



# Water hardness

Northumbrian 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.

Northumbrian Water is compliant with the appropriate regulations and has no plans to introduce softening to hard water areas. Please find below a PDF document of the water hardness for the Northumbrian 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. Northumbrian 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\*.

Northumbrian 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.



Zone name	Alkalinity to pH 4.5 (Total) mg/l as HCO3				Calcium Total mg/l				Hardness	°Clarke	°German	°French	Post Code Areas (can be split across zones)	Supply Areas (can be split across zones)
	Minimum	Average	Maximum	No of Samples	Minimum	Average	Maximum	No of Samples						
N101 KILLINGWORTH FENHAM & BLYTH	54	111	140	12	43	54	67	4	Slightly hard	9	8	14	NE12, NE13, NE2, NE23, NE25, NE26, NE27, NE28, NE3	Brunswick Industrial, The Fairway, Camperdown, Shiremoor, Gosforth Wood, Fawdon, Wideopen, Melton Park, Burradon, Earsdon, Forest Hall, Kingston Park 3, Brunswick Village, Seaton Burn, Killingworth, East Cramlington, Seaton Sluice, New Hartley, Seaton Delaval
N102 FENHAM B&C	61	108	140	12	35	47	67	4	Slightly hard	8	7	12	NE12, NE28, NE3, NE6, NE7	Broadway East, Gosforth, Longbenton, Holystone, Hadrian Park, Shiremoor, Coxlodge, High Heaton, Longbenton, Battlehill, Wallsend, Willington Square
N103 CITY CENTRE & FENHAM D&E	80	122	160	13	34	47	65	5	Slightly hard	8	7	12	NE1, NE15, NE2, NE3, NE4, NE5	South Gosforth, Gosforth, Jesmond, Kenton, Old Benwell, Town Moor, Leazes Park, Elswick, South Benwell, Denton Burn, Cowgate, Central Newcastle
N104 FENHAM F	61	116	180	12	32	46	69	4	Slightly hard	8	7	11	NE15, NE4, NE5	East Denton, Fenham, Arthurs Hill
N106 LOW SERVICE A&B	98	128	180	12	35	52	71	4	Slightly hard	9	8	13	NE1, NE12, NE2, NE28, NE4, NE6	Jesmond Vale, Shieldfield, Heaton, Walkergate, Wallsend, Rosehill, Wallsend, St. Lawrence, Battlefield, Elswick, Newburn Haugh, Low Walker, Willington Quay
N107 LOW SERVICE C&D	72	124	150	12	34	46	57	4	Slightly hard	8	7	12	NE10, NE11, NE15, NE16, NE21, NE41, NE42, NE8, NE9	Throckley, Wylam, Ovingham, Stocksfield, Newburn, Lemington, Low Prudhoe, Scotswood, Stella, Blyden, Metro Centre, Dunston, Redheugh, Gateshead Central, Saltmeadows, Felling, Bill Quay, High Teams, Bensham, Swalwell, Blaydon Haugh, Lady Park, Team Valley
N108 HILLHEAD	61	110	180	12	36	51	73	4	Slightly hard	9	7	13	NE15, NE3, NE5	Butterlaw, Newbiggin, North Kenton, Westerhope, West Denton, Newburn, Walbottle
N109 WYLAM BOOSTER	59	116	180	12	18	45	76	4	Slightly hard	8	7	11	NE4, NE40, NE42, NE43	Greenside, Hedley, Ryton, Crawcrook, Prudhoe, New Ridley, Stocksfield, Riding Mill (part)
N110 CARR HILL	51	107	150	12	38	52	69	4	Slightly hard	9	8	13	DH3, NE10, NE8, NE9	Wardley, Heworth, High Felling, Bensham, Saltwell, Low Fell, Lyndhurst, Birtley, Portobello, Portobello Ind Est, Barley Mow, Pimlico/Harlow Green
N111 BEACON LOUGH	57	95	140	12	35	52	62	4	Slightly hard	9	8	13	NE10, NE8, NE9	Mount Pleasant, Carr Hill, Beacon Lough, Windy Nook, Leam Lane, Wrekenton, Eighton Banks, Sherrif Hill, Harlow Green
N112 WHICKHAM	57	111	170	12	26	48	68	4	Slightly hard	8	7	12	NE11, NE16	Whickham, Dunston, Fellside, Lobley Hill
N113 BIRNEY HILL	93	134	180	12	41	55	65	4	Slightly hard	10	8	14	NE13, NE15, NE20, NE3	Dinnington, Woosington, Hazelrigg, Kingston Park 1, Kingston Park 2, Ogle, Berwick Hill, Ponteland, Darras Hall
N114 BYKER	60	121	160	12	37	56	76	4	Slightly hard	10	8	14	NE6	Byker, Walker
N115 HEDDON WHALTON AND HARLOW HILL	51	94	150	12	36	55	78	4	Slightly hard	10	8	14	NE15, NE18, NE19, NE20, NE41, NE61	Heddon on the Wall, Whalton, Harlow Hill, Belsay, Dissington Park, Milbourne, Fenwick, Ingoe, Belsay Park, Capheaton, Bolam, Matfen, Hallington, Colwell
N117 BLYTH	60	102	150	12	39	55	66	4	Slightly hard	10	8	14	NE23, NE24	East Hartford, Bebside, Blyth, S. Newsham, New Delaval, Nelson Industrial Est.
