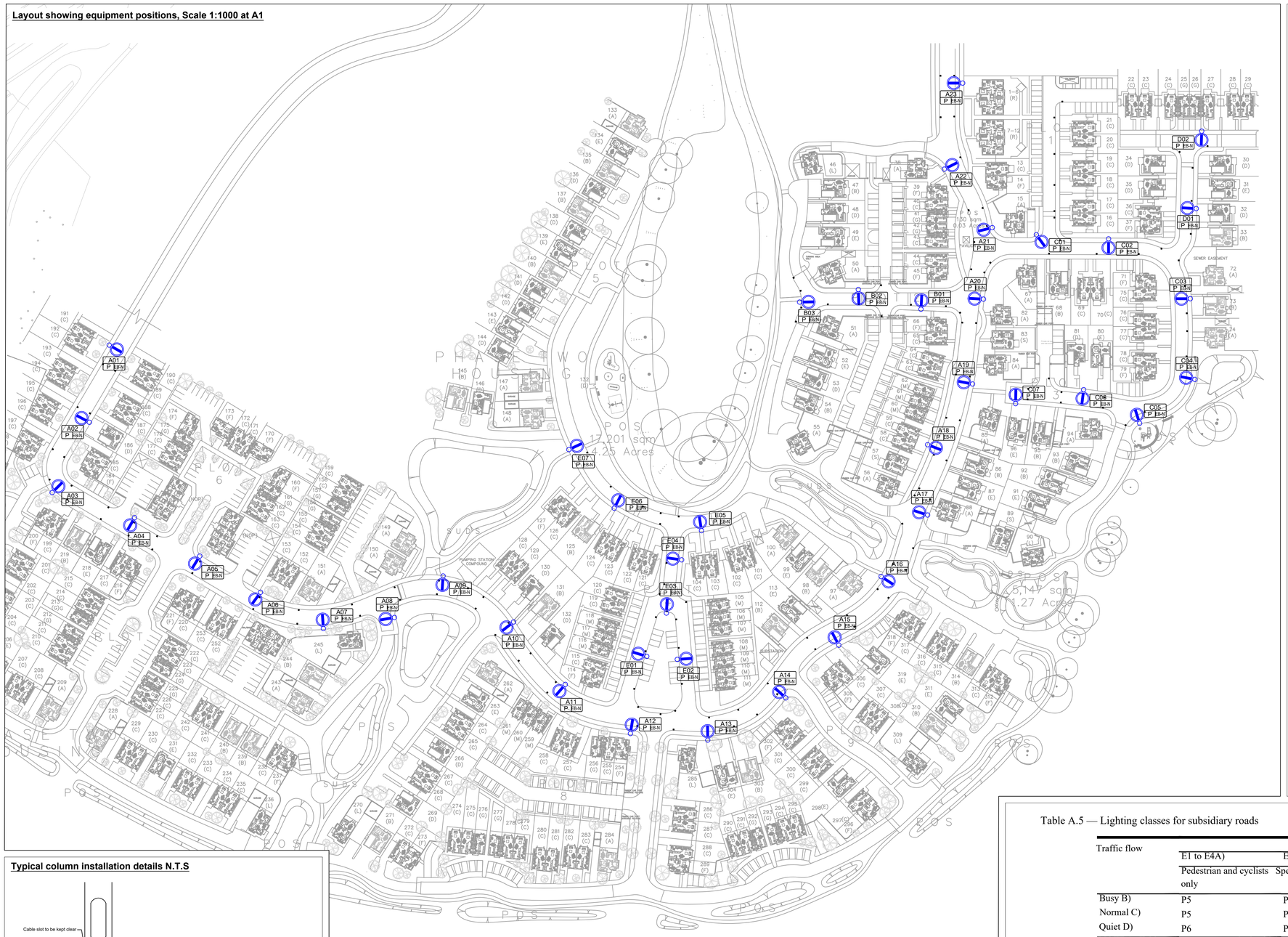
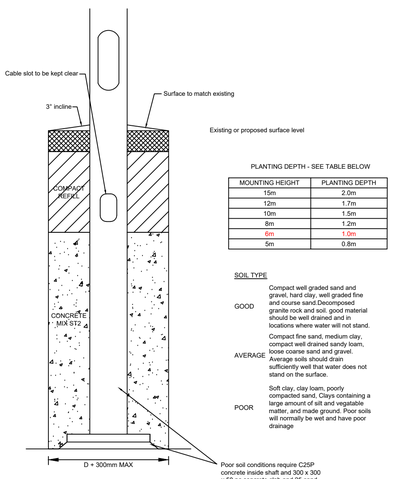
Layout showing equipment positions, Scale 1:1000 at A1



