

20051 New Access Footpaths and outdoor spaces - Schedule of Work

10 Feb 2022

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0 DEMOLITION, SITE CLEARANCE AND ALTERATIONS

£

0.1 Demolition

10 Survey Before Works

Location : Services runs through the building

- **SCOPE OF WORKS**

Scope: The general scope of the works is to install a complete barrier system inclusive of all electrical supplies and liaison with the barrier & access control installers including commissioning. Works include but are not limited to the the installation of below ground ducts, associated draw pits, internal containment. The contractor shall alter kerb lines as shown on the drawings, install new paths and traffic islands, and all making good to surface finishes in-line with the UoR policies. The works also include the installation of signage and road markings.

- **Survey (C20)**

Cost and works Survey: It is the main contractors responsibility to ensure that the electrical and barrier contractor have surveyed the site and allowed for any containment and internal works to connect the system up. Any quotes provided are for information only.

Trial Pit: The contractor whilst excavating trenches shall allow for uncovering existing HV cables to ascertain their depth. Allow for a 1 x 1 x 1m hole and all making good there is a separate provisional sum for any additional works. HAND DIG ONLY!

Total for page £

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1 SERVICES

£

1.1 Supply Ducts

20 Below Ground Ducts

Note : *Future works are planned to the site and all ducts, manholes etc. shall be assumed to be in a trafficked area (car park).*

- **Trench For Electrical/Control Service Ducts (P30)**

Trench Position : *As drawing 20051-P-003D and 20051-P-016.*

Details : *As drawing 20051-P-010*

Trench Depth : *600mm invert depth*

Bedding And Surround : *Granular material.*

Backfilling Generally : *Granular surround to 100 mm above crown of pipeduct with backfilling of excavated material from trench.*

- **Ducts**

Manufacturer : *Contractors choice*

Product Reference : *Twin walled electric ducts to EN-61386-24 for Class 3*

Note : *Allow for manufactures proprietary jointing collars. Allow for draw ropes including a spare in each duct for future works. ropes shall be left tied off so they cannot be dislodged*

- **Cable Riser Protective Cover**

Manufacturer : *As drawing 20051-P-010*

Cable sleeving : *As drawing*

30 Electrical Installation Complete As Drawings

Drawing Reference : *Drawing 20051-P-003D and 20051-P-016*

Location : *with tender documents*

Contractor Design : *N/A*

Electrical Supply : *Existing*

Distribution Board : *New as detailed on the drawing. To BS*

Cables Conduit And Trunking : *All to BS Contractor to submit proposals.*

Accessories : *MK Electric.*

Luminaires : *Holopane Europe and column Abacus Lighting as detailed on the drawings .*

Electrical Testing Commissioning And Documentation : *To IET Wiring Regulations 17th Edition.*

- **Electricity Supply (V90)**

Phase : *Single.*

Voltage : *230 V.*

Source : *New MCBO distribution board located on ground floor in staircase services duct; as shown on the drawings. To BS EN 61439-3.*

Metering : *N/A.*

Suitability Of Supply : *Contractor to measure the existing fault level at switchboard located in Block east wing ground floor.*

