

**Broads Authority area sites which are included in the Norfolk Geodiversity Audit**

Sites marked in blue are those close to the BA boundary which have particular geological interest associated with the BA area itself

Information in red indicates site (or part of) is designated as SSSI (bio and/or geo)

	Site no.	Parish	Site name(s)	Grid Reference	Site descrip	Geo-features	HER	Other	CWS	SSSI	Access	Management	Condition notes	Vulnerability	Threats actual	Threats potential
Broadland District	BRL05	Catfield	Ludham Pilot Borehole Site	TG385199	Site of water supply borehole	Borehole site yielding important information about Pliocene and early Pleistocene lithostratigraphy and biostratigraphy.					Private	[Anglia Water]	Site is a commercial waterworks.			
	BRL23	Horstead With Stanninghall	Little Switzerland Chalk Pits	TG277173	former chalk pit complex	Former chalk pit complex developed in slopes of Bure valley until 1877, with access canals for wherry transport. Chalk of Campanian Mucronata Zone (Paramoudra Chalk horizon). Peake & Hancock chalk site #194. Findspot of entire Mastodon skeleton in Crag Basement Bed (Woodward 1881, p57). A picturesque site mentioned and illustrated by Lyell 1838 (fig 237).		Peake site #194			Private	[woodland and meadow]		Low		
	BRL27	Ludham	How Hill & Crome's Farm	TG377199	Trial pits site	Site of three trial pits in early Pleistocene marine sediments of the Wroxham Formation, How Hill Member.					Private					
	BRL31	Postwick	Postwick Grove River Cliff	TG286080	river cliff	Important exposure of Cretaceous Campanian Chalk, being the most easterly, extant, permanent inland exposure in Norfolk. Exposes a richly fossiliferous horizon close to the upper boundary of the Stage. Should be a Candidate SSSI.		BA			[Public]					vegetation overgrowth; slope stabilisation
	BRL32	Strumpshaw	Buckenham Station Pit	TG352058	disused sand pit	Exposure of sands of the Pliocene Norwich Crag overlain by soliflucted sands and till, with windblown sand on top.					Private			Low		landscaping, tree planting
	BRL33	Strumpshaw	The Sandpit, Stumpshaw Fen CGS	TG341065	disused sand pit	Exposure of sands of the Pliocene Norwich Crag or Pleistocene Corton Formation. Link with biodiversity SSSI.		adjacent Mid-Yare NNR		adjacent Yare Broads & Marshes SSSI (bio)	[public]	Fresh exposure maintained for biodiversity interest (sand wasps)		Medium (vegetation and slumping)		cessation of biodiversity management
	BRL36	Thorpe St Andrew	The Dell Pit	TG26150865	disused chalk pit	Former chalk pit active in C18th, linked with historic lime trade on river Yare. Disused by mid C19th.					Public	Site managed as nature area.	No sections visible as site heavily vegetated and sections slumped			
	BRL40	Wroxham	Dobbs Plantation Pit	TG273158 & TG27251586 (site 2) & TG27251588 (site 3)	[disused gravel pit]	Exposure of [late Pliocene] Pre-Pastonian sediments of the Wroxham Formation, Dobbs Member. Site represents appearance of Macoma balthica. An important site for correlation of marine and terrestrial sequences.					Private					
	BRL41	Wroxham	Wroxham Hall Pit	TG 272 160	[disused gravel pit]	Exposure of early Pleistocene marine sediments of the Wroxham Formation ('Bure Valley Beds'), comprising sands, clays and shelly sands over Cretaceous Chalk. Crag mollusca (but not M.balthica) indicate estuarine conditions.					Private					
Great Yarmouth Borough	GTY01	Fleggburgh	Billockby Sand Pit	TG 4295 1350	disused sand pit	Degraded exposure of Pleistocene Happisburgh Formation 'Corton Beds' sands yielding derived Norwich Crag shell fauna (worked on by SV Wood and FW Harmer). Notable for use of soft, fine sand in the casting of metals in the 19th century. Denotified geological SSSI.					Private	Billockby Farms Limited	Overgrown and slumped	Low		
