



THE
NORWICH
SOCIETY

TELLING THE TIME IN NORWICH

2nd edition



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ABOUT TELLING THE TIME IN NORWICH

This is about the ways in which clocks and sundials have been used to tell the time in Norwich. It includes a directory of all clocks and sundials that can be viewed in places open to the public.

This edition published 2023, first edition published 2018.

The maps use a base of Ordnance Survey Open Data Crown Copyright and database right 2022. The Icons used in the directory maps are adapted from icons at www.svgrepo.com and are used under public domain licence.

INTRODUCTION

The Norwich Society's Civic Environment Committee usually carries out an audit or survey each year. In 2017 we decided to look at public clocks and sundials. In this digital age, with phones and watches, it may seem that the need for public clocks has been superseded but the City has a surprising number, many of historical interest and still popular with the public. Indeed the idea for the survey came to a Committee member when cycling for an appointment. His wristwatch was covered up and he did not have time to stop and look at a phone, but was keen to know whether he was going to be on time; it was then he looked for a clock.

We decided to include all exterior clocks within the City boundary, as well as interior clocks which were in a public space e.g. the Royal Arcade. When we started the project a brainstorming exercise suggested that we could think of 20-30 clocks. We soon became aware of our ignorance, with over 60 clocks and sundials finally recorded. We would not be surprised to learn of more that we have overlooked.



Digital clock at Morrisons



City Hall clock - regularly maintained :
Guildhall clock - not working

There are surprisingly few digital clocks, with even the more recent installations, and there have been several, being in analogue format, although not usually with traditional Roman numeral dials.

What we found by way of audit of their condition was significant variability. Some are clearly well-maintained and cared for by the owners of the properties, whilst others appear neglected and in need of repair or restoration. We also discovered that thanks to a joint project between the Norwich Society and the Norwich Historic Churches Trust in the 1990s the clocks on the following medieval churches were restored to use : St Clement (no. 22 in the directory); St Gregory (no. 26); St John de Sepulchre (no. 27); St Michael-at-Plea (no. 29), and



In need of repair or renovation : St Lawrence and Britannia Barracks clocks and Dial Corner and St John Maddermarket sundials

St Michael Coslany (no. 30).

The initial research for this project was undertaken by the then members of the Norwich Society Civic Environment Committee in 2017-18 : Alan 'Theo' Theobald, John Trevelyan, Jonathan Hooton, Kate Nash, Michael Cross, Roy Holmes, Sue Pike and Sue Roe. The research for this revised edition was undertaken in 2022.

Photographs are by committee members except where otherwise credited. The postcards are from the Norwich Society's collection.

The Society would like to thank Simon Michlmayr (S. Michlmayr & Co) and David Payne (British Sundial Society) for their time in discussing clocks and sundials for the information

they have imparted to us and for permission to use the photograph on page 6. David Payne's Burlingham Sundial Trail can be accessed at <https://sundialtrailsoftheburlinghamwalks.wordpress.com/>

The Society has found the following publications and websites of use:

- Norfolk and Norwich Clocks and Clockmakers (Clifford and Yvonne Bird, Phillimore 1996)
- Norwich Knowledge (Michael Loveday, 2011)
- The Medieval Churches of the City of Norwich (Nicholas Groves, Norwich HEART and East Publishing, 2010)
- <http://sundialsoc.org.uk/> [British Sundial Society]
- <https://greenwichmeantime.com/>
- <https://www.rmg.co.uk/discover/explore/greenwich-mean-time-gmt>

CLOCKMAKING IN NORWICH AND NORFOLK

The establishment of clockmaking as an industry began slowly in the period 1600 - 1650. Immigrant clockmakers began to arrive, following the Spanish invasion of the Netherlands in 1565 - 68. Many of these protestants, who had already fled from religious persecution came to Norfolk and it is interesting to note that the population of Norwich almost doubled between 1600 - 1640, despite the recurring plagues in which thousands died. Many of the immigrants were weavers but other skills were evident notably in the Van Barton family of clockmakers.

The hundred years from 1650 - 1750 are often referred to as the glorious period of English clockmaking. Ahasuerus Fromanteel who was born in Norwich in 1607 of Flemish immigrants introduced the pendulum which made a vast improvement to the accuracy of time keeping. Some of the greatest Norfolk makers are listed in the period. There was a shop at the back of Norwich Guildhall occupied by a succession of fine clockmakers – Jeremiah Hartley 1680-1710; Edward Browne 1717-35; Robert Gymer 1735-1750; Thomas French 1750-51; John Harrison 1751-65, definitely the place to be seen when buying your

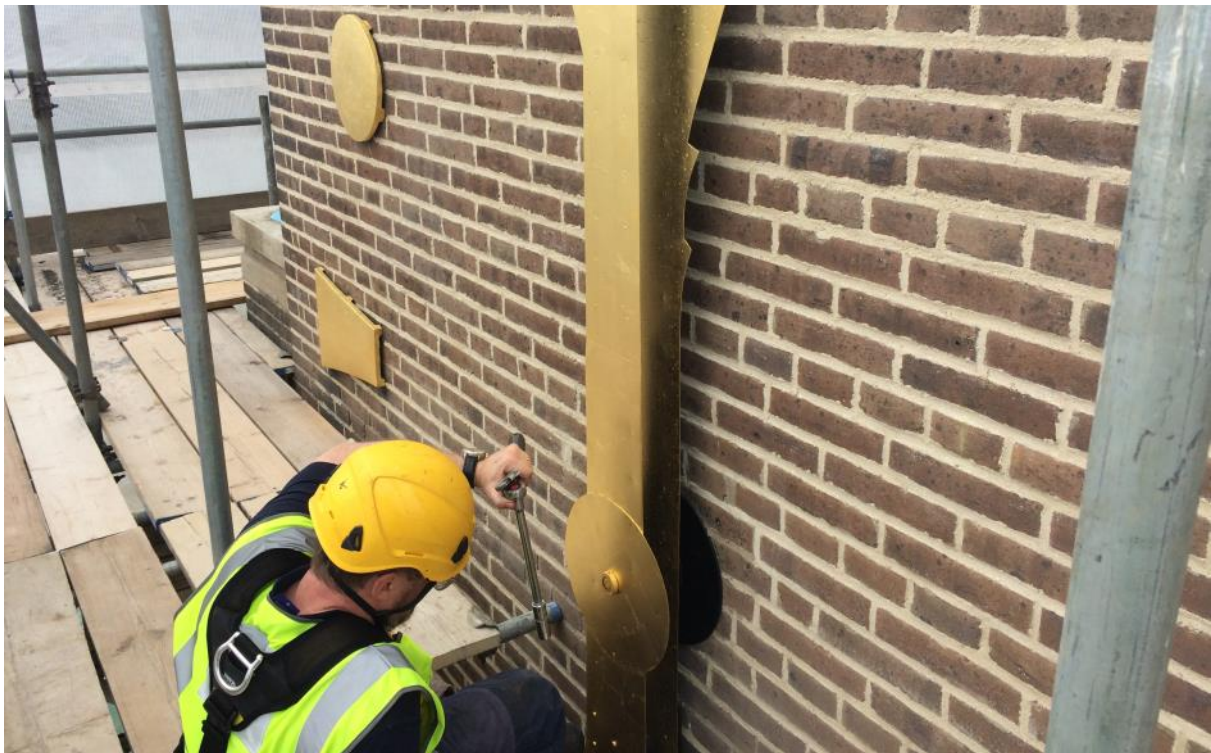
latest timepiece. The greatest growth in clockmaking was in 1750 onwards.

Around 1800 there was an influx of clockmakers from the Black Forest who settled in Kings Lynn and Norwich notably the Beha and Zipfel families. By the mid nineteenth century clocks from the Black Forest area were imported in huge numbers as were low priced clocks from America.

These factors saw the change in Norfolk from manufacture to repair, retailing and servicing and few clocks were made in the present century until the advent of the electric clock.

Robert Smith is the only sundial maker listed (1708) although there must have been others. Many sundials still exist in Norfolk, mostly on old churches but following the introduction of the telegraph, radio time signals, the International Time signal in 1927 and the speaking clock in 1936, they have become somewhat neglected. Some have been relegated to a feature in formal gardens and no longer orientated to record solar time.

Norwich still has clockmakers and repairers. S Michlmayr & Co made the clock at Smith & Pinching (no. 44 in the directory) and regularly keep other clocks in good order. A major job in 2017 was the refurbishment of the City Hall clock (no. 9), including regilding of the dial and hands. A blog on their website [<https://www.michlmayr.com/blog/>] tells more of the story and of how to apply 24 carat gold leaf at the top of a tall tower.



Reinstalling the City Hall clock hands after refurbishment. Courtesy S Michlmayr & Co Ltd

THE GURNEY CLOCK

The Gurney Clock is considered to be the most accurate mechanical clock in the world and one of the most important mechanical clocks created in the last 100 years. Or rather it would be if it was in one piece and working, rather than in pieces somewhere in the care of Norwich City Council.

The history of the Clock is as follows. Gurney's Bank was founded in Norwich in 1775. The Bank provided the finance to enable the cloth trade in Norwich to survive the bad as well as the good times. By 1896, banking had become such a large business that Gurney's amalgamated with 20 other banks under the title of Barclays & Co.

Mr Richard Quinton Gurney, then Head of the Norwich branch of Barclays, wished to commemorate the long association of Gurney's bank with the City of Norwich. When approached, the City Council decided that an animated clock placed in Chapel Field Gardens, would be most appropriate to mark the Bank's bi-centenary in Norwich.

On July 3rd 1987 the keys were finally handed over to the City. The theme of the automata was to show the interaction between the City of Norwich represented by the Lion and Castle, and the Bank represented by the Scales circulating money within the City of Norwich. The cost of the clock came to over £250,000. It was decided to link the Bank's bi-centenary with the reward of £20,000 given in 1775 to John Harrison, who devoted his life to the improvement of timekeeping and produced a chronometer that determined the longitude at sea to $\frac{1}{2}$ a degree, thereby putting Britain in the forefront of navigation. However it was twelve years after the bicentenary that the clock was eventually handed over. This was entirely due to the perfectionism of Martin Burgess, who was determined to be accurate in copying the Harrison design, and refused to be tied down to a finishing date. The clock was vandalised at its Chapelfield Gardens location and



taken away. After much effort by the Norwich Society's then Administrator, Sheila Kefford and with the support of many others the Clock was restored and located in Castle Mall shopping centre, as shown in the photographs. However when the centre was given a makeover in 2015 the clock was removed and no new home has yet been found for it.

CLOCKS AS MEMORIALS

There are three clocks in Norwich that serve as memorials. The Laurence Scott clock (no. 39) is above a tablet listing the names of company employees who died in the First World War.



The clock on St Clement Colegate (no.22) was restored in 2004 with a memorial added to the fallen of the Second World War.



The clock on St Michael-at-Plea contains the inscription "Forget Me Not", but it is not known whether this was intended as a memorial.



CLOCKS AS ADVERTISING



Clocks can be used as advertising. This can be just the name of the business, as with Gordon Barber (no. 38) and Norwich Union (no. 17) or can also include details of what the business offers, as with H Samuel (no 13) and Aleks (no. 2).

Or, in the case of Abbotts estate agents (no. 1), it can just be the slogan “Time to Move”.



A quite different use of a clock in relation to advertising is seen at the railway station concourse (no. 45), where the clock is used as part of a much wider advertisement, in this illustration given the surrounding of Big Ben as part of an advertisement encouraging travel by train to London.



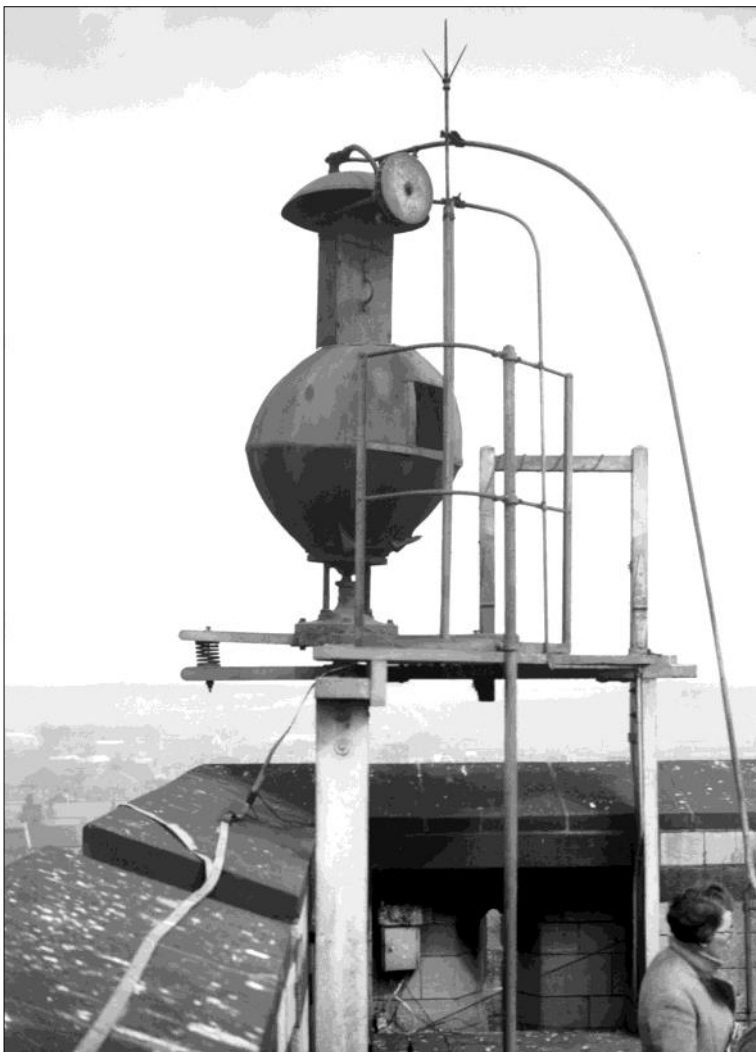
RINGING OUT THE TIME

Clocks often contained bells, so that the hour can be chimed - the Big Ben example in the previous section being known worldwide. Indeed the records often indicate that minute hands were added to church clocks long after their introduction - it being previously considered sufficient for parishioners to hear the hourly chime. Clocks in Norwich that still tell the time this way are : Cathedral (no. 7), City Hall (no. 9).

The Castle Time Ball

Text and photo courtesy of the George Plunkett archive: www.georgeplunkett.co.uk/Norwich/castle.htm

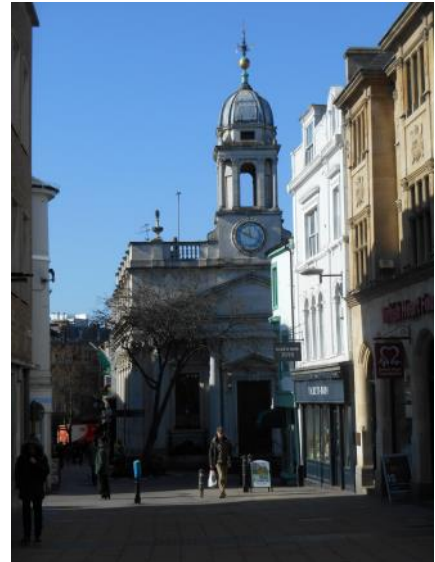
A month before the arrival of the City Hall bell in 1938 the time ball on the battlements of the Castle, made redundant by time signals broadcast over the radio, had been dismantled. It had been used for the first time on 10th August 1900, much against the wishes of the



museum curator, James Reeve, who feared that the daily detonations might endanger the structure. Exploded electrically from Greenwich, it worked by electro-magnet and detonator, with the current coming via the GPO. Its operation necessitated an attendant climbing up daily to rehoist it, a duty carried out some years before his death in 1934 by Arthur Harmer. A man of many parts, Arthur was also caretaker of Churchman House, city mortuary keeper and one of the liveried attendants accompanying the Lord Mayor when he travelled in the civic coach to official functions..

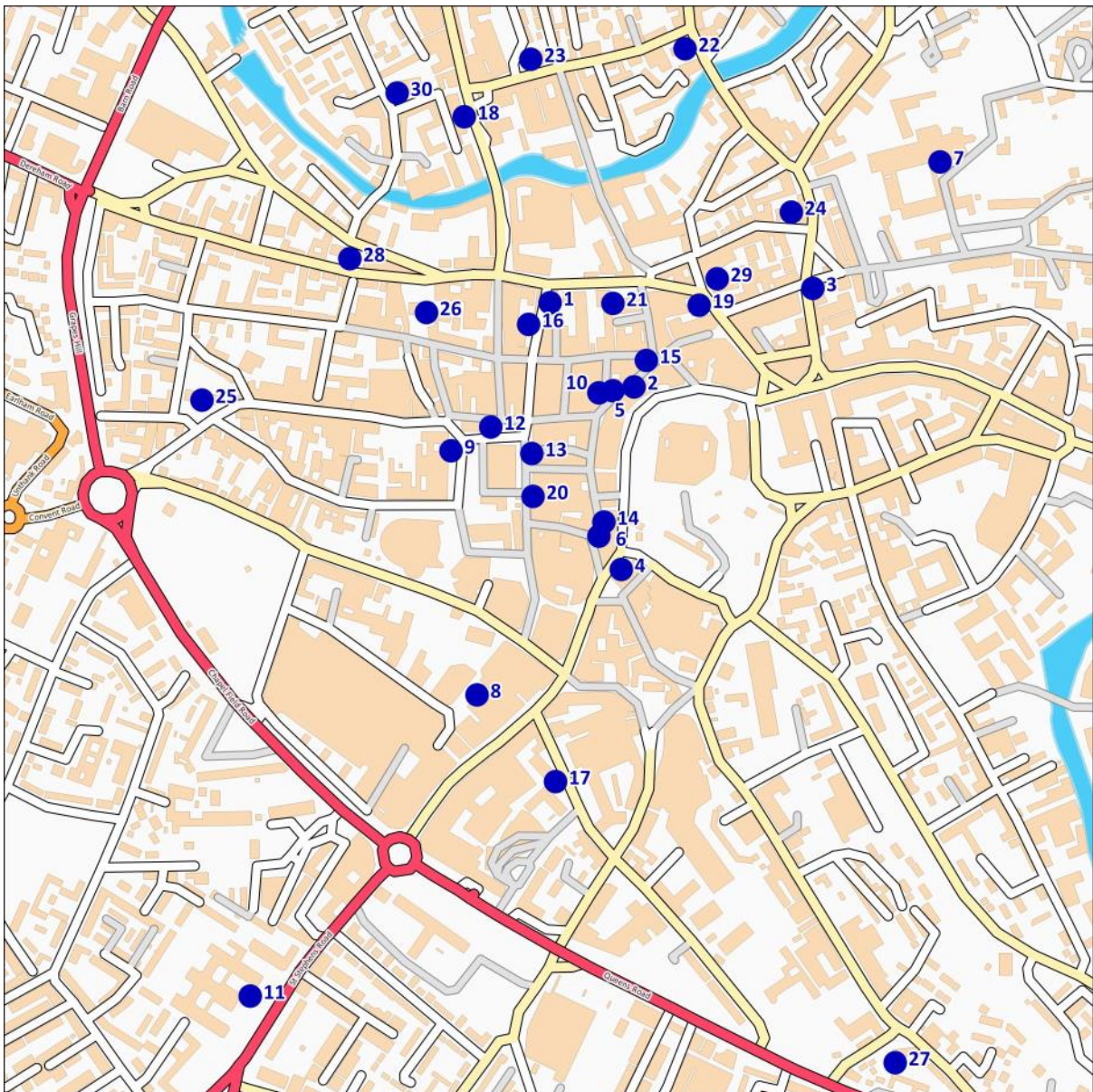
CLOCKS IN THE CITY LANDSCAPE

Clocks, and their towers, play an important part in the City landscape today, both in the near view, as the context images in the directory show, and in wider views. Perhaps inevitably the City Hall clock tower features most often.

