

# Building Water Supply for Construction Sites

**This fact sheet provides guidance and advice on water supplies at construction sites. As a Water Undertaker it is SES Water's responsibility to enforce the Water Supply (Water Fittings) Regulations 1999 to protect the water quality in our network and the public's health by preventing any contamination from construction sites.**

Building water is used directly to support the construction of domestic and commercial premises and will be specific to construction related activities only. Supplies laid as part of a housing development where the supply will serve domestic premises will not be treated as building water. All water supplies will need to be metered.

Sites will be visited on a regular basis by SES Water to ensure backflow prevention devices are unaltered and that there are no new risks.

## Construction site water use

Typical uses of water on construction sites include, but are not limited to:

- Drinking water;
- Welfare facilities (toilets and showers);
- Concrete/mortar production;
- Plaster/grout mixing;
- Hydro demolition;
- Drilling and piling;
- Landscaping;
- Chlorination;
- Soakaway testing;
- Dust suppression.

These varying activities all have a backflow risk and will require different levels of backflow protection to prevent contamination of the water network.

## Complying with the Water Regulations

Under Regulation 2, water supplied for non-domestic purposes should be:

- Metered;
- Used for one month only, extended to three months only with written consent

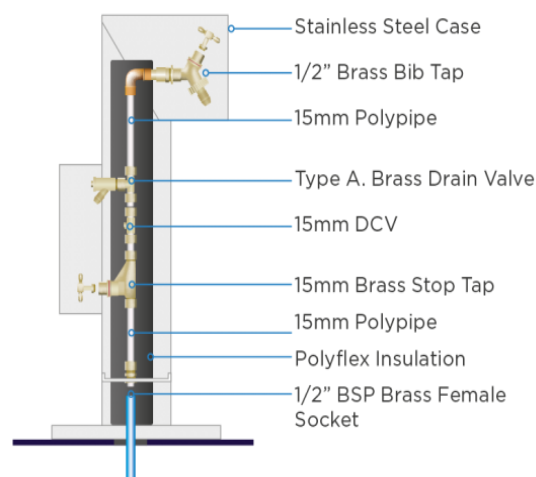
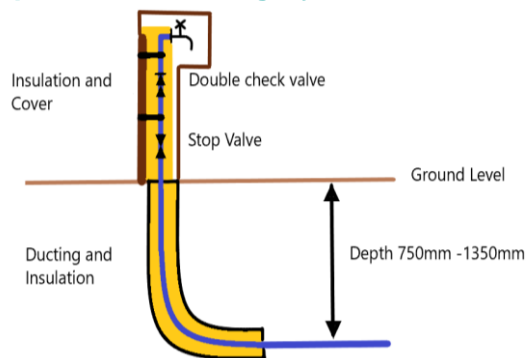
from SES Water. This will need to be discussed with the developer on site;

- Provided with satisfactory backflow protection to prevent any potentially contaminated water from being siphoned back into SES Water's network that could cause risk to public health.

## Small construction sites with temporary standpipe and no welfare facilities

Small construction sites may only require a standpipe arrangement with a double check valve to provide adequate backflow protection (as shown in the diagrams on the following pages).

## Standpipe arrangements and site set-up for a Fluid Category 3 risk:



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It is the responsibility of the builder to inform us what they will be using the water for and the type of backflow protection they intend to use, as any contamination caused by them could lead to prosecution. Where a temporary supply is required for construction purposes that is deemed to be a Fluid Category 3 Risk, a minimum standard of standpipe is required to comply with the Regulations. The following steps are required to comply with the Water Supply (Water Fittings) Regulations 1999:

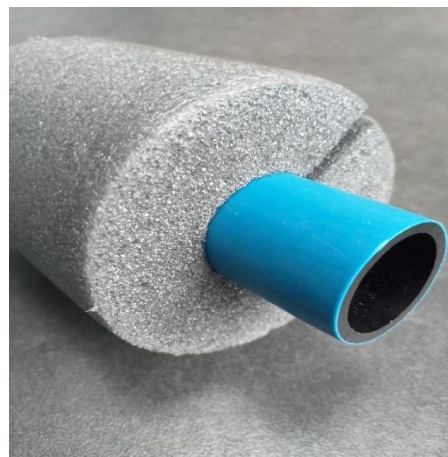
- Pipework should be of an approved material such as MDPE in normal ground conditions and barrier pipe in contaminated ground. The pipework must be laid at a minimum depth of 750mm and adequately insulated and protected above ground to prevent damage from frost or sunlight;
- An approved stop valve must be fitted on the pipe to give full control over the standpipe. Where multiple standpipes are fitted, then each standpipe shall have a separate stop valve;
- A double check valve must be fitted directly above the stop valve. A double check valve will be required on each pipe serving a hose union tap if there are more than one, for point of use backflow protection;
- A drain-cock should be fitted immediately downstream of the double check valve;
- The standpipe must be securely attached to a fixed post or structure.
- The standpipe should **NEVER** be positioned inside a building;
- If the temporary supply is to be used for domestic purposes such as site cabins or canteens, it must be protected from potential contamination from water used for construction. This is best achieved by running the supply directly to the site cabins, at which point backflow protection with double check valves should be installed before continuing to serve the rest of the site;
- Any hosepipe used must be fitted with a self-closing device like a trigger gun for controlling the flow of water and preventing unnecessary waste/misuse of water.

