



Asset Standard Briefing Notes Water & Waste

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Introduction

The purpose of this document is to make Asset Standard briefing notes available to our external partners from the Thames Water Health & Safety Hub. Only briefing notes relevant to asset standards published on TWEXnet are included (mainly Design standards).

You will also find a complete list of AMP 7 Asset Standard briefing notes on TWEXnet in the AMP7 00 folder in PITS.

The table below contains live links which will take you to the updated Standard on TWEXnet. If you have any issues accessing TWEXnet or queries regarding Thames Water Asset Standards please email am.standards@thameswater.co.uk

The briefing notes are listed in date order not numerical order. Briefing notes for standards not issued to TWEXnet will not be included (the numbers may not run consecutively).

For more information on Thames Water Asset Standards please see 'Introduction to Standards' in the 00 folder on TWEXnet.

Date	Briefing note number	Standard Title	Summary of Update	TWEXnet link to updated Asset Standard
05/01/2022	283	WWT 2.1	<ul style="list-style-type: none"> Compliance driven review. Document updated to incorporate new branding. Additions to section 2.3- Process Design – Storm separation flow setting calculations updated. Allowances for maximum infiltration added. Section 2.4- Design – Amendments made to passive flow control requirements. 	WWT 2.1 – Storm Separation Design
31/12/2021	281	WN60	Full review. Read Standard	WN60 DI Reporting including SOSI
30/12/2021	274	WN52	Full review. Read Standard	Land Contamination
13/12/2021	271	WN50	Full review. Read standard	Developments Affecting Water Assets
25/11/2021	276	E04	Full review. Read standard	AM-DES-GEN-E04-SEC2 Design Guide & Zoning of Hazardous Areas
15/11/2021	270	WN11	<p>2.6 Disinfection of Repaired Mains updated. Reference to WRAS document 'The selections of materials for water supply pipes to be laid in contaminated land' Oct 2002 removed.</p> <p>2.8.6 Gap connections (back to backs) updated (previously 2.20). Read section</p> <p>2.16 Appendix 5 New Mains/ Repair Process updated:</p>	Disinfection of Mains & Fittings

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27/10/2021	264	WN24 Valve Operations	<p>Ideally await electronic sample result, (verbal clearance NOT permitted), BUT for on-line installations IF on- site checks completed (on- site chlorine, T&O and visual checks) immediate return to service sanctioned.</p> <p>1.9 Valve Management Information. Added: Prior to any mains isolation, a spot value pressure must be taken and recorded on the PTW. Pressures are required to be taken outside of the main isolation, on both sides. Pressures are then to be re-taken, and again recorded on the PTW, following mains recharge to ensure area has returned to normal operating pressure.</p> <p>When operating a valve and leaving it out of its normal status (be that open, shut or throttled), on a temporary network trial or permanent basis, pressure is required to be recorded either side of the valve before, during and after the operation. These pressure values are required to be recorded on the PTW. If this valve operation is on a temporary basis, then a similar process is to be followed when returning the valve to its original status.</p>	Valve Operations
23/09/2021	267	WWT 5.5,5.6,5.7,5.10 - Tertiary Treatment design standards	<p>WWT 5.5 - Sec 2.3.3 para 3 – Minor revision to Performance Guarantee requirements</p> <p>WWT 5.6 - Sec 1.3.3 para 3 - Clarification given to Performance Guarantee requirements</p> <p>WWT 5.7 - Sec 2.3.4 para 5 – Minor revision to Performance Guarantee requirements</p> <p>WWT 5.10 - Sec 2.3.3 para 4 – Clarification given to Performance Guarantee requirements.</p>	Tertiary Treatment Standards
06/09/2021	265	Fire and Security Standards: SP08 & SP10	<p>SP08 – Technical Standard Security Products - In relation to FA1530, removal of BSEN1461 for security doors, inclusion of BSEN ISO10346 and BSEN ISO12944-2019. Inclusion of RTA 1980 section 164 referring to overhanging barbed wire toppings</p> <p>SP10 – Electronic Security System Standards – Installation - Inclusion of the following related documents and BSEN standards: E04 – Zoning of Hazardous Areas HSP2 – Working in Potentially Explosive Atmospheres HSI32 – DSEAR Competency BSEN 60079</p>	Asset Protection

