

Practical Water Efficiency in the Hospitality Sector

Maximising
Efficiencies

Practical Water Efficiency in the Hospitality Sector



By:

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Practical Water Efficiency in the Hospitality Sector

Maximising
Efficiencies

Agenda

1. Introduction & Drivers

2. Monitoring & Targeting

3. Practical Water Efficiency Solutions

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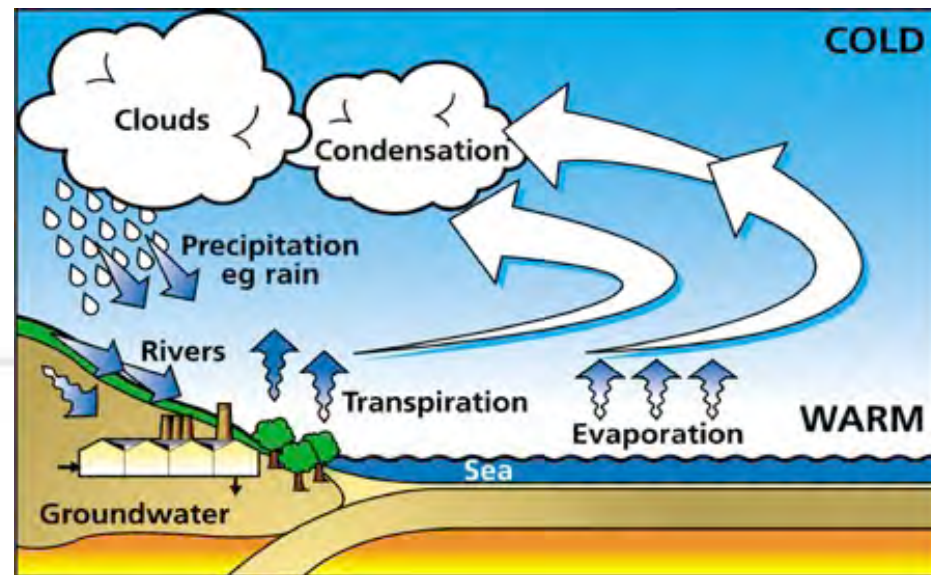
Introduction & Drivers



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Efficiencies

- Introduction
 - Utility bills growing? Water accounts ~15%
 - A water management plan can reduce water use per guest by up to ~50%
 - Related carbon impact



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- Drivers
 - Water consumption ↓
 - Sewerage production ↓
 - Efficiency ↑
 - Operating cost ↓
 - Environmental benefits ↑
 - Liability ↓
 - Capacity ↑
 - Positive green credentials ↑



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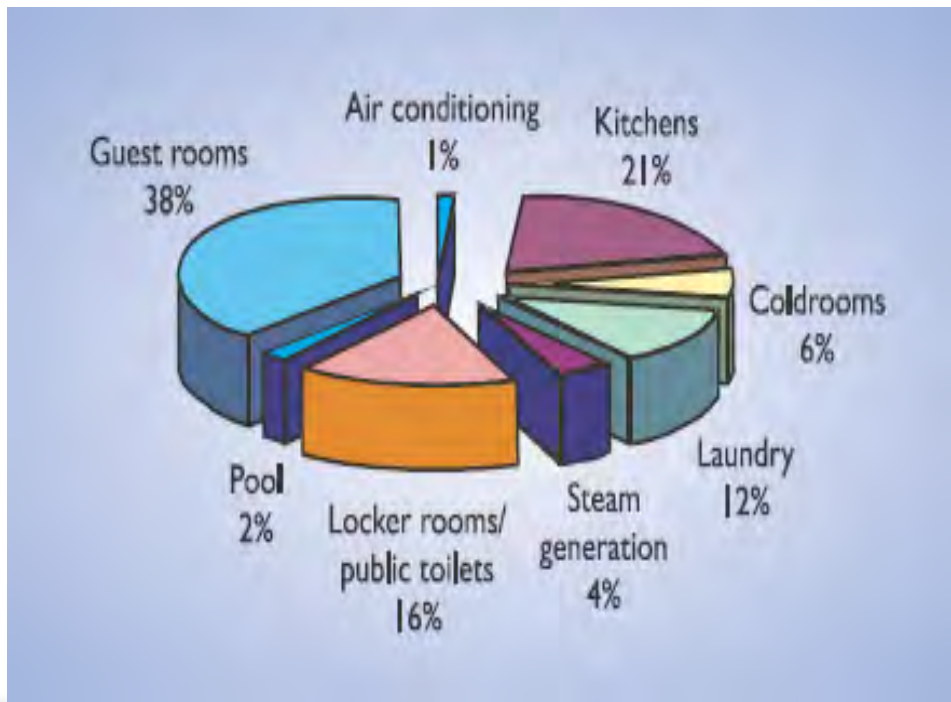
Monitoring & Targeting