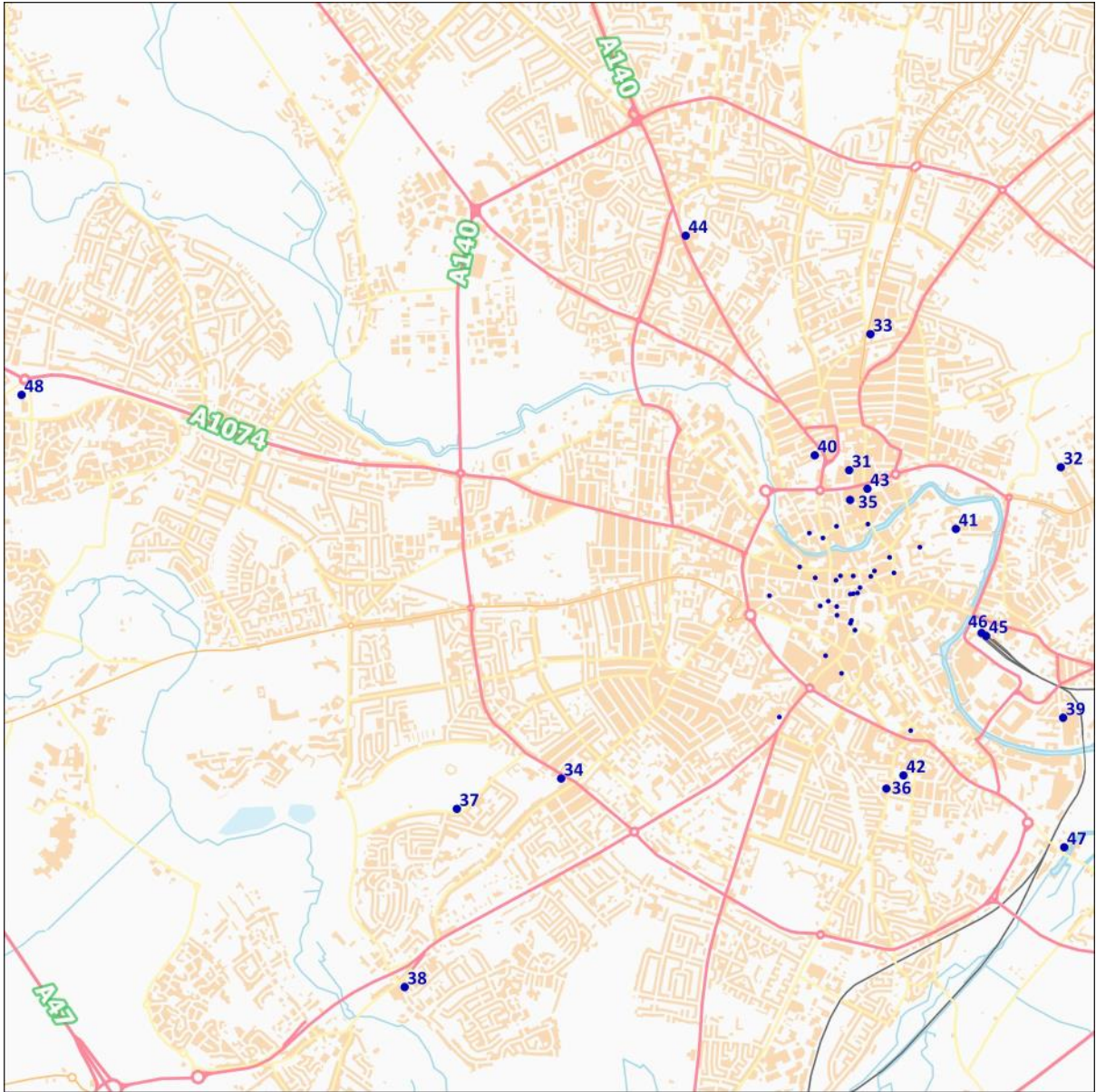


THE CLOCKS DIRECTORY

The directory is in two parts, relating to the two maps on this and the next page. Clocks 1 to 30 are in the city centre as shown on the map below: clocks 31 to 48 are in outer areas and are shown by larger markers on the map on the next page. Location maps for each clock are included in the directory pages. All clocks are normally visible, but a couple (Royal Arcade and Station concourse) are in locations that may be closed at certain times.



City centre clocks



Outer area clocks

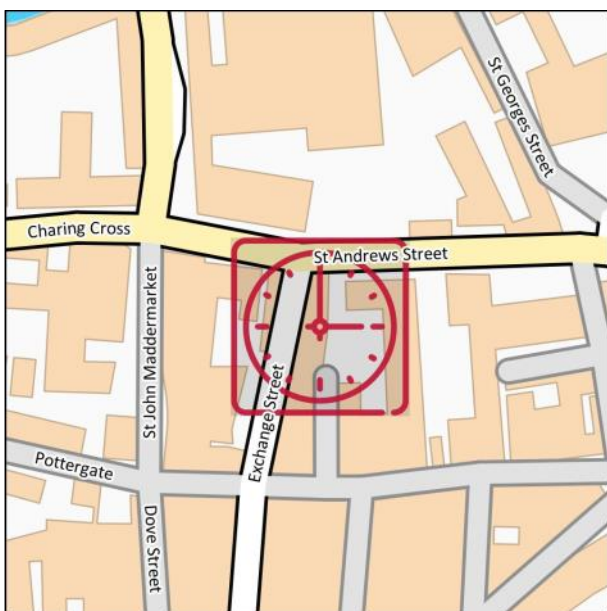
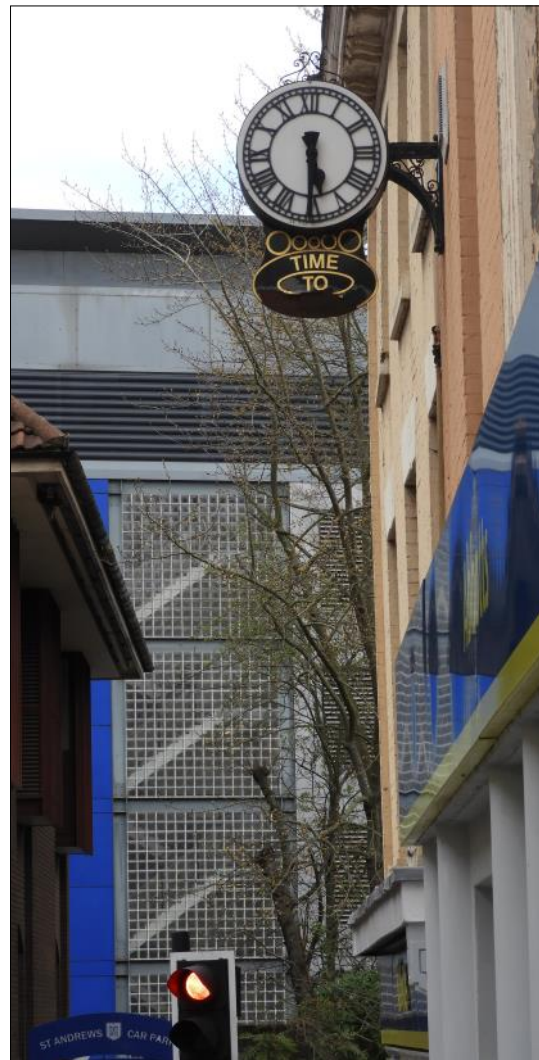
1	Abbotts, Exchange Street*	27	St John de Sepulchre, Finkelgate*
2	Aleks, London Street	28	St Lawrence, St Benedict's Street*
3	All Bar One, Tombland	29	St Michael at Plea, Queen Street
4	Bell Hotel, Orford Hill	30	St Michael (Miles) Coslany, Oak Street
5	Bullens, London Street*	31	Anglia Square, Magdalen Street
6	Castle Quarter, Castle Street	32	Britannia Barracks, Britannia Road*
7	Anglican Cathedral, The Close	33	Christchurch New Catton, Magdalen Road
8	Chantry Place, Malthouse Street	34	Colman Infant School, Colman Road
9	City Hall, St Peter Street	35	Doughty's Hospital, Golden Dog Lane
10	Dipples, Swan Lane	36	East of England Co-Op, Hall Road
11	Fellowes Plain, St Stephens Road	37	Eaton Park, South Park Avenue
12	Guildhall, Guildhall Hill*	38	Gordon Barber, Church Lane Eaton
13	Former H Samuel, Gentlemans Walk*	39	Laurence Scott, Hardy Road*
14	Former Knobs and Knockers, Back of The Inns*	40	St Augustine, Gildencroft
15	Cosy Club, London Street*	41	St Helen, Bishopgate*
16	Norfolk House, Exchange Street*	42	St Mark's Lakenham, Hall Road*
17	Norwich Union, Surrey Street	43	St Saviour, Magdalen Street
18	NUA Duke Street, Duke Street	44	Smith & Pinching, Aylsham Road
19	NUA Francis House, Redwell Street	45	Railway Station concourse, Thorpe Road
20	Royal Arcade, Gentleman's Walk*	46	Railway Station exterior, Thorpe Road
21	St Andrew, St Andrew's Street*	47	Trowse pumping station, Bracondale*
22	St Clement, Colegate	48	Clocktower restaurant, 26 Jarrold Way, Bowthorpe
23	St George, Colegate		
24	St George, Tombland		
25	St Giles, St Giles Street		
26	St Gregory, Pottergate		

* - clock not working at time of survey

1) Abbots, Exchange Street

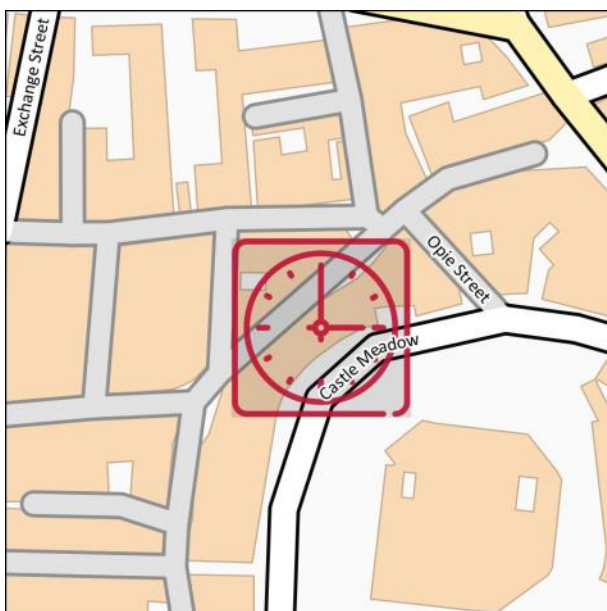
The clock was made by “As Time Goes By”, a family firm for 30 years based in Curdrige, Hampshire. Abbots estate agents have been in business since 1850 and are part of the nationwide Countrywide business.

Since the original survey, there has been damage to the slogan below the clock. It now just says “time to” instead of “time to move”.



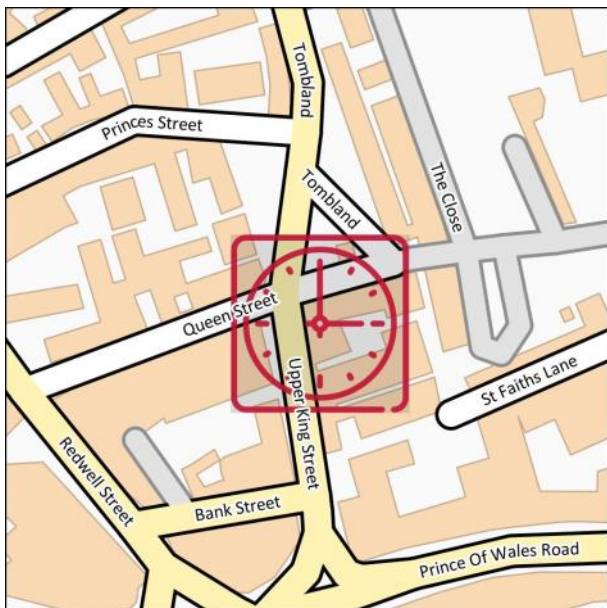
2) Aleks, London Street

The clock is believed to date from the 1990s, and advertises Aleks, a family-owned jewellers that has been in business for over 40 years. It occupies a prominent place above London Street, the first street in England to be pedestrianised. A plaque near to Aleks marks the 50th anniversary in 2017 of that pedestrianisation



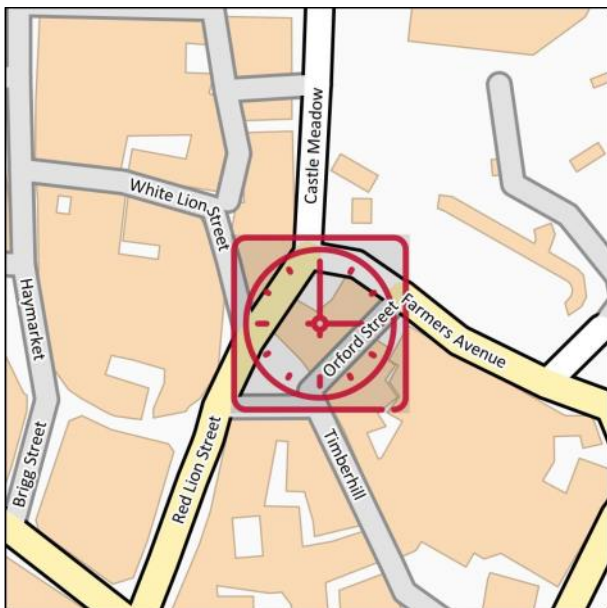
3) All Bar One, Tombland

The clock was made by Smiths of Derby. All Bar One is part of a restaurant chain owned by Mitchells and Butlers, who maintain the clocks.



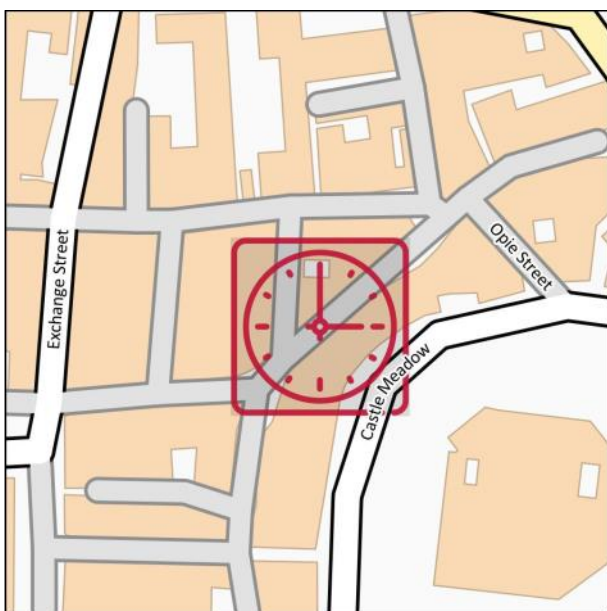
4) Bell Hotel, Orford Hill

This clock is believed to date from the 1990s. The Bell Hotel, part of the J D Wetherspoon chain, is said to date from 1485. It has been known as the Bell Hotel (or the Blue Bell) since at least 1696. In the 1750s the Bell was the headquarters of the Hell Fire Club and throughout the 18th and 19th Centuries revolutionary groups used to meet here. From 1943 until the end of World War II the Bell was home to the American Womens' Army Air Corps.



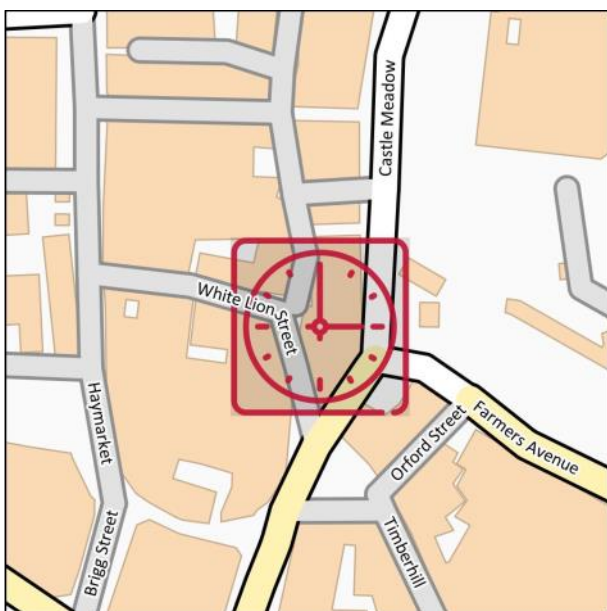
5) Bullens, London Street

The clock is above the entrance doorway. The business was established in 1887 by W R Bullen who claimed direct decent from Anne Boleyn, although he may have taken over an existing business. In 1889 Mr Bullen installed, and may have made, the 'Forget-Ne-Not' clock at St Michael at Plea (no. 29). The shopfront is the original one made by local cabinet makers Robertson and Colman when the shop was opened in its present location in 1898. Its previous location was later developed as the Nat West Bank building (no. 15). Bullen's remains an independent business, although now owned by another local company.



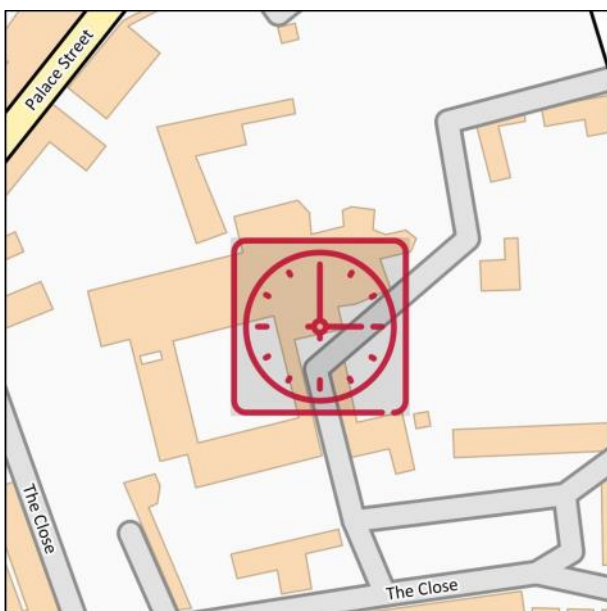
6) Castle Quarter, Castle Street

The clock dates from 1993 and was made by Grayson and Sons, who make clock and supply material, tools and equipment to the horological and jewellery industries. The clock is on all four faces of the tower, located above the entrance to the Mall in Castle Street. Castle Quarter (formerly Castle Mall) was developed on the site of the former Cattle Market and adjoining areas and extends underground for a considerable distance, with additional exits on Timberhill, Farmers Avenue and Cattle Market Street.



