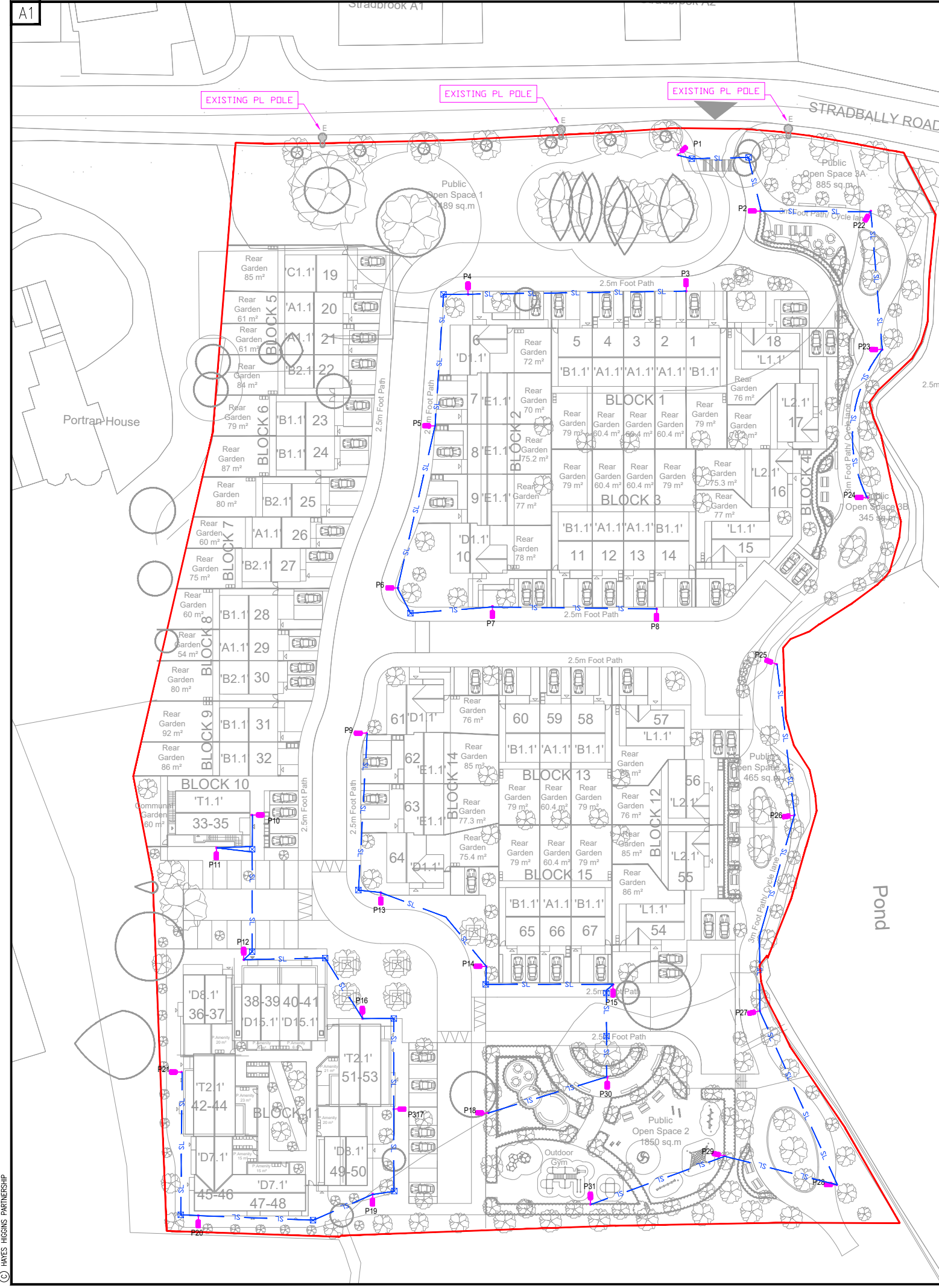




Appendix 3 - Mechanical & Electrical

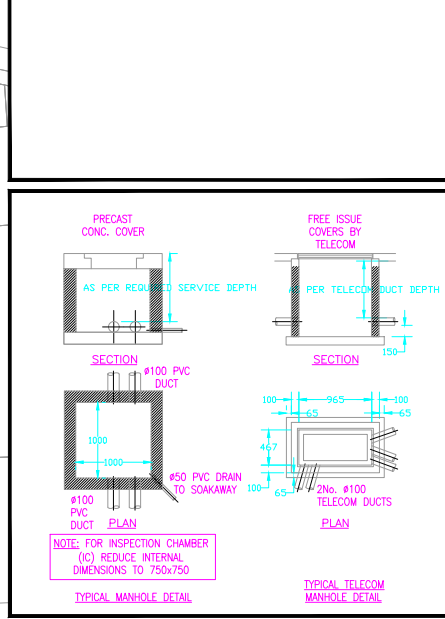
Tyrrells Lands Stradbally Road, Portlaoise, Co. Laois



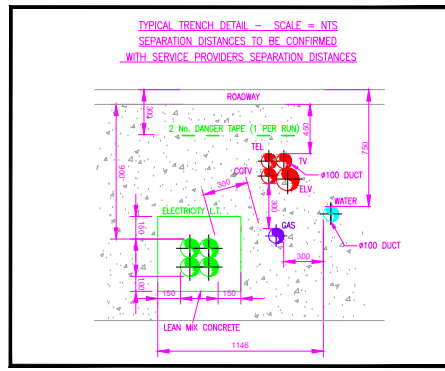
LEGEND

- EXTERNAL LIGHTING DUCT #100mm (RED)
- EXISTING LIGHTING DUCT
- P'n LED LANTERN, 22W, 3400lm, 4000K, DW50 DISTRIBUTION ON 6m POLE
- E EXISTING LUMINAIRE
- MANHOLE FOR DRAWING WIRES, ACCESS AND MAINTENANCE.
- ESB MINIPILLAR "n"
- PL MICROPIILLAR "n"

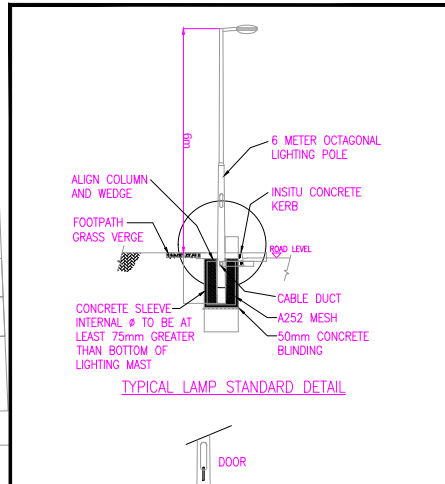
- NOTES:**
- GENERAL NOTES:**
- THIS DRAWING TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS, C&S ENGINEERS DRAWINGS & SPECIFICATIONS.
 - ALL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH THE RELEVANT BUILDING REGULATIONS.
 - DO NOT SCALE - WORK TO FIGURE DIMENSIONS ONLY.
- NOTES:**
- Ducting shall comply with latest version of BS EN 50086 and shall be single wall, coloured red and manufactured from high-density polyethylene. The nominal external diameter of the duct shall be 107mm with a minimum wall thickness of 5mm.
 - Each length of duct shall be stamped with the words 'Public Lighting' or 'Street Lighting', in 18mm black lettering repeated at 1-metre intervals.
