



CPD Seminar

Saving Space, Energy and Time;

Design considerations when specifying sustainable drinking water systems.

Billi™

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Specification Consultant

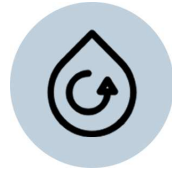
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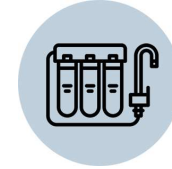


Welcome

Today we will cover.....



Importance of sustainability



Water cooled Vs Air cooled systems



Efficiency requirements



Importance of filtration, scale management and maintenance



Industry Accreditations

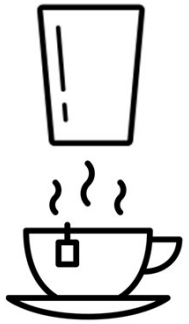


Aesthetic tea point consideration and requirements

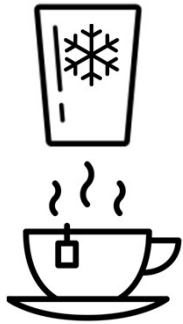
The Billi Story



The Billi System Range



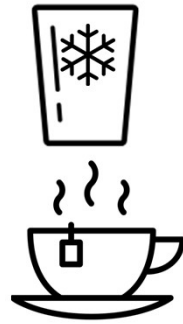
Sahara



Quadra



Quadra
Sparkling



Quadra
Plus*



Quadra Plus
