

BRIDGE HEIGHTS

Bridges and available air draft (bridge height)

There are a number of bridges around the Broads, carrying roads and railways over the river. All bridges require yachts with tall masts to lower the mast, most bridges require larger motor cruisers to check available air draft, lower canopies and awnings, and to proceed with care. Some are so low that some craft with cabins can pass under only at Low Water, and others cannot pass at any time.

Passage planning requires consideration of tide times and air draft at the bridges. This publication contains the best information available, or links to it.

Sea level rise and environmental factors

If taking your motor cruiser or yacht up the rivers Bure, Ant and Thurne, you need to be aware that average water levels have risen considerably in recent years, and by a lot more than is explained by the increase in sea level, for reasons that have not yet been fully understood.

The bridge heights published by the Broads Authority and reproduced on the following page are based on old data and might be considered misleading.

The table (below) of bridge heights for Potter Heigham is extracted from data provided by 'Project Troll' and indicates the air draft available on average at High Water and Low Water. However it is no guarantee of available air draft at a future date, which depends upon many factors including tide, weather conditions and rainfall.

However, **broads.bridgeheight.com** ('Project Troll') is considered to give good guidance for assisting in planning passages. Only some bridges have been rolled out by this service to date.

Historic bridge heights for Potter Heigham

2022					2023					2024				
Date	Air draft at High Water		Air draft at Low Water		Date	Air draft at High Water		Air draft at Low Water		Date	Air draft at High Water		Air draft at Low Water	
	Millimetres	Feet & inches	Millimetres	Feet & inches		Millimetres	Feet & inches	Millimetres	Feet & inches		Millimetres	Feet & inches	Millimetres	Feet & inches
July average	1920	6' 4"	1963	6' 5"	April average	1826	6' 0"	1866	6' 1"	April average	1659	5' 5"	1711	5' 7"
Aug average	1898	6' 3"	1940	6' 4"	May average	1896	6' 2"	1926	6' 4"	May average	1786	5' 10"	1852	6' 1"
Sept average	1820	6' 0"	1859	6' 1"	June average	1898	6' 3"	1940	6' 4"	June average	1802	5' 11"	1840	6' 0"
Oct average	1789	5' 10"	1831	6' 0"	July average	1829	6' 0"	1868	6' 2"	July average	1792	5' 11"	1830	6' 0"
					Aug average	1811	5' 11"	1848	6' 1"	Aug average	1816	6' 0"	1860	6' 1"
					Sept average	1790	5' 10"	1831	6' 0"	Sept average	1792	5' 11"	1832	6' 0"
					Oct average	1655	5' 5"	1690	5' 7"	Oct average	1719	5' 8"	1754	5' 9"

Arched bridges

Two of the lowest bridges, at Potter Heigham and Wroxham, are arched, and the heights given are the highest point only, at the centre of the arch. Boats with wide cabin roofs may require more height than is available at the full width of the boat cabin, in which case the bridge pilot should be used.



Wroxham road bridge

BRIDGE DIMENSIONS AND TYPES

Bridge heights below relate to clearance at average high water during the summer, but water levels may vary considerably.

*indicates height at centre of arched bridge. Gauge boards on approach show clearance currently available.

Specific reserved mast lowering/lay by provision is indicated: up (u) or downstream (d)/seaward (s) of the bridge, pontoon (p), or bankside (b). Bure lay by pontoon is at Runham Swim. Please do not use any of these as moorings.

see pages 126-134 for lift/swing arrangements. **Besides the bridges listed, also be aware of power cables crossing the Waveney and Haddiscoe (New) Cut, as well as the upper Waveney towards Geldeston.

