

# Pipe Selection Assessment Guidance

## General

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When completing this form please refer to 'Guidance for the selection of water supply pipes to be used in brownfield sites' (UKWIR 2010 Ref 10/WM/03/21).

You are required to complete all relevant sections of the *Pipe Selection Assessment Form* and provide us with a Site Assessment Report (SAR) to allow us to assess the risk of contamination of the drinking water supply from chemicals within the soil. Site Assessment process and requirements and SAR checklist can be found in the UKWIR guidance on page 7 and page 33 respectively.

Affinity Water now lays all its water mains and service pipes in plastic. Many organic compounds (i.e. Phenols, Fuels and other hydrocarbons) can either permeate through the walls of plastic pipes and fittings into the water supply or dissolve and weaken the pipe causing water leaks.

The UKWIR Guidance does not apply to greenfield sites, however, relevant sections of our supplementary guidance and the UKWIR Guidance can be considered as being equally suitable for application to those greenfield sites believed to be potentially affected by contamination. The applicant is required to provide us with the completed *Pipe Selection Assessment Form* and a Site Assessment Report even if the site is not considered to be affected by contaminants that could be detrimental to the performance of materials. In addition, Part 4 of the UKWIR guidance should be reviewed to ensure the correct selection materials for the water services.

## Section 2 – Previous Site Use

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The desk study must provide the information about activities that have been undertaken on site. This information can be used to identify whether any chemicals (including fuel oils) may have ever been used or stored on site. Former site uses can be presented as historic maps.

## Section 3 – Proposed Development

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It is necessary for Affinity Water to obtain detailed information about future site use and any potential future contamination which may affect intended pipe selection. Affinity Water may request that barrier material be used in the vicinity of activities determined as a future risk.

Where sites have previously been used for any of the activities listed in *Section 2 The Previous Use of the Site based on Preliminary Risk Assessment* and contamination is detected within the site all water mains and service pipes shall be laid in a suitable barrier material.

'Where a water main and/or service pipe is to be laid close to a petrol filling station, Affinity Water may require the pipe materials laid within a designated distance of the facility to take account of future contamination risk.' Section 1.1 para 7 - UKWIR Report Ref No 10/WM/03/21.

## **Section 4 – Pollution Incident Record**

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Local Authorities or the EA can provide information on past pollution incidents which can provide valuable data on potential site contamination and therefore the need for intrusive information.

Affinity Water has a duty of care to its customers to prevent any potential contamination of the water supply and will designate the use of barrier pipe where we believe there is any risk of contamination.

## **Section 5 – Site Walkover**

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Site walkover details are required in order to ensure the PRA provides sufficient information on possible contamination sources being present on the site. In addition, it helps establish the requirement for the intrusive site investigation.

## **Section 6 – Intrusive Site Investigation**

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### **Testing Requirements**

UKWIR 2010 Ref 10/WM/03/21 does not specify exactly the number of required samples to be collected from the development area. However, it does stipulate the locations of where the samples should be taken. Sample points for the correct selection of pipe material should be located within a 15m corridor either side of the proposed pipeline route. For more information please refer to British Standard BS 10175: 2001: 'Investigation of potentially contaminated sites – Code of Practice'. The BS standard contains guidance on the design, sampling, testing, analysis and reporting of site investigations of all potentially contaminated sites. Higher frequency sampling might be requested if contamination is identified.

Section 7 of the application lists the required testing for contaminants which have the potential for affecting or permeating plastic pipes and/or sealing rings/gaskets. It is crucial that the required sampling and testing is carried out as it enables us to establish the most suitable pipe material for the proposed development. Results of analytical data should be provided in mg/kg.

### **Sample depth**

Water pipes are normally laid at between 0.75 and 1.35m. Soil sample collection should be carried out to a minimum of 500mm depth below the proposed pipework. If groundwater or perched water is present within one metre of the base of the intended trench, a suitable water sample from, for example, a suitably completed narrow borehole should be taken to test for the mandatory analytical suite to check for the presence of contaminants (section 2.5, par. 7 and 8 of the UKWIR Guidance).