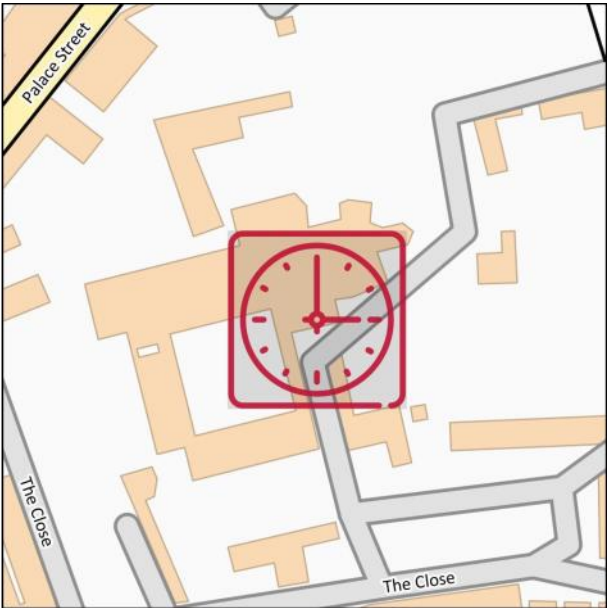
7) Anglican Cathedral, The Close – interior

This is the only clock with different external and internal faces. It was integrated into the restoration of the South Transept in 1830. It is manual and still wound weekly by one of the vergers. There are references to clocks in Cathedral records as far back as the 13th century. The Rolls from 1322 to 1325 record the construction and installation of a clock which had a large astronomical dial and automata. The jacks below the internal face once belonged to an old clock, and were made in the seventeenth century. The most complete Norman Cathedral in England and one of the finest examples of Romanesque architecture in Europe, Norwich Cathedral is one of England's finest Cathedrals. It is adjoined by the largest monastic Cloisters in England, and surrounded by the largest Cathedral Close.



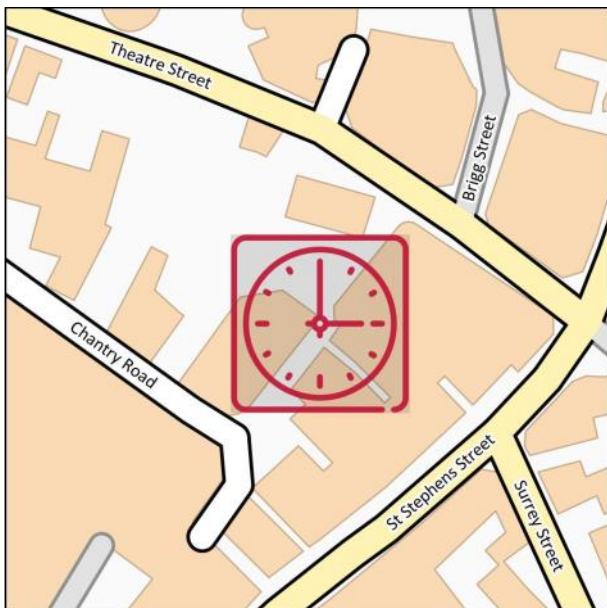
7) Anglican Cathedral, The Close - exterior

The external face is above the entrance to the South Transept from the Close.



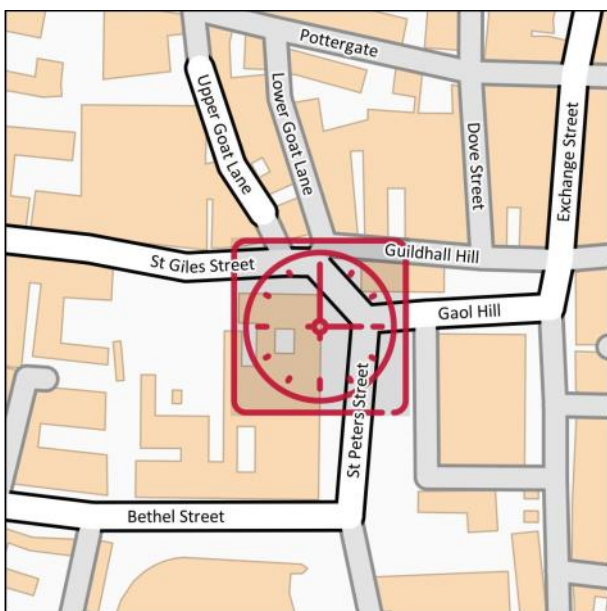
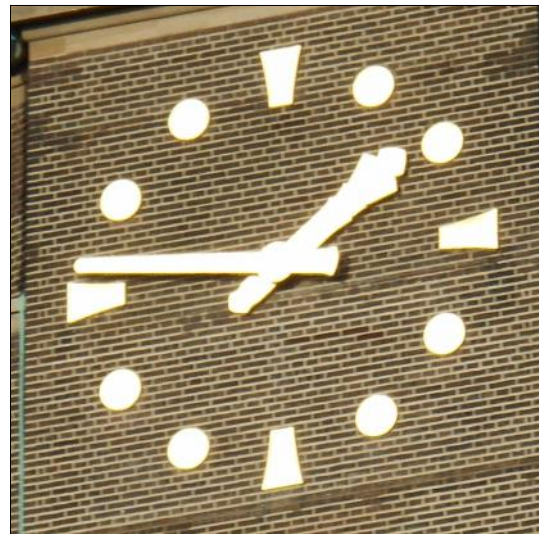
8) Chantry Place, Malthouse Street

The only clock in our directory without a dial, this quirky design was made by Smiths of Derby. It is located on the approach to the centre from Rampant Horse Street via Malthouse Street. The shopping centre, previously known as Chapelfield, was opened in 2005 on the site of the former Caleys chocolate factory.



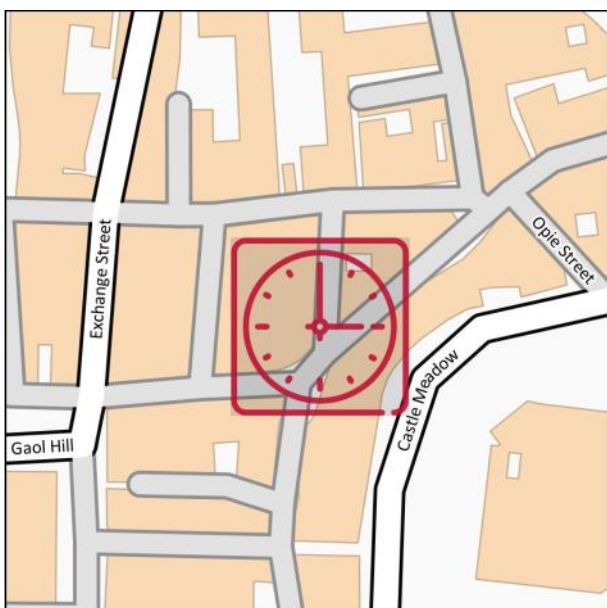
9) City Hall, St Peter Street

City Hall was completed in 1938, replacing the Guildhall (no. 12) as the seat of civic government and the clock, easily the most visible clock in the city, was installed then. The mechanism was replaced in 1962 by one centre clock by Gillett & Johnstone of Croydon. The dials were most recently restored in 2017 by Michlmayr & Co - see page 2. The Great George bell weighs nearly 3 tons and was named after George VI who opened City Hall. It is the largest and deepest toned bell in East Anglia and if the wind is in the right direction, can be heard in Wymondham, eight miles away. The clock strikes every hour from 7.00am weekdays to 10.00 pm seven days a week.



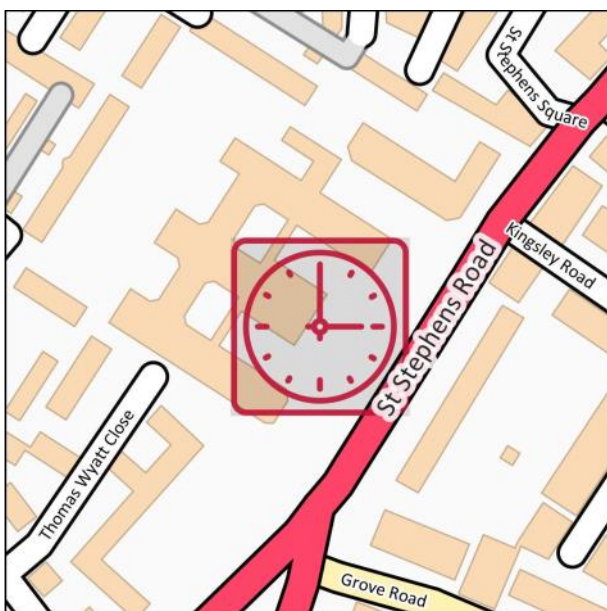
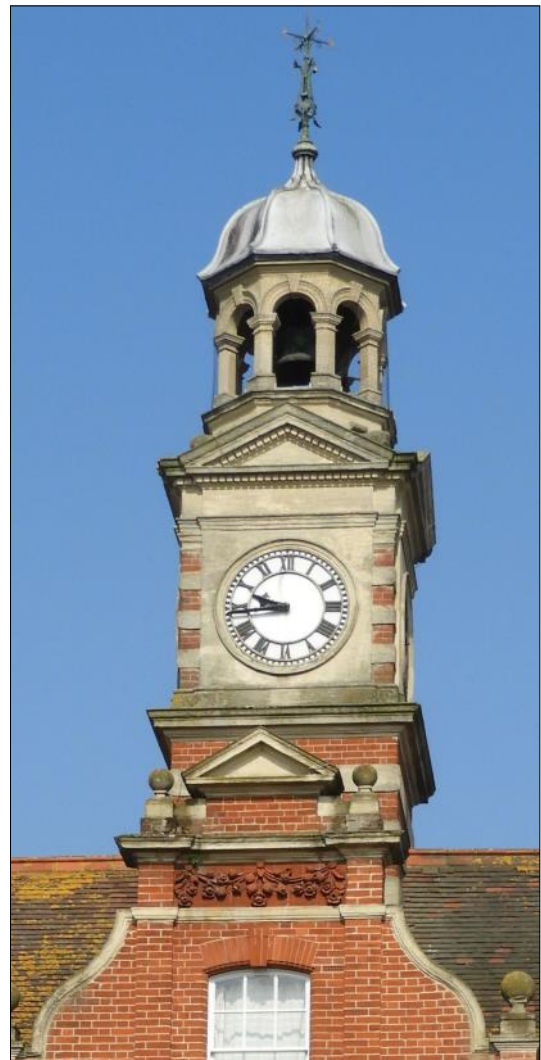
10) Dipples, Swan Lane

The clock was made by Smiths Industries, the Swan, reflecting the name of the street, made locally. Dipples is nearly 140 years old and is the only fifth generation family jewellery business in Norwich and Dereham. The business was founded in 1878 in Woodford, Essex, by George Henry Dipple. George did not stay in Woodford for very long – by 1890 he is no longer registered as living in Woodford. Between 1888 and 1890 the business was relocated to Ipswich. The store made a final move to Norwich around 1894 and has been located in Swan Lane ever since. The second store in Dereham, which was opened by Rodney Ellis, great grandson of the founder, celebrated its 50th anniversary in 2013.



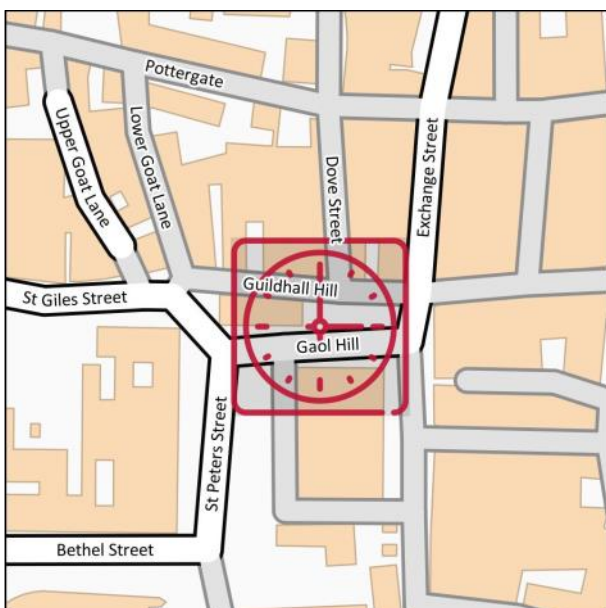
11) Fellowes Plain, St Stephens Road

The Norwich and Norfolk Hospital, now located on the west of the city, was for many years at this location. The main block was built in the 1880s to the design of renowned local architect Edward Boardman and the clock is believed to be part of the original design. The site has recently been converted to residential use, and is now known as Fellowes Plain.



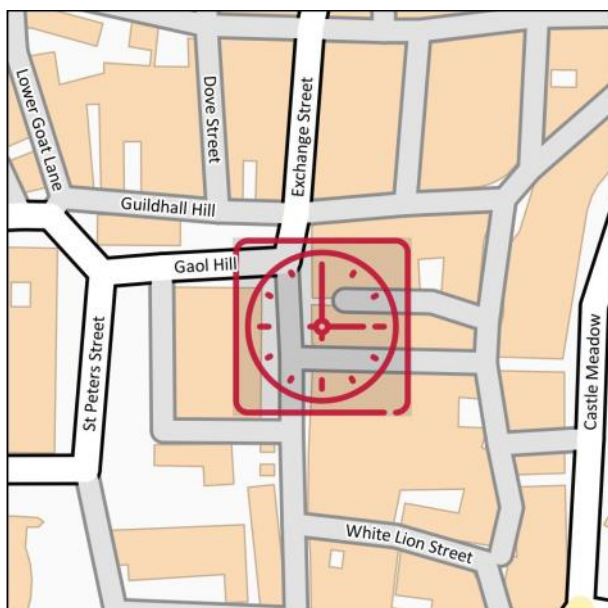
12) Guildhall, Guildhall Hill

The clock and clock tower were donated by Henry Woodcock, mayor in 1849 and 1850. The gift was conditional on the Corporation revealing the old roof of the Council Chamber by removing the false ceiling. It was restored and converted into an electrical clock in the 1990s. In 2013 conservation work done on the clock and clock tower won the Conservation Award at the Norwich Society's Design Awards. The clock, the responsibility of the City Council, is not currently working. The Guildhall was built between 1407 and 1413 and served as the seat of civic government until 1938, when it was replaced by the then new City Hall (no. 9).



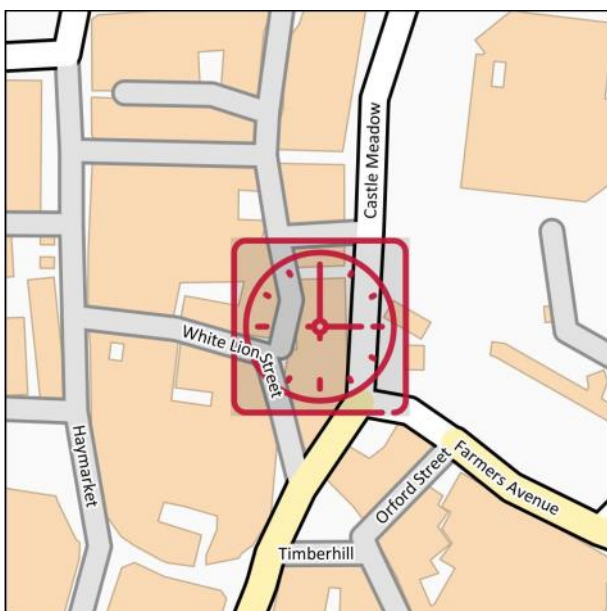
13) Former H Samuel, Gentlemans Walk

The clock is a prominent feature on the walk, although a 1938 photograph by George Plunkett shows a similar, but different one. H Samuel is a national chain of jewellers, founded in Liverpool in 1821 by brothers Moses & Lewis Samuel as a clock making & silversmiths business. Harriet, daughter-in-law of Moses, took over in 1862 and renamed it H.Samuel. The store is now occupied by Hotter and the words around the clock have been removed.



14) Former Knobs and Knockers, Back of the Inns

No longer in business, Knobs and Knockers sold door furniture in the 1970s and possibly later. The clock, no longer working, was provided by Gensign. This was shorthand for General Signal and Time Systems Co Ltd and commercial clocks are often signed with this name. However apparently the company acted as a distributor of clocks and did not actually make them; the manufacturers badge being replaced by Gensign.



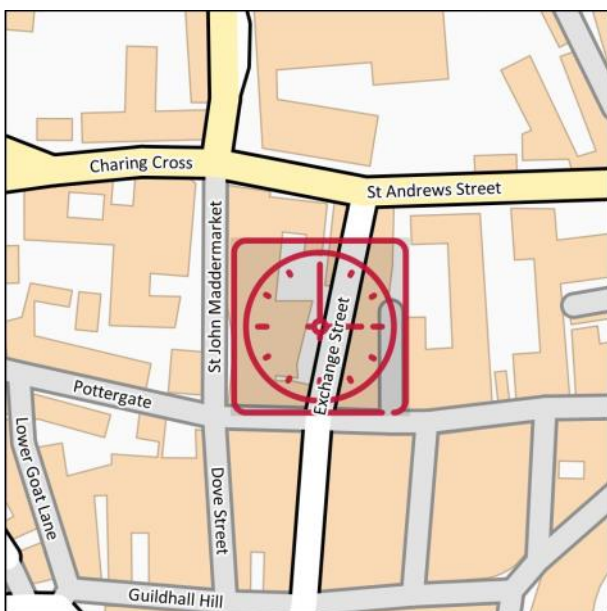
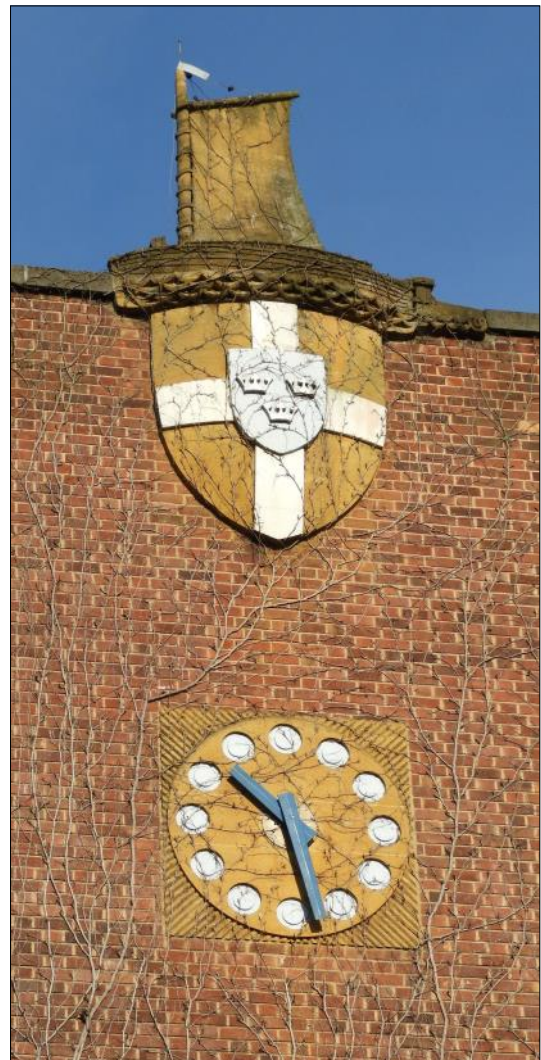
15) Cosy Club, London Street

The former Nat West building, now occupied by Cosy Cub restaurant, was opened in 1925, although having the appearance of a much earlier building, and designed by F.C. R. Palmer and W. C. Holden. The clock is a high-quality gravity escapement clock, now electrical, restored & updated by Cumbrian Clock Co. The hands are impressive – torch and sword.



