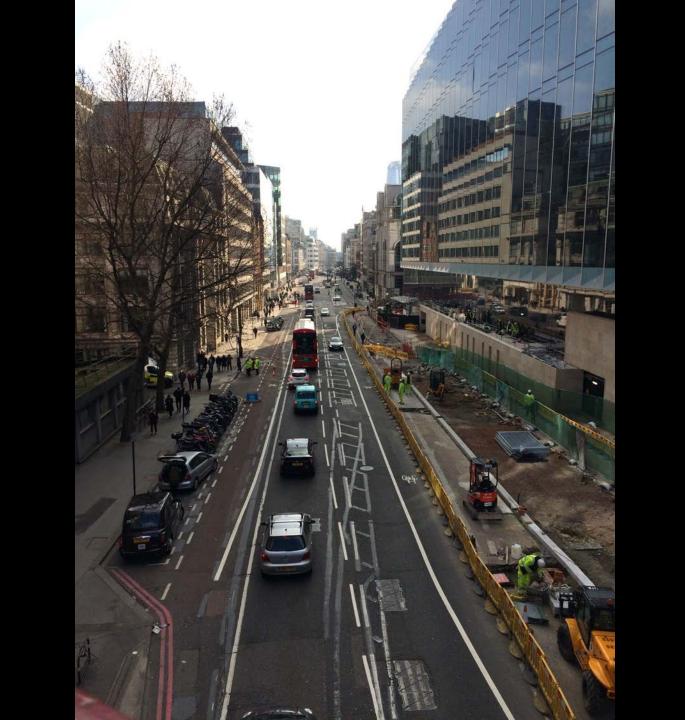
The Natural Environment of Tudor London

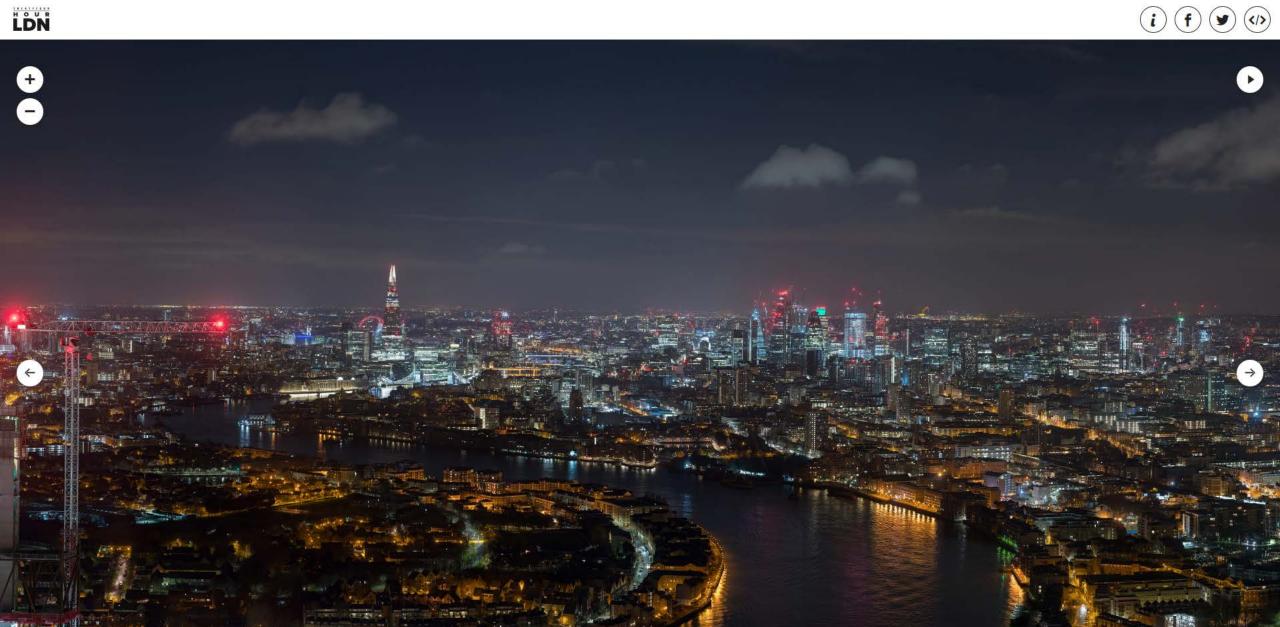
Carolyn Roberts

Professor Emerita, Gresham College
Water and Environment Consultant
Honorary Research Fellow, University College London
Entrepreneur-in-Residence, Keele University

