

OR/18/011 Appendix 1 - Summary of Environment Agency Groundwater Quality monitoring reports

From Earthwise

[Jump to navigation](#) [Jump to search](#)

Stuart, M E. 2018. Review of denitrification potential in groundwater of England. *British Geological Survey Internal Report, OR/18/011.*

No	Monitoring unit	Strata	DO (mg/L)	NO ₃ -N (%>QL-11.3 mg/L)	NO ₂ -N (%>QL-0.03 mg/L)	NH ₄ -N (%>QL-0.39 mg/L)	Fe(%>QL-200 µg/L)	Mn(%>QL-50µg/L)	SO ₄ (%>QL-250 mg/L)	Evidence for confined conditions	Reference
NE1	Till and Northumberland rivers Fell sandstone			Low except arable area	High around Berwick. 10% >QL	2.2	High in N centre. Up to 7.7 mg/L	High in centre. 33% >QL	Elevated. 9	Yes	(ESI, 2004b ^[11])
NE2	Tyne Fell Sandstone			0	NQ	0	74	All	0	Yes	(ESI, 2004c ^[12])
NE4	Skerne Magnesian limestone			High in west. V low where confined	3.1% >QL	2.1	High. 22% >QL	Max around Newton Aycliffe. 30% >QL	14	Yes	(ESI, 2004a ^[13])
NW1	Lake District	-		Low. 1.4	2.4	High near Kendall. 2	Low but 5.1	6.1	Low. High related to pyrite	No	(ESI, 2006d ^[14])
NW2	Carboniferous Limestone, Millstone Grit and Coal Measures of the Lune and Kent	Limestone Grit & Coal		Low, 1.2% Low 0.79	13% 0	3.2 both	28 67	16 54	Low	Yes	(ESI, 2006f ^[15])
NW3	Permo-Triassic sandstones of the Wirral and West Cheshire			High on western margin 8.3	6.5	3.1 at polluted site	12	15	Low 2.2	Yes	(ESI, 2006i ^[16])
NW4	Permo-Triassic sandstones of Eden Valley and Carlisle Basin	St Bees Penrith		5 13	2.3 3.3	0.95 0.63	13 8	21 4.2	8.1 from evaporites 0	Yes No	(ESI, 2006b ^[17])
NW6	Carboniferous Limestone, Millstone Grit and Coal Measures of the Ribble	Limestone Grit Coal		0 0 2.1	2.1 0.03 0	8.4 0.39 6 possibly anthropogenic	30 37 60	33 34 52	0	Yes	(ESI, 2006h ^[18])
NW8	Sherwood Sandstone of Furness and West Cumbria	Furness W Cumbria	>0.02 >5.5	All		3.67 2	24.7 17	23.7 13	1 4	Yes no	(ESI, 2006c ^[19])
NW9	Millstone Grit and Coal Measures of Northern Manchester	Grit Coal	0.2 0.2	0 5	-	0 14	42 72	70 73	0 71	No Yes	(ESI, 2006g ^[10])
MID1	Jurassic Limestone of Cotswolds Edge			18.3	0		3	1.4	0	Yes	(Besien et al., 2006 ^[11])
MID2	Carboniferous sandstones of Coventry			30	ND	ND	ND	ND	0	No	(Besien and Pearson, 2007a ^[12])
MID3	Magnesian Limestone of the East Midlands		1.02-9.61	22 Low in confined zone	11	0	0	0	33	Yes	(Besien and Pearson, 2007b ^[13])
MID4	Coal Measures of Wyre Forest		>6	30	0	0	16	21	23	No	(Pearson, 2007 ^[14])
Anglian 1*	Norfolk and Suffolk Chalk		0-sat	Mean>QL	95%ile>QL	95%ile>QL	95%ile>QL	95%ile>QL	95%ile>QL	Yes	(Environment Agency, 2009b ^[15])
Anglian 2*	Norfolk and Suffolk Crag		0-sat	Mean>QL	95%ile>QL	Yes	Mean>QL	Mean>QL	Max>QL	Yes - by drift	(Environment Agency, 2009c ^[16])