N118 CRAMLINGTON & STANNINGTON	71	112	170	24	36	54	83	8	Slightly hard	9	8	13	NE23, NE61	Beacon Hill, Cramlington, Nelson Village, Stannington
N119 BYRNES	65	94	120	12	7.8	12	18	4	Soft	2	2	3	NE19	Byrness
N120 ROCHESTER	53	102	140	12	8.1	12	13	4	Soft	2	2	3	NE19	Rochester
N121 OTTERBURN	38	93	130	12	8.7	11	12	4	Soft	2	2	3	NE19	Otterburn, Elsdon
N122 AMBLE	65	150	220	12	25	33	42	4	Moderately soft	6	5	8	NE65	Amble, Acklington (part)
N123 HALTON-LEA-GATE	38	178	220	12	44	47	51	4	Slightly hard	8	7	12	CA8	Halton lea Gate
N124 CARRSHIELD	52	137	210	13	1.6	2	3	5	Soft	0	0	1	NE47	Carrshield
N125 ALLENHEADS	120	213	250	12	19	22	26	4	Moderately soft	4	3	5	NE47	Allenheads
N126 STONEHAUGHSHIELDS	240	370	420	12	91	105	110	4	Hard	18	15	26	NE48	Stonehaughshields
N127 SLAGGYFORD	37	110	210	12	8.1	23	50	4	Moderately soft	4	3	6	CA8	Slaggyford
N128 SLAYLEY	34	64	100	12	18	26	33	4	Moderately soft	4	4	6	NE46, NE47	Juniper, Steel, Healey
N129 GUNNERTON	17	99	400	12	8.4	27	75	4	Moderately soft	5	4	7	NE40, NE46, NE47, NE48	West Woodburn, Broomhaugh, Bellingham (part), Gunnerton, Acomb, Hexham (part), Haydon Bridge, Bardon Mill, Langley
N130 BERWICK	170	188	220	12	29	31	32	4	Moderately soft	5	5	8	TD15	Berwick, Meadowhill, Tweedmouth, Hornclyffe, Acroft, Scremerston
N131 GLENDALE	99	143	170	12	14	15	15	4	Soft	3	2	4	NE66, NE71, TD12, TD15	Lowick, Cornhill on Tweed, Millfield, Ford, Wooler, Duddo, Chatton, Holy Island
N132 WARKWORTH	50	153	240	12	26	31	37	4	Moderately soft	5	5	8	NE65, NE66, NE67, NE68, NE69, NE70	Acklington (part), Guyanze, Longframlington, Felton, Warkworth, Alnmouth, Alnwick, Easingham, Glanton, Longhoughton, Craster, Embleton, Eglington, N. & S. Charlton, Seahouses, Belford Eshott, Causey Park Bridge, West Thirston, Earsdon, Fieldhead, West How
N133 HALTWHISTLE & FEATHERSTONE	28	55	95	12	8.8	12	14	4	Soft	2	2	3	CA8, NE49	Haltwhistle, Featherstone Castle, Plennmeller
N134 HEXHAM	37	79	120	12	18	38	63	4	Moderately soft	7	6	10	NE43, NE44, NE45, NE46, NE47	Allendale, Hexham, Corbridge, Riding Mill (part)
N135 HEBRON	54	124	200	12	34	48	79	4	Slightly hard	8	7	12	NE61, NE63, NE64, NE65	Ashington, Newbiggin, Woodhorn, Lynemouth, Ellington, Pegswood, Longhirst, Tritlington, Widdrington Station, Ulgham, Broomhill
N137 MORPETH	49	83	130	12	37	52	84	4	Slightly hard	9	8	13	NE61	Morpeth, Hepscoth, Glororum, Tranwell Bedlington, Choppington, Guide Post, Stakeford, Cambois, Mitford, Netherwitton, Smallburn, Stantonfence, Harelaw, Molesden, Meldon, Low Angerton, Hartburn, Hill Top, Throphill, Wallington Hall, Scot's Gap, Middleton