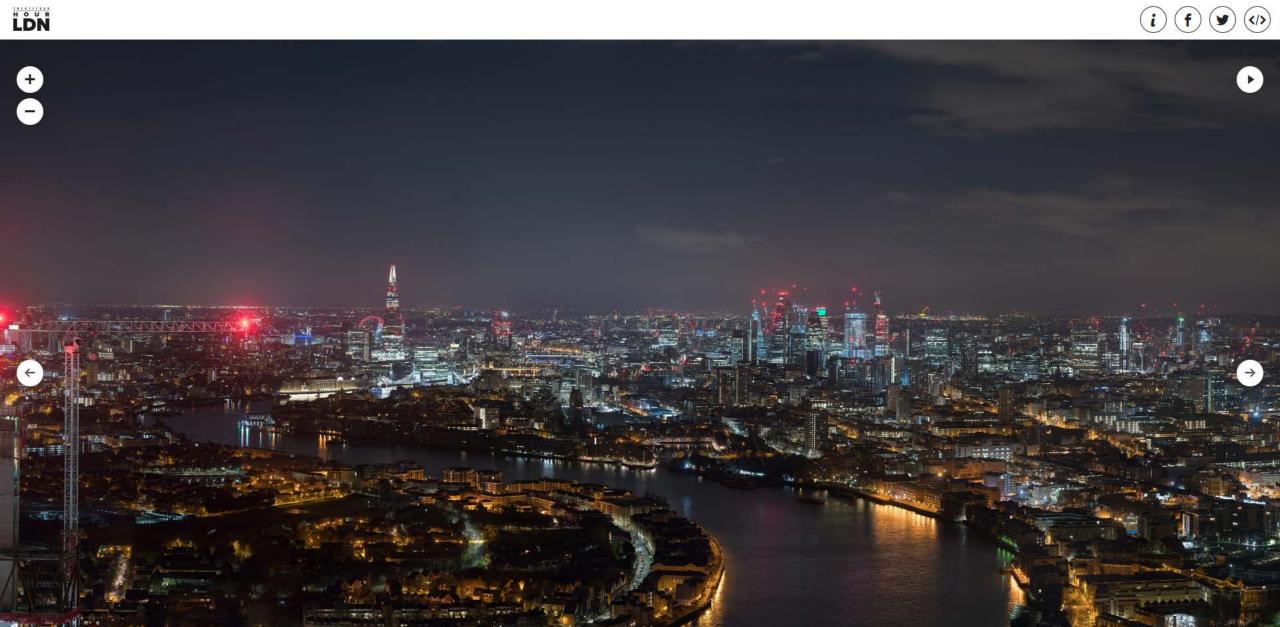




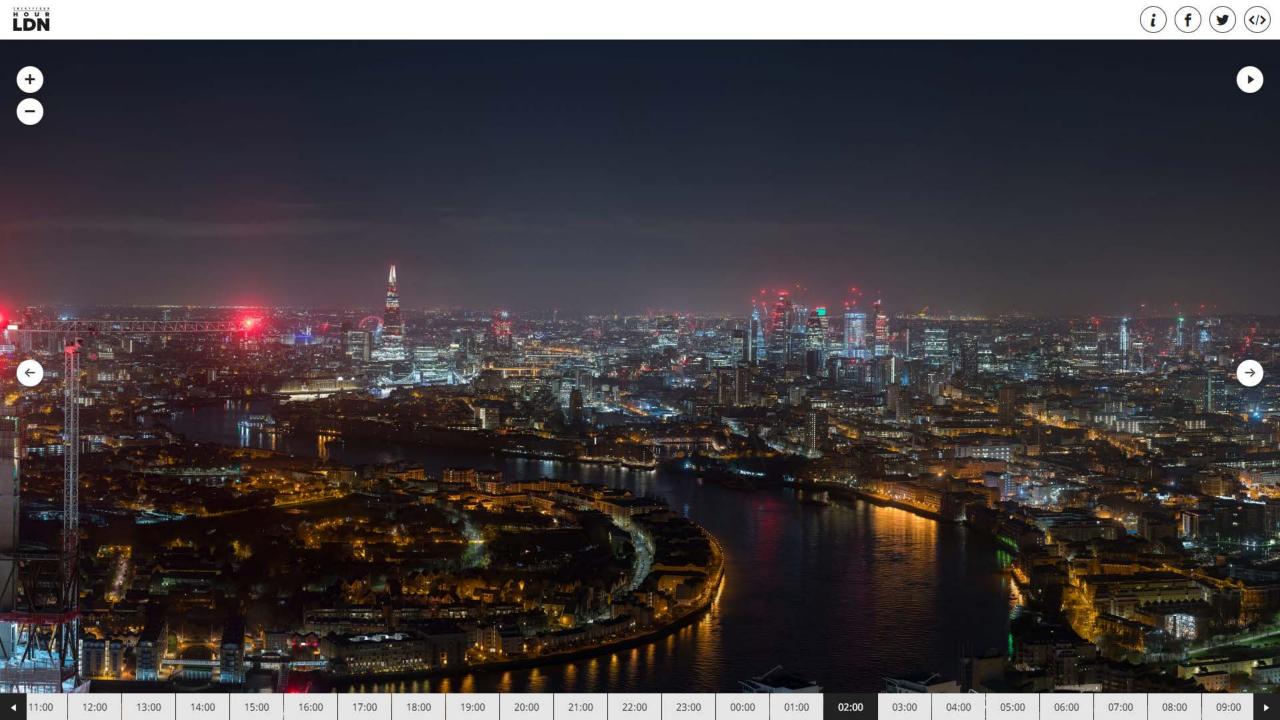


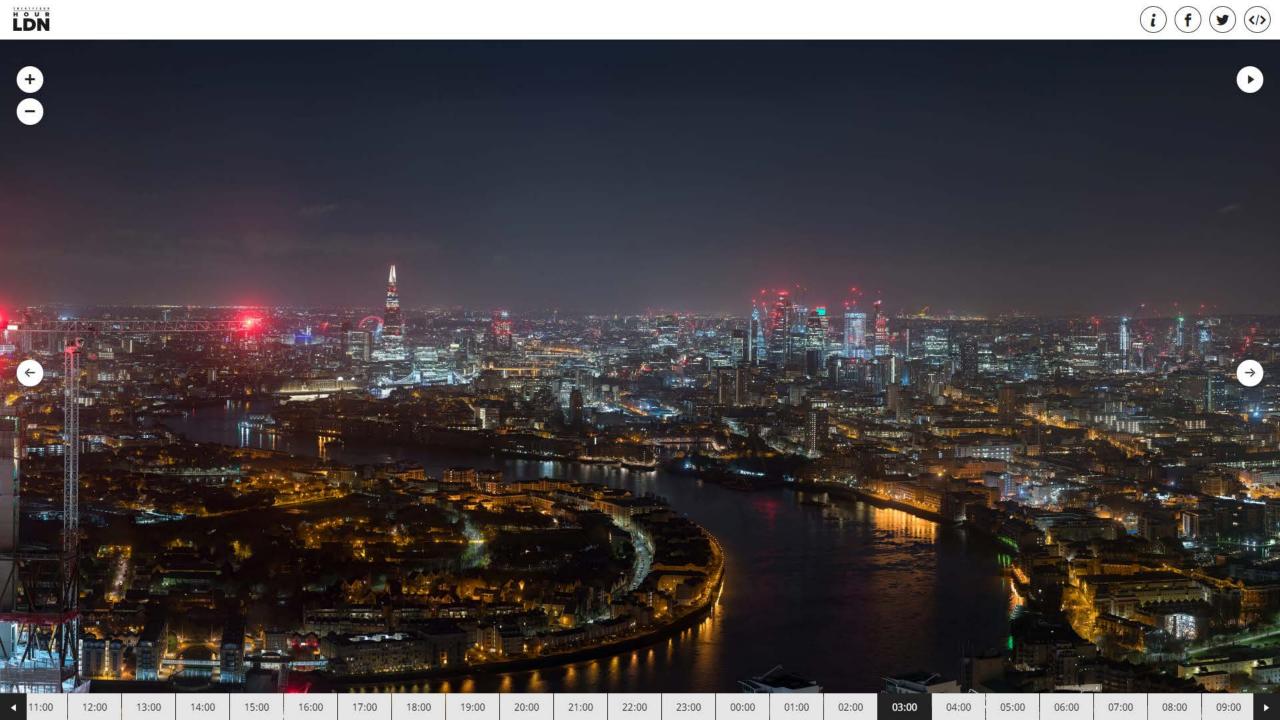


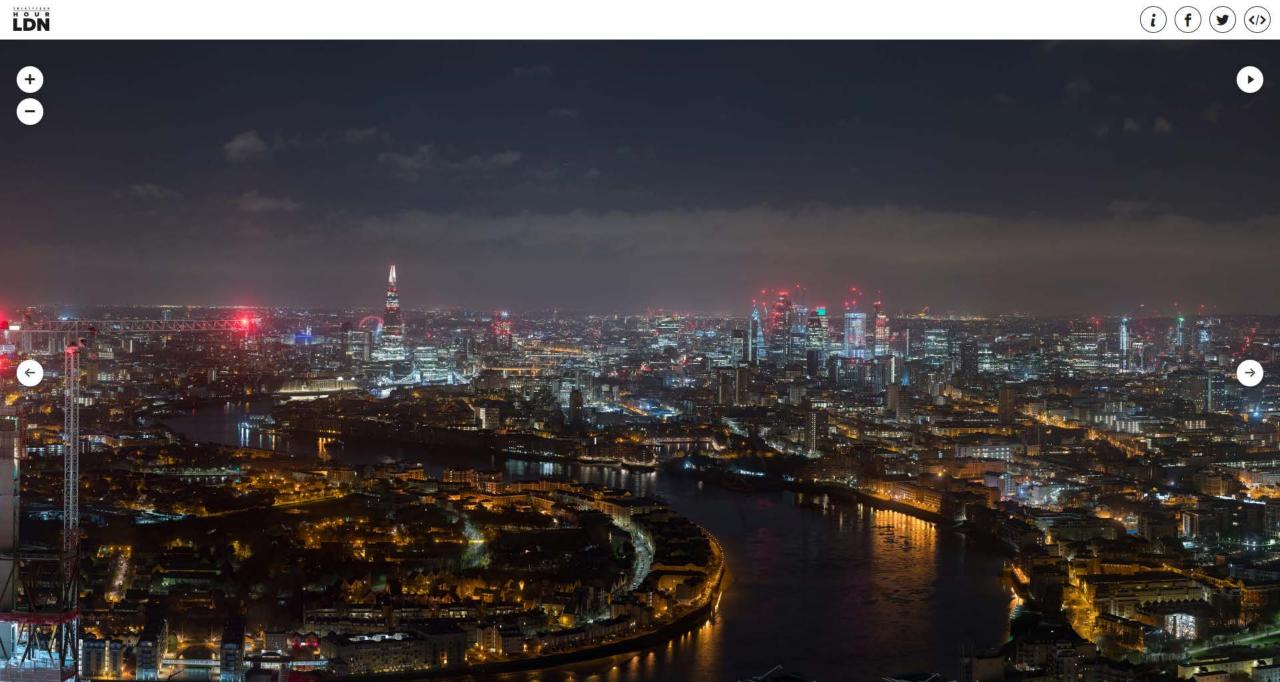












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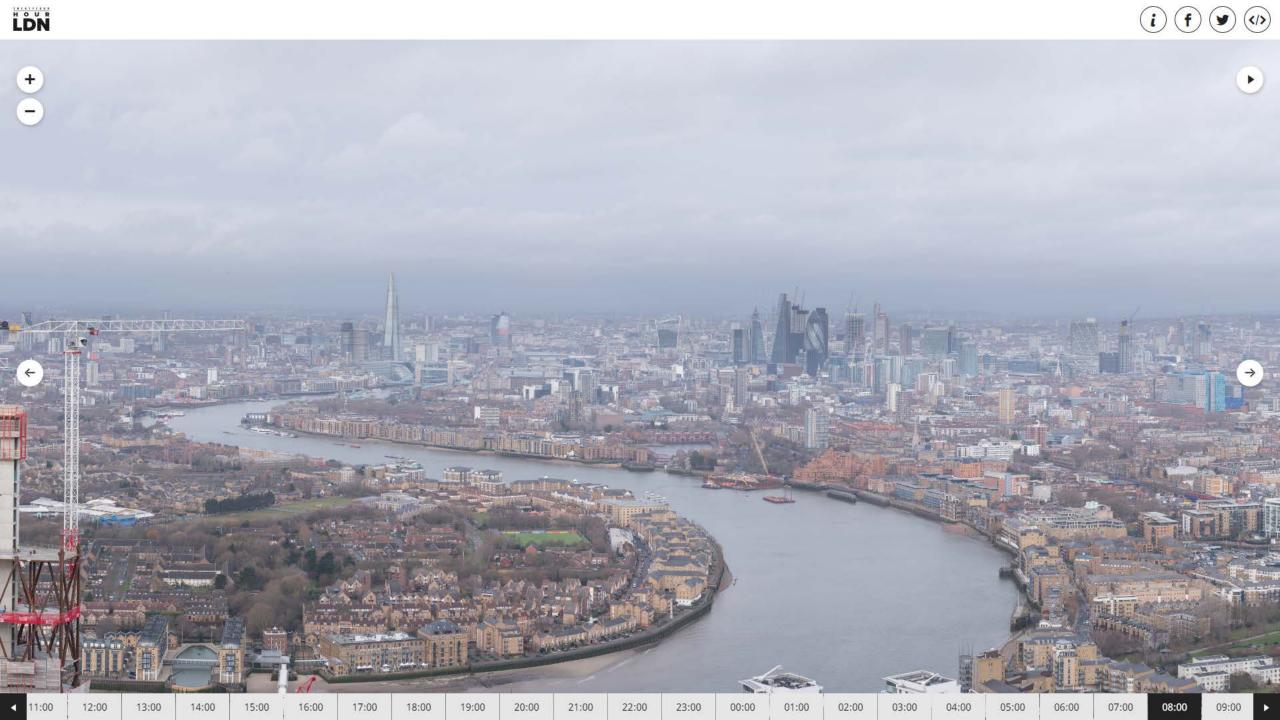


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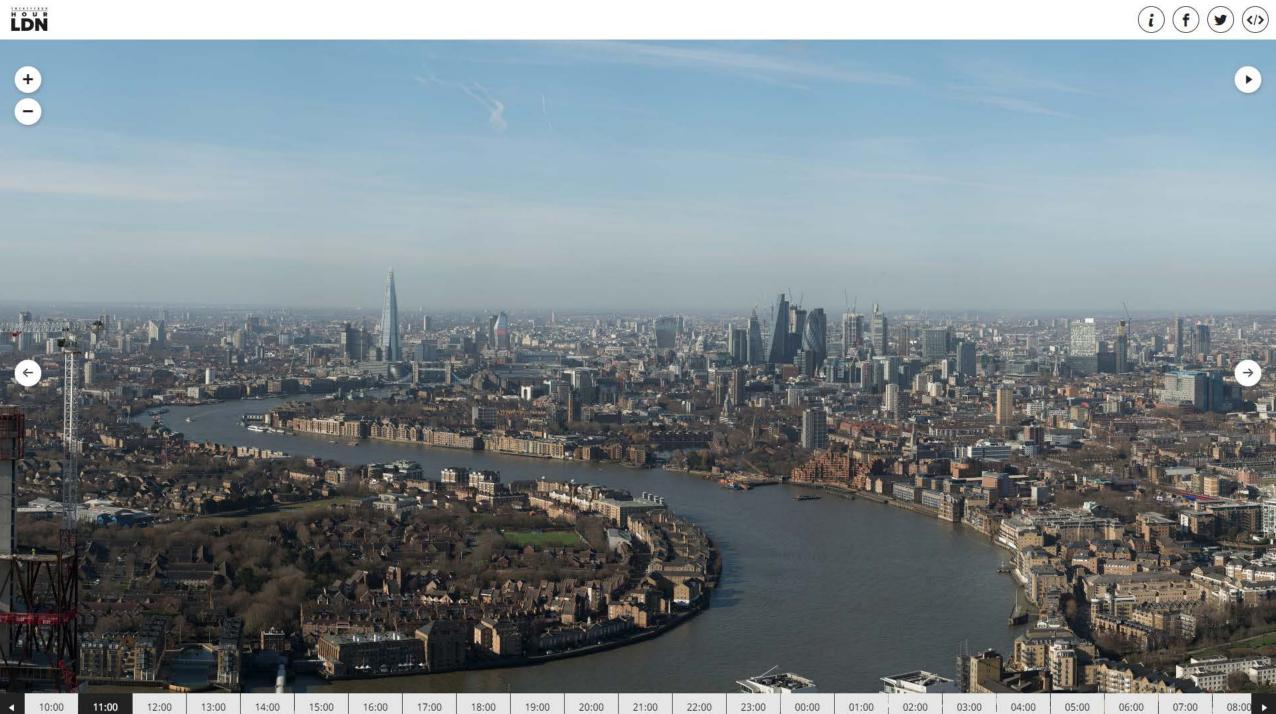