Anglian 3*	North Essex Chalk		1.1-9.8	0	-	95%ile>QL	Mean>QL	95%ile>QL	0	Yes	(Environment Agency, 2009d ^[17])
Anglian 4*	South Essex Chalk		0-7.8	0	Max>QL	Mean>QL	Mean>QL	95%ile>QL	Max>QL	Yes mainly confined	(Environment Agency, 2009e ^[18])
Anglian 5*	Essex gravels		2.4-sat	0	0	0	Max>QL	Max>QL	0	No	(Environment Agency, 2009a ^[19])
Thames 1	Corallian		0.1-10.4	10	1	0	63	21	5	Yes	(Duncan et al., 2004 ^[20])
Thames 2	Upper River Lee Chalk		>3.8	7.6	1.4	0.2	1	0	0	Rarely but by till	(ESI, 2005e ^[21])
Thames 3	Confined Chalk of London Basin		0-sat	1.7	1.1	14	25.4	2.4	4.6	Yes	(ESI, 2006a ^[22])
Thames 4	Thames Valley gravels		>2.2	22.4	6.4	0.6	6.3	8.5	0.3	No	(ESI, 2005f ^[23])
Thames 5	Kennet Valley Chalk		0.16-12	8.9	2.7	13	8.7	0.8	0	Yes	(ESI, 2005a ^[24])
Thames 6	Lower Greensand		0-8.7	6.3	2.9	5.9	27	9.5	0	Yes	(ESI, 2006e ^[25])
Thames 7	Mid-Chilterns and Colne Chalk		0.92-12	1.0	4.9	5.3	1.1	0.2	0	No	(ESI, 2005b ^[26])
Thames 8	North Downs Chalk		-	0.3	33.5	0.4	0.7	0	0	NO ₂ ascribed to mixing. Confined at 1 site	(ESI, 2005c ^[27])
Thames 9	SW and Twyford Chalk		>5.1	19	1.0	0.11	1.6	0	0	No	(ESI, 2005d ^[28])
SW1	Dorset Stour Chalk		>4.5	12	0	0	0	0	0	No	(Environment Agency, 2004c ^[29])
SW2	Frome Piddle Chalk		>5.5	9	0	0	0	0	0	No	(Environment Agency, 2004e ^[30])
SW3	Hampshire Avon Chalk		>3	9	0	0	5	2.3	0	No	(Environment Agency, 2004f ^[31])
SW4	Jurassic Limestone	Great & Inferior Oolite	0.1-11.3	0	0	0	9	0	0	No	(Environment Agency, 2004g ^[32])
SW5	Mendips Limestone		>5.4	0	0	0	0	0	0	No	(Environment Agency, 2004h ^[33])
SW6	Otter Sandstone		>6.1	14	0	0	14	14	0	None, but few points in confined	(Environment Agency, 2004i ^[34])
Southern 11*	Seaford & Eastbourne Chalk		>2.9	0	Yes	0	Yes	Yes	0	No, Fe attributed to pipework	(ENTEC, 2008h ^[35])
Southern 12*	East Kent Stour Chalk		>1.2	Yes	0	Max>QL	0	Yes	0	No	(ENTEC, 2008c ^[36])
Southern 13*	Chichester Chalk		>1.9	Max>QL	Max>QL	Max>QL	95%ile>QL	95%ile>QL	0	Yes in Littlehampton inlier	(ENTEC, 2008b ^[37])
Southern 14*	North Kent Medway Chalk		0.56-4.2	95%ile>QL	Max>QL	Yes	0	Max>QL	0	No	(ENTEC, 2008f ^[38])
Southern 15*	West Kent Darent and Cray Chalk		6.6-11.7	Max>QL	Max>QL	0	95%ile>QL	Max>QL	0	No	(ENTEC, 2008i ^[39])
Southern 16*	Isle of Wight Lower Greensand		>1.32	Max>QL	Max>QL	Max>QL	95%ile>QL	95%ile>QL	0	Yes	(ENTEC, 2008d ^[40])
Southern 17*	Western Lower Greensand	Folkestone and Hythe Fms	>1.1	Max>QL	Max>QL	Max>QL	80	95%ile>QL in Folkestone Fm	0	Yes	(ENTEC, 2008j ^[41])
Southern 1*	East Hants Chalk		>1.7	Max>QL	0	0	Max>QL	0	0	Yes along tertiary edge, semi-confined	(Environment Agency, 2004d ^[42])
Southern 2*	Isle of Wight Central Downs Chalk		0	0	0	0	0	0	No	(Environment Agency, 2004a ^[43])	
Southern 3*	Isle of Wight Southern Downs Chalk		0	0	0	Max>QL	Max>QL	0	No	(Environment Agency, 2004b ^[44])	
Southern 4*	River Itchen Chalk		?	Max>QL	95%ile>QL	Max>QL	95%ile>QL	95%ile>QL	0	?	(Environment Agency, 2004j ^[45])
Southern 5*	River Test Chalk		?	0	0	Max>QL	95%ile>QL	Max>QL	0	?	(Environment Agency, 2004k ^[46])

