



# Water hardness

Essex & Suffolk Water is responsible for supplying a reliable source of safe, clean, drinking water. The majority of the company supply area is soft to slightly hard.

## Why some water is hard

If your water comes from underground limestone or chalk rocks, or contains a proportion of groundwater, then the chances are that it is hard. The hardness is caused by the presence of minerals dissolved from the ground and rocks by the water.

Essex & Suffolk Water is compliant with the appropriate regulations and has no plans to introduce softening to hard water areas. Please find below the water hardness for the Essex & Suffolk Water area, along with the measurement of hardness in degrees Clarke, for use with dishwashers and washing machines.

You can check out how hard the water is in your area here by viewing the harness zones.

Description	Hardness in mg/l as calcium (mg/l Ca)	Hardness in mg/l as calcium carbonate (mg/l CaCO <sub>3</sub> )
Soft	0 - 20	0 - 50
Moderately soft	20 - 40	50 - 100
Slightly hard	40 - 60	100 - 150
Moderately hard	60 - 80	150 - 200
Hard	80 - 120	200 - 300
Very hard	Over 120	Over 300

## What does this mean for my appliances?

If your water is hard you will notice that your kettle and other water heating appliances become furred up with a white scale. You may also find this scale in your bath, sink and shower. It isn't harmful but can be a bit of a nuisance. Hard water can also affect appliances like washing machines, dishwashers and steam irons.

If you are installing a new dishwasher, your plumber may ask you for the hardness of your water. If the manufacturer's instructions show hardness using a different factor, you can convert the values as follows:

<b>Total hardness (as mg/l Ca)</b>	<b>x 2.5 = calcium carbonate (CaCO<sub>3</sub>) mg/l</b>
	<b>x 0.174 = Degrees Clarke</b>
	<b>x 0.25 = French Degrees</b>
	<b>x 0.142 = German Degrees</b>



We do not change the natural hardness of the region's water through treatment, it is left to the customer, either domestic or commercial, to decide whether artificial softening is the right choice for them.

There are efficient softening devices available for domestic installation from reputable companies. Most of these work by altering the chemical composition of the water, the calcium and magnesium are substituted with sodium. Essex & Suffolk Water strongly advises that customers keep at least one mains-fed tap in the property for drinking and cooking purposes. This is particularly important for bottle-fed infants and anyone on a sodium-restricted diet\*.

Essex & Suffolk Water also advises that any water softening devices are installed and operated in strict accordance with the manufacturers instructions.

Further independent advice concerning water softeners and filtration devices can be obtained by contacting British Water at 1 Queen Anne's Gate, London SW1H 9BT or by visiting their website at **[www.britishwater.co.uk](http://www.britishwater.co.uk)**.

\* Many water softeners work by exchanging the calcium and magnesium in the water for sodium.



