Flash flood history East Anglia

Hydrometric	Rivers	Tributaries	Towns and Cities
area			
29	Ancholme	Rase	Brigg, Market Raisen, Grimsby
	Lud	Wathe	Louth
	Great Eau		Mablethorpe
30	Witham	Bain, Slea,	Grantham, Lincoln, Sleaford, Boston
31	Welland	Jordan, Langton Beck, Chater, Glen, Gwash	Mrkt Harborough, Stamford, Spalding
32	Nene	Brampt, Ise, Harpers, Willow, Alconbury	Daventry, Northampton, Wellingborough, Oundle, Peterborough,
			Wisbech
33	Gt Ouse	Bedford Ouse, Tove, Ouzel. Kym,	Buckingham, Newport Pagnell, Bedford, St Neots, Huntingdon, Ely
	Cam	Rhee, Granta, Snail, Lark	Cambridge
	Little Ouse	Sapiston, Thet, wittle, Stanford, Wissey	Bury St Edmonds, Thetford, Brandon, Stoke Ferry
34	Stiffkey		
	Bure	Ant	Yarmouth
	Yare	Wensum, Tud, Tas	Fakenham, Norwich, Yarmouth
	Waveney	Dove	Diss, Beccles
35	Blyth		
	Alde,	Ore	Aldeburgh
	Deben		
	Gipping		Ipswich
36	Stour	Glem, Box, Brett	
37	Colne	Bourne, Roman	Colchester
	Blackwater	Pant, Brain, Chelmer, Can, Wid, Ter	Chelmsford
	Crouch		Burnham

Date and	Raintall	Description
sources		
25 Jun 1201		'A violent tempest of thunder and lightning and hail arose with deluging rain by which men and animals and
Doe (2016)		crops were destroyed'. 'Also so great an inundation was projected forth from the clouds, notably in divers
(Ralph of		neighbouring provinces, that bridges were broken down, crops and hay carried away, some even submerged
Coggeshall)		and several people were afraid that in this outpouring of waters the deluge of God was seen again'.
Jul 1256		<bedford>: Here as in other places a terrible thunderstorm tore mill wheels from their axles and transported by</bedford>

Matthew Paris

Aug 1280 Doe (2016)(Luard 1859)

17 Jun 1573

Stow Annals
Jones et al

1984

12 Aug 1582

Lamb (1964)

25 Aug 1595

Winthrop's

Diary Jones et

al 1984

Pepys

May 1663

26 Jul 1666

Lamb 1964

1692 Date

uncertain

Goldsmith's

History of the

Earth (Hull

Packet 20 Jul

1883)

the force of the waters great distances and and dashed against neighbouring dwellings. Wind sails were torn to pieces. The piles of bridges, stacks of hay, huts of fishermen with their nets and poles and even babies in cradles were carried away. A block of six houses was lifted and carried away, the inhabitants only just managing to evacuate them in time.

<Norwich?>: There was such an inundation of rain and such violent floods followed that men and women old and young and hers in the fields were drowned, mills and bridges, horses and trees were submerged and hay in most places was carried away'.

<Towcester>, <Northants>: A great tempest of rain and hail caused floods

Severe thunderstorm was accompanied by very big hailstones in <Norfolk>

<Boxford> <Suffolk>: A great rain fell and caused a flood at Boxford.

<Northampton>: A thunderstorm caused extraordinary floods in a few hours, bearing away bridges and drowning horses, men and cattle. Two men passing over a bridge on horseback, the arches before them and behind them were borne away and that left which they were upon.

Hail 'as big as walnuts' fell in London and on 27th on the <Suffolk> coast.

<Hertfordshire>: Hailstones measured 14 inches round and as big as a bowling green ball. Every plantation fell before it. It tore up the ground and split great oaks. Inhabitants found precarious shelter even in their houses. Tiles and windows were broken. Pigeons, rooks and smaller birds were brought down. One man was killed another bruised all over. All this was within a compass of one mile.

10 and 15
May 1697
Webb et al
2001 (re
Royal Soc
Transaction
letters),
Webb and
Elsom, 2016
18 Aug 1741
Gentlemans
Mag
15 Jul 1743
Epworth Bells
17 Aug 1889
15 May 1749
Gentlemans
Mag, Derby
Mercury 17
Oct 1877
(Chronology)
16 Jul 1750
Scots mag 6
Jul
10 June 1755
Derby
Mercury 13

June

A thunderstorm with heavy showers occurred from 9 am to 2 pm, then the great storm approached from the southwest

This seems to be the same event as Goldsmith dates to 1692. There was at least one fatality at <Offley> <Hertfordshire> and 'great oak trees' were split and ground torn up on 15th in a Torro H8 hailstorm. On 10th tiled and thatched roofs were damaged and west facing glass was destroyed and several people suffered serious injuries. At Offley haisltones were measured at 343 mm circumference with anecdotal accounts up to 445 mm (corresponding to diameters of 110 to 140 mm). A young shepherd was killed by the hail and other people were severely bruised. At Hitchin the hailstones were around 60 cm diameter and reached a depth of 5 feet. Severe hail damage also occurred at <Ickleford> and <Potton> [Should this be Pirton next to Ickleford?]

No flooding was noted by Webb and Elsom.

<Lincs> (Notts and SE W Riding): In a violent thunderstorm, hailstones as large as musket balls/pigeon's eggs and broken icicles tore and cut up standing corn and killed birds and hares. The hail lay in heaps half a yard deep.

<Enfield>: A storm was accompanied by hailstones the size of nutmegs which broke the windows and peat down the corn for several miles.

At <Brabram> (<Brabraham>?) 6 miles from <Cambridge> (on16th) the road in less than ½ hour after the storm started was up to the horse's belly. Great damage was caused by the floods.

<Epping> <Essex>: Thunderstorm with hail and pieces of ice an inch and a half square. (Thunderstorms were widely reported around the country but with little reference to flooding).

At <Newmarket>, it was the most violent storm of thunder lightning and rain in the memory of man. The water was six feet deep in the street and brought large pieces of timber. It overflowed the cellars on the north side of the street so as to force up boards of many of the first floors and filled several shops and parlours two feet deep. Market stalls were lashed to signposts to stop them from being carried off by the flood. The inundation was thought to proceed from a cloudburst between <Cheverley> and <Newmarket> and the torrent was so sudden that the inhabitants had no time to save themselves. It came with such rapidity that it beat down two

people in crossing the street that with great difficulty saved their lives. The force was so great that it displaced gravestones in the churchyard and removed pews from the church. The water was four feet deep in several houses including the Star Inn.

<Littleport>, <lsle of Ely>: In a thunderstorm the hailstones were 3 inches about and the ground covered on the level more than 6 inches deep.

<Bourn> (8 m from <Cambridge>): Besides regular hail there were pieces of ice some being 8 inches in circumference and many were 5 ½ inches. All the windows with a west aspect were broken; several dozen pigeons were killed; all the fruit and flowers were destroyed. The storm was only 3 miles wide. (Floods were reported at <Harrow>).

<Benefield>, <Northants>: Pieces of ice fell weighing one pound and incredible damage was done to corn and windows.

<Stamford>, <Lincs>: There was a most violent thunderstorm ever known in that country.

<Kettering>, <Northants>: In a thunderstorm with heavy rain a man was killed by lightning and 3 others were much injured.

<Halesworth>, <Suffolk>: Thunderstorm with heavy rain resulting in much hay being washed away. At <Bramfield> 3 miles away the water rose a full 9 feet perpendicular. There was also lightning damage. <Hitchin>: Very large hailstones fell which measured 7 or 8 inches about. The extremity of the storm occurred at <Offley> where a young man was killed and an eye struck out of his head; his body was all over black with bruises. Another person nearby escaped with his life but much bruised. In one large house 7000 panes of glass were broken. The hail fell in such large quantities that it tore up the ground, split large oak and other trees and destroyed vast areas of crops. On a hill it carried away the soil down to the bare chalk. A reporter was in his

28 Jun 1760

Derby

Mercury 10

Apr 1878

(Chronology)

25 Jun 1761

Derby

Mercury 24

Apr 1878

(Chronology)

5 Aug 1761

Derby

Mercury 24

Apr 1768

(Chronology)

16 Oct 1761

Bath

Chronicle 22

Oct

17 Jul 1766

Oxford Jour

26 July

4 May 1767 Herts Express 18 May 1867 garden when the storm commenced 'and before I could get out it took me to my knees and was through the house before I could get in which was in the space of a minute. It went through all like a sea carrying all the wooden things like boats, the greater part of the town being under this misfortune'. The size of the hailstones is almost incredible; they have been measured from one to thirteen and fourteen inches about, their figures various, some oval, some round, other pointed, some flat.

<Norwich>: A thunderstorm with hail killed a horse at Thorpe, injured a woman and child and flooded the low ground and marshes between <Norwich> and <Yarmouth>. A bridge at <Harford>, two miles from the city was carried away.

Probably not a thunderstorm or flash flood

The Fens were underwater over an area 20 miles by 6 miles, to a depth of 3 to 9 feet. Inhabitants were confined to their upper rooms for 5 to 7 days.

<Norwich>: Thunderstorm with heavy rain in which three houses were badly damaged by lightning. There was no reference to flooding.

<Yarmouth>: A storm of severe thunder and lightning led to the unroofing of houses and water in them was four feet deep on the ground floor. Several ships in the harbour had their masts shivered. Number of sheep and horses were drowned.

There were widespread thunderstorms in England most notably in the <Peterborough> area. 'At <Stilton> the rain was so violent that the water rose to the height of four feet perpendicular in some of the inn yards and great quantities of hay were carried away from the meadows' At Leicester heavy rain was reported and ball lightning. At <Blaby>, hail broke all the windows facing southwest in Freer's house. Indeed scarcely a house escaped. At <Fenny Stanton> 15 houses were burnt down by lightning. At <Wansford> 3 children were struck dead and many more injured. At <Abbot Rippon> a girl was struck dead in her house.

<Fenstanton>: A violent thunderstorm occurred and a barn was set alight which spread to six other building which were destroyed. Four pigs perished Many animals were reported killed in the Nottingham area. A man and woman were struck dead by lightning at <Witney> in the <Oxford> area. 'Universal perturbations of nature' were reported throughout Europe.

Mag.

Jun

3 Jun 1772

3 Jun 1767

Caledonian

Mercury 13

27 Nov 1770

Gentleman's

Ipswich

Journal 6 Jun

16 Jul 1782

Cumberland

Pacquet 30

Jul

25 Jun 1783

Derby

Mercury 3 Jul
Cumberland

Pacquet 15

July

Manchester

Mercury 15

Jul

		Ripton> in <huntingdonshire>, a young man at <needingworth>, two were killed in the lake district at Windermere and Hawkshead.</needingworth></huntingdonshire>
31 Aug 1783 Reading		<yarmouth>: A thunderstorm with heavy rain caused much lightning damage to houses, some being unroofed. Many of the ground floors are under much water and inhabitants were obliged to get in and out by boat from</yarmouth>
Mercury 8		upstairs windows.
Sep Kentish		<ely>: They have had such heavy rains that all the low grounds are covered with water and people are obliged</ely>
Gaz 13 Sep		to travel in boats. The waters from the rivers came down so fast that they had not time to get their cattle off the grounds and many were drowned.
9 Jul 1784 Chelmsford		<norwich>: A thunderstorm continued for nearly four hours and the rain overflowed several parts of the city. Lightning struck and damaged a country house at <bramerton> near the city. At N <burlingham> a house was</burlingham></bramerton></norwich>
Chron 16 Jul		destroyed.
Hants		<boston>, <lincs>: A thunderstorm was attended by very heavy rain. At <fryston> 3 oxen were struck dead by</fryston></lincs></boston>
Chronicle 19 Jul		lightning and a great number of trees were shivered to pieces in different parts of the county. (A thunderstorm was also reported at Doncaster).
3 Sep 1785 Ipswich Jour		<chelmsford>: Two dreadful thunderstorms were reported and many of the hailstones were near 2 inches broad. A barn at <writtle> was destroyed with its contents by lightning. <harwich>, <oakley>: Trees were destroyed by lightning.</oakley></harwich></writtle></chelmsford>
10 Sep 13 Apr 1792 Stamford Mercury 20 Apr	(Note severe thunderstorms at Bromsgrove)	<stamford>: The heaviest rain and hail ever known fell here and the thunder continued for upwards of an hour. Many of the hailstones were two and a half inches in circumference. The heavy part of this storm seems to have extended only a few miles from hence.</stamford>
Αþі		<newport pagnell="">: A man was swept with his horse and cart and drowned by the rapidity of the flood. <turvey>, <bedfordshire>: a man was drowned attempting to retrieve timber from a flooded river. <northampton>: The rains from Tuesday to Thursday (no mention here of thunder) have produced the largest flood that can be remembered here for more than 20 years; several houses near the river were filled with water.</northampton></bedfordshire></turvey></newport>
7 Aug 1793		Widespread thunderstorms noted including <harwich>, <ipswich> (also at Brighton, Hereford, Brecon,</ipswich></harwich>

Leicester) mostly referring to lightning strikes on buildings. Strong winds were associated.

Hampshire

Chronicle 19

Severe thunderstorms were reported at Leicester, Edinburgh, Alloa. Others were killed by lightning at <Abbots

Aug		
14 Aug 1795		<norwich>: A thunderstorm with an astonishing amount of rain forced its way into several cellars and kitchens.</norwich>
Norfolk		The Lamb in the Haymarket was flooded. All the meadows were laid under water. St Stephen's Pit which was
Chronicle 22		initially dry overflowed its banks in about 4 hours.
Aug		Damage was done at <holt> and <melton constable=""> by the lightning and at <swanton novers=""> a man was</swanton></melton></holt>
•		killed by lightning. A man at <saxthorpe> and a child at <grimestone> were also killed. Various barns were burn</grimestone></saxthorpe>
		down and horses and cattle killed. Damage was also reported at <diss> and Lynn</diss>
30 Jul 1797		<yarmouth>: A tempest of wind was accompanied by thunder and heavy rain and hail. The hailstones were the</yarmouth>
Saunders		size of a lark's egg and continued for a quarter of an hour. A vast quantity of glass is broken by the hailstones,
newsletter 9		the corn is laid and fruit beaten off trees.
Aug		
25 Sept 1797		<woburn>, <bedfordshire>: We had the greatest flood ever remembered. Thunder is not mentioned but the</bedfordshire></woburn>
Hampshire		rainfall continued for more than 12 hours. Several inhabitants in neighbouring villages were flooded and
Chronicle 30		retreated upstairs or escaped through upstairs windows. Inn cellars were filled. The bridge at Newport Pagnell
Sep		was impassable.
13 Aug 1799		<bedale>, <suffolk>; A hailstorm broke 670 panes of glass at Crake Hall</suffolk></bedale>
Chester		
Courant 27		
Aug		Allows Allowfollo. They had the great severe throughout a great great great and they
10 Oct 1799		<lynn>, <norfolk>: They had the most severe thunderstorm ever remembered there</norfolk></lynn>
Aberdeen		
Press 14 Oct 4 May 1800	Temperature before the	<bourne>, <lincolnshire>: A thunderstorm was accompanied by hail which broke windows in many houses and</lincolnshire></bourne>
Hull	storm was 75 F but fell after	nearly all the windows in the church. Many of the hailstones were 3 inches in circumference and pieces of ice
Advertiser 10	the storm to 60F.	fell 7 inches in length.
May Derby	Same day as flood at Thixendale in the Yorks Wolds	Stamford>: In one house 180 panes of glass were broken by hailstones as large as nutmegs; one measure 4
Mercury 15		inches in circumference. The storm extended 5 miles in width and caused ravages at Dean, at Laxton where
May		many panes were broken, a cow killed and trees were torn up, at <fineshade>, <kirby>, <bulwick>,</bulwick></kirby></fineshade>
Stamford		Selatherwick, <harringworth, .<="" <wakerley,="" etc,="" sleaford=""> was also affected.</harringworth,>
Stannord		Shather wicks, Sharing worths, Swakeneys, etc, etc, Stearonds was also affected.