Southern 6*	Thanet Chalk	?	Mean>QL	0	0	0	0	0	No	(Environment Agency, 2004 ^[42])
Southern 7*	North Kent Swale Chalk	?	Max>QL	0	Max>QL	0	Max>QL	0	No, CWF?	(ENTEC, 2008g ^[43])
Southern 8*	Kent Lower Greensand	Folkestone Hythe >2.5	95%ile>QL	95%ile>QL	0	Max>QL	95%ile>QL	0	Yes. In northern boundary	(ENTEC, 2008e ^[44])
Southern 9*	Worthing Chalk	>2.2	Max>QL	Max>QL	Max>QL	0	Max>QL	0	No	(ENTEC, 2008k ^[45])
Southern 10*	Brighton Chalk	>2.3	Max>QL	Max>QL	Max>QL	95%ile>QL	Max>QL	0	No	(ENTEC, 2008a ^[41])

References

1. [↑](#) ESI. 2004b. Groundwater Quality Review: Till and Northumberland Rivers Fell Sandstone. GWQRNE1. *Environment Agency Report 6234DR11D1* (Bristol).
2. [↑](#) ESI. 2004c. Groundwater Quality Review: Tyne Fell Sandstone. GWQRNE2. *Environment Agency Report 6234DR8D2* (Bristol).
3. [↑](#) ESI. 2004a. Groundwater Quality Review: Skerne Magnesian limestone. GWQRNE4. *Environment Agency Report 6234DR2D3* (Bristol).
4. [↑](#) ESI. 2006d. Groundwater Quality Review: Lake District. GWQRNW1. *Environment Agency Report 6438AR2* (Bristol).
5. [↑](#) ESI. 2006f. Groundwater Quality Review: Lune and Kent. GWQRNW2. *Environment Agency Report 6438AR4* (Bristol).
6. [↑](#) ESI. 2006i. Groundwater Quality Review: Wirral and West Cheshire. GWQRNW3. *Environment Agency Report 6438AR5* (Bristol).
7. [↑](#) ESI. 2006b. Groundwater Quality Review: Eden Valley and Carlisle Basin. GWQRNW4. *Environment Agency Report 6438AR1* (Bristol).
8. [↑](#) ESI. 2006h. Groundwater Quality Review: Ribble. GWQRNW3. *Environment Agency Report 6438AR6* (Bristol).
9. [↑](#) ESI. 2006c. Groundwater Quality Review: Furness and West Cumbria. GWQRNW8. *Environment Agency Report* (Bristol).
10. [↑](#) ESI. 2006g. Groundwater Quality Review: North Manchester Carboniferous. GWQRNW9. *Environment Agency Report* (Bristol).
11. [↑](#) BESIEN, A, PEARSON, A, BOLAND, M, and CONE, S. 2006. Groundwater Quality Review: Cotswold Edge Jurassic Limestones GWQR-MID-G9. *Environment Agency Report* (Bristol).
12. [↑](#) BESIEN, A, and PEARSON, A. 2007a. Groundwater Quality Review: Coventry Carboniferous Sandstones GWQR-MID-D9. *Environment Agency Report* (Bristol).
13. [↑](#) BESIEN, A, and PEARSON, A. 2007b. Groundwater Quality Review: Magnesian Limestone of the East Midlands GWQR-MID-E1. *Environment Agency Report* (Bristol).
14. [↑](#) PEARSON, A. 2007. Groundwater Quality Review: Wyre Forest Carboniferous Coal Measures GWQR- MID-D8. *Environment Agency Report* (Bristol).
15. [↑](#) ENVIRONMENT AGENCY. 2009b. Groundwater Quality Review: Summary Report Norfolk and Suffolk Chalk. *Environment Agency Report* (Bristol).
16. [↑](#) ENVIRONMENT AGENCY. 2009c. Groundwater Quality Review: Summary Report Norfolk and Suffolk Crag. *Environment Agency Report* (Bristol).
17. [↑](#) ENVIRONMENT AGENCY. 2009d. Groundwater Quality Review: Summary Report North Essex Chalk. *Environment Agency Report* (Bristol).
18. [↑](#) ENVIRONMENT AGENCY. 2009e. Groundwater Quality Review: Summary Report South Essex Chalk. *Environment Agency Report* (Bristol).
19. [↑](#) ENVIRONMENT AGENCY. 2009a. Groundwater Quality Review: Summary Report Essex Gravels. *Environment Agency Report* (Bristol).
20. [↑](#) DUNCAN, S M, LANCASTER, A, and THOMAS, J. 2004. Groundwater Quality Review: The