Sparkling*



Alpine



Alpine
Sparkling,
Bottling

The Billi Tap Range



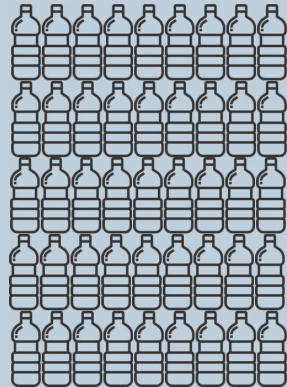


Importance of Sustainability

Global plastic bottle production

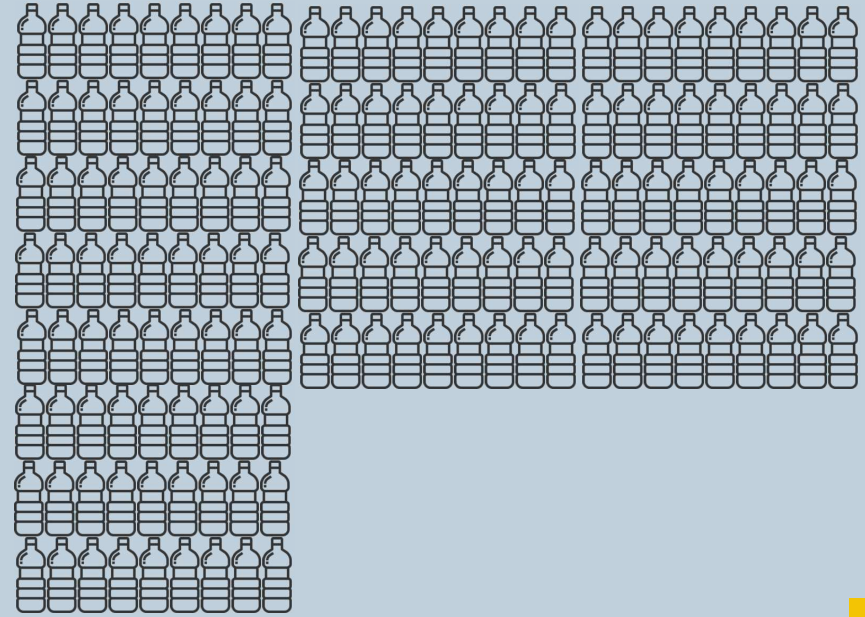
2014

311 Million Tons of plastic bottle produced globally



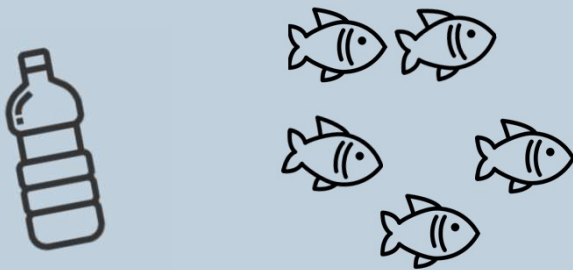
2050

1,124 Millions Tons of plastic bottles – estimated



2014

Plastics to fish ratio in the Ocean by weight



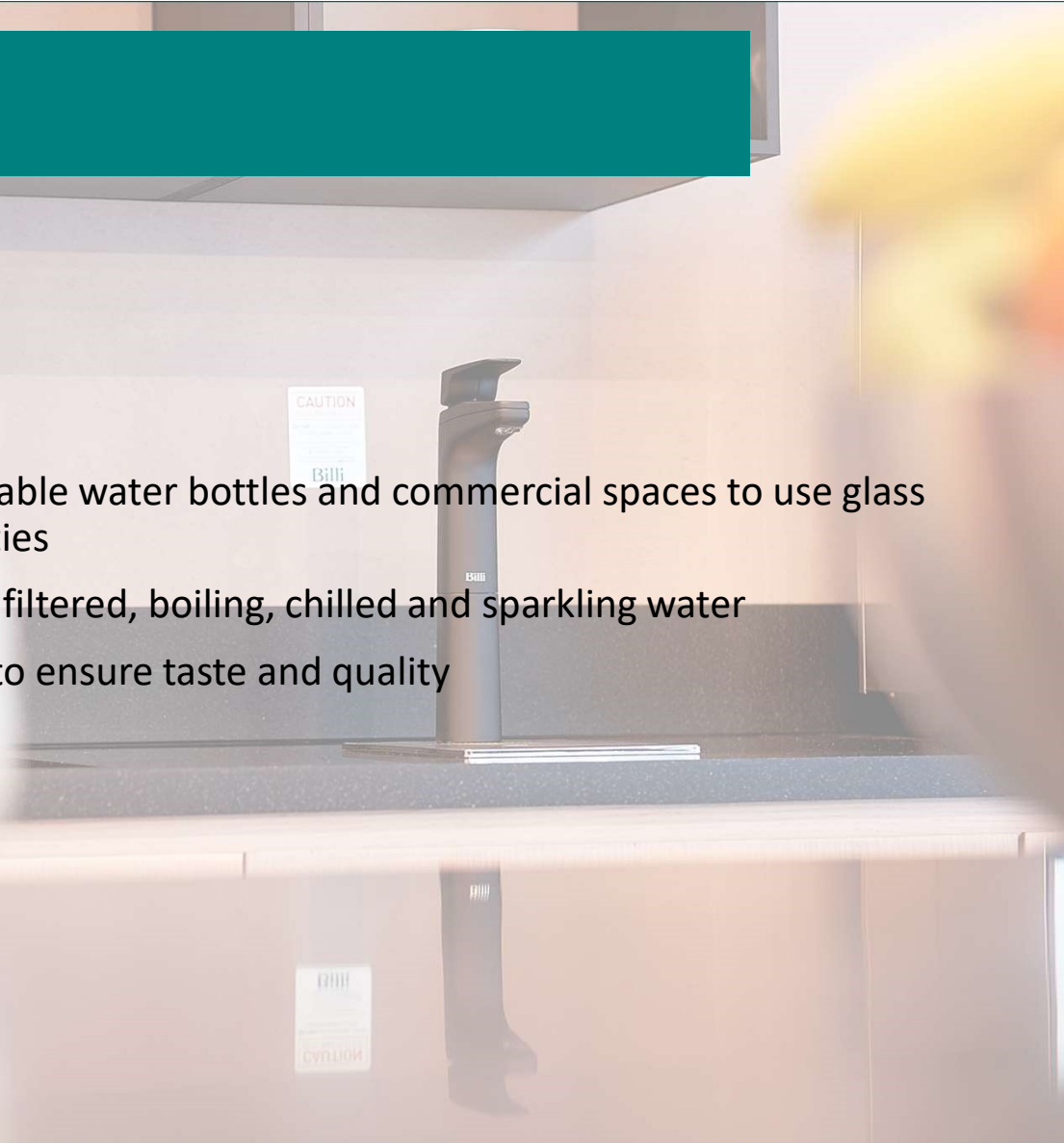
2050

Plastics to fish ratio in the Ocean by weight



The Solution

- Encourage staff to use re-usable water bottles and commercial spaces to use glass bottles for conference facilities
- Systems that deliver instant filtered, boiling, chilled and sparkling water
- Premium filtration systems to ensure taste and quality
- Efficiency savings
- Reduce carbon footprint