 - Ducts shall be laid with the legend facing upwards, in a straight line, close to the line of the column locations and shall contain a continuous draw wire of 8 kN strength.
 - Sand should be used to backfill to 150mm above the top of the ducting.
 - A clearance of at least 100mm shall be allowed to the trench wall.
 - An identifying tape must be placed on top of the sand.
 - A minimum depth of 450mm cover is required in urban footways, grass margins, pedestrian ways, laneways and vehicular accesses; and a minimum depth of 750mm is required at road crossings or under roadways.
 - Installation to comply with the Midland Counties Public Lighting Specification



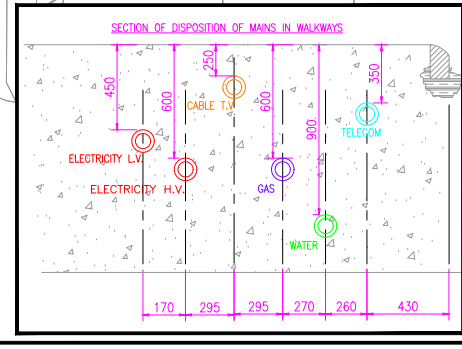
- NOTES:**
- Ducting shall comply with latest version of BS EN 50086 and shall be single wall, coloured red and manufactured from high-density polyethylene. The nominal external diameter of the duct shall be 107mm with a minimum wall thickness of 5mm.
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 - Installation to comply with the Midland Counties Public Lighting Specification