Mercury 16 May

19 Aug 1800 Caledonian Mercury 30 Aug Webb et al 2001 This followed a very severe drought and much water was absorbed.

27 Aug 1800 Stamford mercury 5 Sep

4 Sep 1800 Stamford mercury 12 Sep Hull Advertiser 13 Sep <Lincoln>: the thunderstorm with rain and hail lasted an hour and a quarter. In many parts of the city the pavements were forced up; several wagon loads of stones were brought down the hill into the street of the lower town. Considerable damage was done to a windmill.

<Kettering>, <Northants>: A very severe hail and thunderstorm struck the town. Some of the hailstones measured 4½ to 5 inches in circumference and weighed from ½ to ¾ ounce each. Similar damages were caused in neighbouring villages of <Pitchley>, <Broughton>, <Thorp>, <Rushton>, <Geddington>, <Weekley> and <Barton>.

<Bedfordshire>: The storm affected Broughton, <Cranfield>, <Lidington>, <Ampthill> and <Clophill>. Some of the hailstones measured 9, 10 and 11 inches in circumference. Standing corn is beat out. At <Crawley>, the windows on the SE are broken. Hail killed hares, partridges and pheasants. A young pig had its back broke. Lead on roof is also much damaged. Holes were made in the ground two to 2 ½ inches deep. There was some flooding of cellars at <Woburn>. Webb reports damage to lead roofs.

<Woburn>: The thunderstorm tore away loose earth of an uncompleted road; cellars were filled with water and sand. Not a single hailstone fell at Woburn, only a mile from <Crawley>.

<Rutland>: A thunderstorm occurred from 11 to 2.30 without intermission at Burley near <Oakham> accompanied by hail and rain. 'Many parts of the Vale of Catmos resembled the River Thames'. Cattle and innumerable sheep were carried away and in the town of <Oakham> the water is a full yard deep. Women returning from the fields were obliged to wade up to their shoulders. At <Empingham> the water rose above the windows of two cottages on the right of the bridge. At <Casterton Magna> the flood was so high as to impede the passage of carriages for several hours; the vicarage was inundated nearly a yard high. At <Market Deeping> there were lightning injuries and damage to houses. Cattle were killed.

<Grimsby>: A thunderstorm there and at <Laceby> a man was killed by lightning.

<Market Raisin>: A two hour thunderstorm, the worst in living memory flooded the roads so that they become impassable to horses.

<Brigg>: The hailstones were 2, 3 and even 4 inches in circumference. Four miles from <Barton> on the Brigg road water ran down the middle of a large turnip field and carried away all the turnips over an area of 2 to 3 acres. Many hedges were washed down and much damage done to corn. In Ferriby Field many partridges and small birds were killed by hail. Many miles of country is under water in the neighbourhood of Brigg. Thunderstorms continued overnight in the north part of <Lincolnshire> and <Rutland>. In <Lincolnshire> the hailstones were up to 4 inches in circumference. At <Barton> streams of water carried away the greater part of a turnip field. Many hedges were washed down and much damage was done to corn. Two men were killed by

6 Sep 1805 Public Ledger 18 Nov

2 May 1807 Ipswich Journal 26 may 1849 14 Aug 1807

Saunder's

Newsletter 20

Aug

25 Aug 1809

Morning

Advertiser 30

aug

29 May 1812

Bath

Chronicle 4

Jun

9 Jun 1812

Oxford

University

and City

Herald -

Saturday 13

June 1812

lightning at <Weston> in Derbyshire.

<Ipswich>: the heaviest rainfall ever remembered fell for about an hour. In the parishes of <St Mary Elms>, St Peter, St Stoke, St Clement and the Keys the water was 2 and 3 feet deep and opposite the Cow and Gate 4 feet. The water poured down in torrents from the Barrack sinks that boats could have been used from St Helens to the Common Quay. Much soil was carried down and stopped all of the grates of the common sewers which in some part occasion the flooding in the lower part of town.

<lpswich> and <Eye>: (summary chronology from Philosophical trans): Very hot and an awful storm of hail and thunder. The hail was as large as bantam's eggs and did much damage to windows in both places.

<Norwich>: A thunderstorm with very heavy rain started before 2 o'clock and lasted two hours but started again at six o'clock and lasted until 8.00. The rain deluged many parts of the city and particularly St Stephen's where damage has occurred from water flowing into the cellars.

<Gissing>, near <Diss>, <Norfolk>: Hail descended for an hour so that it covered the buildings and the ground a foot deep. Rain then followed, flooding the cleared corn fields many inches deep. The storm was very localised, neighbouring farms were unaffected.

<Lexden>, <Colchester>: A severe thunderstorm resulted in many fires and the death of a horse and its rider.
A thunderstorm drifted eastward from <Bedford> through <Norfolk> to <Wisbech> where two horses were killed by lightning. The rain deluged the meadows for 3 or 4 days. Hail did much damage in the <Wisbech> area at <Gedney Hill> and <Walpole>.

<Essex>, <Clavering>: The village was deluged by the greatest flood ever witnessed. The flood carried everything before it, pigs, fowls, ducks etc. Every house not on an elevated situation was flooded to a depth of 3 to 4 feet. A timber merchant lost his goods downstream for some miles. The bridge erected just four years previously was destroyed.

16 Jul 1816

Suffolk

Chronicle 27

Jul

30 Jul 1816

Suffolk

Chronicle 3

Aug

26 Apr 1818

Stamford

Mercury 1

May

Hampshire

Chronicle 11

May

19 Aug 1820

Public Ledger

20 Jul 1821

Globe 31 Jul

31 Aug 1821

Oxford Jour

15 Sep

6 May 1822

Framlington

Weekly News

5 Jul 1879

(from an old

diary)

<Peterborough>: A thunderstorm between one and two in the afternoon caused flooding of Bridge Street in less than 10 minutes, more than ankle deep in water and hail. Cellars and lower apartments were flooded. <Spilsby>: A woman was killed by lightning.

<Woodbridge>: A thunderstorm in which houses in several parts of the town were flooded. Such was the quantity of hail that boys pelted each other with it all afternoon!

During a 3 hour thunderstorm, said to be the worst since July 1809, many sheep were drowned in ditches and 40 sheep were drowned in the neighbourhood of <Spilsby> in the <Boston> area. A house was destroyed by lightning at <Corby> in <Northamptonshire>.

<Gainsborough>: Low grounds were covered about 2 yards deep and the road from <Gainsborough> to Retford, although elevated, was impassable by coach and boats were used.

<Dennington> in <Suffolk> suffered a severe hailstorm with hailstones and globular pieces of ice from ¾ inch in diameter and lay 12 inches deep. The storm caused severe damage to grain and pea crops.

<Peterborough>: thunderstorms were widely reported in E Anglia. At <Orton> hailstones broke many hundreds of panes of glass. At <Uppingham> 11 sheep were killed by lightning. At <Ingoldmells> in the <Lincs> coast the hailstones were as large as filberts. No flooding was reported.

<Stamford>: An extraordinary tempest continued for an hour filling the cellars and ground floors of low lying houses and driving inhabitants to upper apartments especially in Scotgate (Protection Place). In all it was many feet deep.

<Pakenham> A deluging thunderstorm here and at <Stowlangtoft> where a waterspout broke banks, hedges and brick walls which were beaten down by the current.

23 Jun 1822 Stamford mercury 28 Jun PL reports thunder 16 May 1824 **Public Ledger** 19 May Warwick advertiser 10 Jul 26 Jun 1824 No thunder reported Warwick **Advertiser 10** Jul 14 Jul 1824 **Bury and Norwich Post** 21 Jul, Chelmsford **Chronicle 18** Jul 1924 (100 years ago) 3 Aug 1824 Manchester **Guardian 21**

Aug

<Gainsborough>: In a thunderstorm lasting about one hour a ships mast was struck and the vessel damaged. Many yards and buildings were completely flooded. The storm was equally severe at <Bole> and <Spittal>

<Chelmsford>: In the space of 6 weeks <Chelmsford> was hit by two extreme floods (See below). In this first the waters rose 7 feet 6 inches above their accustomed level in the <<River Cann>>. This was considered equal to any flood within the memory of man.

<Chelmsford>: The water in the <<River Cann>> rose 10 feet, with no parallel on record. Water poured through passages and doorways in houses in the west side of town and in <Moulsham> filled cellars several feet deep. The water was 3 feet deep down Springfield lane and Baddow lane. At Fryars the water was upwards of 6 feet deep. Brick walls and fences were carried away and gardens destroyed. At Writtle Lodge water entered the cellars.

<Newmarket>: Hailstones fell or rather complete lumps of ice, many as large as walnuts or even hen's eggs.
Windows and garden frames were broken. One stone was measured at five and a quarter inches in circumference. Rabbits and hares were killed by the hail. Damage was also great at <Harwich>. In some places the rivulets became torrents and in <Wickhambrook>, hay formed a dam and one house was flooded to a depth of 13 feet. Two horses were struck by lightning and one killed.

<Chelmsford>: A storm passed over the area from south to north. No flooding or damage was reported in Chelmsford but in neighbouring villages of <Harlow>,<Sawbridgeworth>, <Birchanger> and <Much Eisworth> hail fell which in some places was 5 inches in circumference with devastation to corn, windows and greenhouses. Some large houses had scarcely a pane remaining on the west front.

A thunderstorm with hail affected the east side of <Suffolk>. Hail of large size first affected St Edmund's Hill and several hundred panes of glass were broken at the Mount and pigeons, partridges and chickens were killed by the ice. The storm proceeded northeast to <Fornham> and <Timworth>. In some places the ice was 6 feet deep. Next morning on level ground it was 4 inches deep. The fall of ice was followed by a deluge of rain. The storm was localised over an area 4 miles by 1 mile. The villages of <Horrington>, <Barton>, <Timworth>, <Livermore>,

of water and the hailstones were drifted one to 2 feet in depth. A field of turnips was entirely washed away. 29 Jun 1826 A woman was killed by lightning at <Oakham> and several sheep and beasts at Gretton Woods, a church struck Hampshire at < Duddington > where a pony and six sheep were also killed. Damage to buildings and animals were killed at Chronicle 3 Jul <Uppingham> and <Spalding>. **Bells Weekly** Messenger 3 Jul 22 Jun 1828 <Lincoln>: In a thunderstorm with hail windows were damaged and several houses were flooded in Broadgate. **Hull Packet 1** Jul 12 Aug 1828 <Norwich>: A thunderstorm burst over the city and a severe hailstorm succeeded. In very few minutes the streets were under water Morning Chronicle 15 Aug 9 Sep 1828 <Lincoln>: A severe thunderstorm caused water to penetrate roofs but no mention is made of street flooding. Three men were killed by lightning at <Wragby>. The storms with large hail also affected Canterbury, London <Chelmsford> and at <Lincoln> where house doors were broken open alarming inmates by its suddenness. courier 19 Sep Thunderstorms were 24 Jul 1829 <Boston>: When the storm burst the town was speedily flooded to a considerable depth but with little damage widespread in the town but devastation in the surrounding countryside where whole fields of corn have been washed away, **Bells Weekly** one farmer losing 100 acres of corn. The storm extended through the West Fen and in a stretch 8 miles in Messenger 3 Aug length and a mile in width through the most fertile part of <Lincolnshire>. Hundreds of windows are smashed by immense hailstones, some as big as walnuts. The storm was also reported in <Suffolk> with several people

poor cottagers.

28 Aug 1829

<Whittlesey>: The thunderstorm continued for half an hour accompanied by rain and hail. The town was

injured by lightning but no flooding was noted. Great damage was done by storms in France and Switzerland. <Sibsey>: The high wind and hail caused great damage to windows of 80 different houses mostly owned by

<Fornham> and <Troston> were worst affected. At some of these villages many cottages were under 1 to 2 feet

Huntingdon,
Bedford and
Peterborough
Gaz 1 Aug
25 Jun 1830
Yorkshire
Gazette 10 Jul
Suffolk
Chronicle 3
Jul

flooded in almost every street to a considerable depth and flowed into several houses.

Widespread storms occurred from 25th to 28th Jun.

<Lincoln>: an overnight thunderstorm continued for several hours leaving beds of sand and gravel in the streets. Lumps of ice fell which were nearly a cubic inch in size. Water poured down the hill like a river, overflowing the whole of the main street and flooding cellars and kitchens. Glass in skylights and hot houses were broken.

<Cley> (<Norfolk>) Rain was mingled with large pieces of ice, some measuring nearly 4 inches across, which broke the church windows at <Briningham> and <Brinton> where the hail lad 2 feet deep and some hailstones were as large as walnuts.

Severe thunderstorms were also reported in <Boston> where the streets were flooded to a considerable depth and <Spalding>.

<Suffolk>: A man was killed by lightning at Rumsburgh Green. A bridge at <Halesworth> was destroyed, having been obstructed by hay brought down by the flood; a tan yard was flooded and several houses inundated.
<Norwich>: the rain fell heavily for four hours and many cellars and warehouses were flooded, including at Fybridge and in the Haymarket. In Hundred of Holt all the low grounds were flooded, carrying young crops of turnips into the road, bursting small bridges and tunnels and invading the cottages of the poor. Windows were broken by the hail, fruit trees stripped and garden produce and fields of wheat and barley destroyed.
<Newark>: the hail and rain descended in torrents and the street had the appearance of the sea with many cellars filled and several houses completely flooded. The lightning struck the steeple of the church and also houses.

<Boston>: At <Holbeach> March a man was knocked off his horse and killed by lightning.

<Spalding>: The thunderstorm with hail passed over <Cowbit> and Weston Hills with hailstones as large as horse beans breaking windows.

No reference was made to flooding but remarks that the rain would be beneficial after a dry spell.

<Bedford>: A tremendous storm occurred in the middle of the day. The ground floor of cottages in some low places was 2 feet deep and nearly all the streets were covered. The gratings were stopped up with mud so that

6 Aug 1831 Nottingham Jour 13 Aug

14 Jun 1834

Advertiser 20

Jun

Hull

27 Aug 1834 Bucks Gazette A severe drought earlier in the summer was followed by several periods of extreme

Thunderstorms affected E

Yorkshire and E Anglia and SE

2 Aug

weather

17 Aug 1837 Lincolnshire

Chronicle 18

Aug

Huntingdon

Gaz 19 Aug

26 Aug 1837

Suffolk

chronicle 2

Sep

18 Jun 1839

Stamford

mercury 21

Jun

only by taking these up that the water could get away. A pig was killed by lightning. Windows were broken by hail at <Oakley> and at <Bidenham> the turnips are much injured by the hail.

