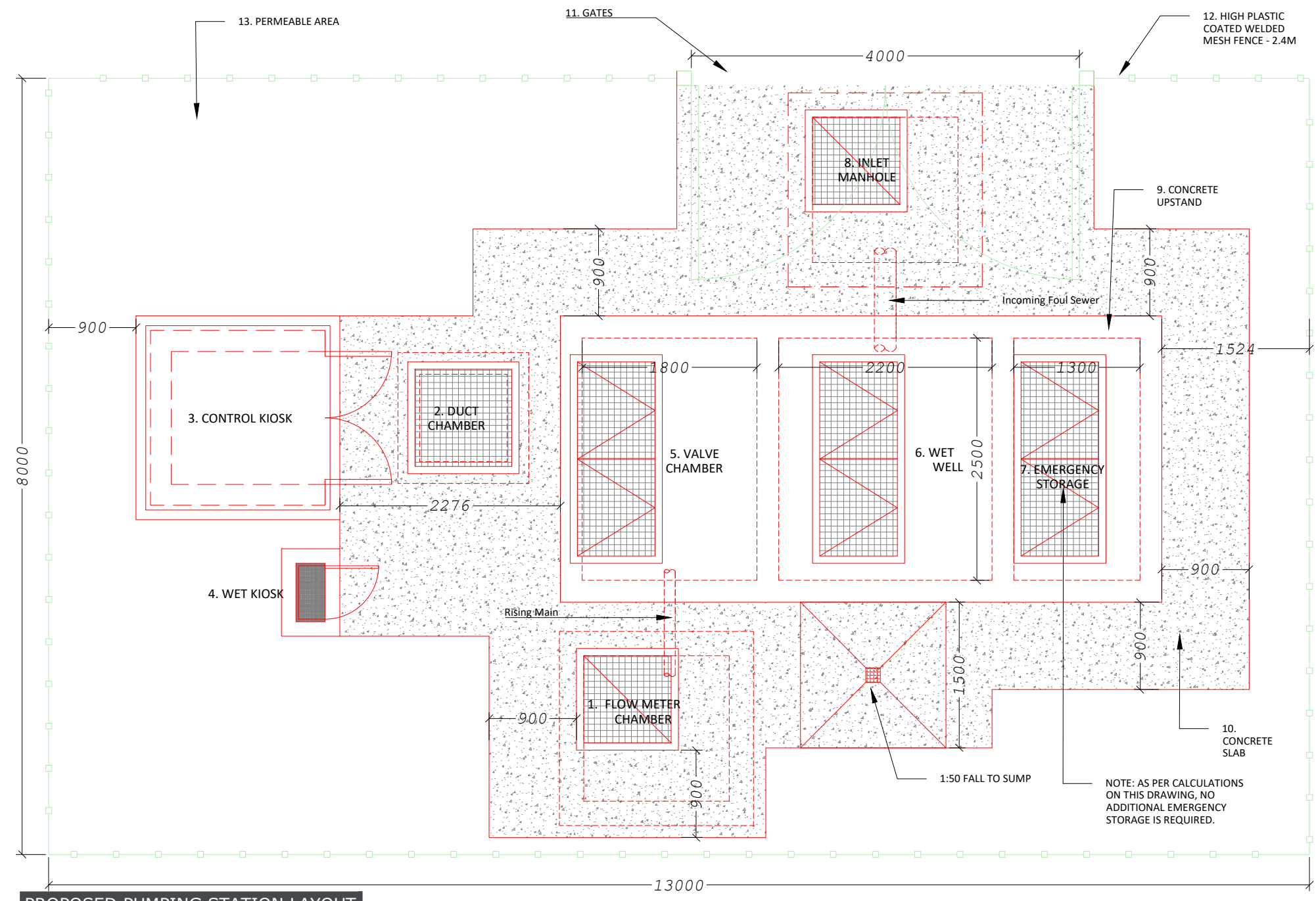


LEGEND -PUMPING STATION LAYOUT	
1.	FLOW METER CHAMBER; SEE STANDARD DETAIL STD-WW-27.
2.	DUCT CHAMBER; SEE STANDARD DETAIL STD-WW-19.
3.	CONTROL KIOSK; SEE STANDARD DETAIL STD-WW-31.
4.	WET KIOSK; SEE STANDARD DETAIL STD-WW-31.
5.	VALVE CHAMBER; SEE STANDARD DETAIL STD-WW-28.
6.	WET WELL; SEE STANDARD DETAIL STD-WW-28.
7.	EMERGENCY STORAGE; SEE STANDARD DETAIL STD-WW-28.
8.	INLET MANHOLE; SEE STANDARD DETAIL STD-WW-11.
9.	CONCRETE UPSTAND; TOP OF WET WELL, VALVE CHAMBER AND EMERGENCY STORAGE TO BE 150MM ABOVE THE SURROUNDING AREA.
10.	CONCRETE SLAB; SEE STANDARD DETAIL STD-WW-32.
11.	GATES; SEE STANDARD DETAIL STD-WW-25.
12.	HIGH PLASTIC COATED WELDED MESH FENCE - 2.4M; SEE STANDARD DETAIL STD-WW-25.
13.	PERMEABLE AREA; SEE STANDARD DETAIL STD-WW-32.



**WATER/WASTEWATER INFRASTRUCTURE**  
 ALL WASTEWATER INFRASTRUCTURE TO BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH:  
 • CODE OF PRACTICE FOR WASTEWATER INFRASTRUCTURE, CONNECTIONS AND DEVELOPER SERVICES, DESIGN AND CONSTRUCTION REQUIREMENTS FOR SELF-LAY DEVELOPMENTS; DECEMBER 2017 (REVISION 1); IW-CDS-5030-03  
 • WASTEWATER INFRASTRUCTURE STANDARD DETAILS, CONNECTIONS AND DEVELOPER SERVICES, CONSTRUCTION REQUIREMENTS FOR SELF-LAY DEVELOPMENTS; DECEMBER 2017 (REVISION 03); IW-CDS-5030-01  
 ALL WATER INFRASTRUCTURE TO BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH:  
 • CODE OF PRACTICE FOR WATER INFRASTRUCTURE, CONNECTIONS AND DEVELOPER SERVICES, DESIGN AND CONSTRUCTION REQUIREMENTS FOR SELF-LAY DEVELOPMENTS; DECEMBER 2017 (REVISION 1); IW-CDS-5020-03  