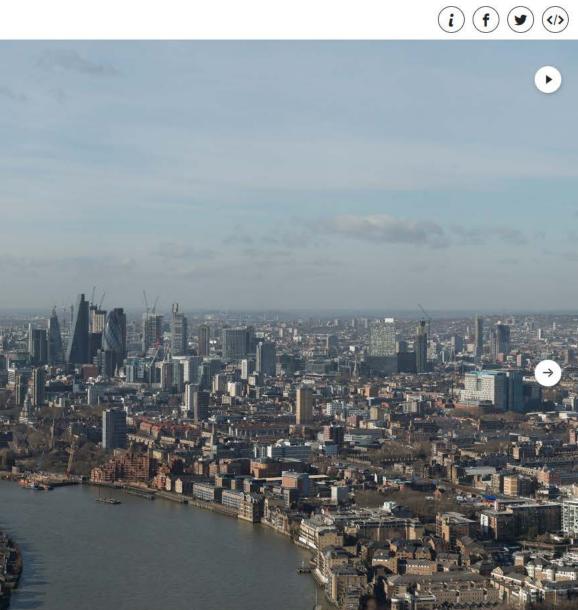












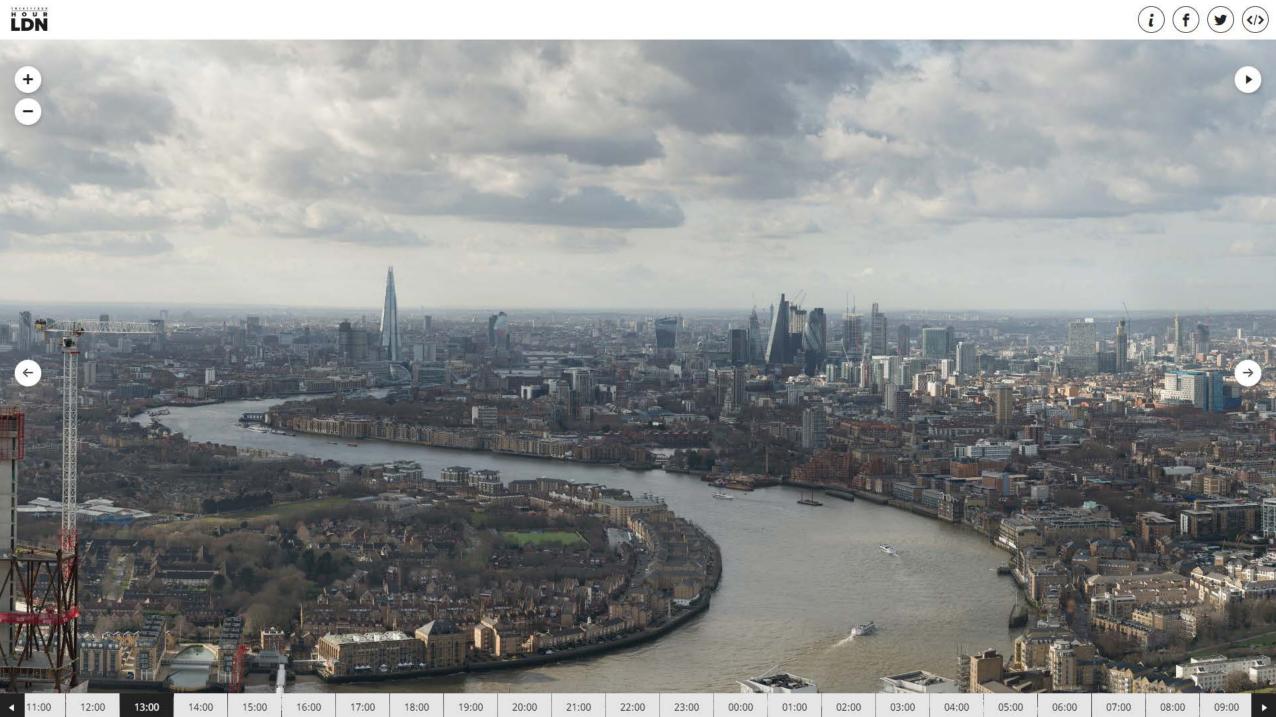














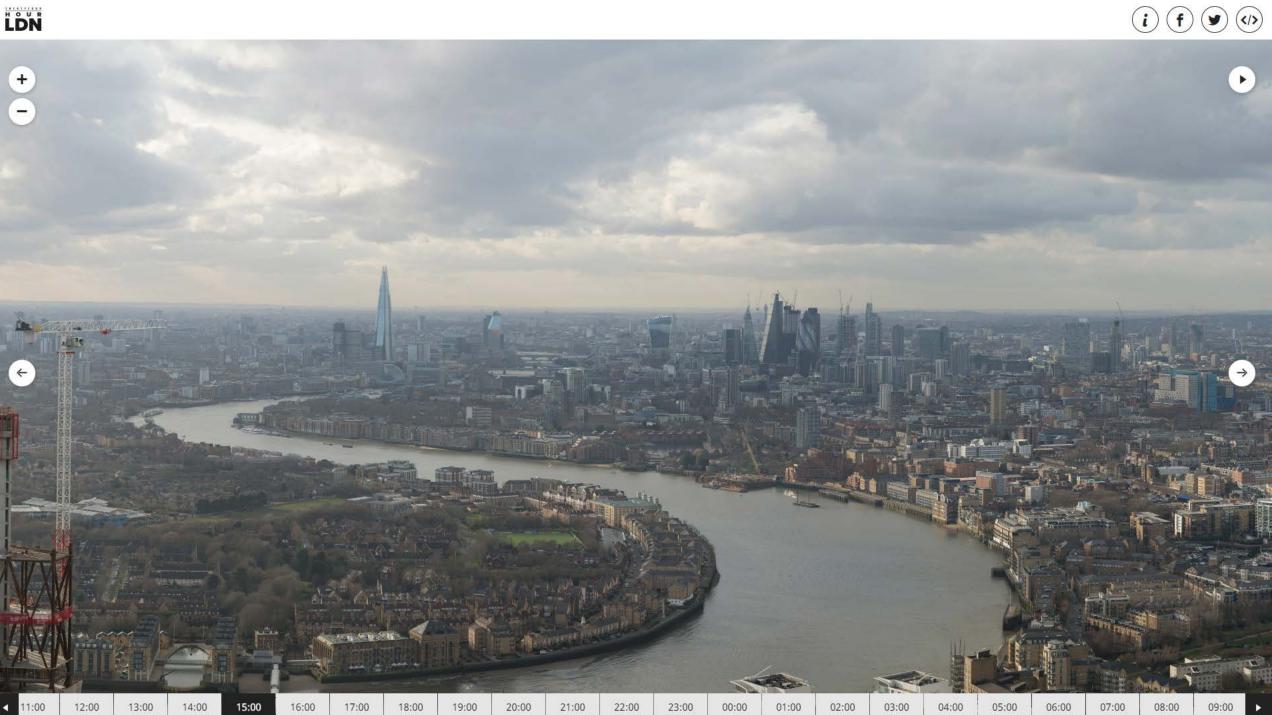


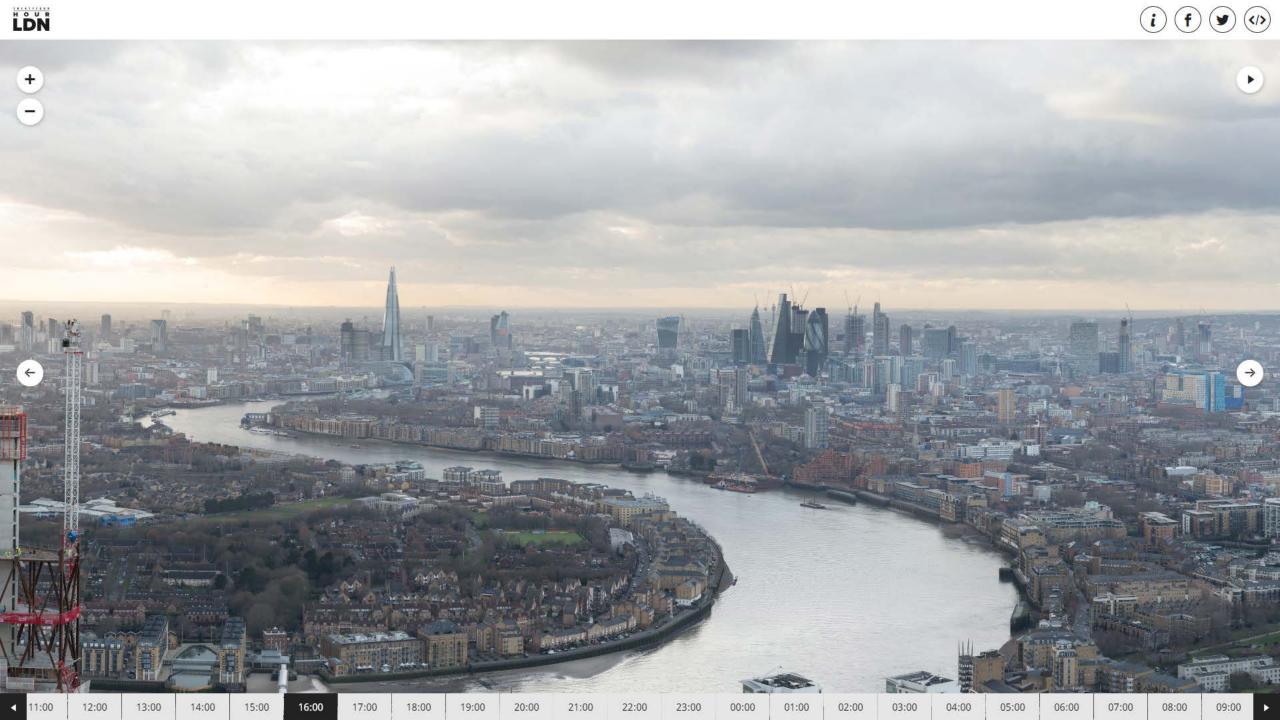


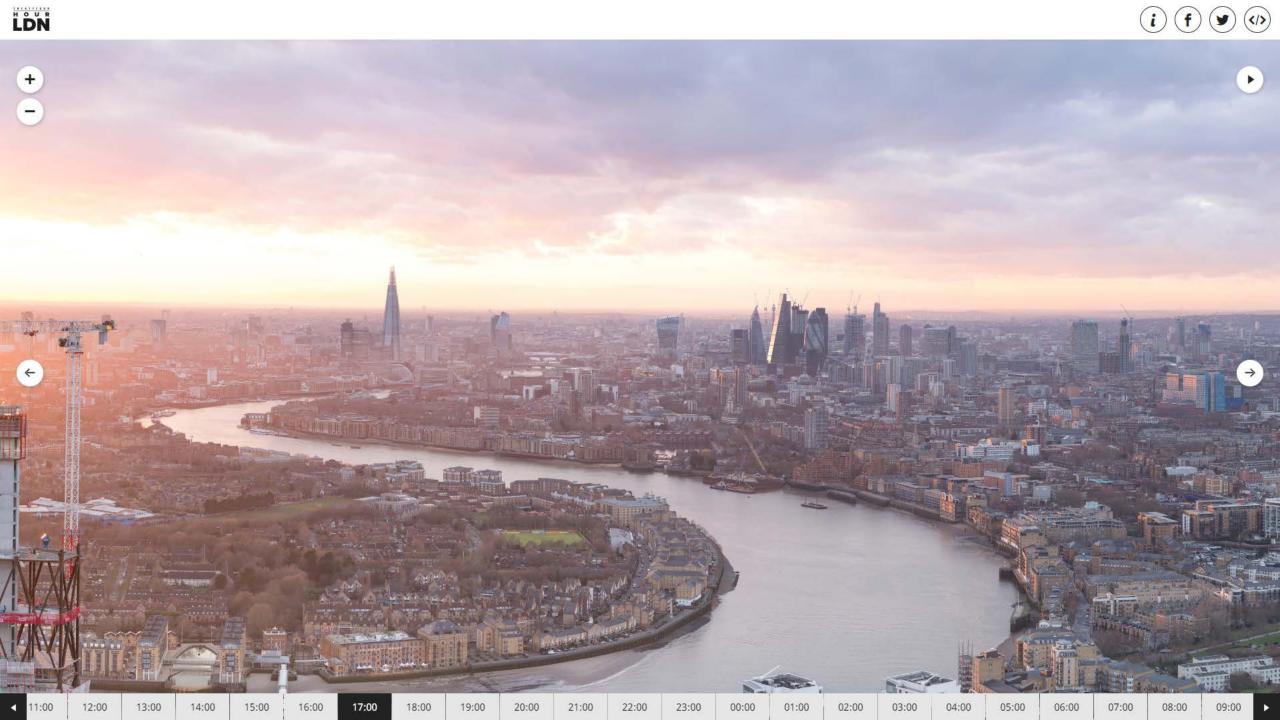










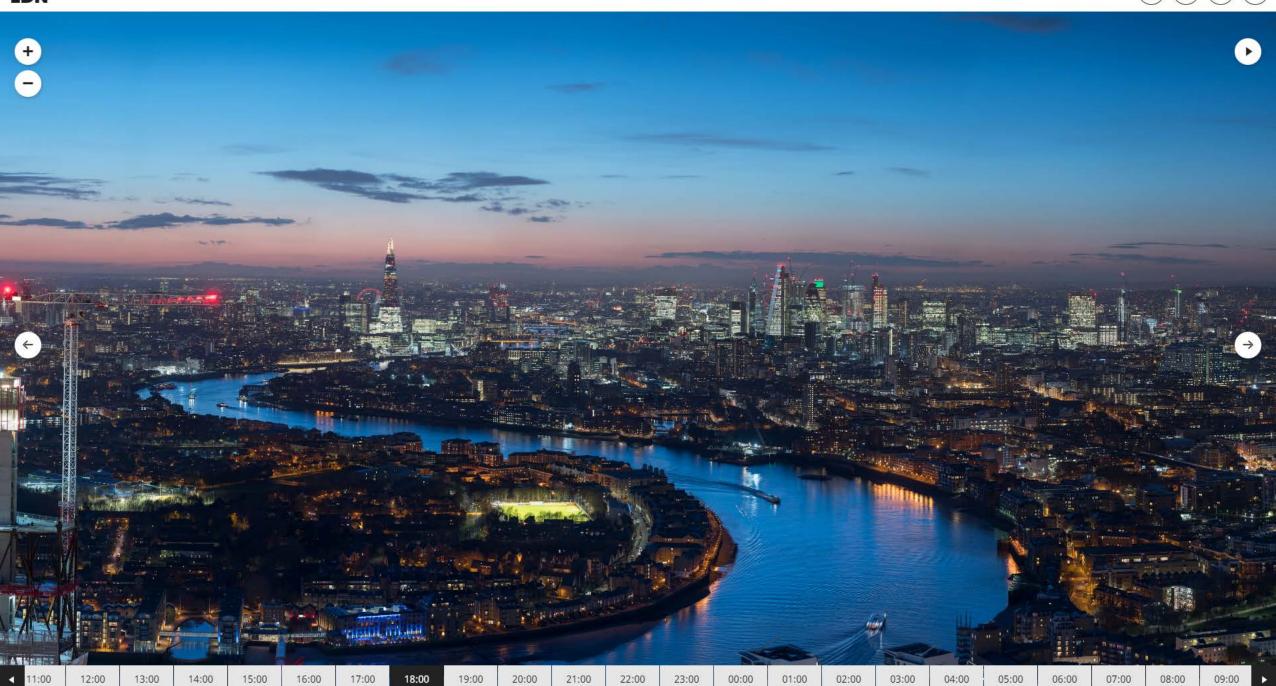


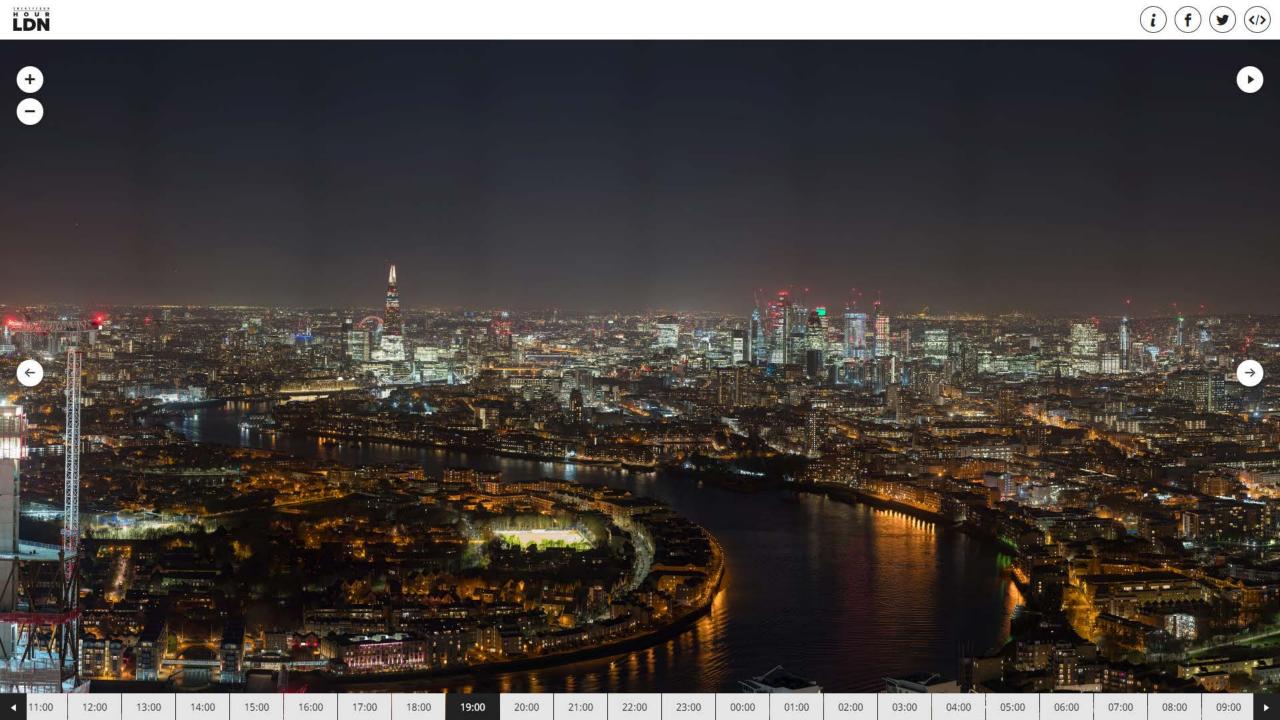


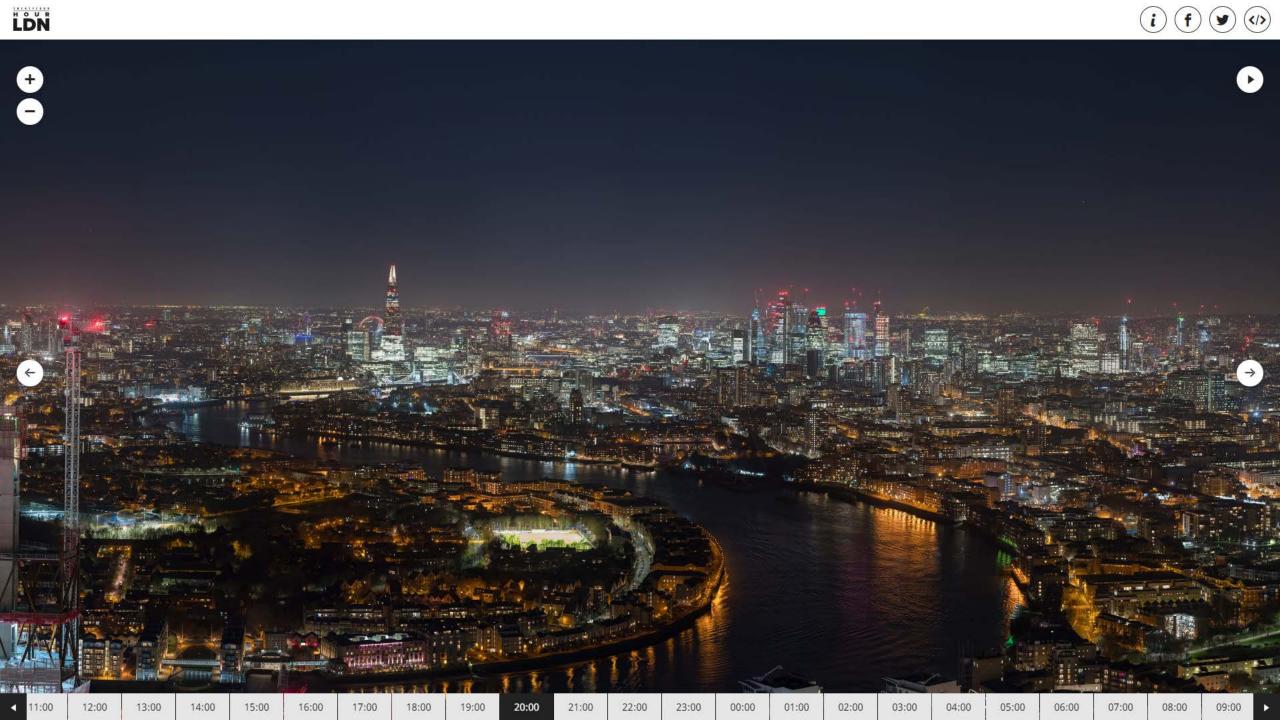


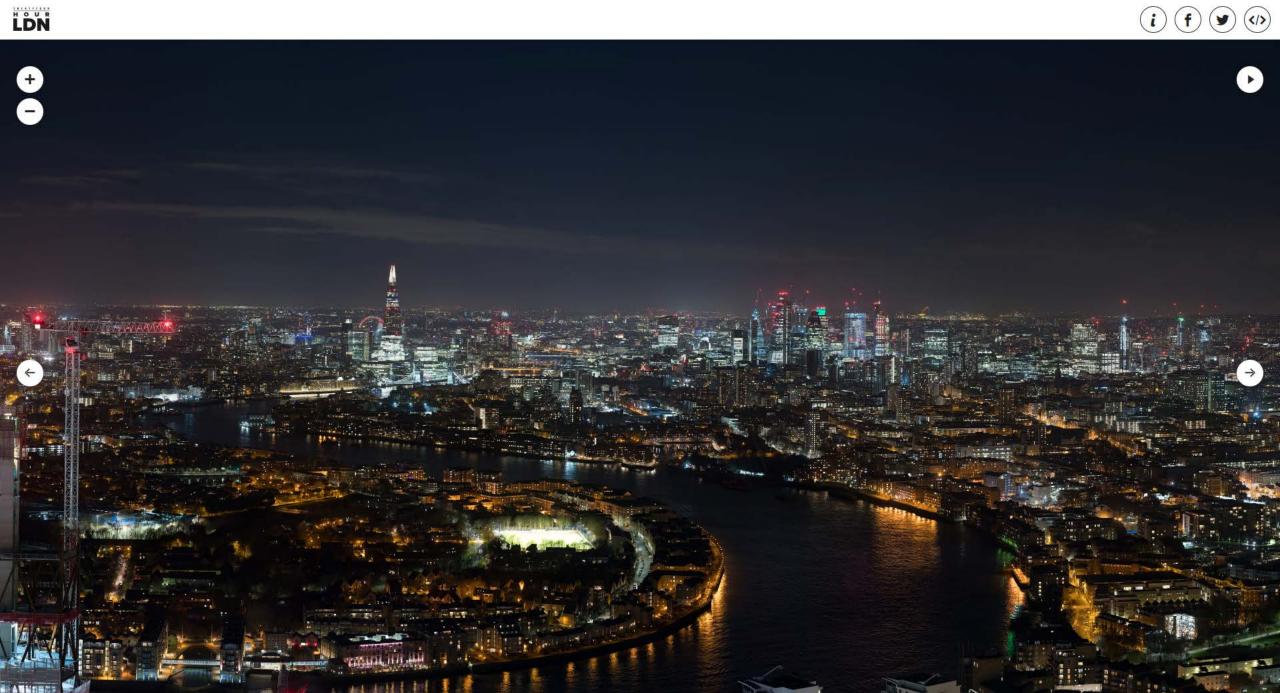






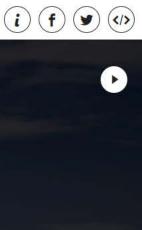