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			BSEN 80079	
06/09/2021	263	AM-DES-WWT-WWT 5.10 Pile Cloth Filters	<p>New branding applied to document</p> <p>CI 2.3.2 – Standby requirements for sites with post-precipitation chemical dosing - 100% capacity is required with one or more units out of service.</p>	AM-DES-WWT-WWT 5.10 Pile Cloth Filters
25/08/2021	262	E08 Energy and Carbon Management	<p>Sec 2.1 - Updated with latest policy document. Links updated.</p> <p>Sec 4.1 – Updated to include AMP7 investment governance, terminology, and carbon assessment process</p> <p>Sec 4.1.2.2 - Less prescriptive new technology requirements based around approval by practice groups and Chief Engineer.</p> <p>Sec 5.0 - Reference to ISO50001, requirement to consider energy performance and maintain records of design activities on TWEXNET. Best practise reference to PAS 2080 and I.S. 399.2014 - Energy Efficient Design Management</p> <p>Sec 6.3- Reference to G59/G99 and asset standards F15 LV specification and F25 HV specification</p> <p>Sec 6.4- Update to New Connection forms and sign-off process.</p> <p>Sec 6.6 - Added requirement to assess and identify gaps or issues with power interruptions or voltage dips on site and actively provide solutions to make the power resilience better or at minimum no worse.</p> <p>Sec 7.2 - Updated substantially. There has been significant change since AMP6 in the submetering processes. The less specific term 'corporate historian' used to give longevity to the document.</p> <p>Sec 7.2.3 - Detail inserted in line with CHPQA requirements.</p> <p>Sec 7.3 - Added requirement to comply with all current environmental legislation and to contact Environmental Permitting team.</p> <p>Sec 7.3.6 – Biomethane standards referenced.</p>	E08 Energy and Carbon Management

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			<p>E08 Appendix A- Drivers, Legislation & Regulation – No change from previous version</p> <p>E08 Appendix B- Portfolio Delivery Framework – Reviewed and updated with new format and latest process included</p> <p>E08 Appendix C- Mandatory Design Operational Considerations – Section 14.1.1 (ISO 50001 Energy Management</p> <p>Compliance) - Additional weekly trigger levels for exemption process for Water and Wastewater treatment sites.</p>	
11/08/2021	261	AM-DES-SCADA-F24-Sections 02,03,04,07,11,12	<p>Section 2 - ICA Documentation Specification</p> <ul style="list-style-type: none"> Section 2.3.5 Signals and Alarms – additional point added (Alarm frozen, flat lining persistence). <p>Section 3: PLC Specification</p> <ul style="list-style-type: none"> Section 3.13.12 Alarm and Status Description amended to include reference to the Operational Control Standard. Section 3.14.2 Analogue Alarms amended to include rate of change alarms and no change alarms. <p>Section 4: Site SCADA Specification</p> <ul style="list-style-type: none"> Section 4.32.4 Alarms: General – updated to include rate of change alarms, no change alarms and reference to the Operation Control Standard. <p>Section 7: RTU Specification</p> <ul style="list-style-type: none"> Section 7.7.1 General – amended to include reference to the Operational Control Standard. <p>Section 11: Sewage Pumping Station Control Specification</p> <ul style="list-style-type: none"> Section 11.13.1 Alarms and Monitoring – amended to include reference to the Operational Control Standard. <p>Section 12: Reservoir Overflow Protection System Specification</p>	F24 -SCADA

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10/08/2021	260	WN61 Water Network Regulatory Metering	<p>• Section 12.6.11.3 Status signals updated to include reference to the Operational Control Standard.</p> <p>Section one (Introduction & Compliance). Standard updated to align with updated E07 Flow Measurement.</p> <p>Section 1.2 Health and Safety Updated: - Reference to Essential Standards and Permits to work added.</p> <p>Section 1.8 Verification Practice Updated: amended statements around errors to agree that the error cannot be quantified (not all uncertainty's can be quantified thus you cannot make an error judgement)</p> <p>Section two (Full Process). Throughout changed Z-One to job management & asset database system.</p> <p>Throughout removed manufacture names and replaced with the device type, for example ABB Flowmeter to Electromagnetic flowmeter.</p> <p>Section 2.2 Glossary updated.</p> <p>Section 2.5 Process Overview Added: reporting leakage levels, accounting for water imported from or exported to other water companies, added to the accurate assessment and reporting of flows paragraph.</p> <p>Section 2.7 Strategy Updated: annual verification changed to regular verification (see links for in section for explanation of what 'regular' means). Updated: All probe substitutions will either replace with a test probe for 24 hours or cycle a probe that has been calibrated <12months by a UKAS accredited test facility. The existing probe will then be re calibrated and ready for future cycle exchanges at other probe locations. Added: Reduce the uncertainty to less than 5% for direct meter to test instrument comparisons and <10% uncertainty for flow tested comparisons.</p> <p>Section 2.9 Roles and Responsibilities Updated.</p> <p>Section 2.10 Regulatory Requirement Updated: Removed: reference to EA annual return. Added: reference to Distribution Input (DI)</p> <p>Section 2.11 Classification of Regulatory Meters Updated: Distribution Input (DI) definition updated to included: A DI meter also records water imported from</p>	<p>WN61 Section 2 Water Network Regulatory Metering</p>