 • WATER INFRASTRUCTURE STANDARD DETAILS, CONNECTIONS AND DEVELOPER SERVICES, CONSTRUCTION REQUIREMENTS FOR SELF-LAY DEVELOPMENTS; DECEMBER 2017 (REVISION 03); IW-CDS-5020-01  
 WHERE THE ABOVE DOCUMENTS ARE REVISED, THE LATEST REVISION OF THE RELEVANT DOCUMENT WILL BE USED WHERE PRACTICABLE.

**PROPOSED PUMPING STATION**

- PUMPING STATION TO BE DESIGNED IN ACCORDANCE WITH IRISH WATER CODE OF PRACTICE FOR WASTEWATER INFRASTRUCTURE; CONNECTIONS AND DEVELOPER SERVICES; DESIGN AND CONSTRUCTION REQUIREMENTS FOR SELF-LAY DEVELOPMENTS; DECEMBER 2017 (REVISION 1)
- TYPE 3 PUMPING STATION

**EMERGENCY STORAGE REQUIRED**

- EMERGENCY STORAGE CAPACITY = 24 HOURS OF DRY WEATHER FLOW (DWF)
- DWF PER PERSON PER DAY= 150 l/day
- PERSONS PER DWELLING = 2.7 Persons/Dwelling
- DWELLINGS = 130-35+10=105 No.
- $DWF_{DAY} = 105 \text{ Dwellings} \times 2.7 \text{ Persons/Dwelling} \times 150 \text{ l/day} = 42,525 \text{ l/day}$
- $DWF_{DAY} = (42,525 \text{ l/day}) / (1000 \text{ l/m}^3) = 42.5 \text{ m}^3/\text{day}$
- EMERGENCY STORAGE REQUIRED =  $V_{EMST-REQUIRED} = 42.5 \text{ m}^3/\text{day}$

**PUMP STARTS PER HOUR**

- DESIGN FOR 6 PUMP STARTS PER HOUR (LESS THAN 10 AS PER IW CODE OF PRACTICE)
- $6 \times DWF_{HOUR} = 6 \times 42.5 \text{ m}^3 / 24 \text{ hours} = 10.63 \text{ m}^3/\text{hour}$
- MIN. VOLUME TO BE PUMPED PER PUMP START =  $10.63 \text{ m}^3/6 = 1.77 \text{ m}^3/\text{pump start}$
- WET WELL INLET PIPE I.L. = 96.125m
- PUMP CUT-IN-LEVEL = 96.125m-0.150m = 95.975m
- PUMP CUT-OFF LEVEL = 95.975m-0.350m = 95.625m
- STORAGE VOLUME BETWEEN PUMP CUT-IN AND CUT-OFF = 2.2m x 2.5m x 0.350m = 1.93m<sup>3</sup>
- 1.93m<sup>3</sup> > 1.77m<sup>3</sup>, THEREFORE PUMP STARTS PER HOUR WILL BE LESS THAN 6.