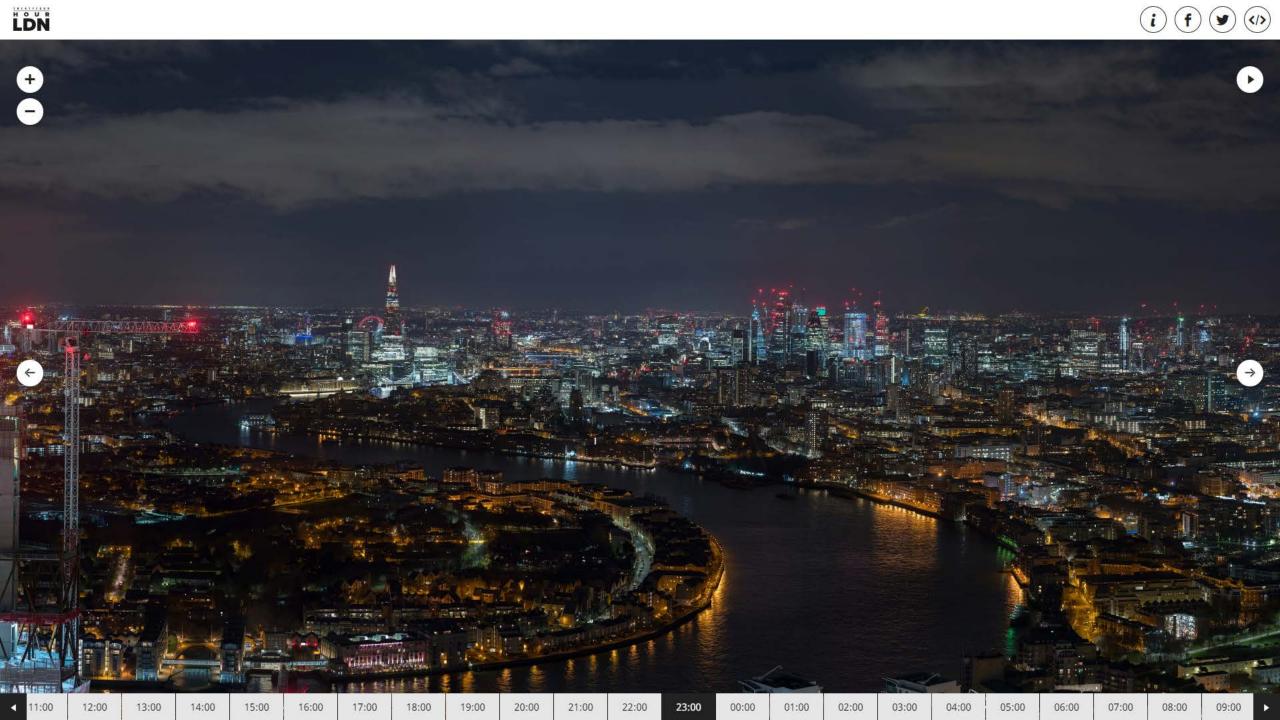


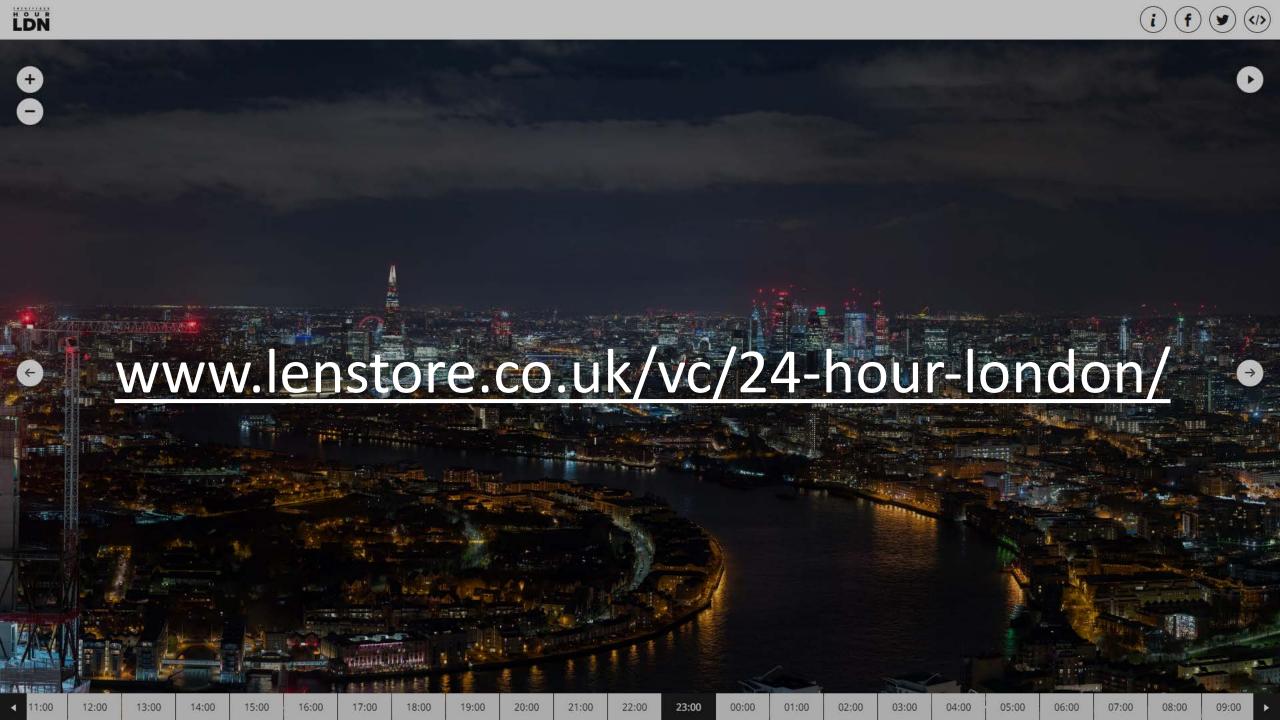
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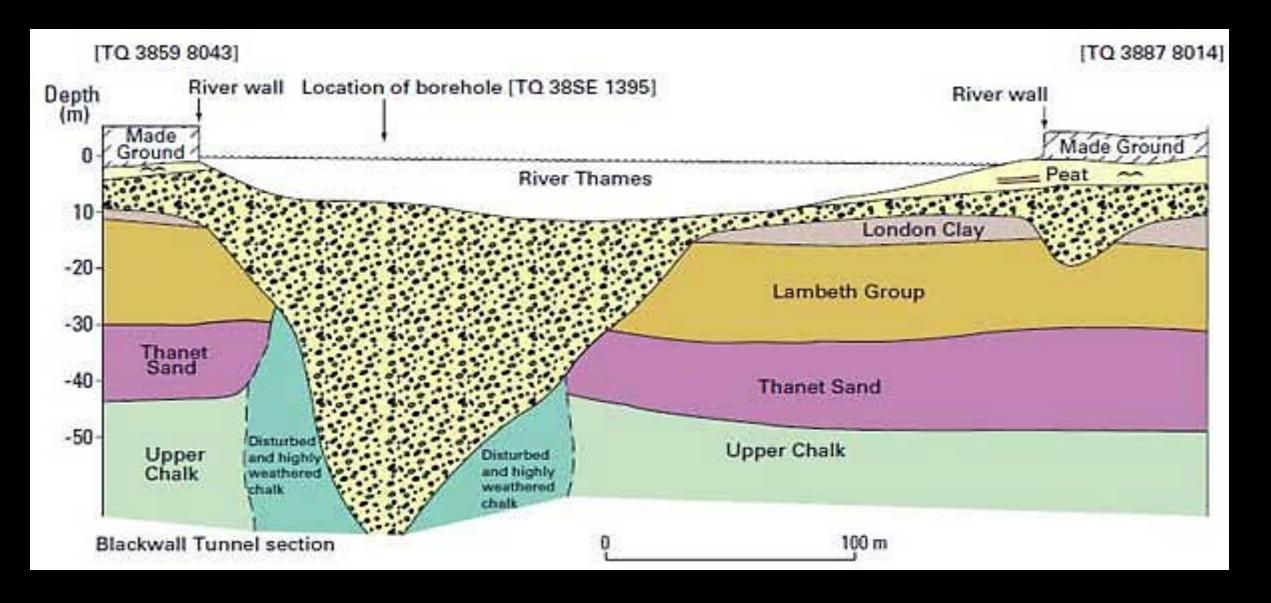








'Panorama of London', by Claes Janszoon Visscher, c. 1616



Cross-section at the Blackwall Tunnel, showing zone of highly weathered chalk cross-cutting the Thanet Sand and Lambeth group. From Ellison *et al.*, 2004.

The Strand area from Visscher's 'Panorama of London', 1616.