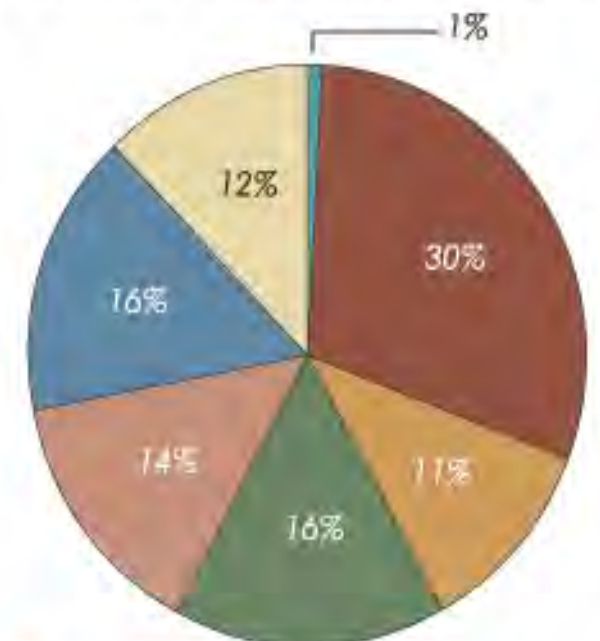
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Maximising Efficiencies

- Water Use in Hotels (CIRIA & EPA)



End Uses of Water in Hotels and Motels



- Domestic/Restroom
- Cooling and Heating
- Landscaping
- Kitchen
- Laundry
- Swimming Pools
- Other

Source: EPA WaterSense

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- Mains Water Charges in NI
 - 1 m³ = 1000 litres
 - 1 m³ = ~220 gallons
 - Water £1.0424/m³
 - Sewerage £1.5831/m³
 - Combined ~£2.50/m³



Outstanding Amount before this bill	0.00
Water Charge	44.00
Sewerage Charge	53.00
VAT Charge	0.00
Amount Billed	£97.00

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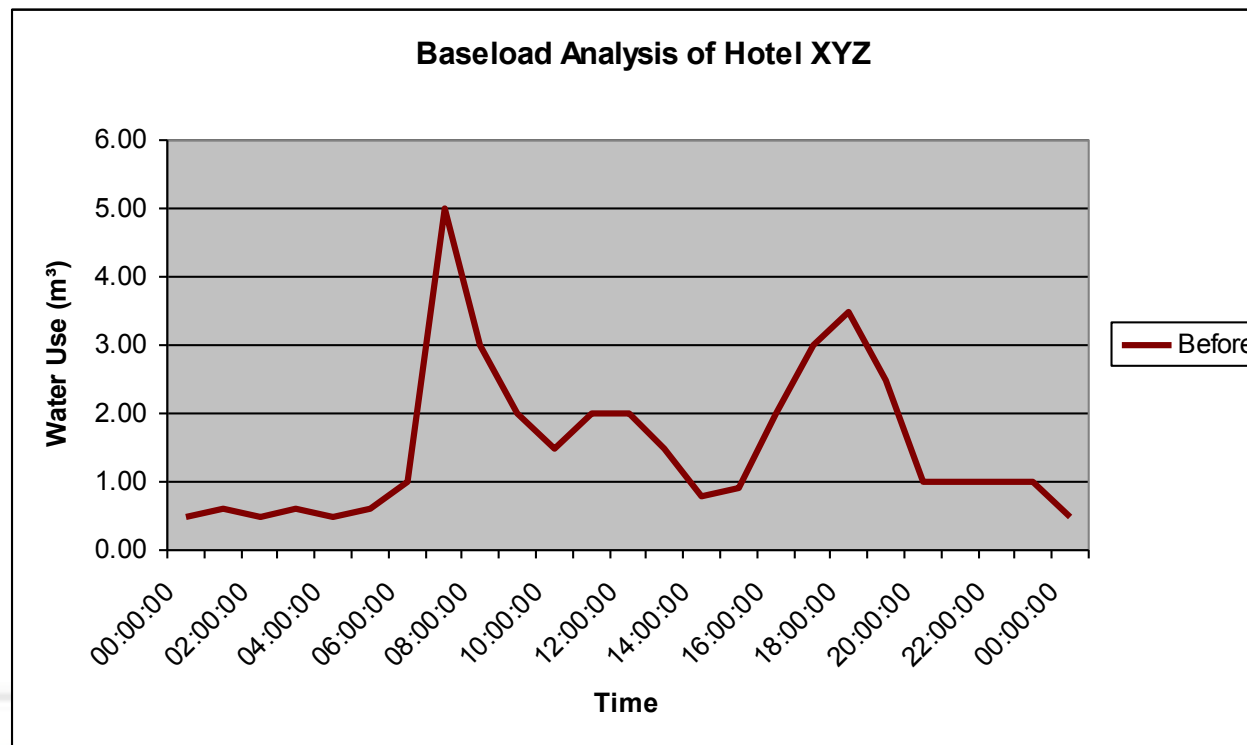
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Efficiencies

