A GUIDE TO THE INDUSTRIAL ARCHAEOLOGY OF ESSEX

TONY CROSBY

Association for Industrial Archaeology
Each gazetteer entry has a letter or letters and number that relate to the location maps, photographs and index. The National Grid Reference is given to aid more accurate location. Sites are listed by the twelve Essex Districts and the Unitary Authorities of Southend-on-Sea and Thurrock, which are part of historic Essex, and alphabetically by town or village. Against each site is a symbol denoting access:

★ Can be viewed from footpath or road which passes near or through the site. This does not imply there is permission to wander anywhere at will.

☐ Open to the public, often with facilities on at least regular open days.

**NOTE:** THE INCLUSION OF SITES IN THE GAZETTEER DOES NOT IMPLY PUBLIC ACCESS. WHENEVER YOU ARE IN DOUBT IT IS ALWAYS COURTEOUS TO ASK PERMISSION TO ENTER A SITE.

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front cover: Crompton & Co Arc Works, Writtle Road, Chelmsford (see C2.10)
back cover: The drinking fountain and horse trough at Quendon, beside the old A11 road (see U15)

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The area that constitutes the present County of Essex, its more western Boroughs now in Greater London, is mainly a rural agricultural county both traditionally and to the present day. Its coastline, which has many river estuaries and creeks, is said to be the longest in Britain and has been the base for a fishing industry for many centuries. Essex has no deposits of coal or metal ores on which to base heavy industry and there is no stone apart from chalk in the north-west and the south-east. This absence of building stone has resulted in the characteristic timber and brick buildings of the county. Between the chalk outcrops the under lying geology of the county is clay, hence the early and continuing manufacture and use of brick and tiles for construction purposes. The clay is over lain with glacial and alluvial deposits on which arable and dairy farming has developed, while the coastal marsh areas traditionally supported grazing.

**MILLS**

Traditional industrial activity stems from the farms and fisheries of the county and the milling of grain is one of the oldest, many watermills having been recorded in Domesday, while windmills were introduced in the late twelfth century and tide mills on the tidal creeks were also built. Working examples of all three types of mill survive (many restored by the County Council itself) alongside the many which have been converted to residential and other new uses. Watermills also served other industries as fulling mills and gunpowder manufacture, particularly at the Waltham Abbey gunpowder works. The industrial revolution period provided a new and more reliable source of power for the mills, steam engines being introduced both as a back-up in times of light winds or sluggish water flow, and also as the sole source of power as existing mills were adapted and new mills built to use steam power. Another development from the 1870s onward was the introduction of roller milling.

**OTHER AGRICULTURAL INDUSTRIES**

Other examples of agriculture based industry include jam making (the famous Tiptree and Elsenham jams, only the former of which is still made in the county); sugar beet processing which ceased at the end of the twentieth century; market gardening including the development in the inter-war period of Land Settlement Association sites for unemployed industrial workers mainly from the north of England; and even the ripening of bananas. The application of factory style production was introduced to agriculture at the end of the eighteenth century with the development of model farms. Brick, industrial style buildings around a central yard, steam power and process flow around an integrated site resulted in greater efficiency.
MALTING AND BREWING

Malting and brewing were major industries in Essex serving both the local market and also nearby London. Malting took place on farms, and most villages and market towns had at least one malthouse. Brewing developed from the activity in medieval communities, on the large farms and estates and at public houses until the rise of common brewers in the second half of the eighteenth century. The nineteenth century saw the development of the multi-storey malthouse and the integrated industrial scale brewery on far fewer sites and often linked to good transport routes such as via the coast to the Thames and London, inland navigations such as the Stort and the railways. Malting now survives in modern plant at Witham and on two sites in Mistley, while the last commercial brewery, Ridgeleys, closed in 2005, although the county has a large and growing number of micro-breweries. One interesting related site is the former Isinglass factory in Coggeshall, originally a tannery, from the mid nineteenth century it was used for the production of isinglass from the swim bladders of fish used to clear beer. There was a distillery in Colchester from 1812 and Gilbeys gin was made in Harlow from the 1950s.

ENGINEERING

The stimulus for the development of the foundries and engineering industry was again agriculture. The need for machinery for the dozens of water and windmills resulted in many millwrights establishing their own foundries (such as Hunt’s at Earl’s Colne) and the need for ploughs etc. led to the development of the agricultural implement manufacturers. The first foundry in the county was established in 1792 in Colchester, with most developing during the first half of the nineteenth century. As well as producing a wide range of gearing for the mills and agricultural implements, such as Bentall’s patent ‘Goldhanger Plough’, these foundries also produced structural ironwork for malhouses and breweries, cast iron arches for road bridges, mileposts and drain covers. Some specialised: the Colne Valley Iron Works in Halstead in stoves and Crittall Manufacturing Co. of Braintree in metal window frames, although they also produced other structural ironwork including the footbridge at Witham Station. Another specialism that developed was the production of steam powered farm machinery such as threshing machines and the Darby Patent Broadside Steam Digger. Davey and Paxman at their Standard Ironworks in Colchester began by making steam engines and boilers before moving on to the production of diesel engines. In 1899 the Hoffman Manufacturing Company established a large multi-storey factory in Chelmsford to produce precision steel bearings.

TEXTILES

Production of woollen cloth can be traced back to Roman times and in the mid sixteenth century Dutch immigrants introduced what was to become the main cloth produced in Essex, ‘bays’ (from which baize is derived) and ‘says’ (a type of serge). These were light, loosely woven cloths similar to worsteds and which needed fulling, hence the number of water powered fulling mills in the county. The main centres for the trade were Colchester, with its Dutch Quarter, Braintree and Bocking, Coggeshall and Halstead. The industry experienced booms and slumps throughout the 1700s but by the end of the century was in serious decline with potentially disastrous effects on the local economy. However the silk textile industry neatly filled the gap created, as the east London silk producers sought a skilled workforce and room to expand in order to survive themselves. The main centres for silk production were the same as those for wool with people like John Hall in Coggeshall and also Chelmsford, Walters and Warners in Braintree, where the principal Essex silk firm of Courtauld’s also became established, having major sites also in Bocking and Halstead. One of Courtaulds’ main products was mourning crepe that was very fashionable in the Victorian era, but lost favour at the end of the 1800s. The company survived this decline in demand for its product by diversifying into the production of artificial fibres.

EXTRACTION INDUSTRIES

Essex, in simple terms, is a bowl of chalk which comes to the surface in the north and south, the bowl being filled with clays and brick earths. Bricks and tiles have been made in the county since Roman times and the industry at its greatest extent was to be found in the vast majority of parishes. The twentieth century, however, saw a considerable decrease in the number of brick works so that today there are only two brick works still operating. The chalk was quarried in both areas where it out-cropped, around Saffron Walden in the north-west and most extensively in the south-west in the Grays area. Tramways were a particular feature of brick works and the quarries, both internal systems, but also external tracks leading to other transport links such as creeks and railways.

2 TRANSPORT – ROADS, PORTS, INLAND WATERWAYS, RAILWAYS

Turnpike roads were established relatively early in Essex with that from London through Chelmsford, Witham, and Colchester to the port of Harwich being laid out in 1695. In 1702 the turnpike from London
to Harlow was established and this route was extended later in the century, in part to facilitate the movement of barley and malt to the capital.

The rivers Stour, Colne, Blackwater, Crouch and Thames were all navigable some way inland from the North Sea coast and stimulated the development of numerous trading and fishing ports such as Mistley, Colchester, Wivenhoe, Brightlingsea, and Maldon. The Chelmer and Blackwater Navigation from Chelmsford to Heybridge Basin opened in 1797 and remains navigable for leisure craft today. The other two inland navigations in the county are the Stour and the Stort, although both serve as the county's boundary with Suffolk and Hertfordshire respectively and hence are not fully in Essex. The Stort Navigation from Bishop's Stortford to the River Lea was opened in 1769, while the Stour Navigation from Sudbury to Manningtree was opened in 1713.

In 1836 the first two railways in the county were authorised – the Eastern Counties Railway (ECR) from London to Chelmsford, Colchester and onto Suffolk and Norfolk, and the Northern and Eastern Railway from London via Harlow to Cambridge and the north. Both lines opened in stages up to 1845 by which time the ECR operated both. Over the next four years three branches from the Colchester line were built and between the mid 1850s and mid 1860s there was a second spate of railway development including the lines through Saffron Walden, the Dunmow and Braintree branch and the London, Tilbury and Southend Railway. The 1880s saw further developments as the Great Eastern Railway sought to fill in gaps in the county's network. The final phase of rail development took place in the early twentieth century and was characterised by the construction of a number of light railways including that to Thaxted and the Corringham Light Railway. The Beeching report inevitably spelled the end of many of the branches but those serving commuter towns and seaside resorts survive.

**ELECTRONICS**

Guglielmo Marconi came to Britain in 1896 seeking backers for his wireless telegraphy apparatus and following success opened the first radio equipment factory in Chelmsford in a former silk mill in Hall Street in 1899. This established Chelmsford as the 'birthplace of radio' and Marconi's company developed factories, research centres and transmitter sites across Essex, including a small broadcast hut in Writtle. The first public radio broadcast was made from the New Street, Chelmsford site in 1920. Marconi's went on to make radar and other defence equipment and in the post-war period became part of larger electronics companies, finally becoming part of BAE Systems. Crompton's, who manufactured electrical components, started in Chelmsford in 1878.

**PUBLIC UTILITIES**

The earliest gas works in the county were in Colchester in 1817 and Chelmsford in 1819 and were private companies that sold their gas to the local authorities and, along with the by-products, to other businesses. There was then a gap before gas works were established in other major towns in the 1830s, such as Saffron Walden where some of the 1836 works survives. The presence of electronics companies in Essex stimulated the electricity supply industry and Chelmsford was first lit by electricity in 1890 after the local authority had contracted with Crompton's for the supply. The first water company was established in Colchester in 1808 and following the Public Health Act 1848 a number of Local Boards were set up, the first being in Chelmsford followed by the other major towns. As well as the undertakings set up in a particular town, companies also developed to supply a greater area...
of this mainly rural county. These waterworks companies developed large supply systems involving pumping stations to extract water and move it from source to treatment works and storage in either a reservoir or water tower and finally to the customer. Much evidence of these supply systems survives in use; the pumping stations, water towers and reservoirs, and some redundant ones have been adapted to new uses.

**INDUSTRIAL COMMUNITIES**

In a rural county of scattered population, providing housing for the workforce has been a long tradition from the large estates providing cottages for agricultural workers to the isolated brick works which needed attract workers with the offer of accommodation. Some companies had a major impact on the settlements in which they were situated by providing a large number of houses and other community facilities, such as Hunt’s in Earls Colne and Courtauld’s in Halstead. The county has also seen the establishment of two company model villages. Silver End was built in the inter-war period by Crittall’s as a self-contained company village of houses, shops and community facilities as well as a metal window factory. East Tilbury was built from the 1930s through to the 1960s by the British Bata Shoe Company, again with houses, shops, community facilities and the factory site.

**SCOPE OF THE GAZETTEER**

This gazetteer covers the current administrative County of Essex, therefore not those areas historically part of Essex but now the eastern Boroughs of Greater London, but including the Unitary Authorities of Thurrock and Southend-on-Sea. It offers a wide range of sites covering both traditional industries and those of the twentieth century, plus the transport infrastructure. It concentrates on what is now rare, unusual and of regional and national significance. There are literally dozens of former watermills, windmills, malt houses and breweries in the County in various states of preservation and adapted to various new uses, but the gazetteer does not attempt to cover them all, rather to use those that tell the story of that industry’s development and are worthy of a visit and study.
Basildon New Town was developed after the Second World War following the New Towns Act of 1946 as an overspill town to ease overcrowding in London, along with other orbital developments such as Harlow. In 1949 Basildon was officially designated a New Town, with Nevendon being an industrial area with the first new factory operational as early as 1951. Bonallack coachbuilders were one of the first big names to move to Basildon in 1953, followed soon after by the Ford Motor Company, who opened a purpose-built radiator plant in 1957, while Marconi’s developed a number of sites in the 1960s.

**B1.1 ELECTRONIC ENGINEERING FACTORY**
Christopher Martin Road, Basildon
TQ731910
This factory was developed in the 1960s by Marconi Airadio Division of the Marconi Avionics Group, but was acquired by BAE Systems in 1999 when the front office building was re-clad. To the rear of the front building are a number of other 1960s workshops of concrete and brick construction. Radio and navigation products are designed and built for the civil and military aviation sectors.

**B1.2 ELECTRONIC ENGINEERING FACTORY**
Compton Close, Basildon
TQ696894
In the 1960s Marconi Commerce Services Ltd built this office and production unit. It is concrete framed with brick and part glazed alternating panels.

**B2.1 ELECTRONIC ENGINEERING FACTORY**
Radford Crescent, Billericay
TQ670953
In 1965 Marconi Specialised Components Division moved to this purpose-built factory from a site in Writtle. It remained in operation until the late 1970s when it was adapted to other manufacturing purposes.

**B2.2 WATER TOWER**
Albion Court, Billericay
TQ674941
This 1939 reinforced concrete water tower comprises a circular water tank supported on a circular central core and twelve columns. There is also a circular base structure covering the whole of the ground plan of the tower. There is a ring beam between the columns at tank soffit level. The tower is surrounded by a later development of sheltered housing for the elderly.

**B2.3 WORKHOUSE**
Norsey Road, Billericay
TQ678952
Erected in 1840 to plans by George Gilbert Scott, based on Kemphorne’s standard plan, the main H-shaped workhouse comprises a symmetrical two-storey central range with single-storey crosswings, one of which contained the Chapel and the other the Board Room. The central Master’s block is two-and-a-half storeys high and the whole of this original building has been converted to residential use. Apart from the Porter’s Lodge all other buildings have been demolished since the closure of the hospital that used the site.

**B3 EXPLOSIVES WORKS**
Pitsea Hall Lane, Pitsea
TQ738863
Originally grazing marshes and tidal creeks, which saw fishing, especially oysters, the British Explosives Syndicate set up a factory here in the nineteenth century manufacturing nitro-glycerine based explosives. In 1920 the site was taken over by the Nobel Explosives Company and during the Second World War the MOD owned the site. Evidence of all three phases of ownership survive in the form of the buildings, blast mounds and pill boxes. The site is now the Wat Tyler Country Park, named after the leader of the 1381 Peasants’ Revolt, which began in near-by Fobbing.
As the firm of Courtauld, Taylors and Courtauld found success in the early nineteenth century, they sought sites for new silk mills and built a horse-powered mill on this site in 1818. As they soon secured water-powered mills elsewhere they sold Pound End Mill to Daniel Walters in 1822. This is a three-storey mill with a red brick ground floor, the other two being of white weatherboarding all under a slate roof. Internally the timber framing survives. The ground floor has eight windows of early 19th century vertical sliding sashes with glazing bars. The upper storeys have windows extending the full length of the building on both long sides. As Walters developed the adjacent New Mills site, this mill became used solely as a warehouse. The building remains intact but is currently vacant.

Daniel Walters' silk weaving business had been in Braintree since 1821 and in the late 1850s developed this complex of weaving mills. The buildings have red brick plinths, but the majority of their structure is white weatherboarding under slate roofs. The fenestration consists of long horizontal windows extending the full length of the buildings, with cast iron glazing bars. Internally there is a light iron framework with cast iron columns. In about 1875 power-looms were introduced, including some Jacquard looms, steam power being supplied by a single cylinder, horizontal, flat-bed steam engine in an engine house in the yard. Drive was transferred to the line-shafting in the mills via tunnels between the engine house and mills. Walters' business went into liquidation in 1894 and the mills were bought by Warner and Sons who reverted to
just handloom weaving until 1918 when steam power was re-introduced. This was superseded by a 60 hp Crossley gas engine and electric power was introduced in 1936. Developments in the first half of the 20th century included a dye-house in 1920s and a new power-loom weaving shed in 1936; both were enlarged in 1949. The mill ceased operation in 1971 and in 1975 the engine house was demolished, but otherwise the two main mill buildings remain intact and now are in commercial use and part houses the Warner Archive.

**BT1.3 WATER TOWERS**
Blyth's Meadow, Braintree
TL758232
The site consists of two water towers, the first built by the Local Board of Health in 1880 and a newer replacement of 1928. The 1880 tower is octagonal in plan, about 20 metres high and in polychromatic brickwork supporting a 45,000 gallon tank. The 1928 tower comprises an enclosed 12 sided tank above an open brick colonnade with a square central core. Both have been converted to office and residential use.

**BT1.4 WEAVERS' COTTAGES**
118, 120, 141-145 South Street, Braintree TL760228 & TL761229
These five houses, a pair and a terrace of three, are among the last remaining weavers' cottages built in association with the Walters New Mills further along South Street to the west. Nos. 141 and 145 have a single storey extension to the side which was the original loom room. No. 118 has a modern two storey extension to the side incorporating the original loom room. No. 120 however retains the loom room and probably the original small paneled window.

**BT1.5 COMPANY HOUSING**
Clockhouse Way, Braintree
TL771230
The post WWI housing boom saw a vast increase in the demand for window frames and accordingly
BT2.2 WATER TOWER
Lyons Hall Road, Bocking
TL773260
This is the site of the 1928 water tower built for Braintree Rural District Council. It is in the campanile style comprising a high plinth in riven ashlar, a red brick tower, an iron tank painted in red oxide and a copper covered pavilion roof surmounted by a wooden louvered turret, itself having a copper covered pavilion roof with a weather vane at the apex.