River	Bridge	O/S grid reference	Height metres / ft-in		Width metres / ft-in		De-mast reserved	Bridge type
ANT	Tonnage	TG347260	2.44	8-00	4.26	14-00		Fixed road
	Wayford	TG348252	2.13	7-00	6.10	20-00		Fixed road
	Ludham	TG372170	2.60	8-06	5.40	18-00	ub	Fixed road
BURE	Wroxham, rail	TG301183	4.57	15-00	14.30	47-00		Fixed rail
	Wroxham, road*	TG303181	2.18	7-01	8.00	26-06	db	Fixed road
	Acle	TG414116	3.66	12-00	23.70	78-00	ub	Fixed road
	Yarmouth/Acle Road	TG521081	2.13	7-00	21.30	70-00	ub	Fixed road
	Yarmouth, Vauxhall	TG520080	2.06	6-09	30.40	100-00	ubdp	Fixed foot/cycle
THURNE	Potter Heigham New	TG420185	2.31	7-07	22.40	73-06	udb	Fixed road
	Potter Heigham Old*	TG419184	1.83	6-00	consult pilot		udb	Fixed road
WAVENEY	Beccles Old*	TM420910	1.98	6-06	12.60	41-06		Fixed road
	Beccles New	TM420914	3.66	12-00	28.90	95-00	db	Fixed road
	Lowestoft Harbour**	TM547927	2.16	7-01			sp	Lifting road
	Lowestoft Gull Wing**	Lake Lothing	12.00	39-05				Lifting road
	Oulton Broad, Lake Lothing**	TM522927	4.57	15-00			p	Swing rail
	Oulton Broad, Mutford**	TM921927	2.39	7-10	6.40	21-00	sp	Lifting road
	Somerleyton**	TM475967	2.54	8-04	16.40	54-00	updb	Swing rail
	St Olaves	TM456994	2.44	8-00	23.90	78-06		Fixed road
Haddiscoe Flyover	TM453991	7.32	24-00	12.10	40-00		Fixed road	
WENSUM	Norwich, Jarrold	TG236092	3.48	11-15				Fixed foot/cycle
	Norwich, Bishop's*	TG239089	3.20	10-06	6.05	19-10		Fixed
	Norwich, Foundry	TG238084	3.05	10-00	16.40	54-00		Fixed road
	Norwich, Lady Julian**	TG236082	3.87	12-08				Swing foot/cycle
	Norwich, Novi Sad**	TG237078	4.88	16-00	16.50			Swing foot/cycle
	Norwich, Carrow **	TG239077	4.16	13-08	12.50	30-00		Lifting road
	Norwich, Trowse **	TG245076	2.74	9-00	12.90	30-00		Swing rail
YARE	Thorpe rail (each)	TG263083	1.83	6-00				Fixed rail
	Postwick Viaduct	TG281081	10.54	34-07				Fixed road
	Reedham**	TG422016	3.05	10-00	16.60	54-06	udp	Swing rail
	Breydon (side spans)	TG516080	4.40	14-06			dp	Fixed road
	Breydon (centre span)**	TG516080	4.40	13-05				Lifting road
	Yarmouth, Haven**	TG521075	2.36	7-09	21.30	70-00	upsb	Lifting road
	Yarmouth, Herring**	Lower Harbour	4.50	14-09	50.00	164-00		Lifting road

Craft should slow right down for bridges and give a sound signal if visibility is at all restricted; lower the mast and canopy and ensure that all crew are safely inside the cockpit. All **Swing bridge** operators monitor VHF Channel 12. Mariners planning passages requiring bridges to swing should monitor **Urgent Boating News** on the BA website (see page 141). At swing railway bridges, one red flag means the bridge is operational, two that the bridge will not be opened; anyone wanting to contact a bridge keeper can sound their horn to gain the bridge keeper's attention – the bridge keeper will attend to them as soon as possible once other safety critical activities are finished. Note that they are subject not only to railway timetables but also to maintenance requirements and cannot always open. Lifting road bridges are subject to road traffic needs. Swing bridge phone numbers: Reedham 0330 858 4655; Somerleyton 0330 858 4656; Oulton Broad 0330 852 5351.

PROJECT TROLL



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Real Time Bridge Clearances Online

Nick Drew and Jeremy Glenn are keen boaters on the Norfolk Broads.

While tootling around the rivers of Norfolk and Suffolk, it was important for them to know if they would get under the bridges, **but BEFORE they got there.**

There were no real time clearances available and no way of working it out without being at a 'bridge board'. Will they get through Potter Heigham? Will they make it to the Locks at Geldeston before they close? Are they going to get across Breydon?

The Norfolk Broads' great unanswered questions! The only way to answer these questions was to design and build their own network of sensors, communications, cloud software and mobile web app. So that's what they did back in 2018.

Whilst they now have a small amount of funding from a local boatyard, all the R&D, hardware and running costs have been met by themselves. Free to all users, they don't come close to covering their running costs, but they think it's an invaluable service for navigation and safety, and so do around 4,000 users a year, so they keep on self-funding it.

At the moment, they cover Beccles, Great Yarmouth and Potter Heigham Bridges (some of the most important ones), but which bridges are next? Nick and Jeremy said *"Lots of people ask us which bridge is next. At the moment we can't afford to add any more bridges to Project Troll without some commercial sponsorship, and the Broads Authority aren't interested."*

Not only are funds an issue for expansion, but also finding sites on the river within half a mile or so of a bridge – so they would be grateful to hear from boatyards that can help them.

Why not take a look at broads.bridgeheight.com and see how it can help you.



Trowse swing bridge – image courtesy of Mike Page – www.mike-page.co.uk

NORWICH BRIDGES

Clearance under **Trowse** swing bridge is 2.74m at Average High Water During Summer. The swing bridge is currently experiencing mechanical problems requiring extra assistance to operate. Network Rail therefore requires seven days' notice to open the bridge. The opening times are Sundays between 02.00 and 04.00.

To arrange a swing, call Network Rail on either 01603 675297 or 01603 763440. Any problems in arranging the opening of the bridge should be reported to the Broads Authority Monitoring Officer on 01603 756085 or rob.rogers@broads-authority.gov.uk, who will be pleased to assist.