	GTY04	Somerton	Somerton No.1 Borehole Site	TG46072120	Site of research borehole	Deep research borehole site yielding information about 1400m sequence of strata, including Palaeozoic (530m), Mesozoic (763m, of which Chalk Group 433m), Tertiary (51m) and Quaternary (55m, of which Crag 29m).					Private	farmland		zero		
	GTY05	Stokesby With Herringsby	Hillborough Hole Pit	TG444116	disused sand and gravel pit	Exposure of Pleistocene Happisburgh Formation 'Corton Beds, comprising cross-bedded sand and gravel underlying sandy till. Sequence capped by cryoturbated stony coversilt.					Private					
	GTY06	Winterton	Winterton Ness GCR & Winterton-Horsey Dunes SSSI	TG490210 & TG460247 to TG504179	coastal ness and sand-dune complex	Nationally important dune system, including ness feature. Link with biodiversity. GCR SSSI composed of three former SSSIs and Winterton Dunes NNR.		AONB	NNR (Winterton Dunes)	SSSI geo + bio (Winterton-Horsey Dunes)						
North Norfolk District	NNF33	Ludham	Ludham Staithe Lime Kiln	TG38941805	Disused lime kiln	Disused lime kiln at Staithe House, circular form, with pointed entrance, made of flint and brick, with rake holes. Dependent on chalk imported by wherry. NHER 17527	NHER 17527				Private					collapse, landscaping
	NNF45	Sea Palling	Sea Palling Dunes	TG 443264 to TG460247	coastal dune complex	Example of coastal dune complex displaying dune succession and range of depositional and erosional features. Link with biodiversity CWS.		AONB	CWS 1231 Waxham Sands Holiday Park; CWS 1247 Marram Hills		[Public]					
Norwich	NCH02	Norwich	Carrow Works	TG242075	industrial works of Reckitt & Colman	Former exposure of Pleistocene river terrace gravels banked up against Cretaceous Chalk cliff, yielding 5 Palaeolithic hand-axes and other flint artefacts excavated by JE Sainty 1926.					Private		site presumably built over			
	SNF01	Aldeby	Aldeby Quarry	TM 459 928	Former quarry undergoing restoration	Former exposure of Pleistocene glacial and glacio-fluvial outwash sediments of the Lowestoft Formation; former type-site of Aldeby Sand & Gravel Member.					[Private]		Landfilled	Zero		
	SNF02	Aldeby	Boon's Heath Pit	TM470926	Former quarry undergoing restoration	Former exposure of Pleistocene glacial and glacio-fluvial outwash sediments of the Lowestoft Formation					[Private]		Landfilled	Zero		
	SNF03	Aldeby	Atlas Aggregates Pit & Stanley Hills Pit	TM 434931	disused pit, partly backfilled'	Exposure of Pleistocene Anglian glacial or terrace sands and gravels; findspot of Palaeolithic hand-axes.					Private		disused and partly back-filled in 1996			

SNF04	Aldeby	Aldeby Brickyard	TM431930	degraded and vegetated former brick pit	Exposure of Pliocene Norwich Crag sands and clays yielding [Baventian] pollen and rich [Antian] molluscan assemblages.					Private		[sections slumped and vegetated]			
SNF05	Aldeby	Oaklands Pit	TM465927	former quarry used as landfill site						Private					
SNF08	Bramerton	Bramerton Pit GCR & Bramerton Common Pit & Bramerton Pits SSSI	TG295060 & TG299061 & TG297060	Former sand pits	Nationally important exposures of Pliocene Norwich Crag strata, including type site of the Norwich Crag Formation. Particularly important for demonstrating vertebrate faunal succession in this period. GCR SSSI.		BA			SSSI geo (Bramerton Pits, which includes Common Pit and Blake's Pit)	Private				