BT2.3 WORKERS’ HOUSING
Church Street, Bocking
TL761260
Five pairs of semi-detached houses built by Samuel Courtauld and Co. for workers from the nearby Bocking Mill. Plaques in the paired gables indicate builder, ‘SC and Co’, and date, ‘AD 1872’. Designed by John Birch in a very decorative style including bargeboards, some with ball pendants and wrought-iron finials and windows with cast iron decorative glazing bars in octagonal patterns, a style used elsewhere by Courtauld. Further south on Church Street is the Village Hall of 1926 and Workman’s Hall of 1884, both funded by Courtaulds.

BT2.4 WINDMILL
Church Street, Bocking
TL763260
This is the second oldest surviving windmill in Essex having been built in 1721 and moved to its current site in 1830, one of many such post mills to have been moved. In 1898 a pair of steam driven stones were installed in the roundhouse so that milling could continue even when there was no wind. In 1929 the Parish Council was given the mill which raised the funds for its preservation. Braintree Council still owns and maintains the mill.

BT3 BRICK WORKS
Bulmer Brick & Tile Co., Hedingham Road, Bulmer
TL833382
A brickyard was operating here by 1844 and the same family continued the business until the First World War. It then passed through other owners before the Minter family bought it in 1936 and they still run it as the Bulmer Brick and Tile Company. Traditional methods are used to produce a range of bricks and tiles, but they specialise in a large range of shaped and decorative bricks, especially for restoration work on old buildings, with many high profile customers. Structures on site include the drying sheds and two 1930s kilns.

BT4 MALTHOUSE
Maltings Close, Bures Hamlet
TL902340
The Railway Maltings was built in 1851 and is H-shaped in plan having a three-storey central
range of drying floors and kiln area, and two-storey cross-wings which have taking-in doors on both floors. The slate covered pyramidal kiln lies at the end of the central range, between it and one of the cross-wings. Now converted to residential use.

**BT5 HERITAGE RAILWAY**
Yeldham Road, Castle Hedingham
TL773362

The Colne Valley Railway has been reconstructed on the line of the former Colne Valley and Halstead Railway track bed at Castle Hedingham. The original railway opened in phases from 1860 to 1863, partly engineered by Joseph Cubitt and closed to passengers in 1961 and freight in 1965. In 1975 the preserved section was opened and the station building from Sible and Castle Hedingham was re-erected here in 1975-6.

**BT6.1 BREWERY**
Little Coggeshall Brewery, Bridge Street, Coggeshall
TL849224

William Gardner owned the land on which this brewery was built by 1827 and he is listed as a brewer and maltster in 1839, having also built the adjacent malthouse, now known as Riverside Maltings. He traded until his death in 1877 and the business was continued by his widow and son as E. Gardner and Son. Brewing had already ceased when Greene King and Son Ltd leased it in 1941 and they closed it two years later removing some of the equipment. Since closure as a brewery the structures have been in light commercial use until a recent sympathetic conversion to private residential use.

**BT6.2 BREWERY**
Church Street, Coggeshall
TL851227

Although some of the structures on the site date from the 17th century, brewing began here in the early nineteenth century. John Beard managed the business from 1857 until his death in 1905 when it was sold to Charrington Nicholl and Co of Colchester who sold it the following year. As well as the brewhouse and offices there was a malthouse in the complex, now demolished, and a range of buildings which probably included stables and a counting house which remain at the rear accessed through an archway. The site is now the Conservative Club.

**BT6.3 BREWERY**
Stoneham Street, Coggeshall
TL850227

This is the site of the Coggeshall Brewery dating from the early nineteenth century and from 1855 George and Isaac Beard were brewing here. By 1899 William Bright had joined in partnership with Beard and from 1925 the business was in the ownership of London Breweries. The brewhouse and offices are now private houses and the malthouse, which is a community hall, is to the rear.

**BT6.4 FOUNDRY**
Bridge Street, Coggeshall
TL850225

The Coggeshall foundry was founded by William Kirkham and Chas. Newman in 1816 and the business was carried on by R.M. Kirkham until c.1887. The building is partly brick built, timber framed and weather-boarded, with gable ends. A single-storey cart shed and a small weather-boarded office complete the complex. This is the only standing small rural nineteenth century foundry in Essex and is now in use as an aprivate house.

**BT6.5 ISINGLASS FACTORY**
West Street, Coggeshall
TL842225

This is on the site of an eighteenth century tannery with central tanyard. A purpose-built factory for the production of gelatine and isinglass was built on the site in 1847-8 and greatly expanded in 1875 incorporating some of the original tannery buildings. The isinglass factory operated by James Vickers Ltd. until 1997. The site has been redeveloped for residential purposes.
**BT6.6 WATERMILL**  
Abbey Lane, Coggeshall  
TL856222

This site has a long and varied social and industrial history, being the site of the Coggeshall Cistercian Abbey and Abbey Mill dating from the twelfth century. In the early seventeenth century a fulling mill built by Flemish refugees served the Coggeshall woollen cloth industry. The present mill was built in the mid eighteenth century as a weaving mill and became a silk throwing mill in c1820. It is timber-framed and weather-boarded and has a breast-shot wheel. The windows of the upper storey are designed for the weaving activity being among much of the length of the mill, with small panes. In c1840 it was converted to corn milling. It was adapted for steam power in the mid nineteenth century and the engine house and chimney remain although the equipment has been removed and the chimney, which has a square base and round flue, reduced in height. The mill operated until c1960 and remains largely intact as one of the largest and best preserved mills in the county.

**BT7 WATERMILL**  
Mill Lane, Colne Engaine  
TL860299

Overshot Mill was built as a fulling mill in 1643 but converted into a corn mill between 1787-1810. Between the wars the mill was used for horse feed and for driving a dynamo which powered the mill and the adjacent farm. During this period the iron waterwheel became very corroded and by 1965 it was replaced with a second-hand Gilbert, Gilkes and Gordon waterwheel. The mill and its granary are grouped close together and form part of a wider complex of buildings including a farm. Overshot Mill House and Mill Cottage. The mill has a red brick ground floor and two timber-framed and weather-boarded storeys above. Central to the roof is a weather-boarded lucam with a gambrel plain tile roof and curved brackets which projects to the roadside. A taking-in door (now part blocked and converted into a window) was located directly below the lucam on the first floor. The mill has been in to residential use for at least 30 years.

**BT8.1 FARMSTEAD WITH MALT HOUSE**  
Cressing Temple, Witham Road, Cressing  
TL799186

The twelfth century Cressing Temple site was the headquarters of the Knights Templar in England. The two barns and the well that survive on the site originate from this period. The Wheat Barn and the Barley Barn are the two finest Templar-built barns in Europe while the Barley Barn is recognised as the oldest timber-framed barn in the world. The seventeenth century timber framed Granary is weather-boarded at ground floor level with render above. The remains of a stone, brick and flint built steeping tank and its brick-built sluice and drain have been found and seventeenth century documents refer to a malting on this site which appears to have gone out of use in the early nineteenth century.

**BT8.2 WATER AND STEAM MILL**  
Bufford Mill Lane, Cressing  
TL774205

There has been a mill on this site since Domesday, a fulling mill being here when acquired by Joseph Savill in 1804, who introduced corn milling but continued with fulling and also spinning. In 1813 he sold the mill which was converted to just corn milling. A steam engine and house were added by 1862, in 1892 rollers, working with and not replacing the stones, were installed, and in the following
year a turbine replaced the 18ft diameter overshot waterwheel. In 1947 the then owner closed down all milling operations but adapted the turbine to generate electricity for his estate. In 1992 the mill was again sold and sympathetically restored to its present condition for residential use. The site also includes the mill leat and sluices, a brick built granary, the mill house, with a range of stables, cart lodge and barns. Although the mill is now in residential use much of its heavy machinery, fixtures, fittings and equipment remain intact along with miller’s tools.

**BT9.1 IRON WORKS**

Foundry Lane, Earls Colne
TL854288

Robert Hunt set up his millwrights business in Earls Colne in 1825, then began ironworking and by 1851 his agricultural machinery business was developed enough to be exhibiting at the major shows and he won a medal at the Great Exhibition. His son Reuben took over the business and he rapidly expanded the Atlas Works site in the 1860s into one of the largest and most important iron foundries in Essex. It specialised in the production of agricultural machinery and produced such items as winnowers, chaff cutters, clod crushers, horse gears and threshing machines. The site closed in 1988 and has been redeveloped for commercial and residential use. All that survives of the original buildings are the Watch house, canteen, hay loft and stores, office, machine shop façade and foundry façade around the courtyard and the water tower.

**BT9.2 CRAPE FACTORY**

Foundry Lane, Earls Colne
TL857288

Courtaulds built a winding and drawing mill here in 1883 during the boom period before the demise of mourning crape in the following decade. Steam power was used from the beginnings of operation. Weaving was also undertaken here from the late 1890s and it became one of the locations for the weaving of the new artificial silk in the twentieth century until it was closed in 1925. It was originally equipped with machinery made in the Hunts Atlas Works on the other side of Foundry Lane. The building was then used by Hunts as a store. The building remains in light industrial use and retains its external integrity including the chimney.

**BT9.3 WORKERS’ HOUSING**

Hibernia Cottages and Bellevue Cottages, Foundry Lane, Earls Colne
TL856287

As Reuben Hunt developed the agricultural machinery business at the Atlas Works, the workforce grew from 50 in 1867 to 200 by 1890 and 290 by 1900. This expanding workforce needed housing, which the company provided starting in 1872 with Hibernia Cottages, a terrace of 12 red brick dwellings with white brick dressings around the doors, windows and as quoins. In 1876 Hunts built Bellevue Cottages, a terrace of 10 cottages of similar architectural style to that used for the adjacent Hibernia Cottages. Other terraces of three and four cottages in each, were erected in 1888, 1897 and 1900 on the west side of Foundry Lane and to the north of Hayhouse Road. More houses were built on a number of other sites within the village including a Garden City Style development on the Halstead Road from 1905 - NGR TL848930.

**BT9.4 MECHANICS INSTITUTE**

High Street, Earls Colne
TL857289

This row of 10 cottages with the Mechanics Institute set in the middle of the row was built in 1854. The Institute is now the village’s library.

**BT10 WINDMILL**

Causeway,Finchingfield
TL687330

Duck End post mill stands in the centre of this picturesque Essex village. Dating from the mid
eighteenth century, its roundhouse was built in 1840 to cover the trestle. It became disused in the 1890s and was restored to a degree in the 1950s. Essex County Council then restored it to its former glory.

**BT11 WINDMILL**

Mill Road, Great Bardfield
TL681307

Built around 1700, Gibraltar Tower Mill may have Seventeenth century origins and is probably the oldest surviving windmill in Essex. Converted to a house in 1957 when the brick work was rendered over.

**BT12 SMALL HOLDINGS**

Various addresses in Great Yeldham, Tilbury-Juxta-Clare & Little Yeldham.
TL750390 - TL770400

Influenced by the Carnegie UK Trust, the Land Settlement Association Ltd. (LSA) was founded in 1934 with the aim of providing work on small holdings for unemployed industrial workers such as miners, principally from the north of England. In each scheme existing agricultural land was divided into plots of varying sizes and houses, out-buildings, glass houses, piggeries and poultry huts were built. Roads and a central storage and administrative centre were established, the latter usually based on a pre-existing farm. The plots and hence the houses were strung out at wide intervals along the frontage of the roads. 25 of these estates were established nationally with two created in Essex. The houses were designed by architects Pakington and Enthoven to provide adequate accommodation as cheaply as possible according to the requirements of the Housing Act. The Ministry of Agriculture took over the Yeldham estate along with the other LSA estates in 1948, but sold the Yeldham estate in 1957/8 by which time market gardening here had ceased.

**BT13.1 BREWERY**

Trinity Street, Halstead
TL8909305

The Halstead Brewery was built in 1859 by Charles Stanton Gray of Chelmsford, but in 1876 was bought by Thomas Francis Adams. On his death in 1878 his sons, Edgar and Percy, continued the business of T. F. Adams and Sons until it was sold in 1939 to Fremlins. In the early 1960s it was no longer needed as a brewery and became a council depot, but has now been redeveloped as housing. At its maximum extent the site consisted of malthouse, brewhouse, boiler and engine house, stable block, stores and offices, plus 'The Cottage' which was the Adams family home. The malthouse, offices and the stores have been converted to residential use and 'The Cottage' remains. The other significant feature of the complex is the adjacent Brewery Chapel, built in 1883 as a memorial to Thomas Adams by his sons as a chapel and reading room, it was rebuilt in 1902 in memory of Thomas and his wife.

**BT13.2 SILK MILL**

Townsford Mill, The Causeway, Halstead
TL813304

The corn mill on the River Colne at Halstead was bought by Stephen Beuzeville who in 1825 engaged Samuel Courtauld to convert it to a silk throwing and weaving mill. When Beuzeville’s business experienced financial problems, Courtauld bought the mill in 1828 and it was to become the core of one of the three main sites of the Courtauld business. The original water powered mill dates from 1788, is three storeys high, weather-boarded under a slate roof. It is distinguished by, on the ground and first floors, rows of very close windows each with small panes and glazing bars. The ground floor was used for drawing the silk, first floor for winding and the top floor for weaving. Adjacent to the mill is the mill house of mid to late eighteenth century. Gradually as the Courtauld business grew the factory here was extended. In 1832 a power loom factory was opened, equipped with 106 looms. A second was added in 1836 and another in 1842. Steam power was introduced in 1828 and expanded with the increasing size of the factory and the number of looms. Gas lighting was introduced in 1838 and gas power was installed in 1892, with Crossley gas engines and a producer gas plant being installed in 1894. The use of gas did not last long however and when a further extension to the mill was built in 1905 a new steam engine was installed. The original weather-boarded mill remains astride
the River Colne, currently an antiques centre and restaurant, with the mill house adjacent. To the north of this mill is a red brick range of one of the mid nineteenth century extensions to the factory which is now part of the shopping centre (‘Weavers Court’). Also on the site are two small ancillary buildings of red brick and red plain tiles – the small one dated 1904 was the gatehouse and the larger one marked ‘SC and Co Ltd 1912’ was the first aid building.

**BT13.3 WORKERS’ HOUSING**
Factory Terrace, Factory Lane East, Halstead TL813305
Built in 1872 by Samuel Courtauld and Co., this housing development consists of a terrace of six and another of 10 three-storey houses. The casement windows have cast iron decorative glazing bars in octagonal patterns, a style used elsewhere by Courtauld. Each dwelling has a rear extension which was probably originally the toilet and wash house. The factory chimney stood between the two parts of the terrace and just to the rear of them. Plaques inform of the date and builders ‘SC and Co’ and ‘1872’. Much of the wall between Factory Terrace and the shoppers car park is part of the original textile factory wall.

**BT13.4 WORKERS’ HOUSING**
The Causeway, Halstead TL812304
This group of workers’ houses consists of a pair of houses and a terrace of 10, all two storey, plus, at the south end, what was a dining room for employees and is now the Royal British Legion Hall. All were designed by George Sherrin for
in 1920 designed by T.W. Cressall which adopts a similar architectural style. The open timber work in a herring-bone pattern together with an inscription dedicated to George Courtauld, 'In Memorium G.C. 1920' are present on the gable. The Courtauld family also funded a number of other community facilities in the town including the adjacent Homes of Rest built in 1923 on the site of the former workhouse.

**BT13.7 WEAVERS’ COTTAGES**
Weavers Row, Halstead
TL817305

There were originally two terraces of silk weavers' cottages here, but just a terrace of twelve remains (the other was of six). Built in the mid-nineteenth century with mansard roofs this is a rare survival of a group of silk weavers' cottages.

**BT14 WATERMILL**
Swan Street, Kelveden TL867190

The earliest reference to Easterford Mill is a Manorial record of 1320 and the present mill was built in the mid-eighteenth century. It is a 2 and a half storey weather-boarded mill with an off-centre gabled lucam projecting to the front. It is unique in Essex in that it has a separate inner timber frame built to support the load of the main machinery, thus leaving the outer walls to just bear the weight of the roof structure. It retains a significant amount of its milling technology, fixtures and fittings including the undershot waterwheel and had the potential to be put back into operational use. Milling ceased in 1929 and it has been recently converted it to residential use thus ensuring its survival as one of the most important water powered mills in the county.

**BT15 WATERMILL**
Pentlow Hill, Pentlow TL809463

On the River Stour, the Suffolk boundary, there has been a mill on this site since Domesday. The current timber framed, brick faced Pentlow Mill dates from the eighteenth century and has an attached mill house. During the nineteenth century the mill incorporated a dairy and a brewery, then with the coming of the railway diversified into milling and a coal merchants, but from the 1870s relied on milling animal feed with a sideline in poultry and eels. Around 1910 the waterwheel was severely damaged in a flood and was not repaired but replaced by a portable steam engine, which in turn was replaced during the 1930s by a paraffin engine. During the 1960s after milling had ceased

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**BT13.5 WORKERS’ HOUSING**
Hedingham Road and Colchester Road, Halstead
TL813310 and TL819305

During the 1920s, and even as late as 1935, Samuel Augustine Courtauld had 45 houses built for company staff, with 25 constructed either side of the Hedingham Road close to those in Box Mill Lane and Mill Chase, the Courtauld Homes of Rest and the Halstead Hospital. Eight were built along Colchester Road close to other sites associated with the Courtauld family and its business: the houses in Mallows Field, the Church, hall and presbytery, and the sports ground. All were built in what became known as 'Courtauld Tudor' style, an Arts and Crafts / Garden Suburb style making use of traditional materials wood, rendering, brick and plain clay roof tiles.