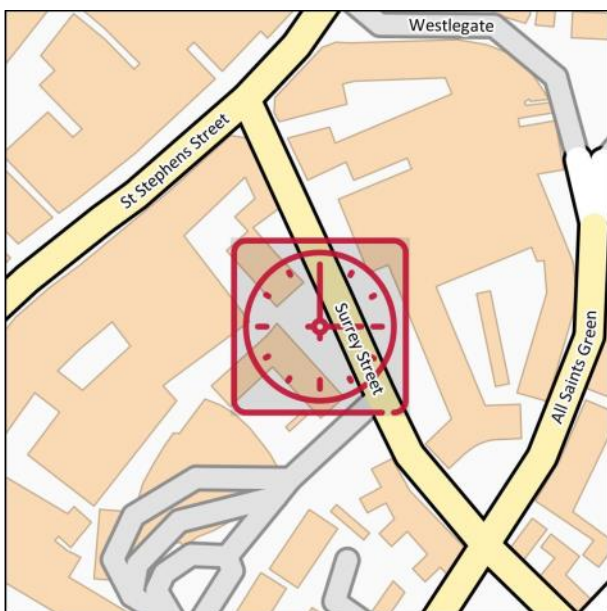
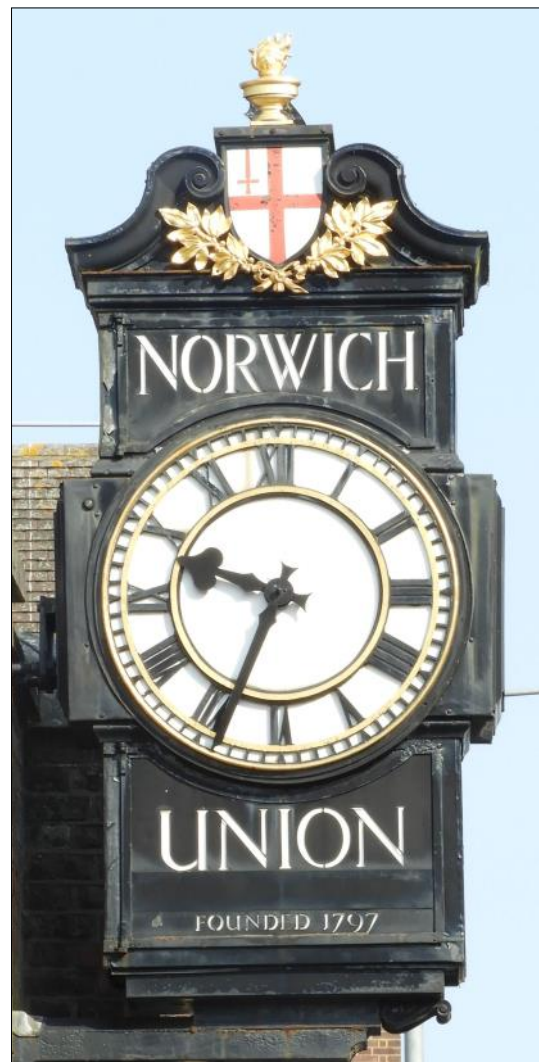
16) Norfolk House, Exchange Street

Norfolk House, now used by City College, was built in the 1950s by a local property developer in the style of town hall of Halmstad in southern Sweden, although the coat of arms above the clock are those of East Anglia and the ship atop the building is a wherry.



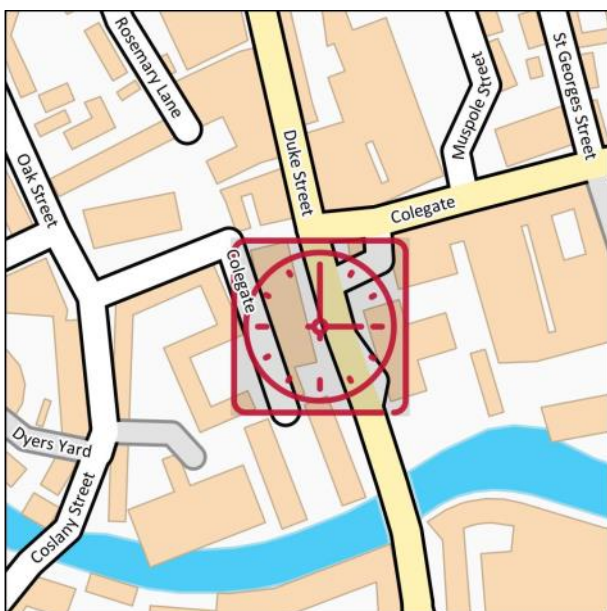
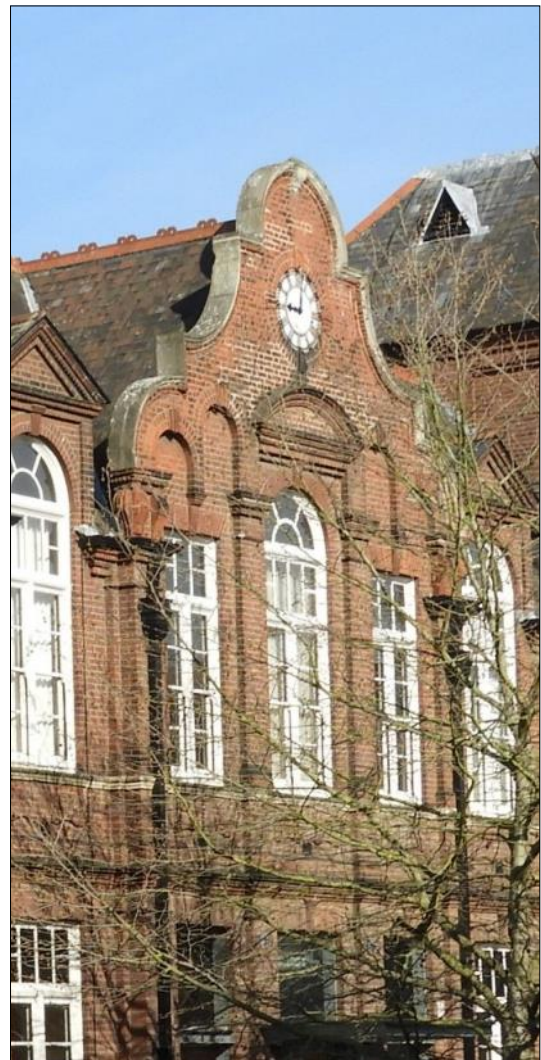
17) Norwich Union, Surrey Street

The clock, originally mechanical, but now electrical, was erected in 1927 over the entrance to No. 9 Surrey Street, which was the public office of the fire society until 1962. This followed a proposal to improve the advertisement value of the public office by the erection of a two dial illuminated clock bearing the name "Norwich Union". The cost of the clock was about £250. In 1962 the public office was demolished and the clock was moved to its current position outside Bignold House further down Surrey Street. The Clock was refurbished in 1977 and 1989. The location is opposite the main Norwich Union (now Aviva) building in Surrey House, where the Marble Hall may be visited.



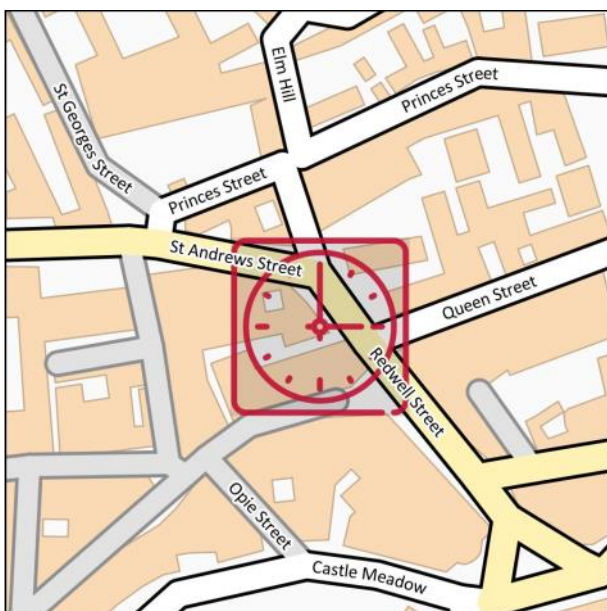
18) NUA Duke Street, Duke Street

The clock is a mechanical clock, wound once a week, and manufactured by Gillet & Johnston of Croydon. The Duke Street school was opened in 1889. It was constructed by the Norwich School Board as a higher grade or municipal secondary school, designed by Mr J.H.Brown, architect to the School Board and built by local firm J.Youngs and Son. It is now used by the Norwich University of the Arts for teaching purposes.



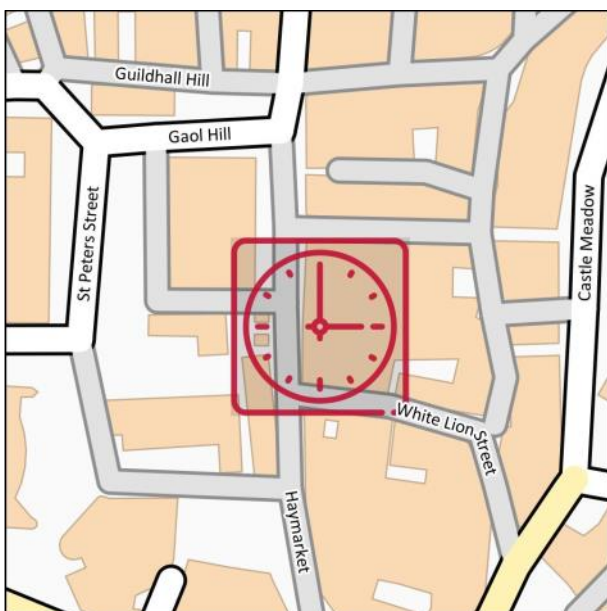
19) NUA Francis House, Redwell Street

The building was built for the Eastern Daily Press, 1958-59, by Yates, Cook & Darbyshire, appropriately since in this location there is a plaque commemorating the publication on 6th September 1701 of the first edition of the 'Norwich Post', the first English provincial newspaper. The building is now the administrative headquarters of the Norwich University of the Arts. The clock is believed to date from the construction of the building.



20) Royal Arcade, Gentleman's Walk

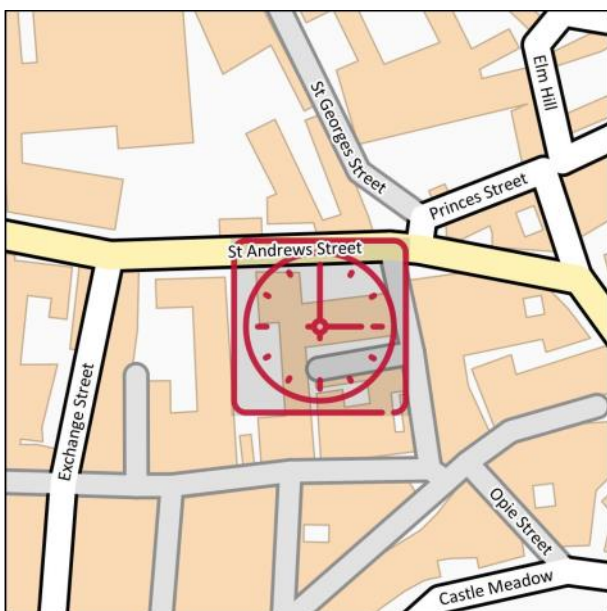
The history of the clock is not known: it is thought that it may have been put in during renovation of the arcade in the 1980s. The Arcade was opened in 1899, designed by local architect Gorge Skipper in Art Nouveau style. It occupies the site of the former stables and yard of the Royal Hotel in Gentleman's Walk, the façade of which remains at the Gentleman's Walk entrance to the arcade. The Castle Street entrance is much more ornate.



21) St Andrew, St Andrew's Street

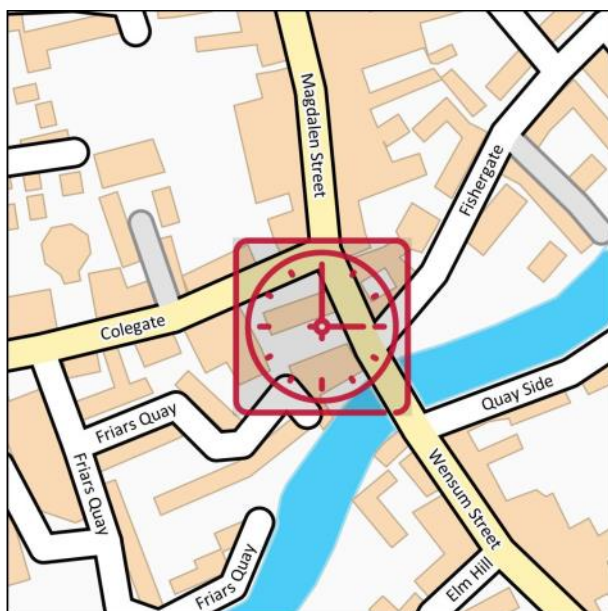
A clock was supplied by Dixon of Norwich 1883. It is said that a clock paid for by the parishioners was installed in 1977 as a memorial to the Rev A.S. Clemence (1966 and 1976) but it is unknown whether it is the old clock refurbished or a new one.

The clock has two faces, one onto St Andrews Street, the other on the opposite (South) side of the tower.



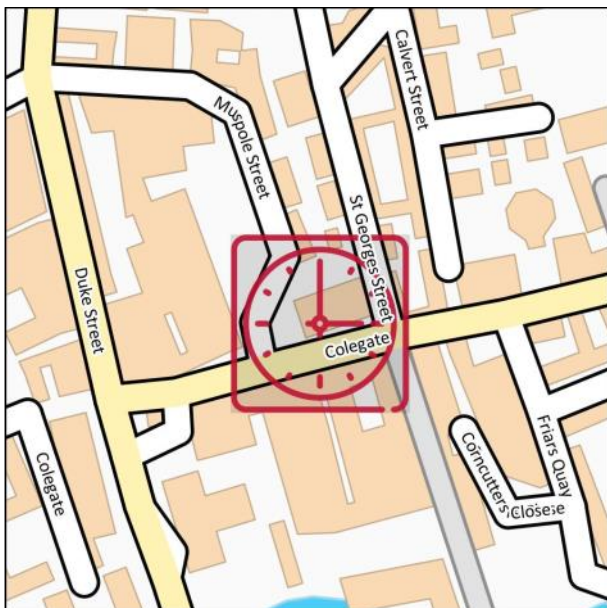
22) St Clement, Colegate

The original movement was removed in the 1940s and is now in the Museum of Norwich at the Bridewell. A synchronous clock motor, made by Smiths of Derby, was installed. The clock was restored by Simon Michlmayr in 2004 as a memorial to those who fell in the Second World War, partly funded by the Norwich Society. The church is thought to have been one of the first to have been erected on the north side of the river. Its parish used to contain a detached portion which became the parish of Christchurch New Catton (no. 33) in 1841. The church is in the care of the Norwich Historic Churches Trust.



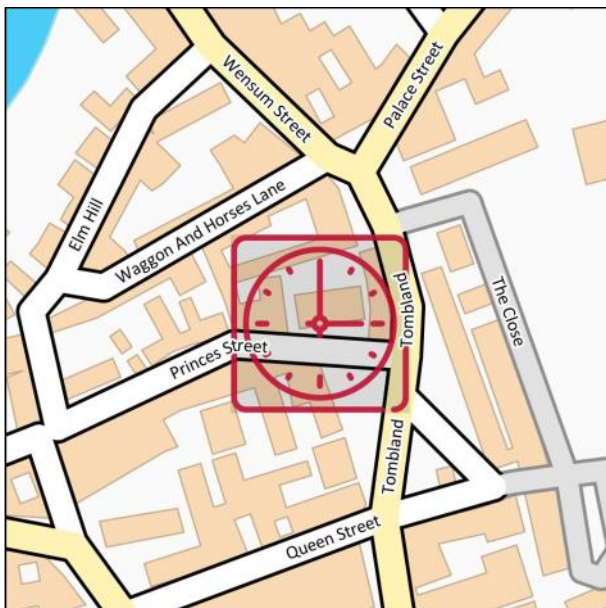
23) St George, Colegate

The clock, now electrically run, is believed to date from 1929. The church was built between 1459 and 1513, but is most noted today for its fine Georgian interior and one of the largest collections of monuments and family memorials in Norwich, including a memorial to the artist John Crome. The church is still in use for worship.



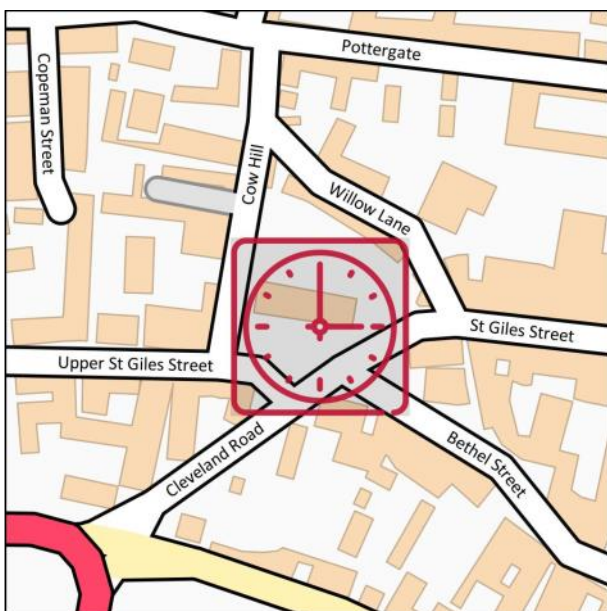
24) St George, Tombland

The clock was made by John Christian of Upper Market Street in Norwich and bears the date of 1786. It was the gift of Charles Maltby. In 1847 the clock was repaired and a minute hand added. It was restored in 2008 with the chime re-instated. Like the other St George, it retains a good deal of its Georgian furnishings, although the church's origins go back to at least the 15th century and possibly earlier. Tombland, meaning 'empty space', was the site of the Saxon market, later moved by the Normans to the present market area. The church is still in use for worship.



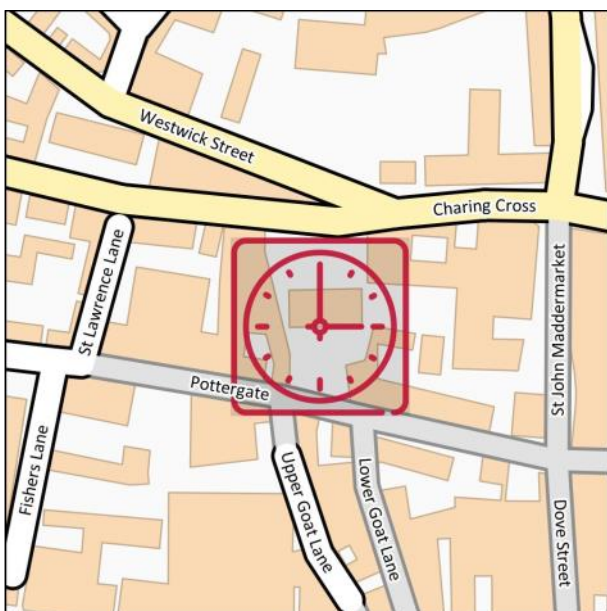
25) St Giles, St Giles Street

The clock is first mentioned in 1712, with a dial surmounted by a figure of Father Time. At the restoration of the church in 1865-6 the clock was restored and recoloured, repositioned lower in the tower and a minute hand. At the same time the figure of Father Time was removed. The church has the tallest church tower in Norwich and is positioned on the highest ground, so that the top of the tower is about 60m above sea level. However its proximity to the much more recent Roman Catholic cathedral means that it does not always appear as prominent in views as its height would suggest.