Corallian. *Environment Agency Report GWQR020* (Bristol).

21. [↑](#) ESI. 2005e. Groundwater Quality Review: Chalk of the Upper River Lee GWQR021. *Environment Agency Report* (Bristol).
22. [↑](#) ESI. 2006a. Groundwater Quality Review: Confined Chalk of the London Basin GWQR022. *Environment Agency Report* (Bristol).
23. [↑](#) ESI. 2005f. Groundwater Quality Review: Thames Valley Gravels GWQR023. *Environment Agency Report* (Bristol).
24. [↑](#) ESI. 2005a. Groundwater Quality Review: Chalk of the Kennet Valley GWQR024. *Environment Agency Report* (Bristol).
25. [↑](#) ESI. 2006e. Groundwater Quality Review: Lower Greensand, Southern Limb, London Basin GWQR025. *Environment Agency Report* (Bristol).
26. [↑](#) ESI. 2005b. Groundwater Quality Review: Chalk of the Mid-Chilterns and Colne Valley GWQR026. *Environment Agency Report* (Bristol).
27. [↑](#) ESI. 2005c. Groundwater Quality Review: Chalk of the North Downs GWQR027. *Environment Agency Report* (Bristol).
28. [↑](#) ESI. 2005d. Groundwater Quality Review: Chalk of the South-West Chilterns and Twyford Brook GWQR028. *Environment Agency Report* (Bristol).
29. [↑](#) ENVIRONMENT AGENCY. 2004c. Groundwater Quality Review: Dorest Stour Chalk GWQR014. *Environment Agency Report* (Bristol).
30. [↑](#) ENVIRONMENT AGENCY. 2004e. Groundwater Quality Review: Frome Piddle Chalk GWQR015. *Environment Agency Report* (Bristol).
31. [↑](#) ENVIRONMENT AGENCY. 2004f. Groundwater Quality Review: Hampshire Avon Chalk GWQR016. *Environment Agency Report* (Bristol).
32. [↑](#) ENVIRONMENT AGENCY. 2004g. Groundwater Quality Review: Jurassic Limestone GWQR017. *Environment Agency Report* (Bristol).
33. [↑](#) ENVIRONMENT AGENCY. 2004h. Groundwater Quality Review: Mendips Limestone GWQR018. *Environment Agency Report* (Bristol).
34. [↑](#) ENVIRONMENT AGENCY. 2004i. Groundwater Quality Review: Otter Sandstone GWQR019. *Environment Agency Report* (Bristol).
35. [↑](#) ENTEC. 2008h. Groundwater Body Water Quality Report: Seaford & Eastbourne Chalk. *Environment Agency Report* (Bristol).
36. [↑](#) ENTEC. 2008c. Groundwater Body Water Quality Report: East Kent Stour Chalk. *Environment Agency Report* (Bristol).
37. [↑](#) ENTEC. 2008b. Groundwater Body Water Quality Report: Chichester Chalk. *Environment Agency Report* (Bristol).
38. [↑](#) ENTEC. 2008f. Groundwater Body Water Quality Report: North Kent Medway Chalk. *Environment Agency Report* (Bristol).
39. [↑](#) ENTEC. 2008i. Groundwater Body Water Quality Report: West Kent Darent and Cray Chalk. *Environment Agency Report* (Bristol).
40. [↑](#) ENTEC. 2008d. Groundwater Body Water Quality Report: Isle of Wight Lower Greensand. *Environment Agency Report* (Bristol).
41. [↑](#) ENTEC. 2008j. Groundwater Body Water Quality Report: Western Lower Greensand. *Environment Agency Report* (Bristol).
42. [↑](#) ENVIRONMENT AGENCY. 2004d. Groundwater Quality Review: East Hampshire Chalk GWQR008. *Environment Agency Report* (Bristol).
43. [↑](#) ENVIRONMENT AGENCY. 2004a. Groundwater Quality Review: Chalk of the Central Downs, Isle of Wight GWQR009. *Environment Agency Report* (Bristol).
44. [↑](#) ENVIRONMENT AGENCY. 2004b. Groundwater Quality Review: Chalk of the Southern Downs, Isle of Wight GWQR010. *Environment Agency Report* (Bristol).
45. [↑](#) ENVIRONMENT AGENCY. 2004j. Groundwater Quality Review: River Itchen Chalk GWQR011. *Environment Agency Report* (Bristol).