**BT13.6 COTTAGE HOSPITAL**
Hedingham Road, Halstead
TL814310

Construct in 1884 and designed by George Sherrin, the cottage hospital was built under the instruction of George Courtauld in memory of his recently deceased wife. The hospital provided accommodation for four men, four women and one child, with a small mortuary and laundry to the rear. The roadside façade has an open timber gable with a dedication inscribed onto the tie-beam over the heads of the first-floor windows 'In Memorium S.L.C 1884'. A free-standing single-storey outpatients department was erected to the south
it was to be converted into a school, but this was not completed and it is now in residential use.

**BT16 RAILWAY STATION**
Station Road, Rayne
TL726224

The newly formed Great Eastern Railway built the branch line from Bishop's Stortford to Braintree in the mid 1860s and introduced a house-style for the station buildings designed by Robert Sinclair. Rayne Station is a small version of this style, dating from 1866 and comprising: station master's accommodation; booking office; waiting room; porter's room; lamp room and toilets (although the Gents is a 1994 reconstruction). The brick platform survives. The station is now the Flitch Way Visitor Centre and ranger base.

**BT17 WATERMILL**
Braintree Road, Shalford
TL790295

Wethersfield Mill comprises a possibly sixteenth century timber framed, weather-boarded mill and a late nineteenth century brick built range added onto the rear. The former has a lucam over a taking-in door at first floor level that is now glazed but retaining its boarded door. The brick built addition similarly has a taking-in door, now glazed, but retaining its boarded door. The mill forms part of a small group of buildings which includes an eighteenth century stable, coach house and timber framed barn and a mid nineteenth century mill house built to designs by Fredric Chancellor. The mill and mill house are both in residential use, the mill surviving as one of only eight surviving mills in Essex that were built with an overshot wheel.

**BT18 WATERMILL**
Alderford Street, Sible Hedingham
TL784339

Alderford Mill dates from the eighteenth century but was extended during the nineteenth century when it was adapted to steam milling. A deed of 1872 records a newly erected engine, a coal store, boiler house and steam engine, together with the necessary driving mechanisms to power two additional sets of stones. During the 1930s the steam engine was dispensed with and a new Rushton and Hornsby oil engine fitted. In the 1950s the traditional grinding methods were abandoned and the mill was converted to use electric crushers for animal feeds. The mill is part brick but mainly timber framed and weather-boarded mill with a plain tiled Mansard roof. The low breastshot waterwheel is cast-iron with wooden paddles. The mill survived unconverted and has been restored by Essex CC’s Mill Team, retaining much of the historic technology original to the building. The waterwheel now turns under its own power and is one of a very select number of watermills within Essex that have the necessary gearing and are still capable of working under water power.

**BT19.1 METAL WINDOW FACTORY**
Boars Tye Road, Silver End
TL810196

Crittalls built this metal window factory in 1926 when the company was developing its model company village at Silver End. Unfortunately most of the original factory buildings, by then derelict, were demolished in 2008, and the whole site awaits redevelopment. The only buildings retained are the 1926 factory building and the
Cubitt. A relatively small bridge of 18ft span with nine segmented cast iron girders resting on brick piers, the name Ransome and Sons Ipswich 1814 is cast on the east face. The bridge was widened to accommodate a concrete pedestrian crossing in 1955.

**BT22.3 ROAD BRIDGE**
Bridge Street, Witham
TL 818141
This cast iron bridge on four brick pillars and with cast iron parapet rails was built in 1900. Circular cast iron disks on the balustrades have the lettering Essex County Council 1900 around the outside and in the centre a shield with three seaxes.

**BT22.4 ELECTRONIC ENGINEERING FACTORY**
Freebournes Road, Witham
TL826152
A purpose built electronics factory of the 1960s for English Electric Valves, which changed its name to Marconi Applied Technologies in 1999 and e2v in 2001. This factory has four inter connected blocks of steel or reinforced concrete frame with cladding and flat roofs.

**BT22.5 MALTHOUSE**
Maltings Lane, Witham
TL815135
This sixteenth or seventeenth century malthouse is timber framed and part weather-boarded, part brick faced. It has two storeys and the kiln with conical roof is set at right angels at the brick faced end. It has been converted to flats, but is one of the best surviving small-scale malthouses in Essex and is one of the earliest surviving examples in the county.

**BT22.6 STATION FOOTBRIDGE**
Witham Station, Albert Road
TL821152
The lattice span footbridge at Witham Station was built by Crittall Coy, Structural Engineers, Braintree in 1907.

*BW1.2: Water tower at Brentwood, see entry on right*
BW1.1 PUMPING STATION
Warley Street, Brentwood
TQ593895
The South Essex Waterworks Co was established in 1861 and originally operated from a chalk quarry in Grays, Thurrock, but developed the Great Warley Pumping Station in 1882 in response to increased demand for a reliable, good quality water supply. It was built as a lifting station to move water up to Brentwood. The complex comprises a pump house with gantry crane, two single-storey brick buildings (one dated S.E.W.W. 1886), a corrugated iron building with barrel roof and a service reservoir.

BW1.2 WATER TOWER
Eagle Way, Brentwood
TQ591915
This site was developed by the then South Essex Waterworks Co as a water storage facility, and now comprises a covered service reservoir and a 1938 reinforced concrete water tower. This has a circular tank supported on a circular central core and 16 columns, which are tied back to the core with ties and struts at two intermediate levels and tank soffit level. There are two ring beams tying the columns together at intermediate levels and at tank soffit level. There is an open concrete balustrade around the top of the tank.

BW1.3 MODEL FARM
Childerditch Street, Brentwood
TQ617905
Hatch Farm model farm was designed by Samuel Wyatt in 1776 comprising a barn and a U-shaped yard flanked by single storey ranges all in red brick with slate or pantiled roofs. The barn was a fodder store and was partly converted to a house in the nineteenth century. The single storey ranges were colonnaded feeding sheds with two-storey corner pavilions and central blocks with arched openings. There have been subsequent alterations and some losses on conversion of the buildings to residential use.

BW2 RAILWAY STATION
Station Lane, Ingatestone
TQ650992
The current Ingatestone Station building is the second, but was built in 1846 very soon after the opening of the line. It was restored in 1989 and retains an unmodernised booking hall with timber booking office screen possibly dating from 1872 and an original waiting room fireplace.

BW3 WINDMILL
Thoby Lane, Mountnessing
TQ631979
Mountnessing Post Mill was built in 1807, and was in regular use until the mid 1930s. It is a post mill, weather-boarded with a polygonal brick roundhouse base. It was purchased by the Parish Council in 1937 and was one of the first to be preserved in the County. In 1956 the County Council took over ownership, it has been restored to full working order and is open to the public.
**CP1 PETROCHEMICAL WORKS**
Haven Road, Canvey Island
TQ776824

The petrochemical shipping and storage facilities at Hole Haven were first developed in 1936 when an oil terminal was established. In 1959 a gas terminal with two one thousand tonne capacity storage tanks was constructed at the site alongside the oil terminal. Gas was imported from America and stored before distribution to the rest of Britain via the facilities at Thames Haven and the local refinery at Shellhaven in Coryton. In the 1970s construction began on an oil refinery but it was never completed due to health and safety concerns. The structures which were built have been removed, including a concrete chimney demolished by Fred Dibnah, and that site is now a nature reserve.

**CP2 WATER TOWER**
Benfleet Road, South Benfleet
TQ790867

This is the site of the water tower of c.1910, latterly operated by Southend Waterworks Co. The tower is built of red and blue brick in the Romanesque style mimicking a castle tower having crenellations and machiolations on the underside of the panelled parapet. It has been converted to flats.
C1 STEAM MILL
Hawk Hill, Battlesbridge
TQ781947
This four-storey former steam mill was built adjacent to its own wharf along the north bank of the river Crouch around 1880. The lower storeys are brick-built and the upper storeys and loft are timber framed and clad in weather-board. A lucam projects out over the river and wharf and there is a full height weather-boarded hoist/elevator bay, now a stairwell. It was enlarged in the early to mid twentieth century following a fire with the addition of a three-storey extension. The building is now used as antiques centre, an adaptation that has resulted in the removal all of its milling technology.

C2.1 BREWERY
Springfield Road, Chelmsford
TL710067
This brewery was run by the Gray family for almost 150 years from its founding in 1828 by Charles Stanton Gray to its sale in 1974. It was built alongside and partly upon the site of the Black Boy Inn and brewery. The brewery is a complex of a number of component parts built in a U-shape around a yard open to the road and most of which remain and are identifiable. These are a three-storey malthouse with taking-in door and hoist and pyramidal kiln chimney; a four-storey malthouse with weather-boarded lucam and a kiln chimney; a four-storey malt Store with taking-in doors; a four-storey brewhouse; a bottling plant; and an office. Steam power was installed in 1860 to operate two well water pumps, the malt mill, mash tun rakes, beer pumps, bottle washers and a boiler force pump. The site is now in use as retail outlets for a number of high street stores.

C2.2 WATERMILL
Victoria Road, Chelmsford
TL713071
A mill is recorded on this site in Domestacy, the current building dating from the eighteenth century. The twentieth century saw a diversification in uses, firstly for oil seed cake manufacture, then grinding bone for fertiliser and animal feed and finally as a store and for seed cleaning. It is now a public house and retains some of the machinery as features. The building is three and a half storeys high, timber framed and weather-boarded. The eighteenth century mill house survives.

C2.3 WATER & STEAM MILL
off Chelmer Road, Chelmsford
TL717062
The first documented reference specifically to a Moulsham Mill is in 1382. Its history is then one of many owners and phases of rebuilding, the last being around 1780. For a while at the start of the nineteenth century it was used as a coal mer-
chant's depot, being on the Chelmer & Blackwater Navigation. In 1839 Joseph Marriage junior took over the mill and within a few years built a brick steam mill. He occupied the site until the middle of the century and was followed by William and Henry Marriage, millers and coal merchants. The steam mill was rebuilt in 1878 and then converted to roller milling in 1891 and continued producing flour until 1958 when all business was transferred to Marriages Chelmer Steam Mill. All the buildings lie within the Chelmer and Blackwater Navigation Conservation Area and include the mill, two mill houses, an engine house and a stable range. The mill in fact comprises two mills built in parallel: the late eighteenth century timber framed and weather-boarded water mill and the nineteenth century brick built steam powered roller mill. The mill was converted for and is presently in use as a craft and business centre.

C2.4 STEAM ROLLER MILL
New Street, Chelmsford
TL712075
In 1898 W. and H. Marriage & Son engaged local architects Fredric Chancellor & Sons to design a new steam powered roller mill and so construction began in 1900 of the Chelmer Steam Mill. The mill remains in the ownership of the Marriage family who successfully continue in the business of flour milling, being one of the largest millers in the eastern region. The nineteenth century mill building still stands on site although it now forms part of a large modern milling complex comprising huge production buildings and flour silos, modern steel clad reception and processing ranges. The dominant feature of the building is an integral seven-storey square plan silo tower which rises above the roofline and is capped by a hipped roof sheltering a water tank in the upper
stage. 'Marriage Millers' is displayed in large white letters on the south facing wall of the tower just below the roof eaves. Chelmer Mill survives as the only working example of a former steam mill and one of only two surviving mills in Essex, the other Langford watermill, to be built by F. Chancellor and Son.

**C2.5 ENGINEERING WORKS**

New Street, Chelmsford

TL710074

Geoffrey and Charles Arthur Barrett formed an unsuccessful ball bearing manufacturing business in Chelmsford by 1896 but had a problem producing truly circular balls. However a Swiss-American inventor Ernst Gustav Hoffmann had patented a method which addressed this problem and the Barretts persuaded Hoffmann to work with them in Chelmsford. In 1898 a new factory and company named the Hoffmann Manufacturing Company was established on an extensive site in New Street. The original factory comprised a number of production buildings (many now demolished) and two large five-storey factories. By 1903 Hoffman dissolved relations with the Barretts, but the company in his name continued to grow based on the demand from railway, motor vehicle and aircraft industries. The site is now part of Anglia Ruskin University.

**C2.6 RADIO FACTORY**

New Street, Chelmsford

TL708073

Marconi's left their Hall Street factory for this purpose built factory opened in 1912. It was a large site with the workshops behind the offices on the New Street frontage, power generation on the Marconi Road side and the open ground not covered in workshops was used for radio masts. The world's first public radio broadcast was made from this site by the opera singer, Dame Nellie Melba in 1920. The New Street frontage has a centrepiece over the entrance on which is the name 'Marconi' in gilt letters and the whole is surmounted by a domed clock tower with weather vane. The site had its own railway sidings. Over the years there have been many additions and alterations, but the site is now disused and awaiting redevelopment.

**C2.7 RADIO FACTORY**

Hall Street, Chelmsford

TL709064

This site is one with a long and varied industrial history. Built originally as a warehouse for John Hall's silk business in 1861, as his business faltered he sold it to Samuel Courtauld and Co. in 1865. Courtauld's used it as a silk mill until 1894 when that business was also suffering from changes in the silk industry. It then became Marconi's first radio factory from 1899 to 1912. Latterly it was the headquarters of the Essex and Suffolk Water Co., but is now vacant along with the site of the adjacent waterworks. A blue plaque records the association with Marconi.

**C2.8 WATERWORKS**

Hall Street, Chelmsford

TL709063

The Chelmsford Local Board of Health set up in 1850 developed this site in the 1850s over an artesian well and a 120,000-gallon reservoir of brick and cement with a galvanised iron roof was built to store the water from this well and that at Burgess Well. The pumping station housed Galloway horizontal boilers and two beam engines. The site of the reservoir is now empty, but the buildings of the...
in around 1942 to manufacture electrical valves and magnetrons. Between the road and the main works buildings are the remaining buildings of Waterhouse Farm, including an extant barn, and a row of houses. The utilitarian sheds of the works were extended a number of times during the Cold War period. The site is still operated by E2V.

C2.12 CONDUIT
Park Road, Chelmsford
TL705070
Two tablet stones mark ‘Conduit Pipes’ of c1800 marking the route of the town water supply from Burgess Well to the conduit head in Tindal Square. The conduit head has been rebuilt and moved on a number of occasions and since 1940 has been in Tower Gardens on the Roxwell Road (TL693074).

C2.13 WATERWORKS
Sandford Mill Road, Chelmsford
TL738061
This is the site of the Chelmsford Corporation Waterworks, acquired in 1923, completed in 1929, and extended and modernised in 1955. This extensive site, on land between the mill stream and the Chelmer and Blackwater Navigation, consists of a number of buildings including a large pre-war structure which has the name of the undertaking on its east façade, as well as areas of water probably from the former treatment works. The waterworks became uneconomic in the 1980s and the site was bought back by Chelmsford Borough Council from the Essex Water Co. It is now the site of a museum, although some important waterworks structures survive.

C2.14 RAILWAY VIADUCTS
Parkway, Chelmsford
TL702066 – TL707072
The Eastern Counties Railway from London to Colchester opened fully in 1843, the Chief Engineer of which was John Braithwaite. As it crossed a number of river valleys a number of bridges and viaducts were needed, including two in Chelmsford. The larger is that over the River Can valley at 647 feet long and 44 feet high. There is then an embankment before the second, the Station Viaduct, which, as the name suggests, is also the site of the station. Both are built on a continuous curve. Chelmsford Station retains its 1899 signal box built on a very tall brick base alongside the viaduct, now disused, and a low water tank of 1881. The original 1843 island platform was lost during re-modelling of the station in 1856.
C2.15 ROAD BRIDGE
New London Road, Chelmsford
TL708066
Built 1890, this single span cast iron bridge replaced an earlier bridge of 1840, damaged by traction engines and then destroyed by floods. It has six iron elliptical arch ribs, each cast in 4 pieces and bolted together.

C2.16 NAVIGATION BASIN
Wharf Road, Chelmsford
TL713067
The Chelmer and Blackwater Navigation was constructed between 1793 and 1797, John Rennie being the Chief Engineer. It runs from Springfield Basin in Chelmsford to the sea lock at Heybridge Basin, near Maldon, and the full length is now a Conservation Area. The navigation is managed by Essex Waterways Ltd, a subsidiary of the Inland Waterways Association. Springfield Basin retains some of its original buildings including a nineteenth century timber warehouse and dwelling, and early to mid twentieth century sheds and warehouse.

C3.1 BREWERY
Church Street, Great Baddow
TL732046
The brewers Crabb, Veley and Co had a new integrated brewery complex built here in 1868. Additions in 1878 were designed by the brewers' architect George Scamell, with further additions in 1902, by which time it was known as the Baddow Brewery Co. The prominent plaques containing 'C's and 'V's testify to the original partnership. The business was taken over by Seabrooke and Sons of Grays in 1927. Many of the structures remain in tact and in use for retail purposes. The bottling stores were on the opposite side of the road from the main structure. This was demolished and a new structure built in 1989 incorporating decorative features from the original building such as the circular inset reliefs of royalty.