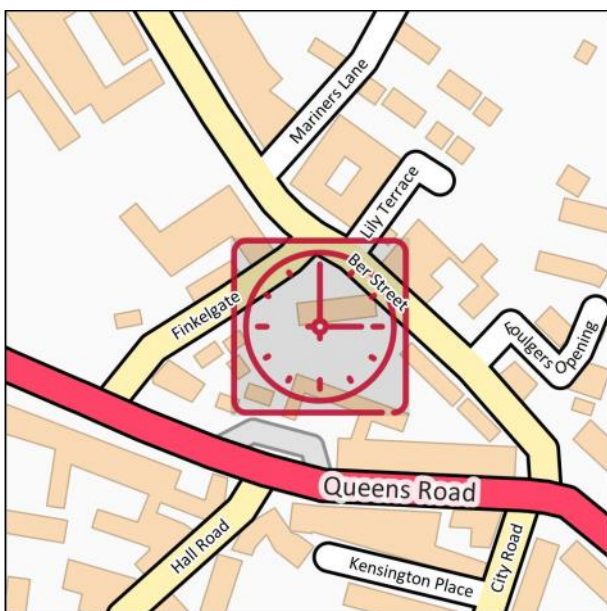
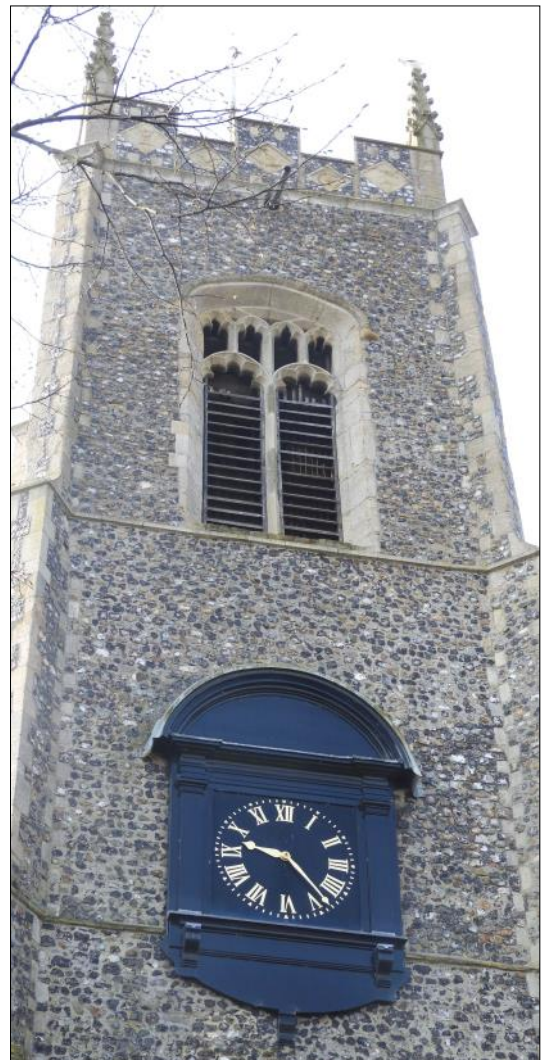
26) St Gregory, Pottergate

Entries in the churchwarden's accounts c.1600 show that there was an astronomical clock. The present clock is thought to date from around 1860. It was restored in the 1990s, with a switch to electrical power, under the joint project between the Norwich Society and the Historic Churches Trust. The church was rebuilt in the 14th century, and has some very fine 15th century wall paintings. The church is in the care of the Norwich Historic Churches Trust, and is leased for use as an antiques centre.



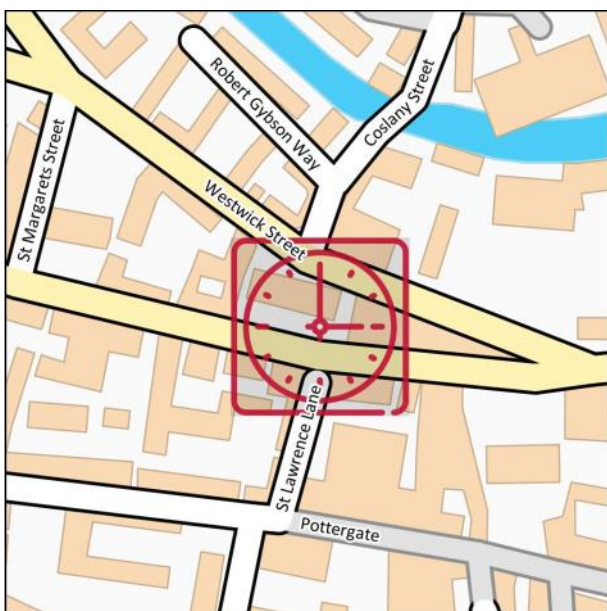
27) St John de Sepulchre, Finkelgate

The clock is believed to date from c. 1820, although the clock face may be earlier. In the 1990s it was fitted with an automatic winding gear, and a supply of a mains electricity, under the joint project between the Norwich Society and the Historic Churches Trust. The church, known to have existed before 1066, was originally dedicated to St John the Baptist, but later gained an additional dedication to the Holy Sepulchre, hence the present contraction of the name. In the Reformation its stained glass windows were replaced with plain glass and paintings whitewashed, but in the late 19th century new decorations and fittings were added. The church is in the care of the Norwich Historic Churches Trust.



28) St Lawrence, St Benedict's Street

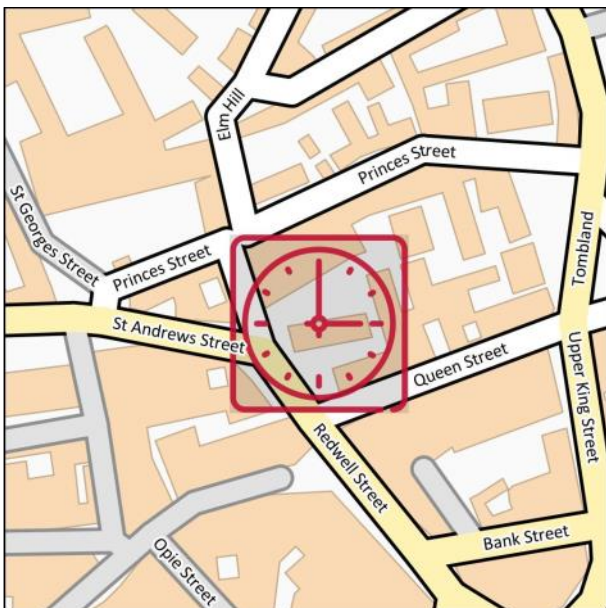
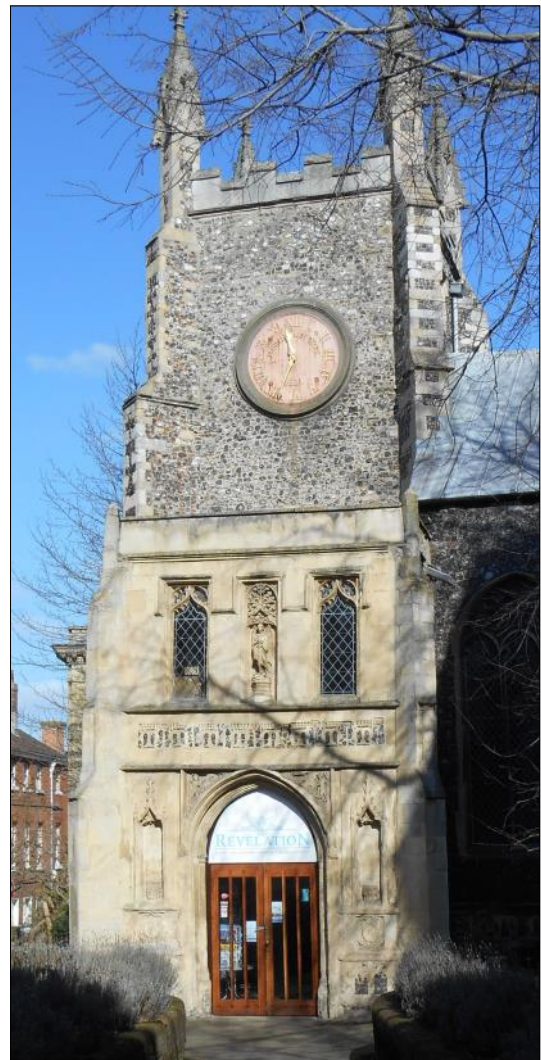
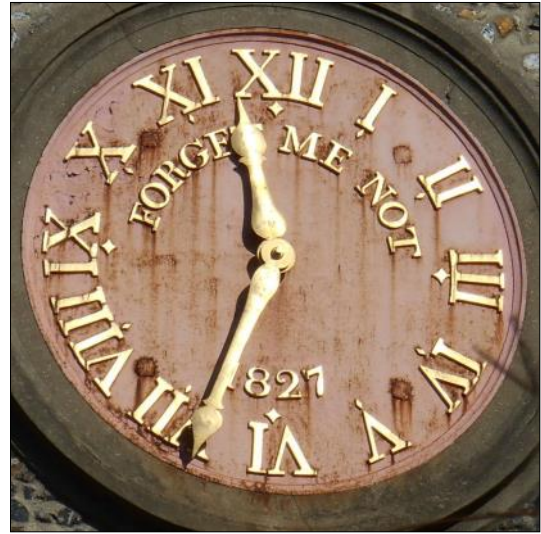
The clock is believed to be one of the oldest clocks in Norwich, a wooden door-frame clock said to have come originally from Binham Priory in North Norfolk. It was given first to Sporle church in c.1873 by the Rev. Augustus Sutton of West Tofts, described in the Vestry minutes of St. Lawrence Norwich as "a very clever mechanic, his speciality being the reconstruction and repairing of old disused church clocks". Through his son, the Rev. A.F. Sutton, it came to St Lawrence in 1894. A dead beat escapement was added c.1900. It is now in poor condition. The church has been under the care of the Churches Conservation Trust since 1992.



29) St Michael at Plea, Queen Street

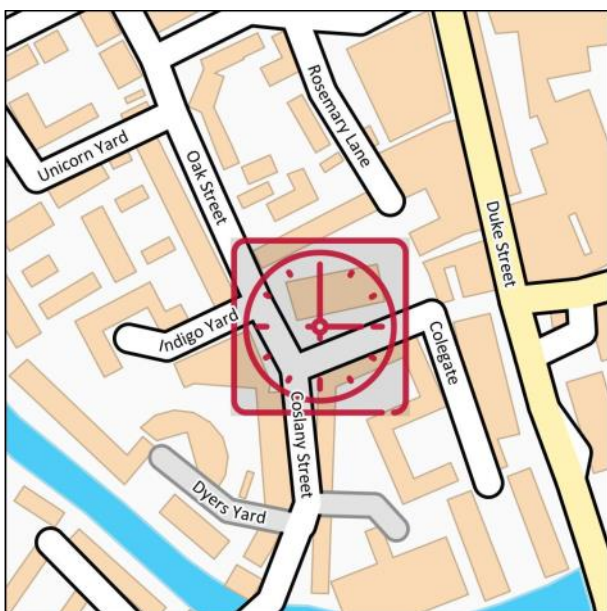
The clock, which has a pink and gold dial inscribed 'Forget-Me-Not', was installed by W.R. Bullen (see no. 5) in 1889 to replace an earlier clock which "for years has been useless". The dial has a date of 1827. The clock was restored in the 1990s under the joint project between the Norwich Society and the Historic Churches Trust, with a later fitting of an automatic wind.

The earliest church on this site is believed to have been in Anglo-Saxon times. The present church dates in part from the 13th century. The church is in the care of the Norwich Historic Churches Trust, and is leased as a bookshop specialising in religious books and a café.



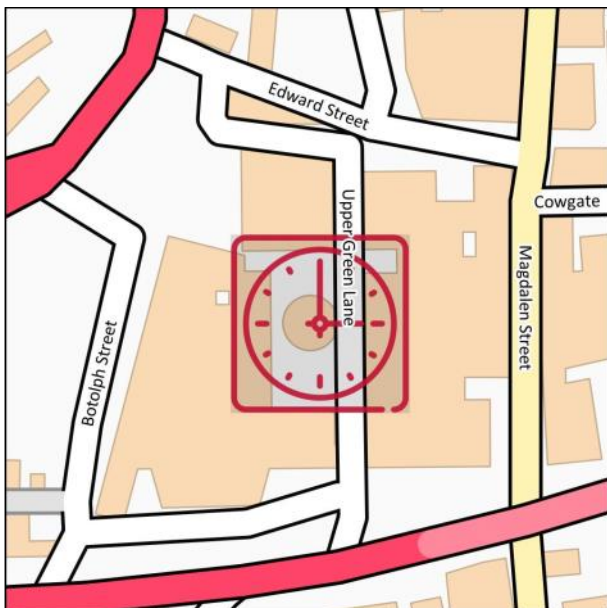
30) St Michael (Miles) Coslany, Oak Street

According to a report in 1996 on the joint project between the Norwich Society and the Historic Churches Trust the design of the clock ceased to be used from about 1650, so the clock would be older than that date. Prior to the early 18th century, when a dial was added, the clock just struck a bell. The 1990s project restored the movement and added hands, as these were missing. Later an automatic wind was added. The church is in the care of the Norwich Historic Churches Trust.



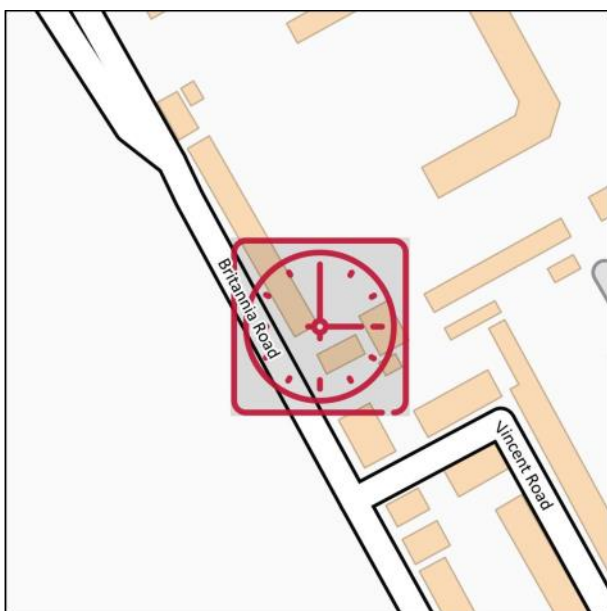
31) Anglia Square, Magdalen Street

The clock was made by Smiths of Derby. Proposals for the redevelopment of Anglia Square are currently being considered by Norwich City Council. If the redevelopment goes ahead, the clock may not be there much longer.



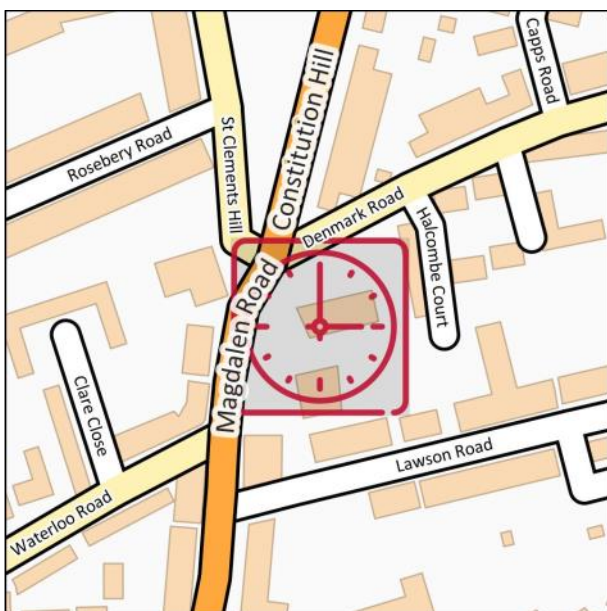
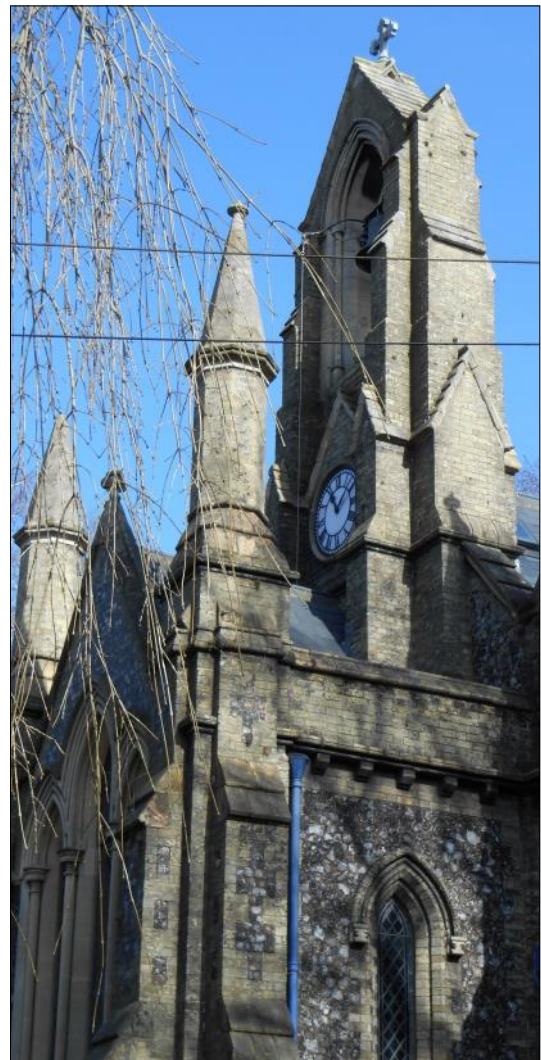
32) Britannia Barracks, Britannia Road

The clock, made by Smiths of Derby, was originally mechanical and was converted to an electric mechanism in the 1960s. It is not currently working. There is a face on each side of the tower. The clock is believed to date from the construction of the Barracks in the 1880s, as a base for the Royal Norfolk Regiment. The name of the barracks was taken from the badge of the Regiment. The Regiment remained at the barracks until it amalgamated with the Suffolk Regiment to form the 1st East Anglian Regiment in 1959. Most of the buildings survive as part of Norwich Prison., and a social enterprise runs Café Britannia in the buildings facing St James' Hill.



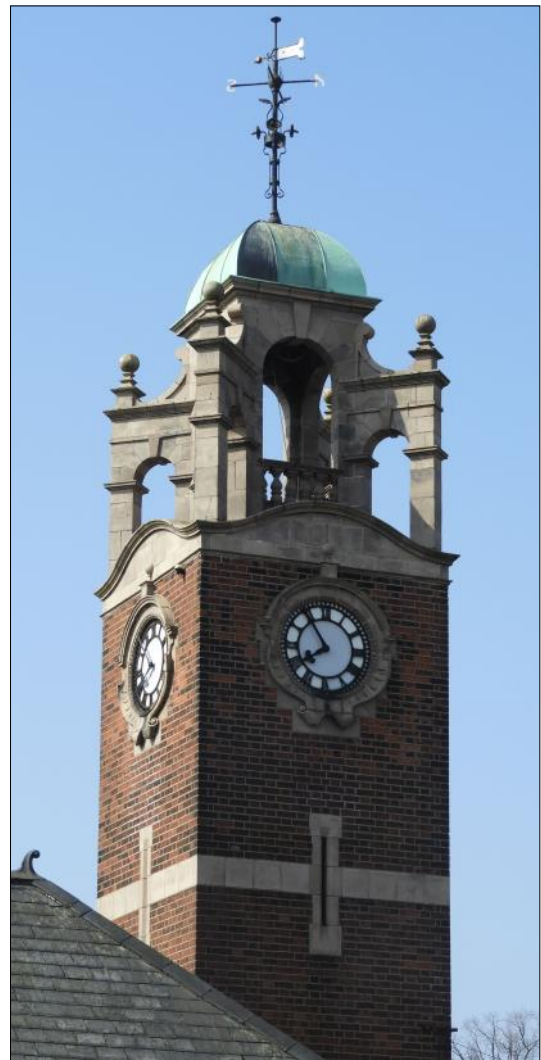
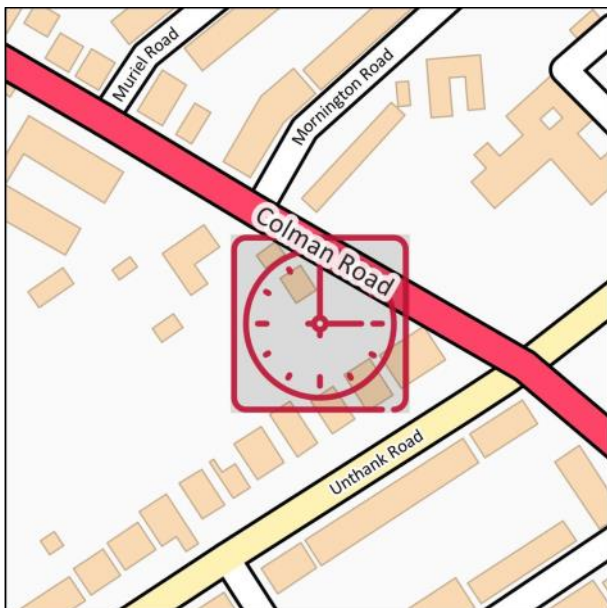
33) Christchurch New Catton, Magdalen Road

Christ Church was the first church to be built outside the city walls and was designed by architect John Brown (also architect of St Mark's Lakenham - no. 42) in the Gothic Lancet style using flint and gault brick dressing – both locally sourced materials, characteristic of the region. The entire cost of the work was £2400. The Bishop of Norwich consecrated the church on 16th November 1841, the occasion being marked by a procession and demonstration by the Chartists. Nothing is known about the clock.