Old Zone Name	Old Zone Ref	New Zone Name	New Zone Ref	Major Towns	mg/l as Ca range	mg/l as CaCO3 range	Degrees Clarke range	Degrees French range	Degrees German range
Basildon East	Z201	Basildon East	Z602	Basildon/Pitsea	99 - 130	247 - 325	17 - 23	25 - 32	14 - 18
Basildon West	Z202	Basildon West	Z603	Basildon/Laindon	98 - 130	245 - 325	17 - 23	24 - 32	14 - 18
Benfleet	Z203	Benfleet	Z604	Benfleet/Canvey Island	97 - 130	242 - 325	17 - 23	24 - 32	14 - 18
Billericay	Z204	Billericay	Z605	Billericay	95 - 130	237 - 325	17 - 23	24 - 32	13 - 18
Brentwood	Z205	Brentwood	Z606	Brentwood	93 - 130	232 - 325	16 - 23	23 - 32	13 - 18
Chelmsford Central	Z206	Chelmsford Central	Z607	Chelmsford	89 - 130	222 - 325	16 - 23	22 - 32	12 - 18
Chelmsford North	Z207	Chelmsford North	Z608	Chelmsford	92 - 130	230 - 325	16 - 23	23 - 32	13 - 18
Chelmsford South	Z208	Chelmsford South	Z609	Chelmsford/Rettendon/Woodham Walter	87 - 130	217 - 325	15 - 23	22 - 32	12 - 18
Criers Wood	Z209	Witham	Z636	Witham	94 - 130	235 - 325	16 - 23	23 - 32	13 - 18
*****		Dagenham	Z610	Becontree	96 - 130	240 - 325	17 - 23	24 - 32	13 - 18
Dengie	Z210	Dengie	Z611	Southminster Crouch Burnham on	99 - 120	247 - 300	17 - 21	25 - 30	14 - 17
Grays	Z211	Grays	Z612	Grays South Ockendon	100 - 180	250 - 449	17 - 31	25 - 45	14 - 25
Harold Hill	Z212	Harold Hill	Z613	Harold Hill	98 - 130	245 - 325	17 - 23	24 - 32	14 - 18
Hockley	Z213	Hockley	Z614	Hockley	100 - 130	250 - 325	17 - 23	25 - 32	14 - 18
Hornchurch	Z214	Hornchurch	Z615	Hornchurch	93 - 130	232 - 325	16 - 23	23 - 32	13 - 18
Hullbridge	Z215	South Woodham & Hullbridge	Z628	South Woodham/Hullbridge	93 - 120	232 - 300	16 - 21	23 - 30	13 - 17
Ilford	Z216	Ilford	Z616	Ilford	83 - 120	207 - 300	14 - 21	21 - 30	12 - 17
Langham	Z301	Langham	Z617	Area around Langham TW	96 - 170	240 - 424	17 - 30	24 - 42	13 - 24
Layer	Z302	Layer	Z618	Area around Layer TW	74 - 120	185 - 300	13 - 21	18 - 30	10 - 17
Maldon	Z217	Maldon	Z619	Maldon	98 - 120	245 - 300	17 - 21	24 - 30	14 - 17
Margaretting	Z218	Margaretting	Z620	Margaretting/Ingatestone	91 - 130	227 - 325	16 - 23	23 - 32	13 - 18
Ockendon	Z219	Ockendon	Z621	South Ockendon	97 - 130	242 - 325	17 - 23	24 - 32	14 - 18
Rayleigh	Z220	Rayleigh	Z622	Rayleigh	97 - 120	242 - 300	17 - 21	24 - 30	14 - 17
Rochford	Z221	Rochford	Z623	Rochford	100 - 120	250 - 300	17 - 21	25 - 30	14 - 17
Romford East	Z222	Romford East	Z624	Romford/Hornchurch	97 - 130	242 - 325	17 - 23	24 - 32	14 - 18
Romford West	Z223	Romford West	Z625	Romford/Dagenham	89 - 130	222 - 325	16 - 23	22 - 32	12 - 18
Seven Kings	Z224	Seven Kings	Z626	Ilford/Dagenham	96 - 120	240 - 300	17 - 21	24 - 30	13 - 17
Silver End	Z225	Silver End	Z627	Silver End	140 - 150	350 - 375	24 - 26	35 - 37	20 - 21
South Woodham	Z226	South Woodham & Hullbridge	Z628	South Woodham/Hullbridge	97 - 120	242 - 300	17 - 21	24 - 30	14 - 17
Southend East	Z227	Southend East	Z629	Southend	97 - 120	242 - 300	17 - 21	24 - 30	14 - 17
Southend West	Z228	Southend West	Z630	Leigh on Sea/Westcliff	100 - 130	250 - 325	17 - 23	25 - 32	14 - 18
Stanford Le Hope	Z229	Stanford Le Hope	Z631	Stanford Le Hope	93 - 120	232 - 300	16 - 21	23 - 30	13 - 17
Thames	Z230	Thames	Z632	Barking/Dagenham Rainham	100 - 130	250 - 325	17 - 23	25 - 32	14 - 18
Tilbury	Z231	Tilbury	Z633	Tilbury/Grays	110 - 130	275 - 325	19 - 23	27 - 32	15 - 18
Upminster	Z232	Upminster	Z634	Upminster/Hornchurch	95 - 130	237 - 325	17 - 23	24 - 32	13 - 18
Wickford	Z233	Wickford	Z635	Wickford	99 - 130	247 - 325	17 - 23	25 - 32	14 - 18
Woodham Walter	Z234	Chelmsford South	Z609	Chelmsford/Rettendon/Woodham Walter	87 - 130	217 - 325	15 - 23	22 - 32	12 - 18
Barkingside	Z235	Barkingside	Z601	Barkingside/Ilford	77 - 130	192 - 325	13 - 23	19 - 32	11 - 18

