

Code for Adoption Agreements – Accreditation requirements for staff competence and training:

RFI

Severn Trent response

August 2020

WONDERFUL ON TAP



Summary of response

We welcome the opportunity to provide further information in response to your questions regarding accreditation requirements for staff competence and training.

We are wholly supportive of the Water Codes for Adoption and, after significant engagement and collaboration, it is great that a broad consensus has been reached between companies and Self-lay providers (SLPs). We pride ourselves on our close working relationships with SLP customers and key stakeholders such as Fair water Connections. We are active participants in WIRS and have fully supported the evolution of the Codes, seeking to better understand and address SLPs remaining concerns. Ongoing dialogue continues to shape our approach.

In consideration that water companies are responsible for not only the enabling of new connections to their networks, but their wider duties, obligations and responsibilities associated with protecting their network and their end customers, it is unsurprising there are a few areas where companies and SLPs are not in complete alignment.

In terms of the skills, competency and assurance of persons working on our network we do believe there are comparable requirements on all parties, be they direct labour, contract partners or SLPs.

As Self-lay providers have commanded a (minimum) 50% share of the new mains requisitions market for the past few years in the Severn Trent region, we believe we are working in a way that enables them to compete, secure schemes and grow their businesses.

Specific comments in respect to each of the questions are contained within this document that I hope you find helpful. Should you require any further information please do not hesitate to contact me.

Steve Betteridge

Head of Developer Services

Response to detailed questions

Contractual arrangements for installation of new mains and services

- 1) For the installation of contestable mains and service connections to development sites, do you use:
 - a) Your own employees;
 - b) A contractor (if so, are they also a WIRS accredited SLP); or
 - c) Both (please provide details of how this work is split).

Service Connections- We use Severn Trent internal resources with the provision for Network Plus, a utility and infrastructure service provider, to supplement this activity during peak demand. Network Plus are not a WIRS accredited SLP.

Mains (contestable and non-contestable)- We currently use Amey although other contractors are available to us through a competitively awarded framework for Capital Works. Amey are not a WIRS accredited SLP however sub-contractors used are on the list.

Ensuring staff competence to install new mains and services

- 2) How do you assure yourself that your own employees/contractors are sufficiently competent to carry out works on contestable mains and service connections:
- a) Do you require your own employees/contractors who are installing new mains or services to meet the minimum requirements set out in section 4 of the WIRS requirements document? This includes undertaking the Energy and Utility Skills Register (EUSR) Network Construction Operations (NCO) water registration scheme training and certification. If not, please provide details of why and, instead, set out what you do require; and/or
 - b) Do you accept or require the competence of your own employees/contractors' operatives installing new mains or services or other works to be assessed and demonstrated via other means of external accreditation (i.e. instead of via the requirements set out by WIRS such as registration on the EUSR)? If yes, please explain why you use this alternative and how it differs from the WIRS minimum requirements such as the EUSR NCO (water) registration scheme (for example in terms of granularity and extent of assessment)?

Please answer separately for employees and contractors and explain if there are any differences. Please also explain if there are any differences depending on the type of work to be allocated to staff.

To meet the standards that we expect, it is crucial that all operatives that work within our framework are sufficiently competent to complete the task. For this to be successful, we select the most suitable qualifications for them to acquire, based on the workstream they are on. For us, this is not specifically the Energy and Utility Skills Register (EUSR) Network Construction Operations (NCO) water registration scheme training and certification. Instead, we follow a pragmatic approach where the requirements we set are at least an equivalent requirement and in some cases an enhancement.

Service connections

We train our direct labour to NCO level 1 and "Develop" is our training partner to support us with this. The suite of modules covered under this programme complement the role that these operatives perform.

We also operate an operative competency framework model that validates competency against required skills and behaviours. In addition to the core operational activity the model includes customer service, health and safety, mental health, the use of new products and driving. The framework also enables progression from entry to expert level. We can provide more detail on our operative competency framework model should you require it.

Whilst Network Plus assist during peak demand we still set a level of expectation on the competence of their operatives.

They shall be qualified to a minimum of:

- NVQ Service laying, Level Two or equivalent
- NRSWA operatives (Units 1-7)

Mains (contestable and non-contestable)

Our minimum requirements are written into our standard contract documents. We expect operatives to be competent to carry out work to nationally accepted standards that can be achieved through the provision of acceptable qualification. As a minimum, operative require one or more of the following qualifications:

- National Vocational Qualification – Main laying and Service laying, Level Two (Please note this scheme is only available to candidates registered with CABWI prior to 18 April 1996).
- National Vocational Qualification – Public Utilities, Distribution Level Two.
- City and Guilds, Utilities Operations Certification Scheme.

