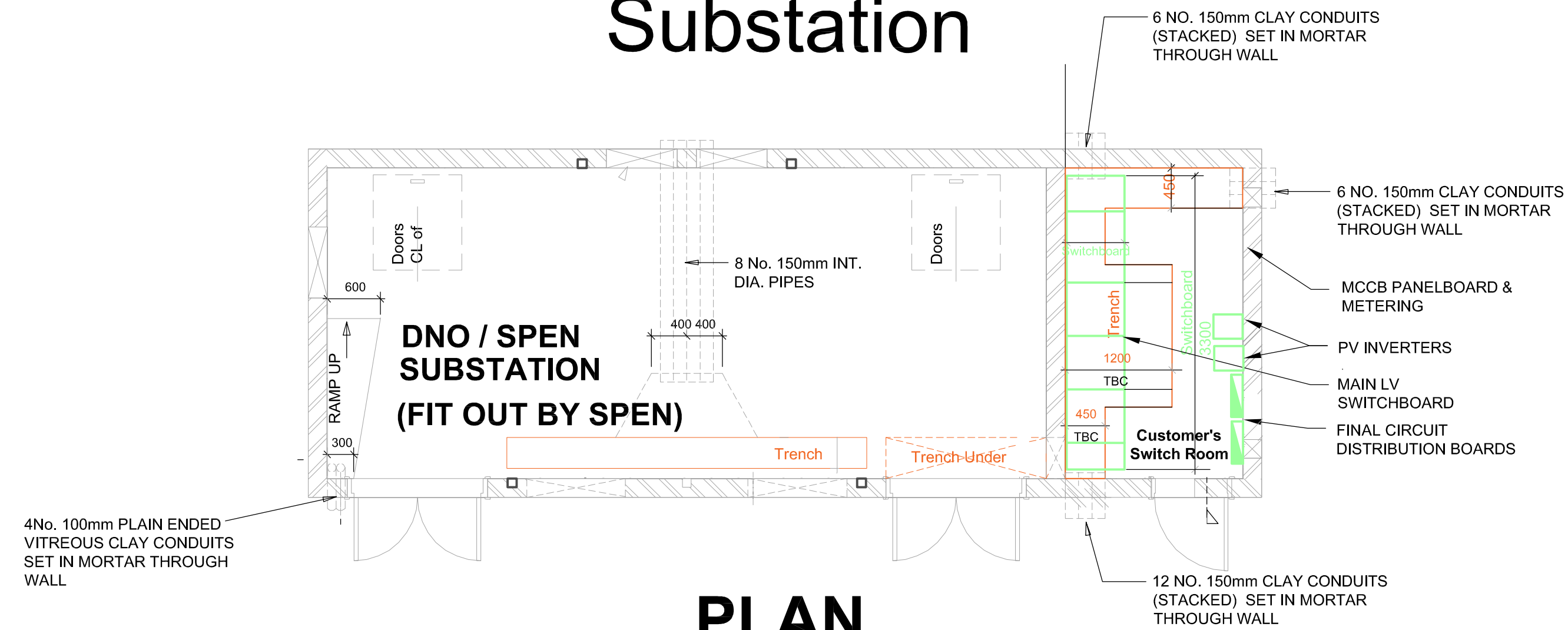


Site Key Plan



- Electrical Notes:
- Do not scale, take site measures when undertaking the installations. The drawing setting out arrangement is indicative only. The measured setting out arrangements for the buildings, trenches and drawpit chambers shall be determined by the main contractor in undertaking the construction of this proposed scheme.
 - This drawing has been provided to assist in the proposed setting out of the substation and customer switchroom arrangement to mitigate clashes and minimise disruption and the necessary diversions of existing underground services installations. The contractor should accurately locate existing underground services and utility services on-site prior to undertaking any excavations with mechanical plant.
 - This drawing shall be read in conjunction with the M&E Specification, M&E Schedules and all other tender documentation.
 - The Contractor shall liaise with a coordinate the installations with SPEN Project Manager Andy Bromlow, Mob 07762 863 571.
 - The Customer Switchroom shall be provided as a separate accommodation constructed as part of the standalone substation building and to the same SPEN specification standards. The switchroom shall be provided with 750mm deep cable trenching with a trench width of 1200mm in the centre incurring sections of the switchboard to facilitate termination of cabling.
 - The switchroom shall be provided with suitable ventilation, frost protection heating, steel channel frames/ marine ply pathways for mounting of switchgear & galvanised steel containment tray installations. The switchroom shall be provided with internal lighting, emergency lighting maintenance sockets, frost protection heaters, 50mm x 6mm x 900mm Cu earth bar, smoke detection MCP, data connections and intruder alarm alarm.
 - The installations shall be undertaken in accordance with the current version of BS7671 the IET Wiring Regulations including all amendments.
 - Underground cabling shall generally be shall be routed via underground ducts, where crossing handstanding areas.
 - The contractor shall liaise with and coordinate with the Utility to provide new incoming cabling from the Utility substation to serve and connect to the new LV Switchboard.
 - A new substation earth ring conductor comprising of 25mm x 6mm tape routing not less than 1000mm around the perimeter of the substation building and to connect earthing electrodes (not less than 2.4m) at each corner to accord with SPEN requirements. The drawing provides for an indicative arrangement of earth electrodes and earth ring (Green) tape around the perimeter of the substation building and is subject to SPEN requirements and further details.
 - Existing lightning protection earth electrodes and inspection pit shall be relocated where required and located so as not to impact on the substation earthing installation minimum of 1m clearance).
 - New ducting shall be provided as required for new cabling installations into the building, and to each of the ASHPs within the compound area. Cabling within each compound shall be fixed to heavy duty galvanised steel cable trays.
 - The compound shall be provided with access control with a fire alarm interface. The access controller shall be located at high level within the changing area and fed from local distribution board DB-1.
 - All power wiring from controls panels shall be contractor designed.
 - It is assumed that all submains cabling to controls panels shall be reutilised. This is subject to final load confirmation and as such, a provisional sum shall be included for upgrading of the submains to the control panels.