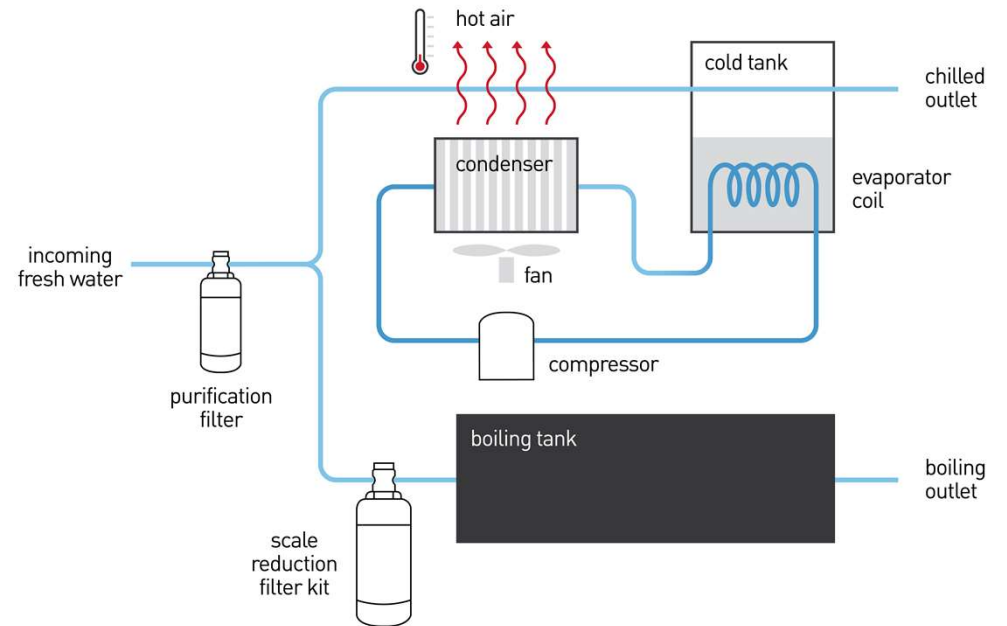




Water cooled
Vs
Air cooled systems

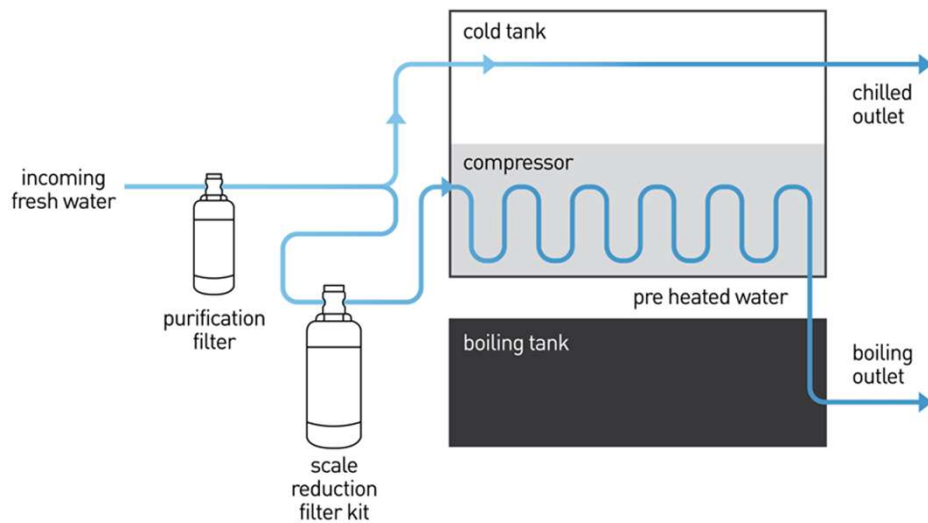
Air cooled systems

- Air flow system to expel heat out and draw cool air in
- Ventilation required
- Refrigerant circulatory system converting gas to liquid and back again
- Chilled water will stop working when cabinet reaches 36°C