Rev.	Date	Description	Drawn	Checked	Approved
P1	08/11/23	INFORMATION	HP	BC	BC



Rev.	Date	Description	Drawn	Checked	Approved
P1	08/11/23	INFORMATION	HP	BC	BC



Client: WICKLOW COUNTY COUNCIL

Job Description: OGP 67 HOUSING UNITS IN STRADBALLY RD, PORTLAOISE, Co. LAOIS

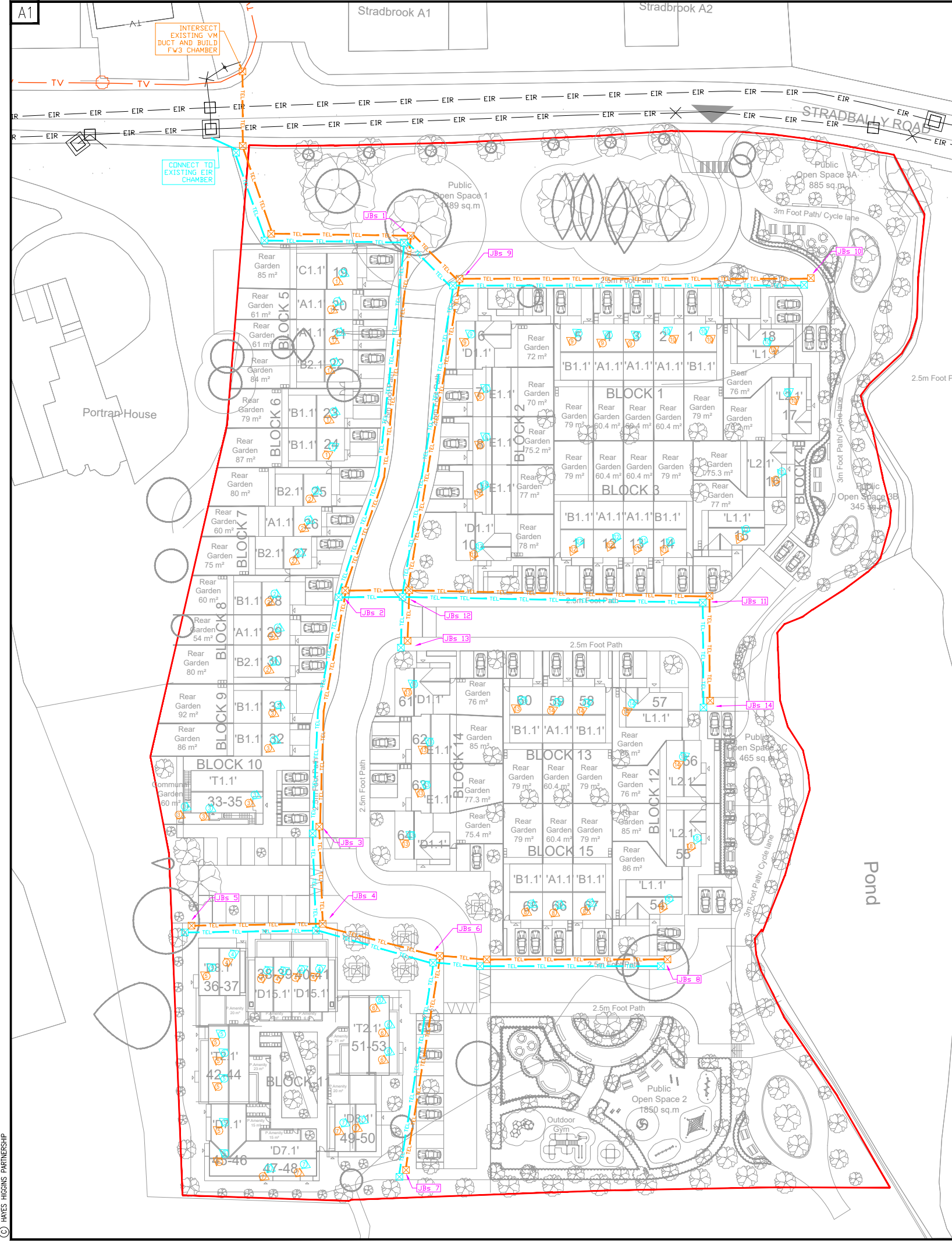
Information: PUBLIC LIGHTING SITE SERVICES LAYOUT

Project No: 23ME002 **Drawing Ref:** ME-1000(C) **Rev:** P1

Date: 08/11/2023 **Scale:** 1:400 @ A1 (1:800@A3)

Drawn By: H.P. **Checked By:** B.C. **Approved By:** B.C.