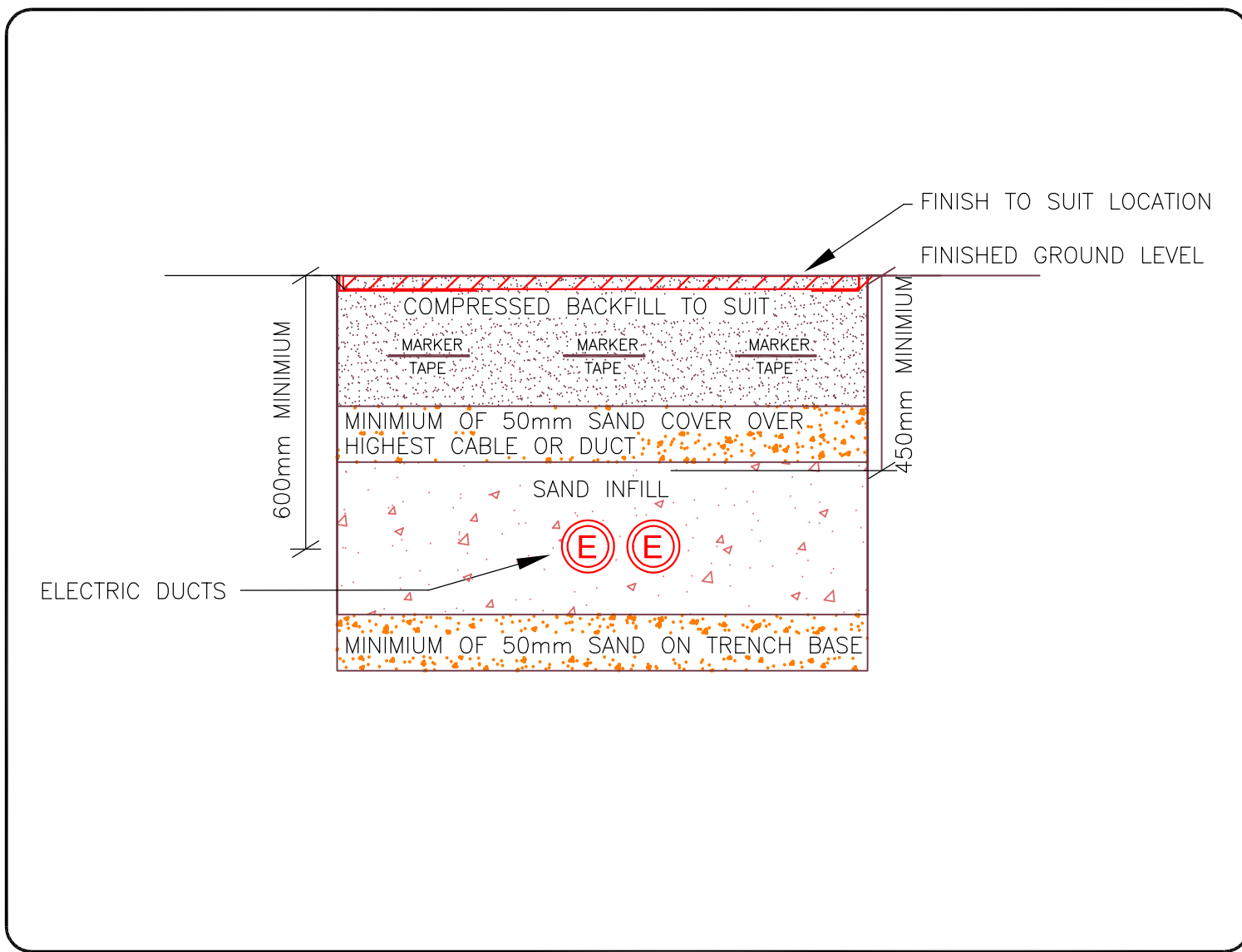
Substation



PLAN

Scale 1:50

TYPICAL CABLE TRENCH DETAIL



EXISTING UNDERGROUND SERVICES

GAS

WATER

BT

HV ELECTRIC

NEW UNDERGROUND SERVICES

Extended DNO HV (Proposed)

LV Sub main supply duct

Data / ELV / Fire ducts

EARTH TAPE

EARTH ROD / INSPECTION PIT

LV CABLE DRAWPIT 1000x1000.

ELV/COMMS CABLE DRAWPIT 450 x 450.