C3.2 RESEARCH CENTRE
West Hanningfield Road, Great Baddow
TL728038
This site, the Marconi Research Centre, was in operation by 1939 to carry out trials of experimental radio and radar equipment. Major expansion took place in the Cold War of the 1950s and 1960s. It is now an Advanced Technology Centre for BAE Systems.

C4 ROAD BRIDGE
Hawk Hill, Rettendon
TQ780946
The previous bridge on this site across the River Crouch was demolished by a steam traction engine in 1845, so when this one was built in 1872 it was robustly tested before erection. It has a cast iron central arch with brick side arches, parapets and pillars, the total length being 117 feet. It has been widened to take two lanes of traffic.

C5 WINDMILL
Mill Lane, Stock
TQ989988
Stock Tower Mill is the sole survivor of three windmills (the other two were post mill) that once stood on this site. Built in about 1816 it originally had cloth sails which were turned into the wind from first floor staging which has now been removed although evidence of it can be seen in the brickwork. From 1902 it had auxiliary steam power, but ceased operation in 1930. Now in the care of the County Council, it is open to the public.

C6 ROAD BRIDGE
Parsonage Lane, Great Waltham
TL699147
Cast iron bridge carrying unclassified road over River Chelmer. The importance of this bridge is that it was made in Chelmsford by Coleman and Morton, local iron founders, and it is beyond reasonable doubt the largest surviving example of their work. The bridge rests on brick piers; on either side of the carriageway are elaborate balustrades mounted on iron plinths each of which bears the firms name. Each outer ridge of the bridge span has the words AD1871 COLEMAN AND MORETON CHELMSFORD cast into it.

C7 ROAD BRIDGE
Bridge Street, Writtle
TL682061
This cast iron bridge takes the Chelmsford to Writtle road across the River Wid and was erected in 1891. Circular cast iron disks on the inner faces of both parapets have the lettering 'Writtle Bridge Essex County Council' around the outside and in the centre the date 1891 within a shield with Essex County logo.
CO1 WATERWORKS
Langham Waterworks, Hall Road, Boxted
TM016340 and TM027344
This is an extensive site comprising a number of components of a water treatment works developed in the early 1930s by the then South Essex Waterworks Co. and most of the buildings reflect the International Modern Movement architectural style. Low Lift pumping station is adjacent to the River Stour from which water is extracted and pumped to the main site of the water treatment works. This consists of extensive filter beds with associated buildings including the Control Room, Primary Filter House and Chemical House which are all of similar architectural style to that of the Low Lift pumping station. Along the south edge of this main site is High Lift Villas Road on which there are six semi-detached and one detached house developed as staff housing. To the southeast of the main site is a large covered service reservoir with its own small pump house.

CO2.1 RAILWAY VIADUCT
Colchester Road, Chappel
TL897284
Peter Bruff built Chappel viaduct in 1847-9 for the Eastern Union Railway. It is 1163ft long, has a maximum height of 80ft and has 32 semicircular arches. Originally it was to be a timber viaduct, but was built of locally made brick. It remains in use on the Marks Tey to Sudbury branch line.

CO2.2 HERITAGE RAILWAY
Station Road, Chappel
TL898288
The East Anglian Railway Museum is based at Chappel and Wakes Colne Station on the operating Marks Tey to Sudbury Branch Line. The Sudbury line was opened in 1849 and this station was built soon after although it was greatly expanded in 1891 with new station buildings, stables, goods shed and staff cottages. The whole line was threatened with closure in 1967 but this was cancelled and the Preservation Society, which had been set up to operate the line, developed Chappel and Wakes Colne Station as a steam centre, opening in 1971. Most of the original buildings survive and other historic buildings have been re-erected on site.

CO3.1 BREWERY
Maidenburgh Street, Colchester
TL997253
This is the site of the Daniell Brothers brewery which has dated and initialled bricks of 1876. Following a merger with the West Bergholt Brewery the business became known as Daniell Brothers and Co and brewing ceased here in
1892, although the firm continued to trade at West Bergholt until taken over by Truman, Hanbury and Buxton and Co. Ltd. in 1958 and these premises were used as offices until selling off began in 1957. The brewery has been part demolished and converted to offices while the former maltings is now in residential use. Externally the brewery retains some original features including a louvred ventilator on the ridge, taking-in doors and a chimney.

**CO3.2 BREWERY**
East Hill, Colchester TM005254

This is the site of what was probably the most extensive brewery in Essex, now unfortunately extensively demolished with only the offices which fronted East Hill remaining. Built in 1871 by Charrington Nicholl and Co. on the site of an earlier brewery based in a former baymaker’s warehouse, this site developed into an integrated brewery complex consisting of a well, brewhouse, maltings, fermenting rooms, tun room, offices, tap house, stables, cart sheds, cooperage, cask washing shed, bottle washing and chimneys all around the brewery yard. Eventually taken over by the Colchester Brewing Company (which owned the adjacent Eagle Brewery) in the early 1920s it continued to operate for a few years until the site was sold to the Crowther Brothers for a clothing factory. Most of the brewery was demolished in 1971 and all that remain are the offices fronting East Hill and the Goat and Boot Public House.

**CO3.3 BREWERY**
74 East Hill, Colchester TM003252

Christopher Stopes and Robert Hurnard commenced brewing on this site in 1828 (the date appearing twice on the extant buildings) and by 1887, following a number of mergers, the business was known as the Colchester Brewing Co. Ltd. However, in 1882 Christopher and his son Henry Stopes had designed and built a new Eagle Brewery on this site which Henry Stopes further extended in 1888. By this time Christopher had died and Henry had established his own firm of brewers’ engineers ‘H. Stopes and Co.’ and had become an influential figure in the world of malting and brewing. The business continued to expand by take-overs including that of the adjacent East Hill Brewery of Charrington Nicholl and Co. in the early 1920s. However it too was taken over by Ind Coope and Co. of Romford about 1925.
and brewing ceased, the site becoming regional offices and a depot. In the late 1980s the entire site was sold and the front offices converted for office use and the tower brewhouse to residential use. The extant structures are of one of the most decorative breweries remaining in Essex, e.g. the main office block has an eagle above the date 1828.

**CO3.4 SIGNAL BOX**

East Street, Colchester

TM010253

East Gate Junction Signal Box was built in 1924 by the London and North Eastern Railway. It has a brick ground floor and timber framed upper storey and was fitted with a 35 lever McKenzie and Holland frame.

**CO3.5 WATERMILL**

Bourne Road, Colchester

TM005238

Bourne Mill was built in 1591 by the Lucas family and is thought to have been constructed as a mill within the lower storey and a fishing lodge on the first floor, with the attic or bin floor being a later insertion of c. 1830–40. It has a complicated history; first built as a corn mill and fishing lodge, later converted to fulling and then back to corn milling. The lower storey containing the wheel pit and the overshot waterwheel lies below the level of the millpond, while the stone floor is above. Despite the conversion to a dwelling house and the removal of much of the auxiliary machinery, fixtures, fittings and the millstones, it still retains an operational overshot iron wheel, upright drive train and a layshaft with pulleys. Bourne Mill is presently owned by the National Trust, and it remains as an exceptional, ostentatious and unusual dual purpose mill building, unique in Essex. It is one of the earliest mills to survive in the county, one of a very few overshot mills in Essex, one of only two that retain a waterwheel (the other being Spring Valley Mill) and the only watermill to preserve a working overshot wheel.

**CO3.6 WATER TOWER**

Balkerne Hill, Colchester

TL993253

In 1882 the Borough Corporation took-over the local water undertaking and this water tower was then constructed, now known as ‘Jumbo’. It is c. 105 ft high, built of red brick by Charles Clegg, Borough Surveyor and Engineer. Its construction
comprises four square piers with round-headed arches and a central service pier with stairway. This all supports a cast iron water tank on brackets with a copper roof topped by a lantern and weather vane. 'Jumbo' remains largely unaltered from its original design. The earthquake of 1888 has left a large crack in the brickwork chamber around the central stairwell. Now redundant the tower is the subject of various development proposals.

**CO3.7 PUMPING STATION**
Balkerne Hill, Colchester
TL992254

This is the site of the 1808 waterworks established following the Act of Parliament of that year. The waterworks were acquired in 1851 by Peter Bruff who sank an artesian well worked by a 24 h.p. steam engine. In 1880 the Corporation took over the undertaking and began major improvements. In 1893/4 the extant pump house, which pumped water to the 'Jumbo' water tower, and associated workshops were built and these are now used as offices and stores. Modern development has taken place on much of the site.

**CO3.8 DUTCH QUARTER**
Stockwell Street, Colchester
TL992753

In 1565 Queen Elizabeth allowed refugees from Holland to come to Colchester, where they made 'bays', a type of baize cloth. By 1575 at least 500 Dutch settlers had come to Colchester and the area north of the High Street became known as the Dutch Quarter. A seventeenth century description states 'the whole town is employed in spinning, weaving, washing, drying and dressing their bays in which they seem very industrious'. The Dutch Quarter retains a number of original timber-framed buildings including the Dutch Bay Hall.

**CO3.9 ROAD BRIDGE**
Station Road, Colchester
TL993256

This cast iron bridge on a substructure of brown brick was erected in 1843 and widened in 1903. Three cast iron arches with cast iron balustrading are supported on piers with pointed stone cutwaters.

**CO3.10 ROAD BRIDGE**
East Street, Colchester
TM0077253

This brick road bridge was built 1802 and widened in 1928. There are two main arches with cutwaters and smaller arches each side to span the river bank. At road level the bridge has six ashlar pillars on both sides surmounted by wrought iron lamp posts with lamps. There is an iron balustrade between the pillars.
CO3.11 WATER AND STEAM MILL
East Street, Colchester
TM008253
East Mill was grinding corn until the mid sixteenth century when it was converted to a fulling mill. It later served both purposes until the end of the wool industry at the end of the eighteenth century and then reverted to corn milling only. In 1840 it came into the ownership of the Marriage family and they introduced both steam power and roller milling, before completely rebuilding the mill as a steam roller mill between 1885 and 1893. Rank, Hovis, McDuggall renovated the mill in 1930-1, but it was closed in 1976 and was then converted first into a hotel and now apartments.

CO4.1 WEAVERS’ COTTAGES
Southfields, Dedham
TM058328
This structure originates in the fifteenth century and has later additions so that the whole now is of courtyard plan as a result of its pattern of growth by separate units. Probably during the eighteenth century the manufacture of ‘bays’ and ‘says’ took place here.

CO4.2 WATERMILL
Mill Lane, Dedham
TM057334
Dedham mill was owned by John Constable’s father Abram Constable until 1846 when it was sold at auction in Ipswich. It was made famous by Constable’s painting of Dedham Lock and the original mill. The current mill, Clovers Mill, was built in the early twentieth century as a replacement astride the River Stour and comprises a tall and imposing multi-storey red brick mill with a detached two-storey granary and outbuildings sited along the river’s edge. The site was redeveloped in 1987 the mill being subdivided into residential apartments and the granary converted to domestic use. A pair of nineteenth century brick built cottages to the east of the road and facing the mill may well be mill manager/worker’s accommodation.

CO5.1 WATER WORKS
Church Road, Layer-de-la-Haye
TL966194
This is an extensive site comprising a number of components of a water treatment works, including reservoirs, pumping station and a housing estate. It was developed by the then South Essex Waterworks Co. in the late 1930s, water being abstracted from the River Stour and pumped to the treatment works before being stored at the Abberton impounding reservoir (NGR TL981185). The principal structure on the site is the boiler house and pumping hall built in the International Modern Movement architectural style. The rest of the site consists of filter beds, covered service reservoirs and other more recent buildings. On the south perimeter of the site is what is described as ‘Essex Water Company Estate’, a road called Waterworks Close consisting of three detached and six pairs of semi-detached houses.

CO5.2 WATERMILL
Layer Mill Lane, Layer-de-la-Haye
TL980205
Layer Mill dates from the late eighteenth century and latterly ground fertiliser for use on the adjacent mushroom farm. When this ceased in 1960s all the machinery was removed. It is a three-storey building, timber framed and weather-boarded with a central lucam and a Mansard roof. It is now in residential use and forms a group of buildings with the mill house and a pair of mill cottages.
CO6 BRICK WORKS
Church Lane, Marks Tey
TL910243
A brick works has been in operation on this site since 1863 and now Colliers is one of only two operating brick works in Essex, excavating their clay on site. A variety of kilns have been used over the years and the now disused bottle kiln is the last surviving example in Essex. Staff housing survives in Church Lane.

CO7 WATER TOWER
Parkfield Street, Rowhedge
TM 029214
Built in 1902 for the then Lexden and Winstree Rural District Council, this water tower has now been converted for residential use. Built in campanile style, the tower is red brick with an iron tank painted red oxide colour and a copper pavilion roof surmounted by a wooden turret. This latter is louvered on three sides and glazed on the fourth and itself has a copper covered pavilion roof. One of five campanile style water towers identified in Essex.

CO8 WORKHOUSE
London Road, Stanway
TL959249
This workhouse was erected in 1836 to a design by Scott and Moffatt which followed an unusual variation of Sampson Kempthorne's cruciform plan. It has a central octagonal hub of three-and-a-half storeys from which four three-storey accommodation wings project. These are enclosed by single-storey outbuildings which create an octagonal plan. Associated buildings included the administration block, receiving wards, infirmary (later a nurses' home), ward blocks, chapel and laundry. The stables, a wood and cart shed and original mortuary have been demolished. This workhouse survives as an unusually complete early nineteenth-century workhouse with few external modifications, retaining all the key components, and its spatial form demonstrates how the paupers were accommodated, segregated and supervised. It is subject to major re-development.

CO9.1 JAM FACTORY
Factory Hill, Tiptree
TL899156
Arthur Charles Wilkin founded the Britannia Fruit Preserving Co Ltd in 1885 and it was renamed Wilkin & Sons Ltd in 1905. The factory was extensively modernised in the 1970s, while the 1990s saw the opening of a shop, tearooms and new museum on the site. The company owns 1,000 acres of farmland and continues to thrive. In 1904 the company began building houses in the village for the workforce, including in roads with such names as Cherry Chase, Damson Gardens and Mulberry Walk.

CO9.2 PUMPING STATION
Grange Road, Tiptree
TL884167
This site was developed by the then South Essex Waterworks Co. in the early 1930s to receive water into the service reservoir from the Langham treatment works and then pump it onwards to other local reservoirs. The substantial pumping station is, like the buildings at Langham, built in the International Modern Movement architectural style. Along the west side of the site is a close of three pairs of semi-detached houses known as Waterworks Cottages.
**CO10 WATERMILL**  
Wakes Street, Wakes Colne  
TL892284  
Wakes Colne Mill dates from the mid nineteenth century as both a corn and oil mill and it operated as a water powered corn mill until 1945 when electric power was introduced and it also served as a coal merchant's depot. The mill is a three-storey brick building with a slate covered hipped Mansard roof and forms a group of buildings with the former oil mill, granary and mill house and all are now in residential use.

**CO11 BREWERY**  
Colchester Road, West Bergholt  
TL967276  
Thomas Daniell was brewing on farms adjacent to this site before the mid nineteenth century and the brewery developed during the rest of the century into an extensive brewery complex with house, brewhouse, bottling plant, malthouse, stables and a chimney. In 1889 Scamell and Colyer, brewers' architects, were responsible for additions. It remained in the Daniell family under various names and was Daniell and Sons Breweries Ltd when taken over by Truman, Hanbury and Buxton and Co. Ltd. in 1958. Brewing ceased in 1959, the site then being a regional office and depot until 1986. Demolition of some of the complex was followed by conversion of the remainder into residential units. The two-storey malthouse survives, but its conversion to offices use has resulted in the loss of distinguishing features.

**CO12 WATER TOWER**  
Upland Road, West Mersea  
TM012131  
Built in 1924 this water tower is in the campanile style with the tower in multi-colour bricks with a blue brick plinth. The iron tank is painted red oxide colour having a copper-covered pavilion roof with a wooden turret, itself having a copper covered pavilion roof with weathervane on the apex. At the tank level are now a number of antennae used in the modern communications industry. One of five campanile style water towers identified in Essex.

**CO13.1 WATER TOWER**  
Tower Road, Wivenhoe  
TM039227  
Two plaques either side of the door on the north elevation indicate the foundation stone of this tower was laid on 24th September 1901 and it was built for Wivenhoe District Council Waterworks. Built in campanile style in red brick on a blue brick plinth it has an iron tank painted red oxide colour and has a copper pavilion roof surmounted by a wooden turret. This latter is louvered and glazed and itself has a copper covered pavilion roof with a weathervane on the apex. One of five campanile style water towers identified in Essex.

**CO13.2 QUAY**  
The Quay, Wivenhoe  
TM038214  
Wivenhoe on the tidal River Colne earned its wealth from the sea as a port, fishing village, and boat building and repairing centre, and in the quay area survive a number of buildings associated with these activities. These include a warehouse used for the smoking and canning of fish, before being used as a store by Wilkin's of Tiptree the jam makers. The residential development known as Old Wivenhoe Quay was a shipyard founded in the eighteenth century and which built fishing boats, yachts, steamers, gunboats and even an experimental submarine. Other buildings include sail making premises, shipwright's premises and store, and the former J.W. Cook and Co shipyard.