## Small construction site Temporary Building Supply (TBS) with welfare facilities

If a small construction site requires an overland TBS that will also be connected to welfare facilities and standpipes, then further measures are required on site to prevent the risk of contamination.

The drinking water in the kitchen area must be protected from the risk of contamination from toilets and standpipes. A double check valve should be fitted at the front of the site on the overland supply for zonal backflow protection. A double check valve and stop valve must be fitted on the supply to every standpipe on site and the toilet block supply. The toilets should have a type AUK 1 air gap arrangement due to the potential of Fluid Category 5 backflow risk.

If overland pipework is used, it must be adequately insulated to protect it from warming and degradation through UV light during warm weather and to delay the onset of freezing during the cold winter periods. Insulation will not stop overland pipes from freezing but it will delay the action.



[Example of insulation suitable for overground supplies in warmer months but this is not adequate during winter periods]

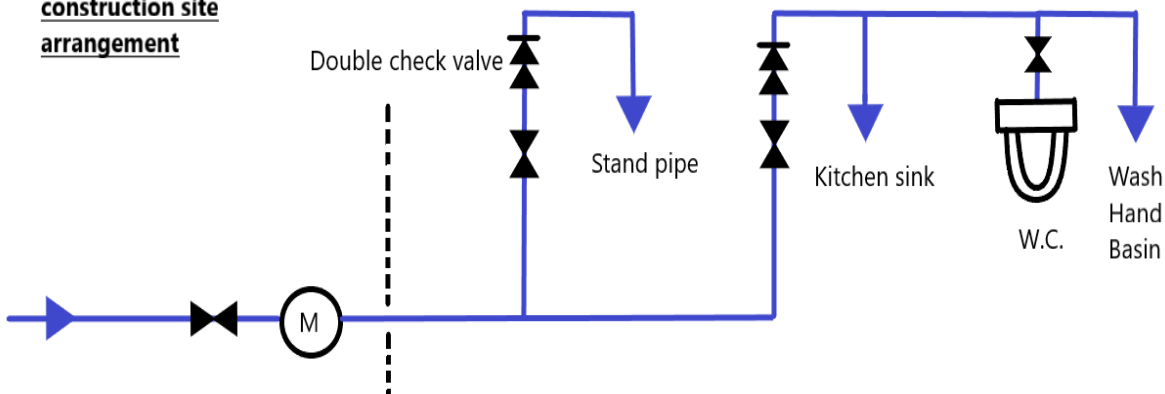
For further information contact the Water Regulations team at  
 SES Water, London Road, Redhill RH1 1LJ  
 Email: [waterregulations@seswater.co.uk](mailto:waterregulations@seswater.co.uk)

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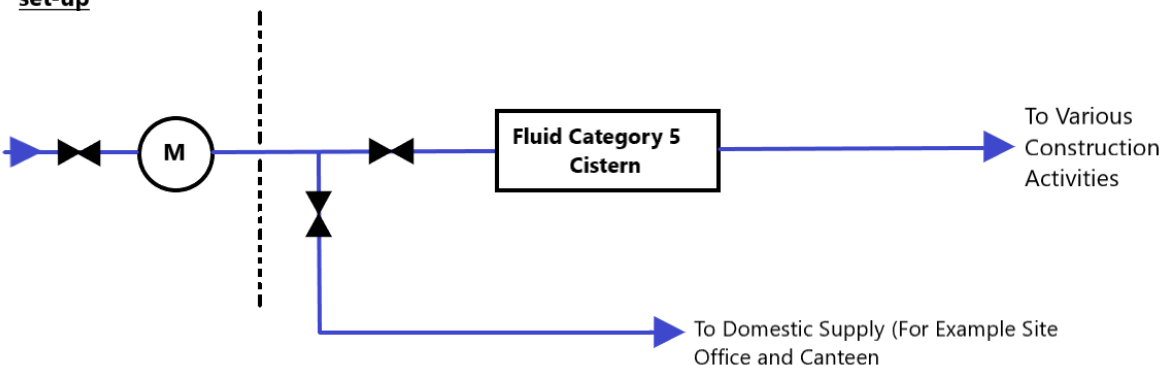


This flow chart shows the typical arrangement of a small construction site.