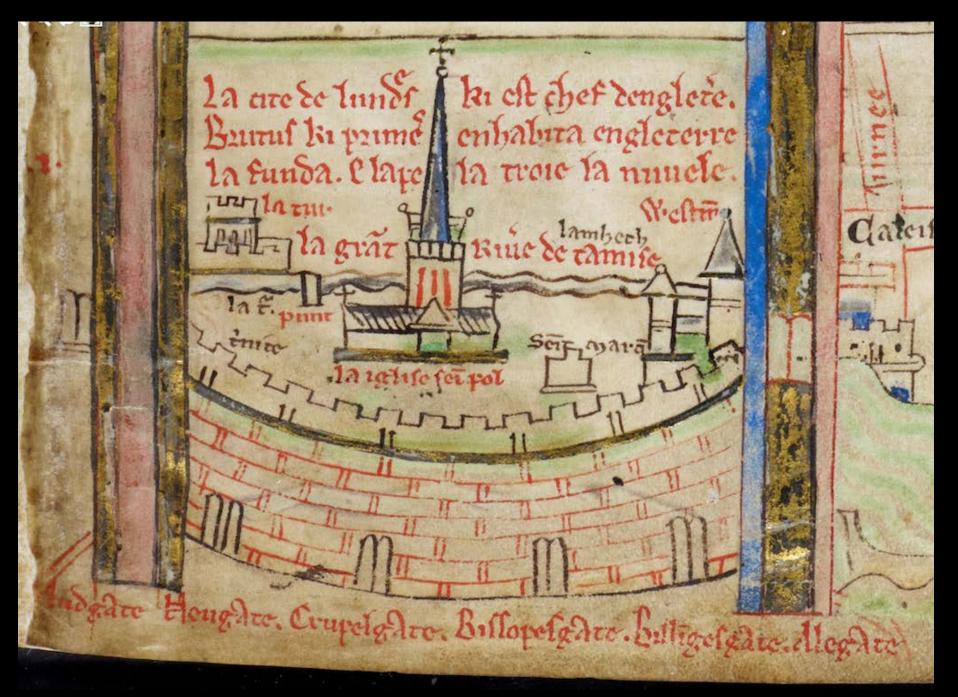
A narrow zone of villas alongside the Thames with hilly countryside close behind





London in the 'Gough' Map of Great Britain. Probably around 1370, with later additions

http://www.goughmap.org/map/#



London, 1390 by Matthew Paris, monk and cartographer



The imprisonment of Charles Duke of Orléans in the Tower of London, about 1483.

The River Thames embankments are shown in detail, with the White Tower and Traitor's Gate. London Bridge at the top.

British Library; illustrator is unknown.

John Norden's 1593 map of London, on which John Speed based his famous atlas



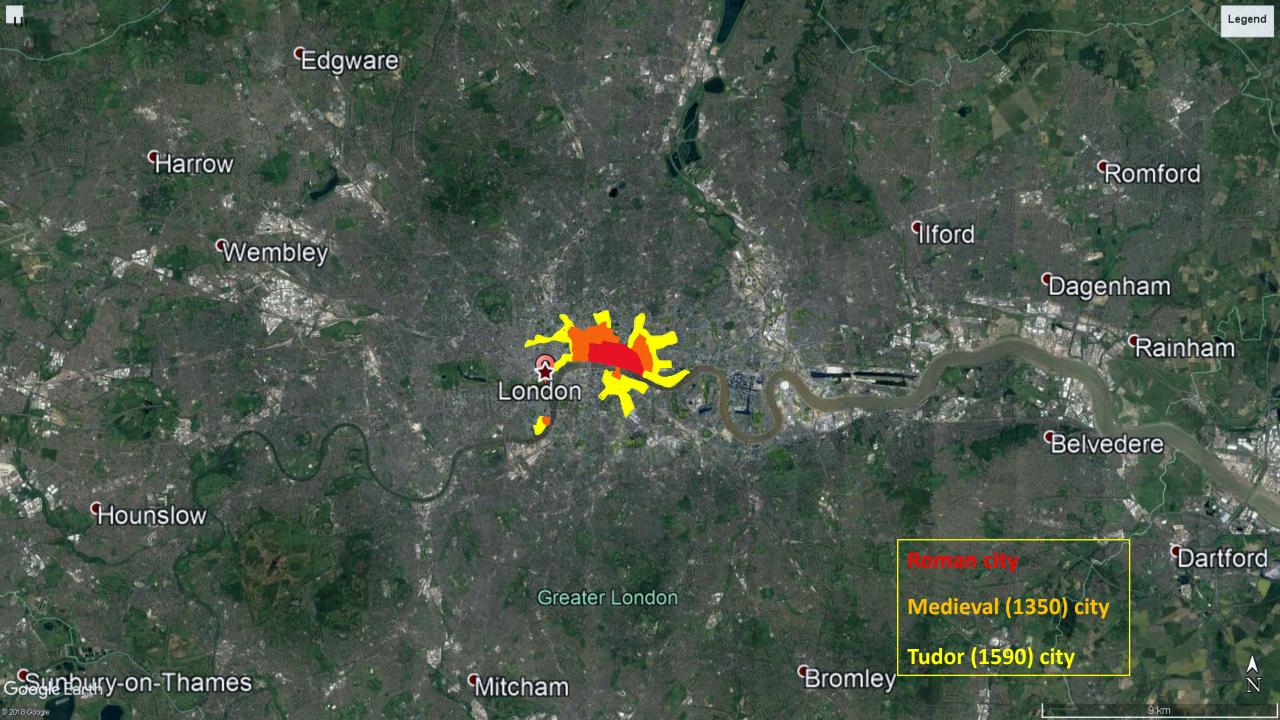
The Cittie of London by Cornelius Dankerts, c 1633

from 'London in Maps'



Map of London, originally started by Wenceslaus Hollar (1607-1677) but published after 1688







LONDON going out of Town _ or _ The March of Bricks & mortar! _

'London going out of Town' or 'The March of Bricks and Mortar!'

Designed, etched and Published by George Cruickshank, 1829 A map of London in around 1505. St Paul's Cathedral in the centre (Getty Images)



'Old Saint Paul's' in dyptich by John Gipkyn (active 1594-1629).

Society of Antiquities of London, Burlington House



London as an environmental paradise?

Domenico Mancini, 1483, Parisian scholar, described it as 'the royal city'....

Another writer said 'sovereign of cities....the flour of Cities all....seemeliest in sight....'

Vaclev Schasek, 1466 'elegant gardens, planted with various trees and flowers, which are not found in other countries'



John Stow,

'A Survey of London', 1598

'Thou stately stream that with the swelling tide

'Gainst London walls incessantly dost beat

Thou Thames, I say, where barge and boat do ride,

And snow-white swans do fish for needful meat...'

George Turberville, 1567

'Along the shore of silver streaming Thames

Whose rutty bank, the which his river hems

Was painted all with variable flowers.....'

Thomas Platter, 1592

'the banks of this river are wooded and gay with pleasant hamlets and homesteads' (further downstream)

Andreas Franciscius, 1497, Venetian

London is 'so pleasant and delightful that it would be hard to find one more convenient and attractive'.

But streets 'were so badly paved that they get wet at the slightest quantity of water.....on account of the rain....a vast amount of evil smelling mud formed, which does not disappear quickly but lasts a long time, in fact nearly the whole year round'.



Sir Thomas Gresham, aged 46 by unknown Netherlandish artist, circa 1565

Purchased in 1872 by the National Portrait Gallery

Engraved
copper
baseplate of
what would
become the
'Agas Map'
circa 1555-8.
Part of a series.



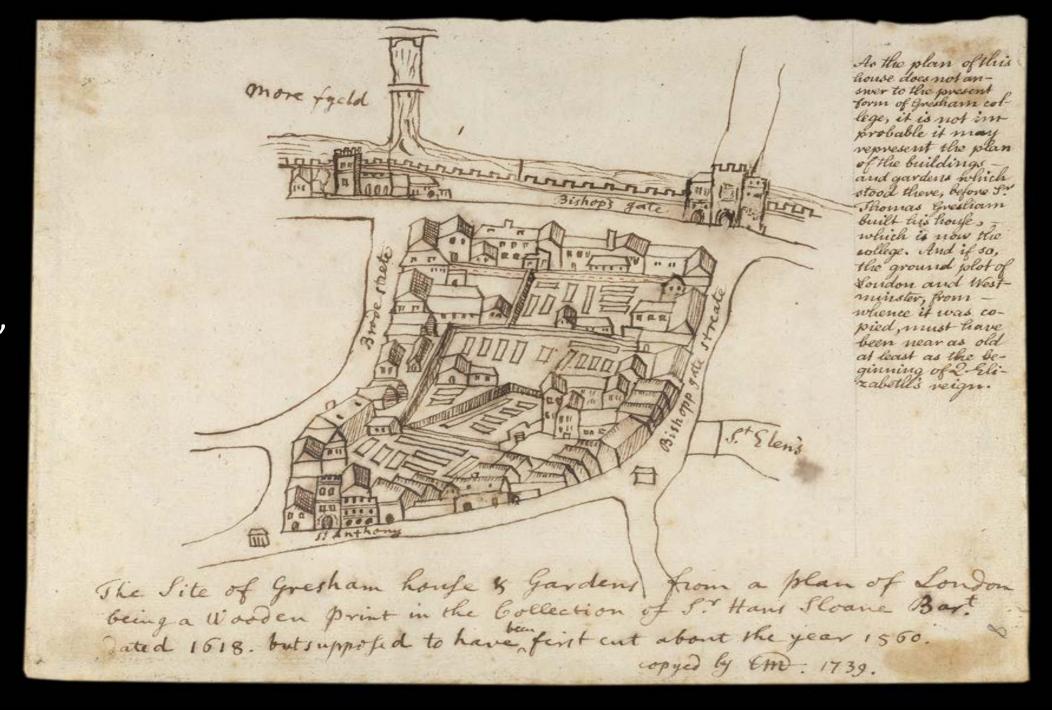


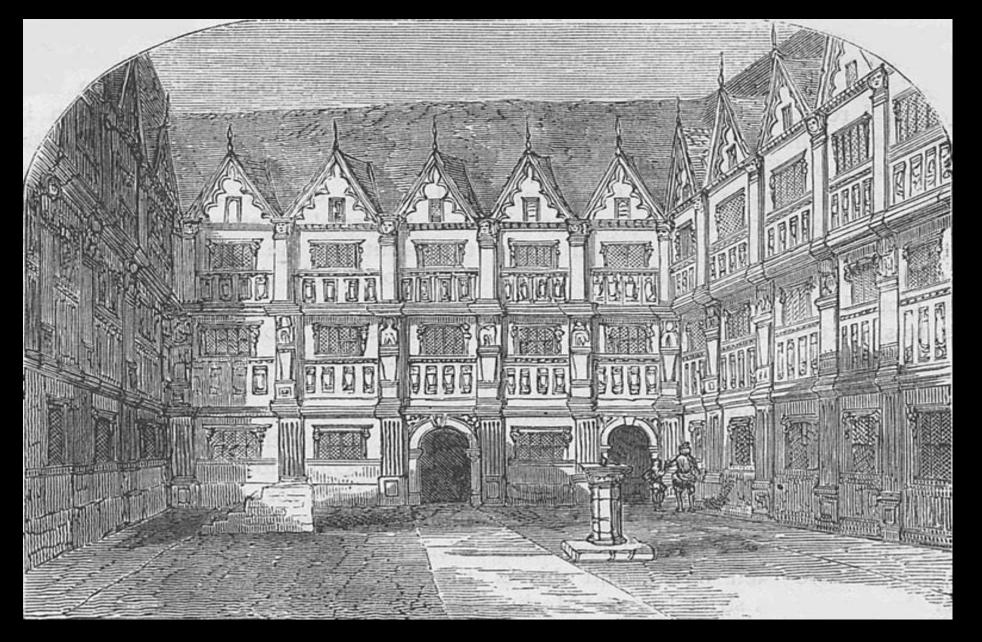
Reproduction of the 'Agas' or 'Woodcut Map of London', formally titled *Civitas Londinum* (c. 1561), and wrongly attributed to Ralph Agas.



Thomas walks north from Bishopsgate to Moorfield

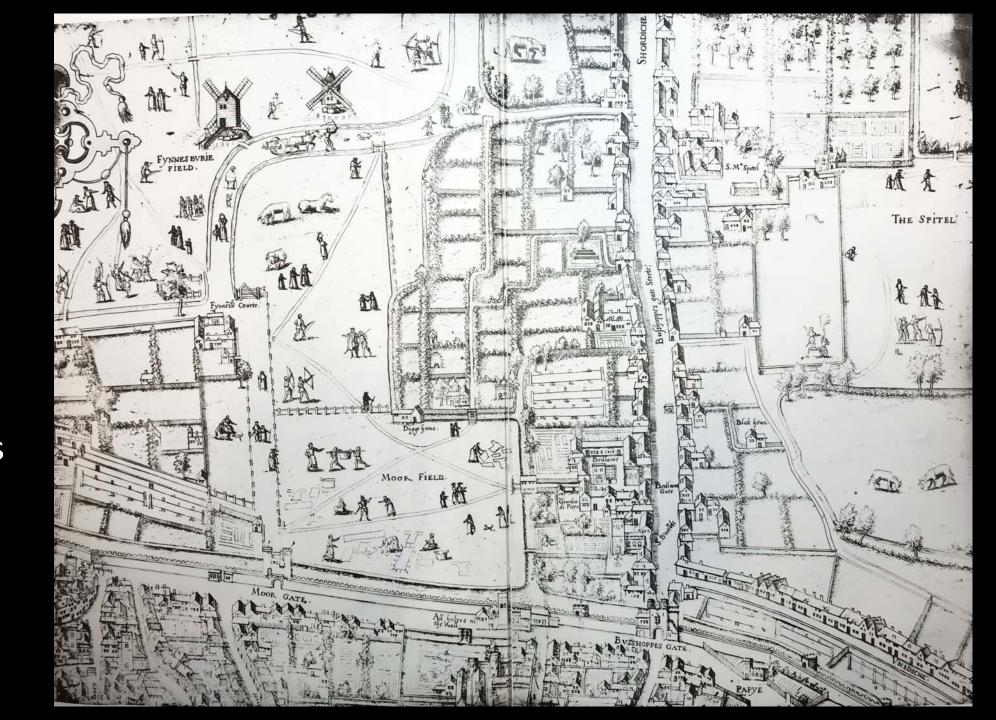
Copy of a woodcut plan of the site of Thomas' house in Bishopsgate, prior to building what was to become Gresham College





Sir Thomas and Lady Ann Gresham's townhouse in Bishopsgate Street, London. Built in the 1560s, but not finished until 1566

The 'Agas Map' of c. 1561 showing Bishopsgate, the Wall, Moor Gate and Moorfield, Spitelfield and Fynnesburie Field's windmills



The 'Agas
Map' of c. 1561
showing hills
North of the
city.