**Suffolk Hardness Levels**

<u>Old Zone Name</u>	<u>Old Zone Ref</u>	<u>New Zone Name</u>	<u>New Zone Ref</u>	<u>Major Towns</u>	<u>mg/l as Calcium (Ca)</u>	<u>mg/l as Calcium Carbonate (CaCO<sub>3</sub>)</u>	<u>Degrees Clarke (or English Degrees)</u>	<u>Degrees french</u>	<u>Degrees german</u>
Barsham	Z101	Barsham	Z501	Lowestoft/Beccles/Ilketshall	170 - 190	424 - 474	30 - 33	42 - 47	24 - 27
Broome	Z102	Broome	Z502	Bungay/Rumburgh/South Elmham	140 - 180	350 - 449	24 - 31	35 - 45	20 - 25
Coldfair Green	Z103	Coldfair Green	Z503	Leiston/Aldeburgh/Knodishall	170 - 190	424 - 474	30 - 33	42 - 47	24 - 27
Eye	Z104	Suffolk West	Z510	Eye / Thorndon / Worham /Palgrave / Wetheringsett /Redgrave /Mendlesham /Rickinghall /Redgrave / Rickinghall	140 - 220	350 - 549	24 - 38	35 - 55	20 - 31
Great Yarmouth	Z105	Great Yarmouth	Z504	Great Yarmouth/Gorleston/ Ormesby	100 - 140	250 - 350	17 - 24	25 - 35	14 - 20
Hacheston	Z106	Hacheston	Z505	Hacheston	170 - 190	424 - 474	30 - 33	42 - 47	24 - 27
Halesworth	Z107	Walpole	Z512	Halesworth/Framlingham Yoxford/Rendham	140 - 230	350 - 574	24 - 40	35 - 57	20 - 32
Lowestoft	Z108	Lowestoft	Z506	Lowestoft Gorleston	87 - 180	217 - 449	15 - 31	22 - 45	12 - 25
Parham	Z109	Saxmundham	Z507	Saxmundham / Leiston / Glenham / Hacheston / Parham / Stratford St Andrew	160 - 190	400 - 474	28 - 33	40 - 47	22 - 27
Redgrave	Z110	Suffolk West	Z510	Eye / Thorndon / Worham /Palgrave / Wetheringsett /Redgrave /Mendlesham /Rickinghall /Redgrave / Rickinghall	140 - 220	350 - 549	24 - 38	35 - 55	20 - 31
Rickinghall	Z111	Suffolk West	Z510	Eye / Thorndon / Worham /Palgrave / Wetheringsett /Redgrave /Mendlesham /Rickinghall /Redgrave / Rickinghall	140 - 220	350 - 549	24 - 38	35 - 55	20 - 31
Saxmundham	Z112	Saxmundham	Z507	Saxmundham / Leiston / Glenham / Hacheston / Parham / Stratford St Andrew	160 - 190	400 - 474	28 - 33	40 - 47	22 - 27
Shadingfield	Z113	Shadingfield	Z508	Worlingham/Wrentham Kessingland/Gisleham/Holton	140 - 200	350 - 499	24 - 35	35 - 50	20 - 28
Southwold	Z114	Southwold	Z509	Southwold	150 - 180	375 - 449	26 - 31	37 - 45	21 - 25
Syleham	Z115	Syleham	Z511	Stradbroke/Fressingfield/Weybread/Wingfield/Laxfield/Worlingworth	160 - 190	400 - 474	28 - 33	40 - 47	22 - 27
Walpole	Z116	Walpole	Z512	Halesworth/Framlingham Yoxford/Rendham	140 - 230	350 - 574	24 - 40	35 - 57	20 - 32