Further qualifications are required when carrying out certain types of activities, as set out below:

PE and ductile iron main laying

The leading hand in each main laying or relining gang and those operatives whose work involves cutting and piecing in the water mains shall be qualified to a minimum of:

- NVQ Main laying, Level Two, consisting of the five core units (Note this scheme is only available to candidates registered with CABWI prior to 18.4.96).
- NVQ Public Utilities, Distribution, Level Two, consisting of the four mandatory units and the optional units of Install Components and Sub System (Water distribution Mains) and Rectify Faults and Damage in Systems and Services (Water distribution Mains).
- City and Guilds, Utilities Operations Certification Scheme Water Main laying, including the following units:
 - Main laying, Ductile Iron Pipes.
 - Main laying, Plastic Pipe Materials (Mechanical and Push Fit Joints).
 - Main laying, PE Butt Fusion Jointing.
 - Main laying, PE Electrofusion Jointing.
 - Main laying, Asbestos Cement Pipes.
 - Mains Repairs and Modifications.
 - Abrasive Wheels, Pipe Cutting Operations.
 - Trench Support Techniques.

Working in Highways

Work in Highways shall be carried out by competent persons. Qualified persons shall always be present on site whilst the work is in progress. The provision covering these qualifications are contained within "Street Works (Qualification of Supervisors and Operatives) Regulations 1992"

Where the work being carried out is deemed to be "RESTRICTED ACTIVITIES", at least one member of the gang shall be in possession of a certificate of competence covering hygiene and disinfection matters.

This shall be at least one of the following:

The Client's, Hygiene and Disinfection, Certificate for Distribution Operatives.

- NVQ Level Two Distribution Control, Unit DS305, Disinfection of Water Mains. (Please note this Unit is no longer available from CABWI)
- NVQ Level Two Distribution Control, Unit DC204, Disinfection of Water Mains. (Please note this Unit is only available to candidates registered with CABWI prior to 15.12.96).
- NVQ Level Two Distribution Control, Unit ADC5, Disinfection of Water Mains.
- City and Guilds Utilities Operations Certification Scheme, Water Inspectorate, Unit 5, Disinfection of Water Mains.

- 3) Does your company run its own internal training in order to ensure and assess your employees' and/or your contractor staff's competence to install mains/services, rather than, or in addition to, using external accreditation? If so, please explain what and how this compares to those requirements set out by WIRS such as the EUSR NCO (water) registration scheme.

Currently to make sure our operatives gain the best training experience and ensure competence we select the external accreditation channel. However, we do recognise the range of benefits of delivering an internal training programme and thus we wanted to take this opportunity to mention our brand new training academy that has been built around five key learning streams – including Operations and Engineering.

We can now offer more than 250 courses delivered by our own Operational Trainers and a wide range of suppliers in four key areas:

- Water industry operations and maintenance.
- Engineering maintenance.
- Plants and equipment.
- Health, Safety and Wellbeing.

We also offer a range of operations development programmes for our new starters in frontline operations. Our programmes take around 12 to 18 months to complete and include (See Appendix-1):

- Classroom based training to develop knowledge
- On the job learning, where colleagues build a portfolio of evidence to show how they are building their skills and competency
- Regular progress reviews with a dedicated assessor.

- 4) Beyond any external qualification requirements, please explain how you assess staff competency to undertake relevant new connections works and if this is a standard assessment framework used for your employees, contractors and SLPs or if the assessment requirements vary? Please explain the reasons for any differences.

We undertake both first line and second line assurance across all our workstreams. Third line assurance is also conducted for our mains installation activity.

First line assurance

Our directly employed operatives are audited once per week at a minimum by our supervisors. They audit against a set criteria and peer reviews are often completed amongst our supervisors to ensure consistency across the piece.

Assurance of our contractors is initiated at tender stage; we require them to go through a rigorous exercise to provide us confidence that they have the infrastructure in place to excel in this space. Due to this extensive upfront activity we set up a self-supervised model.

As part of onboarding, new operative qualifications are verified, furthermore, ongoing checks occur during first line assurance. Staff competency assessments are discussed within contract management meetings and all information is made available by our contractors as required.

Amey have been employed with Severn Trent for well in excess of 15 years, with AMP5/6/7 being appointed on a self-assurance/self-supervision framework delivering this new mains scope of works. They are constantly assessed through their own formal internal audit procedures, specifying number and quality of audits/inspections, and these are shared and reviewed.