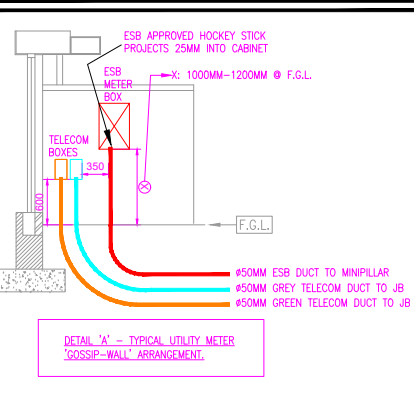
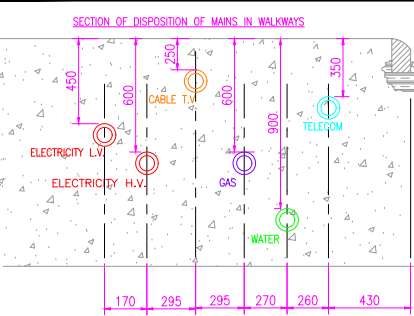
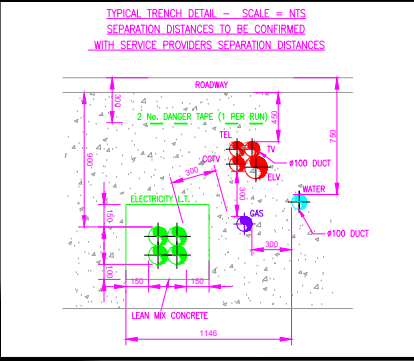
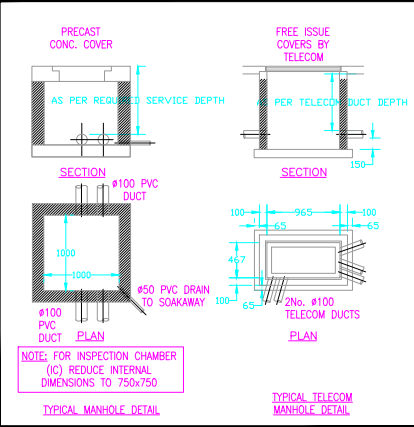
Hayes Higgins Partnership
Gas House Lane, Kilkenny.



LEGEND

- TEL TELECOM GREY DUCTS
Ø110mm MAINS TO CHAMBERS
AND Ø50mm FROM CHAMBERS TO ETU'S
EXISTING EIR DUCT
- EIR PROPOSED JB4/FW3 MANHOLE,
EXCEPT OTHERWISE NOTED
- En TELECOM 1 JB "n"
- Ø50mm GREY DUCT TO JB "n"
- EIR TELECOM POLE
- TELECOM GREEN DUCTS
Ø110mm MAINS TO CHAMBERS
AND Ø50mm FROM CHAMBERS TO ETU'S
EXISTING VIRGIN MEDIA DUCT
- Cn TELECOM 2 JB "n"
- Ø50mm GREEN DUCT TO JB "n"

- NOTES:**
- GENERAL NOTES:**
- THIS DRAWING TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS, C&S ENGINEERS DRAWINGS & SPECIFICATIONS.
 - ALL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH THE RELEVANT BUILDING REGULATIONS.
 - DO NOT SCALE - WORK TO FIGURE DIMENSIONS ONLY.