Ventilation





Heat Exchange system

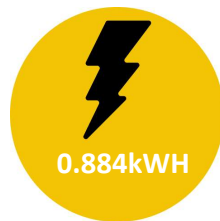
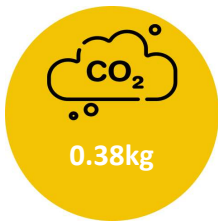
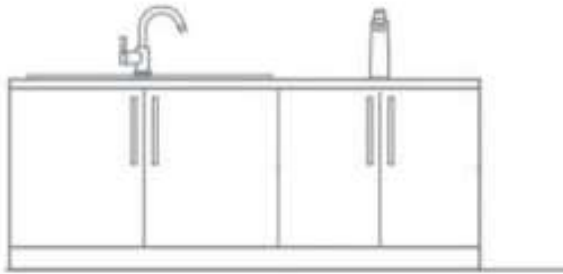
- More energy efficient in harnessing heat energy from the cooling process
- Aesthetically more appealing as no ventilation required
- Compact installation footprint
- High grade insulation specification



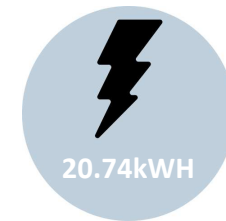
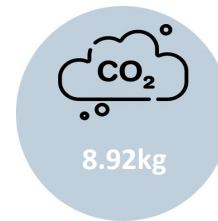
Efficiency
requirements

Energy Comparison

Under-counter water system



Kettle, watercooler & plastic bottles



*Typical 24 hour day assumes the units are in full operation mode for 12 hours, in sleep mode for 12 hours with a 10 minute warm up period.

For full data, please refer to our Energy Report on our website: www.billi-uk.com/downloads. Costs calculated based on energy prices published by Npower in Jan 2019 (0.16p per kw)

The trouble with kettles



***75%**

Users will boil more than they need = wasted energy

***£68m** wasted from overfilling kettles



****4 Days per year** wasted waiting for water to boil

* Domestic UK

** Commercial UK

The Billi undercounter solution



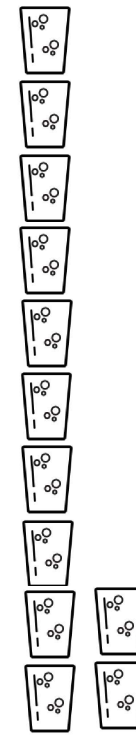
1 Hour



Boiling
250 Cups



Chilled
175 Cups



Sparkling
120 Cups





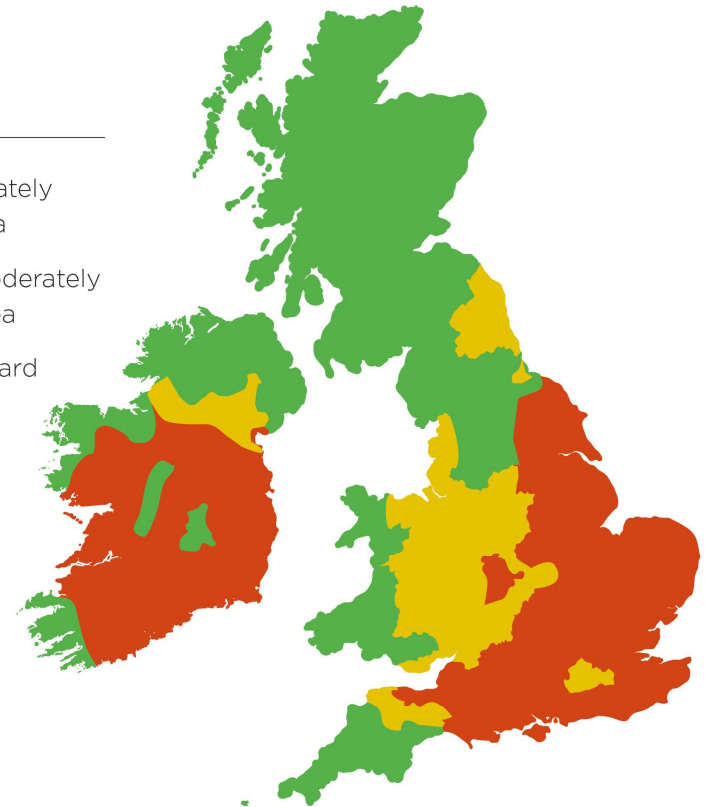
Importance of scale
management,
filtration and
maintenance