- **Measure Consumption**
 - Obtain NI water bills for a year
 - How many meters? Start taking readings
 - Take overnight readings
- **Compare Water Use**
 - Standardise, use KPI (m³ per bedspace)
 - Compare against published benchmarks

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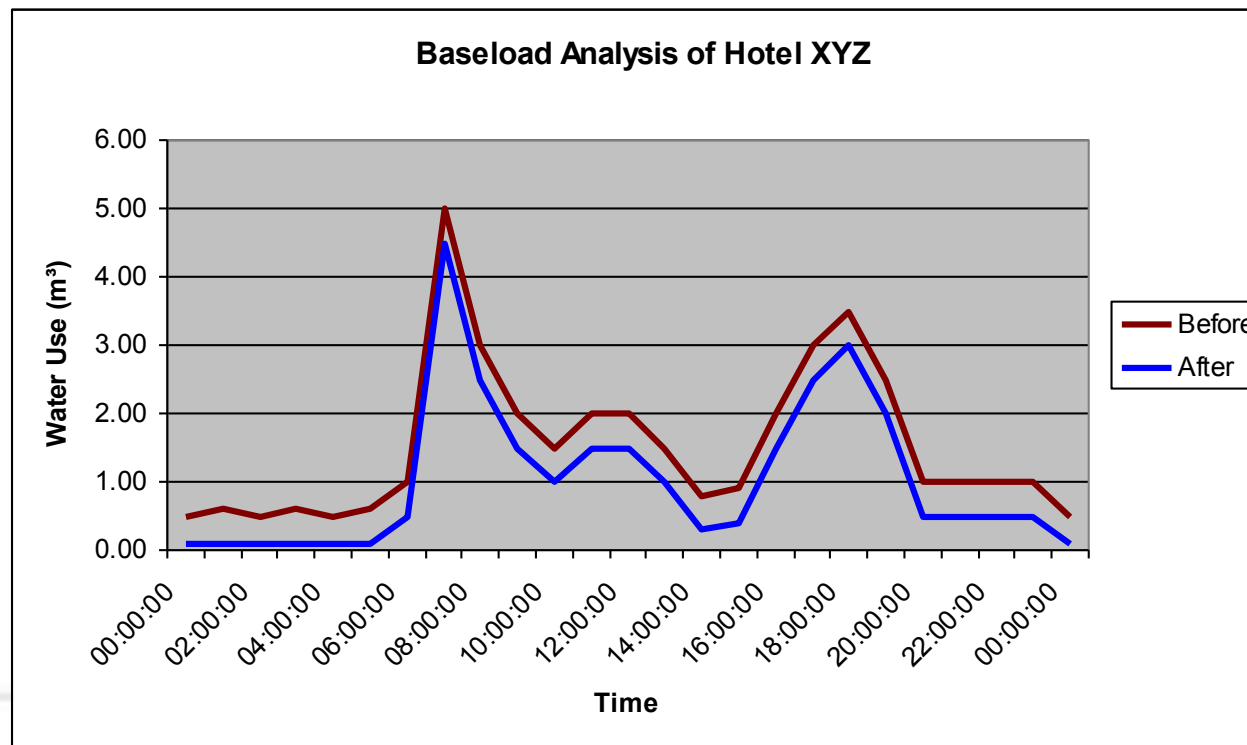
- Why measure baseload?.....before...



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- Why measure baseload?.....and after!