Typical column installation details N.T.S



PLANTING DEPTH - SEE TABLE BELOW

MOUNTING HEIGHT	PLANTING DEPTH
15m	2.0m
12m	1.7m
10m	1.5m
8m	1.2m
6m	1.0m
5m	0.8m

SOIL TYPE

GOOD	Compact well graded sand and gravel, hard clay, well graded fine and course sand.Decomposed granite rock and soil, good material should be well drained and in locations where water will not stand.
AVERAGE	Compact fine sand, medium clay, compact well drained sandy loam, loose coarse sand and gravel. Average soils should drain sufficiently well that water does not stand on the surface.
POOR	Soft clay, clay loam, poorly compacted sand, Clays containing a large amount of silt and vegatable matter, and made ground. Poor soils will normally be wet and have poor drainage

BoQ

TRT Lighting Ltd. AS16_LED_35W_GR5_3000K_FG
TRT Lighting Ltd. test report no. 001
lamp(s): 3000K
candela file 'AS16_LED_35W_GR5_3000K_FG.ies'
1 lamp(s) per luminaire, 4440 initial lumens per lamp
Maintenance Factor = 0.820, watts per luminaire = 35
Outreach (from mounting axis to photometric center)= 300 mm
tilt angle= 5 deg
mounting height= 6 m
number locations= 42, number luminaires= 42
kw all locations= 1.5

Notes

1. Column foundations to be as per Local Authority Standard Detail drawing.

2. All columns to be provided with Distribution Network Operator Services to Local Authority Standard Detail drawing, unless otherwise stated.

3. Column positions to be agreed on site with the Local Authority Street Lighting Engineer. All columns to be sited within the adoptable highway and generally in compliance with the current Local Authority Design Guide for Residential areas. Columns shall not be installed within dropped kerb areas.

4. Column numbering to be agreed with the Local Authority Street Lighting Engineer.

5. The Contractor is to provide Local Authority with as-built drawings, test certificates and column and lantern data sheets.

6. All Street Lighting works to be carried out by Local Authority approved contractors.

7. A list of proposed equipment is to be rendered by the contractor for approval by the Local Authority Street Lighting Engineer prior to the installation.

8. Adoptable ducting to be installed to satisfy the requirements of Distribution Network Operator.

9. The contractor to liaise with Distribution Network Operator with regard to connections and disconnections of columns and illuminated signs.

10. Minimum distance for a column to be erected in a service strip is 1m back from the front face of the column to kerb edge.

11. This lighting scheme comply's with North Wales Authorities Lighting Design Guide and Specification (ref: ENV/PP/DC-1075).

12. All wiring including component labelling to be in accordance with BS7671.

13. Prior to excavation works the installation contractor must be aware of underground services or hazards which may be encountered in the installation of the lighting system. Advice should be sought from the developers engineering representative.

14. The installation contractor must be aware of any overhead obstructions. Advice should be sought from the developers engineering representative.

15. Column door orientation as per current Wrexham County Borough Council's policy is for the operative maintaining the column to be facing the oncoming traffic.