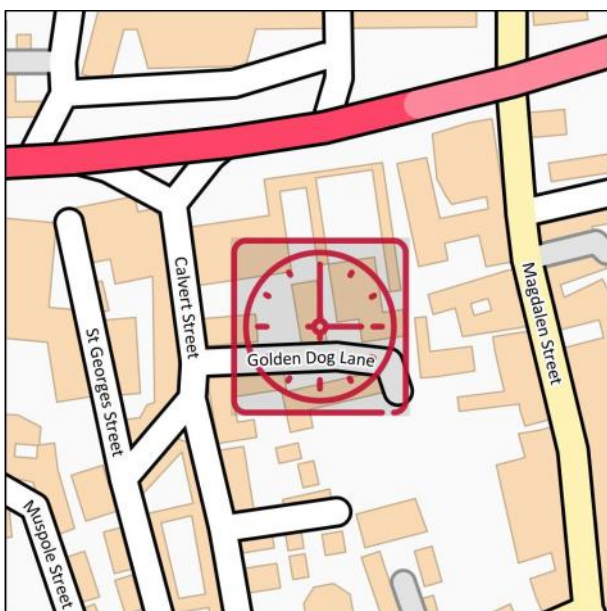
34) Colman Infant School, Colman Road

The school, which was recorded by the Norwich Society as a building to be included in a local list of buildings of merit outside Conservation Areas, was built in 1906. Nothing is known about the origins of the clock, but its original mechanism has been replaced by electrical mechanism.



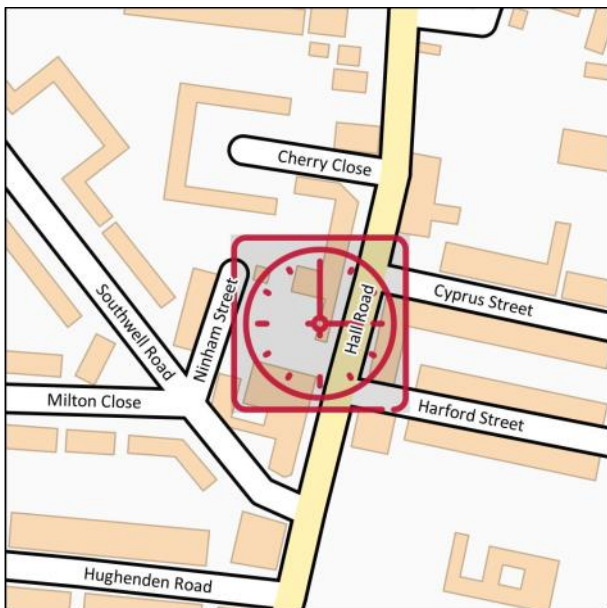
35) Doughty's Hospital, Golden Dog Lane

The clock was installed in 2014 on the new extension at the request of the trustees of the Norwich Charitable Trusts, who wanted a focal point of interest. The Hospital is not a hospital in the modern sense, but an almshouse, in the same way as the Great Hospital (see St Helen, no. 41). It was founded by a bequest from the will of mariner William Doughty, who died in 1688. His generosity was perhaps not as great as it might seem, as he had previously done a deal to be absolved of taxes if he endowed almshouses in the city.



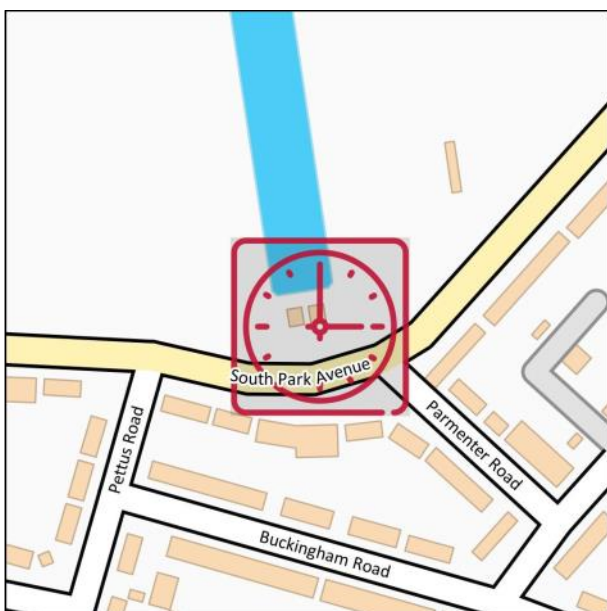
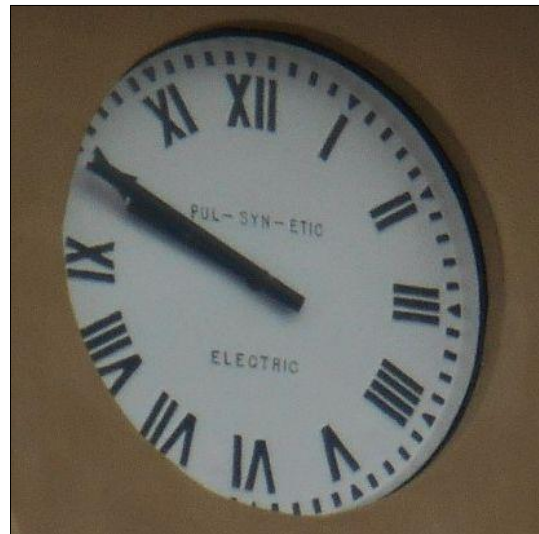
36) East of England Co-Op, Hall Road

The clock was installed as part of the new building at the store in 2001.



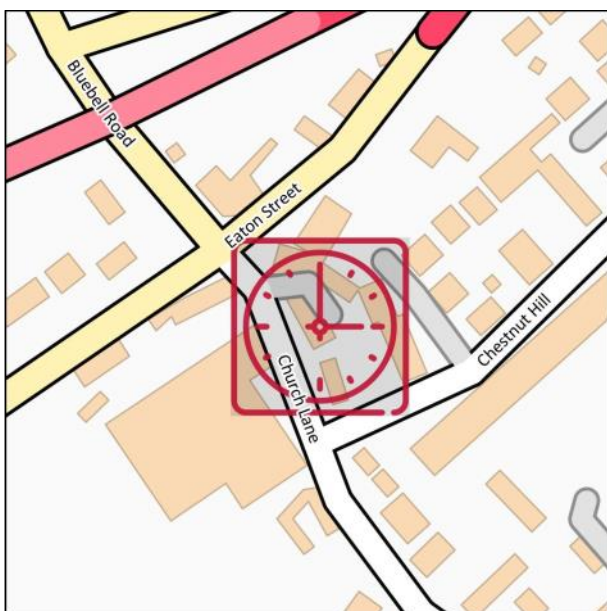
37) Eaton Park, South Park Avenue

The original clock was commissioned in 30th August 1922 as a memorial of Captain Fred Milton, model yacht enthusiast, and the Norwich Model Boat Club still maintains its 2007 replacement as part of its use of the pavilion. The park itself was opened in 1928, one of the parks created in the 1920s as unemployment relief. The boating pond north of the pavilion is considered by the Club to be one of the best purpose built model yacht ponds in the United Kingdom.



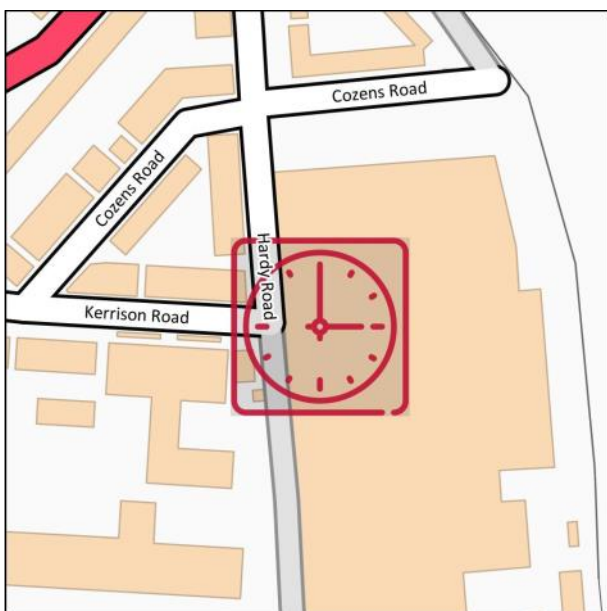
38) Gordon Barber, Church Lane Eaton

The clock is believed to have been installed c 2000 by Fitt Signs, with movement by Smiths of Derby. Gordon Barber is a funeral directors.



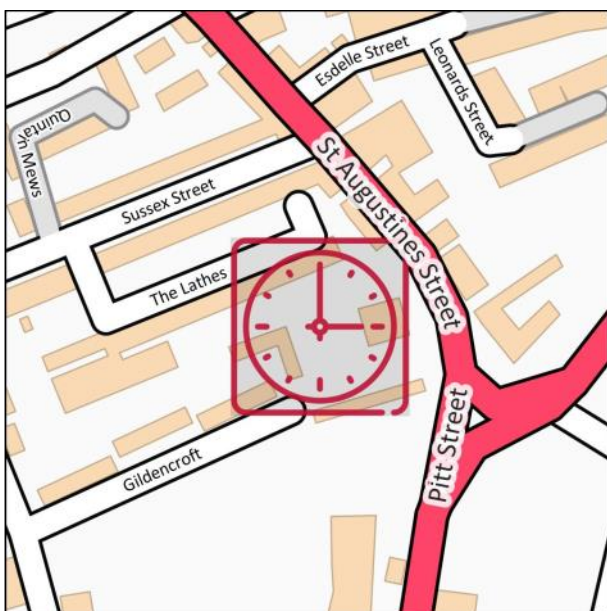
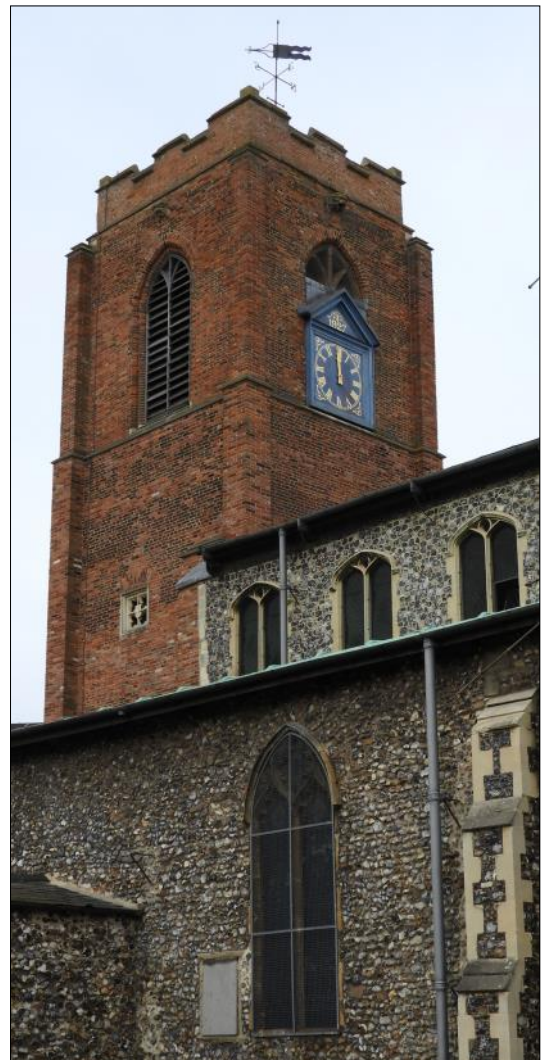
39) Laurence Scott, Hardy Road

In the First World War Laurence Scott & Co were commissioned to make shells as well as supplying electrical motors and other equipment, their core business, to the Admiralty and other parts of the military. The works then were much more extensive than the present site. After the war the company erected a clock and plaque below at the Gothic Works to commemorate the 33 employees who had lost their lives while serving in the armed forces.



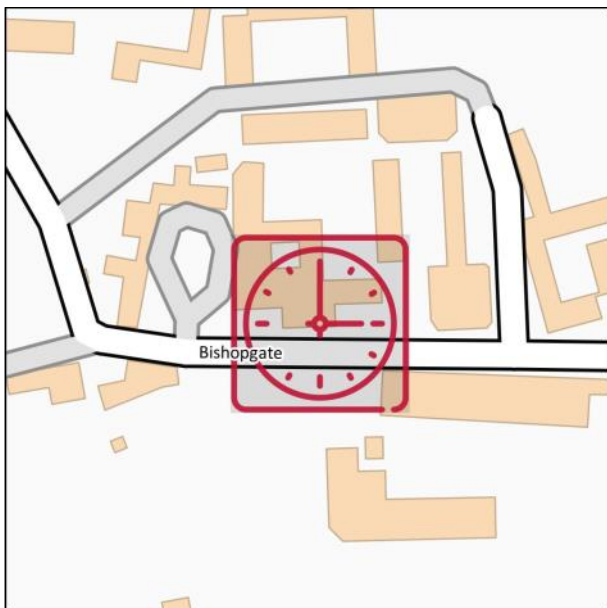
40) St Augustine, Gildencroft

There appears to have been a clock in St Augustine's red brick tower ever since it was completed in 1688, following the collapse of the original tower, as a clock face with this date appears in Kirkpatrick's sketch of the church dated 1713. An electric clock mechanism was installed in the tower in 1926. This drove a movement made by Gents in the belfry two storeys above. The electric clock workings were removed for safe keeping and restoration in 2002, and at present the clock is not working. The church is in the care of the Churches Conservation Trust. Gents, now a manufacturer of fire detection and alarm products, was for over a century a well-known manufacturer of electric clocks.



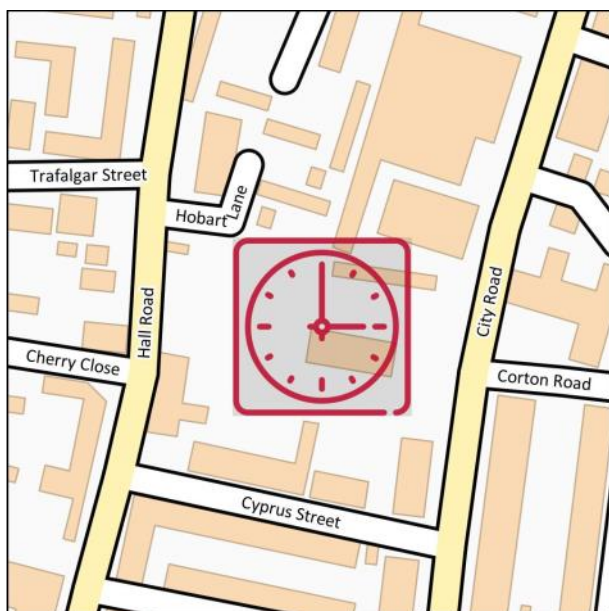
41) St Helen, Bishopgate

The clock was originally mechanical, but is now digital. The original wooden clock face collapsed and it is now fibre glass. St Helen's church is unusual, in that it is part of the Great Hospital complex. The original St Helen's church was on the other side of the road, but was given to the hospital in 1270 and was then demolished. Part of the hospital church then became St Helen's church, with other parts serving as part of the hospital, some of which can occasionally be visited. The Hospital has been providing care for the poor and elderly since 1249.



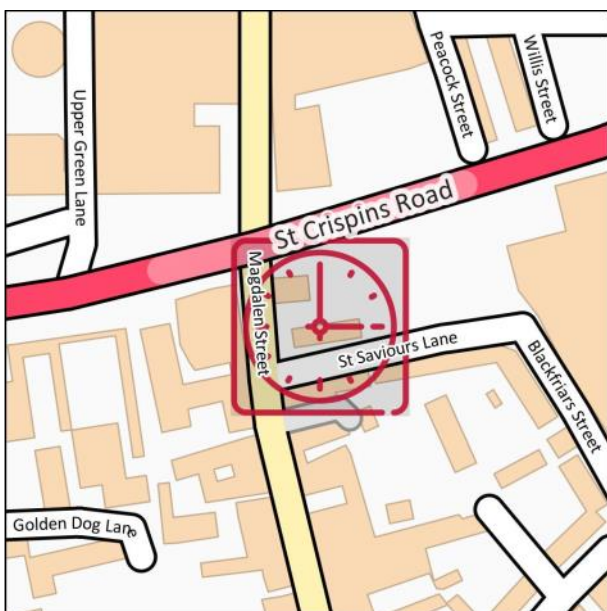
42) St Mark's Lakenham, Hall Road

Built in the 1840s to a design by John Brown, also architect of Christchurch New Catton (no. 33), later extended. It is still in use, and currently undergoing restoration. Nothing is known about the history of the clock.



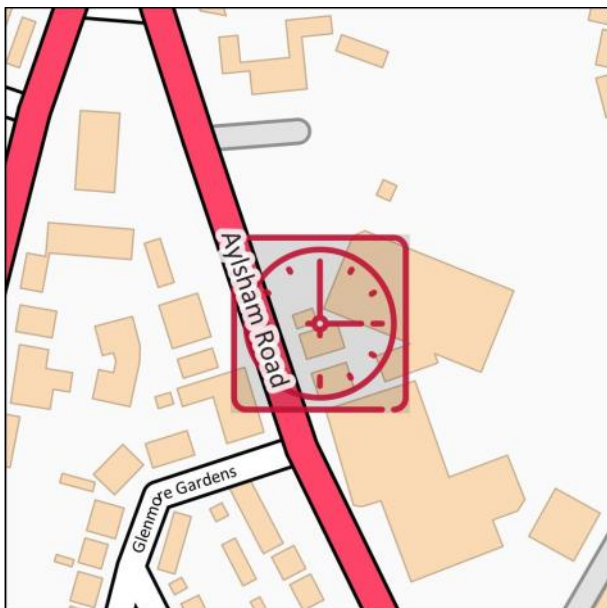
43) St Saviour, Magdalen Street

The clock is believed to date from the second half of the 19th century. Its mechanism restored and an automatic wind system fitted in the 1990s under the joint project between the Norwich Society and the Historic Churches Trust. The church is dedicated in honour of “the Transfiguration of the Holy Saviour”, but the name has been reduced to St Saviour, even though there was no such saint. The church is in the care of the Norwich Historic Churches Trust.