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- Published Benchmark (With Pool)

Type	Benchmarks (m ³ /bedspace/annum)		
	Best Practice	Typical	Above Average
1 star	9	25	60
2 or 3 star	20	60	185
4 or 5 star	60	130	220
No rating	40	90	170

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- Published Benchmark (Without Pool)

Type	Benchmarks (m ³ /bedspace/annum)		
	Best Practice	Typical	Above Average
1 star	5	10	15
2 or 3 star	10	20	50
4 or 5 star	15	30	65
No rating	10	30	70

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**REMEMBER IF YOU DON'T
MEASURE IT,
YOU CAN'T MANAGE IT!**

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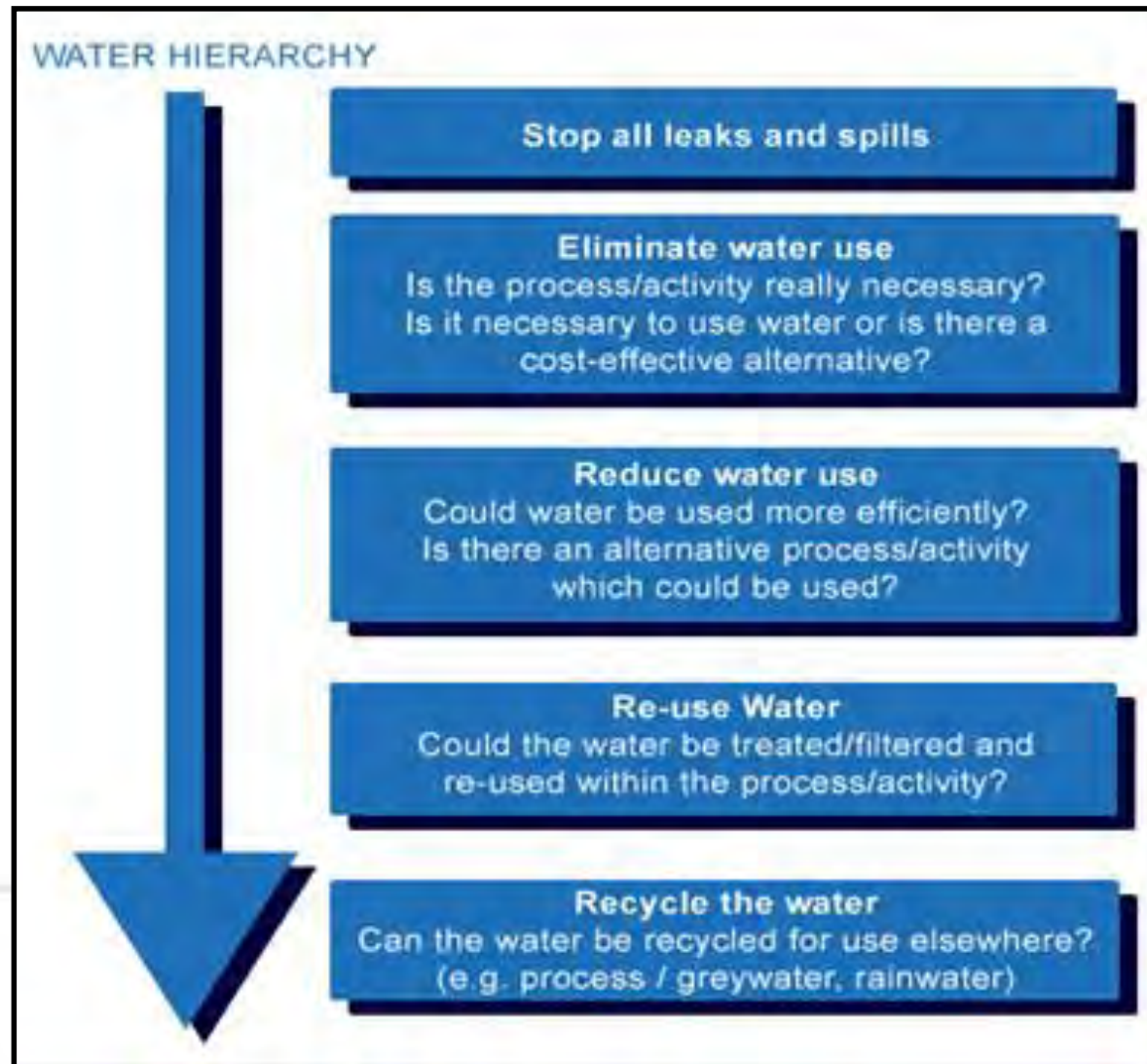
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Practical Water Efficiency Solutions