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			<p>or exported to another water company (including Inset agreements). Updated Zonal Meter definition to include: FMZs are used for regulatory leakage reporting. Removed: reference to Import/Export meters</p> <p>Section 2.12.5 SCADA Added: Regional SCADA systems provide the ability to monitor and control TW's water networks. There are two systems:</p> <ul style="list-style-type: none"> • LWAS – London Water Area SCADA. • TVWT – Thames Valley Water Telemetry. <p>Both are ClearSCADA systems, supplied by Schneider Electric. Additionally, large sites have their own site-based SCADA systems. The company standard for this is 'Wonderware.</p> <p>Section 2.15 Calibration Updated: Calibration All new meters come factory calibrated by the supplier. If a meter goes out of calibration it Shall be replaced with a new meter or returned to the supplier for recalibration.</p> <p>Section 2.18 Verification of Regulatory Meters Updated: Described below are some of the more common in-situ verification techniques (see sections).</p> <ul style="list-style-type: none"> • Section 2.18.1.1 Master Meter. • Section 2.18.1.3 Clamp-on Ultrasonic Meter. <p>Section 2.18.1.6 Changed: title to Manufactures test tool (Hardware).</p> <p>Section 2.18.1.7 Changed: title to Manufactures test tool (Software).</p> <p>Section 2.18.1.9 changed: title to Legacy Manufactures test tool.</p> <p>Section 2.18.5.3 Flowmeter Secondary Verification Added: Perform loop check on 4-20mA transmitters, where appropriate and or pulsed output check.</p> <p>Section 2.21 Recording of Information Added: Meter confidence score or uncertainty score</p> <p>Section 2.23.1 Audit Check List Added – Check list added</p> <p>Section 2.23.2 Flow Audit Chart Summary Added –</p>	

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			<p>Flow Audit Summary Checklist added.</p> <p>Section three (Field Process)</p> <p>Section 3.2 Health & Safety Updated: Health and Safety Permits are risk assessed by Production Managers and authorised by Water Control Centre (WCC) and Network Management Centre. Meters shall be attended with an ICA technician and the WCC informed of work to be carried out and permit activated prior to work commencing.</p> <p>Section 3.2 Glossary of Terms updated</p> <p>Section 3.6.2 Verification Process Updated: Data Process Flow chart updated.</p> <p>Section 3.6.6 Verification Abort Process Flow chart updated.</p>	
04/08/2021	259	WWT 14.1 Chemical Dosing	<p>CI 2.2.1 – Minor revision- rectangular horizontal/cross flow Humus Tanks where unscraped shall not be permitted for any site with a P limit =<1.5 mg/L</p>	WWT14.1ChemicalDosing
29/07/2021	257	Fire & Security Standards	<p>Following the introduction of the Protective Security Guidance (PSG) by Defra in late 2019, TW framework agreements and working practices have been updated. In response to these changes, the following Fire and Security Standards have been reviewed and updated or replaced by the Asset Protection team.</p> <p>SP02 – Security Risk Assessment and Risk Scoring Process - replaces Security and Resilience appraisal document - amalgamation of SRA lite process and of security and resilience appraisal process. Now includes risk scoring. All security risk assessments are now undertaken by TW Asset Protection Team.</p> <p>SP08 – Technical Standards Security Products - general update, now includes TW minimum security standards in line with Protective Security Guidance (PSG), also includes references to key safe boxes, anti-climb paints, updated signage and the removal of electric fences.</p> <p>SP09 - Electronic Security Systems Standards - Introduction - replaces AM-SEC-ESS-SEC1-Ver 0.2</p>	Asset Protection