SNF09	Bramerton	Blake's Pit & Bramerton Pits SSSI	TG 2982 0608 & TG 298061	Former sand pit	Nationally important exposures of Pleistocene Norwich Crag Formation, including type site of the Bramertonian Stage. Studies of pollen, foraminifera and mollusca have demonstrated change from temperate (Bramertonian) to cold (Pre-Pastonian) climatic conditions. SSSI geo but not cited in GCR.		BA			SSSI geo (Bramerton Pits, which includes Common Pit and Blake's Pit)	Private				
SNF10	Broome and Ditchingham	Broome Heath Pit GCR	TM345913 & TM348915	heathland with former sand and gravel pits	Nationally important exposure of Middle Pleistocene fluvio-glacial sediments of the Broome Terrace in the Waveney valley, resting on Pliocene Norwich Crag. Type-site of the Waveney Valley Formation, Broome Member. GCR SSSI.			CWS 130 Broome Heath		SSSI geo (Broome Heath Pit)	Public				
SNF12	Burgh Castle	Burgh Castle Pit & Welcome Pit	TG481043 & TG482043	partially backfilled though active pit' (1994)	Exposure of Pleistocene glacial till and outwash deposits of the Happsburgh Formation (Corton Sands; Leet Hill Sands & Gravels, Corton Till), underlying Anglian Lowestoft Formation (Lowestoft Till).						Private		Only eastern face of quarry being worked in 1988		
SNF28	Ditchingham & Hedenham	Bath Hills	TM321913	river bluff	Notable incised meander bluff of River Waveney developed around meander core of Outney Common (Suffolk)		BA (part)				Private, with public footpath	woodland		low	landscaping
SNF29	Earsham	[Earsham Quarry]	TM317899	active quarry with landscaped areas	Exposure of Pleistocene river terrace deposits of the 2nd (Broome) terrace of R.Waveney						Private		pits now landscaped and flooded		
SNF31	Earsham	Pheasant Walk Quarry	TM315892	[active gravel quarry]	Pleistocene [late Anglian] glaciofluvial sands and gravels associated with Terrace 3 (Homersfield Terrace).						Private	gravel extraction		High	backfilling
SNF39	Gillingham	[Gillingham Gravel Pit]	TM427932 & TM426929	[former sand pit]	Exposure of Pliocene Crag and Pleistocene glacial sediments.						Private				
SNF40	Haddiscoe	Haddiscoe Old Pit	TM444966 + TM445963	[disused quarry]	Former exposures of Pliocene Norwich Crag Formation and Pleistocene Happsburgh Formation, Corton Beds and Anglian Formation, Haddiscoe Sands and Gravels (glacio-fluvial outwash).						Private				backfilling and landscaping
SNF46	Kirby Bedon	Whitlingham Sewage Works (North)	TG279077	Excavation for sewage works settling tank	Exposure of the Cretaceous Maastrichtian Chalk of the Weybourne Chalk sub-division, B.lanceolata Zone. Exact stratigraphic position needs further research.						Private		Chalk strata presently inaccessible		
SNF47	Kirby Bedon	Whitlingham Sewage Works (South)	TG281073 & TG281070	Rough disturbed ground south of treatment works; site of former gravel pit'	Temporary exposure of Pleistocene terrace gravels of R. Yare, resting on Norwich Crag. Important findspot of Palaeolithic flint artefacts including more than 200 Acheulian hand-axes (some in primary context).						[Private]		site landscaped 1972		extension of sewage works
SNF48	Kirby Cane and Stockton	Leet Hill Pit & Leet Hill Kirby Cane GCR	TM381929 + TM384926	Former sand and gravel pit	Nationally important exposures of Middle Pleistocene deposits associated with proto-thames and Bytham rivers beneath glacial sands and gravels of the Happsburgh Formation, including type-site of the Leet Hill Sand & Gravel Member; also new type-site for Lowestoft Formation, Aldeby Sand & Gravel member (TM384926) as Aldeby sections destroyed. GCR SSSI.					SSSI geo (Leet Hill Kirby Cane)	Private				