Second line assurance

Our Chief Engineer's Capital Assurance team provide second line assurance checks as part of their Advisory Inspection process to check the overall competence and effectiveness of both internal Severn Trent and external operatives. The Capital Assurance team provide dedicated persons to conduct regular independent inspections within the Developer Services programme. A redacted assurance template is attached as Appendix-2

Third line assurance

We have provided further detail on this in our response to question 12.

- 5) If there are differences in what your company will accept as demonstrating competency, what steps do, or will, you take to recognise alternative means of demonstrating staff competency when employees move to or from your company/contractor and/or SLPs, such as skills passports, competence tickets etc.

As mentioned previously, we have put much thought into the requirements we set out to demonstrate staff competency for these workstreams. On view of the individuals credentials, we will assess against our criteria and validate their skills and behaviours. Post review, we will set out a tailored training plan and work with the individual to help them gain the relevant skills.

- 6) How frequently do you review and record your own employees'/contractors' competencies assessment and ensure they are kept up to date, including the renewal of time limited qualifications?

We have several internal systems to log skill for our direct labour:

- Competency requirements are built into our corporate SAP system and scheduled for annual review.
- We also have an e-learning platform that predefines modules staff must complete based on role and has a built-in functionality of pre-determined expiry dates.
- If Standard Operating Procedures (SOPs) or Safe Systems of Works (SSOWs) are updated then there is a formalised process to communicate these to relevant colleagues with an overarching assurance framework to monitor and demonstrate that these have indeed been reviewed/actioned and subsequently recorded as 'read and understood'.

Our contractors also have similar systems to register, record and monitor staff competency. The robustness of these systems was reviewed as part of the extensive selection process. Staff competency assessments are discussed within contract management meetings and information is made available by our contractors as requested. Consideration is given not just to qualifications, but also experience, and we have different teams for our mains laying work (in private sites with smaller diameter pipework for example), than those carrying out larger, more complex diversions, or connections to larger mains.

Furthermore, through our Chief Engineer, checks of management record keeping and operator competency training is checked as part of the scope of the Capital Assurance Advisory Inspection process that applies to both in house and external teams.

- 7) How do you ensure that works are only allocated to operatives who have demonstrated competence for that particular type of work?

For our directly employed operatives our Click scheduling system is programmed to only allocate activities to those employees with relevant skills & qualifications.

Our contractors also use a similar scheduling system, furthermore, we are closely involved in the scheduling process and/or have visibility of job allocation by operatives.

In addition, through the two-tier audit programme, checks of management record keeping and operator competency training is verified.

- 8) When using a contractor do you have full visibility of how they have established the competency of their operatives to install new mains and services? If so, what type of information are you provided to give this assurance?

Our contractors also have systems to register, record and monitor staff competency. The robustness of these systems was reviewed as part of the extensive selection process, information is made available as requested. Consideration is given not to just qualifications, but also experience, and we have different teams for our mains laying work (in private sites with smaller diameter pipework for example), than those carrying out larger, more complex diversions, or connections to larger mains.

Furthermore, through our Chief Engineer, checks of management record keeping and operator competency training is checked as part of the scope of the Capital Assurance Advisory Inspection process. The Capital Assurance team conduct inspections on both in house and external teams.

Part of our assurance processes is keep a have a watching brief for any systemic failures. In the even that such a failure occurred then the contractor would be put on warning or can have their self-assurance accreditation removed until they can demonstrate that they have the correct improvements in place. In such a situation, we would step in to provide supervision assurance cover.

- 9) Do you consider you should be accrediting or training your contractors/staff to the same/similar level as an SLP? If not, please explain why.

We believe that all parties who undertake activity on our network should be trained and competent to an equivalent standard and to a level that provides both quality workmanship and quality assets. Aforementioned we believe we use mechanisms to ensure the same or enhanced level of competency and undertake two lines, and for mains installation a third line, of assurance on both in house and external teams.

It is worth noting that we make competency, contractual and assurance decisions in the context of our absolute responsibility for the public network, our end customers and associated regulatory performance commitments. It is the Water Undertaker that would be prosecuted or sanctioned by the DWI should there be any issues, it is also the Water undertaker that would be held to account for providing clean and wholesome drinking water to its customers.

- 10) Do you plan to make any changes to how you accredit or train your own contractors/staff going forward? If yes, please explain.

Our view is that our existing procedures and requirements are consistent with having a well-trained and well qualified workforce. With our new training academy now coming on line, we are looking to maximise the opportunity to provide in-house training to our teams and collectively gain the benefits that this offers.