<Woburn>: In a violent thunderstorm with hail, the streets were completely inundated. Several windows were broken by the hail and much damage done to crops and gardens.

<Northampton>: A long line of country to the north of the town running northeast and northwest was subjected to a severe hurricane 30 to 50 yards in breadth; trees were broken off near the ground; standing wheat was cut as if by a scythe. <Bedford>, Moulton, Pitsford and Guilsborough were all witnesses to its violence. Pieces of ice as large as a penny piece fell at Great Billing, breaking glass. At Moulton two horses were knocked over by the wind.

<Boston>: In a thundershower the market place was one sheet of water and nearly every cellar and many shops were flooded.

Huntingdon: A thunderstorm lasted for upwards of an hour. The rain was mingled with very large hailstones. The streets were flooded in a short time and houses in some cases were flooded to a depth of 4 to 5 feet.

Bury St Edmonds: In a thunderstorm the streets in the lower parts of the town were flooded. Several horses and sheep were reported killed by the lightning.

(a man and a young boy were killed by lightning at <Bedford>)

Grantham: A violent storm of hail and rain passed over from the southwest and fell with the greatest severity in the country bordering the River Witham, with unprecedented damage to crops, especially in the parish of Honington. The hail in some places was like large pieces of ice and much greenhouse and other glass was broken. 'A gentleman in the neighbourhood who has a raingauge states that more rain fell within an hour than during the months of April and May'.

Carlton le Moorland (near <Newark>): The rain and hail was accompanied by hurricane like winds. The hailstones were of immense size and caused great damage to the parish church windows as well as to houses. Crops are badly damaged.

<Lincoln>: The streets were flooded and all the gutter gratings stopped up with silt within a few minutes. Scores of cellars were soon filled with water and in some residences in low locations the water was of sufficient depth

27 Aug 1839 Stamford mercury 2 Aug

24 Aug 1842

Ipswich

Journal 27

Aug

9 Sep 1842 Stamford

Mercury 16

Sep

Aug

9 Aug 1843 Yorkshire Gazette 19Aug, Webb et al 2001, Cambridge Chronicle 12 Nearly all accounts are of effects of lightning and hail. The storm led to the founding of the General Hail Insurance Company, later Norwich Union, now Aviva to put out fires and buoy up the furniture. Some cellars had 12 feet of water in them. Two windmills were damaged.

Horncastle: The storm completely inundated the country near Horsington, Bucknall and the Moor doing much damage to corn and turnip fields. A calf and a pig were killed by lightning. On the 28th a hailstorm crossed the country from Reevesby to Moorby and Bardney. The hail was as large as walnuts and did great damage to windows and hothouses.

Beccles: Rain and hail descended in torrents and flooded the streets and in many instances the houses. Great damage was done glass in conservatories. Hailstones or pieces of ice measured from 2 to 3 inches round and sometimes more. The thunderstorm extended in the direction of <Yarmouth>.

Bungay: There was a severe tempest here with many windows broken by hail. A bran was struck and destroyed by fire.

Long Sutton: After a day of moderate thundershowers it intensified at 10 pm on 7 but there was a further more intense storm on 9th when the streets were completely flooded. A tornado swept across the country from Sutton St James but just missed the town but carried away tiles and slates from houses and several trees were blown down. A bullock was killed by lightning.

<Spalding>: A thunderstorm was reported with lightning damage but no flooding was reported.

Thunderstorms were widespread in East Anglia but with general rain from 9 in the morning till 10 at night.

<Stamford>: Houses struck and people injured but no reference to flooding

<Biggleswade>: Hailstones the size of walnuts broke every pane of glass in the direction they came including the demolition of the church windows. At Caldecot nearby a woman was killed and three houses burnt down. A man on a pony were both struck and killed. The water was flowing down the aisles of the newly furbished church.

The storm with hail and lightning damage was also reported at Rochester, <Oakham>, <Boston>, Melton Mowbray and at <Lincoln> where the water ran down the street is such a torrent that a young woman was carried off her feet below Castle Hill but rescued.

<Spalding>: The rain caused a flood reaching a foot high in some streets, rushing with great velocity, filling all the cellars of the town.

<Norfolk>: Hail covered the ground to 4 or 5 inches. The crash of windows was heard in every direction; houses were deluged by rain and doors blocked with hail. Crops and gardens were totally destroyed. The storm tracked

northeast from thetfrd through Norfolk. The effects of the hailstorm were devastating between Old Buckenham and just east of Norwich. Several villages had nearly every window broken. The flooding in Norwich was so severe that stalls in the market place were swept away.

<Wimpole> (Cambridgeshire): The rector wrote 'The land before it was as the Garden of Eden, behind it a barren and desolate wilderness ... what the hail and lightning did not utterly destroy, the rain which fell in torrents finished'.

<Cambridge>: The hailstones were as large as pullets eggs or about 3 inches in circumference. The hailstorm lasted half an hour. Scarcely a pane of glass was left in the whole town including Trinity church the Town Hall and King's College Hall. Rooks and pigeons were killed in large numbers. Crops were totally destroyed. Glass in glasshouses and the contents of plants were destroyed. All the gas lamps were destroyed and in some cases roofs were broken. Glaisher at <Cambridge> Observatory notes that hailstones were an inch in diameter and some larger. His raingauge overflowed but he estimates the amount to be not less than 2.5 inches. Midsommer Common was one sheet of water and a drain burst up in the middle. The houses in the town were in many parts flooded and cellars were several feet deep in water. Great damage has been done to crops. Windows in town to the north and east have been smashed. Webb and Elsom (2016) quote the Cambridge Advertiser that hailstones were the size of hen's eggs 6 inches in circumference in the Trumpington Road area. The storm was also destructive in the villages of Grantchester, Barton, cherry Hinton, Bottisham and Quy. A road adjacent to Anglesey abbey was knee deep in hailstones.

<Boston>: A mill was destroyed by fire after being struck.

CC details the glass broken in each of the college buildings by hail and describes effects mainly of hail on surrounding villages and towns.

<Newmarket>: The hails was as large as marbles. The water ran along the streets like a brook and the torren lasted for 20 minutes. The cellars belonging to some of the houses are full of water.

<Norfolk>: Another storm passed over the county from <Suffolk>. In the neighbourhood of Intwood, Ketteringham, and Hethersett roads ad meadows were flooded accompanied by lightning and hail. Great damage has been done at Litcham and Dereham as hailstones and pieces of ice fell for three minutes breaking vast number of panes of glass. At Mattishall pieces of ice fell 6 inches in circumference.

<lpswich>: In a thunderstorm the water rushed through the streets like a river and the steets were quite impassable. The Key Church and St Nicholas Church were flooded. There was no hail but several houses and

15 Aug 1843 Norfolk Chronicle 19 Aug 10 Sep 1843 Coventry Standard 15

Sep

24 Jun 1844

Ipswich

Journal 29

Jun

8 Jun 1846

Cambridge

Advertiser 17

Jun

1 Aug 1846

Various

papers

Cambridge

Gen

Advertiser 12

Aug

27 May 1847 Stamford mercury 4 Jun cellars were completely filled with water. In a butcher's shop in Tacket Street the water was up to the ceiling.

<Ipswich>: The thunderstorm was very severe at <Halesworth>. It came on at 5 o'clock in the afternoon and lasted until 7. The rain fell with some hail overflowing the streets and flooding some houses. The storm raged with greater violence in Haveningham, Walpole, Cookley and Chediston. Hail and large pieces of ice broke many windows at Haveningham Hall.

Worlingham near Beccles: The thunderstorm was accompanied by hail and large pieces of ice. The whole parish was inundated in less than half an hour and several cottagers were obliged to leave their dwellings. Much garden glass was broken.

Thunderstorm with hail and heavy rain affected London and surrounding areas. Webb reports that the most severe hail damage occurred in two storms which affected areas around <Stamford>, <Lincs> and Weldon, <Northants>

Weldon, Rushton (nr Corby):Torrents of rain and hail were accompanied by a hurricane wind. Scarcely a house has not had its windows broken and in many cases the roofs demolished. For miles around streams of water were seen rushing down slopes carrying away sheaves of corn sheep and pigs. One farm lost 20 to 30 sheep and two colts. At Harewood lodge Mount Wilford, windows were dashed in frames and all and furniture and carpets drenched. A painting on the library wall opposite a window was split by the hailstones. A gardener's cpttage was demolished. At Rushton an 8-year old boy was swept away by the torrent and drowned.

<Norfolk>: Very severe lightning occurred in most parts but in the east little rain fell. However at Upon Acle the rain and hail did great damage to crops. The hailstones varied in size from hazelnut to pigeon's egg and forced out all the windows facing southeast.

(Webb, 1996)

'Judging by the damage done the storm has been more severe than any that has occurred since the celebrated one in 1809'.

Caistor (<Lincs>): On the previous day the temperature was 80F in the shade. A thundershower was accompanied by hail and pieces of ice the size of a halfpenny and some of them a quarter of an inch thick. At a place two miles distant they were even larger assuming a more globular form and doing considerable damage to windows. Upwards of 60 panes of glass were broken in a few seconds.

14 Jul 1848 Suffolk Chronicle 22 Jul

5 Aug 1848 Leeds Times 12 Aug Cambridge Independent Press 12 Aug

5 Jun 1849 Norwich Mercury 9 Jun Cambridge Independent Press 9 Jun <Suffolk>: The western part of the county was struck by a thunderstorm which was the worst for many years. Various places are mention but there is little reference to flooding except at thetford.

Bury: Lightning struck a barn and in the fire which followed a large number of animals were killed.

Lavenham: the hailstones were of tremendous size and three trees were torn up by the roots.

Thetford: Rain and hail fell in torrents, the ground scarcely visible for the flood of waters for two hours. Several houses were flooded wetting carpets etc. At Barnham a distance of 2 miles The Grafton Arms Inn had scarcely a pane of glass left; the church windows and nearly all the windows in the village were destroyed. Crops were ruined. Old men of 80 and 90 years never recollect so terrific a storm.

A thunderstorm occurred in the <Lincoln> area with the heaviest hailstones since 1838. Great damage was done to crops and at Till Briggs 8 miles north of <Lincoln> an embankment gave way and flooded a large area of countryside. The hailstones measured from 2 ½ to 3 inches in circumference were said to be the heaviest hailstones since 1838. From <Lincoln> to Hull the roads were flooded to the level of coach doors. In <Lincoln> the water ran down the steep High Street like a raging torrent inundating the lower parts to 2 to 3 feet. The occupants of houses 'outside the Bow' spent their time trying to keep water out of their houses.

Weasenham: A man was killed and another injured by lightning.

Lynn: The town experienced a storm of hail and rain which surpassed anything known there before. The hailstones were as large as the end of a man's finger and a great deal of glass was destroyed. Half the houses in the town were flooded from the drains not being able to carry off the water sufficiently fast. The storm did not extend far.

Wells: With heavy rain and hail sever houses in different parts of the town were inundated.

<Lowestoft>, Pakefield: Windows were broken by hail and the street was covered knee deep with water.
<Norwich>: A thunderstorm passed over this town from 2 o'clock in the morning for several hours without intermission. There was local destruction of greenhouses by hail of large size. Eight sheep were killed by lightning. Pieces of ice were from an inch to an inch and a half in circumference.

Huntingdon: The thunderstorm put thousands of acres under water. Alconbury and Weston were deluged for two to three hours with the furniture of many cottagers floating in their houses. Man and women whose houses were in the hollow could not reach them that night, the water being 6 or 7 feet deep on the main road. At Hamerton the lower rooms were filled in two or three hours and timber recently cut floated away some distance. At Coppingford Mill Brook the coping and walls were washed down.

16 Jul 1850
Bradford
Observer 25
Jul,
Chelmsford
Chronicle 19
Jul,
Cambridge
Ind Press 20
Jul

20 Jun 1851 Yorkshire Gaz 28 Jun Worcestershir <Peterborough>: The rain commenced at 2 and continued until near 5 and several houses in Midgate and Narrow Street were inundated to a great depth. Inhabitants had to wade up to their waists.

Lynn was affect with the storm from 3 o'clock till near 8. A quantity of glass was broken by hail and 8 sheep were killed by lightning. No flooding was reported.

<Kettering>, Market Harborough, Rugby: The thunderstorm was reported with flooding of meadows.
In parallel with severe flash floods in Lancashire, storm effects were noted elsewhere in the country, mostly from lightning. In Saffron Waldon hailstones 3 to 4 inches in circumference and water flowed into cellars and lower apartments until it reached a height of 7 or 8 feet in some houses in the High Street. Elsewhere the hailstones were described as large as cherries. Great damage was done to crops and windows by the hail.
Implements were washed out of fields and whole crops of turnips were washed away; banks were broken down and brick walls destroyed. One country house had 6000 to 7000 panes of glass broken.

The flood occurred at Woodham Walter on a small tributary of the River Chelmer in <Essex>. Heavy rainfall was accompanied by very large hail. The brook through the village rose 10 feet in an incredibly short time. In one cottage the water level was 6 feet deep and Davis the occupant had difficulty in saving his wife and three children but an aged woman was drowned. Several others had narrow escapes. Several buildings were swept away.

Newport in <Essex>: The storm continued for an hour from 3 pm and the streets were flooded. The hailstones were the size of walnuts and a great many fully an inch in circumference, with much damage done to crops and glasshouses. For several days previous the weather had been hot and sultry. At Canfields the storm caused instant flooding. Two bullocks were killed by lightning at Shonks Mill. At Lamborne a boy on a horse were both killed by lightning. In Danbury and Little Baddow roads were torn up and the corn levelled to the ground. Soham: The thunderstorm commenced at 1.00 and continued for 2 hours. Many of the houses were flooded to a depth of several inches. The hail was generally the size of marbles but some were as big as pigeons' eggs. Windows are smashed and the wheat and beans severely damaged.

A girl was killed by lightning at Worksop. The storm also was 'destructive in Scotland' <Yarmouth>: A man was killed by lightning having taken shelter in a mill.

Six severe (H3+) hail events, the most severe (H5) affecting a 50 km swath across Gloucestershire and Warwickshire (N Cotswolds to Rugby), said to be on 21st.

<Stamford>: The storm raged from 2 to 4 o'clock with hailstones and large pieces of ice destroyed windows and

e chronicle 2 Jul, Webb et al 2009 Stamford Mercury 27 Jun

13 Aug 1851 Lincs Chronicle 22 Aug 5 Jul 1852 Lincolnshire Chronicle 9

Jul

25 Jul 1852 Southern Times 31 Jul 10 Aug 1852 conservatories in many places. Railway labourers were cut about the hands and face. The storm at <Stamford> exceeded in violence the storm of 1843.