**EMERGENCY STORAGE PROVIDED**

- MAXIMUM FOUL WATER LEVEL = LOWEST FFL/ROAD LEVEL ON SITE - 600mm
- MAXIMUM FOUL WATER LEVEL = 99.000m - 0.600m = 98.400m
- PLAN AREA OF WET WELL = 2.2m X 2.5m
- I.L. OF WET WELL = PUMP-CUT OFF LEVEL-0.450m = 95.625-0.450=95.175m
- STORAGE PROVIDED WITHIN WET WELL=2.2 x 2.5 x (98.400-95.175) =  $V_{WETWELL} = 17.73 \text{ m}^3$
- STORAGE PROVIDED WITHIN FOUL SYSTEM PIPES/MANHOLES= $V_{SYSTEM} = 32.53 \text{ m}^3$
- EMERGENCY STORAGE PROVIDED =  $V_{EMST-PROVIDED}$
- $V_{EMST-PROVIDED} = V_{WETWELL} + V_{SYSTEM} = 17.73 + 32.53 = 50.26 \text{ m}^3$
- $V_{EMST-PROVIDED} > V_{EMST-REQUIRED}$ , THEREFORE NO ADDITIONAL EMERGENCY STORAGE VOLUME IS REQUIRED.

**PROPOSED PUMPING STATION LAYOUT**

SCALE 1:50

© THIS DRAWING IS PROTECTED BY COPYRIGHT AND IS THE PROPERTY OF SDS (Structural Design Solutions) Ltd. / SDS-UK Ltd. IT MAY NOT BE USED, REPRODUCED OR DISCLOSED TO ANYONE WITHOUT THE PRIOR WRITTEN APPROVAL OF THE AUTHORS.

**SDS (Structural Design Solutions) Ltd,**  
 DUBLIN • LONDON • CASTLEBAR  
 Head Office: Unit 9, NS Business Park, Castlebar, Co. Mayo. Tel: +353 (0)94 9034914  
 Dublin: 46 Dawson Street, Dublin 2. Tel: +353 (0)1 6877480  
 London: Bridge House, 25-27 The Bridge, Wokingham, Hants, RG40 3AB. Tel: +44 (0)20 30265724  
 info@structuraldesign.ie Web: www.structuraldesign.ie

**DRAWING NOTES:**

- This drawing is to be read in conjunction with the relevant Specifications & other Architectural & Engineering Drawings. Engineers to be informed immediately of any discrepancies before work proceeds.
- Do Not Scale from this Drawing. Metric Figured Dimension only are to be used.
- It is the Contractors' responsibility to ensure that all works are carried out in accordance with the requirements of the current Building Regulations and all other statutory documents relevant to this project including the grant of planning permission, Fire Safety Certificate and Disability Access Certificate.
- SDS (Structural Design Solutions) Ltd / SDS-UK (Structural Design Solutions) Ltd. bear no liability for unilateral changes/modifications made during the course of construction based on the drawing prepared without prior consultation and confirmation of acceptance of the revision by SDS (Structural Design Solutions) Ltd / SDS-UK (Structural Design Solutions) Ltd.

REV.	DATE	BY	DESCRIPTION
PL2	04.03.2022	CD	Issued for Planning
PL1	27.02.2020	CD	Issued for Review

**CONDORF INVESTMENTS ICAV**

Project No:  
 HOUSING DEVELOPMENT AT BALLINDERRY RD.,  
 MULLINGAR, CO. WESTMEATH

Drawing Title:  
 PUMPING STATION - LAYOUT PLAN

Scale	Page No.	Sheet
1:50	A3	PLANNING
Drawn by	Date	Checked
FL	FEBRUARY 2020	CD
Project No.	Drawing No.	Revision
18262	C110	PL2