

Local practice for pumping stations

Sewerage Sector Guidance allows Anglian Water to introduce a Local Practice in certain permitted areas where our operational requirements are not adequately covered in the Design Construction Guidance.

Anglian Water first published its Local Practice for pumping stations for an initial 30-day consultation period on Monday 9th March. As we did not receive any feedback during this time, the same consultation was extended for a further 30 days.

An additional amendment has now been added (F3.4.6.1). Except for this one point, the original document remains unchanged.

Our Local Practice for Pumping Stations is below, **which is effective as of 22nd June 2020**. This Local Practice is considered necessary for Anglian Water to comply with its own geographical and health and safety requirements, whilst meeting the principles of the Code.

The references shown below refer to the relevant sections of Design Construction Guidance (SSG Appendix C) published on [Water UK's website](#)

D5.6.1 In order to achieve consistency between flow assessments made as part of our pre-planning process and adoptable pumping stations delivered by developers, the following actual water consumption figures should be used to calculate the dry weather flow:

- 2.35 persons per property
- 125 litres per head per day
- 25% infiltration

The use of realistic criteria also leads to smaller pumps and reduced power costs, smaller rising mains and a lower emergency storage requirement.

- Pump rate = 4 x DWF (increased if necessary to achieve velocity between 0.75-1.8m/s)
- Emergency storage is 4 hours at 1DWF
- The peak inflow is considered to be 2.12 x DWF

D2.2 Anglian Water accepts pumping stations designed to Code with a wet well depth of up to 8m based on our safe working practices for lifting. A wet well depth which exceeds 8m will require a specific consultation with Anglian Water as alternative powered lifting arrangements will be required.

D5.3.5 Anglian Water's preference is for the compound to be secured using a 1.8m high brick wall, 225mm width with engineering brick DPC wherever this is possible. This ensures the pumping station will match its surroundings and is more sustainable regards site security. We will not accept access gates which are constructed solely of wood as this solution reduces security sustainability. Galvanised steel bar is preferred.

D5.6.3.g There shall be sufficient clearance between the high level backup float and the telemetry high level alarm float required by Anglian Water's telemetry standards. The telemetry high level alarm float must activate before half the total retention capacity of the system has been reached, to give the best chances of avoiding pollution impact.

D6.1.7 At the discharge end tracer wire should be terminated with 1 m of wire coiled inside a small but suitably sized and IP rated enclosure to last in the installed environment. This enclosure must be accessible from ground surface level to enable safe future access and use.

D7.1.2 The system and equipment shall also be resilient enough to auto reset after 'brown-out' power situations. Refer to F3.3.11.4.7

D7.7.2.d All chambers (wet well/valve/flow meter) shall have covers with integral fall protection grids regardless of chamber depth. Therefore Anglian Water does not require the supplementary posts and rails for fall protection.

D7.7.3.b Unless there are specifically documented design needs, Anglian Water shall not allow open mesh or holes/slots within covers for venting. Where security fencing/wall is provided, Anglian Water will accept plastic vent pipes and cowl, the vent pipe must be positioned at the inside edge of the perimeter wall/fence and be of equal height.

D7.7.6 Chamber ladders should be in accordance with E2.37, preferably option 3 or 4, with retractable hand hold rail that can be raised above the cover level to aid safe access/egress.

D7.11.7 Kiosk construction form of any type except GRP must be agreed with Anglian Water during the technical review of the design.

D7.11.16.a Anglian Water does not require a resuscitation sign

F2.3.12.3.c If an existing handle or lifting point upon a pump will not meet these requirements, then an item must be fitted by the pump manufacturer, that is a recognised purpose designed part supplied by the manufacturer that provides at least 120mm clearance. It must form part of the fabric of the pump and the design and not be regarded as lifting equipment, thus not requiring testing under LOLER requirements.

