





General

- 1.1 Do not scale drawings.
- 1.2 All dimensions in mm unless noted otherwise.
- 1.3 This drawing shall apply to sites in the UK only.
- 1.4 The contractor shall be responsible for confirming dimensions and levels on site prior to the commencement of construction or fabrication.
- 1.5 The contractor shall be responsible for setting out the project on site.
- The contractor shall be responsible for the stability and integrity of existing structures and ground profiles within and adjacent to the works, from the date of taking possession of the site until practical completion of the works. The contractor shall be responsible for the design, installation and maintenance of all necessary temporary works to comply with this requirement.
- 1.7 The contractor shall ensure that tolerances are integrated and co-ordinated throughout the works to ensure the efficient implementation of the works.
- 1.8 Where the existing weatherproof envelope is pierced to implement the works, the contractor shall be responsible for ensuring that ingress of water does not occur during the construction period.
- 1.9 Deviations between site dimensions, levels or existing details to those shown on the drawings shall be brought to the attention of the Engineer for comment and resolution.
- 1.10 Preparation, handling and application of the proprietary products shall be all in accordance with the recommendations of the product manufacturer, Health and Safety legislation and the specifications and details of the Engineer. Where contradictions occur between these requirements, reference should be made to the Engineer for resolution
- 1.11 Where specific proprietary products are referenced an equal product approved by the Engineer may be substituted, unless noted otherwise.

Fasteners and Connections — Steel to Steel

2.1 Unless noted otherwise fasteners shall comply with BS EN 15048-1 and the following:

Bolts Grade 8.8 to BS EN ISO 4014 and 4017.

Nuts Class 10 to BS EN ISO 4032.

Washers 300HV to BS EN ISO 7091.

- 2.2 Fasteners shall be spun galvanised to BS EN ISO 10684.
- 2.3 All bolts shall be sized in length to give a minimum extension beyond the nut of three threads.
- 2.4 Where connections are made using dissimilar materials, all connections shall be provided with neoprene, 'top-hat' washers, spring washers or other approved barrier between connector and main material, to minimise the risk of bi-metallic (electrolytic) corrosion.
- 2.5 Where appropriate, taper washers shall be used in bolted connections.
- 2.6 Where a connection is subject to vibration or cyclic loading use shall be made of locknuts, lockwashers or spring washers or other approved methods at locations indicated on the drawing by the Engineer to minimise the risk of loosening of the connectors. This requirement shall apply to Antenna support structures (poles, yokes, freestanding platforms, and associated bracing, support brackets and fixings), and Flagpole support brackets and fixings.

3 Fasteners and Connections - Steel to Concrete or Masonry

- 3.1 The preferred method of fixing structural fixings into solid concrete or masonry walls shall be through-bolt fixings unless specified otherwise. Where the through-bolt fixings cannot be achieved resin anchor fixings should be utilised upon consultation with the Engineer.
- 3.2 Anchor embedment depths shall be as shown on detail drawings.
- 3.3 Where a connection is made between dissimilar metals, all connections shall be provided with neoprene, 'top-hat' washers/spring washers or other approved barrier between connector and main material, to minimise the risk of bi-metallic (electrolytic) corrosion.
- 3.4 Where appropriate, taper washers shall be used in bolted connections.
- 3.5 Where a connection is subject to vibration or cyclic loading use shall be made of locknuts, lockwashers, spring washers or other approved methods, as indicated on the drawing by the Engineer, to minimise the risk of loosening of the connectors.
- 3.6 Anchors shall be tested in accordance with 'Construction Fixings Association Anchors shall be tested in accordance with 'Construction Fixings Association Guidance Note: Procedure for site testing construction fixing', BS 8539:2012, European Technical Approval Guideline or manufacturers recommendations.
- 3.7 Anchors shall be tested to the test loads specified on detail drawings.
- 3.8 All tests shall be documented with location sketches and unique references for each bolt tested, in such a manner that each test location can be identified on site from the documentation. Please ref to BS 8539:2012 B4 section
- 3.9 All nuts, bolts and studdings used in connections to porous materials shall be stainless steel.

4 Concrete

4.1 Unless noted otherwise all concrete shall be:

Conform to BS8500-1: 2015+A2:2019.

Concrete grade: C28/35 Minimum cement content: 360 kg/m3

Nominal aggregate size: 20mm

Maximum free water/cement ratio: 0.45

Cement type: IVB-V (BS 8500-1) Portland cement with 36% fly ash.