Hard water and limescale

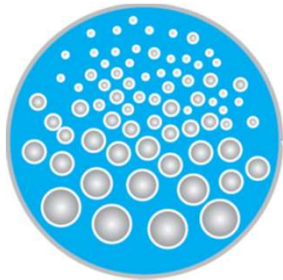
- Limescale is a deposit of calcium carbonate
- Hard water results in the build-up of scale and is present in over 60% of the UK and Ireland
- Scale build-up damages the performance, efficiency and lifespan of products
- Taste and appearance of drinks can be affected by scale

Key

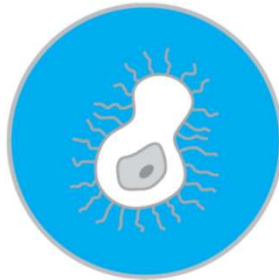
-  Soft to moderately soft water area
-  Medium to moderately hard water area
-  Hard to very hard water area



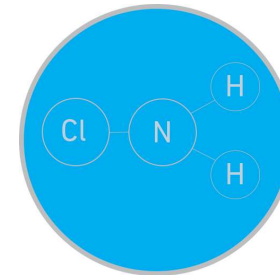
Five Stage Filtration



SEDIMENTS
Filter out particles
in the water



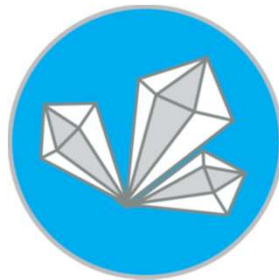
BACTERIA
Kills harmful
bacteria such as
giardia and
cryptosporidium



CHLORAMINE
Filtered from the
water



CHEMICAL
Removes 99.9% of
chemicals such as
chlorine and
ammonia



MINERAL
Enables minerals to
flow through the
appliance without
scale build-up



Maintenance and service considerations

- Manufacturers Warranty – usually 24 months
- Maintenance: scheduled or un-scheduled (ad-hoc)
- Limiting Down Time
- Response Time: how quickly can the tech team respond?
- First Time Fix: resolve the issue at first attempt



Industry
Accreditations

We can help you achieve....

WELL
BUILDING
STANDARD™

BREEAM®



SKArating®



- The statutory requirement for flow rate must be less than 5 litres per minute.
- Automatic leak detection & in built pressure reducing valves
- Automatic time-out
- 7 day time-switch
- Splash free
- Self calibration
- Green Tag Certification

WRAS – Why not 100°C?

- To achieve WRAS approval in the commercial environment, you are unable to dispense water above 98°C for safety and energy efficiency
- Keeping water at 98°C reduces power consumption