N138 BEDLINGTON & HILLEND	31	63	96	24	38	44	49	8	Slightly hard	8	6	11	NE22, NE61, NE62, NE63	West Monkseaton, New York, Billy Mill, West Chirton, Preston Grange
N139 NORTH TYNESIDE	56	105	170	12	37	60	81	4	Slightly hard	10	9	15	NE25, NE29, NE30	Seaton Sluice, Monkseaton, Whitley Bay (part), Cullercoats, Marden, North Shields (part), Percy Main,
N140 WHITLEY BAY	60	102	160	12	43	49	56	4	Slightly hard	8	7	12	NE25, NE26, NE29, NE30	Seaton Sluice, Monkseaton, Whitley Bay (part), Cullercoats, Marden, North Shields (part), Percy Main,
N141 THROPTON ROTHBURY AND LONGHORSLEY	91	130	160	12	20	33	72	4	Moderately soft	6	5	8	NE65	South Carlington, Thropton (part), Newtown Thropton, Holystone, Longhorsley, Stanton, Blackpool, Linden Hill Head, Todburn, Whitton, Great Tosson, Rothbury, Wingates
S101 TYNESIDE WEST	38	61	99	12	15	17	19	4	Soft	3	3	4	NE10, NE31, NE32, NE35, NE36	Jarrow (west), Hebburn, Fellgate, West Boldon
S102 TYNESIDE CENTRAL & NORTH	37	64	91	12	14	17	20	4	Soft	3	3	4	NE32, NE33, NE34, NE35, NE36	Jarrow (east), Simonside, West Harton, Biddick Hall, Whiteleas (west), Boldon Colliery, East Boldon, South Shields, High Shields, Westoe, Harton, Marsden, Cleadon Park
S103 TYNESIDE EAST	60	199	380	12	19	56	95	4	Slightly hard	10	8	14	NE34, SR6	South Bents (Sunderland), Whitburn, Cleadon, Whiteleas (east)
S104 SUNDERLAND WEST	32	104	280	12	21	60	100	4	Slightly hard	10	9	15	DH4, NE38, SR4	Rickleton, Harraton, Fattfield, Penshaw, Shiney Row, Bourne Moor, Fencehouses, Newbottle
S105 SUNDERLAND NORTH	61	115	290	12	15	36	88	4	Moderately soft	6	5	9	SR4, SR5	Southwick, Hylton, Red House, Castletown, Hylton Castle, Town End Farm, Downhill
S106 SUNDERLAND FULWELL	54	187	370	12	17	51	67	4	Slightly hard	9	7	13	SR5, SR6	Fulwell, Monkwearmouth, Seaburn, Roker
S107 SUNDERLAND EAST	70	267	350	12	84	86	88	4	Hard	15	13	22	SR1, SR2, SR3, SR4	Millfield, Bishopwearmouth, Ashbrooke, Hendon & Sunderland Centre, Ryhope, Ryhope Colliery, Tunstall Hills, Hillview
S108 SUNDERLAND PALLION	54	195	330	12	19	59	94	4	Slightly hard	10	9	15	SR3, SR4	South Hylton, Pennywell, Grindon, Pallion, Thorney Close, Ford
S109 SUNDERLAND STONEYGATE	52	211	390	12	65	85	110	4	Hard	15	12	21	DH4, SR2, SR3, SR4	The Herringtons, Farringdon, Doxford Park, New Silksworth, Springwell, Humbledon, Burdon
S110 EASINGTON SOUTH	60	264	400	12	22	46	100	4	Slightly hard	8	7	12	DH6, SR8, TS24, TS27, TS28, TS29	Thornley, Wheatley Hill, Wingate, Station Town, Castle Eden, Hesleden
S111 EASINGTON PETERLEE	44	156	350	12	28	60	98	4	Slightly hard	10	9	15	SR8, TS27	Peterlee, Blackhall Colliery, Horden