Connection : *N/A.*

Separate Earth Bar : *N/A.*

- **Distribution Board (V90)**

Manufacturer : *Schneider Electric.*

Product Reference : *Acti 9 Isobar B.*

Third Party Certification : *ASTA certified.*

Rating : *100 A.*

Number Of Phases : *Three.*

Incoming Devices : *Switch disconnecter to BS EN 60947-3.*

Number Of Outgoing Ways : *4 TP & N single phase MCBO's.*

Outgoing Devices : *Miniature circuit breakers to BS EN 60898-1.*

Enclosure : *Metal, surface mounted.*

Ingress Protection : *To BS EN 60529, IP31.*

Security : *Lockable door/cover with barrel lock and key.*

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• Post Top Mounted Luminaire (V90) Manufacturer : <i>Holopane Europe.</i> Product Reference : <i>Denver iD Pole. complete with electronic driver</i> Holopane Denver iD: Pole consists of a 2-part body and a removable LED module manufactured from LM6 marine grade die-cast aluminium with integrated thermal management properties. The LED module optical arrangement consists of LEDs with individual PMMA optical lenses surrounded by a patented white Transition Zone to reduce perceived glare. This is sealed behind high-transparency 'hydrophilic' glass. Both luminaire body and LED module are sealed to IP65 and rated IK10. Drivers and LED are mounted separately from each other to promote low operating temperatures and long system life. Column mounting of the luminaire is facilitated by a bespoke post-top bracket with specific interface to attach luminaire to bracket. Cable entry and termination to the luminaire is via an IP65 cable gland. Access to the luminaire is via 4 x nuts.. Switching : <i>Photo-electric cell. Pre-set dimming to 70% between 12.00am to 6 am</i> Lamp : <i>LED light engines, .</i> Fixing : <i>Column mounted as manufactured by Abacus Lighting; 5 metres above FGL raise/lower root mounted with concrete surround to manufacturer's Specification. Manufacturer's reference T051RLS. Post top mounted luminaires to be fixed on decorative twin head bracket with 5 deg. tilt mounted on column manufactured by Holopane Europe reference PR2-03/D. Base of column fitted with Lucy Switchgear DP fused cut-out reference Titan 2 part NT 06 with flexible cable connection to lantern 1.5mm2 3 core circular butyl insulated neoprene sheathed flexible cable.</i> • Documentation For Electrical Installation (V90) Contents : <i>Schedule of Works and drawings</i> • Commissioning Of Electrical System (V90) Requirements : <i>In accordance with IET Wiring Regulations 17th Edition</i>	£
• Fence Top Mounted Luminaire (V90) Manufacturer : <i>Holopane Europe.</i> Product Reference : <i>Denver Elite DEP.LZ054.AY.C6.T1.D2. complete with electronic driver</i> Material And Finish : <i>Soda lime prismatic glass lens 'prismal LED optic with highly reflective aluminium AL99.85 reflector housed in a marine grade aluminium LM6 body and canopy to provide a IP65 rated enclosure complying with BS EN 60598. Prepared and painted with one coat of blue/grey etching undercoat and two coats of gloss BS 4800 12 B21 (crown peridot) applied in manufacture final coat or baked epoxy powder to equivalent RAL colour factory applied.</i> Switching : <i>Photo-electric cell. Pre-set dimming to 70% between 12.00am to 6 am</i> Lamp : <i>LED light engines, .</i> Fixing : <i>Fix to top of Secure fencing in position shown in drawing; 5 metres above FGL. Fence top mounted luminaires to be fixed on approved metal plate to the agreed angle by CA. Light to be fitted with Lucy Switchgear DP fused cut-out reference Titan 2 part NT 06 with flexible cable connection to lantern 1.5mm2 3 core circular butyl insulated neoprene sheathed flexible cable.</i> • Documentation For Electrical Installation (V90) Contents : <i>Schedule of Works and drawings</i> • Commissioning Of Electrical System (V90) Requirements : <i>In accordance with IET Wiring Regulations 17th Edition</i> •	
40 Plastics Inspection Chamber Drawing Reference:- <i>20051-P-003D and 20051-P-016</i> Location : <i>As drawing</i> Invert Level : <i>As drawing</i> Cover Level : <i>As drawing</i> • Excavation (D20) Extent : <i>As drawing</i> • Plastics Inspection Chambers For Below Ground Drainage Systems (R12) Manufacturer : <i>Naylor Drainage Metro Genus</i> Diameter : <i>Manufacturer's standard.</i> Base : <i>Manufacturer's standard.</i> Shaft Units : <i>Manufacturer's standard.</i> Access Covers And Frames : <i>As drawing</i> Cover Loading Grade : <i>C250.</i> Concrete Collar : <i>Concrete (general), 200 x 300 mm (minimum).</i> Seating : <i>Not required.</i> Bedding : <i>As drawing</i> Surround : <i>Granular, size 4/10, thickness 100 mm (minimum).</i> • Completion Of Backfilling To Trenches And Excavations To Below Ground Drainage Systems (R12) Backfill For Excavations In Paved Areas : <i>Selected fill compacted in layers to 200 mm (maximum) from finished ground surface.</i> Backfill For Excavations In Planting Areas : <i>Selected fill compacted in layers to 300 mm (maximum) from finished ground surface.</i>	

1.2 Builder's Work In Connection With Services 50 BWICW <i>Location : The contractor shall allow for all BWICW services installation. This includes but is not limited to opening up/making good/protection/forming openings/fire stopping/taking out and replacement of ceilings/chasing walls/decoration/temporary works</i>	
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2 EXTERNAL WORKS

£

2.1 Site Works

50 Asphalt Concrete To Car Parks

Drawing Reference : 20051-P-003D and 20051-P-016

Location : As drawings

- **Excavation (D20)**

Extent : As drawing A202 & Civil Engineers Drawings

- **Granular Sub Base (Q20)**

Material : To MCHW Volume 1: Specification for highway works (SHW), clause 803 Type 1 unbound mixture.