## Example of small construction site arrangement



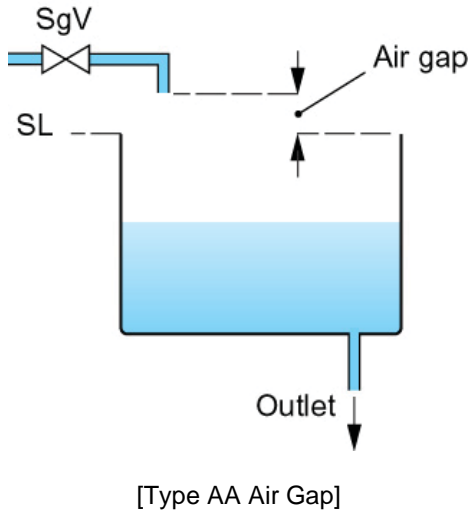
## Example of large construction site set-up



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## Fluid Category 5 Cisterns Air Gap arrangements:



Water Supply (Water Fittings) Regulations 1999. The Fluid Category Risk for each application has been summarised in the table below.

Application	Fluid Category
Drinking Water	1
Hot water boilers, water coolers and vending machines (no ingredients or CO <sub>2</sub> )	2
Wash hand basins, showers, dishwasher (for domestic use) and vending machines (ingredients or CO <sub>2</sub> added)	3
Washing machines	4
WCs	5

## Large construction sites building water supply layout with welfare facilities

Large construction sites will generally be in operation for longer durations with the activities being undertaken potentially carrying higher contamination risks.

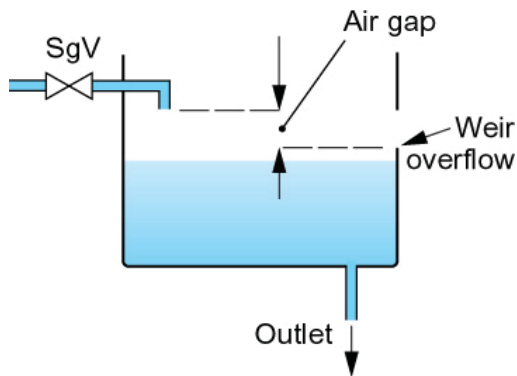
These higher risks could include a cement silo or concrete batching plant which would pose a Fluid Category 5 contamination risk and would therefore require a water supply through a Type AA, AB, AD or DC arrangement on a break cistern.

A large construction site should be set up as shown in the schematic on the following page, with a domestic supply separated off for welfare facilities, and the rest of the site having zonal backflow protection utilising a Fluid Category 5 Risk break cistern.

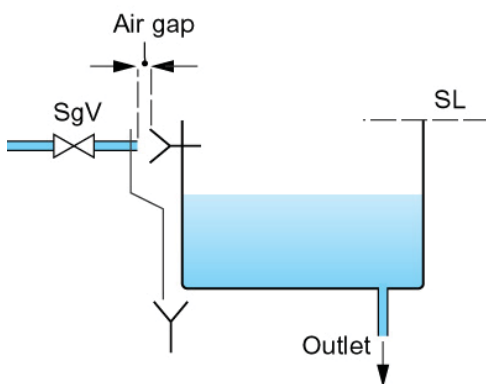
The domestic elements of the site will require the same backflow protection as outlined in the

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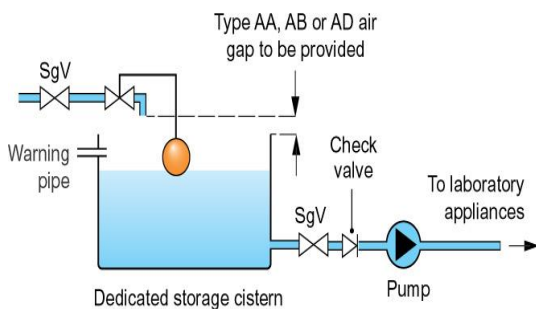
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[Type AB Air Gap]



[Type AD Air Gap]



[Break Cistern with Booster Pump]

## Dust Suppression

Sites will often have to suppress dust that is produced during construction activities, particularly where demolition takes place. Developers are encouraged to use a misting type system as these are more water efficient. The dust suppression should only be in use during operational hours. It is recommended that any

rubble should be covered up when the site is not operational to prevent dust from spreading across site, which would result in the unnecessary water usage if the dust suppression system operated continually.

[Example of misting dust suppression]



## Spray heads

A spray system with fixed sprinkler heads that is used without any insecticide or fertiliser additives, and with the heads fixed not less than 150mm above ground level can be classed as a Fluid Category 3 risk. This risk can be protected with a double check valve, anything else should be fed through a Fluid Category 5 break cistern.



[Examples of dust suppression]

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