Aesthetic tea point
consideration and
requirements

Space

Undercounter Space



Sparkling Water – 600mm



Boiling and Chilled Water – 500mm

And where there is space above the counter then all options can be considered



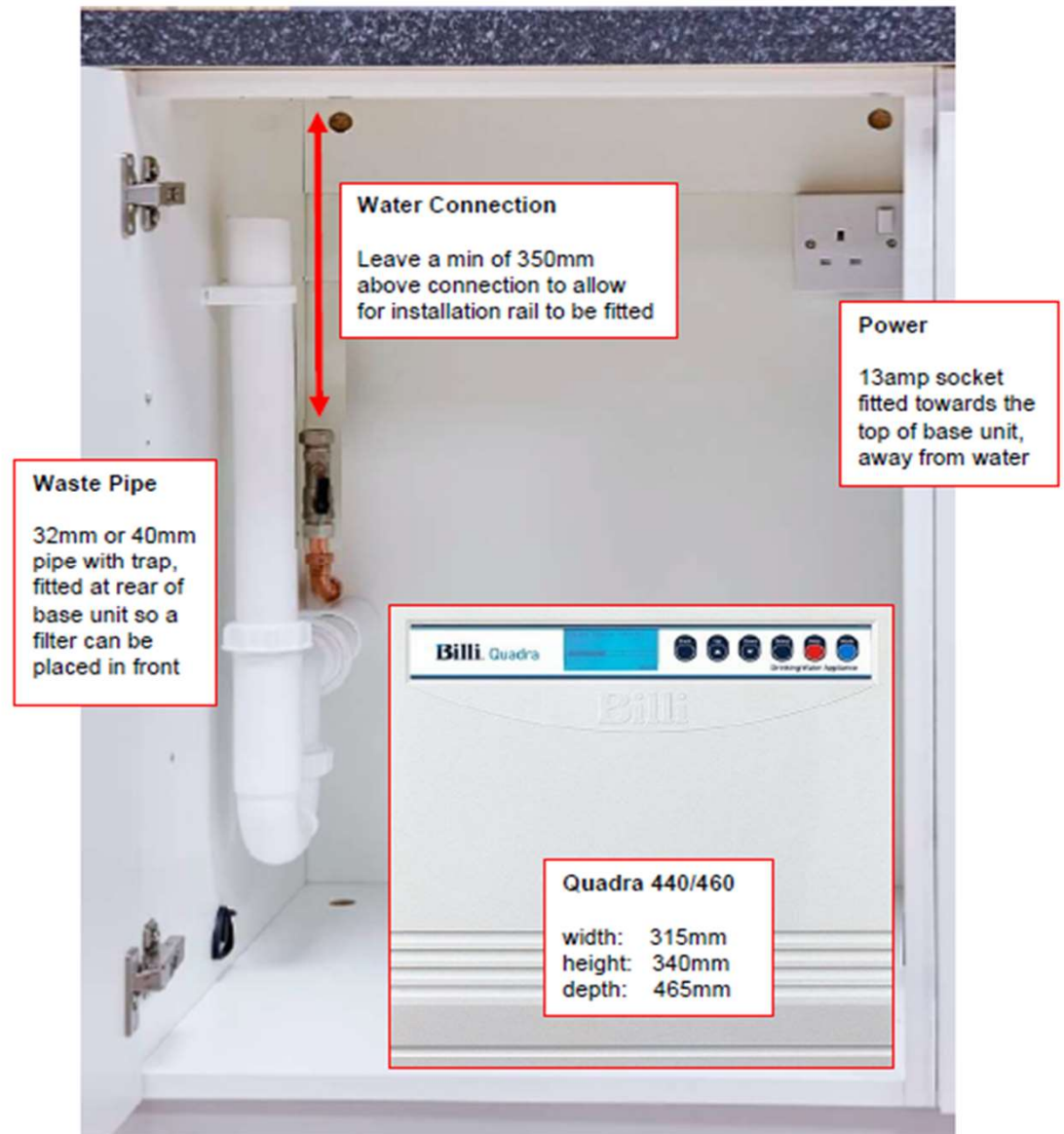
Installation Requirements

Water connection (isolation valve terminating in a 15mm compression)

Waste pipe (32mm or 40mm upstand with trap)

Power (13amp socket)

All services must not obstruct the undercounter system
Quadra



Space

Undercounter Installation



Sparkling Water – 600mm



Boiling and Chilled Water – 500mm



Capacity

Important to understand the likely peak demand as well as the hourly demand during a typical day



How many users are there?