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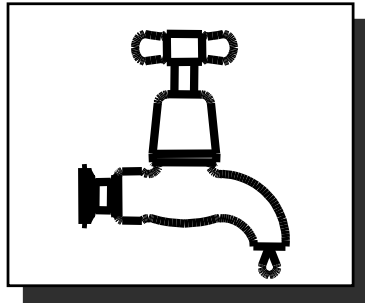
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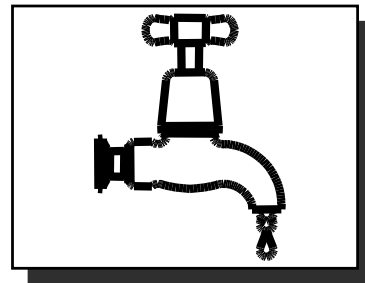
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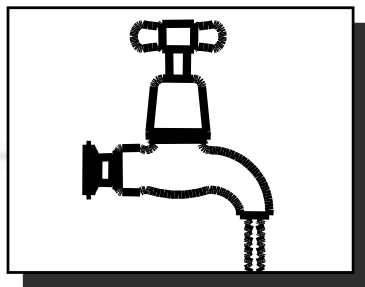
- Housekeeping



One drop/second
4.8 m³/year
~£12/year



**Drops breaking to a
stream**
31 m³/year
~£80/year

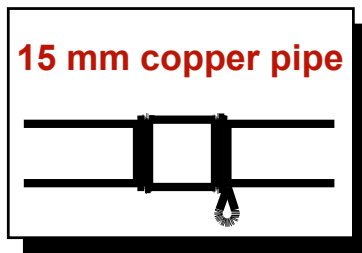


3 mm stream
336 m³/year
~£856/year

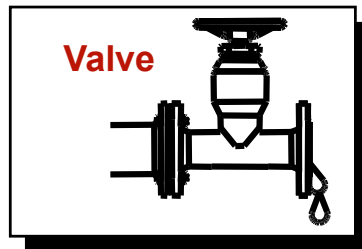
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- Housekeeping



100 drops/minute
8 m³/year
~£20/year



0.5 litre/minute
265 m³/year
~£675/year



7 - 14 litres/minute
3,680 – 7,360 m³/year
~£9,370 - £18,741/year

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- Domestic / Bedroom Areas – Urinal Flush Control Options



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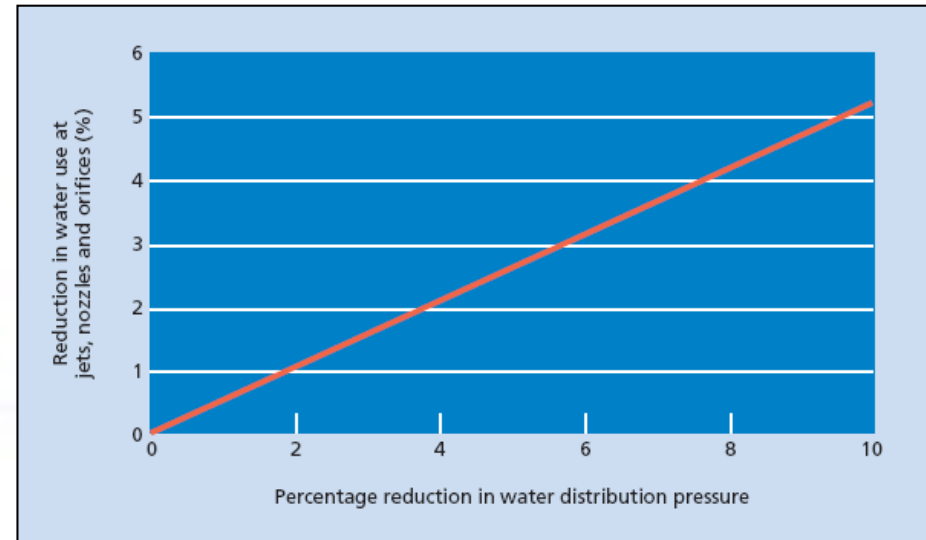
- Domestic / Bedroom Areas – Cistern Flush Control



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- Domestic / Bedroom Areas – WHB/Other



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- Domestic / Bedroom Areas – WHB



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- Domestic / Bedroom Areas – Shower/Bath