**CO13.3 RAILWAY STATION**  
Station Road, Wivenhoe Station  
TM037217  
The current station buildings were built in 1886 to replace the original Tendring Hundred Railway Station of 1863 and have much architectural detail. The original 1860s goods shed was built of timber and burnt down in 1900. The surviving brick replacement was built in 1903, but although a listed building in a Conservation Area, it is now derelict, recent redevelopment proposals having failed.
E1 MODEL FARM
Nether Street, Abbess Roding
TL578109
A farm existed on this site from at least the seventeenth century as evidenced by the survival of a timber-framed, weather-boarded barn of that date. Longbarns Farm was largely rebuilt in the early nineteenth century, its design being influenced by the contemporary philosophy of the model farm. The nineteenth century complex is U-shaped and consisted of cattle sheds, cart sheds, stable, a timber-framed barn and farm office.

E2 BREWERY
Market Place, Abridge
TQ466968
This is the site of the former Anchor Brewery dating from the mid nineteenth century. Alterations were made to the malting house and brewery for Hurdle and Wileman in 1894 by Harrap and Duffield, a London practice of brewers’ consulting engineers and architects. After a number of changes of ownership, the brewery was bought by Whitbread and Co. Ltd. in 1898, and brewing probably ceased soon after this. Whitbread’s using the site as a local delivery depot until 1922. The complex consisted of the malting house, brewhouse, tap house - The Blue Boar - and a number of other structures, all around a cobbled yard accessed under an arch to the north of the public house. The malting house remains as does The Blue Boar and some structures to the rear of the public house, the rest having been re-developed as housing.

E3.1 WATER TOWER
High Street, Epping
TL457018
Built in 1872 to a design by Thomas Hawksley, this water tower was taken over by the Hertfordshire and Essex Water Company in 1879. In Victorian Gothic style and at 90ft in height it is of red brick.
with grey and blue brick and stone dressings, square in plan but with a circular turret on one corner. An early twentieth century single storey pump house adjoins the west elevation. Epping also has a 1930s reinforced concrete, square water tower (TL467027).

E3.2 WORKERS' HOUSING
High Road, Thornwood, Epping
TL469034

Brickfield Cottages are adjacent to the site of the former Wintry Park Brick and Tile Works. Built in the mid 19th century, this is a terrace of currently eight, but originally ten, cottages. To the rear each house had brick built sheds and weather-boarded outbuildings both under tiled roofs which survive. The outbuildings contained ranges and coppers, and a separate shed had the communal bake house.

E4 WATERMILL
Willigale Road, Fyfield
TL571066

Fyfield Mill was built around 1798 and in common with many Essex watermills was re-gearied and renovated in 1890. The mill continued producing flour up until 1942 and quickly fell into disrepair and was on the verge of demolition when it was sympathetically restored to its present working condition. A timber-framed and weather-boarded three-storey mill having a slate roof. Built on a red brick plinth, a weather-boarded lean-to, formerly accommodated the original undershot waterwheel, which was replaced in 1890 by the present undershot twin turbine by J.J. Armfield of Ringwood, Hants.

E5 COAL DUTY BOUNDARY MARKER
Waltham Road, Nazeing
TL460648

City of London Coal Duties Acts empowered the City to levy a duty on coal entering from other areas and following the Act of 1851 boundary markers were set up alongside transport routes. The duties were repealed in 1889 but many markers survive. Road side ones, like this example, are of cast iron made by the Regents Canal Ironworks and have the City of London shield with cross and sword cast into them.

E6 RAILWAY STATION
High Street, Ongar
TL552035

The Great Eastern Railways branch line from Loughton to Ongar via Epping was built in 1865, the Epping to Ongar section always being just single track. During the post-war nationalisation of the railways, the Ongar branch became part of London Transport's Central Line, although initially it was only electrified to Epping, steam shuttles operating to Ongar until electrification in the 1950s. The Central Line from Epping to Ongar was closed in 1994 but re-opened in May 2012 as a heritage railway - the Epping and Ongar Railway. Ongar Station retains its 1865 station building and also one of only two Footwarmer Houses surviving in Essex, built in 1896. Other stations on the branch are Blake Hall (TL523038) and North Weald (TL497037).

E7.1 STORT NAVIGATION
Roydon
TL391092

The Stort Navigation runs from the Fielde's Weir junction with Lee Navigation to Bishop's Stortford in Hertfordshire and constitutes for much of its length the County boundary between Essex and Hertfordshire. The Stort Navigation Act 1766 (an earlier Act of 1759 was not implemented) was sponsored by Sir George Duckett (formerly Jackson) and Thomas Adderley (an inn keeper of Bishop's Stortford) and the work involved the dredging of the river Stort and construction of 15 locks over its 13 mile course. It was opened in 1769, but did
not prosper going through a number of private hands before being sold to the Lea Conservancy Board in 1911 which re-constructed it. Today it is used for pleasure cruising, a new marina has been recently constructed at Roydon.

**E7.2 WATERMILL**
Off High Street, Roydon
TL403103

Water mills are recorded on this site from the time of the Domesday Book, the current building dating from the early nineteenth century. It has four storeys with a double pile Mansard roof, the lower two storeys built of yellow brick and the two upper storeys timber-framed and weather-boarded. It has a slate roof and there is one lucam with a taking-in door below and the canopy of another hoist survives above a taking-in door on the first floor. During conversion to residential use the turbine and all internal gearing, fixtures and fittings were removed. The wheel pit and culverting remain but river water is now channelled through a modern pipe to the mill tail. The detached mill house of similar date is timber framed and built over two storeys with a hipped slate roof. The Stort Navigation runs close by.

**E7.3 WORKERS' HOUSING**
Allens Row, High Street, Roydon
TL409099

A terrace of six 3-storey cottages in grey gault brick under a slate roof, each with a wooden front door and one window per storey on the front elevation. The windows are original iron-framed pivot windows with small panes and segmental heads. The industry to which these cottages are associated remains uncertain, but one theory is that they were once railway navvies cottages (the railway opened to Roydon in 1842). The listed building description mentions what appears to have been full length accommodation, possibly workrooms.

**E7.4 RAILWAY STATION**
High Street, Roydon
TL406105

Built by the Northern & Eastern Railway in 1841 for the opening of the line in the following year, this station is unique in its design. Single storey, the building is of a mixture of materials, has a curved portico on the road side and the main windows are round headed. The small former station master's house survives as does the much altered 1876 signal box. In the station yard is the original, now
derelict, goods shed, the oldest surviving goods shed in Essex. The station is still in use but the station building is a restaurant. Roydon Lock on the Stort Navigation is close by.

**E8 MALTHOUSES**

Station Road, Sawbridgeworth
TL489148

A large complex of a number of mid to late nineteenth century malthouses which lie between the Great Eastern Railway and the Stort Navigation (which here forms the boundary between Essex and Hertfordshire). A number of them at the north of the site form a J-shaped complex of five or more attached three storey malthouses dating from the 1860s and there is a separate malthouse parallel to the south end of the complex. At the far south end of the site is a later multi-storey malthouse with a nine-bay, three storey central area for the drying floors and higher gabled cross wings at each end, the pyramidal kiln chimneys surviving in the south cross wing. All were originally served by railway sidings. All now converted to other uses and some are open to the public.

**E9 MALTHOUSES**

Sheering Lower Road, Sheering
TL491148

Two multi-storey malthouses to the east of the Great Eastern Railway line which date from the late 1890s. Both developed by H.A. & D. Taylor, the northern one is the only surviving purpose built pneumatic malthouse in Essex. It has six storeys and the single conical kiln chimney survives. The other was built later and was a traditional floor maltings, again six storeys with four pyramidal kiln chimneys, the roof above the kilns is octagonal and rises to a large domed cupola. Both were served by railway sidings. Operations here ceased in 1983 and both have been converted to residential use.

**E10 WATERMILL**

Romford Road, Stanford Rivers
TL551010

Littlebury Hall Mill is a part brick, part timber three and a half storey weather-boarded and timber framed mill with a slate covered gabled ended roof built with an oversailing lucam projecting from one gable end. The remains of a collapsed wheel house are set astride a culvert formerly fed by the mill race. The mill was latterly electrically powered and used to prepare cattle food for the adjacent Littlebury Hall Farm dairy herd. Internally the mill retains much of its spatial integrity and some of its gearing and milling apparatus, such as, in the wheel house, the turbine, wallower/crown wheel, horizontal drive shaft and take off pulleys all remain, although in disrepair. Now redundant the mill is little altered by conversion to a new use.
Harlow New Town was developed after the Second World War following the New Towns Act of 1946 as an overspill town to ease overcrowding in London, along with other orbital developments such as Basildon. Sir Frederick Gibberd drew up the master plan in 1947 and the New Town incorporated a number of villages plus the market town of Harlow, now known as Old Harlow. Harlow is divided into a number of self-supporting residential neighbourhoods plus two separate industrial areas, original manufacturing including a biscuit factory and a distillery for Gilbey’s gin. This early activity has declined and new industries have arrived including a defence contractor, pharmaceuticals, and modern communications electronics.

**H1.1 MALTHOUSE**
St. John’s Walk, Old Harlow
TL471116

This late nineteenth century, three-storey maltings is built of Cambridge gault bricks under a slate roof and retains a pyramidal kiln vent and two lucamms
which give access to the roof level storage area. The internal roof includes both King- and Queen-post roof trusses. It is now in use as local campus for the Memorial University of Newfoundland.

**H1.2 MALTHOUSE**
Old Road, Old Harlow
TL473128
An eighteenth century, timber-framed, weather-boarded malthouse with a clay tiled roof. Two storeys high, it retains its conical kiln vent. Built adjacent to where the former Hockerill Highway turnpike road crossed the River Stort, which was made navigable in 1769.

**H1.3 ENGINEERING WORKS**
Burnt Mill Lane, Harlow
TL446113
Two storey, brick-built with a slate roof, this late nineteenth century factory was built for the marine engineers John Kirckcaldy Ltd. who occupied it until 1930s. It is now used by the Harlow Outdoors Centre for Outdoor Learning.

**H1.4 RAILWAY STATION**
Station Approach, Harlow
TL447112
Built on the site of the original 1841 Burnt Mill Station, Harlow Town Station was opened in July 1960 to serve Harlow New Town and is listed Grade II. It has a high booking hall, single storey offices and waiting rooms on the footbridge, with three lift towers prominent. Architects were John Bicknell and Paul Hamilton of BR’s Eastern Region.

**H1.5 WATER AND STEAM MILL**
Pardon Mill Lane, Harlow
TL437111
Pardon Mill was built around 1897, the previous mill having been destroyed by fire. Steam power was introduced soon after, as evidenced by the extant late nineteenth century engine house and chimney. A horizontal turbine of 1904 survives. The mill continued to grind corn until 1960, after which it was used for milling animal feed and was a coal merchant’s depot. It became derelict until 1968 but was then restored for use as offices, and studios and workshops for artists and craftsmen. It is a large four-storey brick built mill, with two lucams at third floor level below which are tiers of taking-in doors. Adjacent is the mid-eighteenth century mill house, the whole site is adjacent to Pardon Mill Lock on the Stort Navigation.

**H1.6 MODEL FARM**
Chalk Lane, Harlow
TL492112
Feltmores Farm model farm was built between 1850 and 1880 and was built around a courtyard. It comprises a number of buildings mainly in brick initially designed for stock rearing, but later used for dairy herds, before becoming an arable farm. The buildings include a cow shed with granary above, a stable that was later cowshed with hayloft above, an office, pigsty, cart and implement shed, later turkey and pig shed, dairy, shelter shed that was later a cowshed, barns and farmhouse.
M1 POWER STATION
High Street, Bradwell-on-Sea
TM002088
Construction of this nuclear power station began in 1957 and it began generating in 1962, having two Magnox reactors. Electricity generation ceased in 2002, with subsequent de-fuelling complete by 2006. The turbine hall was demolished 2011 but final site clearance is not due until 2013 or later. The site is on the edge of a former WW2 airfield, one and a half miles from the Essex coastline, chosen as the land had minimal agricultural value, offered easy access, was geologically sound and had an unlimited source of cooling water from the North Sea. In 2011 it was announced that Bradwell was one of eight sites to be opened as nuclear facilities by 2025.

M2.1 ENGINEERING WORKS
Colchester Road, Heybridge
TL856082
William Bentall’s first foundry was in Goldhanger from 1808, but in 1815 the company moved to this site adjacent to the Chelmer and Blackwater Navigation. Bentall’s thrived and became one of the major iron founders and supplier of agricultural implements in Essex, especially famed for its revolutionary broadshare ploughs. By the mid twentieth century they had expanded operations to both sides of the Navigation, but the original site on the west side has now been re-developed and the only building to survive on the east side is four-storey brick warehouse.

M2.2 WORKERS’ HOUSING
The Square, Heybridge
TL854081
The Square was the first range of cottages Ben- tall’s provided for its employees probably in 1815 and not 1827 as recorded on the plaque in the centre of the terrace. It is a terrace of two-storey brick built cottages, one of which was later reused as a shop, and one provided breakfasts for the foundry workers.
M2.3 WORKERS' HOUSING
Woodfield Cottages, Heybridge
TL860086
Bentall's built Woodfield Cottages for its employees in 1873. They are unusual in being an early example of concrete construction, originally with flat roofs, although pitched roofs were added in 1918. In total there are 40 cottages in three parallel terraces and contemporary pairedouthouses of similar construction face the front of the cottages on the opposite side of narrow access roadways.

M2.4 WORKERS' HOUSING
Barnfield Cottages, Heybridge
TL858082
Barnfield Cottages is a terrace of eight early twentieth century single-storey concrete dwellings with adjacent outhouses, built by Bentall to a very similar architectural design as Woodfield Cottages.

M2.5 WORKERS' HOUSING
Well Terrace, Heybridge
TL858080
Well Terrace is a terrace of eight two-storey brick-built cottages constructed by Bentall around the mid to late nineteenth century. Each pair of cottages is T-shaped in plan, with the main rooms in the main body of the cottage and a utility range within a central outshot to the rear. The increased level of architectural detailing in Well Terrace indicates the higher status of these cottages and their allocation to supervisor level employees. Each cottage was provided with plot of land to the rear and small front gardens, some of which still retain original concrete boundary walls and gateposts. To the rear, all of the cottages have retained their brick-built back-to-back outhouses.

M2.6 WORKERS' HOUSING
Stock Terrace, Heybridge
TL857082
Stock Terrace is a row of twelve three-storey houses built by Bentall around the same time as Well Terrace, purpose built for employees with large families, plus one or two set aside as rooms for younger employees, under the supervision of a landlady. Projecting to the rear and straddling the property boundaries are single-storey gable-ended utility/toilet ranges. Most survive intact, but converted to other uses.

M2.7 MALTHOUSE
Goldhanger Road, Heybridge
TL874078
Saltcote malthouse was completed in 1895 to a design by Frederic Chancellor. It has three storeys, a pair of pyramidal malt kilns and a single, free-standing barley kiln. Now converted to residential units. There was an earlier nineteenth century malthouse also on the site, but this was demolished in the 1950s.

M2.8 HEYBRIDGE BASIN
Basin Road, Heybridge
TL872068
The Chelmer and Blackwater Navigation was constructed between 1793 and 1797, John Rennie being the Chief Engineer. Although originally planned to reach the sea at Maldon, due to objections it took a different course to reach the sea at Heybridge. The sea lock is a deep brick chamber with stone copings, current iron work on the gates was supplied by the Maldon Iron Works in 1921. There is also a nineteenth century two-storey lock-keeper's cottage.
M3 WATER PUMPING STATION
Hatfield Road, Langford
TL836090

This is the extensive site of a water treatment works adjacent to the Rivers Chelmer and Blackwater consisting of a number of structures of various ages and hence of differing significance. Southend Waterworks first developed the site in the late 1920s and the former pumping station dates from that first period of development. The Lilleshall Company Ltd. of Oakengates, Shropshire provided all three engines, the first two of 1927 and 1931 were scrapped along with the boilers and chimney after the pumping station became redundant in 1963. The extant engine is No. 282 Marshall that was commissioned in 1931 and, like the other two, is a steam-driven triple expansion rotative pumping engine. The engine operated three high lift pump plungers and three low lift pumps which first transferred water from the sedimentation reservoirs and then forced untreated water to the treatment plant. Developed from 1927, this site retains rare evidence of in situ technology and is now the site of the Museum of Power.

M4 WATERMILL
Little Braintree Lane, Little Braintree
TL831147

A mill is recorded on this site in Domesday and the current mill and mill house date from the eighteenth century. There is one long building, the former mill is mainly weather-boarded with brick facing to ground and first floors and the mill house is of red brick. The mill has a weather-boarded lucam. In 1886 the mill closed and at this early date the watermill and mill house were subsequently divided up and converted into two separate residences.

M5.1 WATER AND STEAM MILL
Abbey Turning, Maldon
TL839082

Although there has been a mill on this site since the twelfth century, associated with the Abbey, the current Beeleigh water mill building dates from the late 1790s. In 1845 a two-storey steam mill was built with an A-frame compound double acting beam engine which has a plaque recording that 'JAS Wentworth and Son Engineers Started Aug. 1845'. In 1875 the five-storey water mill was severely damaged by fire and abandoned, while the steam mill lost its roof and windows. The main surviving feature of the water mill is two brick lined barge docks used for loading and unloading. Essex Water Co re-roofed the steam mill in 1960 to preserve the historic machinery and in 1995 Essex County Council acquired the lease with the intention of restoring the mill to operational use.