Minimum Thickness : Ref civil engineers drawings

Accuracy Of Sub Base : ± 20 mm from required falls and cambers.

- **Geotextile Filter (Q20)**

Manufacturer : Submit proposals.

Product Reference : Refer to engineers drawings

- **Asphalt Concrete Paving To Car Parks - Or As Stated on Engineers Drawings/Spec (Q22)**

Base : AC 32 dense base, grade 70/100.

Base Compacted Thickness : 75 mm nominal.

Binder Course : AC 20 dense bin, grade 40/60.

Binder Compacted Thickness : 60 mm nominal.

Surface Course : AC 10 close surf, grade 40/60.

Surface Compacted Thickness : 25 mm nominal.

Reclaimed Content : Surface course maximum 10%, other courses maximum 50%.

- **Uncoated Chippings To Asphalt Concrete Paving (Q22)**

Type : Whinstone.

Size : 0/6 mm.

Binder : Bitumen emulsion.

- **Road Marking (Q10)**

Manufacturer : Contractor's choice.

Type : Thermoplastics.

Layout : As drawing 20051-P-010

Colour : White.

Reflective Finish : BS EN 1436, class R2.

- **Timber Edging To Planing Area (Q22)**

Drawing : 20051-P-010

Pegs : Softwood, 50 x 50 x 450 mm long.

Centres : 1000 mm.

Boards : 38 x 150 mm softwood.

Fixing : Galvanized nails into pegs.

Preservative Treatment : ACQ, high pressure vacuum.

Weed Control/Finish : As drawing

70 Precast Concrete Kerbs To Roads And Car Parks

Drawing Reference : 20051-P-003D and 20051-P-016

Location : As drawings

- **Excavation (D20)**

Extent : As drawing

- **Precast Concrete Kerbs General Specification (Q10)**

Manufacturer : Contractor's choice.

Product Reference : As shown or to match

Type : As shown or to match

Length : Contractor's choice.

Finish : Smooth.

Colour : Natural.

Joints : Dry, minimum 2 mm gap.

Layout : As drawing

Drop Kerb : Allow for drop where shown on drawing

- **Concrete Foundation And Haunching For Precast Concrete Kerbs (Q10)**

Mix : Designated concrete GEN0 or Standardised prescribed concrete ST4, very low workability.

Foundation Size : Contractor's choice.

Haunching : As drawing 20051-P-010.

Reinforcement : A252 mesh to be incorporated in to the top of the island

- **Bollards (Q50)**

Manufacturer : Contractor's choice.

Product Reference : e.g. Marshalls Bridgeford

Preparation : Remove existing surfacing as necessary. Set aside intact unit pavings for reuse.

Operation : Fixed.

Material : Precast concrete.

Finish As Delivered : Manufacturer's standard.

Height Above Ground : 915mm

Fixing : As manufacturer's recommendations.

Completion : Make good to surfacing.

- **Concrete Flag Paving (Q25)**

Manufacturer : Best match to existing

Finish : As existing.

Size : As existing

Bedding : Mortar

Bond : Straight line.

Jointing : As exiting

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80 Road Traffic Signage/Markings

Drawing Reference 20051-P-010

Location : As drawing
Concrete Base : As drawing

Mounting : Post mounted; post for road traffic signs as specified; set in concrete.

Sign Height : As drawing or barrier mounted

• Road Traffic Signs (N91)

Manufacturer : Contractor's choice.

Product Reference : As drawing

Function : As drawing

Layout And Dimensions : As drawing

Material : Aluminium plate.

Fasteners : As manufacturer's recommendations.

Additional Options : None.

Design And Detailing Of Signage System : Complete the design in accordance with BS 12899-1 and the Department for Transport 'Traffic signs manual' Chapter 7. Submit drawings showing dimensions and fixing methods.

• Road Marking (Q10)

Manufacturer : Contractor's choice.

Type : MMA (Methyl Methacrylate), hand applied

Layout : As drawing

Colour : White.

Reflective Finish : BS EN 1436, class R2.

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**20051 - New Access Footpaths and outdoor spaces
- Schedule of Work**

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Preliminaries	
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Signed _____

For and on behalf of _____

Date _____