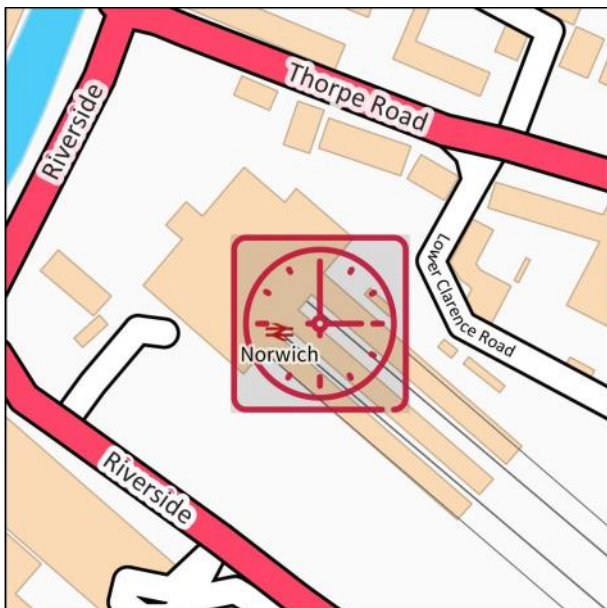
44) Smith & Pinching, Aylsham Road

The clock was made by Michlmayr & Co. at the request of Smith & Pinching, who have been independent financial advisers in the area for over 40 years.



45) Railway station concourse, Thorpe Road

The clock was made by Smiths of Derby. It is surrounded by a large advertising board, and faces over the concourse towards the platforms.



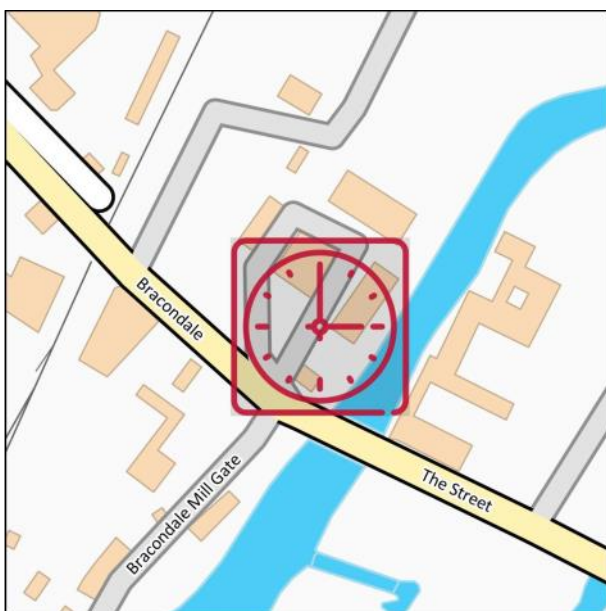
46) Railway station exterior, Thorpe Road

The clock is now electrical, the previous mechanical movement having been donated to the Norfolk Museums Service. The clock is believed to date from the rebuilding of the station in French Chateau style in 1886.



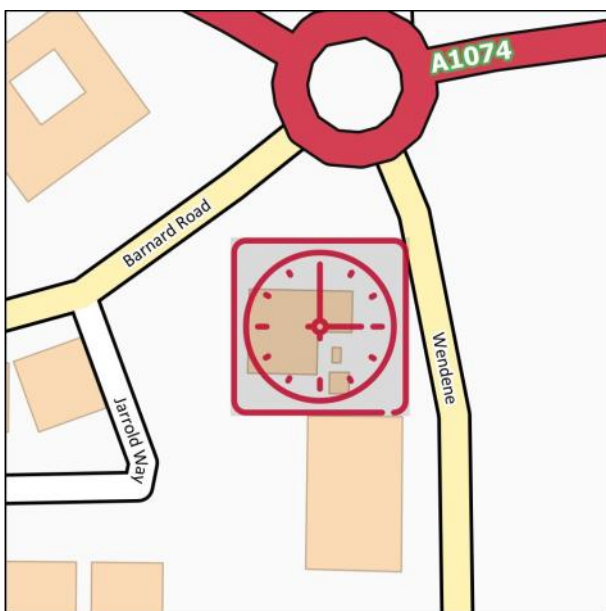
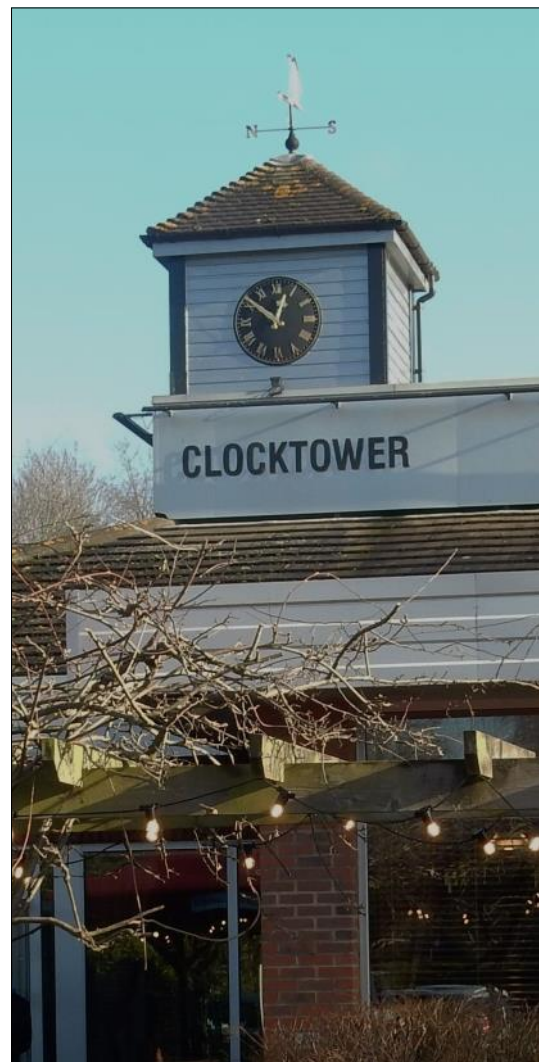
47) Trowse pumping station, Bracondale

The former pumping station for a sewerage works, commenced in the 1860s and extended in 1909, this clock is located in Trowse Millgate, just within the city boundary. It is believed to date from the construction of the building in 1909. The building, currently unused, is included on Norwich City Council's local list.



48) Clocktower restaurant, 26 Jarrold Way, Bowthorpe

The restaurant has had its present title since 1998, and was previously known as Calendars from 1988-1997 and Artists Fare from 1997-1998.



SUNDIALS

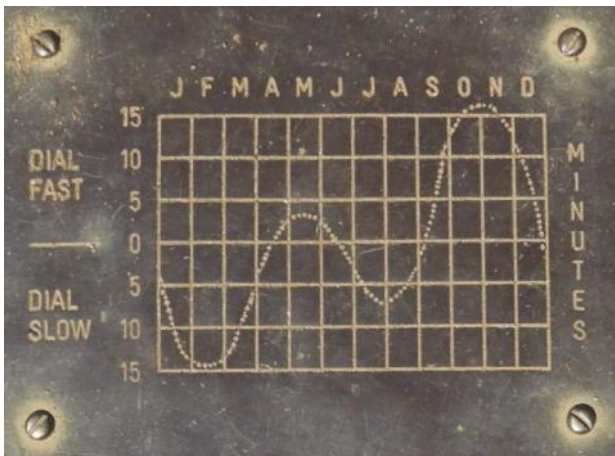
When members of the Society's Civic Environment Committee did their survey of the sundial on St Peter Mancroft church they found that the time it gave, compared to the time on their watches or phones, was 40 minute slow. So was the sundial at fault? To answer the question it is necessary to understand what time a sundial measures, and how accurate it is. A sundial measures solar time – the time indicated by the



The St Peter Mancroft sundial

shadow cast by the sun's rays. This is the same at places on the same latitude. However that is in terms of local time – Norwich time. Every 15° longitude represents one hour's

difference in time: (24 x 15 = 360, the degrees of a circle). This can be observed by looking at the times for sunrise and sunset. Aberystwyth, on the coast of Wales, is at roughly the same latitude as Norwich, but is just over 50 west in longitude. The times for sunrise and sunset are around 20 minutes later in Aberystwyth than they are in Norwich, measured of course in Greenwich Mean Time. In local time (Aberystwyth time and



Equation of Time plate, Blickling Hall

Norwich time) they would be much the same. Norwich time is about 5 minutes ahead of London time.

However the Sun itself is not a very precise way of measuring simple time. Because of the way the Earth circles the Sun, the apparent time of mid-day, when the Sun is at its highest in the sky, may vary up to 16 minutes early or late, from the real time, depending upon the time of year. This variation is known as the Equation of Time, and has to be taken into account when reading the time from a sundial.

With the development of the railways in the mid-19th century, and the associated spread

of telegraphs, difficulties with the use of local time became greater. This led to railway companies adopting London time, based on the time at the Greenwich Observatory. In 1880 Parliament passed a law, the Statutes (Definition of Time) Act, which provided that such references to time in legislation were to be held to be references to Greenwich mean time in the case of Great Britain. This Act has subsequently been supplemented by legislation providing for British Summer Time.

To return to the question about the accuracy of the St Peter Mancroft sundial, suppose that the time when the surveyors visited was 1055 by their watches and 1015 by the sundial. The survey took place in October, but before the clocks went back, so British Summer Time was in force.

<u>Watch time</u>		1055
<u>Greenwich Mean Time</u> : deduction for British Summer Time	Minus one hour	0955
<u>Norwich time</u> : allowance for Norwich being east of Greenwich	Plus five minutes	1000
<u>Equation of Time</u> correction for October 2017	Plus approximately 15 minutes	1015

The conclusion is thus that the St Peter Mancroft sundial is accurate: all you need to do, apart from being there on a sunny day, is know the Equation of Time correction for that day, then deduct five minutes and, if need be, add an hour for British Summer Time and you should be close to the time on your watch.

Sundials in Norwich

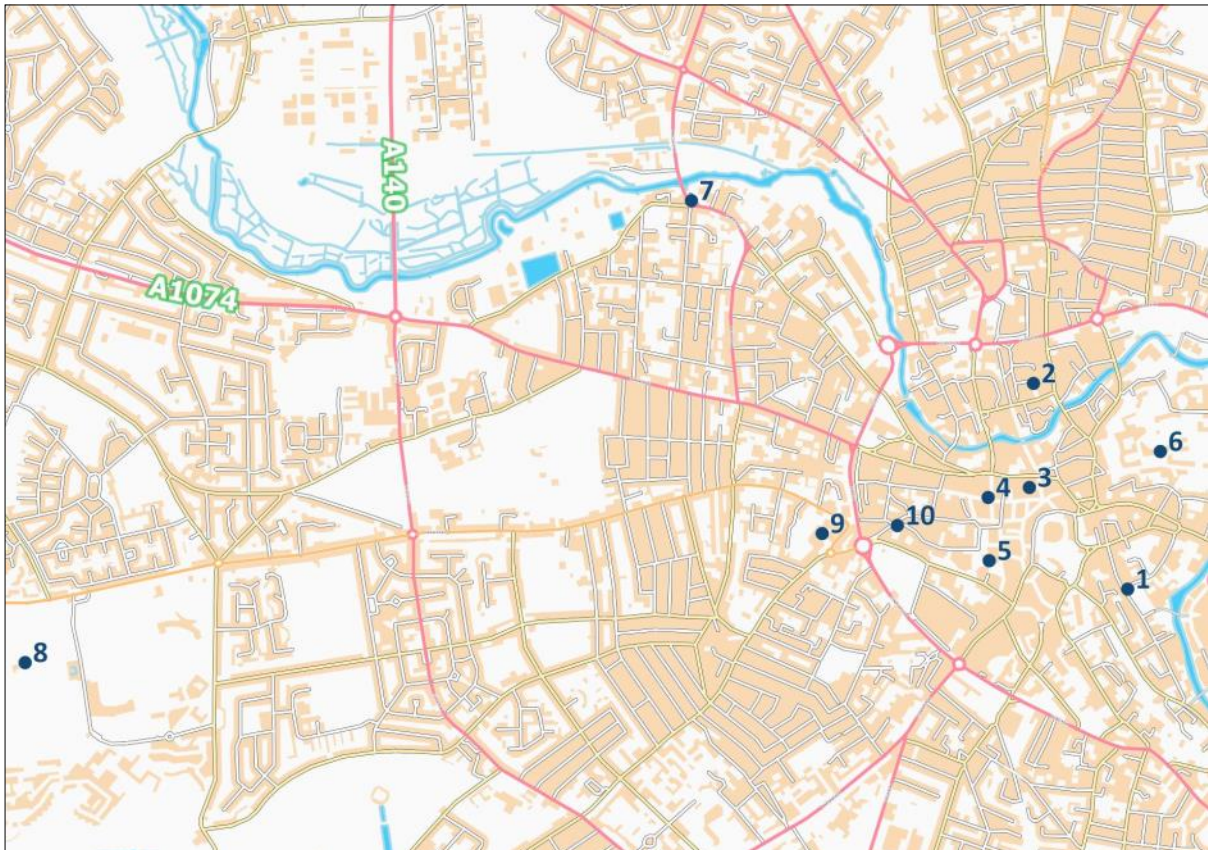
The sundials we have located in Norwich are mostly of the vertical type, with one horizontal. These are the most commonly found sundials. To see others, local sundial specialist David Payne has created a trail at Burlingham with various other types of sundial that he has made (details on page 5). The trail also includes churches in neighbouring villages where scratch dials can be seen. These were very early ways of telling the time. So far as the Society knows there are none in Norwich churches, either because they were mainly located in rural areas, or because subsequent rebuilding and renovation has obliterated them. An analemma sundial (human gnomon) is on the trail and one can also be seen (and tried if it is sunny) at Blickling Hall.

The remains of a sundial can be seen at the western end of the car park by the Refectory in the Cathedral Close (see image right), but nothing is known about its history.



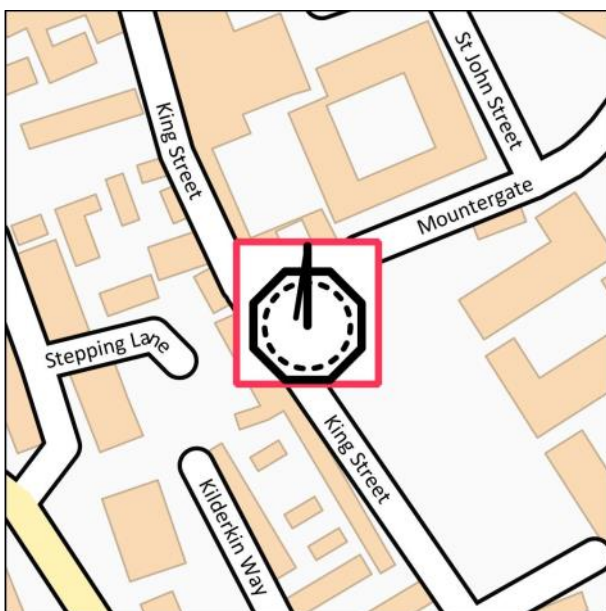
THE SUNDIALS DIRECTORY

The sundials directory is in the same format as the clocks directory, relating to the map below. Location maps for each sundial are included in the directory pages. All sundials are normally visible, but nos. 9 and 10 are only available to view when the adjacent cafes are open at the Roman Catholic Cathedral and Churchman House.



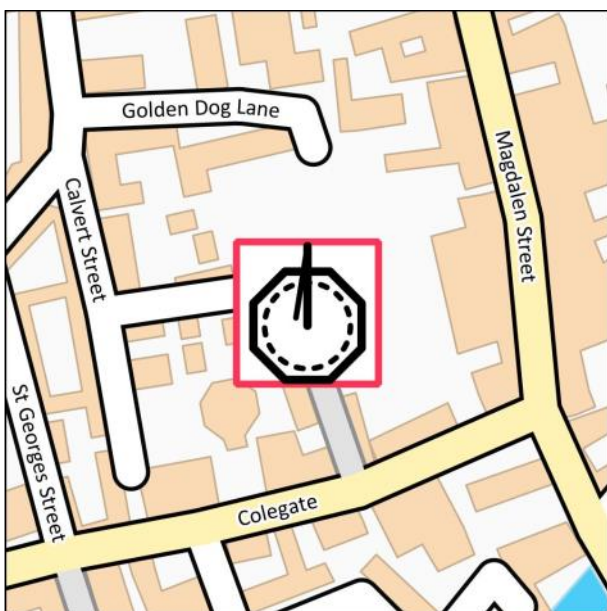
1) Howard House, King Street

Howard House was built in the seventeenth century, and has recently been restored after years of neglect, thanks to pressure from the Norwich Society for its restoration. It was once the garden house of Henry Howard, Earl of Surrey until he became duke of Norfolk in 1677. The sundial is later, with a date of 1840, and has been finely restored. Note that the gnomon points to 10 o'clock and that the numbering on the dial is unevenly spaced, indicating that the house does not face due south.



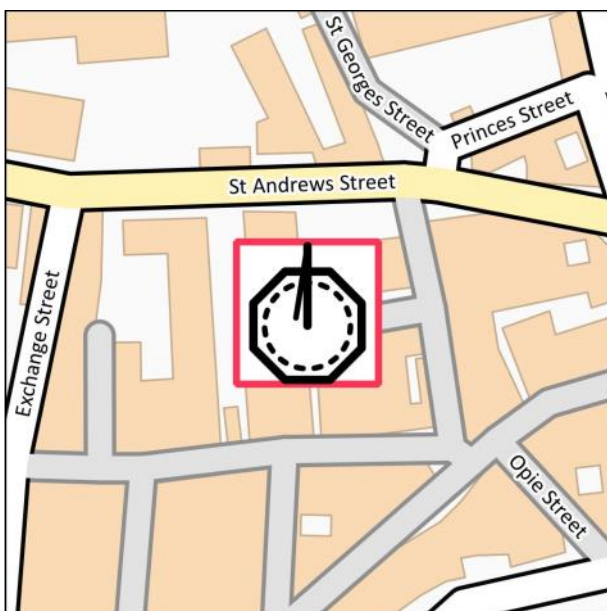
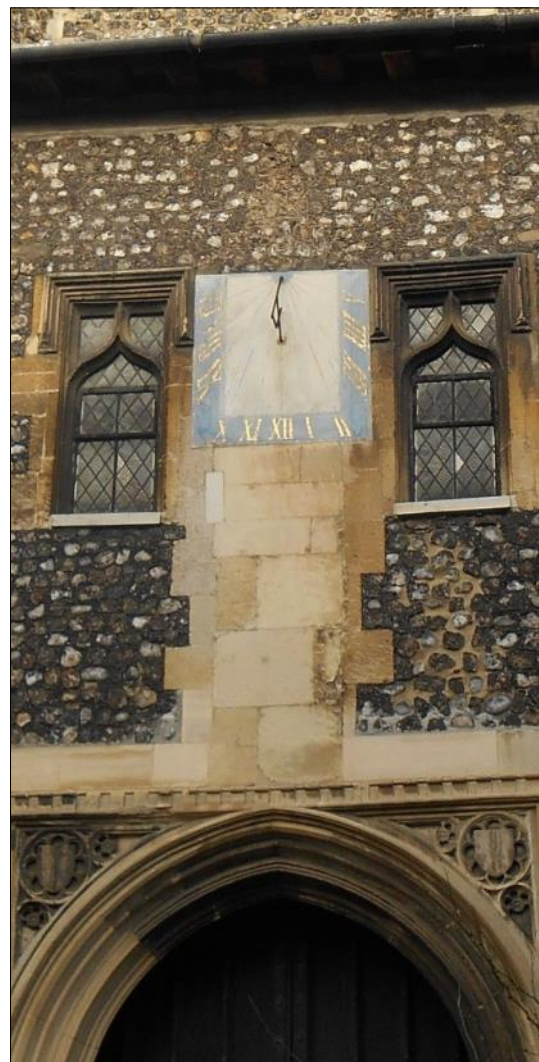
2) Old Meeting House Chapel, Colegate

The sundial bears a date of 1693: this is the date of construction of the Meeting House itself, and it is not known whether the sundial is of the same age. The Chapel is the oldest purpose-built nonconformist meeting house, built after an Act of 1689 allowed such groups to own land and buildings.