M5.2 IRONWORKS
Fullbridge, Maldon
TL851075

Maldon Ironworks Co Ltd was established in 1853, the site comprised foundry, blacksmiths, fitting and wheelwright's shops, stores and workers' housing. Iron production ceased in 1954 and the surviving building was probably erected in 1876 as a warehouse, fitting shop, pattern store and offices and has now been converted to shops.

M5.1: Beeleigh Mill, Maldon
The columns are tied together with ring beams and by supporting ties and struts back to the central core. There are also supporting ribs under the tank floor. The central core has rectangular metal windows and a wooden door. The tank is topped by a concrete balustrade and has a cupola rising from the centre with a flagpole on the apex.

**M5.5 SALTWORKS**

Downs Road, Maldon
TL854072

Salt extraction through evaporation has taken place since Roman times and the ‘Maldon Salt Works’ was established here in 1777. The ‘Maldon Crystal Salt Company’, a successor business, started in 1882 and still operates panning the crystals in the traditional manner. The extant nineteenth century buildings although in traditional weather boarding, have been much altered, the only original feature surviving is the chimney which may have dispersed heat from the 2 brick-built evaporation pans.

**M5.6 RAILWAY STATION**

Station Road, Maldon
TL852075

Maldon East Station was built in 1847/8 as the terminus of the Maldon, Witham and Braintree Railway. It is a grand Jacobean building in red brick with white brick dressings, the front nine-arch arcade and balustrade being mostly white brick. It has been very little altered since closure in 1964 and is now used as offices. Maldon West Station on the branch to Woodham Ferrers has been demolished but the goods shed (TL852076) survives, as do two pairs of semi-detached staff cottages.
M6 MODEL FARM
Lower Burnham Road, Stow Maries
TQ834984
Great Hayes Farm was built during the late nineteenth century as a court-yard farm complex including a barn flanked by cow sheds, loose boxes, stables and cart sheds, tack room, farm office, smithy and a farmhouse. A chimney survives which may have been associated with a stationary steam engine used for powering the farm machinery. The buildings have now been converted to light industrial and office use.

M7 TIMBER TRESTLE BRIDGE
Station Road, Wickham Bishops
TL824118
The Maldon, Witham and Braintree Railway was built economically with much use of timber, although Maldon east station was the exception, opening in 1848. Two long viaducts were needed to carry the railway over the River Blackwater at Wickham Bishops, designed by Joseph Locke.

ROCHFORD
SEE PAGE 46 FOR MAP INCLUDING ROCHFORD

R1 BRICK WORKS
Star Lane, Great Wakering
TQ935874
This brick works was opened in 1932 and operated by the Milton Hall (Southend) Brick Company Limited until 1984 when it was taken over by the London Brick Company. The site only recently ceased operation and structures, including eight down draught kilns, survive as production may start again.

R2 TIDE MILL
Hawk Hill, Rayleigh
TQ780946
A tide mill has existed on this site since the eighteenth century, having been rebuilt on a number of occasions, the last time c1815. It became redundant at the end of the nineteenth century on the construction of the steam mill across the River Crouch (C1) and much of it was demolished. The current building is in fact a granary building rebuilt as a tide mill, the water wheel being a modern replica. It is currently a retail business.

R3 WINDMILL
London Hill, Rayleigh
TQ807910
Rayleigh Tower Mill was built around 1809 and the tallest remaining windmill in Essex. Milling by wind power ended in the early twentieth century, being replaced first by an oil engine and then in 1937 by electricity. Externally the sails, fantail and stage have been restored by the Council, but it lacks internal machinery so does not operate. It is open to the public.

R4 BRICK WORKS
Cherry Orchard Lane, Rochford
TQ860900
This brick works opened in 1890 and has had a number of different operators including the Milton Hall (Southend) Brick Company and most recently Hanson’s. There have been a maximum of six intermittent down draught kilns on the site, the earliest dating from 1900, two from 1931 and two from 1962. Latterly the kilns were oil fired. There is a narrow gauge light railway under Cherry Orchard Lane from the clay pits into the brick works. In front of the brick works and facing Cherry Orchard Lane are eight houses for employees which were built c1900. The site only recently ceased operation and the structures survive as production may start again.
Leigh-on-Sea on the Thames estuary between London and the North Sea has a long history of association with the sea as a port, handling coastal and continental trade, for ship building and as a fishing village. Trading started in the fourteenth and continued to the nineteenth century and it stimulated the ship building activity from the sixteenth century onwards, which produced both trading vessels and fishing boats. Fishing (fishermen were recorded in Domesday) continued to thrive after trading ceased, working local fishing grounds, including oyster cultivation, to supply the London market by road and barge. The fishing industry received further stimulus with the opening of the London, Tilbury and Southend Railway in 1854, winkles, mussels and shrimps being transported to London by rail. The cockle sheds where cockles are cooked and which sell a large variety of shellfish survive in numbers.

**S1 RAILWAY STATION**
The Ridgeway, Chalkwell
TQ852850
Chalkwell Station was built in 1933 by the London, Midland and Scottish Railway on the London, Tilbury and Southend Railway line and retains many original Art Deco features such as windows, doors and benches in the waiting room.

**S2.1 SMITHY**
High Street, Leigh-on-Sea
TQ838656
Originally two timber framed cottages they were converted into a ship’s smithy in 1860. Along with the adjacent wooden cottage they have been restored and converted into the Leigh Heritage Centre.

**S2.2 SAIL LOFT**
Pier Hill, Leigh-on-Sea
TQ842859
Built for a sailmaker’s business, this building is now the Foreshore Inspector’s Office.

**S2.3 CONDUIT**
High Street, Leigh-on-Sea
TQ837857
The source of water for the town was spring on the high ground behind the town and this was piped down to a cistern on the High Street as a supply of fresh water from 1712. The cistern was restored in 1975 and the conduit head relocated there in 1981.

**S3.1 SEASIDE PIER**
Western Esplanade, Southend-on-Sea
TQ889850
Southend-on-Sea is a traditional English seaside resort whose development dates back to the Georgian period and as such boasts both a seaside pier and a cliff lift. The first pier was a timber one 600 ft in length opened in 1830. It was extended to a mile and a quarter in 1846 making it the then longest in Europe. A replacement iron pier was begun in 1888 and included an electric railway. This was also extended in 1898 to 7080 ft making it the longest in the world. The last quarter of the twentieth century has seen a number of fires and other damage to the pier, plus the closure of the railway on safety grounds, which led to the
threat of total closure of the pier. These events have necessitated a number of refurbishments to bring the whole pier back into full use and the building of a new 3 foot gauge railway.

**S3.2 CLIFF LIFT**
Western Esplanade, Southend-on-Sea
TQ882851

The cliff lift was opened on August Bank Holiday in 1912 as a means of easily transporting visitors from the promenade to the town avoiding a steep climb. The single car runs on a 4ft 6 inch gauge track, under which is a 1ft 9 inch track which carries the counterweight. Modernisation has taken place in 1930, 1959 and 1990, the car being replaced on each occasion.

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**TENDRING**

**TE1.1 WATERMILL**
Spring Valley Lane, Ardleigh
TM038277

In 1777 there was a fulling mill on this site which was later converted to corn milling. In the mid-1800s it was converted to steam power with an engine house for the boiler and beam engine, although it retained its cast iron overshot water wheel. It was used for grinding and crushing beans until 1938, was derelict by 1966 but was then privately restored. Spring Valley Mill is part brick and part timber framed and weather-boarded mill with a tiled mansard roof and an extant lucam. It is currently in a poor state of repair and a building at risk, although one of a few in the county not converted to other uses and containing most of its machinery including one of only two extant overshot waterwheels, the other being Bourne Mill, Colchester.

**TE1.2 STEAM MILL**
Station Road, Ardleigh
TM053291

This c1850 mill is one of the earliest mills in the county purpose-built for steam power. Known as Phoenix Mill it is close to the Ipswich-Colchester railway line and was served by a siding. The mill ceased grinding in about 1910 and was latterly used as a warehouse for an adjacent nursery, becoming disused by 1987 and now converted to offices. The site also consists of a two-storey stable/granary building and a mill house.

**TE1.3 SMALL HOLDINGS**
Various addresses, Ardleigh and Lawford
TM0629 - TM0831

Influenced by the Carnegie UK Trust, the Land Settlement Association Ltd. (LSA) was founded in 1934 with the aim of providing work on small holdings for unemployed industrial workers such as miners, principally from the north of England. In each scheme existing agricultural land was divided into plots of varying sizes and houses, out-buildings, glass houses, piggeries and poultry huts were built. Roads and a central storage and administrative centre were established, the latter usually based on a pre-existing farm. The plots and hence the houses were strung out at wide intervals along the frontage of the roads. 25 of these estates were established nationally, with two created in Essex. The houses were designed by architects Pakington and Enthoven to provide adequate accommodation as cheaply as possible according to the requirements of the Housing Act. The Ministry of Agriculture took over the Ardleigh and Lawford estates in 1948 and these were then sold, mainly to the tenants, although the LSA marketing operation at Lawford continued to be successful well into the second half of the century.

**TE2 LIME KILN**
Quay Lane, Beaumont-cum-Moze
TM190240

Beaumont Quay is on an artificial cut at the western end of Hamford Water built in 1832. The only buildings to survive are the quay, a store
TE3.1 BREWERY
Victoria Place, Brightlingsea
TM087169

Known as the Marine Brewery, Frederick Miller was brewing here in 1874 until 1899 when he sold it to Charles Seabrooke of Grays and it then traded as C. and W. R. Seabrooke. In the early 1930s it was sold to Daniell and Sons of West Bergholt. The Brewers Arms public house building dates from at least the late seventeenth century and is timber framed with a plastered front, weather-boarded rear and red plain tiled roof. The brewhouse is the adjacent red brick building with a slate roof.

TE3.2 SAIL LOFTS
Waterside, Brightlingsea
TM089162

Brightlingsea was a limb of the Cinque Port of Sandwich and much of its wealth came from the sea. Oyster cultivation and dredging and sprat catching were traditional industries that required boats, which were built here, and packing sheds. Copperas was also dredged off the shore. The nineteenth century saw the development of racing and cruising yacht building. Few of the buildings associated with these industries survive, although there are timber framed and weather-boarded sail lofts now in other uses, but the James and Stone shipyard was redeveloped after its closure in 1980 as a marina and housing. The 1780 Cinque Port Wreck House survives, a rare example of such a building.

TE4.1 SEASIDE PIER
King's Parade, Clacton-on-Sea
TM177145

Designed by Peter Schuyler Bruff, Engineer and Manager of the Eastern Union Railway, Clacton Pier opened to the public in 1871 as a landing pier for goods and passengers. It also became
a popular venue for promenading, especially as Clacton's popularity with day-trippers from Londoners grew due to easy access by sea on Woolwich Steam Packet Company steamships and following the opening of the railway in 1882. A lifeboat station was added in 1878 and originally 480 feet (150m) long it was extended in 1893 to 1180 feet (360m).

**TE4.2 SIGNAL BOX**
Carnarvon Road, Clacton-on-Sea
TM178155
Clacton signal box was built in 1891 by the Great Eastern Railway. It is a timber box which had new windows and cladding in about 2000. It was built with a 52 lever Saxby and Farmer Dulpex frame.

**TE5.1 WATER TOWER**
Fronks Road, Dovercourt
TM243309
This water tower was built in 1902 and has an open painted steelwork tower, octagonal in plan topped with a circular water tank of painted corrugated metal sheeting. There is a diagonal access ladder leading to an access gallery with handrail. The tank has a coned shaped roof.

**TE5.2 Lighthouses**
Marine Parade, Dovercourt
TM253308 (Upper)
Upper and Lower Lighthouse are a pair of cast iron leading lighthouses joined by a causeway, Upper being onshore and its partner is offshore. When a ship saw the two lights aligned, it was on the right course. The lighthouses were erected following the lights at Harwich becoming redundant and were restored between 1985 and 1988.

**TE6.1 PIER**
The Quay, Harwich
TM259328
Known as the Ha'penny Pier, a name originating from the ½d (half an old penny) toll charged, the pier was opened in 1853 and became a popular departure point for paddle steamers until after the First World War. Originally the pier was twice as long as the present one but one half burnt down in 1927. The Pier Ticket Office is a charming example of late nineteenth century architecture and now houses the Ha'penny Pier Visitor Centre. The pier also accommodates the lifeboat house for the RNLI inshore rescue boat.
TE6.2 LIGHTHOUSE
Harwich Green, Harwich
TM263323

Low Lighthouse was built under the supervision of John Rennie Sr. in 1818 to replace an earlier timber one, and is a 45 feet (16.5m) high, ten-sided brick tower. Trinity House took over the light in 1836, but it became redundant in 1863 due to the changing course of the channels. It became the property of the local authority except for a short period in the 1970s and is now Maritime Museum run by the Harwich Society.

TE6.3 LIGHTHOUSE
St Helens Green, Harwich
TM262324

High Lighthouse was also built under the supervision of John Rennie Sr. in 1818 to replace an earlier timber one, and is a 90 feet (32.8m) high, nine-sided brick tower. Trinity House took over the light in 1836, but it became redundant in 1863 due to the changing course of the channels, although it continued to be used by mariners as a landmark. It then became a private residence and now contains a privately run Wireless Museum. The Harwich High and Low Lighthouses are 150 yards apart and were leading lights working as a pair with one light positioned above the other as seen from the sea so a vessel knew it was on the correct course.

TE6.4 TREADWHEEL CRANE
Harwich Green, Harwich
TM262325
Built in 1667 for use in the Naval Dockyard, now Navyard, it was moved to its present site on Harwich Green in about 1932. Men walking in the interior of the wheels worked the crane and two wheels produce balanced action. Each oak wheel is 16 feet (4.87m) diameter, 3 feet 10 ins (1.2m) wide and spaced 4 feet (1.22m) apart on a common axle 13 ½ ins (34cms) diameter. The jib has a projection of 17ft 10 ins (5.4m). Probably the only British example of a two-wheel man operated treadwheel crane.

TE6.5 CINEMA
Wellington Road, Harwich
TM262327

The Electric Palace Cinema opened in 1911 and is one of the oldest purpose-built cinemas to survive complete with its silent screen, original projection room and ornamental frontage still intact. There is also a former gas powered generator engine with a 7 feet (2.1m) fly wheel situated in the basement. Closed in 1956 it has been restored, re-opened in 1981 and now runs as a community cinema showing films every weekend.
**TE6.6 TRINITY HOUSE DEPOT**
The Quay, Harwich
TM258327

Trinity House Depot was established in Harwich in 1812 and it is now the operational Headquarters for England and Wales, both having previously been in London. The present offices were built in 2005, when a new Buoy Yard was also constructed in George Street.

**TE6.7 TRAIN FERRY PIER**
The Quay, Harwich
TM 257328

Harwich was a train ferry port for the Continent and the train ferry pier was erected here in 1924 consisting of a second hand gantry from Richborough and a second hand link span from Southampton. Now no longer in use it remains derelict in the Trinity House Depot.

**TE6.8 WATERWORKS**
Mill Hill, Lawford
TM 104315

Tendring Hundred Waterworks Co. originally operated in Mistley, but in the early twentieth century built a service reservoir on this site. In 1905 the company moved from Mistley to a new waterworks here with further expansion during the 1920s and 1930s. This is an extensive site with a number of structures of various ages reflecting the stages of development, including a modern but architecturally sympathetic office block. At the entrance stands a red brick, tile roofed single-storey building with terracotta plaques moulded with the initials THWWCo and the date 1908. There are two large pump houses that have the distinctive long round headed windows and both have clerestory roofs.

**TE6.9 WATERMILL**
Mill Hill, Lawford
TM 076317

Shirburn Mill is the survivor of two watermills on this site, the upper mill having been demolished in 1921. It was built in the late eighteenth century and is of three storeys, timber framed and weather-boarded on a brick base. The overshot exterior wheel was removed in 1937. Also on site are the mill house and a sixteenth century timber framed mill cottage. The mill building is disused and is one of the few in the County to have not been converted to other uses.

**TE8.1 MALTHOUSE**
North Street, Manningtree
TM 109318

All that remains of a mid nineteenth century extensive maltings complex are two red brick two storey kilns surmounted by wooden ventilator towers. Modern flats occupy the site of the maltings, but the converted kilns have been retained as a landscape feature in a settlement where the malt industry was once important.

**TE8.2 MALTHOUSES**
The Walls, Manningtree
TM 109318

There were originally eight maltings on this site, built by Edward Norman between 1806 and 1828. Only three survive, one on the road frontage and two further back on the site which are linked by two surviving large pyramidal kilns. The whole site has been redeveloped for housing, the three surviving maltings and two kilns having been converted to residential use.

**TE8.3 MILEPOST**
Station Road, Manningtree
TM 05318

A cast iron milestone of 1834 recording the distances from Manningtree to London, 60, Harwich, 12 and Colchester, 9. It has the founder's mark O. Bendall Engineer Lawford 1893.