<Uppingham>: the hail broke almost all the house windows in the place including 100 panes in the church.Some hailstones were larger than walnuts and weighed nearly an ounce. Large pieces of ice measuring 6 inches over fell at the same time.

<Kettering>: the storm lasted from 2 to 3.30 with hailstones of diversified sizes and shapes and caused considerable damage to glass.

<Boston>: Lightning started at 2.00 but the storm was at its height at 5.00. flooding was not reported nor serious damage from hail.

<Lincoln>: The rain fell in torrents for half an hour and the streets of the city were soon rendered impassable and the water swept down the hill with the force of a rapid. Cellars in Stone Bow and high Bridge were soon filled to a depth of 5 or 6 feet. Some walls were knocked down and houses flooded. The Saracen's Head cellar was filled. A mill on the burton Road was much damaged. The large hailstones riddled the rhubarb. Windows in Riseholme Palace were damaged. It is 13 years since a similar storm occurred in <Lincoln>

Horncastle and Caistor: The storm passed over north <Lincolnshire>. The streets were flooded at Caistor and a quantity of hail remained until the following day. Serious damage was done to the corn crops and windows were broken by the hail. Two horses were reported killed by lightning.

<Stamford>: The rain was limited over the town but at neighbouring Easton the rain was mixed with large pieces of ice damaging the crops and breaking glass.

Thistleton: A thunderstorm passed over in a northeasterly direction and the streets were flooded in a few minutes. Hailstones nearly as large as pigeon's eggs fell at Exton breaking many windows. At greetham trees were broken down, crops severely injured and houses flooded in some cases to 12 inches deep; inmates escaped by wading with children in their arms.

Barking <Essex>: A considerable portion of the church of St Margaret was flooded and the organ was struck by lightning. A chorister girl was injured by lightning.

<Yarmouth>: In an afternoon storm, large pieces of ice fell accompanied by a flood of rain. Greenhouses were

Norwich
Mercury 14
Aug
20 Jun 1853
Essex
Standard 1 Jul
9 Jul 1853
Norfolk
chronicle 16
Jul

18 July 1853
Westmorland
Gazette 22 Jul
Manchester
Courier 23 Jul
(probably
also 8/9th)

riddled with the ice and many windows were broken; turnips and mangels were cut.

Saffron Walden: A thunderstorm flooded the streets to broad sheets of water. The rain was mixed with hail but no damage was observed. A youth was killed by lightning.

<Norwich>: The storm of rain and hail was of unusual intensity over a short time the worst since the severe storm 10 years ago. The water rushed into cellars and kitchens and some houses. A sewer burst in London Street flooding houses there and the bottom of Exchange Street. One house was struck and damaged by the lightning. At Wereham a green house was completely ruined by hail.

North Walsham: The neighbourhood was visited by the greatest fall of rain ever remembered. Many dwelling houses and shops were soon filled with water to a depth of several feet. Crops were damaged at Scottow, Worstead, Westwick, Swafield, Edingthorpe, Witton Bacton, Happisburgh, Paston, Knapton, Trunch and Mundsley with many acres destroyed. In hilly fields the soil was washed away. Bridges were forced up and fences and stone walls levelled to the ground. The inmates of several cottages were obliged to escape by the windows.

Bury: There was great flooding of streets and cellars in the town. Near the railway station the water was between 2 and 3 feet deep; the street near the Six Bells was impassable. The roads were washed and gullied in an extraordinary manner.

Hail damage was also reported in Huntingdonshire, <Cambridge> and Sussex. In <Cambridge> the hailstones and pieces of ice were as big as pigeon's eggs and occurred for 20 minutes over the greater part of Ouse fen with great damage to crops.

Storms and floods were described for various parts of the Midlands and South. There are also notes of thunderstorms and flooding in Leicester, Nottingham Wales and Reading but prolonged rain was the main cause.

In Buckinghamshire (?), the River Ouse overflowed at Brackley and the water level rose 18 inches in half an hour..

In <Chelmsford> the flood was the worst since 1824 and houses near the river were flooded to a depth of 3 to 4 feet. Halstead in <Essex> suffered a tremendous flood with much agricultural damage. The Cherwell and Isis

10 Sep 1853

Lincs

Chronicle 16

Sep

5 May 1854

Stamford

Mercury 12

May

31 Jul 1854

Norfolk News

5 Aug

10 Jul 1855

Norfolk

Chronicle 14

Jul

14 Jul 1855

Stamford

Mercury 20

Jul

also suffered. Flooding was also reported in the Bristol area.

<Gainsborough>: A heavy storm completely deluged the town during the space of half an hour. Hail also fell and broke several windows. The rainfall amounted to one inch in one hour. The Murder hole under the railway bridge was flooded to a depth of several inches.

<Gainsborough>: A thunderstorm with hail last more than an hour and in some places the streets wereankle deep in water. Nearly 1 ½ inch of rain fell during the evening.

Aylsham (9 miles N of <Norwich>): A thunderstorm during the afternoon caused the streets to appear like rivers and many houses suffered much from the flood. Windows were broken by the fall of large pieces of ice. Wells next the Sea: the thunderstorm continued for 2 hours and was accompanied by showers of ice and accompanied by a strong wind which blew from all directions. The lower parts of the town were quickly inundated, some to more than 3 feet. Cellars were filled and streets rendered impassable. Gravel was carried down steep hills and deposited in heaps several feet high. Many windows were broken and pigs and fowls drowned. The storm was confined to a few miles round. The barley is much laid but the wheat does not appear to be injured.

Fakenham: Very heavy rain and hail flooded the cellars and lower apartments of many of the houses. A house was damaged by lightning.

Horncastle: Rain and hail descended in sheets with a strong wind blowing from the west. In less than 5 minutes the streets were flooded to a depth of 2 inches and kept increasing until they became impassable. Nearly every house in Union Street and Foundry Street had windows broken by the hail some with more than 20 panes. The hailstones were as large as beans. Animals were killed by lightning and serious damage done to crops. <Lincoln>: The thunderstorm raged furiously for an hour. Large stones were washed with great veolicity down the Steep Hill, the New road and silver street. The upper part of High Street was like a river. The drains were blocked up and had to be opened up. Horses were killed by lightning at Addington. The storm was widespread and accompanied by hail with many houses being damaged between <Sleaford> and Horncastle

19 Jun 1856 Bucks Chronicle 25 Jun 1 Sep 1856 Norfolk Chronicle 6 Sep

14 Aug 1857 Hull Packet 21 Aug Nottinghams hire Guardian 20 Aug Lloyds Weekly Paper 14 Aug, Morning chronicle 17 Buckingham: A thunderstorm with rain and hail caused material damage in many quarters within a radius of a few miles of the town. Low lying meadows are flooded with 2 feet of water.

Banbury: Gardens and glasshouses were seriously damaged by hail.

<Yarmouth>: The storm lasted from 6 pm until midnight with hail. The water rushed down the streets like a river, overflowing the drains and causing considerable damage to property.

Ormesby: the storm was even more severe here. Every road and field was a street of water, walls and hedges were burst and every hollow filled. Opposite the church are several cottages called Church Hole were flooded by water 7 feet deep. The high road was a river knee deep flowing towards Ormesby Green. One of the cottages in the Hole fell down. The Broad rose 15 inches in 12 hours. There had never before been water in the hollow (Hole).

Hemsby: Many pigs and fowls were drowned and the horses in their stable were up to their knees.

<Lowestoft>: The rain was accompanied by hail and although there was no damage in the town, the railway at the cutting near Oulton church was covered to a depth of a yard by the earth carried down by the rush of water. At Carlton Colville windows were broken by hail.

Beccles: The thunderstorm lasted two hours causing great damage to corn and turnip crops. An old pedlar was drowned on the road between Wheatacre and Beccles.

Aldeby: The storm continued for an hour and a half and the lands were flooded. In the morning hails tones lay in some places 20 inches deep. The public roads were gullied in places to depths of 27 inches.

In <Essex> market gardens were severely damaged both by the heavy rains and flooding and by the lightning. At <Stamford> the pinnacle of St Michael's Church was struck down.

(Extensive flooding in Notts, Leics and Lancs).

<Lincoln>: A storm of almost unequalled violence broke over the city and neighbourhood and last ten hours. The rain descended in torrents for 4 hours. The water rushed down the steep hill like a mountain river and caused flooding in houses in the lower part of town. Serious damage has been done to the crops especially in the marshy areas between <Lincoln> and <Boston>. Rail traffic was disrupted; a portion of the line at Fisherton was swept away by water which rushed down from neighbouring hills. A mile south of Carlton station between <Newark> and Retford the overflow from the Trent covered the line and raised the rails and sleepers causing both a passenger and a goods train to be derailed and overturned. No deaths were reported but several were

Aug injured.

<Stamford>: lightning struck St Michael's church and knocked down a pinnacle. No flooding was reported. <Essex>: Great damage has been done to market gardens by flooding in Epping , Barking Dagenham, Ilford, Brentwood Hornchurch, Lea, Ongar, etc... Trees and house roof were much damaged by lightning and much delay to rail traffic.

<Essex>; A succession of thunderstorms with rainfall falling heavily throughout the day and rivers were swelled into torrents. Towards Maldon and Crouch whole flocks of sheep were drowned in the fields, one farmer losing 50 sheep and some cattle. Whole fields were carried away and soil swept off by the force of the water. Farm buildings were flooded to a depth of several feet. All the farms and villages towards the coast have been affected with many houses inundated. One young man was swept away and drowned. At Colchester Camp a high wall was carried away by the wind and the flood.

At Mundon a blacksmith was carried away by flood water. At <Chelmsford> the Chelmer overflowed and a young farmer lost his life. In Kent and Surrey the rain was nearly as severe as on the north of the city. The lower part of Lewisham was entirely under water. Similar scenes occurred at Greenwich.

<Lincoln>: A thunderstorm was accompanied by hailstones as large as hazel nuts and flooded several cellars in the lower part of the city.

<Ipswich>: Rain and hail fell in large quantities. The hailstones were large and fell with masses of irregularly shaped pieces of ice which did considerable damage. No flooding was reported. Damage by lightning was reported in various localities in <Suffolk>.

<Stamford>: A thunderstorm lasted 2 to 3 hours was accompanied by rain and hail. Streets and several cellars and kitchens were flooded.

<Rutland>: The storm was more severe there and the inhabitants of Tinwell, Ketton were inconvenienced by streams rushing into their homes.

Raunds: Incessant rain flooded several parts of the village.

The storm was also reported at <Peterborough> and <Newark> but with no flood damage reported. At Market

22 Oct 1857 Exeter flying

Post:

Manchester

courier 31 Oct

15 May 1858

Notts

Gaurdian 20

May

5 Jun 1858

Suffolk &

Essex Free

press 10 Jun

12 Jun 1858

Stamford

Mercury 18

Jun,

Cambridge

Chronicle 19

Jun, Cambridge Independent Press 19 Jun

31 May 1859 Chelmsford Chronicle 3 Jun, Bury Free Press 4 Jun

20 Jul 1859 Suffolk and Essex Free Press 28 Jul

28 Jul 1860 Suffolk Chronicle 28 Jul, Halesworth Times 31 Jul, Harborough the River Welland overflowed and flooded the Sheep Market; two lambs were killed by lightning. <Cambridge>: In little more than an hour, several back premises were flooded ankle deep and kitchens were flooded especially in Sydney Street where drapers and bakers were affected but the flooding was quite widespread. In Market Street a draper's warehouse was much damaged by floods and neighbouring businesses. In St Andrew's Street the kitchens of the Post Office were flooded to a depth of 4 feet. There has not been a storm like this since the memorable one in August 1843 when nearly all the windows were smashed with hail. St Ives, Longstanton: The damage done by hail is considerable and shops were flooded. A man was killed by lightning at Combleton.

St Neots and <Cambridge>: The corn has suffered from the hail and rain.

Wisbeach: Lumps of ice as large as walnuts fell and glass in greenhouses was much broken.

Holbeach: the hail was as large as a penny piece.

Fordham, <Suffolk>: A man was killed by lightning whilst sheltering under a tree.

<Ely>: A man was killed by lightning

Rymer: The hail fell in such quantities that it lay a foot deep next morning.

Streatham: A farm labourer was killed by lightning and his two companions injured.

Bury (1 Jun): A storm continued for nearly an hour and flooded some streets of the town and converted them to temporary rivers. Cellars were flooded and drains burst and a grocer in Churchgate Street was a particular sufferer. The ditches at Buts and Friars Lane were swelled to rivers.

Braintree: The thunderstorm commenced at 5 pm and although of only 15 or 20 minutes duration it flooded the streets and premises of the town to an almost unprecedented extent. At Hartford End, Felsted and at Great Waltham hailstones fell of extraordinary size and broke windows of many houses including Great Waltham church. Hail also fell from Roxwell to Rayne and were the size of a small walnut and in some places it lay 24 to 30 inches depth. Windows were broken but serious damage was done to crops. All the windows at the west end of Little Leighs church were broken.

<Ipswich>: In a severe thunderstorm the hailstones were larger than ordinary marbles. In gardens leaves were stripped off bushes and much glass was broken. Underground kitchens and cellars were flooded. The roads and streets were furrowed to a depth of several feet and wagon loads of sand and stones were carried along by the force of the torrent. The grass was indented by the pieces of ice which fell and several locations had several hundred squares of glass broken.

<Halesworth>: A severe thunderstorm was accompanied by rain and hail; the streets were flooded. At Holton

Suffolk & essed Free press 2 Aug,

28 Jul 1860 Norfolk Chronicle 4 Aug

27 Jun 1861 Bury & Norwich post 2 Jul

7 Jul 1861 Louth and N lincs Advertiser 13 Jul, Cambridge Journal 13 Jul 6 May 1862 Stamford Mercury 9 the water covered the streets to a depth of one to two feet. The marshes were speedily covered and hay carried away. The storm was also severe at Bramfield and Walpole.

Tendring Hundred: Most of the meadows were flooded to a great extent and hay was entirely destroyed. Alresford: Crops were much damaged by the hail; a barn was burnt to the ground. For some time after the storm had ceased the roads were several inches deep in water. A cow and a horse were killed by lightning. Beccles: the thunderstorm commenced at one and continued till nearly 3 o'clock. The roads in the neighbourhood in many places were completely flooded and much injury has been done to crops by large hailstones. A horse was killed by lightning.

<Newmarket>: A tempest of hail and rain passed over the area, beating down crops and destroying hay. <Cambridge>: As <Newmarket>.

Cottenham: the streets were entirely flooded. A horse was killed by lightning.

<Newmarket>: The town and neighbouring villages were visited by a severe storm of rain and hail. Much damage was done to crops especially turnips and other root crops. In a very few minutes after the start every thoroughfare was like a river and the drains were incapable of taking the flow. The water poured down the hills from <Newmarket> and Moulton and Cheveley over turnip fields and making great gulleys. The storm extended over a radius of a few miles. At Moulton the rain was at its heaviest and in a short time every brook and pond overflowed; some of the houses were flooded but not so severely as in the that of last winter. At the southern end of the village the water rolled from the hill between Cheveley and the village cutting a ditch in the highway up to a yard deep. Serious flood damage was done to a farm where the water was up to between the horse's knees and belly.