Demand patterns including defined breaks and drinking requirements



Finish

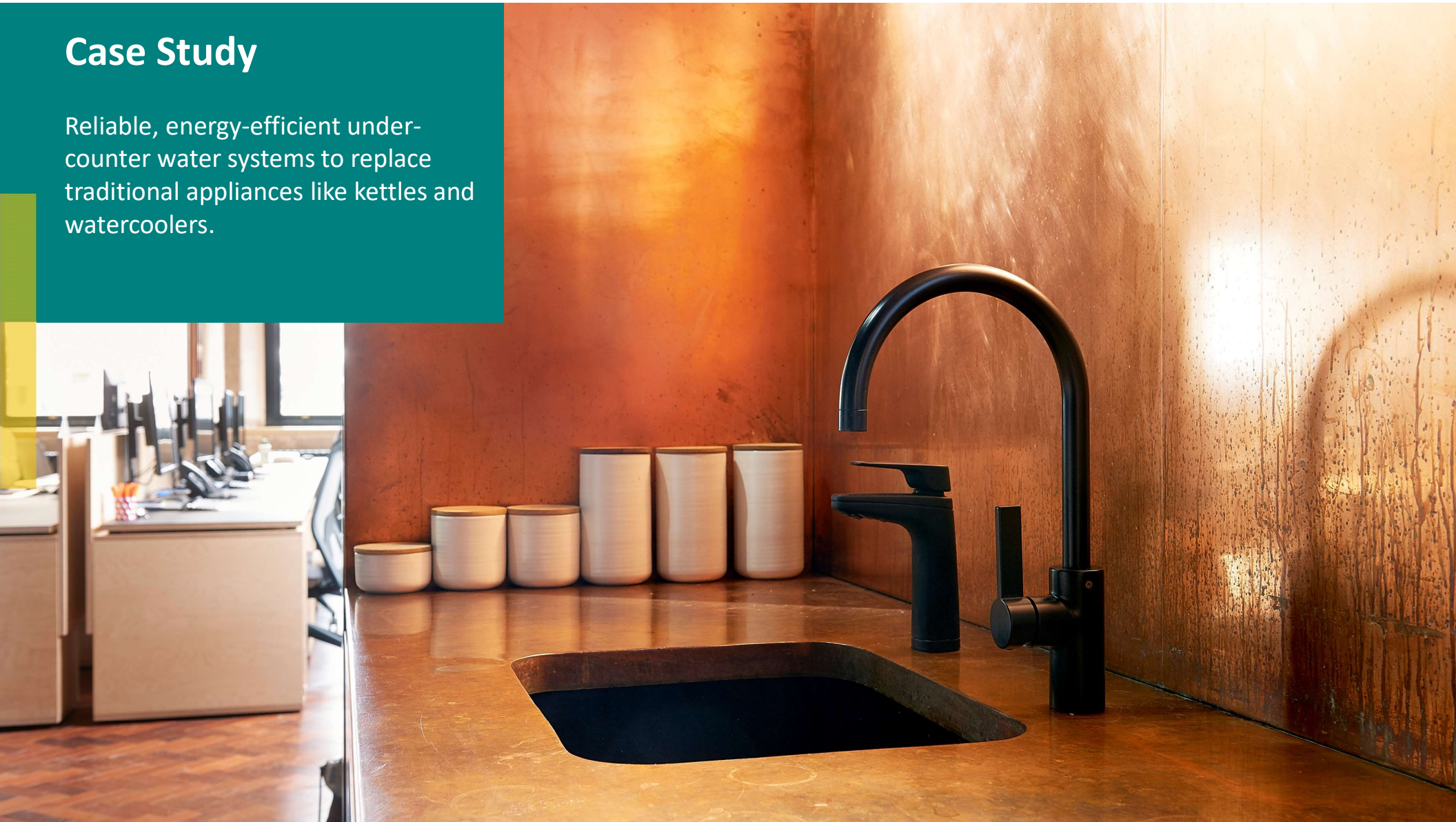
Important to understand the aesthetics of the installation and the range of finishes available*

* Pantone colour matches also available



Case Study

Reliable, energy-efficient under-counter water systems to replace traditional appliances like kettles and watercoolers.