**TE7.3 WATERMILL**
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TM 076317

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MISTLEY

Mistley is a planned industrial port (and later spa) settlement of the early eighteenth century established by Richard Rigby (1690 – 1730). As well as renovating existing properties, Rigby built new houses along the High Street, made alterations to the quay, built a new ship-yard, coal yards, granary and two malthouses, and provided community facilities such as the Thorne Inn of 1724/5. As industry expanded, population increased and the need for more houses became evident and in the 1760s Richard Rigby’s son (also Richard, 1722 – 1788) built 12 cottages on The Green, and in the 1770s he demolished and repaired many of the buildings his father built, including the wholesale replacement of two quayside malthouses with one larger building. Many of the buildings in the village including the church (now the two Mistley Towers) and the fountain were designed by Robert Adam. Mistley developed during the second half of the nineteenth century to become one of the major centres for the malt industry, serving the vast barley growing areas of East Anglia and supplying London and other major brewing centres via sea and rail links. Seven multi-storey malthouses incorporating technological innovations patented by Robert Free and built by Free, Rodwell and Co were in operation at the industry’s peak. Robert Free established New Mistley, a purpose built company settlement providing workers’ housing, a school, an inn, a Methodist Chapel and Robert Free’s own house, The Elms. Mistley remains an important port and much of the Rigbys’ and Free’s developments survive.

TE9.1 MALTHOUSE
High Street, Mistley
TM119318

Mistley became a major centre of the late nineteenth century malt industry and retains some of the best preserved malthouses in the county. There is also a purpose built quay, an architecturally ornate railway station, stock brick-built offices and workers terraces. Known as No.1, this large red brick-built malthouse complex, built by Free, Rodwell and Co between 1896-7, has three storeys to the High Street side and eight storeys to the quayside. A pair of five storey pyramidal kilns stand to the east of the main block. Robert Free was one of the leading entrepreneurs of the late nineteenth century industry and his pioneering ideas were reflected in the technology used in this and other Mistley malthouses.

TE9.2 MALTHOUSE
High Street, Mistley
TM117317

Known as No. 2, this five-storey malthouse now forms part of only three operating malt complexes in Essex (the others being Crisp’s adjacent in Mistley and Baird’s at Witham) and was built by the Free, Rodwell and Co in 1893. Adjacent was the site of the English Diastatic Malt Extract Company founded in 1881 by, amongst others, Robert Free and being known by that name from 1884 and as EDME Ltd from 1897. EDME produced diastatic (enzyme rich) malt extract and syrups for the breweries, and malt flour for the bakery industry, but as demand for their products from the breweries declined EDME produced ingredients and equipment for the home brew trade. In 1941 EDME rented No. 2 malthouse to produce malt for Free, Rodwell and Co and in 1975 following the acquisition of Free, Rodwell and Co by Allied Breweries, EDME purchased No. 2 malthouse. The original malthouse was built with pneumatic drum malt kilns (one of only two Essex malthouses that contained drums for pneumatic malting) but these were apparently unsuccessful and replaced by traditional kilns. These kilns were removed during the 1950-60s, to be replaced by malt drums, a system similar to the original pneumatic kilns. EDME had stopped malting on site by the end of 1994 and closed down No.2. By 1999 the company stopped producing malt.
were built by Richard Rigby Snr. for the people who worked at the port of Mistley and its industries. There are two terraces of houses on either side of the High Street, nine on the north side and eight on the south. The Green is a terrace of 12 cottages built by Richard Rigby Jnr. in the late eighteenth century.

**TE9.8 WORKERS’ HOUSING**
Beckford Road, Mistley
TM120316

The purpose built company settlement of New Mistley was developed in the late nineteenth century by Robert Free to provide workers' housing, a school, an inn, a Methodist Chapel and the his own house, The Elms. The original housing is in Beckford Road, Armagh Terrace, Rigby Road, Pleasant Place and James Terrace, all being terraces of two-up, two-down Victorian cottages. Stour Cottages are the most decorative, the others being lower status dwellings. Although there have been some external alterations this group of houses largely maintains its character and the layout of the settlement is un-disturbed.

**TE10 INDUSTRIAL SETTLEMENT**
Parkeston
TM237322

Parkeston ('Parkes Town', named after the company Director, Charles. H. Parkes), in common with settlements at Silver End and East Tilbury was purpose built by industry, in this case the Great Eastern Railway (GER), to provide adequate and local accommodation for its employees. The GER decided to relocate its shipping interests from Harwich and consequently built its own deep-water quay at Ray Island, now known as Parkeston Quay, where from 1879 – 1893 it built the new quay, warehouses, a railway goods yard, a hotel and a station for GER passengers. The town of Parkeston was built to the south of the quay to house up to 600 people and provide a primary and secondary school, Anglican and Methodist churches, a village hall, Co-operative store, fire station, a hotel and a sports ground. GER also supplied electrical power to the entire estate sourced from its own power station within the quay. The houses are grouped within clearly defined hierarchical/social zones with a distinct north and south divide. Managers' and middle managers' housing lies within the northern half of the town and comprise semi-detached houses or small detached groups of houses with gardens. The lower status housing comprised basic 2-up, 2-down type terraces to the south of the town.
Ramsey post mill has a three-storey round house of red brick, with a timber framed and weather-boarded body. It is believed to have been moved from Woodbridge, Suffolk in 1842. By 1974 the mill was derelict but was restored in the late 1970s.

**TE12 MALTHOUSE**
Station Road, Thorpe-le-Soken
TM178213
This three-storey malthouse was built in the late 1870s by Robert Free to produce both pale and crystal malt. It has two weather-boarded lucams and two kilns mid-range and a third to the rear.

**TE13 TIDE MILL**
Brightlingsea Road, Thorrington
TM082194
A tide mill at Thorrington is shown on a map of 1777, but it was rebuilt in the 1830s and this is the building that now survives. It was last worked by waterpower in 1926 when the waterwheel failed, although it continued to grind for some time after using a portable steam engine. From 1941 the mill began to fall into disrepair but Essex County Council acquired it in 1974 and restored it to its present condition. In 1990 the waterwheel was turning once more using tidal waterpower and in 1993 it was opened to the public. This three-storey mill is timber framed and weather-boarded, the undershot, cast-iron waterwheel is 16 feet in diameter and 6 feet wide. The adjacent mill house is an eighteenth century timber framed, part plastered, part brick building. Thorrington Tide Mill is the only surviving complete and working tide mill in Essex.

**TE14.1 SEASIDE PIER**
Southcliff Promenade, Walton-on-the-Naze
TM258229
This is Walton's second pier, the original one was built to a length of 530 feet in the 1870s, but this proved too short and passengers from the ships often had to transfer to small boats to come ashore. The second pier was opened in 1898, 2600 feet long and with a single line electric tramway which survived until 1935 when it was replaced by an unusual battery-powered carriage. In 1937 the pier was damaged by fire, but rebuilt after the war and re-opened in 1948 when a diesel locomotive was used for carrying passengers. The railway ceased operation in the 1970s.

**TE14.2 IRONWORKS**
Hall Lane, Walton-on-the-Naze
TM258229
The Crescent Foundry was established by Robert Warner, son of John Warner a bell-founder from London, in 1872 to produce a variety of machinery including wind pumps, portable boilers, steam engines and machinery for rubber plantations. Built adjacent to the Walton Channel by the coast, it had its own private dock for bringing in raw materials and transporting out finished products, but the cut was infilled in 1950s. A tramway was used to move heavy goods from the wharf to the foundry. Much of the original works has been lost in post-war development, but the manager's house, an office surmounted with a wooden cupola and the pattern shop survive. Housing was built for the staff including a terrace of 13 cottages in Hall Lane, at the end of which was built Crescent Hall in 1875 which served as a dining hall during the day and an adult education centre in the evenings. It is now the Baptist Church.
**T1.1 SHOE FACTORY**
Princess Margaret Road, East Tilbury
TQ680782

Tomas Bata had founded the Bata shoe making company in Zlin, Czechoslovakia, in 1894 and by the inter-war period he was exporting millions of pounds worth of shoes to England. Concerned that there may be tariffs placed on these imports, Bata decided to open a factory in England, although Tomas died before work on its construction began for the British Bata Shoe Co. The first single storey factory building was operational in 1933 and since then three five-storey, a three-storey and six further single storey buildings have been erected, all of which remain. They are of concrete construction with day light glazing to provide maximum light to the factory floors. British Bata closed in 2006 and the factories are vacant or occupied by other businesses.

**T1.2 COMPANY MODEL VILLAGE**
Princess Margaret Road, East Tilbury
TQ680787 (Centre)

This is a complete planned industrial settlement centred around the British Bata Shoe Co., established in East Tilbury by the Czech Tomas Bata in 1933. Bata provided all the housing and social needs of the workforce - over 300 houses, a hotel, four dormitory buildings, shops, cinema (now the village hall), swimming pool, memorial gardens, orchard, sports facilities, college, fire station and a 300 acre farm. The settlement at Tilbury was based on the original Bata development at Zlin in Moravia and was designed by modernist architects Jan Kotera, Vladimir Karfik and Frantize Gahura. The first houses were built in Bata Avenue by 1933 and were followed by three parallel roads (Thomas Bata, King George VI and Queen Elizabeth Avenues) of modernist houses built before and after WW2. These later houses varied slightly according to status, providing different internal layouts and larger executive houses, the latter built with extended frontages and a first floor balcony. Later post-war houses were of traditional pitched roof design.

**T1.3 FORT**
Princess Margaret Road, East Tilbury
TQ691788

Coalhouse Fort was completed in 1874 and with two forts on the Kent side of the Thames served to defend the capital. Built with thick granite walls and having large vaulted casemates, during the First World War it controlled shipping on the Thames and in the Second World War it was equipped with anti-aircraft guns. After the war it was used as storage by Bata’s but when it became redundant was bought by Thurrock Council in 1962 and they maintain it as a visitor attraction.

**T2 OIL REFINERIES**
The Manorway, Fobbing
TQ740825 (Centre)

Currently the large Coryton and Shellhaven
oil refinery complex, this site has a varied and interesting history. In 1897 G. Kynoch & Co Ltd, ammunition manufacturers, developed this agricultural site after they had diversified into explosives production, including Kynite. Known from that date as Kynoch Ltd, they chose the site for its remoteness and accessibility by shipping. In 1898 they built 34 staff houses, a school and Institute in a community which was known as Kynochtown, adding a further four houses in 1901/2. This was not enough and a further 51 houses were built in Corringham, bricks being supplied by a brick works established on the Kynoch site. The Corringham Light Railway was sanctioned in 1899 to link the London, Tilbury and Southend Railway with the works and Corringham where some of the staff lived. Although Kynoch’s expanded to meet extra demand during the First World War, it closed in 1919 and the whole site including the railway and housing was sold to Cory Bros. who wanted the site for oil refining and distribution - Kynochtown became Coryton, the explosives works having been demolished. Predecessor companies of what became Mobil in 1955, took over the site in 1950 and in 1970 demolished Coryton village in order to create space for the expansion of the refinery, and the light railway was wound up, what physically survived of it becoming part of the refinery’s internal rail system.

**T3.1 CHALK QUARRIES**
Warren Lane, Grays
TQ600789 (Centre)

The Grays area of south Essex is the location of the upper chalk outcrops and was the centre of the chalk quarrying industry and the development of the cement industry, with such companies as the Portland Cement Co, Blue Circle and Lafarge. Development of the quarrying began in the mid 1800s and the area saw experiments with new technologies such a rotary kins. With the cessation of quarrying all sites have been redeveloped, most famously a former Portland Cement site as the Lakeside Shopping Centre opened in 1990 (TQ587790), another as a nature reserve (TQ597793) and a third for housing (TQ607782). It was in the latter quarry that the South Essex Waterworks Co first sourced fresh spring water and in 1863 built a pumping station to supply parts of south Essex with potable water.

**T3.2 WORKERS’ HOUSING**
Broadway, Grays
TQ623778

A terrace of six cottages built within and along the southern most boundary of the former late nineteenth century Globe Brick and Cement Works. The cottages, known as Cement Block Cottages, were built overlooking the main tramway that connected the works to the wharfs on the Thames foreshore. This simple two-storey terrace may have been constructed using cement blocks, most likely produced on site.

**T4 WOOL MARKET**
The Square, Horndon on the Hill
TQ670833

The Wool Market was built in the 1500s and was where Dutch wool merchants came to trade. The wool came from sheep kept on the Thames flood plain and marshes below the village.

**T5 PUMPING STATION**
Pilgrims Lane, North Stifford
TQ592800

The South Essex Waterworks Co. established in 1861 and originally operating from a chalk quarry in Grays, developed this site at Davey Down in the 1920s, which consists of a number of component buildings. Most prominent is the former pump house, a tall brick structure typical of such waterworks buildings with its tall round-headed windows with metal glazing bars and a clerestory.
rood. It houses two of the original three diesel drives and pumps, built by Sulzer of Switzerland. There is also a filter house, a utility building and a small circular concrete water tower which may be of a slightly later date than the two main buildings. There is also a house on the site.

**T6 WINDMILL**  
Baker Street, Orsett  
TQ633812  
This eighteenth century smock mill last worked in 1917. Derelict for a number of years it has been restored and the adjoining steam mill is part of a house conversion.

**T7.1 WORKERS’ HOUSING**  
Church Hollow, Purfleet  
TQ551783  
A terrace of twelve quarry workers cottages built in 1790 by the brewers Samuel Whitbread, who had purchased land in and around Purfleet to quarry chalk for the local brickworks, lime and later cement works industries. Known as Hollow Cottages, these 12 cottages were reduced to 6 in the mid nineteenth century by making one unit out of two.

**T7.2 WORKERS’ HOUSING**  
London Road, Purfleet  
TQ553781  
This terrace of 12 cottages known as Botany Cottages is located to the south of the Botany chalk pit and was built in 1905 for the employees of The Steam Ship Owners Coal Association Ltd. A large plaque attached to the central gable bears the initials SSOCALtd and a steam ship and anchor. These two-storey cottages have small gardens to the front and rear.

**T7.3 WORKERS’ HOUSING**  
London Road, Purfleet  
TQ567779  
This terrace of 38 cottages was built by the Purfleet Wharf and Saw Mills in 1904. The terrace is roughly contemporary with Botany Cottages and shares many similar architectural details. The terrace has two plastered plaques set into road facing gables bearing the company initials PW and SM, the build date of 1904 and a banner below reading Jarrah Cottages.

**T8 WORKERS’ HOUSING**  
Corringham Road, Stanford-le-Hope  
TQ688823  
A pair of flat roofed semi-detached managers’ houses built by the Shell-Mex Oil Refinery by 1939, sited to enjoy a south facing aspect and extensive views of the Thames estuary and the oil refinery. The buildings are typical of the later Art Deco movement, and original architectural features such as concrete porches and a fully glazed belvedere/crow nest projecting from the roofline still remain, although the original Crittall glazing has been lost to modernisation.

**T9.1 POWER STATION**  
Fort Road, Tilbury  
TQ660755  
This complex originally consisted of two power stations, ‘A’ and ‘B’. Station A began generating electricity in 1956, was mothballed in 1981 and finally demolished in 1999. Station B was opened in 1968 and in 2004 the adjacent jetty was enlarged to accommodate larger ships bringing in the coal. However, in 2011 it was converted to burn biomass wood pellets.
The first permanent fort at Tilbury was built in 1539 and it was reinforced during the Armada. Work started on the current fort in 1670, the original blockhouse being retained and surrounded by a pentagonal defensive wall with projecting bastions and an earth and brick gun line along the river bank. Completed in 1682 major features include an imposing Water Gate, which is extant, and two large powder magazines built in 1712. The nineteenth century saw extensive re-modelling along the riverside, the walls were reinforced and earth was embanked on the outside to protect the brickwork from the effect of newer high velocity guns. The original blockhouse was demolished around 1867 and the nineteenth century developments were partly built over prior to the First World War with concrete emplacements and magazines. Bomb damage in the Second World War destroyed the eighteenth century soldiers' barrack block, but the officers' terrace survives. No longer required after 1950, the fort is now in the care of English Heritage.
U1 AND U2 TUNNELS
Audley End and Littlebury
NGR - see text below
The Eastern Counties Railway line to Cambridge crosses the chalk uplands of north-west Essex and hence on this section there are major engineering works including a viaduct (TL517362), two tunnels and a number of cuttings. The tunnels were built in 1845 at the insistence of Lord Braybrooke of Audley End House where the line passed through his land. The southern portal (TL513382) of the Audley End tunnel bears his coat of arms on its keystone and has a semicircular ring decorated with bosses featuring Tudor roses and portcullises. The south portal (TL513389) of the Littlebury tunnel is in Egyptian style, while both north portals (TL513386 Audley End tunnel and TL514394 Littlebury tunnel) are plain. They were probably designed by Sancton Wood.

U3 MODEL FARM
Wenden Road, Audley End
TL 526376
Abbey Farm model farm dates from 1865 and was probably designed by Frederic Chancellor for Lord Braybrooke of Audley End House to a typical E-shaped double yard plan. Each yard is flanked by various livestock buildings, a cart shed, timber framed granary and, between the two, a large central cowshed. Post-war there have been alterations including conversions associated with intensive pig-rearing and the barn and dairy have been demolished.

U4 WINDMILL
Gunners Green, Aythorpe Roding
TL590152
The largest remaining post mill in Essex, it was built in the 1770s, continued in use until 1936, and is the first restored mill in the County to grind by wind power.