Craft should arrive at the bridge in good time before an arranged opening as late arrivals may not be accommodated.

The bridge keeper may be contacted on VHF Channel 12.



Carrow lifting bridge – image courtesy of Mike Page – www.mike-page.co.uk
Boats entering Norwich will see the Norwich City FC ground to starboard

Carrow lifting bridge (clearance 4.27m at Average High Water During Summer) will lift, but an engineer is required to be present. The **Novi Sad** bridge (clearance 4.88m at Average High Water During Summer) and the **Lady Julian** bridge (clearance 3.96m at Average High Water During Summer) are both swing bridges. The opening of these three bridges can be arranged through Broads Control on 01603 756056, VHF Channel 12.

24 hours' notice is required for the opening of these bridges.



Lady Julian bridge

Any NSBA member with general swing-bridge issues is welcome to get in touch with the NSBA which may, ultimately, assist all river users.



Potter Heigham bridges – image courtesy of Mike Page – www.mike-page.co.uk



Reedham swing bridge – image courtesy of Mike Page – www.mike-page.co.uk



Somerleyton swing bridge – image courtesy of Mike Page – www.mike-page.co.uk

POTTER HEIGHAM BRIDGES

At Potter Heigham, where the clearance under the centre of the arch of the **medieval Potter Heigham** bridge is 1.83m at Average High Water During Summer, pilot assistance is available (08.30-18.00, and dependent on tide and weather conditions) from *Phoenix Fleet Boatyard*, on the Great Yarmouth side of the river downstream. Tel: 01692 670460. Currently there is a charge of £15 per passage. (*Phoenix Fleet Boatyard* advocate that a *Pilot* is used for all bridge transits, private or hire craft.)

REEDHAM AND SOMERLEYTON SWING BRIDGES

The clearance at Average High Water During Summer at these bridges is 3.05m (**Reedham**) and 2.59m (**Somerleyton**). If one red flag is flying at one of these bridges it will swing on demand unless a train is imminent; if two red flags are flying the bridge is inoperable. Request an opening of the bridge by giving three prolonged blasts of the horn/whistle; a sign will give an approximate time to wait. The bridges can swing 24 hours a day.

Direct phone number for **Reedham** swing bridge is 0330 858 4655.

Direct phone number for **Somerleyton** swing bridge is 0330 858 4656.

Bridge keepers may be contacted on VHF Channel 12 but note that the **Reedham** bridge keeper has a hand-held VHF radio with limited range only.



Wroxham road bridge – image courtesy of Mike Page – www.mike-page.co.uk

WROXHAM BRIDGES

Clearance under **Wroxham** road bridge is 2.21 metres (7ft 3in) at Average High Water During Summer.

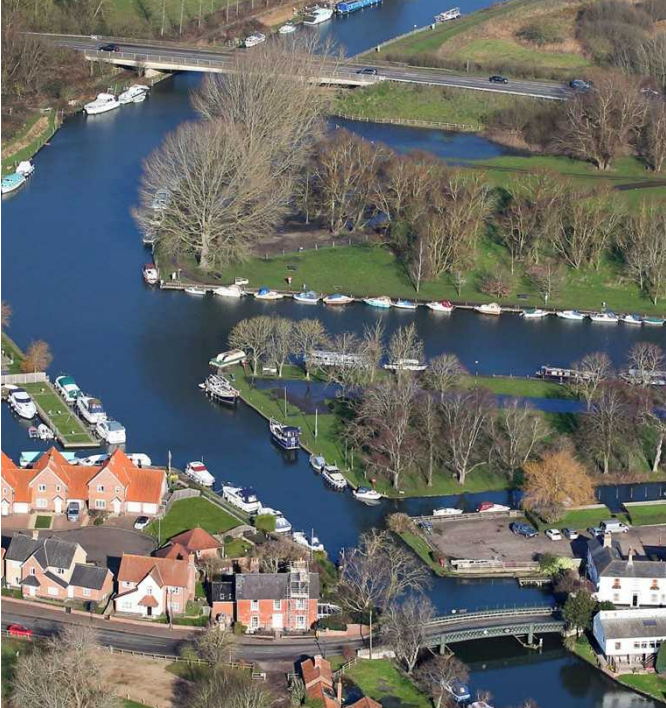
Be aware of warning chains just before the bridge (downstream), attached to the footbridge.

Pilot assistance is available from *Granary Staithe* (next to the bridge, downstream) if required.



Wroxham rail bridge – image courtesy of Mike Page – www.mike-page.co.uk

Clearance under **Wroxham** rail bridge is 4.57 metres (15ft), but only the centre span should be used.



BECCLLES BRIDGES

Clearance under **Beccles** new bridge is 3.66 metres (12ft) at Average High Water During Summer.

Clearance under **Beccles** old bridge is 1.98 metres (6ft 6in) at Average High Water During Summer.

Beccles new bridge (top of image).

Beccles old bridge (bottom of image) – image courtesy of Mike Page – www.mike-page.co.uk