If a pump cannot be supplied with the required lifting point to accept the required lifting equipment, then as an absolute last resort, Anglian Water under specific agreement may accept lifting chains. These will need to be subject to a written scheme of thorough examination. The chains will need to meet specific requirements i.e. short link BSEN 818, with larger links at 1m intervals, stainless chain - shackles - id and hooks, with pins secured.

F3.2.1.7.a This certificate shall confirm the installation satisfies all appropriate design requirements of BS7671. As part of the certification process, the period to next inspection should be recorded. Anglian Water will expect at least an 18 month period between the due date and date of legal transfer.

F2.3.12.2 Lifting points shall be designed for lifting the whole pump unit and be designed, supplied and marketed by the pump unit manufacturer.

F3.1 BS7671 specifies surge protection devices should be fitted, if they are not a risk assessment including calculations must be provided.

F3.3.3.4.3 Doors shall have the requisite number of handles to ensure effective opening and closing, and shall require a key to unlock (not tool) for opening.

F3.3.7 see **F3.4.6.2.1.2**

F3.3.8.2.7 "the control system for the relevant pump shall"

F3.3.8.2.7.c start the alternate pump (if available)

F3.3.8.2.7.d inhibit the relevant unit from running

F3.3.8.4 The High Wet Well Level referred to in this section is also known as High Level Backup Float level, not the High High Level or High Level Alarm float that shall be connected directly to telemetry.

F3.3.8.4.7 Anglian Water requires option a, the associated indication lamp shall remain illuminated until the system reverts to Ultrasonic Level Control, it shall not require manual reset.

Table F 3 On Anglian Water installations the High Wet Well Level and Backup Control Systems indications are to be one and the same/combined. Therefore the High High indication may be referred to as the High Wet Well Level (high level telemetry alarm).

F3.3.11.1.1 Motor starter compartments - motor protection shall be accordance with motor/pump unit manufacturer's warranty requirements.

F3.3.11.2.3.d The distribution board shall incorporate the protection devices supplying items e to i. The items themselves do not need to be mounted on the door.

F3.3.11.5.3.c not required see **F3.3.8.4.7** of Anglian Water local practice

F3.3.12.6.3.b not required see **F3.3.8.4.7** of Anglian Water local practice

F3.4.1.2.1 At least 1 splash proof, IP54 (minimum) socket outlet, 13 A, 230 V, complying with BS 1363: Part 2: shall be provided inside the kiosk. This shall be provided with 30 mA RCD protection.

F3.4.5.4.1 If the pumping station is in a secure compound, pump connection junction boxes suitably IP rated shall be housed within a kiosk located at a safe distance but in close proximity to the wet well, with the same venting requirements as the main assembly kiosk.

F3.4.5.4.2 If the pumping station is not in a secure compound, the main assembly kiosk shall be provided with facilities to prevent the ingress of explosive or corrosive gases into the kiosk regardless of the hazardous area assessment of the wet well.

F3.4.6.1 Main earth conductors shall be connected to a main earth terminal bar to which the independent earth conductor for the generator will be connected. The DNO supply earth shall be easily disconnected or isolated from all other earth connections preferably by removeable link. Local practice for pumping stations - 4 - May 2020

Appendix 1 10.d This certificate shall confirm the installation satisfies all appropriate design requirements of BS7671. As part of the certification process, the period to next inspection should be recorded. Anglian Water will expect at least an 18 month period between the due date and date of legal transfer.

Appendix 1 10.e Anglian Water will expect at least a 6 month period between the due date and date of legal transfer.

Appendix 1 10.f Anglian Water will expect at least a 6 month period between the due date and date of legal transfer.

Additional Services:

Anglian Water can provide monitoring of the pumping station via telemetry. Please liaise with our Telemetry Coordinator at the appropriate time who can confirm monitoring costs.

Acknowledgements:

This document has been produced by the Development Services Drainage Team. If you have any questions relating to the content, please contact us on **0345 60 66 087** or by email to developmentsservices@anglianwater.co.uk

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