46. [↑](#) ENVIRONMENT AGENCY. 2004k. Groundwater Quality Review: River Test Chalk GWQR012. *Environment Agency Report* (Bristol).
47. [↑](#) ENVIRONMENT AGENCY. 2004l. Groundwater Quality Review: Thanet Chalk GWQR013. *Environment Agency Report* (Bristol).
48. [↑](#) ENTEC. 2008g. Groundwater Body Water Quality Report: North Kent Swale Chalk. *Environment Agency Report* (Bristol).
49. [↑](#) ENTEC. 2008e. Groundwater Body Water Quality Report: Kent Lower Greensand. *Environment Agency Report* (Bristol).
50. [↑](#) ENTEC. 2008k. Groundwater Body Water Quality Report: Worthing Chalk. *Environment Agency Report* (Bristol).
51. [↑](#) ENTEC. 2008a. Groundwater Body Water Quality Report: Brighton Chalk. *Environment Agency Report* (Bristol).

Retrieved from

'http://earthwise.bgs.ac.uk/index.php?title=OR/18/011_Appendix_1_-_Summary_of_Environment_Agency_Groundwater_Quality_monitoring_reports&oldid=43847'

Category:

- [OR/18/011 Review of denitrification potential in groundwater of England](#)

Navigation menu

Personal tools

- Not logged in
- [Talk](#)
- [Contributions](#)
- [Log in](#)
- [Request account](#)

Namespaces

- [Page](#)
- [Discussion](#)

Variants

Views

- [Read](#)
- [Edit](#)
- [View history](#)
- [PDF Export](#)

More

Search

Navigation

- [Main page](#)
- [Recent changes](#)
- [Random page](#)
- [Help about MediaWiki](#)

Tools

- [What links here](#)
- [Related changes](#)
- [Special pages](#)
- [Permanent link](#)
- [Page information](#)
- [Cite this page](#)
- [Browse properties](#)

• This page was last modified on 29 November 2019, at 10:35.

- [Privacy policy](#)
- [About Earthwise](#)
- [Disclaimers](#)