S112 EASINGTON NORTH	250	307	340	12	78	84	88	4	Hard	15	12	21	SR7	Seaham, Murton (east), Hawthorn

Zone name	Alkalinity to pH 4.5 (Total) mg/l as HCO <sub>3</sub>				Calcium Total mg/l				Hardness	°Clarke	°German	°French	Post Code Areas (can be split across zones)	Supply Areas (can be split across zones)
	Minimum	Average	Maximum	No of Samples	Minimum	Average	Maximum	No of Samples						
S113 BURNHOPE PIPELINE	67	165	350	12	32	65	81	4	Moderately hard	11	10	16	DH4, DH5, DH6, SR7, SR8	Houghton le Spring, Hetton le Hole, Murton (west), Easington Lane, Haswell, Shotton Colliery, Peterlee Ind Est, Easington, Easington Colliery
S114 WASHINGTON	45	78	110	12	15	16	18	4	Soft	3	2	4	NE10, NE37, NE38, NE9	Washington, Springwell, Concord, Albany, Columbia, Biddick, Oxclose
T101 BARNARD CASTLE	20	61	130	12	20	24	32	4	Moderately soft	4	4	6	DL1, DL12, DL2, DL3	Barnard Castle, Gainford, Staindrop, Etersgill, Holwick, Ingleton, Stainton, Darlington (part), Hurworth, Neasham, Middleton St George, Eaglescliffe (part)
T102 DARLINGTON	100	126	170	12	41	46	49	4	Slightly hard	8	7	11	DL1, DL2 DL3	Darlington
T103 YARM	25	83	160	12	25	30	38	4	Moderately soft	5	4	8	TS15, TS16, TS17	Thornaby (south), Yarm, Kirklevington, Hilton, Ingleby Barwick, Hutton Rudby, Crathorne, High Worsall, Longnewton
T104 HEMLINGTON & COULBY NEWHAM	58	101	170	12	29	33	36	4	Moderately soft	6	5	8	TS5, TS8	Stainton, Hemlington, Thornton, Coulby Newham
T105 MIDDLESBROUGH CENTRAL	35	81	140	12	24	30	37	4	Moderately soft	5	4	7	TS1, TS17, TS3, TS4, TS5	Middlesbrough (part)
T106 NUNTHORPE	54	89	160	12	26	30	34	4	Moderately soft	5	4	8	DL6, TS14, TS7, TS8, TS9	Stokesley, Great Ayton, Kildale, Ingleby, Greenhow, Great Broughton, Eastby, Newby, Kirkby, Carlton, Swainby, Ingleby Cross
T107 BILLINGHAM AND MIDDLESBROUGH NORTH	43	96	140	12	26	32	36	4	Moderately soft	6	5	8	TS1, TS2, TS20, TS22, TS23, TS3	Middlesbrough (part), Redcar, Port Clarence, Wolviston, Newton Bewley, Norton, Haverton Hill, Cowpen Bewley
T108 REDCAR	42	82	150	12	25	30	36	4	Moderately soft	5	4	8	TS10, TS11, TS3, TS6	Kirkleatham, Grangetown, South Bank
T109 SADBERGE	43	79	120	12	27	30	33	4	Moderately soft	5	4	7	DL1, DL2, TS19, TS21	Sadberge, Bishopston, Stillington, Thorpe Thewles, Carlton, Whinney Hill, Stockton (part)
T110 EAST CLEVELAND	42	74	140	12	24	30	36	4	Moderately soft	5	4	8	TS11, TS12, TS13	Carlin How, Loftus, Liverton, East Loftus (part), Deepdale, Moorholm, Stanghow, Lingdale, Skelton, Marske, New Marske, Yearby, Saltburn, Brotton, Boulby
T111 LONGBANK	44	85	130	12	29	40	57	4	Slightly hard	7	6	10	TS3, TS4, TS6, TS7	Eston, Lackenby, Lazenby, Ormesby, Easterside, Martin