- NOTES:**
- Ducting shall comply with latest version of BS EN 50086 and shall be single wall, coloured red and manufactured from high-density polyethylene. The nominal external diameter of the duct shall be 107mm with a minimum wall thickness of 5mm.
 - Ducts shall be laid with the legend facing upwards, in a straight line, close to the line of the column locations and shall contain a continuous draw wire of 8 kN strength.
 - The bedding shall consist of a mix for concrete grade C35 to be: 1 cement, 1 sand, 2 washed pebble.
 - The surround shall consist of either a lean mix concrete (1 cement to 3 sand 6 gravel) or crushed rock to CL804, to be laid in 200mm thick layers and each layer to be well consolidated with a mechanical compactor.
 - The bottom of the trench shall be leveled and rammed, in rocky or stony soils, earth, free from stones, shall be spread over the bottom of the trench and rammed to afford a bedding of 75mm in thickness upon which the duct shall be laid.
 - Ducting will be covered with sand (or equivalent substrate) before back filling the trench to avoid damage by back fill aggregate material.
 - An identifying tape must be placed on top of the sand.
 - A minimum depth of 450mm cover is required in urban footways, grass margins, pedestrian ways, laneways and vehicular accesses; and a minimum depth of 750mm is required at road crossings or under roadways.
 - All sleeves to be in accordance with Section 11 and Appendix E of the "Construction Standards for Road and Street Works in Dublin City Council"

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Qualitas Veritas
ISO 9001-2015

ENGINEERS IRELAND
cpd ACCREDITED COMPANY

Rev.	Date	Description	Drawn	Checked	Approved
P1	08/11/23	INFORMATION	HP	BC	BC

Client: LAOIS COUNTY COUNCIL
Job Description: OGP 67 HOUSING UNITS IN STRADBALLY RD, PORTLAISOE, Co. LAOIS

INFORMATION

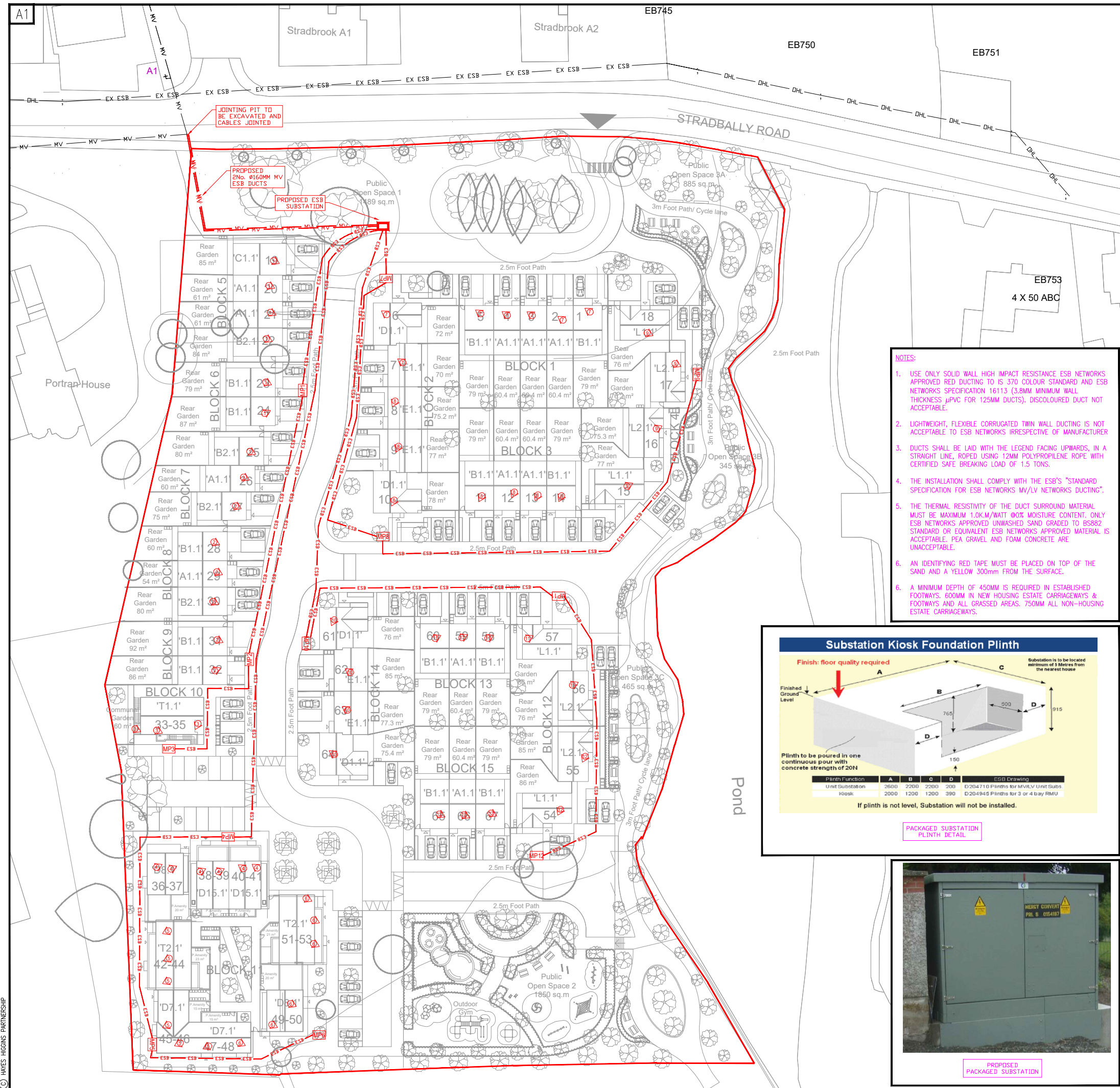
Drawing Title: TELECOM SITE SERVICES LAYOUT