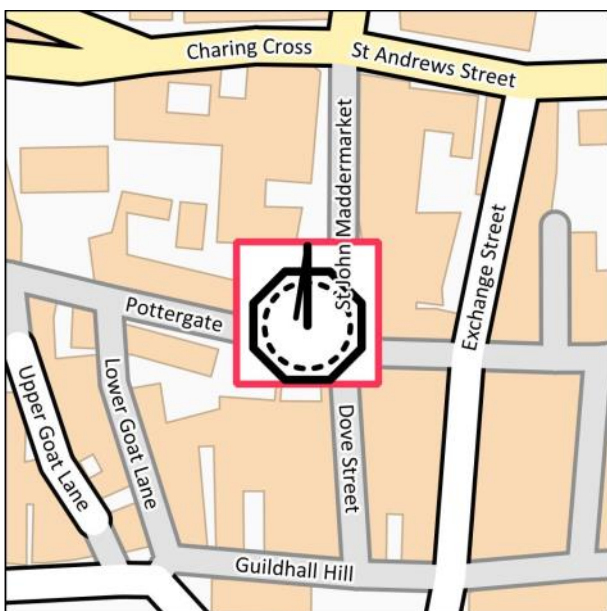
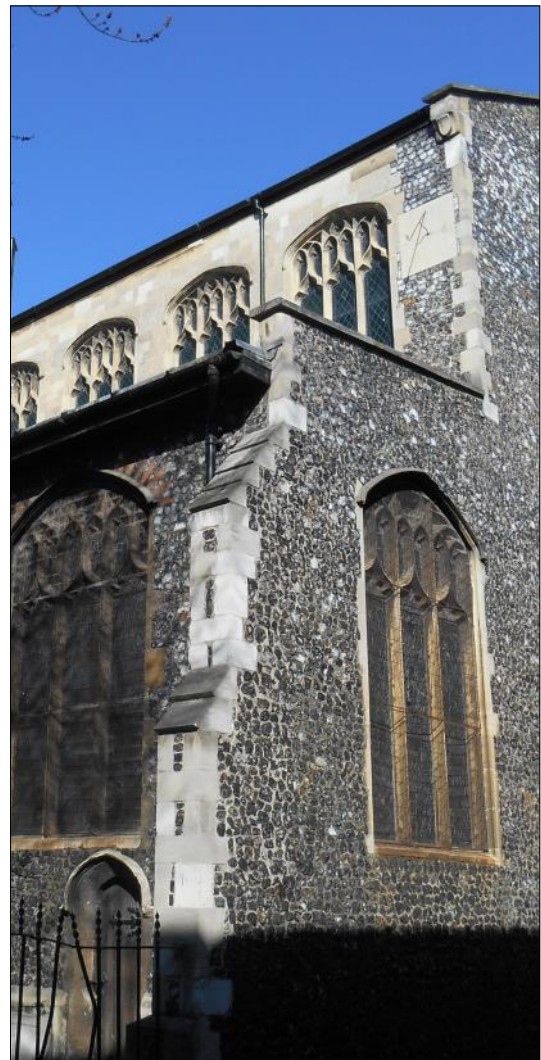
3) St Andrew, St Andrew's Street

The origins of the sundial, which is located above the south porch, are not known. St Andrew is the only building in Norwich with both a clock (no. 21) and a sundial. The church was completely rebuilt in 1506 and contains one of the finest collections of monuments in the city. It is still in use for worship.



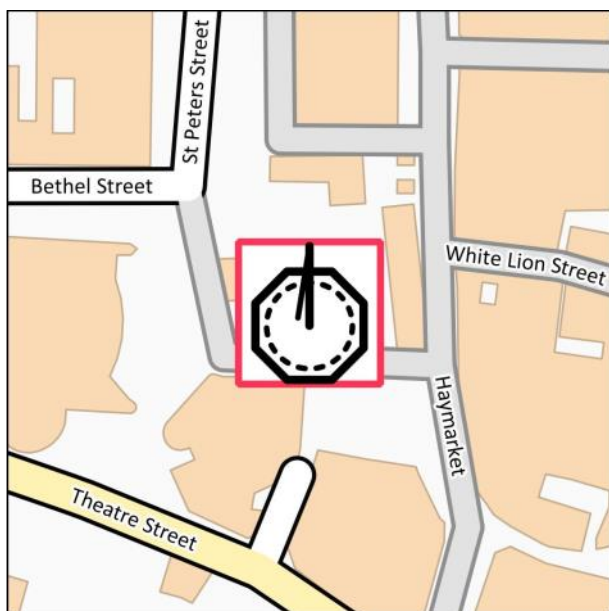
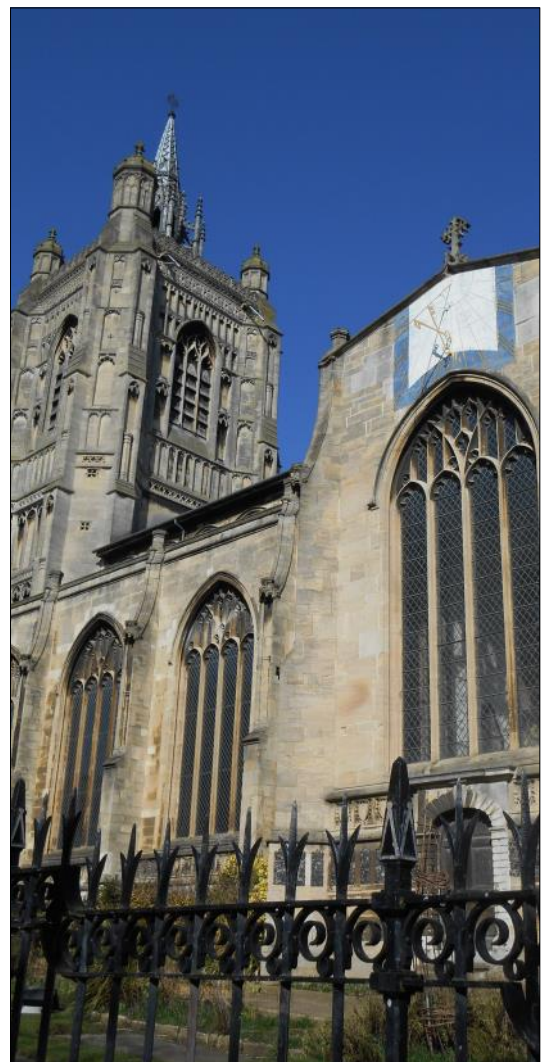
4) St John Maddermarket, Pottergate

One of three churches in Norwich now in the care of the Churches Conservation Trust, the church of St John the Baptist, Maddermarket takes its name from the yellow flower which produced madder or red vegetable dye, marketed in this area. Nothing is known about the history of the sundial, which is located high on the south-east corner of the clerestory, and is in poor condition. The gnomon has an upturned end. The church dates from the mid-15th century and was thoroughly restored in the 19th century. In common with St. Gregory's, it has a tower over the footpath at the western end.



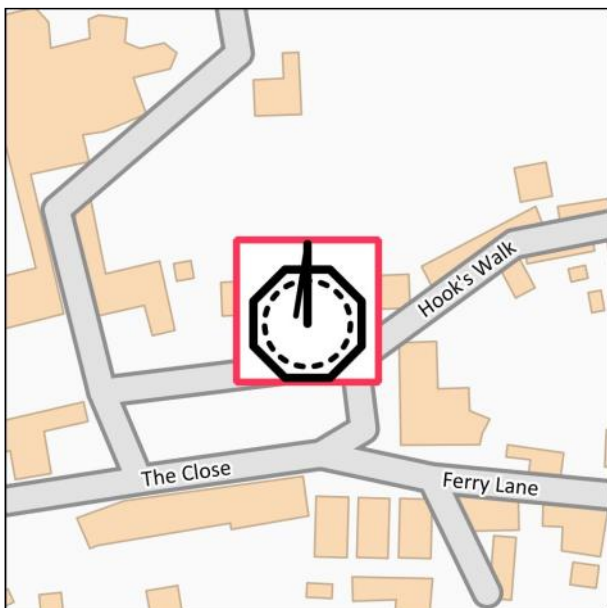
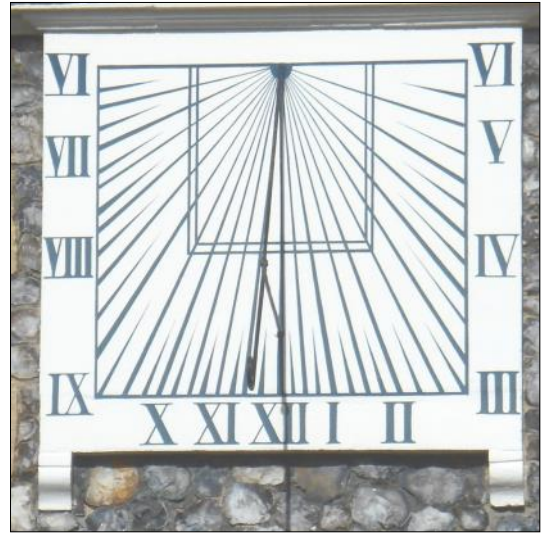
5) St Peter Mancroft, St Peter Street

The gnomon is supported by gilded crossed keys, and the arch under the dial means that it is not square in appearance. The origins of the sundial are not known. The church underwent a complete rebuilding in the middle of the 15th century, but additions to the top of the tower in 1895. Mancroft is not the name of a saint, but a derivation from either Latin or Old English, where 'croft' meant field : a field stood to the south of the church, and the college founded where the Assembly House is now was called St Mary-in-the-Field.



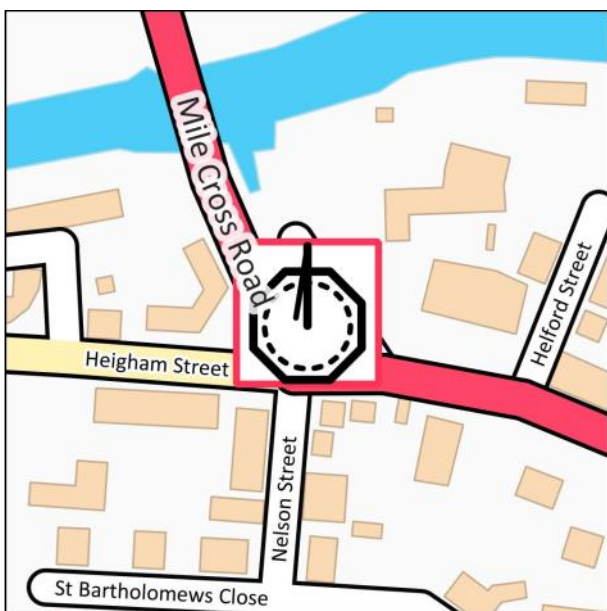
6) 53 The Close

The Cathedral Close is the most extensive in England. The present sundial can be dated, as the house, known as Dial House, collapsed when undergoing renovation work in 1903, and was subsequently rebuilt. Nothing is known about the earlier dial from which the property derived its name.



7) Dial Corner House, Mile Cross Road

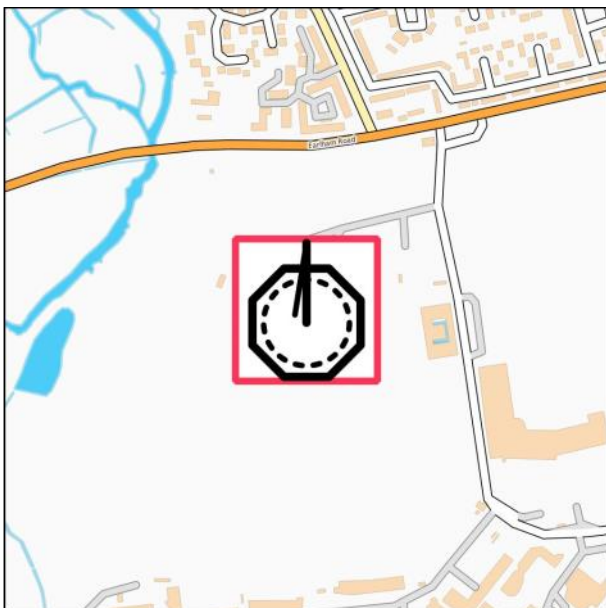
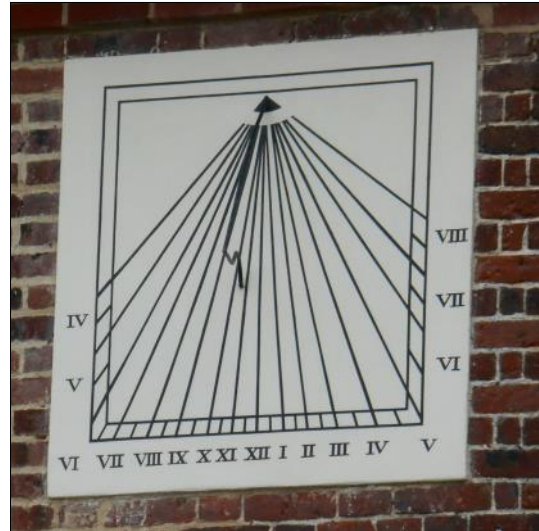
This sundial is not in the location which gave the area its name, as an earlier photograph (see below) showed that it was further west. The property on which it stood was demolished to make way for the building of Mile Cross Road in the 1920s. It is not known whether the sundial that now can be seen, and is in poor condition, was installed at the time of the road-building.



8) Earlham Hall, UEA

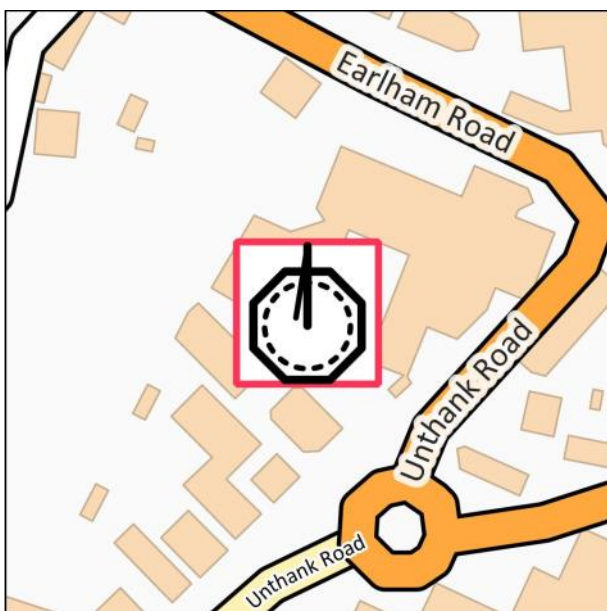
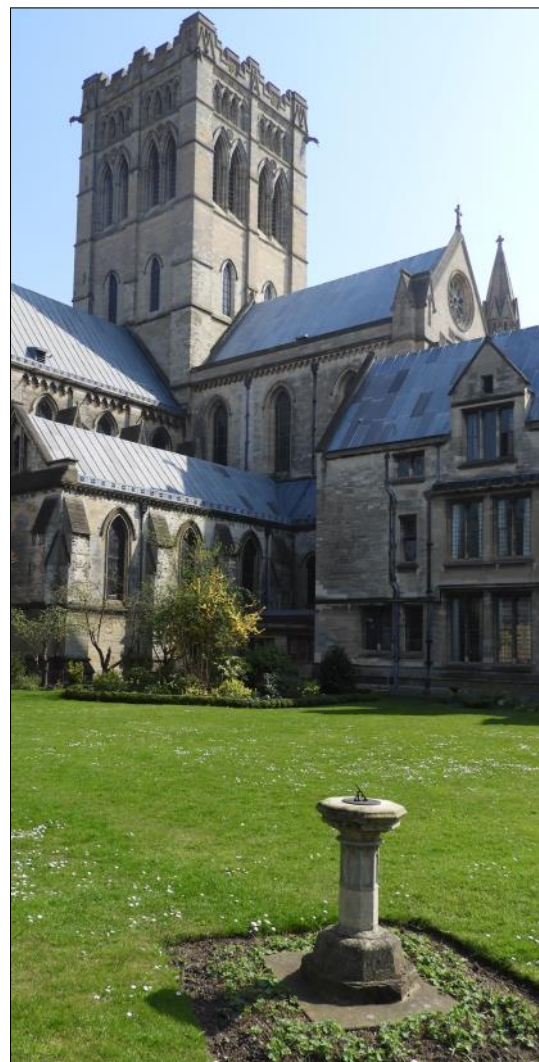
The building is of national importance as an historic building dating from the late sixteenth century and is of social significance as the former residence of locally important figures, through its Quaker connections and association with the well-known prison reformer, Elizabeth Fry (1780-1845). It was extensively refurbished by the University in 2013 for use as its Law School.

The sundial is on an eastern outbuilding: nothing is known about its history.



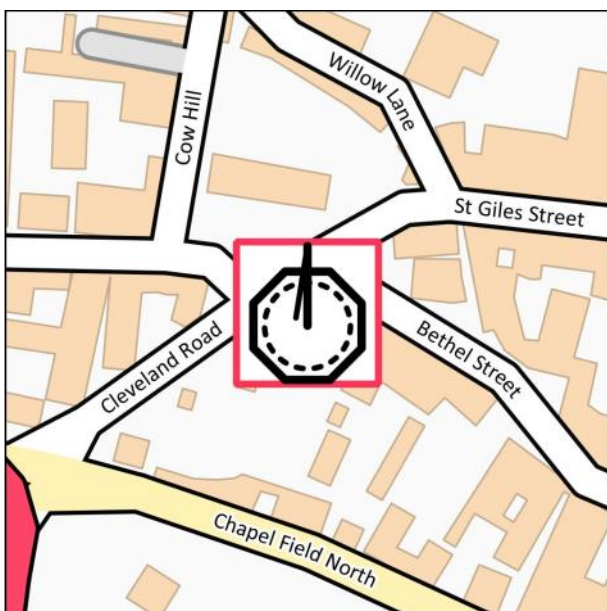
9) Roman Catholic Cathedral, Earlham Road

The sundial, believed to be the only horizontal sundial in a public place in Norwich, is situated in the garden of the Narthex, which includes a café open daily. It bears an inscription “Let others tell of storms and showers : I’ll only count your sunny hours”. The cathedral was designed by George Gilbert Scott Junior in Victorian Gothic Revival style. It was the gift to the Catholics of Norwich of the then Duke of Norfolk. It was completed in 1910. Until 1976 when it became the Cathedral of the new Diocese of East Anglia, it was believed to be the largest parish church in England.



10) Churchman House, Bethel Street

This Grade II listed building is a fine example of a Georgian town house with Rococo plaster work. More recently used as a registry office, it is now shared between a café run by the Food Project and the REST partnership project led by Norfolk and Waveney MIND bringing together mental health support, local services and a place where everyone can feel welcome. The sundial is on the rear wall of the building overlooking the garden.



ABOUT THE NORWICH SOCIETY

As the city's civic society, The Norwich Society is an independent community-based charity, supporting the preservation, development and improvement of features of historic interest of our city. We also use the expertise of architects, town planners, surveyors and other industry professionals within our committees to comment on significant planning decisions in the area on behalf of the public. And we encourage exploration and enjoyment of Norwich's history through a range of talks, walks and other events, as well as regular publications.

From saving the historic Elm Hill area from demolition in the 1920s, to recent campaigning for better development of the Anglia Square site, we've been championing the built environment and public spaces in Norwich and celebrating the city's unique character and beauty since 1923.

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