Nominal concrete cover to reinforcement: Concrete in the ground (against blinding, against shutters, top): 60mm Other concrete: 35mm Concrete cast directly against soil: 75mm

- 4.2 Unless noted otherwise all reinforcement shall be: Unless noted otherwise all reinforcement shall be:
 - (a) Ribbed reinforcement bars to BS 4449:2005+A3:2016 Grade 500. Ribbed reinforcement bars to BS 4449:2005+A3:2016 Grade 500.
 - Plain round reinforcement bars to BS 4482:2005 Grade 250. Plain round reinforcement bars to BS 4482:2005 Grade 250.
 - Welded steel mesh reinforcement to BS 4483:2005. Welded steel mesh reinforcement to BS 4483:2005.
 - (d) Reinforcement scheduling to BS 8666:2005. Reinforcement scheduling to BS 8666:2005. CE marking of the above to BS EN 10080:2005.
- 4.3 All tower holding down bolts and anchorage assemblies, their setting All tower holding down bolts and anchorage assemblies, their setting out and any relevant templates shall be supplied by the tower manufacturer.
- 4.4 The main contractor shall be responsible for setting out, fixing and checking the installation of the tower anchorage assembly in accordance with the details supplied by the tower manufacturer.
- 4.5 The mix design certificate shall be submitted to the Engineer, for the mix design certificate shall be submitted to the Engineer, for the opportunity to comment, a minimum of 72 hours prior to commencement of casting.
- 4.6 Concrete cube testing to be carried out in accordance with BS1881-124:2015. The results to be forwarded to the Engineer for evaluation. Three 150mm cubes to be made, one to be tested at age 7 days and two at 28 days.
- 4.7 All concrete reinforcement and cast in items shall be positively located in position prior to casting of the concrete
- 4.8 Where concrete is to be cast against an existing concrete surface, the existing surface shall be scabbled to remove laitance and other deleterious materials. Scabbling shall expose the aggregate and sound material. A bonding agent is to be applied to the scabbled surface a maximum of two days before casting.
- 4.9 Concrete in each base shall be cast in a single continuous operation.
- 4.10 Cover to reinforcement as noted on detail drawing.
- 4.11 Concrete shall not be cast where the ambient temperature is 2 degrees centigrade and falling or less than 2 degrees on a rising thermometer.
- 4.12 Finishes where stated shall be:

Formed finish - basic as struck

Worked finish - brush finish.

5 Steelwork

5.1 Unless noted otherwise, structural steel to be:

Open sections / plates BS EN 10025-2-S275JR.

Hollow sections BS EN 10210-1-S355J2H.

All to be CE marked to BS EN 10025-1 and BS EN 10210-1.

- 5.2 All welds to be minimum 6mm fillet weld unless noted otherwise. Welds at tube to tube connections to be full penetration butt
- 5.3 All steelwork to be galvanised to BS EN ISO 1461, Unless Noted
- 5.4 Minor site erection damage to galvanised steelwork to be made good with brush applied Galvafroid, unless noted otherwise.
- 5.5 All steelwork to be CE Marked to BS EN 1090-1:2009 + A1:2011.
- 5.6 Unless specified otherwise. Steelwork to be fabricated to Execution Class to BS FN 1090-2 as follows:

Execution Class 2 as a minimum.

- 5.7 Comply with National Structural Steelwork Specification Current Edition / CE Marking Version.
- 5.8 Grouting materials BS EN 1504-3 & BS EN 1504-6: Only when specify, high strength, high flow, non-shrink cementitious grout Fosroc Conbextra GP or equal approved, installed to manufacturers recommendations

6 Ducting

- 6.1 All ducts should be equipped with double draw-cords and secured at either end with labelled pegs.
- 6.2 All ducts to be sealed with expanding foam after cable installation
- 6.3 Type 54 (98mm dia) duct should be used for poke outs. Direction of poke outs to be in the approximate location of the fixed services joint box and should not be pointing towards the base of
- 6.4 Inter-cabinet duct of 75/100mm diameter should be installed for inter-cabinet cabling purposes. It should NOT be ribbed from inside to avoid issues while pulling cables.
- 6.5 Recommended minimum depths of ducting -

Footway/Verge - 250 to 350mm

Carriageway - 450 to 600mm

Greenfield - 1000mm

- 6.6 Where possible all ducts to be laid with a minimum bend radius of 450mm
- 6.7 Telecom and power ducts to be kept separate.
- 6.8 Backfilling of any excavation should be done carefully to make sure that services are not damaged.

Put back warning tiles, tape etc in their original position above the services unless visual examination after exposure showed this to be incorrect, in which case replace them above the service to which

- Do NOT use warning tape for any other purpose and do not discard it in an excavation during backfilling
- 6.9 Backfill material adjacent to gas plant should be suitable fine material or sand, containing no stones, bricks or lumps of
- 6.10 Services must NOT be buried or encased in concrete

ALL DIMENSIONS ARE IN mm UNLESS NOTED OTHERWISE

E:297599 N:518115

N.G.R

MD JM 28.05.21 MODIFICATION BY CH DATE



Site Name Opt. SHEPLEY WHITEHAVEN

Site Address / Contact Details

THE OLD TOWN HALL DUKE STREET WHITEHAVEN CA28 7NU

Drawing Title:

GENERAL NOTES

Purpose of issu Dwg Rev: CONSTRUCTION Drawing Number Α 500 Surveyed By Original Sheet Size: ²ack

Date: **21.05.21** MD 28.05.21