Table A.5 — Lighting classes for subsidiary roads

Traffic flow	Lighting class				
	E1 to E4A)	E1 to E2A)		E3 to E4A)	
	Pedestrian and cyclists only	Speed limit v	≤ 30 mph	Speed limit v	≤ 30 mph
Busy B)	P5	P4		P3	
Normal C)	P5	P5		P4	
Quiet D)	P6	P5		P4	

NOTE 1 Table A.5 assumes no parked vehicles; see risk assessment in A.3.3.2.

NOTE 2 An EV lighting clas using vertical illuminance, from BS EN 13201-2:2015, Table 6, can be specified in addition to the general lighting class when there are particular concerns about crime and personal safety. EV is calculated at the typical height of a human face (1.5m) and in relevant viewing orientations.

NOTE 3 To ensure adequate uniformity, the actual value of the maintained average illuminance is not to exceed 1.5 times the value indicated for the class.

NOTE 4 The actual overall uniformity of illuminance, Uo, needs to be as high as reasonably practicable (See 7.2.6).

NOTE 5 The ambient luminance descriptions E1 to E4 refer to the enviromental zone as defined in ILP GN01 [N2].

NOTE 6 The illuminance classes are suggested minimum levels. A risk assessment needs to be carried out to ensure that the light levels are adequate, particularly for pedestrians and cyclists.

A) Environmental zone, as given in ILP GN01 [N2].

B) Busy traffic flow refers to areas where the traffic ussage is high and can be associated with local amenities such as clubs, shopping facilities, public houses, etc.

C) Normal traffic flow refers to areas where the traffic usage is of a level equivalent to a housing estate access road.

D) Quite traffic flow refers to areas where the traffic usage is of a level equivalent to a residential road, and is mainly associated with the adjacent properties or properties on other equivalent roads accessed from this road.

Key

42 **Proposed Column:**
- **Manufacturer:** CU Phosco
- **Material:** Galvanised Steel
- **Type:** Tubular
- **Height:** 6m

Proposed Lantern:
- **Manufacturer:** TRT
- **Model:** Aspect AS16
- **Optic:** GR5
- **LED:** 16
- **KLM:** 4.44 klm
- **Kelvin:** 3000k
- **Mounting:** post top
- **Tilt:** 5°
- **Wattage:** 35W
- **Photometry file:** 'AS16_LED_35W_GR5_3000K_FG.ies'
- **Driver:** DALI enabled
- **PECU:** factory fitted miniture cell, switching at 55lux 1:0.5 ratio
- **Dimming:** Dimmable by 25% between midnight and 5am

A01 P EB-N — A01 = Proposed S38 Column Number; P = Proposed Column; EB-N = Proposed Electical Board connection

Note

Until technical approval has been obtained from the relevant adopting authority, it should be understood that all drawings issued are preliminary and NOT for construction. Should the contractor commence site work prior to approval being given, it is entirely at his own risk.

Additional Notes

Double pole isolation device with a 6A BS88 fuse to be utilised above the DNO cut out. Tofco model to be used.

- 1.5mm Flex for the downleads.
- BS 951 'safety electrical connection' lable in base.
- Copper grease on door hinge & door retaining bolt
- 6A discrimination DNO to private cut out.
- Conductors doubled over in the terminals

REV	DESCRIPTION	DATE	DRN	APP
C	Lanterns changed	26/01/24	KL	PDL
B	Revised lanterns to 3000k	27/07/22	TL	PDL
A	Added Columns E01-E07	19/10/21	TL	PDL

DRAWING NO: 23020-D-01 REV: C

DRAWING STATUS: DESIGN

CLIENT: PURE

PROJECT: Ruabon, Wrexham Phase 1 Adoptable Lighting

TITLE: Proposed Lighting and Installation Design Layout

SCALE: AS INDICATED

DESIGNED BY: TL 30/09/21

SHEET NO: Sheet 1 of 1

APPROVED BY: PDL 05/10/21

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PROJECT: F:\Projects\Pure Homes\Ruabon, Wrexham, Phase 1\Drawings\Rev_ C

XREF DRAWINGS: --------

Date Plotted: --------

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