Louth: At Stennigot rain and hail fell in such quantities that it carried away labourer's clothes across a field and buried them in the sand. At Calsthorpe the rain fell like marbles and houses had their glass completely smashed. At Grimblethorpe the flood carried away a quantity of standing corn and some large limbs of trees. At Welton le Wold the back of a house was carried away and most of the furniture carried off; many of the other houses were flooded. Damage and destruction of crops was widespread.

Chatteris: In a thunderstorm the roads were flooded in some places more than a foot deep

<Stamford>: the storm was short but extraordinarily violent. Previous weather was warm and dry and the fields were parched. Drains were burst by the force of the water and a Catholic priest's house in All Saints Street was flooded. On 7th another storm with hail broke greenhouse glass at Wansford and at Yarwell.

May

9 Jun 1862 Norfolk News 14 Jun 29 aug 1863 BR 20 May 1864 Stamford mercury 26 May

8 Jun 1864 Ipswich journal 11 Jun <Bourn>: The storm on 6th at 16.30 lasted nearly an hour and the streets were flooded and on 7th the hail size ranged from the size of a bean to a pigeon's egg. Several hundred panes of glass were broken and done damage to fruit trees. South Street near the church was flooded from side to side. In the railway station yard the water was from 3 to 6 feet deep.

The storm with large hailstones was also experience at Norton, Swinton and <Newark>, where three pieces of ice weighed a quarter pound and four others were weighed at half a pound.

The storm was also reported at Whittlesey and <Oakham>.

<Yarmouth>: A very heavy thunderstorm passed over the town. The hailstones were very large – the size of nutmegs. Roadways were flooded and two people were struck and badly injured by lightning.

<Westley> (W Suffolk): 0.76" fell in 15 minutes.

Spilsby: The storm with hail was thought by some to be large than any that has occurred since July 1846. It also affected villages to the north and northwest. Some of the hailstones were nearly as big as a blackbird's egg and some at Sausthorpe not smaller than a moderate sized pipe head. Several thousand panes of glass were broken in neighbouring villages including at Dalby Hall and at Sausthorpe where all the windows on the west side of the Hall were broken and at the church where nearly all the windows on the south side were broken. Great damage was done to wheat and beans.

Horncastle was also affected by the storm with damage done by hailstones of enormous size.

Alford: The heavy rain flooded the streets and cellars whilst the hail broke many windows facing west. Fruit trees and bushes and vegetables were greatly damaged.

<!pswich>: The rain was heavy but the lightning was not severe. The streets were deeply flooded in the usual places and the drains and sewers proved to be ridiculously inadequate. The Handford Road was flooded for its entire breadth to a depth of several inches for 100 yards distance as a consequence of water delivered from high lands abutting Burlington Road. St George Street or Globe Lane also contributed from the high ground around Henley road and the streets at Hyde park corner were impassable for some time. Black Horse Lane was flooded to a depth of several inches and a deep pool formed at the top of Currier's Arms Lane. St Peters and St Nicholas Streets were deeply flooded and impassable to pedestrians. Havoc was caused at the Arboretum where there were deep gullies. At Maltster's Arms on Quay Street water was in the bar and cellar. In Star Lane several houses were a foot deep in water. An immense body of earth was left at the bottom of Princes Street at the cessation of the storm. At the Old Station Stoke an immense quantity of soil was washed down blocking the road at Stoke Cottages, the water rushing down the narrow lane at Stoke Green meeting house. In the centre of

this lane was a very severely flooded cottage with the inmates narrowly escaping with their lives. In Bath Street many cellars were half full of water. Houses were damaged by lightning.

North Walsham: In a thunderstorm there was the greatest fall of rain known for many years. In a few minutes the watercourses were quite inadequate to carry the flow so that some houses were flooded.

Louth: In the preceding month it was unusually dry with only ½ inch rainfall. In the storm the roads and streets were flooded very quickly and the lower apartments of houses were flooded causing inmates to retire to upper rooms. The rain continued for some hours.

Alford: A thunderstorm flooded the streets and gardens.

Barton: A man was killed by lightning.

Market Rasen: A terrific hailstorm occurred with the hailstones the size of a large pea and in so dense a shower that it was impossible to see beyond a few yards. It continued for a quarter of an hour and was then followed by drizzling rain. The ground was covered in hail in many places to a depth of 1 foot. Many houses were flooded a foot in depth and Oxford Street was standing up to the axles in hail and water. Hundreds of squares of glass were broken mainly in the outskirts. Water and hail was washed under roof tiles and through ceilings and at the White Hart Hotel the ceiling collapsed; the adjacent Post Office was also flooded. Much damage has been done to merchandise in the town and many fruit trees and vegetables are much damaged. So large a volume of water rushed down the Rase that at West Rasen some men who were washing sheep had to make a sudden run for it and postpone their work.

<St Neots>: In a hailstorm the roads were sheeted in an incredibly short space of time and the gutters were swollen to little rivulets.

<Hitchin>: A BR observer notes on a railway journey: On arriving at Hitchin the rails were under water. Just before reaching Shefford, one very vivid flash set a farm in flames in an instant. I was told that four others were fired at the same moment. A waterspout had torn up the rails on the Bedford and Cambridge railway. This would lie in the track of the water-spout I and other passengers saw formed at Welwyn. The Hitchin observer reports: The storm came up from the SE and was, no doubt, the supplement of a heavy storm early on the same day. On the following Sunday [Could this be 17th noted below], another heavy thunderstorm took place, almost as severe as on the previous Thursday, in which 1.08" of rain fell. On both occasions, our little town was devastated by a flood which drove many of the poor people in the lower parts of the town on to their first floors.

<Stevenage>: The day's fall was 1.95"; but 1.55" fell in about an-hour-and-a-half.

<Bury St Edmunds>: The rainfall was measured at the Botanic Gardens and was so much more than at Culford 4

3 Jul 1864 Norwich Mercury 9 Jul 5 May 1865 Stamford Mercury 12

May 22 May 1865 Stamford

mercury 26 May<

Lincolnshire Chronicle 2

Jun

BR

6 Jul 1865 Cambridge Independent Press 8 Jul Hitchin 1.42" in 20 m

17 Jul 1865

Bury St Edmunds 2.36" in 2 h

BR 4 Jun 1866 Suffolk and Essex Free press 7 Jun, BR

29/30 Jun 1866 Norfolk Chronicle 30 Jun, Ipswich Journal 7 Jul, Louth Advertiser 7 Jul

5 Sep 1866 Stamford mercury 7 Sep

10 May 1867 Sheffield Independent 13 May West Tofts (Cambs) 1.92" in 2 h

BR notes: The entries on May 10 are confined to a radius of 50 miles round the Wash. miles off.

Stowmarket: A thunderstorm commenced at 6.30 in the morning and continued for 4 hours. The rain and hail flooded several cellars and houses.

<lxworth> (W Suffolk): A distant thunderstorm at 5 a.m; came overhead at 7.30 a.m with heavy rain at 9 a.m. a short respite; the thunderstorm returned by 10 a.m., and further heavy fall of rain, causing a flood; by 11 a.m. 1.77" had fallen; altogether it was the most violent storm ever remembered here; trees, houses, and sheep struck in this parish, and a woman killed and three houses burnt to the ground in the next. Two cottages were burnt down at Rushford (Suffolk) [Google maps has Rushford in Norfolk but not Suffolk]. Much damage in Suffolk. A woman was killed at Troston at 9.15 a.m., the lightning came down the chimney and struck her on the breast, but did not burn her, and scarcely left any mark.

< Attleborough> (Norfolk), about 10 a.m., a man was struck, a cow and donkey killed, and several telegraph wires melted.

< Bennington> (Lincoln): A farm labourer was killed in a field at, his steel watch chain was melted, but he was not burned.

<Norwich>: the drains were choked and the streets were speedily flooded and the basements of a number of houses especially in London street were flooded. A man was killed by lightning on Coburg Street.<!pswich>: A thunderstorm was accompanied by hailstones or large lumps of ice which were destructive of gardens and glass. Windows were broken in many houses in Victoria Street, St Matthew's. Houses were struck and damaged by lightning. There were reports of hail blocking gutters so that houses were flooded.Woodbridge: Rain and hail flooded several houses in Church Street, Brook Street and The Thoroughfare.Louth: In the Wolds West of Louth the hail cut up the crops and washed the newly sown turnips and soil out of the ground. At Donington and Burgh on Bain the river swelled and overflowed its banks and covered the adjoining fields and the village streets which were knee deep in water and much glass was broken in Burgh. Two men were killed at Hatton near Horncastle by lightning. Nine sheep sheltering under a tree were killed.

Market Rasen: there was quite a tempest for a quarter of an hour with hail and thunder. The hailstones were of large size and lay in the ditches till the following day. Waterloo Road was under water for a considerable distance from the overflow of the Rase and carts were on request to carry people!

Louth: The streets were flooded and houses and cellars were flooded in the lower part of town. Fields of corn

<Newmarket>: the rain fell in torrents for nearly an hour and many cottages were flooded.Barrington, <Cambridge>: A man was killed by lightning.

were under water from 6 inches to one foot depth.

St Ives (Huntingdon): Large hailstones fell increasing with size through the storm till they were 2 to 3 inches in circumference. Great damage was done to crops and fruit trees and a great number of houses had their

Buckingham Advertiser 18 May, Norfolk chronicle 18 May, Herts express 18 May, BR

1 Sep 1867 County Express 7 Sep 29 May 1868 Norwich Mercury 3 Jun

A destructive thunderstorm, in Wales Herefordshire, and Devon, passing on 29th across the midland, southern, and eastern counties, at an apparent rate of about 14 miles per hour. Several persons were killed, and property of very great value destroyed in various parts, especially in Surrey, Sussex, Kent, Middlesex, and Suffolk

windows smashed. The storm with large hailstones lasted 4 minutes. In about 5 minutes the River Ouse rose 1 foot.

<Upper and Lower Sheringham> (N Norfolk): Ordinary hailstones fell first, then irregular shaped pieces of ice. The water rushed down the hills into the roadways and onwards towards the Upper village and was 4 feet in depth when it dashed upon the houses where the doors were unable to withstand the force and everything floated away seaward that was moveable. Across the fields to Sheringham hythe it left a gulley 5 feet deep and 5 yards wide and large stones and sand were carried to be deposited at the base of the hills. Shops and warehouses were flooded. Similar damage was caused at Lower Sheringham and added to by the swelling of the old mill stream by the water from the Beeston hills. Houses were flooded and garden walls washed away.
<Hitchin>, Herts: Large hail fell as part of the storm and cellars were suddenly flooded. The water was deepest in Bridge Street and Sun Street and in Portmill Lane. There has not been such flooding of the town for many years with the exception of the great storm which occurred 2 years ago. The storm came just in time to celebate the centenary of the great storm on 4 May 1767 (See report)

<Amthill> (Beds): An inch of rain fell in a storm of hail and rain on the 10th, after three days of great heat, especially on the 6th;

Smallburgh, <Norfolk>: Two 8-year old girls were killed by lightning and four others seriously injured in a single strike at a school.

<Essex>: In various parts of the county the rain was so heavy that in less than half an hour large tracts of land were under water and cottages were flooded and rendered uninhabitable.

11 Aug 1868 Hull & Eastern counties Barton upon Humber: The low lying parts of the town were considerably flooded; the cottage houses on the waterside road were also flooded and much furniture washed away. A boundary wall 60 yards long was destroyed. A cottage and its contents was washed away.

105 m

in 90 m

<Wells next the Sea> (N Norfolk): Very heavy thunderstorm and all of immense hailstones at 10.30 a.m.; quite blocks of ice, some being 2 1/8" by 1 3/8", the average being 1 1/8" by 1 in.

<Newark>: The rain fell in torrents so that a portion of the London road was completely flooded. Other parts of the town were also flooded.

Geldeston (Norfolk) 1.64" in

Loddon (12 miles SE < Norwich>): A thunderstorm was accompanied by large hailstones some of which measured more than 3 inches in circumference. Some parts of the road were impassable and several houses were flooded. A good many windows were broken by the hail but, because there was no wind, the damage was not severe.

Bergh Apton: In a thunderstorm of 3 hours duration a raingauge in the parish registered 2.80". Large hailstones or pieces of ice fell. the roads became impassable with mud and water. Two sheep were struck dead. Crops in many of the fields were almost levelled to the ground.

<Hunstanton>: On the 17th of June there was another very violent thunderstorm and a fail of at least 2.08" of rain was registered at Old Hunstanton between 12.30 p.m. and 3 p.m.—the rain gauge then overflowing. At New Hunstanton (Hunstanton St. Edmund's) the fall was greater; the rain commenced there about 12.30 p.m. and continued at a moderate rate till 1.30 p.m.; it then began to come down very fast, and gradually increased its rate of fall till 2 p.m., at whicli time it was coming down in torrents; it continued raining very heavily indeed till 2.45 p.m., then slackened and ceased altogether at 3.04 p.m. I measured the rainfall roughly at Hunstanton St. Edmund's between 2.4 p.m. and 3.4 p.m. by catching it in glasses, and made the quantity falling during this hour to be just 2 in. During a portion of this time the rain came down more rapidly than I ever remember to have seen rain fall before. Thus, from 2.11 p.m. to 2.16 p.m. (five minutes), 0.34"fell. The rain did great damage. The water flowing off" from a very small extent of land (some fifteen or twenty acres at the outside) produced a perfect torrent, which flooded the basement of a house to a depth of 5 ft. 8 in., washed down a solid stone wall, and rolled many of the stones (6" cube) a distance of 195 yards down the road. The church at Old Hunstanton was also flooded, and very large quantities of soil were washed off the fields.

<Lowestoft>: One of the heaviest storms that have occurred here for some years passed over the town. The streets and some houses were flooded.

28 Apr 1871 **Ipswich** Journal 29 Apr

14 Jun 1871

Thorpelands (Northants)

Grantchester (Cambs) 1.04"

BR 1.25" in 1 h

17 Jun 1871 BR

19 Jun 1871 Lincolnshire Chronicle 23 Jun 30 Jul 1871 Lincolnshire chronicle 4 Aug, Bedforshire Mercury 5 Aug

17 Aug 1871

18 Jun 1872

BR

Leeds

Long Hills Lincoln 0.95" in 30 m

Branston (Lincs) 0.42" in 20 m
There was a violent local rain in the north of
Northamptonshire, and the south-east of Leicestershire.
This was not felt at any of our

Mercury 20 Northamptonshire, and the Jun, Morning south-east of Leicestershire. Advertiser 20 This was not felt at any of our regular stations, but a gauge Jun. at a village near Kettering, Northampton gave 3-63 in the five hours Mercury 22 from 3 to 8 p.m., and another Jun gauge at Market Harborough collected 4 inches between 4-

50 and 7-50 p.m.

A thunderstorm on this day produced heavy falls over Bedfordshire, and parts of Cambridgeshire and Huntingdonshire. The maximum was at Sandy Rectory, Beds, where 2.07" fell, which was 9.5%, of the total fall in the year.

<Stamford>: Rain fell in torrents so that many places were flooded. A horse was killed by lightning at Easton and sheep and other stock were killed around <Stamford>.

