

- PUMPING STATION MINIMUM DESIGN REQUIREMENTS:**
- PUMPING PLANT SHOULD BE OF FAILSAFE DESIGN;
 - PUMPING PLANT TO BE DUTY AND STANDBY ARRANGEMENT OR DUTY/ASSIST AND STANDBY ARRANGEMENT;
 - PUMPS TO BE SUBMERSIBLE PUMPS WITH AUTOMATIC DECOUPLING ARRANGEMENTS COMPLETE WITH TWIN GUIDE RAILS, EASY LIFT, ETC.;
 - AUTOMATIC SELECTION ROTATION OF THE DUTY/STANDBY OR DUTY/ASSIST/STAND-BY PUMPS TO BE PROVIDED ON AN HOURS RUN BASIS WITH MANUAL OVER-RIDE;
 - PUMPS TO BE SIZED FOR A MINIMUM OF THREE (3) TIMES DWF;
 - PUMPS TO BE SUITABLE FOR PUMPING UNSCREENED WASTEWATER CONTAINING FIBROUS MATERIAL AND LARGE SOLIDS. PUMPS TO HAVE, IN GENERAL, A MINIMUM DISCHARGE SIZE OF 80mm;
 - PUMP CONTROL TO BE VIA ULTRASONIC LEVEL TRANSDUCERS, LOCATED ABOVE LIQUID LEVEL, IN AN EASILY ACCESSIBLE LOCATION;
 - THE PUMP GUIDE SYSTEM TO BE PROVIDED TO ALLOW THE PUMP UNITS TO BE AUTOMATICALLY COUPLED TO THE OUTLET PIPEWORK AND HELD IN PLACE BY ITS OWN WEIGHT;
 - THE GUIDE SYSTEM TO ALLOW THE PUMP UNITS TO BE LIFTED TO THE TOP OF THE WET WELL WITHOUT THE NEED TO UNDO ANY FIXING ARRANGEMENTS OR TO ENTER THE WET WELL;
 - ANCHOR BOLTS SHALL BE STAINLESS STEEL, STAINLESS STEEL AND GALVANISED STEEL SURFACES SHALL NOT COME INTO CONTACT WITH EACH OTHER;
 - PUMPS TO BE MOUNTED ON A CAST IRON COUPLING/DUCK-FOOT PEDESTAL, WITH AUTOMATIC DECOUPLING ARRANGEMENTS;
 - PUMP ARRANGEMENT TO BE PROVIDED TO ALLOW EASY INSTALLATION AND SPEEDY REMOVAL FROM THE SUMP WITHOUT NEED FOR OPERATOR ENTRY TO THE SUMP;
 - PUMPS GUIDE RAILS TO BE OF GALVANISED MILD STEEL OR STAINLESS STEEL (GRADE 316);
 - PUMPS TO BE PROVIDED WITH CERTIFIED, STAINLESS STEEL LIFTING CHAIN (DESIGNED TO IS EN 818 - PART 7), SUITABLY SIZED AND FIT FOR PURPOSE, WITH 8mm THICK LINKS, AT LEAST, AND LARGE LINKS AT NOT MORE THAN 1m INTERVALS;
 - SPARE CERTIFIED STAINLESS STEEL CHAINS, OF SIMILAR CAPACITY TO THE INSTALLED CHAIN UNIT, SHALL BE PROVIDED TO FACILITATE REGULAR INSPECTION/REPLACEMENT OF THE LIFTING CHAIN;
 - ANCHOR BOLTS TO BE OF STAINLESS STEEL OR GALVANISED STEEL SUITABLE FOR THE MATERIAL BEING RETAINED (NO CONTACT BETWEEN STAINLESS STEEL AND GALVANISED STEEL);
 - DISCHARGE PIPEWORK WITHIN THE WET WELL TO BE COMPLETE WITH BENDS, RADIAL TEE-PIECES, FITTINGS, ETC. TO LINK THE WET WELL PIPEWORK TO THE VALVE CHAMBER PIPEWORK;
 - PIPEWORK WITHIN THE VALVE CHAMBER TO INCORPORATE ISOLATION VALVES (ONE PER PUMP INSTALLED), NON-RETURN VALVES (ONE PER PUMP INSTALLED), BENDS, RADIAL TEE-PIECES, ETC.;
 - NON-RETURN VALVES TO HAVE REMOVABLE COVERS, DUCTILE IRON BODY WITH RESILIENT SEATED DISC AND STAINLESS STEEL HINGE PIN, COMPLETE WITH EITHER A BALL WEIGHT OR LEVER ARM AND WEIGHT;
 - BENDS TO BE SWEEP/SLOW BENDS TO MINIMISE BLOCKAGES AND PIPE FRICTION LOSSES;
 - SLUICE VALVES TO BE PROVIDED WITH REMOVABLE HAND-WHEELS;
 - FLANGE ADAPTORS TO BE PROVIDED TO PERMIT EASE OF REMOVAL OF VALVES FROM THE PIPEWORK;
 - ALL PIPEWORK AND VALVES TO BE OF DUCTILE IRON TO IS EN 598, SUITABLE FOR USE WITH SEWAGE, WITH PN-16 FLANGES TO BS EN 1092-1;
 - PUMP MOTORS TO BE HIGH EFFICIENCY WITH CLASS F INSULATION AND IP68 RATING AND MUST MEET IE3 EFFICIENCY STANDARDS OR BETTER;
 - PUMP EFFICIENCY SHALL BE MAINTAINED WITHIN 15% OF ITS MAXIMUM EFFICIENCY OVER THE WHOLE OF THE SPECIFIED DUTY RANGE;
 - MOTOR AND MOTOR HOUSING TO BE BOLTED TO THE PUMP HOUSING, SHRINK OR PRESS FIT ASSEMBLIES WILL NOT BE ACCEPTED;
 - MOTORS MUST INCLUDE STATOR OVER-TEMPERATURE PROTECTION IN THE FORM OF THERMISTORS EMBEDDED IN EACH PHASE OF THE WINDINGS. OVER-TEMPERATURE PROTECTION SHOULD AUTOMATICALLY RE-SET WHEN THE TEMPERATURE RETURNS TO NORMAL;
 - PUMPS SHALL HAVE A MAXIMUM SPEED OF 1500RPM. PUMP CHARACTERISTICS SHALL BE STABLE, NON-OVERLOADING AND SHALL BE SUCH THAT THE PUMPS SHALL OPERATE AS CLOSE TO MAXIMUM EFFICIENCY AT THE DESIGN POINT (SPEEDS IN EXCESS OF THIS MAY BE ALLOWED IN THE CASE OF NON-CLOGGING MACERATOR PUMPS, WHERE THESE ARE PROVIDED);
 - PUMPS TO BE PROVIDED WITH INDICATOR PLATES PROVIDING INFORMATION FOR THE PUMP, MOTOR, ETC. A DUPLICATE STAINLESS STEEL PLATE TO BE PROVIDED AND MOUNTED IN THE CONTROL PANEL.