Formal and informal gardens, hedges, fields, deciduous trees



Native trees and very early introductions, courtesy Hilary Miller, 2018

Oak Quercus robur

Beech Fagus sylvatica

Ash Fraxinus excelsion

Hornbeam Carpinus betulus

Common lime Tilia x europaea / T.

vulgaris

Small leaved lime Tilia cordata

English elm *Ulmus procera*

Wych elm Ulmus glabra

Field maple Acer campestre

Birch Betula pubescens / B.

verrucosa

Hawthorn Crataegus monogyna

Willow Salix alba / S. fragilis

White poplar Populus alba

Black poplar Populus nigra

Holly *Ilex* aquifolium

Scots pine Pinus sylvestris

Yew Taxus baccata

Very widespread and frequent. Commonly pollarded. Major timber tree

Native to S England. Extensive Chilterns trade to supply London's firewood.

Frequent – in some areas branches and leaves were cut for winter animal feed

Native to S E England, notably Epping (pollarded), Hatfield & Hainault Forests.

Possibly native or a very early introduction.

Native – usually a woodland tree.

Possibly a very early introduction. Very tall and formerly abundant

Native. More rounded silhouette than the English elm.

Small tree in woodlands and hedges.

Common

Small tree / shrub, common in hedges but also as small individual trees.

Widespread and form large trees, usually in wet places.

Early introduction.

Native.

Evergreen, often an understorey in woodland

Scotland (further south in the post-glacial period). Planted elsewhere

Native conifer. Not obvious on any of the early maps of London

The 'Agas Map' of c. 1561 showing densely packed houses in the main area within the city walls, and villas beyond in St Giles, and Aldersgate Street





Thomas walks from Bishopsgate to London Bridge

The 'Agas Map' of c. 1561 showing formal and informal gardens, fields, deciduous trees



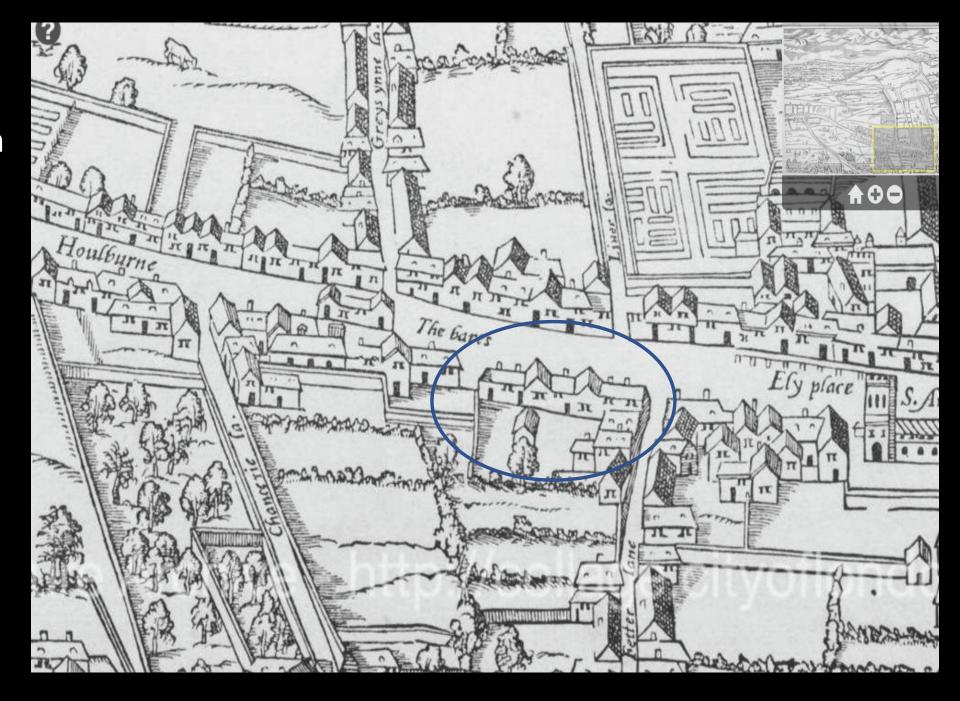
Eastcheape Market in about 1598. (Re)drawn by Hugh Alley

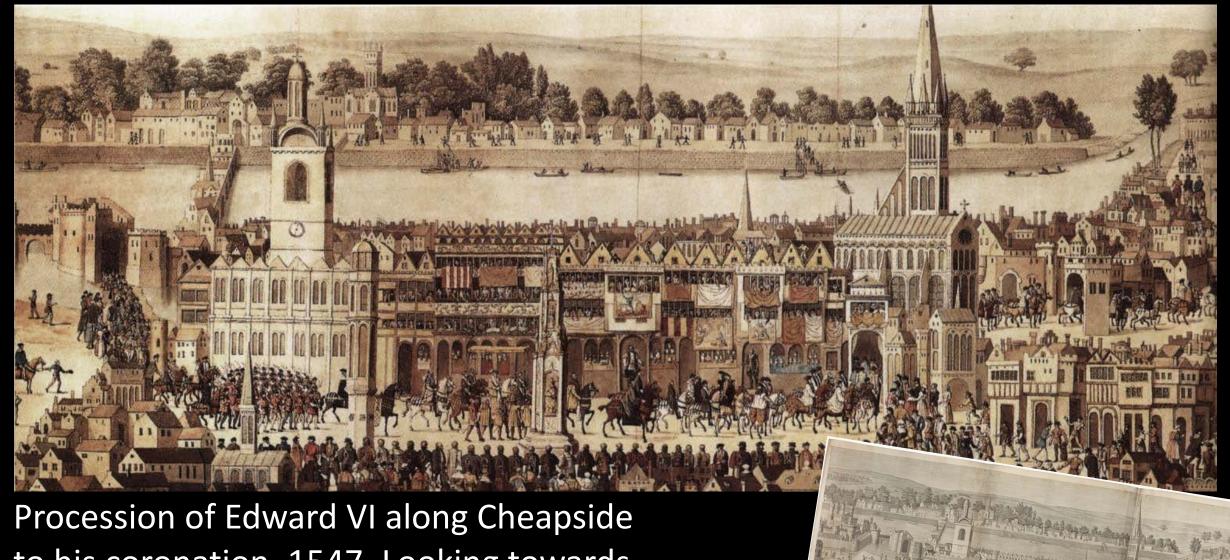


ESCHEAPE MARKET
from a very old Drawing. Vide D. Combe.

The 'Agas Map' of c. 1561 showing Holborn and Clerkenwell.

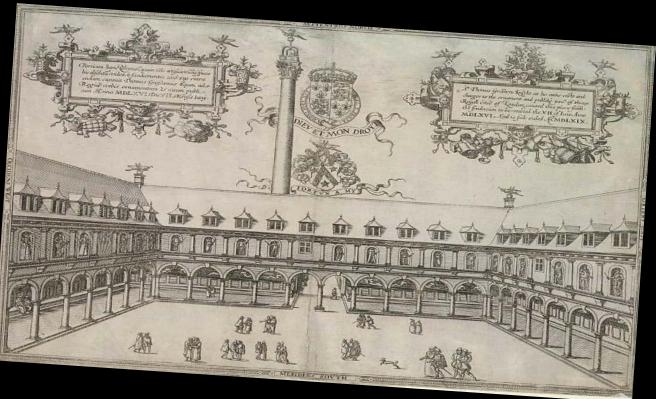
Formal and informal gardens, fields, hedges, deciduous trees, and the site of Barnard's Inn, current home of **Grrsham College**





Procession of Edward VI along Cheapside to his coronation, 1547. Looking towards Southwark

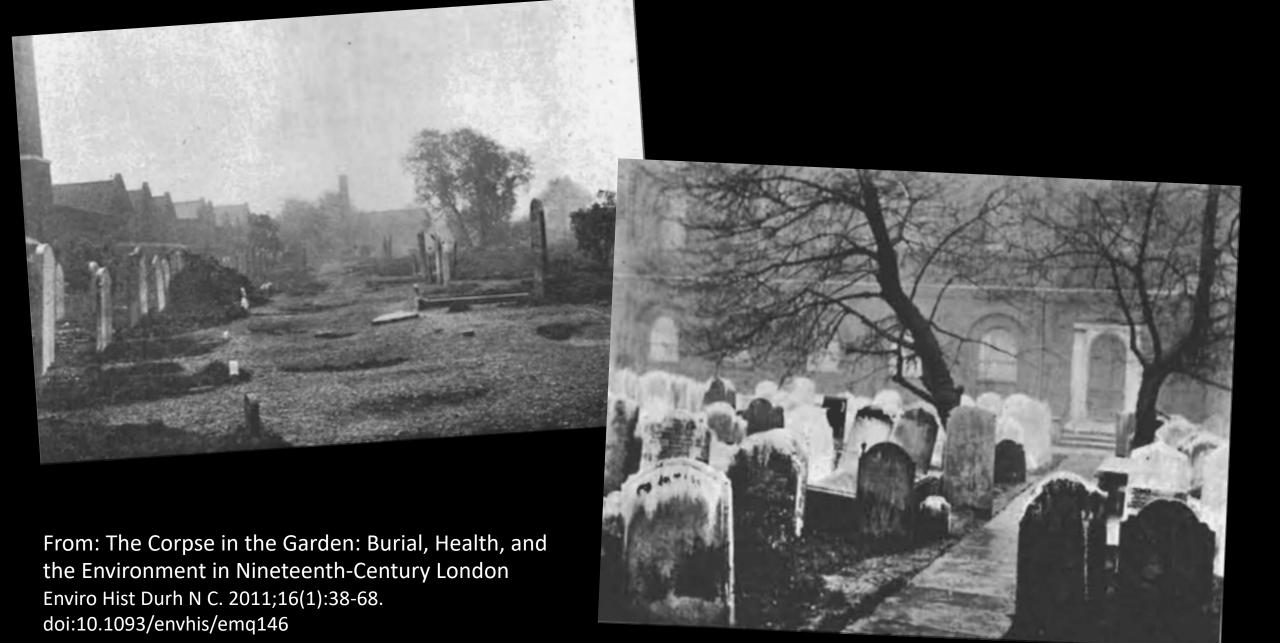




The Royal Exchange, London.

Not completed until 1571, opposite the
Bank of England, near the junction of
Cornhill and Threadneedle Street.





Iganga, Uganda in 2005

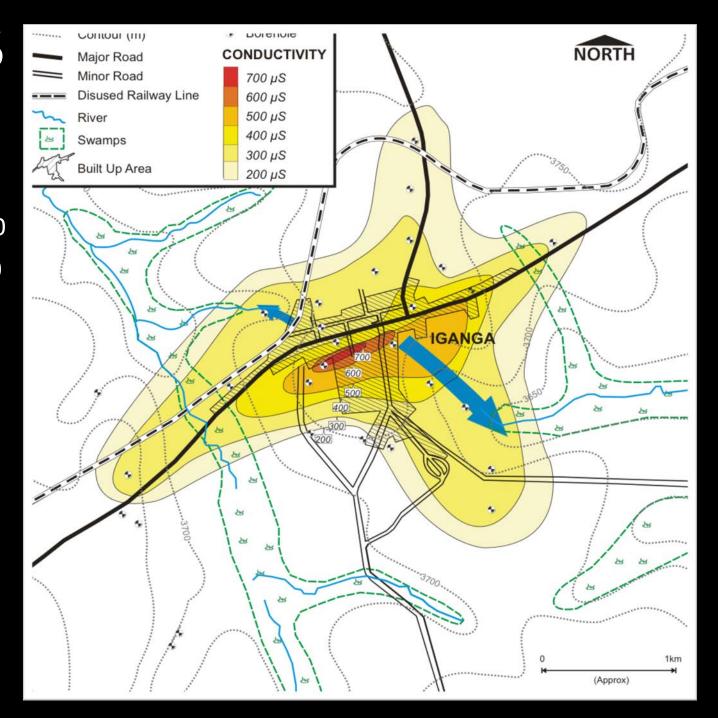
Groundwater contamination

Populations

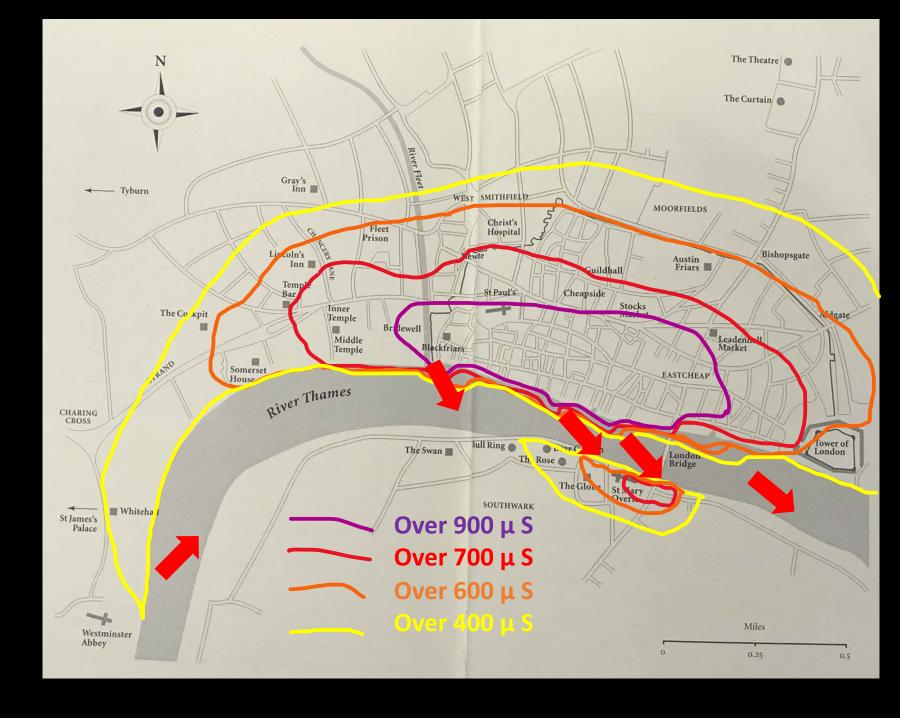
London, England: 1500 50,000; 1600 200,000