Project No: 23ME002 Drawing Ref: ME-1000(B) Rev: P1
Date: 08/11/2023 Scale: 1:400 @ A1 (1:800@A3)
Drawn By: H.P. Checked By: B.C. Approved By: B.C.

Hayes Higgins Partnership
Gas House Lane, Kilkenny.

Scale: 1:400 @ A1 (1:800@A3)
Date: 08/11/23
Drawn By: H.P. Checked By: B.C. Approved By: B.C.

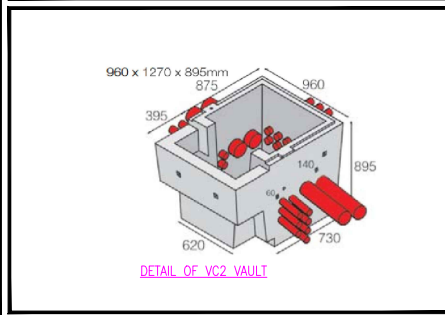
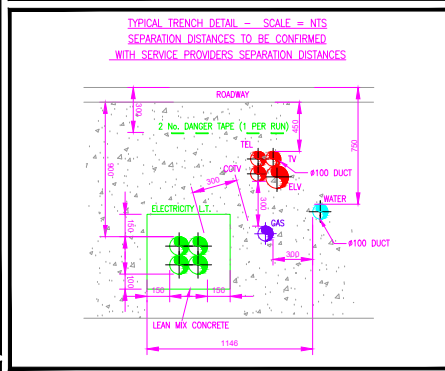
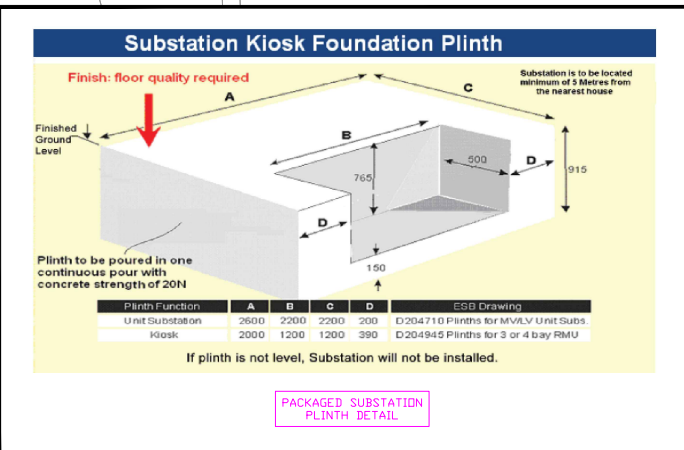
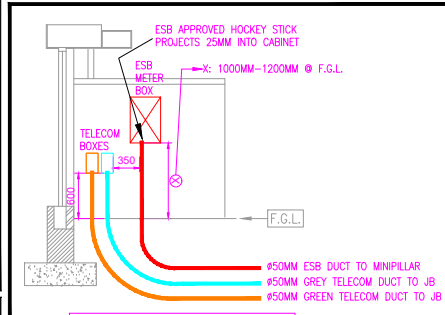
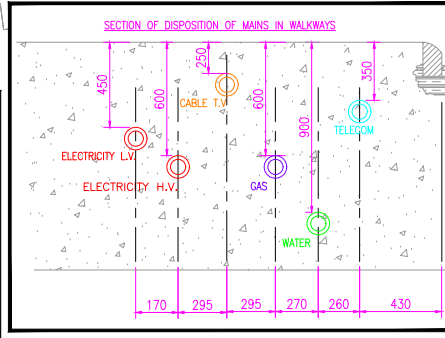
A.3.4