SNF52	Norton Subcourse	Norton Subcourse Quarry, South-East Pit	TM403992	Active quarry	Exposure of marine Pliocene sands and gravels of the Norwich Crag and Lower Pleistocene sands and gravels of the Wroxham Formation. Overlying fluvial sediments of the Cromer Forest-bed Formation (MIS 17) have yielded important environmental evidence, including vertebrate fossils. Overlying Middle Pleistocene sands and gravels of the Ingham and Lowestoft Formations. A nationally-important site for early Pleistocene stratigraphic and faunal correlations. Site excavated by British Museum/AHOB project 2004.						Private			resumption of mineral extraction	mineral extraction; landscaping
SNF63	Trowse with Newton	Whitlingham Chalk Pit & Crown Point Pit & Colman's Pit	TG2675 0770	disused chalk pit and lime kiln complex	Large former chalk pit with two disused lime kilns. Exposure of the Cretaceous Campanian Chalk of the Paramoudra Chalk sub-division, B.mucronata Zone. Exposes 4m of soft, iron-stained chalk with two bands of flints and in-situ paramoudra. Also exposure of shelly sands of Pliocene Norwich Crag Formation (displaying varve-like sedimentation) and Basement Bed ('Stone Bed') and early Pleistocene Kesgrave Formation. Link with biodiversity in disused lime kiln used as bat roosting site. Site adjacent to former staithe on R.Yare. [Denotified SSSI]. NB Coronation Belt Pit also called Crown Point Pit (TG253073)		BA		[denotified SSSI]	[Public]		site described as 'badly overgrown' in 1960. Much tree growth on slopes. But exposure visible on east side of pit near entrance.			
SNF64	Trowse with Newton	[Crown Point Pit] or [Coronation Belt Pit]	TG253073	former pit close to dry ski slope	[Exposure of Cretaceous Upper Chalk as erratic raft displaying glacially-tectonised fold structures]		BA		[denotified SSSI]	[Public]					
SNF65	[Trowse with Newton]	Lafarge Grading Plant Site	TG256076	Section on site of mineral grading plant	Exposure of terrace gravels of the R.Yare [and glacially tectonised chalk raft].		BA				[Private]				

Waveney District	1	Barsham	Barsham Marshes	TM396908	grazing marshes	Valley peats of the Breydon Formation containing archaeological remains of triple post alignment of oak stakes beside palaeochannel of R Waveney of late Iron Age date, with palaeo-environmental evidence; channel became infilled by C11th.				Private	grazing meadows		Medium		drainage and wastage of peat
	1	Beccles	Beccles Marshes	TM430920	grazing marshes	Waveney floodplain including 'gravel island' remnants of Late Devensian Terrace 1, containing Holocene Breydon Formation peat and alluvium containing palaeo-environmental and archaeological archives. Iron Age alignment of posts and a trackway under investigation (2007) by Birmingham University under the direction of Andy Howard.		BA		Waveney 8 (Beccles Marshes0	[private]		High	Drainage. "The landscape of the marshes has changed considerably over the last twenty years. Many of the grazing marshes have been converted to arable fields and a large number of dykes have been infilled." - CWS citation	
	No number	Bungay	Outney Common	TM325095		[Small exposure of Pleistocene glacial sand and gravel of the 2nd (Broome) terrace of R.Waveney]. Link with biodiversity CWS.		BA		Waveney 16 (Outney Common)	private		Low		
	No number	Somerleyton	Somerleyton Brickworks	TM 4795 9667	disused brickpit	Poor exposure of 6.5m of pebbly sand of the Pleistocene Kesgrave Formation underlying 6m of Happisburgh Formation, Corton Till Member (aka 'North Sea Drift') overlain by Lowestoft Formation, Lowestoft Till. Brickworks operative from c.1815 to 1939.					[private]				