Defects liability requirements

- 11) WIRS providers are required to rectify any defects notified by the accreditation body and the draft water sector documents set out a 12 month defects liability period on new mains and services installed by the SLP after the adoption date. If your company uses a contractor(s) to install new mains and services, please provide details of the defects liability period / arrangements in place, including details of any security payments held for this purpose?

Our mains installation contractors are retained on a framework basis, and as such we have framework retention rather than project specific for efficiency reasons (which we pass on to developers and means we keep charges low for customers). Our framework contracts are executed 'under deed', meaning an extended liability period of 12 years and all contractual requirements are held in our Engineering Specification that is bound into frameworks and contracts. As such, if there were to be a proven event of latent/serial defects, the contractors hold liability for 12 years.

In all other cases the following statement is valid for all contractors on the Developer Services programme.

The period between the Defects Commencement Trigger Date and the defects date is:

in respect of any works which are subject to the requirements of NRSWA and associated reinstatement guarantee periods in accordance with the Specification for the Reinstatement of Opening in Highways (issued by the Highways Authorities and Utilities Committee):

- 104 weeks where the depth of cover of pipe or other equipment is less than 1.5m; or
- 156 weeks where the depth of cover of pipe or other equipment is greater than 1.5m; and
- In respect of all other works the defect date is 52 weeks.

- 12) If your company uses a contractor(s) to install new mains and services, please outline any further contractual requirements, beyond any skills and competency accreditation and defect liability requirements you have explained above, that seek to ensure the quality of assets provided. Please make clear if these are also required of SLPs.

The risks (and percentage of failure) around historical jointing of PE pipe is well documented. Severn Trent have specified that all joints on PE pipe must be made by using fully automatic welding equipment with operational data printout facilities. Each operative receives a unique fob that makes each joint performed traceable. We use Controlpoint as our supply partner to remotely inspect the incoming data and provide an independent assessment of the evidence presented. These are able to highlight any non-conformances that might arise and, if left unattended, would almost certainly reduce the expected design life of the asset. If any joint were not receive assurance it would be cut out and replaced. Our performance figures from Controlpoint show that we are utility industry leading in our successful joint rates.

Transparency of requirements

13) What steps has your company made to explain to SLPs if/where there are differences between your requirements of them with regards to skills accreditation and/or defects liability, and the requirements you place on your contractors or own staff?

We have explained our approach to operative competency directly with SLPs and at previous forums held. In addition, we are an active member within the WIRS advisory panel where explanations have been shared here also. We are keen to continue with this dialogue and move forwards on this topic. That said, we are also open to possible new schemes e.g. passport scheme.

Appendix 1 Severn Trent Academy – learning pathway for Connection Operatives

	Off-the-Job Training Courses	Workplace Learning	Self-Directed Learning
Weeks 0 - 3	Trench timbering Cat and Genny Upskilling Low Risk Enclosed Area Entry Manual Handling Body Mechanics Work at Height Safety, Health and Environmental Awareness (SHEA) Banksman Register for NCO Service Laying Level 2	Social media policy Safety Net CF 20 training Mobile device policy Driver inspection Customer experience training Advisory inspection Streetwork compliance Stores ordering process	Videos ST Induction Toolbox talks Excavation Safety High Pressure Pipelines Working in the Vicinity of Structures Working near Tramways Underground Services Confined Spaces and Enclosed Space Entry Working Near Railways and Level Crossings Sharps (working with contaminated debris) Overhead Powerlines Personal Safety Violence at Work Managing Asbestos Working at Height Slips, Trips and Falls Driving for Work Risk Assessment Water Commissioning Process e-learning National Water Hygiene Blue Card
Weeks 4 - 12	Asbestos Compressed Air Tools Thrustboring BA Face Fit Test Driving Licence Car and Trailer B + E Slinging Abrasive Wheels Portable Emergency First Aid	Reacted HAVs training	Toolbox talks Mental Health Fire Safety Mind Safety Vulnerable People Electrical Safety Vibration at Work Managing Hazardous Chemical Substances Lone Working Noise at Work LOLER Working in the Highway
0 – 12 Months		Connection How clean water is treated Ground contamination Components of water utility drawings – legend, material, size, pressure, dates Company SLAs for connections and consequences of not completing a customer connection How to install a meter and record evidence	Learning log Diary updates Driver book Plant sheet HAV recording (if monitor not working)
		Health, Safety and Wellbeing How to carry out tasks, including excavation, safely Health and safety standards and toolbox talks How to lift and handle safely to reduce the risk of injury Equipment – how to ensure it's fit for purpose and conforms with testing Safety Net – how to raise un/safe acts, hazards and near misses	Learning log Record of on-site assessment Compliance on Standards and TBT tracker Evidence of equipment free of defects Records of un/safe acts and wellbeing conversations recorded on Safety Net
		Regulatory Compliance D-MEX requirements GDPR SLAs Competition	Learning log Understanding of regulatory obligations to ensure compliance
		Personal Contribution Personal accountability for achieving goals and objectives Written communications and appropriate responses / actions Communication with customers and colleagues Importance of addressing critical customer issues in a timely manner When to ask for help Using colleague network to get things done	Learning log Proactive steps to deliver against objectives Copies of email exchanges Personal written documents Recommendations to a developer based on site drawings Evidence of when help has been asked for e.g. on WhatsApp group Comm cell data

