This is the first ever guide to the fascinating but hitherto unknown history of water towers in East Anglia. Its aims are to inspire people to consider the variety and significance of the region's water towers and to demonstrate their enormous potential as cultural and economic resources. Water towers have inspired poets, musicians, novelists, painters and photographers but their history is an enigma.

East Anglia has some of the oldest, biggest and tallest water towers in Britain but because the builders were often municipal water boards who have gone with privatisation, few records of their design or construction have been preserved. Much information has been lost and apart from a dedicated few, very little attention is given to water tower history and architecture today.

Available maps are inaccurate as many towers have quietly disappeared or they quite patently exist without recognition. It is estimated that East Anglia has over 300 water towers so this guide is a just a taste of what is waiting to be discovered by the adventurous.

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Includes full colour poster
In East Anglia the water tower explorer has an unparalleled opportunity to compare many kinds of towers in close proximity that illustrate the progress of tower design over 300 years. Many towers are unique but municipal or industrial designs can have multiple examples. The towers here are those of which something of their history is known. Please respect that towers are on private property and there are no visitor facilities unless noted.

1. Elmham St Michael, Suffolk 1957 3D (OS: TM341837)
   Concrete water board design with a pleasing 1930's aesthetic. Common in East Anglia.

2. Bradfield St Clare, Suffolk 1951 4C (OS: TL913577)
   Octagonal legged concrete design common in East Anglia.

3. Havering atte Bower, Essex 1935 6B (OS: TQ517931)
   Romantic turret in reinforced concrete by L G Mouche. In need of attention.

4. 'Jumbo', High St, Colchester, Essex 1882 5C (OS: TL932532)
   Major landscape feature and focus for preservation controversy.

5. Thornham Hall, Eye, Suffolk Late 19th C 3D (OS: TM102718)
   Brick Italianate estate tower beside restaurant. www.thornhamhallandrestaurant.co.uk

6. Risby, Suffolk 1953 3C (OS: TL972570)
   Water board design of a single shaft concrete octagon.

   Five chambered 'brutalist' style. Interesting departure from the norm.

8. House in the Clouds, Thorpeness, Suffolk 1923 4E (OS: TM468598)
   Steel & timber framed tower now converted to a holiday let that sleeps 10.

9. Southwold, Suffolk 1937 3E (OS: TM501763)
   150,000 gallon municipal concrete tower beside a listed 1866 wind pumped brick tower. Seen in a Peter Greenaway film.

10. Kilverstone Hall, Nr Thetford, Norfolk circa 1905 3C (OS: TL892842)
    Exceptional brick Arts & Crafts example.

11. Raveningham, Toft Monks, Norfolk 1977 2D (OS: TM413951)
    Prefabricated concrete cone of innovative Swedish design. Tank was raised up the shaft by jacking.

12. Ford Motor Works, Dagenham, Essex 20th C 6B (OS: TQ494828)
    Steel industrial towers of American pattern.

13. Riviey Hill, Linton, Cambridgeshire 1936 4B (OS: TL566478)
    Pleasing brick Arts & Crafts example.

14. Appleton Tower, Sandringham, Norfolk 1877 1B (OS: TF705277)
    Exceptional brick Italianate tower restored for holiday lets by the Landmark Trust. www.landmarktrust.org.uk

15. Rushmere Heath, Ipswich, Suffolk 1973 4D (OS: TM341837)
    Unusual concrete modernist design.

    A brick municipal tower paired with modern concrete 'flying saucer'.

17. Martello Tower 'M' HMS Ganges, Shotley, Suffolk 1812 4D (OS: TM341837)
    Stone defence tower converted to supply Navy training establishment.

18. 'The Onion', Basildon, Essex 1963 6B (OS: TM341837)
    Steel peachoid American factory tower.

    Low brick tower above 450' borehole. Converted into museum display space.

20. Goldings Lane, Leiston, Suffolk 1970's 3E (OS: TM341837)
    Concrete champagne glass.

21. Haylings Road, Leiston, Suffolk pre 1914 3E (OS: TM341837)
    Brick tower with iron tank now converted to private house in public park. Once served Garrett works and estate.

22. Former USAF Bentwaters, Rendlesham, Suffolk 1960's 4D (OS: TM341837)
    Steel Braithwaite tanks remaining from the Cold War.

23. Spriteshall Lane, Felixstowe, Suffolk 1934 4D (OS: TM286363)
    At 145 feet, this concrete tower is the highest of this form in UK.

24. Shrubland Park, Coddenham, Ipswich, Suffolk mid 18th C 4D (OS: TM341837)
    Estate tower at a country house designed by Sir Charles Barry, architect of the Houses of Parliament.

25. Fronks Road, Dovercourt, Essex 1902 5D (OS: TM341837)
    A very rare example of early flanged steel construction.

26. Park Road, Ipswich, Suffolk 1936 4D (OS: TM341837)
    A rare concrete design. Possibly by L G Mouche.

27. Church Langley, Harlow, Essex 1983 5B (OS: TM341837)
    Conical tower popular with charity abseilers.

28. Manse Drive, Cottenham, Cambridgeshire 1840's 3A (OS: TM341837)
    Former windmill converted to water tower undergoing second conversion into home (05).