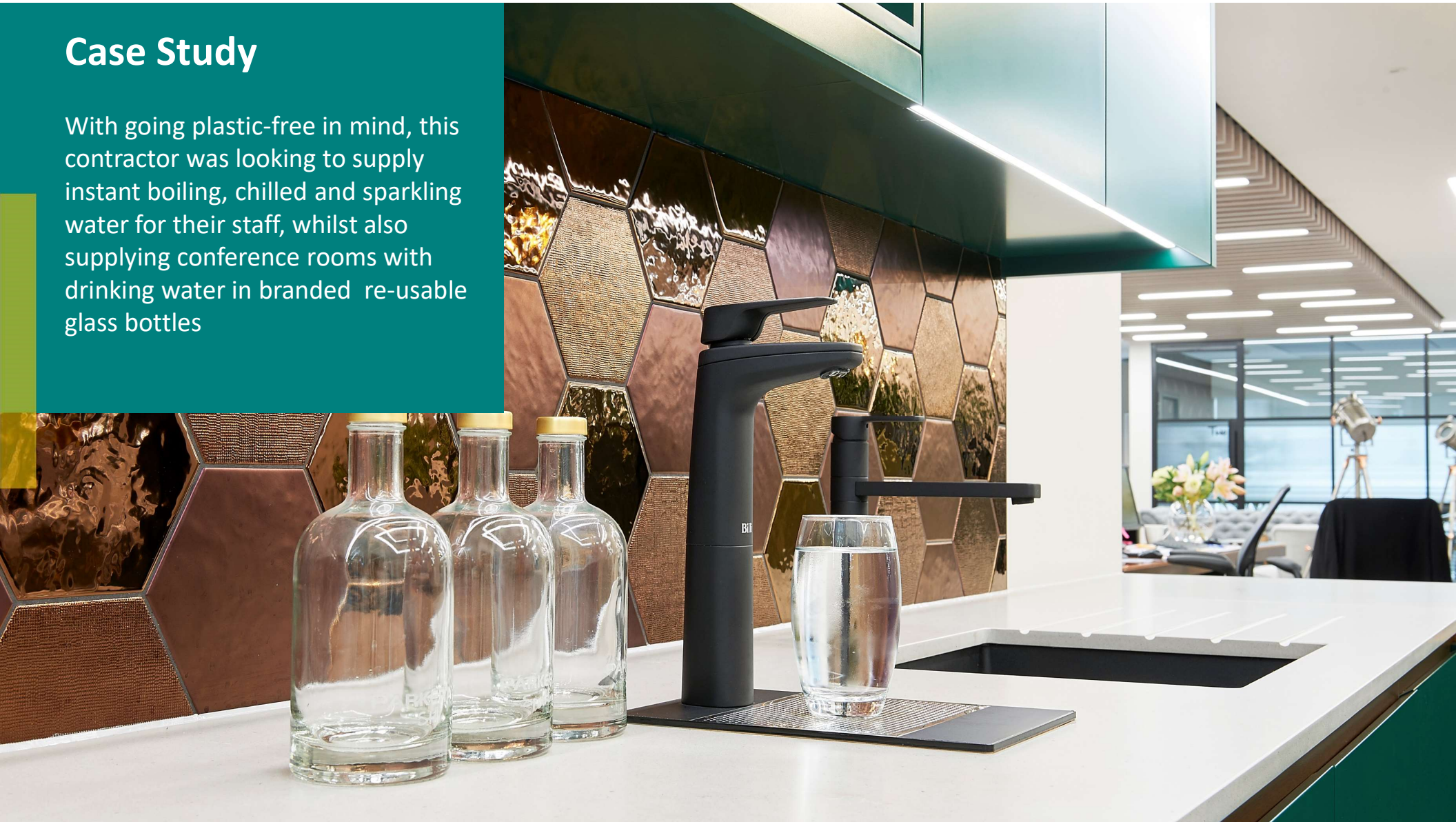
Case Study

Sustainable, energy-efficient and stylish under-counter water systems to replace traditional appliances like kettles and watercoolers.



Case Study

With going plastic-free in mind, this contractor was looking to supply instant boiling, chilled and sparkling water for their staff, whilst also supplying conference rooms with drinking water in branded re-usable glass bottles





BilliTM

Thank you for your time

Any questions?