U5.1 TREADWHEEL & WELL HOUSE
Dewes Green Road, Berden
TL463303
Seventeenth century oak animal-powered treadwheel, 15 feet by 3 feet, to turn a 3 foot wooden winding drum over a 130 foot well. Enclosing timber-framed building is tiled and weather-boarded and in two stages, the upper having been built to exactly accommodate the circumference of the wheel.

U5.2 MALTHOUSE
Dewes Green Road, Berden
TL462303
Early seventeenth century farm malthouse which is timber-framed on a brick plinth, with rendered walls and roofed with hand-made clay tiles. Single storey as barley and malt were probably stored elsewhere on the farm. Did have a single conical kiln vent, but this has been dismantled.
U6.1 BREWERY
Chelmsford Road, Hartford End
TL688175
Thomas Dixon Ridley built the brewery in 1842 down steam from his mill on the River Chelmer and expanded the business through to his death in 1862. Since then it passed through succeeding generations of the family until it became the last working brewery in Essex. However, in 2005 Ridley's was taken over by Greene King and brewing ceased at Hartford End. All equipment has been stripped out and the building awaits development. Adjacent are two pairs of semi-detached cottages built to house the staff of the brewery.

U6.2 WATERMILL
Mill Lane, Hartford End
TL685173
Dating from about 1780 Camsix mill is an impressive two and a half storey brick built mill which was at one time owned by Thomas Dixon Ridley who built the nearby Hartford End Brewery. It worked until 1929 when the wheel was sold and the machinery was stripped out. Nicholas Ridley, then the owner of Ridley and Sons Hartford End Brewery, converted it to a house in the 1970s. The mill forms an important group of historic buildings with the mill house and mill bridge, plus the now redundant brewery.

U7 WATERMILL
Old Mill Lane, Gaston Green
TL496169
The water-powered corn mill on this site was recorded in 1720 as being used for silk throwing and twisting, probably using a copy of machinery patented two years earlier by Sir Thomas Lombe. After a short period it reverted to corn milling and was re-built in 1874. Having a brick ground floor, the upper storeys are clad in vertical weather-board, all under a pantile roof. Two lucarnes are extant. Now in use as a restaurant.

U8 MODEL FARM
Green Street, Great Canfield
TL571191
Peckers Farm dates from the 1870s and is U-shaped, the yard being flanked by two barns, a shelter shed, dairy, stables and ancilliary buildings. A separate L-shaped block consists of pigsties and a cart shed.

U9 BREWERY
School Street, Great Chesterford
TL507429
Maltings Cottage and the former tap house, now known as 'Old Maltings' date from the seventh century, while the brewery to the rear was built in the mid to late nineteenth century. In 1874 John Thomas Pilgrim was operating as a maltster and brewer and did so until his death in 1899, after which the business was run by his executors and then his family, trading as E. and H. Pilgrim, until 1910. It was sold in 1913 to Dale and Co., the Cambridge brewers. When the brewery closed the building was used as a malthouse and then an umbrella factory. All that remains of the brewery / malthouse is the kiln section which has a slate, pyramidal roof, which has been converted to a dwelling.

U10.1 MALTHOUSE
Mill Lane, Great Dunmow
TL628220
A two-storey timber-framed and brick malthouse, known as Boyes Croft, with a peg tile roof, the earliest part of which dates from the early to mid sixteenth century. At the west end on the brick-built ground floor is the cement rendered brick-built steep that was supplied with water from a small cast-iron pump which survives. The first floor here is weather-boarded and has a taking-in door to what was the barley store. In the next seven bays are located the malting floors, the walls have wattle and daub infill, and beyond is the nineteenth century malt kiln, which replaced an earlier example. There is then a brick-built furnace and above the drying floor a conical kiln chimney. A two-storey timber-framed malt store stands at the east end with a jettied first floor landing and external stairs. To the west, adjacent to the main building is a second drying kiln, part of a private residence.

U10.2 BREWERY
North Street, Great Dunmow
TL627223
The Dunmow Brewery was founded in 1803 initially run by Alliston and Randall before merging with Dunmow rivals, Webb and Gibbons. Acquired by Charringtons in 1966 it closed soon after and most of the structures such as the brewhouse, cooper's shop and stables were demolished in 1975. The surviving structures are the tap house, The King's Head, the malt store, bottle store and brewery manager's house.

U10.3 WORKHOUSE
Chelmsford Road, Great Dunmow
TL633212
This workhouse built in 1840 to a design by Scott & Moffatt has three main components: a two-storey entrance range containing the chapel and board
room; a U-shaped courtyard range containing the bulk of the residential accommodation and service blocks, a four storey central block with three storey wings; and two terraces of late nineteenth century staff houses. Following closure in 1914 the workhouse was used as army and refugee billets, and later a prisoner of war camp. In 1932 the buildings were sold and converted into flats and houses, and early example of adaptive re-use, but the buildings retain most of the principle components and external integrity has not been compromised by the residential conversion.

**U11.1 ROAD BRIDGE**
Walden Road, Littlebury
TL518396

This cast iron single-span road bridge was built in 1858 by Henry Stock, the County Surveyor. The main beam on both sides is marked Littlebury Bridge Erected MDCCCLVIII.

**U11.2 WATERMILL**
Mill Lane, Littlebury
TL518395

Kings Mill and Mill House date from the late eighteenth century and were once part of the Audley End Estate. It was water powered until around 1859 when a steam engine was introduced and it ceased milling around c1924 after which it was converted to residential use. The site comprises a large three and a half storey timber framed, weather-boarded mill with a Mansard roof and a three storey mill house with a Mansard roof. The waterwheel had been removed but elements of machinery framing and six pairs of French millstones survive, although nothing survives of the steam plant. In 1977 the mill and house were sold by the Audley End Estate and have since remained in private hands, unused apart from as storage.

**U12 CROSSING KEEPER’S HOUSE**
High Cross Lane, Little Canfield
TL603213

This crossing keeper’s house was built for the opening of the Bishop’s Stortford, Dunmow and Braintree branch and is of similar design but smaller scale than the station building at Takeley.
The Countess of Warwick of near-by Easton Lodge built Easton Lodge Halt here in 1895 for her visitors' use, although it was also a public halt.

**U13 WATER TOWER**

Homelye Chase, Little Dunmow

TL649223

A Reinforced concrete water tower of 1938 in a modernist style. It comprises a circular tank supported on an octagonal core and eight columns, with ring beams at ground and tank soffit level from where there are ties back to the central core. Windows on the central core are metal framed.

**U14.1 NEWPORT BRIDGE TOLL HOUSE**

Belmont Hill, Newport

TL521344

Although on the Essex & Herts. Turnpike Trust turnpike road, later the A11, this toll house was a private one for collecting tolls for passing over the privately owned bridge. Timber-framed and with plaster decoration, there is a surviving toll board detailing the tolls payable.

**U14.2 MALTHOUSE**

Station Road, Newport

TL522336

An 1854 complex of one three-storey malthouse plus a two-storey building that was stables, storage and offices. The malthouse is brick built, with weather-boarding above first floor level at the west and east ends, a lucam mid-way along the south façade and two tile clad conical kiln chimneys at the east end. The storage building is at 90° to the malthouse, parallel to the adjacent railway line at Newport station. A siding was provided via a trailing point from the down line of the main GER Cambridge line to the west side of the storage building.

**U14.2: The malthouse at Newport**

**U15 REFRESHMENT AREA**

Cambridge Road, Quendon

TL514303

This site consists of a drinking fountain under a tile covered, wooden canopy supported by wooden posts, which, according to the inscription was presented to the people of Quendon and Rickling Green 'In Memoriam' by Henry Archibald Tufnell in 1887. Adjacent is a drinking trough for horses, both being on the side of the former A11.

**U16.1 GAS WORKS**

Thaxted Road, Saffron Walden

TL544384

The gas works here were one of the earliest in Essex, built in 1836. All that remains are two red brick built buildings flanking the roadside entrance to the former works. The two-storey manager's house has a decorative plaster facade to the road with pilasters and an 1836 date-stone. The single storey structure, which may have housed the retorts, is truncated to the east and the full height brick arches on the long walls have been blocked. Architectural embellishment on the road side has the inscriptions 'GAS WORKS' and '1836'.

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U14.1 above: Newport Bridge toll house serving a privately owned bridge.

right: Detail of the toll board showing the tariff.
The front elevation presents two storeys and a basement window, while the rear extension shows three complete storeys, the land

until 1920. Latterly a garage, the site, that included the brewhouse and a three-storey malthouse, has been redeveloped as residential units.

Saffron Walden was also a centre for the textile industry, both worsted yarn and silk. This building has been called a crape factory, but was probably a warehouse and distribution centre for Grout, Baylis & Co., putting thrown silk out to weavers to work on at home. The silk industry only lasted about 20 years in the town and this building ceased its association with it in 1836. A timber-framed roofed carriageway at the north end allowed access to the rear of the warehouse.

This terrace of 11 houses is built of knapped flint cobbles with red-brick dressings under a slate roof. It was a row of weavers' cottages (many of which exist in the town) built in the early nineteenth century in association with the short-lived local silk industry. The front elevation presents two-storeys and a small basement window, while the rear extension shows three complete storeys, the land
falling towards a brook. The basement would have been used as the weaving room.

**U16.8 WEAVERS' COTTAGES**  
34 Gold Street, Saffron Walden  
TL538383

This sixteenth century timber-framed and plaster cottage is recorded as having been the home of weavers of both woolens and then in the nineteenth century crape. The large first floor window that lit the weaving room survives.

**U16.9 WORKERS' HOUSING**  
Alpha Place, Saffron Walden  
TL541381

Alpha Place is a development of 16 three-storey houses built in 1850 as two parallel terraces of eight and was occupied by various craftsmen and artisans, such as carpenters, painters, tailors, boot and shoemakers, coach builders, domestic staff and a brewer's labourer. The communal water supply was by a pump situated on the pathway between the two terraces, the stump of which survives.

**U16.10 WORKERS' HOUSING**  
Artisan's Dwellings, Saffron Walden  
TL542384

Artisan's Dwellings is a development of 16 two-storey houses built in 1882 as two parallel terraces of eight. Like Alpha Place they were occupied by a similar variety of craftsmen and artisans. They were constructed by and using building materials from Dix, Green & Co., cement makers of Saffron Walden but not as housing for their staff, rather as a showcase for their products.

**U16.11 WEIGHBRIDGE**  
Debden Road/Station Road, Saffron Walden  
TL578379

Weighbridge Court, a development of modern apartments, is built on the former Saffron Walden Goods Yard. The weighbridge has been retained as part of the development. It was added to the yard in 1930, was capable of weighing up to 12 tons and was manufactured by H. Pooley & Sons Ltd. of Birmingham and London.

**U16.12 RAILWAY STATION**  
Station Road, Saffron Walden  
TL540380

The station building is the only other surviving structure from the once extensive complex of railway station, goods yard and industrial premises. It was built ready for the opening of the Saffron Walden Railway Company's line from Audley End as far as Saffron Walden in 1865, a through station as the line was eventually extended to Bartlow. It is a symmetrical two-storey, brick building of five bays with set-forward gabled cross-wings and consisted of a booking hall and waiting room with Station Master's accommodation on the first floor. Opposite is the Railway Arms public house.

**U16.13 DRINKING FOUNTAIN**  
Market Square, Saffron Walden  
TL538385

Designed by John Bentley and moved from the London Exhibition of 1862 to Saffron Walden as a gift from Gibson the brewer and banker to celebrate the wedding of the then Prince of Wales.
U16.14 WORKHOUSE
Radwinter Road, Saffron Walden
TL550386
Saffron Walden Union Workhouse was erected in 1837 and designed by James Clephan, following Sampson Kempthorne's cruciform model. It comprises three-storey ranges forming the cruciform plan, with a central octagonal hub, which were linked by single-storey wings and walls, enclosing the courtyards in-between. Each of the three-storey ranges terminates in a square block with pyramidal roof. The entrance block has a clock on the façade and is flanked by single-storey ranges. The former mortuary and casual ward block survive, although some of the single-storey ranges have been demolished and replaced with modern additions.

U17.1 WINDMILL
Mill Side, Stansted Mountfitchet
TL510247
This 5-storey brick-built tower windmill dates from 1787 and was working until 1910. It has been restored on a number of occasions since. Most of the original machinery survives including three pairs of stones by Hughes & Son, London and Brown, Huxham.

U17.2 REFRESHMENT AREA
Chapel Hill, Stansted Mountfitchet
TL510251
A late nineteenth century cast-iron drinking fountain, with a canopy supported on four slender columns. The canopy has four faces each with a shield of arms and one with 'Essex 1871'. Promoted by H. & W. Gilbey (local distillers) and cast by Macfarlane & Co., Glasgow. Situated where the road from the village centre meets the former A11.
via a facing point from the up line of the main GER Cambridge line. Now extensively altered, distinguishing features have been removed and converted to commercial premises.

**U18 WATER AND STEAM MILL**

Mill Lane, Stebbing

TL658240

Town Mill was built in the late seventeenth to early eighteenth century and has two storeys and an attic, is timber framed and weather-boarded under a tiled roof. It was substantially renovated in 1877, at which point a new pitch back wheel and gearing by Fell Christy of Chelmsford were added, along with a portable steam engine. Flour milling had ceased by 1901 and latterly it was used to mill animal feed and break horse beans. It finally closed in 1995 and was converted to residential use in 2003 at which stage it lost most of its machinery. There is an adjacent brick-built mill house.

**U19 RAILWAY STATION**

Station Road, Takeley

TL564210

The branch line from the main Cambridge line at Bishop's Stortford to Great Dunmow and Braintree was opened in 1869 by the Great Eastern Railway. Passenger services ceased in 1952, the Dunmow viaduct was closed due to structural problems in 1966 and freight traffic continued to decline so that the line closed in phases until it closed completely in 1972. The former line was acquired by Essex County Council and is a designated country park called the Flitch Way – a linear route following most of the track bed from Start Hill (TL519213) to Braintree. Takeley Station was built for the opening of the railway, but became redundant on the cessation of passenger services and fell into disrepair. It was restored in 2006 by the County Council for use as a Rangers’ office. Also extant on this disused branch line is the formerFelsted Station (TL666412).

**U20.1 RAILWAY STATION**

Off Stanbrook Road, Thaxted

TL606300

Thaxted Station, the terminus of the Eelsenham to Thaxted Light Railway is almost a mile from the town itself. The original station building of 1913 is all that remains of the original station buildings and facilities, but externally it appears to be intact and little altered from the original. The rest of the site is used as a builder’s yard.

**U20.2 ENGINE SHED**

Off Stanbrook Road, Thaxted

TL605301

Also at Thaxted Station the original engine shed
of 1913 survives as the only existing example of an engine shed in Essex. It is brick built under a corrugated iron roof, being one bay wide and four bays long, in each of which is a wide round-arched, small-paned window.

**U20.3 WATER TOWER**
Off Stanbrook Road, Thaxted
TL605301

Finally, completing the group of three original buildings at Thaxted Station is the water tower of 1913. It survives as the only one of three intact, railway associated water towers in Essex. It is brick built and surmounted by a cast-iron water tank.

**U20.4 WINDMILL**
Mill Row, Thaxted
TL609308

This red brick, five floor tower windmill was built in 1804 for John Webb using bricks from his own brick works near the mill. By 1904 it was disused and in decay by 1970, but it has been completely restored to working order. One pair of stones being able to grind. Most of the original machinery survives.

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**U21 WATER MILL**
Footpath north from Grange Green, Tilty
TL599267

This water mill, built in the late eighteenth century of brick and tile, is of two storeys. It is now derelict, but many features can be identified including the leat and water wheel.

**U22.1 RAILWAY STATION**
Station Road, Wendens Ambo
TL516363

Audley End station, on the Liverpool Street to Cambridge line, was built in 1845 by the Eastern Counties Railway, which had taken over from the Northern & Eastern Railway the completion of the line under Robert Stephenson as engineer. Designed by Sancton Wood and probably completed by Francis Thompson, the main block has two storeys in brick with semicircular arched, radially glazed windows and a porte-cochere with stucco arches and coursed pillars.

**U22.2 BRANCH LINE HALT**
Station Road, Wendens Ambo
TL516362

The Saffron Walden Railway Co. opened the branch line from Audley End through Saffron Walden to Bartlow in 1865. It was closed in 1964 following the recommendations of the Beeching Report. The branch line station building and a length of the platform survive close to the mainline station building in the middle of the car park. It is a small single storey building of brick under a slate roof. There is a central open canopied seating area and bench seating, on either side of which are the office and waiting room.

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Train Ferry Gantry erected on the train ferry pier at Harwich in 1924, now disused and in the Trinity House Depot.
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THE ASSOCIATION FOR INDUSTRIAL ARCHAEOLOGY

This book is published to mark the AIA’s 2012 Conference at Writtle College, Chelmsford, Essex. The AIA was established in 1973 to promote the study of industrial archaeology and encourage improved standards of recording, research, conservation and publication. It aims to support individuals and groups involved in the study and recording of past industrial activity and the preservation of industrial monuments, to represent the interests of industrial archaeology at national level, to hold conferences and seminars, and to publish the results of research.

The Association is a voluntary one. It publishes the *Industrial Archaeology Review* which is sent twice yearly to all members, who also receive the quarterly *Industrial Archaeology News*. Further details may be obtained from the AIA Liaison Officer, The Ironbridge Institute, Ironbridge Gorge Museum, Coalbrookdale, Telford, TF8 7DX.

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