Iganga, Uganda: 2002 39,000; 2011 52,800





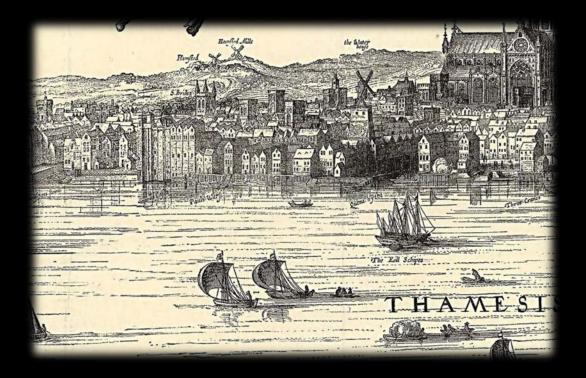
Estimated impact of waste water practices on groundwater conductivity, Mid 1500s

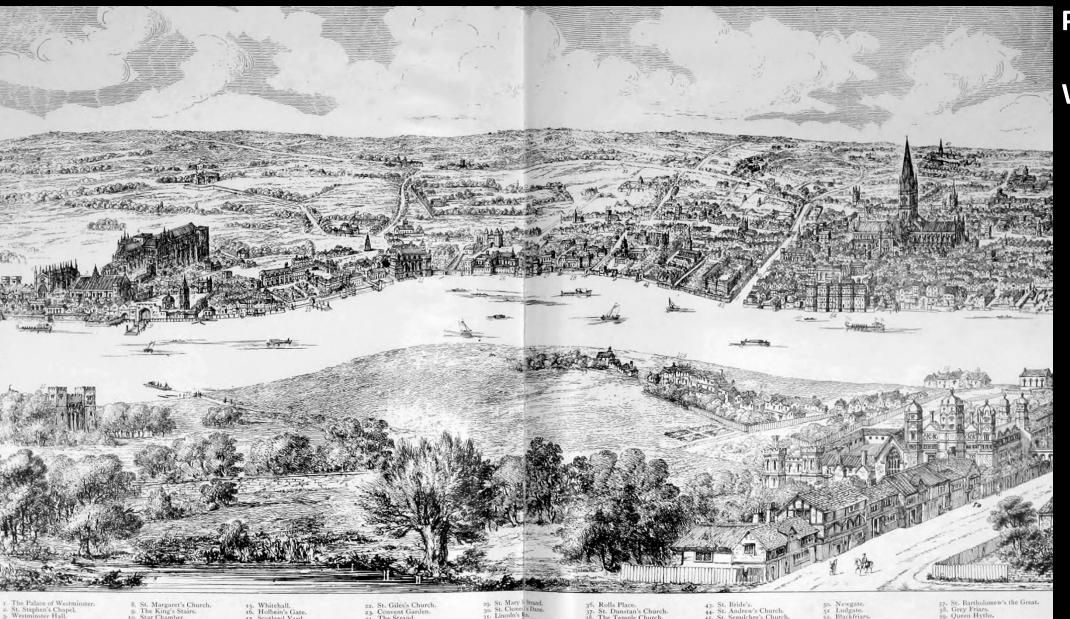






Thomas travels from London Bridge to St James and Westminster





Panorama of London, Westminster and Southwark, by Anthony van den Wyngaerde, 1543 (part only).

> **Sutherland** Collection, **Bodleian** Library

Panorama of London, Westminster, and Southwark, by Anthony van den Wyngaerde, 1543 (part only, with St Paul's)



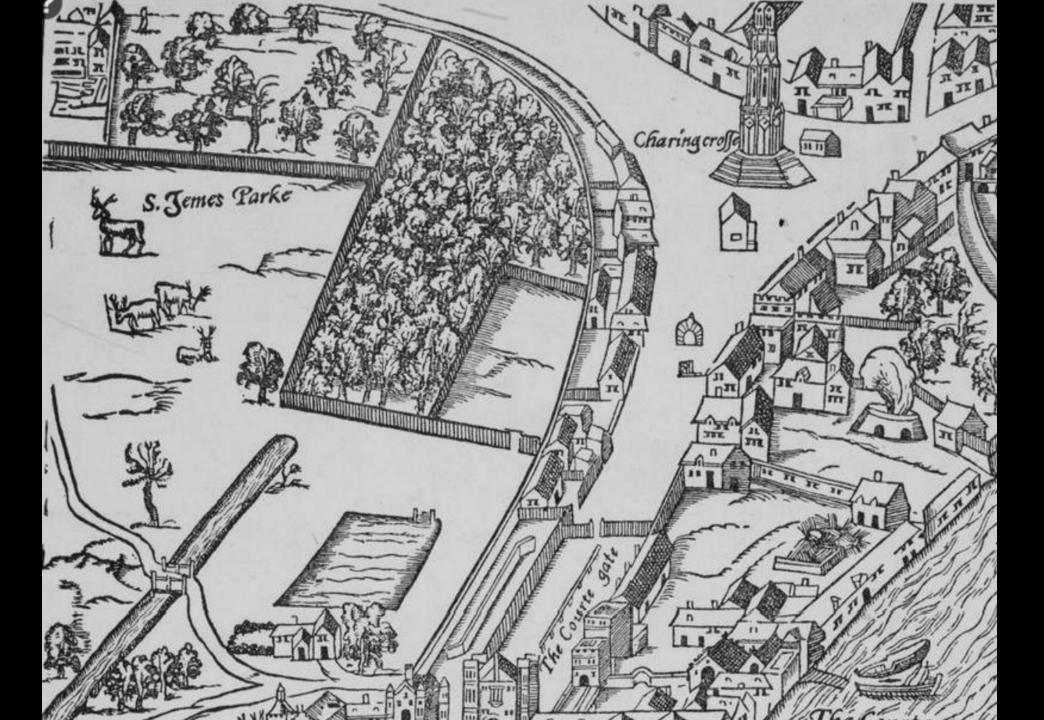
London as in 1574, by Georg Braun and Frans Hogenberg



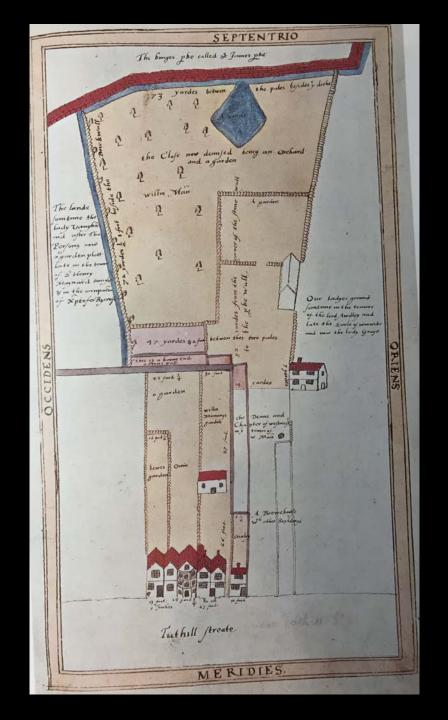


The 'Agas Map' of c. 1561 showing Westminster Hall, and Lambeth Palace, St. James' Park (with deer), orchards and Charing Cross





Ralph Tresswell, c 1612. Estate in Tothill Street, Westminster. From London in Maps



London, by John Norden, 1593

British Library:

http://www.bl.uk/onlinegall ery/onlineex/crace/a/00700 000000001u00033000.htm l, Public Domain Norden also created a panorama, viewed from Southwark, in about 1600





In this painting from 1677, you can see how thick the ice would have been on the Thames.



View of London from Southwark, c. 1630; based on Claes van Visscher's 'Panorama of London' (1616)

Staghounds were a recognized institution in the fifteenth century, and in later times meets were held in Lincoln's Inn Fields, St. James's, and Mayfair. They were gradually driven from Middlesex by the extension of London. In addition to the Lord Mayor's hounds, a pack of staghounds was formed in 1824 by the Hon. George Grantley Berkeley whose hounds hunted twice a week in the Harrow Weald.

On one occasion the stag entered the kitchen of a house, the wrathful owner of which said in reply to Grantley Berkeley's apologies:

Your stag, sir, not content with walking through every office has been here, sir, here in my drawing room, sir, whence he proceeded upstairs to the nursery, and damn me, sir, he's now in Mrs. --'s boudoir.

John
Graunt
born
c 1620.
Book
publishe
d 1662



Pieter Bruegel the Elder's painting 'Netherlandish Proverbs' c. 1559

Staatliche Museen zu Berlin



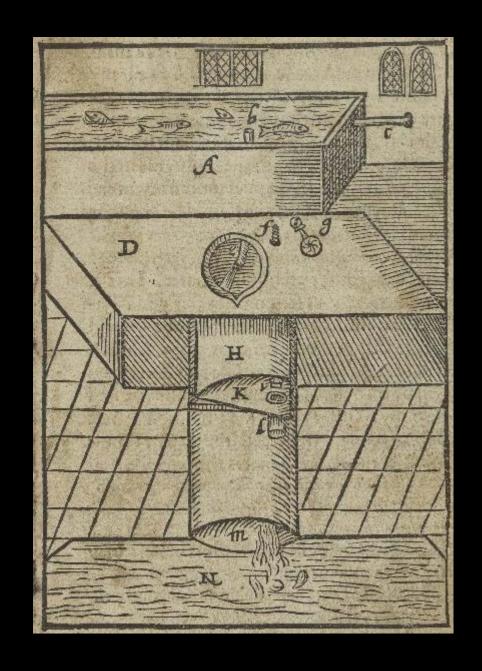


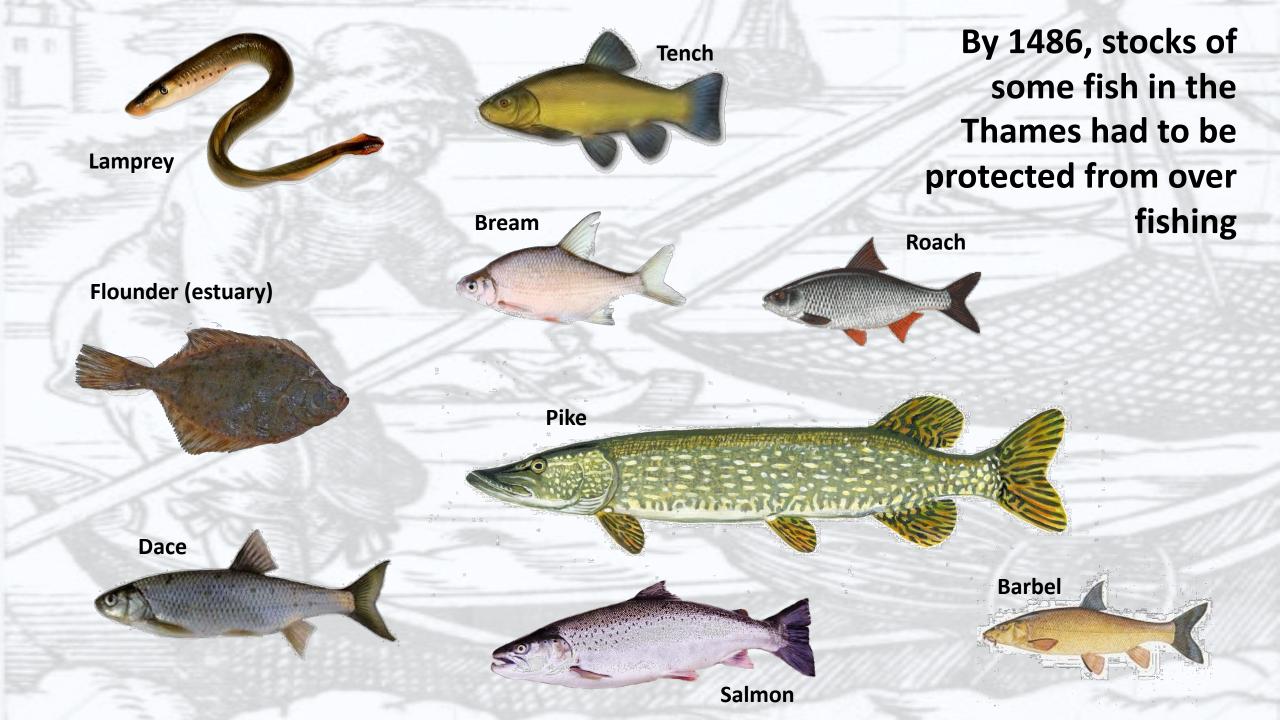
The Proverb here is 'They both c**p through the same hole'