Vrs



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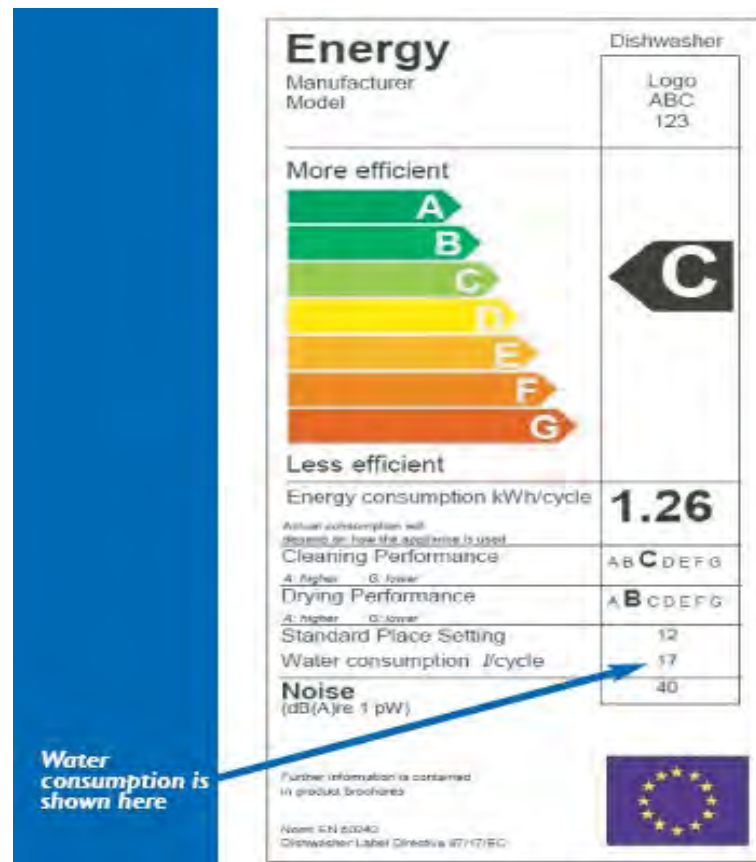
- **Kitchens**



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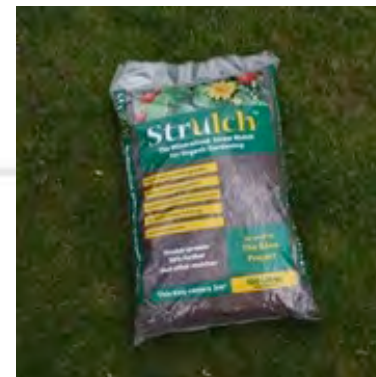
- **Laundry**
 - Buy water efficient machines
 - Use full loads at minimum temperatures



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- Garden Areas



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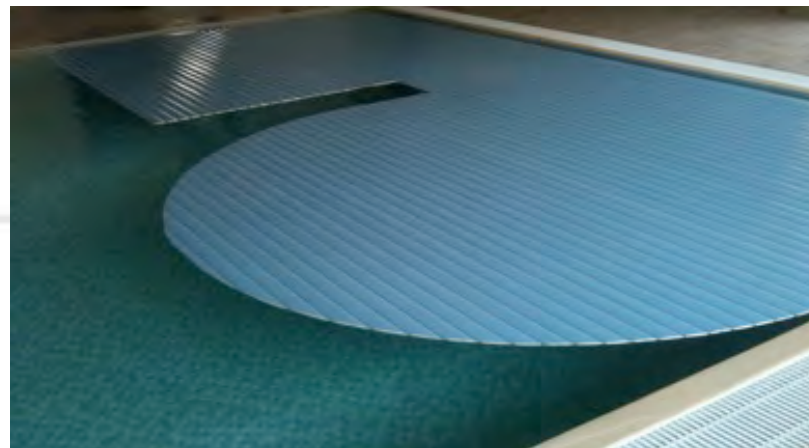
- **Swimming Pools**
 - Typical hotel pool, 25 m x 12.5 m
 - Water/Air Temperature of 28°C/29°C
 - RH of 60%
 - ~550 m³ of evaporative losses



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- **Swimming Pools**
 - Keep air temperature up to 1°C greater than that of the water
 - Maintain Relative Humidity 50 - 70%
 - Install a pool cover (solid or liquid)
 - Optimise backwashing frequency



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- **Water Technology List**
 - Efficient showers
 - Efficient taps
 - Efficient toilets
 - Efficient washing machines
 - Meters and monitoring equipment
 - Others



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Points to Takeaway

Measure Consumption



Develop KPI and Benchmark Performance



Implement Water Saving Measures



Repeat the Cycle

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