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			(Introduction). Document updated with new processes and reformatted.	
			SP10 – Electronic Security Systems Standards – Installation - replaces AM-SEC-ESS-SEC2-Ver 0.2 (Installation). Document updated with new processes and reformatted.	
			SP11 – Electronic Security Systems Standards – Operation - replaces AM-SEC-ESS-SEC3-Ver 0.2 (Operation). Document updated with new processes and reformatted.	
			SP12 – Electronic Security Systems Standards – Maintenance - replaces AM-SEC-ESS-SEC4-Ver 0.3 (Maintenance). Document updated with new processes and reformatted.	
			SP13 – Standalone Security Products – This is a new standard document for CCTV, IDS and EACS for sites not connected to the AMC.	
			SP14 - Electronic Security Systems Standards – Decommissioning – This is a new standard document.	
			SP18 – CCTV and SSP installation - replaces CCTV 004 Selection & OR. Document updated and reformatted. Now incorporates Standalone Security Products (SSP).	
23/07/2021	255	WWT 14.1 Chemical Dosing	Minor update: CI 2.4 – Additional guidance given for appropriate selection of mixing equipment with reference to upstream screenings plant performance.	WWT 14.1 Chemical Dosing
08/07/2021	252	WWT2.2 Flow Balancing Tanks Section 2 (Design)	<p>Sec1.2–FTFT calculation altered to 2.5PG+2.5E+I(previously2PG+2E+I) References to maceration removed from document. Fig.2.4 – modified to include storm overflow.</p> <p>Sec 2.4- Offline balancing tank sizing. Additional information given based upon P.E range and retention requirements.</p> <p>Sec 2.6.6 - (New section) Balance Tank returns.</p> <p>Sec 2.9.1 – Process Monitoring- Additional requirement for FTT link to initiate balance tank return system.</p>	WWT 2.2 Flow Balancing Tanks SEC2

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28/06/2021	251	WWT 14.1 Chemical Dosing	<p>Periodic update</p> <p>CI 2.1.2 - Amendments to post-precipitation dosing location.</p> <p>CI 2.1.3 – Additional information for suspended solids concentrations</p> <p>CI 2.1.6 - Amendment to chemical dosing for Humus tank performance enhancement. CI</p> <p>2.2.1 – Table 1 Chemical dosing point options updated.</p> <p>CI 2.2.2 – New section- Tertiary solids removal for post-precipitation dosing (where P permit<0.7mg/l)</p> <p>CI 2.3.1 – Amendments to Flow and load sampling Table 2- Post precipitation reduction factor added. Table 3- Amended to include primary and secondary dosing.</p> <p>CI 2.3.3 – New section - Alkalinity</p> <p>CI 2.4.1 – Examples of mixing facilities added. Consideration of balancing tanks upstream of chemical dosing point added.</p> <p>CI 2.7.2 – Post precipitation dose rate to be based on real time control.</p>	WWT 14.1 Chemical Dosing
22/06/2021	248	WN24 Valve Operations Section 1	<p>Section 1.10.2 Roles & Responsibilities Added: Activity Lead: For all Level 2 and Level 3 incidents, there is a requirement for a FOS, FOM or OOH coordinator to be on-site and act as the Responsible Person (RP) to ensure all activities are carried out as per agreed plan and permits.</p> <p>The RP will act the central point of communication and escalation for the duration of the work.</p>	WN24 Valve Operations
11/06/2021	247	DWI Notification	<p>As of 12th June 2021, mild steel must not be used in borehole construction or in components used in abstraction from boreholes unless its use has been approved under Regulation 31.</p> <p>For those products requiring approval, applications made to the Inspectorate on or before 31 December 2021. The table below provides guidance to applicants on information that should be provided as part of the application.</p>	See Appendix 1

Appendix 1 - DWI Notification; Briefing Note 247; 11th June 2021.

Document/information	location of information
<i>Application form for Mild Steel well casings</i>	<i>Metallic Construction Products application form - https://cdn.dwi.gov.uk/wp-content/uploads/2020/12/15092534/MetallicProducts1.doc</i>
<i>Application form for Mild Steel rising main</i>	<i>Pipe Systems - https://cdn.dwi.gov.uk/wp-content/uploads/2020/12/15092538/plasticpipes1-1.doc Application must include the alloy composition and any jointing materials</i>
<i>Instructions for Use (IFU)</i>	<i>Advice Sheet 2 provides the requirements for the document - https://cdn.dwi.gov.uk/wp-content/uploads/2020/12/15092447/Advicesheet2-1.pdf this should include any requirements for water quality suitable for contact with the mild steel.</i>
<i>Material BS6920 test reports or conformity to Water Fittings materials</i>	<i>These maybe through reference to the listing on WRAS, NSF Reg 4 or KIWI Reg 4 schemes, or provision of the BS6920 test report. These should be provided for all the non-metallic components used in the product.</i>