PROPOSED EMERGENCY STORAGE TANK WITH 24-HOUR CAPACITY

TYPE 3 UNDERGROUND WASTEWATER PUMPING STATION AND ASSOCIATED INFRASTRUCTURE TO SERVE 294 NO. UNITS AND A CRECHE.

MINIMUM 133 m³ (24 HOUR LOADING) STORAGE VOLUME TO BE PROVIDED. PUMPING STATION TO BE DESIGNED & INSTALLED IN ACCORDANCE WITH IRISH WATER REQUIREMENTS

PUMPING STATION

LOWEST INCOMING INVERT @ 36.785
GROUND LEVEL: 40.300m

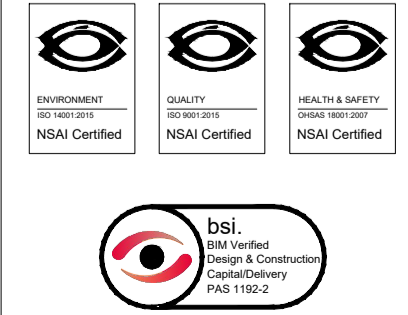
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Rev No.	Date	Revision Note	Drn by	Chkd by
P01	13.05.20	SUITABLE FOR REVIEWS/ COMMENTS	AB	MK
C01	19.05.20	STAGE COMPLETE - PLANNING	AB	MK

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Client: CASTLESTAR (ATHLONE) LIMITED
Project: RESIDENTIAL DEVELOPMENT CORNAMAGH, COOSAN, ATHLONE
Title: PROPOSED WASTEWATER PUMP STATION GENERAL LAYOUT SHEET 1 OF 2

Code	Originator	Zone	Level	Type	Role	Number	Status	Revision
B907	OCSC	XX	XX	DR	C	0524	A1	C01

Date: MAY'20 Scale: SHOWN@ A1 Drn by: AB Chkd by: MK Aprvd by: AMD