- LEGEND**
- PROPOSED ESB LV DUCT Ø125mm RED
 - PROPOSED ESB MV DUCT Ø160mm RED
 - PROPOSED ESB OHL
 - EXISTING ESB OHL TO BE REMOVED
 - EXISTING ESB OHL
 - MANHOLE FOR DRAWING WIRES, ACCESS AND MAINTENANCE.
 - ESB MINIPILLAR "n" C/W VC2 VAULT IMMEDIATELY IN FRONT
 - ø50mm RED DUCT TO MINIPILLAR "n"

- NOTES:**
- GENERAL NOTES:**
- THIS DRAWING TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS, C&S ENGINEERS DRAWINGS & SPECIFICATIONS.
 - ALL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH THE RELEVANT BUILDING REGULATIONS.
 - DO NOT SCALE - WORK TO FIGURE DIMENSIONS ONLY.

- NOTES:**
- USE ONLY SOLID WALL HIGH IMPACT RESISTANCE ESB NETWORKS APPROVED RED DUCTING TO IS 370 COLOUR STANDARD AND ESB NETWORKS SPECIFICATION 16113 (3.8MM MINIMUM WALL THICKNESS uPVC FOR 125MM DUCTS). DISCOLOURED DUCT NOT ACCEPTABLE.
 - LIGHTWEIGHT, FLEXIBLE CORRUGATED TWIN WALL DUCTING IS NOT ACCEPTABLE TO ESB NETWORKS IRRESPECTIVE OF MANUFACTURER
 - DUCTS SHALL BE LAID WITH THE LEGEND FACING UPWARDS, IN A STRAIGHT LINE, ROPED USING 12MM POLYPROPYLENE ROPE WITH CERTIFIED SAFE BREAKING LOAD OF 1.5 TONS.
 - THE INSTALLATION SHALL COMPLY WITH THE ESB'S "STANDARD SPECIFICATION FOR ESB NETWORKS MV/LV NETWORKS DUCTING".
 - THE THERMAL RESISTIVITY OF THE DUCT SURROUND MATERIAL MUST BE MAXIMUM 1.0K/M²WATT @0% MOISTURE CONTENT. ONLY ESB NETWORKS APPROVED UNWASHED SAND GRADED TO BS882 STANDARD OR EQUIVALENT ESB NETWORKS APPROVED MATERIAL IS ACCEPTABLE. PEA GRAVEL AND FOAM CONCRETE ARE UNACCEPTABLE.
 - AN IDENTIFYING RED TAPE MUST BE PLACED ON TOP OF THE SAND AND A YELLOW 300mm FROM THE SURFACE.
 - A MINIMUM DEPTH OF 450MM IS REQUIRED IN ESTABLISHED FOOTWAYS. 600MM IN NEW HOUSING ESTATE CARRIAGEWAYS & FOOTWAYS AND ALL GRASSED AREAS. 750MM ALL NON-HOUSING ESTATE CARRIAGEWAYS.



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Qualitas Veritas ISO 9001-2015

Rev.	Date	Description	Drawn	Checked	Approved
P1	08/11/23	INFORMATION	WP	BC	BC

Client: LAOIS COUNTY COUNCIL

Job Description: OGP 67 HOUSING UNITS IN STRADBALLY RD, PORTLAOISE, Co. LAOIS

Status: INFORMATION

ESB SITE SERVICES LAYOUT

Project No: 23ME002 Drawing Ref: ME-1000(A) P1

Date: 08/11/2023 Scale: 1:400 @ A1 (1:800@A3)

Drawn By: H.P. Checked By: B.C. Approved By: B.C.

Hayes Higgins Partnership

Gas House Lane, Kilkenny.

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The Oge House, 11 Oge Lane, Southlake (01) 6612321 (01) 6612304 admin@hayeshiggins.ie

A.3.4