29. Houghton Park, near King's Lynn, Norfolk 1731 6B (OS: TF789294)
    Fine Palladian estate water tower at the home of Robert Walpole. Probably the oldest tower still in use today.

30. High Street, Epping, Essex 1872 5B (OS: TM341837)
    Attractive brick tower by prolific engineer Thomas Hawksley.

    Fine estate tower overlooking workers' cottages.

32. Caister-on-Sea, Norfolk 1932 2E (OS: TM341837)
    Largest known 'intre' concrete tank in UK.

33. Station Road, Thorney, Cambridgeshire 1855 2A (OS: TM341837)
    Fine Jacobean revival tower by Samuel Sanders Teulon.
No life exists without water and no society prospers without water in plentiful supply. Across the deserts and plains of North America, communities cluster around the water towers that make existence there possible. Many engineering advances were first perfected in water towers which figure considerably in North American culture. Yet, despite their quantity in East Anglia, the significance of water towers in Britain has hardly been acknowledged until now.

East Anglia has few places ideal for reservoirs so its water mostly comes from river extraction and wells. The Romans used pumps to fill raised cisterns which fed wooden pipes for distribution. The remains of a Roman water tower have been uncovered at Ixworth. Later, many medieval castles and monasteries had stone water towers lined with clay or lead.

From the late 16th century, wind and waterwheel driven pumps began to appear in European cities. A 'forcer' pumping piped water "to the highest parts of the city" was in use in Norwich in 1583. One of the great early water engineers was George Sorocold (1668 - 1717) from Derby who built many 17th century pumping systems including those for Norwich, King's Lynn and the Palace of Versailles.

The Industrial Revolution (1760-1830) brought greater demand for water for manufacturing processes. With the introduction of steam pumping, the water tower became
essential for maintaining a constant pressure in the supply. Brick water towers became prominent alongside engine houses, chimneys and factories and, with advances in iron and steel manufacturing and the growth of the railways, all-metal water towers were developed.

According to English Heritage: "the water industry in England then was of the greatest international importance ... many of the solutions adopted in Europe and North America were first devised in English towns." After a fire destroyed the city-state of Hamburg in 1842 when the water supply failed, the British engineer William Lindley (1808-1900) built several towers for the new water system and then many more for other European cities. It was noticed that British designs reduced mortality from cholera and British technology was in demand in Europe until the 1900's when the German engineer Otto Intze made significant advances in tower and dam engineering.

The cholera epidemics of the mid 19th century and the 'Great Stink' of 1858 convinced Parliament that Britain's water supply needed a complete overhaul. Great Victorian engineers like Joseph Bazalgette (1819 - 1891) built large metropolitan water projects and with them many water towers. Some Victorian engineers such as Thomas Hawksley (1807-1893) became noted for their architectural sophistication as well as their engineering brilliance. Meanwhile, East Anglia's great engineering firms such as Ransomes and Garretts were producing pumps, pipes and water tanks for railways and water systems across the world.

The period 1860 to 1930 is considered the golden age of water towers. Worldwide demand encouraged research and development as engineers could get plenty of orders for successful designs. From the 1890's the French engineer Francois Hennebique (1842-1921) was building towers from reinforced concrete and the techniques he perfected in water towers unleashed the enormous potential of this material elsewhere. Hennebique's UK agent was the French born engineer Louis Gustave Mouchel (1852-1908) and his firm's designs dominate tower construction after W.W.I.
Despite progress in the cities, waterborne diseases were still common in rural areas where local governments could not raise the capital investment required. Some remarkable water towers were built by large landowners, schools and asylums but in 1910, two thirds of rural parishes in England still had no piped water and relied on sources at risk of contamination.

In 1944 the rural water boards obtained the public investment they needed for a long period of post-war tower building. During W.W.2 East Anglia’s strategic position caused a great number of prefabricated steel towers to be built for military installations. Some were adopted for the public supply afterwards and remain in use. It took until the mid-sixties to connect every town and village in East Anglia to mains water.

Most towers constructed in East Anglia after 1945 were built in reinforced concrete - often on Mouchel patterns - but the designers remain anonymous beyond references to the main contractor. Cost constraints were usually too great to express the optimism of design in the mid 20th century although a few towers are bold experiments. Aesthetically, tower design tends towards making a bold outline as viewing is usually from a distance where fine details are invisible. Towers shaped as champagne glasses or a ‘bowl in hand’ or slender flutes and a few Brutalist structures have been tried but, by the end of the 20th century, electric pumping had become cheaper than building and maintaining towers. Tower research and development today continues for markets in the Middle East, where Kuwait’s futuristic water towers have become a symbol for the developing country.

The future of water towers in East Anglia likely lies in their imaginative reuse. Their visibility gives them commercial value. Many redundant towers are maintained as sites for mobile phone masts which can be lucrative and masts on water towers rarely meet opposition on aesthetic grounds. Disused towers have become homes, offices, performance venues, sports facilities and viewing platforms or camera obscura. Not all towers are worthy of preservation but many significant examples have already been lost. Although progress could one day make phone masts obsolete, few towers have got recognition for their historic or cultural significance outside a small group of enthusiasts.
THE WATER TOWERS OF EAST ANGLIA