Caistor: A thunderstorm with a rain lasting nearly an hour concentrated its fury on the wold district including th parishes of Swallow and Rothwell. Here the soil and silt were swept long distances into the valleys and hailstones accumulated to several feet in depth. Crops of barley were flattened.

Cleethorpes: There was a heavy fall of hailstones of large size and the town was completely deluged with rain but thanks to the sewerage works just completed the flood entirely subsided in a quarter of an hour. Stevington, Beds: A thunderstorm occurred between 7 and 8 in the morning and was accompanied by hail with a circumference of 3 inches. The flood ran down the streets and flooded several of the houses.

Turvey, Beds: The note was almost the same as for Stevington

<Northampton>: Great damage was done in the town; the foundations of a new house were washed away and the streets were covered with rubbish. People were living in their bedrooms and communication is being maintained by carts and boats. All down the meadows along the River Nene for many miles the land is under water and cut hay has floated down towards the Fens. Animals grazing there were drowned. The river overflowed its banks at the west end of <Northampton> and houses flooded. A bridge over the river has been washed away. Several pleasure boats moored at the riverside were washed away. Three men were able to secure one of the boats and get into it but it capsized and they were drowned.

<Kettering>: Several farmers in the area had stock drowned by the heavy rains. Ballast was washed from under the rail line at Rushton delaying rail traffic. At Barton Seagrave nearby the storm raged for 3 hours and pieces of ice fell in sheets. The raingauge in the 3 hour period was 3.22 inches.

<Market Harborough>: Nearly every cellar became flooded. Roads were impassable from near the school down to St Mary's Road. The sheep market was all under water. The entrance to Lubenham lane <Northampton> Road and St Mary's Road could only be entered by conveyances. The Folly Pond overflowed and filled the whole street. Between 4.50 and 7.50 4 inches of rain was measured. A man was drowned at Little Bowden. Finedon: The streets were in many places knee deep in water and many houses were flooded some to 3 feet

24 Jun 1872 Chelmsford Chronicle 28 Jun	Shoeburyness (Essex) 1.10" in 30 m	deep. The River Ise rose rapidly and flooded the Finedon Iron Works. Mawthorpe: A man was killed by lightning Southend: The storm raged from 6 to 9 pm. Houses in many instances were flooded to a depth of 3 to 4 feet. Hailstones broke windows and struck down swallows. The roads between Rochford, Rayleigh, Prittlewell and Southend were like ponds and impassable to pedestrians. Cocks of hay were carried away.
6 Jul 1872 BR 12 Jul 1872 Leeds mercury 15 Jul, Chelmsford Chronicle 19 Jul, Essex Standard 19 Jul 13 Jul 1872 BR	Geldeston (Norfolk) 1.00" in 25 m and 1.46" in 109 m	Much damage was caused to property all over <essex> including <colchester>, Tiptree, Messing, Easthorpe, Copford, Stanway, Lexden, and places adjacent. The storm was accompanied by hail as big as marbles and with duration sufficient to cover the ground several inches deep. Branches were cut down and gardens cut to ribbons. Much glass was smashed. The river overleaped its banks in a period of time so short as to be almost beyond belief. Along the Colne farmyards and building were flooded so that livestock were rescued with difficulty. At Lexden cows were recued by a farmer up to his waist. On the railway at Baker's Bridge NW of <colchester> the line was flooded 2 feet deep and ballast washed away. A train was derailed. Weeting <norfolk>: A man was struck and killed by lightning whilst sheltering under a tree. Epping: As above a man was killed by lightning whilst sheltering under a tree.</norfolk></colchester></colchester></essex>
23 Jul 1872 BR 25 Jul 1872 Cambridge Chronicle 27	Bury St Edmunds 1.06" in 2 h	<huntingdon>: The rain fell like waterspouts and there was a quantity of hail. On the following day the Ouse overflowed and meadows were flooded. No other flooding was noted.</huntingdon>
Jul 7 Aug 1872 Cambridge Chronicle 10 Aug , BR	Addinton (Bucks) 1.50" in 2 h	<kimbolton> (9 m W of Huntingdon): the rain fell in torrents for upwards of an hour so that water accumulated in the streets up to knee deep. In the back street the water ran into houses on both sides. Farmseads were so much flooded that stock had to be moved to places of safety. The water soon began to rise in the River Kim and so rapidly did it swell that occupiers in the precincts had to move their goods and chattels to higher ground in water knee deep. <hillington> (Norfolk): The gauge at Hillington Hall, which held 3.50" was filled and ran over, and that at Hillington Rectory, of which the capacity was 3.70", was also found running over. A broad road ran with 6 inches depth of water like a stream; an eel was caught upwards of a furlong from a pond on the high road; cellars were inundated, and also stables and cottages. No inhabitant recollects anything like it.</hillington></kimbolton>

25 Aug 1872 Stamford Mercury 30 Aug		<kirton lindsay="">: In a thunderstorm the streets were complete rivers and the grates were completely inadequate to receive the flow.Cattle were killed and building and hay struck by lightning and set alight.</kirton>
6 Apr 1873 BR		<branston> (Lincoln): Remarkable thunderstorm with hail half-an inch to 1" in diameter, 0.20 fell in five minutes.</branston>
23 May 1873 Stamford mercury 30 May		<horncastle>: A short but heavy shower of hail and rain passed over Horncastle and the streets were flooded, the grates being blocked up by debris washed into them. Fruit trees were damaged by hailstones.</horncastle>
24 Aug 1873 BR	Cold Norton (Essex) 1.05" in 35 m	
3 Oct 1873 BR	Branston (Lincoln) 0.65" in 20 m	
24 May 1874 BR	Mattishall (Norfolk) 0.81" in 1 h	
10 Jul 1874 BR	Aspley guise (Beds) 1.25" in 1 h	
24 Jul 1874 Lincolnshire Chronicle 31 Jul, BR	Norwich 0.96" in 30 m Sprowston (Norwich) 0.78" in 30 m Branston (Lincs) 0.85" in 1 h	<branston>: the rain fell in torrents and forced tis way into several houses. Four cattle were killed by lightning. BR notes: Thunderstorm, and in many places the ground was covered and ditches were filled with hailstones; some beasts were killed and damage was done to trees and buildings; the storm came from the W. and was very narrow, not more than two miles wide <caistor>: Pelting hail occurred between 12 and 3 pm and damaged corn and turnip crops. At <cabourne> the entire village was flooded; turkeys were drowned and pigs rescued with difficulty. An extraordinary amoput of silt was washed into the village.</cabourne></caistor></branston>
28 Jul 1874 BR	Branston (Lincoln) 0.72" in 25 m	Sitt was washed into the village. <branston>: Another violent storm, in half-an-hour the ground was 2 in. deep, with hailstones, varying from ½ to 1 ¼ in. in diameter; harvest fortunately not ripe, but the corn was much knocked out; fruit bruised, vegetables were cut, and glass was broken; the hail falling off the buildings might be taken up by cart loads.</branston>
29 Jul 1874 BR	Boston (Lincs) 0.73" in 30 m Geldeston (Norfolk) 0.55" in 30 m	were cat, and glass was broken, the hall failing on the buildings inight be taken up by cart loads.
31 Jul 1874 Norfolk		<norwich>: Damage was done in one or two instances by inundations particularly in the lower parts of the city and the macadamised roads were swept clean. House property was affected in Lower Heigham, St martin's and</norwich>

Chronicle	1
Aug	

10 Aug 1874 **London Daily** News 12 Aug, Stamford Mercury 14 Aug 24 Sep 1874

BR

Calcethorpe (Louth Lincs)

Ipswich 0.75" in 45 m 28 May 1875

Ipswich Journal 29 May 17 Jun 1875 Bury and **Norwich Post** 22 Jun, BR

29 Jun 1875

Chelmsford

Chronicle 2

18 Jul 1875

Nuneaton

Advertiser 24

Jul, BR

0.61" in 12 m

Cardington (Beds) 2.50" in 1 h Newport Pagnell (Bucks) 2.00" in 2 h Dunmow (Essex) 1.46" in 2 h

Mainly Initial persistent frontal rainfall followed by thunderstorms

Pockthorpe. A great flood of water swept along Pockthorpe to a depth of several inches and entered some of the houses, but drained away with the clearing of grates. Houses on one side of Alexandra road in north Heigham were inundated especially at the corner of Earlham Road where a house was flooded 3 feet deep. <Godmanchester>: A violent storm flooded the lower parts of the town. Hailstones were as large as marbles and were solid pieces of ice. Damage was done to greenhouses with the glass much broken. <Cambridge>: The storm was accompanied by hail and heavy rain causing damage at Horningsea and Waterbeach districts.

<Ipswich>: The storm only lasted half an hour between 5 and 6 pm but the rain was so heavy that streets were flooded. The lower part of Elm Street, the bootom of Black Horse Lane, the part of Thursby's Lane next Princes Street and many other places were flooded ankle deep. In Handford road there was so much water that inhabitants could not get to or from their houses.

Bury: In a thunderstorm the rain fell with such volume and rapidity that some of the thoroughfares soon presented the appearance of rivers. In churchgate Street for example there was an unbroken sheet of water from kerb to kerb and some cellars at the lower end of the street were flooded. The water also found its way into St James church, the floor being well nigh covered. The roadway near the railway arch at Northgate was flooded to a considerable depth and conveyances were immersed to their axles. The water flowed like a torrent along Westgate road and near Stamford bridge it was 18 inches deep. In Mustow Street it was with difficulty that water was kept out of the houses. The rain continued for nearly an hour and raingauges measured 1.5 inches in two hours. In some of the villages to the north and south not a drop of rain fell.

<Hulcote> (near Milton Keynes): Thunder, and a little hail mixed with rain; within a mile of here the hail completely stripped the leaves off the potatoes, beans, and young plants; under the eaves of a cottage where it was driven, and where it fell also from the roof, I found it to be nearly 18in. deep.

<Chelmsford>: Torrents of rain and hail fell and traffic was suspended for upwards of an hour, the water running down the streets like a swollen river. A bullock was killed by lightning and a house struck and damaged. In Brookfield Road the hailstones were almost as big as walnuts, smashing glasshouse and conservatory glass and destroying gardens.

<West Haddon> (Northants): The principal streets were speedily flooded and The Green was 2 or 3 feet deep in a short time. Several houses were completely flooded.

<Winwick> (Northants): The street presented the appearance of a swift river carrying everything before it. One

Jul 20 Jul 1875 BR 21 Jul 1875 BR	Sprowston (Norwich) 1.40" in 2 h	of the houses nearest to the water was flooded nearly to the ceiling. <coston> (E Leics): The flood in this village was higher than has ever been recorded.</coston>
22 Jul 1875 Cardiff times 24 Jul	Widespread persistent rain but with local thunderstorm at the close	<northampton>: The River <<nene>> rose rapidly and the Fens are totally submerged. Railway traffic was delayed due to ballast being washed away (for example between Leicester and <stamford>) or embankments failing. <stamford>: The rail line between Stamford and Skegness was affected by flooding which washed ballast from the line with banks and sleepers afloat. Trains were delayed.</stamford></stamford></nene></northampton>
24 Jul 1875 Lancaster Gaz.		Storm at Louth <lincolnshire> flooding several houses. Thunderstorms were reported on the Wolds of E Riding and Moors of N Riding.</lincolnshire>
9 Aug 1875 Lincolnshire Chronicle 13 Aug		Louth: In a thunderstorm hail the size of hazel nuts fell. There were no reports of flooding.
22 Jul 1876 Lincolnshire Chronicle 28 Jul , Epworth		Louth: the town was affected by a violent storm of rain and hail which consisted of fused and jagged pieces of ice up to three quarters of an inch in diameter. Hundreds of squares of glass were broken. Several horses and sheep were killed by lightning. Animal deaths were also reported in various parts of the county. Flooding was not reported.
Bells 29 Jul		Epworth: the street immediately below the market place was covered by water from side to side and swept away the loose portion from the surface of the street. Heavy showers of hail mingled with larger pieces of ice also fell causing breakage of glass. Billingborough: In a short time streets and houses in low places were flooded. Several animals were killed by
23 Jul 1876 Peterborough Advertiser 29 Jul, BR	Thunderstorms were reported over East Anglia but without flood reports Bedford 1.85" in 1 h	lightning <sawtry> (Cambs): Rain mixed with large hailstones came down in torrents with an increase in size as the storm intensified. Some measured 6 inches in circumference, breaking glass and damaging trees and destroying standing corn. Birds were killed by the hail. <bedford>: Tthe extraordinary hailstorm here was very local in its character: commencing here it crossed the country in a south-western direction some eight miles, with a breadth of one to two miles. Some of the</bedford></sawtry>

hailstones measured 3 to 4 inc	hes in circumference, and one accredited farmer states that the hail at several
places lay on the ground to the	e depth of 4 inches. The duration of the downfall was about an hour, and the
depth when melted measured	1.50" in the gauge.