Appendix 2 Independent second line assurance inspection template

This includes the provision for photographic evidence as demonstrated below.

SEVERN TRENT		PROJECT ASSURANCE ADVISORY SITE INSPECTION		OriginMobile		
Job Details						
Job Ref		Date/Time				
Auditor		Area				
Contractor		Sub Contractor				
Agent		Workstream				
Job Type		SAP No				
Project Name		Gang				
Site Location						
Site General (Chapter 8)			Yes	N/A	No	Severity
1.1 Have the works been adequately planned including liaison with the highway authority permit /notice in						
1.2 Works correctly guarded						
1.3 All plates / footway boards secured appropriately for the location and correctly maintained						
1.4 All machinery, plant and spoil within the barriers						
1.5 Traffic lights set correctly and stop-go boards on site						
1.6 Traffic lights notices in place						
1.7 Suitably Manned Traffic Light Management Peak Times						
1.8 Site kept clean/tidy with sweeping up during and after job						
1.9 Do vehicles stopping on the highway for works purposes have either a roof-mounted flashing amber light bar or two independent vehicle roof-mounted flashing amber beacons visible through 360 degrees (Compulsory in Scotland and Wales).						
1.10 Do vehicles stopping on the highway for works purposes have high visibility chevron markings (Compulsory in Scotland and Wales)						
1.11 Are the whereabouts up to date and correct.						
1.12 Works correctly signed						
1.13 Work in vicinity of railway approved by Rail Operator? (Mandatory zone 50m, precautionary zone 200m)						
1.14 Appropriate number of NRSWA qualified operatives on site (certificates in place)						
Comment on why section is N/A						
Health & Safety and CDM			Yes	N/A	No	Severity
2.1 PPE being used as per the Operatives RAMS, Site rules and COSHH assessments						
2.2 Dust suppression being used as per RAMS and COSHH assessment						
2.3 Vehicles, trailers and plant in good working order, fully equipped and used correctly						
2.4 SSOW for access/egress in place						
2.5 Does site require F10?						
2.6 Utility plans on site and up to date						
2.7 Copy of F10 on site. Correctly filled in and all duty holders named.						
2.8 Appropriate site specific RAMS's contained within the workpack covering observable work activities and						
2.9 All changes in technique recorded appropriately within the workpack and RAMS reviewed						
2.10 Evidence that a system is in place to cover Accidents, incidents and near misses.						
2.11 Evidence of Co-ordination, Communication and co operation between Principal contractor and other						
2.12 Plant operating in accordance with GS6 in vicinity of overhead cables						
2.13 Evidence that Operatives have received Manual Handling training in the last 3 years						
2.14 Have confined Spaces been correctly identified? If so are all controls in place as per assessment.						
2.15 Are emergency procedures in place to cover fire and medical treatment						
2.16 COSHH procedures in place and being followed						
2.17 Traffic management plan in place suitable for the works being carried out.						
2.18 Working at height controls in place as per RAMS and SSRA						
2.19 Noise and vibration controls in place						
2.20 Slips trips and falls controls in place						
2.21 Correct storage of materials, substances and equipment						
2.22 Site induction adequate arrangements effective						
2.23 Appropriate Site investigations procedures in place						
2.24 Temporary works controls in place. Temp works register in place, evidence of design approval, duty holders appointed. Signed permits to proceed in place						
2.25 Construction Phase Plan (CPP) in place and adequate to activities undertaken and shows evidence of acceptance by Client prior to site set up						
2.26 Design Risk Assessments (DRAs) available on site and sufficient.						
2.27 Residual risks have been communicated to construction drawings and CPP.						