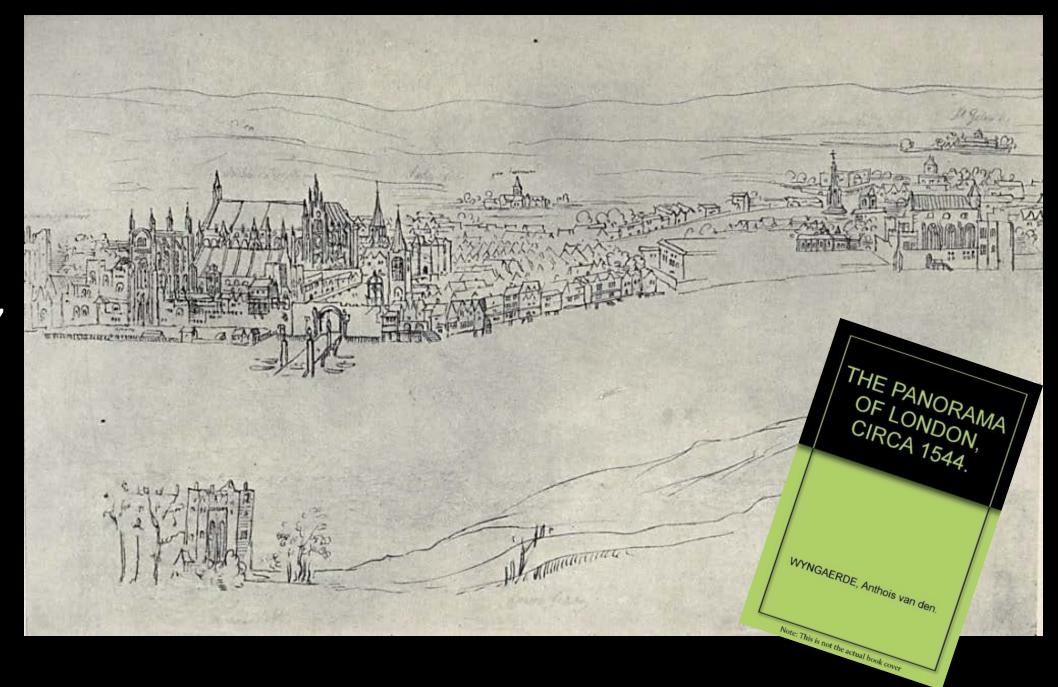
Diagram of a flushable toilet from Sir John Harington's *Metamorphosis Upon Ajax* (1596), sig. L5r. Image courtesy of LUNA at the Folger Shakespeare library.

http://mapoflondon.uvic.ca/SE WA1.htm?name=MOOR11



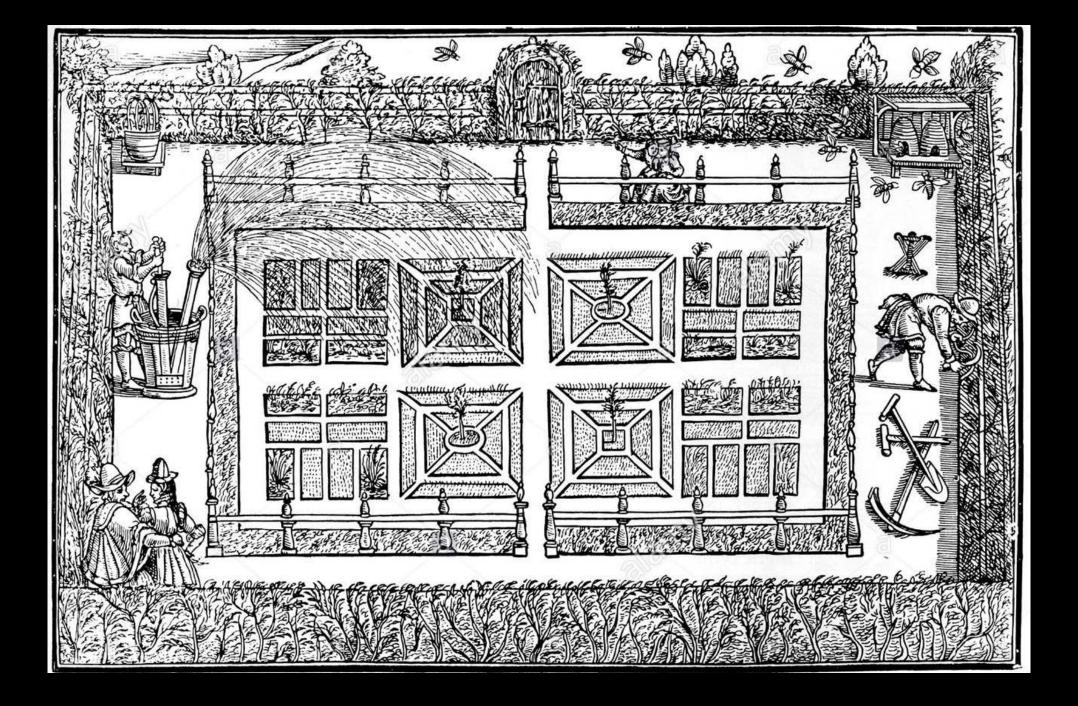


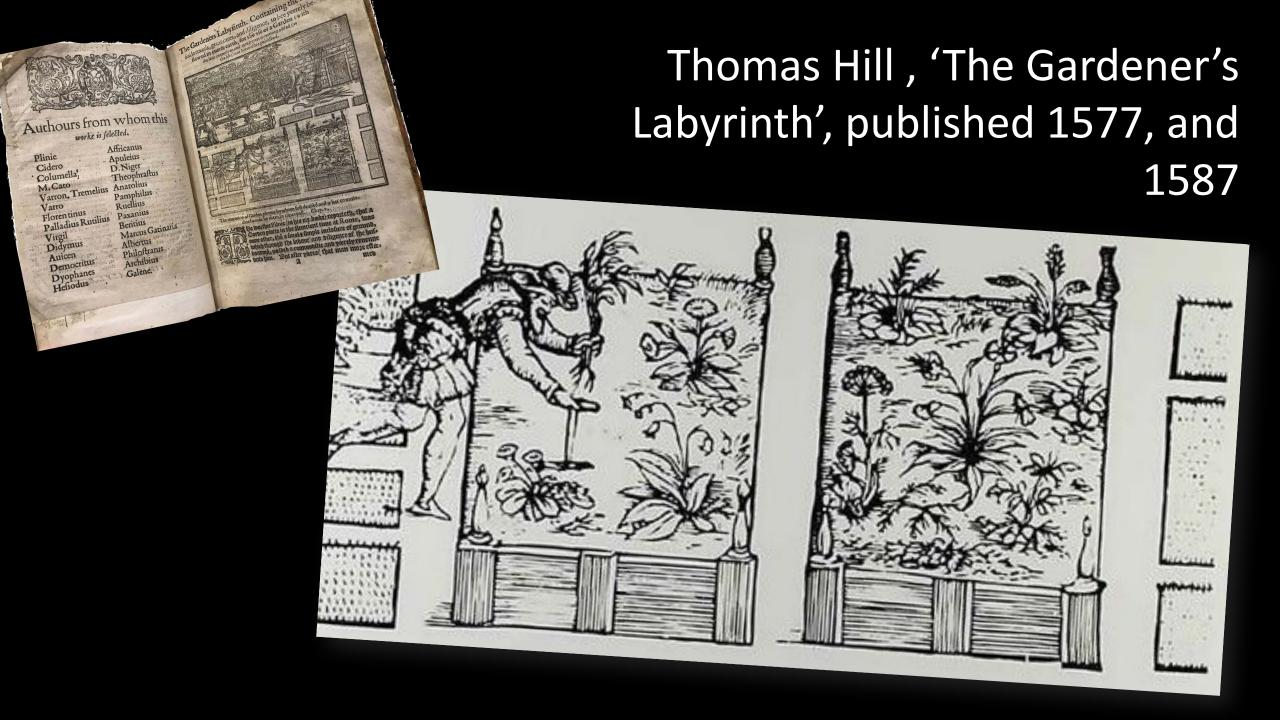
Sketch by Anthony van den Wyngaerde, c. 1544. Palace at Westminster, Charing Cross, Lambeth Palace in the foreground. Gutenberg source





Thomas travels from Westminster to Southwark





Herbs commonly grown or gathered

Rue

Sage Coriander

Basil Rosemary

Sweet Bay Thyme

Parsley Chives

Hyssop Marjoram

Mints

Savory Caraway

Fennel Lovage

Flowers commonly grown

Violet

Columbine

Lily

Rose

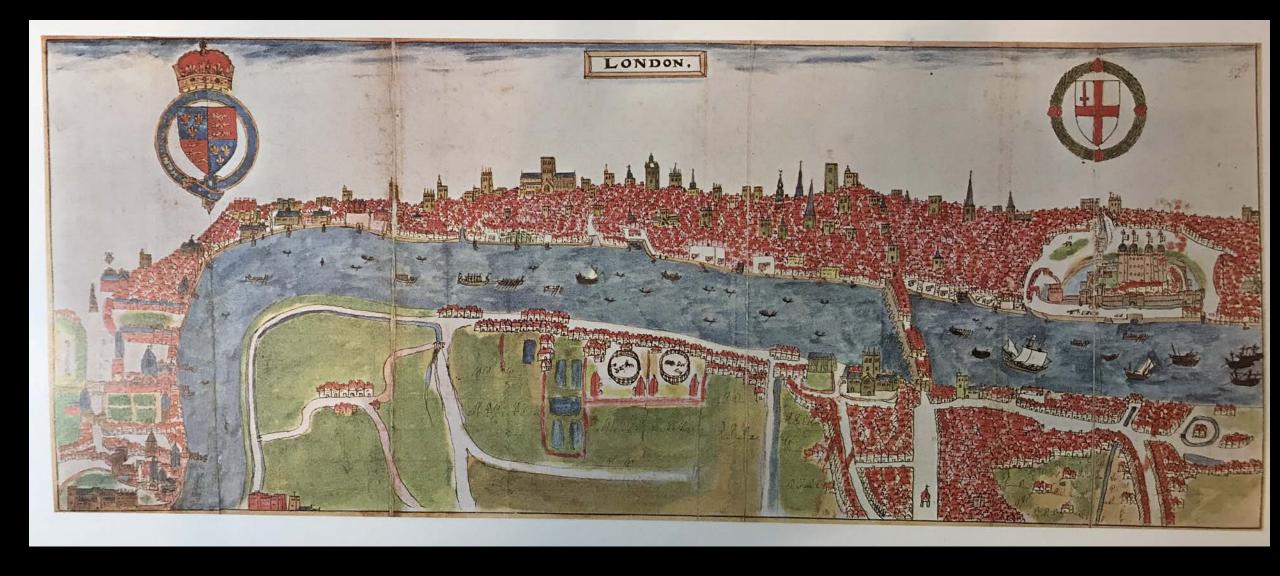
Pinks

Lavender.....









William Smith, 1588. Topographical artist. Painted during Shakespeare's time in London

View of London from Southwark, c. 1630, based on Claes van Visscher's 'Panorama of London' (1616)

Bear gardens

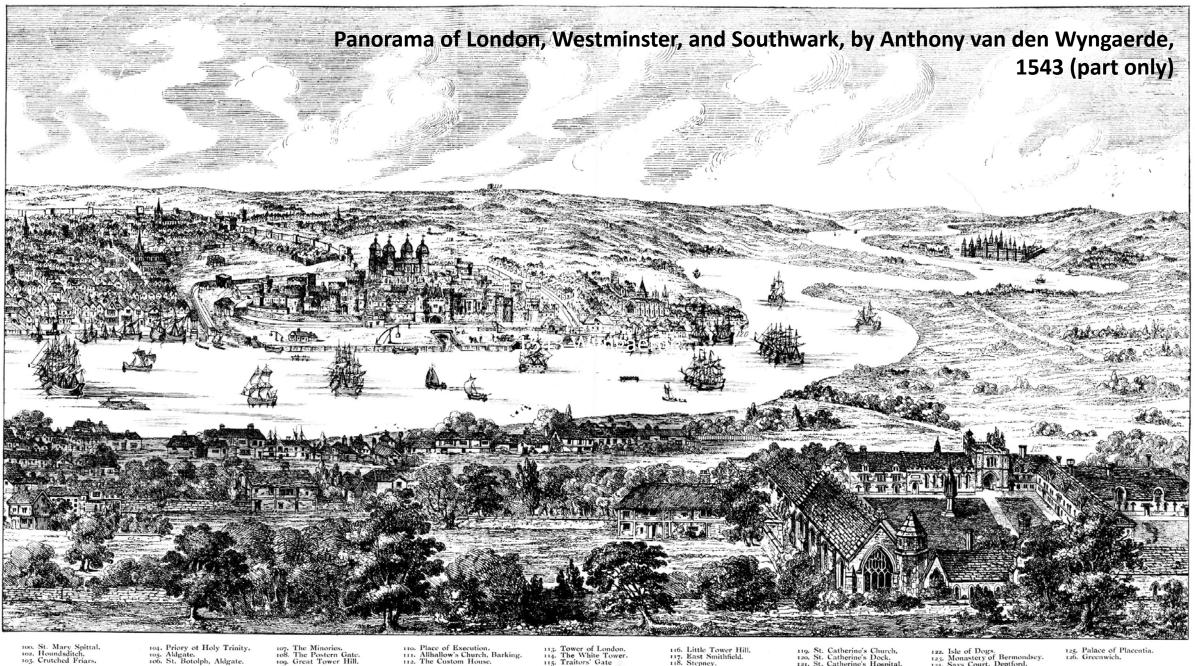


'Agas Map' of c. 1561, showing London Bridge, part of the City of London and the Tower



'A True and **Exact Draught** of the Tower Liberties', surveyed in 1597 by Gulielmus Haward and J. Gascoyne





^{113.} Tower of London. 114. The White Tower. 115. Traitors' Gate

^{116.} Little Tower Hill. 117. East Smithfield. 118. Stepney.

^{122.} Isle of Dogs. 123. Monastery of Bermondsey. 124. Says Court, Deptford.



Thomas ends his day with a feast at Bermondsey

'A Marriage
Feast at
Bermondsey'
Attributed to
Marcus
Gheeraets
the Elder, c.
1569

https://commons .wikimedia.org/w iki/File:Marcus_G heeraerts_the_El der_-_Festival_at_Ber mondsey.png