4 Apr 1877 Stamford mercury 6 Apr		<stamford>: Rainfall was mingled with hailstones the size of nuts and small walnuts and caused flooding of streets. Many windows in the town were broken by the hail.</stamford>
1 Jun 1877 BR	Mattishall (Norfolk) 0.53" in 20 m	
31 Jul 1877 Ipswich		<stoneham aspal="">: The severe rain and hailstorm lasted half an hour with ice as large as walnuts. Roads in several parts of the parish were flooded and in a broad sheet completely over the road. Such a storm has not</stoneham>
Journal 4 Aug		occurred here for more than 20 years. Wheat and beans are very much damaged by the hail. Many panes of glass were broken.
15 aug 1877 BR	Norwich 0.69" in 20 m	
18 May 1878 BR	Hillington (Norfolk) 1.23" in 2 h	
11 Jun 1878 Lincolnshire		<epworth, axholme="" isle="" of="">:In an afternoon thunderstorm the streets were flooded in a few minutes by the downpour of rain and hailstones the size of large beans</epworth,>
Chronicle 14 Jun		
19 Jun 1878 BR	Huntingdon 2.61" in 2 h	
23 Jun 1878 Lowestoft Journal 29 Jun, BR	Leyton 3.10" in 2 h	<fakenham>: the thunderstorm lasted nearly an hour. The rain speedily converted the streets into small rivers and the lower parts of the town suffered considerably. Large hailstones and pieces of ice fell abundantly doing damage to windows and greenhouses. Standing crops were beaten down in some places and gardens and fruit trees damaged.</fakenham>
26 Jun 1878 Grantham journal 29 Jun, BR	Northampton 1.25" in 50 m	<oakham>: Rain and hail came down in torrents flooding the streets in a few minutes. An old house in Dean's Lane was completely washed down. Generally the rain was acceptable to crops of corn and gardens.</oakham>
23 Jul 1878		<attleborough> (SW of <norwich>): A thunderstorm caused much lightning damage but there were limited</norwich></attleborough>

Lowestoft Journal 27 Jul 24 Jul 1878 BR	Oundle (Northants) 1.13" in 2 h	reports of flooding. 'On taking a stroll through the town afterwards, one found several inhabitants baling out their yards and kitchens'. Several roads were flooded in some cases more than knee deep.
6/7 Aug 1878 Boston Guardian 9 Aug,	Caistor (Lincs) 0.89" in 10 m	<spalding>: Two storms passed over the town. Station Street, as usual in heavy rains, was flooded to a depth of 18 inches and impassable for a time for pedestrians. St Thomas road and the Crescent were also flooded but not to a great depth. The water quickly subsided but left a very objectionable sediment behind. (The paper referred to defects in the drainage).</spalding>
Stamford Mercury 9		<caistor>: The storm lasted more and an hour starting at 5 pm. The streets were converted to rivers and considerable damage done to property.</caistor>
Aug, BR		<kettering>: The rain fell in such torrents that sewers burst in several places. Some parts of the town were flooded and considerable damage done to goods stored in cellars.</kettering>
12 Aug 1878 Norfolk Chronicle 17		< <yarmouth>>: A short thunderstorm between 1 and 2 o'clock brought heavy rain and hail and lightning caused damage and alarm to a school. Several thoroughfares and many houses were flooded and in many places foot traffic was stopped including on the North Quay</yarmouth>
Aug, Northampton		<lowestoft>: From an immense fall of rain and hail some streets were inundated several feet deep and many houses were flooded. Hailstones were picked up an inch in length. Seven calves sheltering under a tree were</lowestoft>
Mercury 17 Aug		killed by lightning.
23 Aug 1878 BR	Hulcote (Beds) 2.25" in 95 m	
24 Aug 1878 London Evening Standard 26 Aug		<essex>: In a severe storm widespread over London neighbouring places in Essex were also affected at Cheadle heath, Romford, Barkingside and Ilford as well as Stratford. The crops were beaten down and the hail broke many windows in greenhouses and roads were inundated, the water rising to a height of 2 feet. Houses sustained considerable damage.</essex>
30 Aug 1878 Essex Newsman 31 Aug		<chelmsford>: The storm commenced about 3.00 and continued until about 5.00. The rain flooded the streets and roads so that they were generally ankle deep but in some instances as in the high path in Baddow Road, Springfield Street and in some of the roads in the parish of Little Baddow, knee deep. The storm interfered with the last hours of Chelmsford Market as drovers rushed to inns and other shelters. Cellars and basements in low</chelmsford>
Aug		lying houses in many parts of the town were flooded. <sandon>: The storm was heavy and the road between Sandon Bridge and Marsham's hous was flooded and impassable.</sandon>

8 Sep 1878 Ipswich Journal 10 Sep, Grantham Journal 14 Sep Northampton 1.31" in 2 h

3 Aug 1879 Webb et al 2009, London Evening Standard 4 Aug, Eastern **Daily Press 4** Aug, Globe 4 Aug, Leighton Buzzard Observer 5 Aug, Bury and **Norwich Post** 5 Aug, Norwich mercury 6 Aug, Herts

and Cambs

Cambridge: storm rainfall was over 3 inches Norfolk: The storm was said to be the worst since 9 Aug 1843 which was more destructive than this one for the fall of ice. Norwich 1.67" Yarmouth 2 ½ " Grantchester 100 mm Herts and Cambs report rainfall during the storm: Barrington 3.87" Cambridge 3.25" Royston 3.00" Therfield 2.03" Wrestingworth 2.24" Wetherden (Suffolk) 1.77" in 105 m Cambridge 3.60" in 4 h 30 m

<Springfield>: The fields beside the river Chelmer and the Blackwater Navigation in the vicinity of the Gasworks were covered with water and some cattle were carried away.

<Hutton>: Fields and gardens were flooded and the road near the Chequers and the railway bridge was knee deep in water.

<Witham>: the rain was accompanied by large hailstones rendering Guithavon Street and Bridge Street impassable; a number of houses were flooded.

<Sudbury>: The rain and hail for upwards of an hour caused floods in many places the drains being insufficient to carry off the water. Several private houses were flooded and the pathways in and around the All Saints Churchyard were completely submerged. The hailstones were very large. The storm was within a six mile radius although there were similar storms at a distance.

<Billingborough>: Hailstones of a very large size fell followed by a heavy downpour of rain that soon flooded the streets. The large drain at the north end of the town quickly filled to the edge of the banks. Buildings were struck and damaged by lightning.

<Falkingham>: The storm lasted about an hour with large hailstones which broke several windows. Several houses were flooded causing occupants to seek shelter upstairs.

< Cambridge>: The storm continued for four hours and the streets were flooded. The river rose 10 feet in 5 hours [Hardly a wall of water] and the water was level with the lawn at King's College. There was flooding all along the valley of the Cam more than for 20 years and the college grounds were flooded. The flooding was to an extent unknown for 24 years. Men were rowing on Midsummer Common which is flooded almost up to the four lamps. The college grounds of Trinity, St John's, Clare, King's and Queen's were several feet deep with water and the roads at the back of the colleges were impassable to pedestrians. Parkers Piece presented the appearance of a lake at daybreak when scarcely a piece of turf could be seen. The University Cricket Ground was almost in the same condition and water penetrated even into the bedroom of the custodian. The people who live at the back of the colleges and at Newnham are isolated from the borough and some people have been removed from their homes out of upstairs windows. Many houses in the town have been flooded.

Hailstones as large as beans fell and broke glass of greenhouse etc. A man at Tivetshall was struck dead by lightning. Vast tracts of land are flooded between Cambridge and St Ives. Communication between Cambridge and the Midland counties was disrupted by flooding of the line. BR further reports: The fall occurred between Reading and Norwich, and was very heavy over Cambridge. All the gauges in the town record upwards of 3 in., and at Granchester Mill the fall in 24 hours was very nearly 4 in.

Reporter 8 Aug, Bury fee Press 9 Aug

<Norwich>: The rain descended for nearly two hours before daybreak. Nearly every street was quickly deluged with water which gathered in big streams and coursed madly along carrying rubbish which choked the gulleys. In all quarters of the city great pools were formed rising above the paths and pavements and rushing into under kitchens, cellars, warehouses and shops. The wind continually veered through the storm which seemed to stop then returned. An immense volume of water poured down Earlham Road and unable to escape through the gratings ran down Park Lane on the one hand and Alexandra Road, Gladstone Street and Belvoir Street on the other. Houses were struck by lightning on Alexandra Road. Houses were flooded in Blevoir Street, Lower Heigham, St Martin's and St Miles. Water poured into St Lawrence church. From St Stephen's road the water coursed into St Stephen's Street and flooded many cellars of businesses causing irreparable damage to goods. Cellars in the Market Place were flooded of the Lamb Inn and adjacent grocer's. Little Orford Street was flooded to a depth of several feet. Cellars in London Street were similarly affected. At Holl's brewery in Lakenham, the cottages in the vicinity were flooded to several feet. Some hedges were thrown down on Long John's hill but greater effects of the storm were on Carrow Hill where a massive stone wall was struck and thrown down. An immense volume of water pursued its course past the Carrow Works as far as the Swing bridge, flooded the toll house and emptied itself into the river. The whole of Carrow Hill was deeply excoriated. Along the Clarence Harbour Road the ground looked as if it had been ploughed up and where the water descended from the Thorpe quite a deep ravine has been cut close to the railway bridges. In nearly every street some householder or shopkeeper experienced the inconvenience of encroaching water. Heaps of shingle and sand were depositied in hollows. In the lane adjoining St Matthew's Church, Thorpe Hamlet, the gas pipes were laid bare.

<Frettenham>: Three horses were killed by lightning.

<Wells next the Sea>: A church at Wells next the Sea was destroyed by lightning and a subsequent fire; little more than the tower was left standing.

<Cromer>: The gratings in the street becoming stopped, there was an enormous run of water through the opening between the West Cliff Boarding House and the Esplanade House which gullied out a large quantity of soil from the top of the cliff.

< Wymondham>: The storm rain was accompanied by hailstones half an inch square. Inhabitants were engaged

baling out water in Market Street, the sewers being quite inadequate. The White Hart Inn yard was completely flooded. There was three feet of water in many places. In Damgate Street inhabitants spent the night baling out water. The Sun Inn bowling green was covered with water 3 feet deep. The water from the river overflowing entered some houses. The road to Soton was impassable to foot passengers. Under the new railway arch near the station the water was nearly 6 feet deep. The wind was at one time at hurricane strength and the Brook Lane Mill sustained injury with one of the sails being hurled into an adjoining field. The Norwich Road was a sheet of water which entered some of the cottages.

<Lowestoft>: The rain flooded houses in Surrey street, Bevan Street and Tonning Street, pat of the London road near the Suffolk Hotel, St Peter's Street and several parts of the Beach and the High Street. The water was up to the knees in houses or higher.

<Yarmouth>: The rainfall was so heavy that the roads and streets were flooded in a few minutes and affected gardens and houses. All the low lying portions of the town suffered greatly with roads scoured and gullied and the drains blocked with debris.

<Gorleston>: A house was partially unroofed an in another a gable end blown in. On roads silt was washed away exposing stones and flint with deep gullies cut. A horse was killed by lightning.

<Hempnall>: Scores of houses were flooded some to a depth of 2 feet with much damage to furniture as well as goods of tradesmen whose shops and warehouses were flooded. Communication on either side of the bridge was stopped and much damage was done to the bridges and walls near the watercourse were washed down.
The adjacent villages of <Saxlingham> and <Topcroft> were also extensively flooded.

<North Walsham>: Large hailstones fell in abundance. Much damage was done to warehouse property and other rooms and dwellings.

<Diss>: The storm last 3 hours from about 3 am and the hailstones were as big as walnuts and few houses escaped without broken windows including the Independent Chapel. Mount Street, Church Street, Victoria Street and the lower part of Denmark Street were flooded with water making its way into the houses. At the

Crown Hotel the water made its way into the large market room where a fete dinner had been prepared.

<Godmanchester>: Many of the houses were under water and the storm has severely flooded much of the county of Huntingdonshire.

<Leighton Buzzard> Bridges were swept away at Leighton Buzzard and houses there were flooded and their inhabitants confined to upper rooms. The <<Ousel>> and its tributaries overflowed and the land for miles was flooded to a depth of 6 to 8 feet. The brick walls upon the bridge at the bottom of Lake Street were carried away to their very foundations. The walls protecting the gas works and Grovebury Road were knocked down. The parapet of the bridge at Steppingstones Road was razed to the ground and in Brickhill road a wall was washed away by the overflowing torrent. Great damage was done to several mills by the floods. When the bridge parapets went down the water swept into the roads and in Lake Street the water rose up to the junction with Grove Road to such a depth that every house between that junction and the gas works was flooded with furniture floating about in the lower rooms. Meager's coachsmith's yard was cleared of many of its contents including 4 pigs washed out of their sty. The house there was flooded to such a depth that the piano as floated and overturned. Cows were carried downstream. The canal overflowed deluging the Battlesden Carriage Works. The scene at daybreak was of an angry surging sea entirely encompassing the town. Ravines were cut through the roads. The water penetrated the gas works and put the fires out and cut off all light to the town. The ballast was torn from the sleepers on the Dunstable branch railway and a slip occurred on the main line near Triag.

<Biggleswade>: Older residents recall the storm of 13 Aug 1843 when hailstones broke all the windows of a southerly aspect. In about half the houses in the town the water ran in under their doors, the drains being quite inadequate to carry the water away. The water penetrated several of the cellars in the Market Place. The river overflowed and animals had to be rescued by boat and wading. The bridge by the Chequers Inn on the Sutton Road was washed away with all four arches having fallen in. The water entered the houses by the side of the river at the back of Shortmead street and running out the front. On the other side of the bridge the houses were evacuated as the water was just over a yard high. The peak water level was with one exception – over 50 years ago – higher than any other flood. At Girtford the bridge was washed away. At Blunham the rush of water was so great that the iron railway bridge was broken through and ballast and sleepers were carried away. At

Gamlingay the rail line was similarly damaged.

<Barton le Cley>: the whole length of the road through the village was converted to a swiftly flowing river with cellars flooded and the infant schoolroom unuseable. Barton Mill was severely damaged. A hut was washed down and the inmates sought refuge at the Rectory.

<Lower Sundon>: The vaults of the church were filled and the floor in some places sank in.

<Streatley>: Several of the cottages at the lower end of the village were flooded and in some it was 3 feet deep. There was on sheet of water from the shop to some distance past the little chapel. The church was struck by lightning but with limited damage.

<Turvey>: There was no perceptible rise in the <<River Ouse>> until the morning of Monday 4th. About 11.00 a vast body of water appeared coming down the valley without any warning. The Ouse speedily spread over its banks and flooded the meadows on either side. In some cases the haymakers could scarcely rescue their forks and rakes. The large wheel of the mill was quickly choked with floating hay.

<Renhold>: Houses were flooded, corn beaten down and a woman died.

<Lidlington>: The lower part of the village was a complete lake while the hill was channelled two feet deep and the railway lines completely buried in the sand. Rainfall during the night of 1 ¾ inches was reported.

<Stevington>: at 6.30 on 5th the river rose with unusual rapidity and flooded the adjoining meadows.

<Flitwick>: The mill and its contents were damaged and the bridge was washed away. Many animals were washed away and drowned. The lower part of Maulden was completely under water. The Primitive Methodist chapel at Clophill was surrounded by water. The Flying Horse pub was flooded and the residents retreated upstairs.

<Rickinghall><Suffolk>: the rain falling between 03.00 and 04.30 was 2.3 inches. The parish church and school had to be closed as they were flooded to a depth of several inches.

<lckworth>: No flooding was reported but the hailstones were two or three inches long and broke much glass in windows and greenhouses.

<Isleham>: The water around Isleham Ferry being a foot deep before the storm has now risen by 3 to 4 feet by the overflow of the Rivers <<Lark>> and <<Lea>>. You have to row a mile or two to geet foot passengers over the Lark. The new ferryhouse is wholly surrounded by water.

<Chedburgh><Bury St Edmonds>: According to the Rector the hailstorm which lasted about 2 minutes brought hailstones 2 to 4 ½ inches in circumference. The one that measured 4 ½ inch weighted ¾ ounce. Someone else picked up stones the size of hen's eggs with one stone weighing 1 ½ oz. The rainfall during the night measured 0.65 inch. Holes were found in a grass plot 1 inch deep and 1 ½ inches in diameter. A great many glass panes were broken.

<Culford>: The hailstones were of great size and irregular in form, some of them exceeding 5 inches in circumference. Glass was perforated like a bullet. At least 1 ½ inches of rain fell in 2 hours and 2.09 inches in the day.

<Walsham-le-Willows>: The storm continued from 2.30 to 4.30 in the morning. The river was totally unable to carry such a volume of water and speedily overflowed and flooded the adjoining land and houses. The road from the High Street to the Old Hall Farm was impassable for hours and great destruction has taken place to property At Hatten's farm premises the water was up to the window sills. Near the Baptist Chapel a cottage was flooded and wrecked when the walls collapsed. Several houses in the High Street were flooded to a depth of 2 to 3 feet, including the school and schoolhouse. So rapidly did the water rise that in less than an hour the schoolmistress had to be taken from the house by the bedroom window the lower floor being flooded. The Bury and Norwich Post details the houses that were flooded or destroyed. Unprecedented floods washed away two clay-built cottages and injured the foundations of others.