2.30 Permits to load/strike/remove in place.				
2.31 Authorisation to enter / CDM. area plan in place. Authorisation to work and site safety agreements in place from the Wholesale Operations				
2.32 RAMS in place to cover deliveries, loading and off loading				
2.33 Pipe Trailers in good working order / correctly used / safety features in place				
2.34 Potential loadings adjacent to excavations have been assessed				
2.35 Client, Principal Contractor, Principal designer and Designer named in Construction Phase Plan				
2.36 Operatives on third party sites have adequate site induction and signed in				
Comment on why section is N/A				
Welfare				
	Yes	N/A	No	Severity
3.1 Correct number of nominated / appointed 1st aiders on site appropriate to site activities				
3.2 Clean hot and cold, or warm, running water available and soap				
3.3 Toilets should be suitable and sufficient, and clean				
3.4 Welfare unit van adequate for number of operatives kept clean and tidy				
3.5 Vehicle interiors kept clean & tidy				
3.6 Correct number of first aid kits, complete and in date appropriate for works				
3.7 Are mobile works facilities provided at a central location accessible within a reasonable distance or time				
3.8 Drinking water provided or made available at readily accessible and suitable places				
3.9 Site cabin facilities detailed in CPP available and maintained				
Comment on why section is N/A				
Statutory Inspections				
	Yes	N/A	No	Severity
4.1 PUWER Inspections carried out and carried out in accordance with company procedures				
4.2 LOLER Inspections carried out and evidenced (12 months for lifting, 6 months for accessories)				
4.3 Lifting plans in place, lift supervisor appointed				
4.4 Adequate Ladders & scaffolds used, checked as per company requirements and tagged				
4.5 Excavation register and permits to dig in place and up to date				
4.6 Daily Plant & Machinery Inspection records in place				
4.7 Confined space inspection records in place				
Comment on why section is N/A				
Higiene				
	Yes	N/A	No	Severity
5.1 All vans have segregation between fittings and plant, fittings stored in bags				
5.2 All operatives should be in possession EUSR blue card, and EUSR SHEA Card, or in date signed cover note				
5.3 Chlorox spray fresh, labelled correctly, suitably contained and used correctly				
5.4 Any chemicals & chlorine tablets stored safely and away from the reach of public/children				
5.5 All fittings & materials stored on site should be off the ground, and covered. Also away from contaminants				
5.6 Watertight cap ends or blank plates, fitted to pipe ends in excavations				
5.7 Water in excavations being kept at least 150 mm below open pipes				
5.8 Correct on-site chlorination procedure being carried out and followed				
5.9 Pre-chlorinated pipe marked up with pipe number, and date chlorinated				
5.14 All materials compliant with DWI Reg 31 and reg 31 schedule available				
5.17 Hygienic Pipe Coil In Date (12 Months from Manufacture)				
5.18 Is the correct Size By-pass being used and identified on Construction drawings and sampled? Sample				
Comment on why section is N/A				
Environmental management				
	Yes	N/A	No	Severity
6.3 Working in tree proximity guidelines considered (NJUG No 10). Hedgerows are protected				
6.6 Waste, including spoil and drilling slurry, are stored and disposed of properly and in timely manner				
6.7 Pollution prevention controls in place (surface water drains protected, spill kit available, secondary containment available where required)				
6.8 Agreed ecology mitigation plans followed				
6.9 Required permits/exemptions in place and followed (e.g. for dewatering operation, crossing water bodies)				
6.11 Concrete Washout being managed to protect environment				
6.12 Environmental constraints effectively communicated to construction (e.g. for dewatering operation, working in flood plain , discharge of chlorinated water)				
6.13 Environmental constraints effectively communicated to construction (e.g. on hazard on drawings, DRA, CPP, TBT etc)				
Comment on why section is N/A				