## Validity of the Site Assessment Report

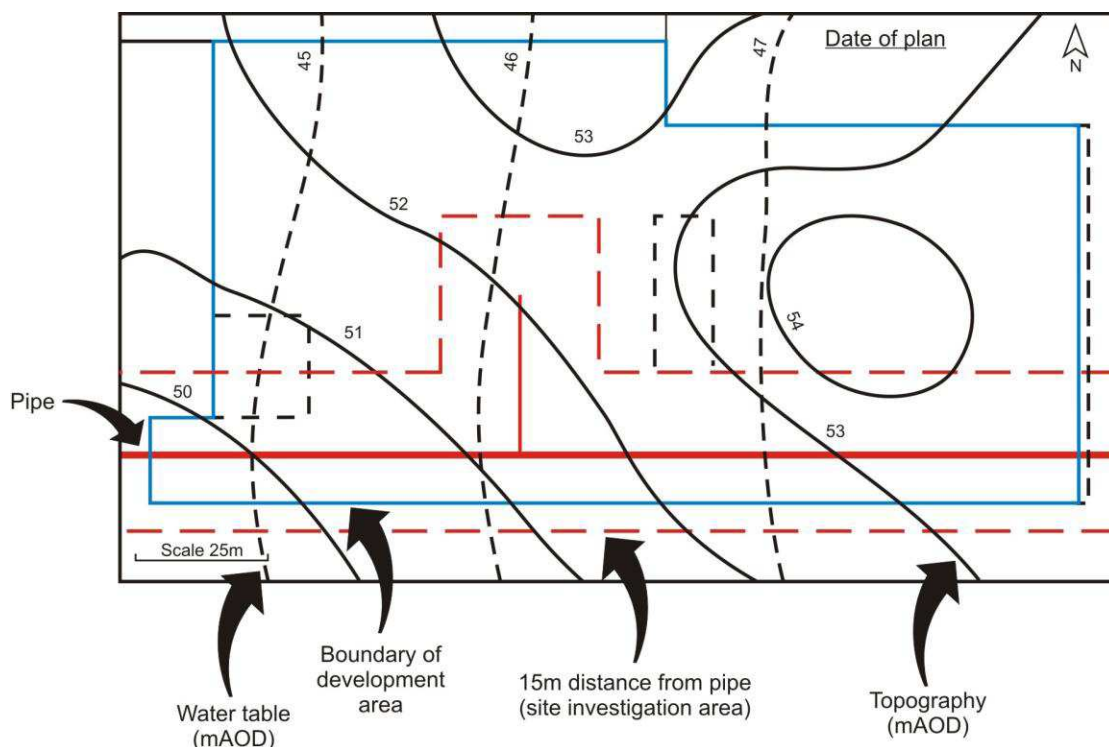
NOTE: Where the site investigation data has been produced more than three years prior to the submission of the SAR, the site investigation would need to be repeated.  
 - UKWIR Report Ref No 10/WM/03/21 - Section 2.7\_3 page 14.

## Section 7 – Results of Soil Analysis

The table in *Section 7 Contaminants* lists the contaminants which can damage our pipes in this way and pose a risk to the water supply. Where soil analysis shows levels of these contaminants to be above the trigger levels shown in pipe selection table of the UKWIR guidance Affinity Water will designate that all water mains and service pipes shall be laid in a suitable barrier pipe.

### Site Plan

The Developer should produce a site plan highlighting the location of sample points, showing scale of drawing, North sign, proposed site layout with buildings and roads, site boundary, proposed route of all pipelines and location of fuel storage if applicable. Figure 1. shows an example of a Site Plan. For more information please refer to Section 2.2.2 of the UKWIR Guidance.



**Figure 1. Site Plan**

UKWIR Report Ref No 10/WM/03/21

## Section 8 - Remediation

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As water mains are laid at between 0.75 and 1.35m to a depth, any contaminated soil to a depth of 1.35m must be removed. We will require post remediation sampling results confirming contamination has fallen below the trigger levels prior to payment for the work. If contamination is found all water mains and services on the site must be laid in suitable barrier materials. Affinity Water will not change the agreed mains material after the payment has been made (as we will have ordered the materials). So please ensure your remediation proposals are made clear at this stage.

## Section 9 - Declaration

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By signing this form you confirm that the information provided is correct. Please return this completed form with your application and a copy of your Site Assessment Report to:

Development Experience  
Affinity Water Limited  
Tamblin Way  
Hatfield  
Hertfordshire  
AL10 9EZ  
Email: [dx@affinitywater.co.uk](mailto:dx@affinitywater.co.uk)