T112 TEESIDE PARK AND STOCKTON SOUTH	42	82	160	12	22	28	32	4	Moderately soft	5	4	7	TS1, TS16, TS17, TS18, TS19, TS21, TS5	Thornaby (north), Middlesbrough (part), Eaglescliffe (part), Stockton (south)
T113 STOCKTON NORTH	46	102	170	12	29	36	49	4	Moderately soft	6	5	9	TS18, TS19, TS20	Stockton (north)
T114 SEDGEFIELD & AYCLIFFE	17	36	99	12	17	18	20	4	Soft	3	3	5	DL17, DL5, TS21	Newton Aycliffe, Chilton, Sedgfield, Great Stainton, Thorpe Larches
T115 LARTINGTON BOWES AND MICKLETON	39	65	92	12	22	25	28	4	Moderately soft	4	4	6	DL12	Bowes, Middleton in Teesdale, Mickleton, Newbiggin, Holwick, Forest in Teesdale, Barningham, Brignall, Boldron, Lartington, Gilmorby, Cotherstone, Hunderthwaite, Romaldkirk, Eggleston, Etersgill,
W101 CONSETT CHOPWELL AND BURNHOPEFIELD	44	64	100	12	16	22	29	4	Moderately soft	4	3	5	DH8, DH9, NE16, NE17, NE21, NE39, NE43	Consett, Castleside, Leadgate, Delves, Dipton, Chopwell, Highfield, Blanchland
W102 CHESTER-LE-STREET STANLEY & ANNFIELD PLAIN	17	54	86	12	16	21	27	4	Moderately soft	4	3	5	DH2, DH3, DH7, DH9, NE38	Chester Le Street, Ouston, Pelton, Urpeth, Newfield, Kibblesworth, Stanley, Annfield Plain, Lanchester, Edmondsley, Beamish, Burnhope
W103 CROOK & ESH WINNING	19	46	89	12	16	22	31	4	Moderately soft	4	3	6	DH7, DL13, DL15	Crook, Brancepeth, Tow Law, Esh Winning, Langley Park (part), Hollinside, Billy Row
W104 BISHOP AUCKLAND & WEAR VALLEY	25	50	74	14	18	20	24	5	Moderately soft	4	3	5	DL13, DL14, DL15, DL4, DL5	Bishop Auckland, Witton Park, Willington, Hunwick, Wolsingham, Howdon Le Wear, Witton Le Wear, Hamsterley, Evenwood, Heighington, West Auckland, Frosterley, Eastgate, Rookhope, Westgate, St John's Chapel, Wearhead, Stanhope, Ireshopeburn, Cowshill, Laneh
W105 SACRISTON	17	42	84	12	15	18	19	4	Soft	3	3	4	DH1, DH2, DH3, DH4, DH5, DH6, DH7	Gilesgate (part), Belmont, Sherburn, Ludworth, Pitlington, West Rainton, East Rainton, Sacriston, Pity Me, Great Lumley, Langley Park (part)
W106 DURHAM & TRIMDON	18	48	82	12	15	17	21	4	Soft	3	3	4	DH1, DH6, DH7, DL17, TS21, TS29	Shincliffe, Bowburn, Cornforth, Fishburn, Trimdon, Trimdon Grange, Kelloe, Cassop, Ferryhill (part), Durham, Brandon, Ushaw Moor, Bearpark, Newton Hall (part)
W107 SPENNYMOOR	26	54	84	12	14	17	20	4	Soft	3	3	4	DH14, DH6, DL14, DL16, DL17, DL3, DL4	Spennymoor, Ferryhill (part), Sunderland Bridge, Shildon, Coundon
W109 WOODLAND & COCKFIELD	33	75	160	12	22	24	26	4	Moderately soft	4	4	6	DL13	Woodland, Butterknowle, Lynesack, Cockfield, Wackerfield, Burnt Houses, Maltkin Cotts