Supervision and Public Relations		Yes	N/A	No	Severity
7.1 Are there suitably qualified personnel for the task being undertaken?					
7.2 Adequate level of supervision on site. Formal inspections undertaken					
7.3 Access to shops and houses being maintained. Pedestrian and vehicular access satisfactory					
7.4 Site sufficiently branded. Vehicles displaying the Severn Trent Official Contractor sign					
7.5 R&C contingency plans signed off and plans being adhered to. VA forms on site. Network control liaison					
7.6 Customer Information Board available and up to date if permit scheme					
7.7 Customer notified when site has been unmanned?					
7.8 Barriers/Signs kept well clear of customers' fences, walls etc.					
7.9 Bulletin board up to date and linked to GISST					
7.10 Correct nuisance management in place (dust, mud, light)					
7.11 Special need/sensitive customers identified and steps taken to mitigate impact					
7.12 Sufficient documented customer management plan in place. Evidence of plan being adhered to and maintained by the team					
7.14 Business open as usual sign in place at either end of works where there are Businesses present					
Comment on why section is N/A					
Electrofusion Welding		Yes	N/A	No	Severity
8.1 Is Blue Box used and enabled?					
8.2 Welders EUSR Accredited and had Control Point training					
8.5 Welding equipment within the Service Calibration dates					
8.6 Are Umbrellas / Tents used for all welds					
8.7 Mechanical scrapers being used where appropriate					
8.8 Alcohol wipes available and used correctly according to procedure allowing fitting surface to dry prior to					
8.9 Operatives have clean hands when welding or using latex gloves					
8.10 Pipes fully dry before welding takes place and fittings in sealed bags until used.					
8.11 Evidence of Guillotines used to cut pipe					
8.12 Puriton Pipe being prepared to Joint Specification cut back of outer inner layer to weld area only					
8.12 Puriton Pipe being prepared to Joint Specification cut back of outer inner layer to weld area only					
8.13 Operatives wearing correct PPE Gloves Safety Glasses when Welding					
8.14 Distance between fittings minimum of 150mm					
Comment on why section is N/A		Not applicable to this audit			
Butt Fusion Welding		Yes	N/A	No	Severity
9.1 Welders qualified with the correct certification for the type of jointing					
9.2 Have two dummy welds being produced prior to start of production (Full heat soak completed)?					
9.3 BDI Equipment being used / Butt Fusion Data Download being uploaded and recorded					
9.5 Equipment within calibration dates					
9.6 Rollers and clamps being used as required					
9.7 Welding tents being used for all welds					
Comment on why section is N/A					
Mainlaying General		Yes	N/A	No	Severity
10.1 Pipe been checked for defects post installation					
10.2 If thrust blocks are required must be according to design, and have relevant TWD in place					
10.3 Have all ferrules been exposed prior to work commencing					
10.4 All other utility mains and services have been located and marked prior to work commencing incl. trial					
10.5 Where required has tracer tape been laid					
10.6 Where required are depths being logged and recorded					
10.7 Service pressure test being adhered to					
10.8 Bed and surround adequate					
10.9 Have mechanical joints been completed to manufacturer specifications (e.g. correct torque)?					
10.10 Are Squeeze offs fitted correctly and to specification and collar or collars fitted after use?					
Comment on why section is N/A		Not applicable to this audit			

Specification/Mains		Yes	N/A	No	Severity
11.1 Main laid to correct depth according to the design.					
11.2 Deviations from mains depths and techniques been approved by appropriate D&B and AC					
11.3 Fire and Washout Hydrants being installed to specification including spade valves					
11.4 Has an Under Pressure connection been installed to the Engineering Spec?					
11.5 Boundary taps fit within the 300 rule					
11.6 Services laid at 90% degrees from B/Box to main connection if not possible diversion has been agreed.					
11.7 Services laid at correct depth according to mains renewal design manual					
11.8 Correct size service pipes being laid					
11.9 Shared communication pipes being installed according to the mains renewal design manual					
11.10 Meters installed according to standard drawing as detailed in the STW Design Manual					
Comment on why section is N/A		Not applicable to this audit			
Reinstatement		Yes	N/A	No	Severity
12.1 Backfill materials properly stored at compound & on site					
12.2 Correct layer thickness and number of passes for reinstatement material					
12.3 Correct compaction equipment being used					
12.4 Team have correct road category to ensure correct surface/binder course depth					
12.5 Correct reinstatement material being used					
12.6 Evidence that correct procedure to monitor temperature in place					
12.7 Excavations cut to regular sizes & edge preparation carried out					
12.8 150/250mm cut back rules being adhered to					
12.9 Evidence that correct procedure to monitor crowning/depression in place					
12.10 All road markings replaced or signage available stating road has no road markings on highway					
12.11 Over banding carried out correctly if required					
12.12 All verges reinstated satisfactorily					
12.13 Site left clean and tidy when unattended or work complete					
12.14 Appropriate number of NRSWA qualified operatives and supervisors on site (certificates in place)					
12.15 Reinstatement keeping pace with mainlaying					
Comment on why section is N/A		Not applicable to this audit			
Quality Control		Yes	N/A	No	Severity
13.1 ITP's in place for all current works and all works been carried out in accordance with Inspection and Test Plans (ITPs)					
13.2 Non-conformance procedure in place					
13.4 Installed quality satisfactory. Minimal defects.					
13.5 Sub-contractor work quality is being monitored by a principal contractor.					
13.6 Adequate as constructed records held on site, track sheets.					
13.7 Installed quality satisfactory for shuttering, concrete pours and reinforcement					
Comment on why section is N/A		Not applicable to this audit			
Project Management Arrangements		Yes	N/A	No	Severity
14.1 Project Management Plan (PMP) covers Health & Safety, Environmental and Quality management arrangements and PMP is updated and communicated regularly					
14.2 Evidence of D&B Self Assurance audits being undertaken. Evidence of audits on sub-contractors and supply chain. Actions are closed out.					
14.6 Sufficient construction programme in place. It is regularly updated and communicated.					
14.8 Design process in place for design continuing into the construction phase. Any changes or concessions agreed and recorded.					
14.10 Evidence of effective documents control.					
14.11 Sufficient Risk Register in place, regularly updated and communicated.					
14.12 Handover documentation defined and being progressed. E.g. Health and safety file.					
14.13 Sufficient Commissioning Plan in place to manage commissioning activities. Regularly updated and communicated to relevant parties. Evidence of liaison between Asset Creation and Operations.					
14.14 Plant in Use Agreement in place as required.					
14.20 Land entry notices in place. Land and Planning consultant appointed where required.					
14.21 Planning considerations being managed effectively.					
Comment on why section is N/A		Not applicable to this audit			

Valve Technician Audit	Yes	N/A	No	Severity
15.1 Correct Chloros & Chlorine Level Tablets (Palintest 1-2-3-4)				
15.2 Neat Chloros Solution For New Mains Chlorination				
15.3 Correct Chlorination Unit For New Mains (When Required)				
15.4 Sodium Thio-sulphite Crystals For De-Chlorination and COSHH available				
15.5 Chlorine Level & Turbidity Monitoring Sets Twice Daily Calibration check with Gel standards if taking				
15.6 2" & 1" Hose's For Flushing & Transfer of Water Minimum of 2				
15.7 Stand Pipes 2" To 1" Non-Return & Flush Through and colour coded green				
15.8 De-Chlorination receptacle available				
15.9 Bottles- Bacti-Turbidity-Taste & Odour				
15.10 Test Gauges 2 Minimum carried by Technician at least one up to 25 Bar				
15.11 Timed Sample Chart if required				
15.12 Correct Range Of S/V Bars & Lifting Keys and colour coded green				
15.13 Relevant Paperwork (Sample Sheets-Chlorination Coil Register & S/V Log Book)				
15.14 Collapsible Chapter Eight Signs & Cones				
15.15 Van Kept Clean & Tidy				
15.16 Is all reporting up to date & complete /Mains Commissioning Log /Valve Operations / DG3 / Mains				
15.17 Adequately trained in Operational Care, Valve Due Diligence within last 2 years				
15.18 Customer Care. Evidence of Property Warn for Business & Domestic. Any requirements for Vulnerable				
15.19 Documentation: R&C up to date, Network Control valving operation (sequence)				
15.20 Valve Operation as per requirements				
15.21 Authorisations: Network intervention authorised on day of planned works				
15.22 Request GISST Amendment via GISSTupdate@severntrent.co.uk if valves & fittings differ from current				
Comment on why section is N/A	Not applicable to this audit			

USAG	Yes	N/A	No	Severity
16.1 Have New Starters using CAT and Genny, who hold a valid ticket, been competency assessed within 2 weeks of starting on site?				
16.2 Have those using CAT & Genny had an annual competency assessment completed on live site for approximately 2 hours?				
16.3 Have those using CAT & Genny Completed re-certification training of the competency assessment at no greater than 3 year intervals?				
16.4 Are post incident competency assessments completed with site teams before re-starting work following an incident?				
16.5 Does the Incident Form for service damage investigations have equivalent content to the enhanced USAG form?				
16.6 Has the incident investigation form been completed fully including insurance mitigation details, CAT download and photos?				
16.7 Are located services clearly marked up on site and markings maintained for duration of works?				
16.8 SSOW/RAMS contains: CAT & Genny checks must be carried out throughout the duration of excavation operations. Scan before breaking ground, re-scan after removal of surface and as frequently as practical to avoid striking a service, not exceeding 300mm				
16.9 Does CAT & Genny data download indicate use in accordance with statement in SSOW?				
16.10 Does CAT have data download facility?				
16.11 CAT data downloaded and regularly reviewed by all members of the site team?				
16.12 Is downloaded data analysed using SPX software or equivalent?				
16.13 Is CAT data downloaded and analysed after an incident and attached to the incident investigation form?				
16.14 Is Flame Retardant clothing worn as outer clothing when breaking ground or working near exposed services?				
Comment on why section is N/A	Not applicable to this audit			

Good Practice 3		Good Practice 4	
Category	Safe Systems of work	Category	
Sub Category	OH.UG service	Sub Category	
Example of cat and Jenny good example.			
			

Additional Photo 1	Additional Photo 2
Over view of site	Butt fusion machine
	