<Coston> (E Leics): Rain began about 8 pm distant thunder at 11 p.m.; and about 1 am on 3rd the storm broke with torrents of rain and vivid lightning, and continued till nearly 5 a.m. The water rose rapidly, and the flood in the village was very high.

<Stradbrooke><Suffolk>: Hail and pieces of ice broken nearly every window in the village. Trees were uprooted and sheds and roofs were carried away. The hailstones were as large as walnuts. Various windmills were damaged by wind here and in neighbouring villages.

<Stowmarket>: Sixteen sheep together were killed by lightning. The river which the day before was quite empty rose over six feet and all the low meadows were covered. At Combs the water came over the road for several hundred yards and causing damage to hay and crops.

<Newmarket>: The river at Cooper's Mill on the Ipswich Road rose rapidly and in two hours the high road was flooded for several hundred yards. The <<Gipping>> rose overflowed and all the low ground adjacent was flooded and much damage was done to hay and crops have been beaten flat.

<Mildenhall>: A tempest of unusual severity occurred from half past two to 6 o'clock rendered the roads impassable. Lightning set buildings alight and killed a sow whilst many ducks and chickens were drowned. All the cellars in Mill Street were flooded. In the Market Place residents had to bank material under their doors to keep the water out.

<Clare>: The rain was followed by a hailstorm as is seldom heard, sounding like big stones being hurled at windows and doors. Pieces of ice 2 to 3 inches across were found.

<Thetford>: the rain fell in such torrents as have never been witnessed before. The water poured down White Hart Street and King Street and settle in Bridge Street so that houses had 2 to 3 feet of water in their basements. Some houses and businesses were flooded to a depth of 2 feet. The road was left one mass of mud and silt. The Anchor cellar is full. In the higher part of the town there were many sufferers in consequence of the drains being blocked up, the water finding its way into houses. In Minstergate Street one house had water up to the level of the table. In White Hart Street properties including the Cooperative bakehouse were flooded to a considerable extent. The green on London road was covered and Brandon Road was impassable for a time.

<Bourn>: The town was visited by one of the most severe tempest and and disastrous floods on record. The water commenced rising at 11.00 pm and continued to do so until 06.00 with several houses becoming inundated, some to a depth of 3 feet. The manor house and farm premises suffered most with water through

the front door and out through the back windows. Horses and 3 pigs were killed by lightning.

<Meldreth>: Before morning many of the cottages were flooded. The road was impassable at Chiswick End.Several farmyards were inundated and stock had to be moved out.

<Foxton>: Rain was mingled with great hailstones. Several houses were inundated and it was 2 feet deep in cellars.

<Barrington>: The raingauge in the vicarage gave rainfall between 10.30 pm and 5.00 am of 3.87 inches. A great amount of flooding was caused by the water coming down so suddenly. The road on the village green was flooded to a greater depth than has been known for 50 years.

<Colchester>: The Mayor's home at Hythe Hill had 800 to 100 panes of glass broken with an easterly aspect. A large quantity of glass was also broken at Myland and other parts of the town. Seven bullocks were killed by lightning at Mistley.

<Weybread> (Suffolk): Intense rain was followed by hailstones the size of small oranges that wrecked glasshouses.

<Barrow><Bevington>: Hail penetrated slated shed roofs and many windows were broken

<Brentwood>: The storm raged for more than an hour and rain and large hailstones fell in torrents with much glass broken.

<Wetherden> (near Stowmarketm Suffolk): 2.30 a.m. to 4.15 a.m. incessant thunder and lightning with hail and rain; amount 1.77" causing worse floods than any known for 20 years

17 Sep 1879 W Ipswich m Journal 20 Sep, BR

15 Apr 1880

Wisbech (Cambs) 0.64" in 30

Maldon (Essex) 1.03" in 30 m

<Framlingham>: A severe thunderstorm occurred periodically during the night. The river began to overflow the following morning and stood about 4 or 5 inches on the path near the Spring Pump. Fairfield Road was a complete river for nearly a quarter of a mile and about 2 feet deep. The streets of the town were washed clear of silt. A horse was killed by lightning. The Post office, the Peoples Hall and all the houses on the banks of the river were inundated to a depth of 12 to 18 inches. A brick bridge on the north of the town was carried away.

BR

23 Jun 1880 Market Harborough (Leics)

1.00" in 30 m RR

Wootton (Beds) 1.27" in 90 m 25 Jun 1880

BR

2 Jul 1880 **Essex Herald**

6 Jul

Jul

13/14 Jul 1880 Glasgow Herald 15 Jul

Persoistent rains over 13th and 14th gave 2 day totals of over 3"

March (Cambs) 2.13" in 90 m Terrington (Norfolk) 1.06" in

2 h

Marmont Priory (near Wisbech) DR 3.30"

It was at first believed that 15 Jul 1880 this was the highest flood **BR Sheffield** ever experienced but daily according to Harrod there was in April 1641 a great rain Telegraph and westerly wind that made 16/19 Jul, the Welland flow half way up to St Mary's church. It filled **London Daily** the lower rooms of the Bede News 16 Jul. House in St Martin's and Stamford those of the George Inn. It rose 5 feet 4 inches in the mercury 23 lower rooms of the Bede house. From this the 1880 flood was 16 inches less than

> in 1641. Silsoe (Beds) 0.80" in 50 m and 1.18" in 1 h

<Dunmow> The streets presented the appearance of running streams and cellars and ground floors were inundated. The storm was very localised as neighbouring villages had no rain.

<Weedon> near <Northampton>: The town was inundated and 8 cottages were reduced to ruin. Four on Farthingstone road have also been demolished whilst others are greatly damaged. Several of the inmates had narrow escapes. At <Great Haughton> a man was killed by lightning.

<Kings Lynn>: Much damage was done to hay and standing crops and a flock of sheep was destroyed. BR notes: Some bridges on the Midland Railway were washed down, and traffic was temporarily suspended.

<Northampton>: Widespread thunderstorms 1.74" with flooding on the outskirts of town with destruction of property and loss of life. Two people were drowned at Northampton. Several head of cattle were drowned and quantities of hay were swept away. In the low lying part of the town inhabitants dammed up their doors with clay but later the water flowed in through the windows. Wetherall's factory was submerged.

<Huntingdon>: The Ouse overflowed to a serious extent and flooded the racecourse and all the low lands. <Stamford>: It was said to be the most destructive flood that had ever visited Stamford. The rise of water to such an unusual height and in such a short time was totally unprecedented. The river overflowed its banks early in the evening but at 10.00 pm the water rose with such rapidity and force that Bath Row and Water Street and the new road leading to the railway station became like rapidly running rivers, in Bath Street being 6 feet, in Water Street about the same and about 3 feet in New Road. It was only on St Mary's Hill that furniture could be removed before the floods came upon inhabitants. The Town Hall was thrown open as a refuge including those from Welland Street. The water was above the archways of the main bridge but it survived. However, the iron suspension bridge leading from the gas works to Water Street was not strong enough and at midnight the abutments gave way and the iron structure was washed down as far as the railway station. The bridge leading from Hudd's Mill to Barncak Road also gave way and all the neighbouring walls were washed down. Pigs sheep and chickens were washed away. At the George hotel the water reached to the top of the pockets of the billiard

table and covered the courtyard to a depth of several feet. The aviary of Jones the dentist was burst open and only one bird was saved. The yard of Robert's builders on Wharf Road was at least 7 feet under water. The outer gates of the brewery on Water Street were torn away and barrels floated among the railway trucks at the station. A list was compiled: Jelley's Mill (water 5 feet 10 inches), No 17 Bath Row (water reached the second floor), Exeter Building Castle Street(14 fowls drowned), houses in the lower part of St Mary's Hill (much damage and loss), Anchor Inn and George Hotel (very great loss): many individual looses noted. <Newstead>: By the overflowing of the <<Gwash>> traffic on the Uffington Road was stopped and the Corporation gardens were under water to a depth of 4 to 6 feet.

<Market Deeping>: The great downpour of rain in Leicestershire and the Welland Valley has sent down such an extensive flood that no record of a greater flood on the Welland has been found. Before midninght (15th) the water rose so that several houses were flooded down the whole street and in Deeping St James and Deeping Gate the water rose to 6 inches above the remarkable flood in July 1875 which was then said to be the greatest known. The houses in the Market Place were also inundated, water rushing through the New Inn and other places. The stream flowed through many houses like a cataract for 24 hours. Horsegate was impassable, the water reaching the window sills and a cottage was washed down after the inmates had been removed. Walls pigsties and fowl houses were carried away. Mill Lane and Church Street became impassable, the water having overflowed from Thorpe's mill stream and the houses were 3 or 4 feet deep. Towngate was submerged 3 or 4 feet deep. The gas works was inundated and the gas partially cut off for two nights.

<Market Harborough>: The thunderstorm raged with great fury for several hours. The Welland being full from the downpour on the previous day there was no room to receive such a rush of water as came from the north and northwest parts of the town. The water which came down the river over the Cherry Tree paddock levelled the wall and then continued until it broke down the wall at the west door of the New Hall and then into Sheepmarket. Another stream came from the canal on Coventry Road and a third current flowed down High Street and Church Street owing to the overflow of the canal. A fourth stream broke the wall at the back of Gibbon' Row and joined the great sea in the Sheepmarket which was calculated to be 7 feet deep. Houses there were filled and furniture damaged to a lamentable extent. Nunneley and Eady's brewery suffered severely, the north end being washed down. The gas house was inundated to a depth of 3 to 4 feet so no gas could be used that night. The total loss of property in the town is estimated at £15000. A committee was formed to distribute help to sufferers.

17 Jul 1880 Stamford mercury 23 Jul <Raunds> (on the <<River Nene>>: the thunderstorm raged from 0700 to 0830. Half an hour after the storm had abated the town was visited by one of the most disastrous storms ever witnessed in the town. A watercourse runs through the centre of the town receiving several tributaries. It is culverted but these were full from the preceding storms and the ground being saturated the brook overflowed and every road that led into the town was flooded. The low lying parts of the town were flooded from one to 6 feet including Upper End, High street, Middle Street, Brook Street, Higham road and Thorpe End. The furniture was floating about and the water rose so rapidly that nothing could be moved in advance. A bakery at Upper end was flooded to a depth of 3 feet and in High Street most of the houses were under 3 feet of water. One house was flooded to 6 ¼ feet deep. In Brook Street and Higham End the lowest part stood 6 feet deep in water and the houses to 4 or 5 feet. Partition walls and summer houses were forced down. Losses cannot be less than £1000.

<Thrapston>: In consequence of reports from higher up the stream at Northampton and Wellingborough, anxieties were expressed by residents in Bridge Street who removed their furniture and clayed up their doors. Denford Road near the gasworks was flooded. Much floating hay passed through the bridges. The water rose within 6 inches of the great flood in 1875 when bridge Street was almost entirely submerged.

<Coston> (E Leics): Flood rose rapidly (River <<Eye>>) almost to the height of that of July, 1875.

<Stamford>: A further storm caused flooding in Scotgate and All Saint's Street but the river was unaffected.

<Bourn>: The rain fell in torrents for about 2 hours and the houses in North Terrace were completely flooded, the occupants being obliged to remove their furniture.

<Peterborough>: The effects of the recent heavy rains were not felt until late on 17th when the river rose rapidly to an unusual height but nothing compared with the flood of 1875. The houses in Bodger's yard were flooded. Albert Place and Water end Woodstone almost entirely escaped. Several houses near the river at Stanground were flooded and the road to Peterborough was several feet under water.

<Godmanchester>: Another alarming storm continued for about 2 hours. The water flowed from the field drains and flooded the vicinity of Silver street. Part of the bank on Westside Common gave way and flooded the lower portion of it; the stock had to be removed.

<Market Deeping>: A further storm broke over the district. The road from the Mill House to West Deeping was flooded. West Deeping houses were flooded with the furniture floating. Tallington also suffered from the storms.

<Helpston>: The paper mill was flooded. Etton and Maxey were flooded and residents had to take refuge on

upper floors	per floors	o	Ю	TI	١r	эe	or	u	
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		upper floors.
29 Jul 1880 BR	Horncastle (Lincs) 1.49" in 105 m	
6 Aug 1880 Stamford Mercury 13 Aug	Partney (Lincs) 1.29" in 50 m	<spilsby>: At <partney> a beck which crosses the road on the north side of the village overflowed and some cottages nearby were flooded. At the south side of the village at Sausthorpe Lane End a number of cottages and gardens were flooded, the water reaching the axle and body of carts.</partney></spilsby>
7 Aug 1880 BR	Swaffham (Norfolk) 2.18" in 2 h	
9 Oct 1880 Chelmsford Chronicle 15 Oct	No thunder mentioned; probably not a flash flood	<chelmsford>: During the night there was an incessant downpour of rain and in the morning all the streams in the district including the Chelmer, the Cann and the Wid and the Navigation river rose very rapidly and overflowed their banks with vast expanses of land being under water. In the town the flood extended from the Stonebridge up High Street to the entrance to London Road and from London Road bridge to Tyndal Street. There most of the cellars and cellar kitchens were flooded. The east side of High Street was also affected. CC reports that the most disastrous flood that has occurred in Chelmsford was in 1824 when most of the streets in the town were flooded and a large part of Moulsham was submerged. A tablet in a garden wall in High Street shows the level of that flood. It is stated that the making of the railway line and the cutting of the New London road have decreased the extent of Chelmsford floods.</chelmsford>
27 May 1881 BR	Diss 1.75" in 70 m	
3 May 1882 Daily telegraph 4		<wellingborough>: In the valley of the Nene a great deal of land was flooded. A man was killed by lightning whilst milking cows. <newport pagnell="">: the thunderstorm lasted upwards of an hour. The rain flooded the streets and hailstones</newport></wellingborough>
May, Croydons Weekly		fell very plentifully. <wolverton>: The thunderstorm lasted over an hour and the hailstones were almost as large as marbles. By the next morning the river had greatly swollen. The hail damaged fruit and crops.</wolverton>
Standard 6 May, Northampton Mercury 6		<raunds>: The thunderstorm with rain and hail last just less than one hour. The water ran down the street in streams; drains were blocked and cellars in various parts of the town were flooded. The water overflowed the culverts, flooding Upper and Lower High Street and Brook Street to a depth of 8 to 12 inches. Inhabitants feared a disaster akin to autumn 1880but fortunately it subsided before getting into houses.</raunds>
May 8 Jul 1882 Northampton		<wellingborough>: Between 3 and 4 o'clock a storm broke out and for half an hour hailstones of considerable size fell rattling the window panes. Drains and sewers were blocked and many parts of the town were flooded.</wellingborough>

Mercury 15
Jul
25 Jul 1882
BR
0 lun 1002

Hillinton (Kings Lynn) 0.80" in

20 m

9 Jun 1883 BR 25 Jun 1883 Manchester

Courier 26

Jun, BR

Ketton Hall 1.00" in 2 h Cambridge 1.00" in 40 m Newport Pagnell 1.50 in 105

30 Jun 1883 Eastern Evening News 2 Jul, Stamford mercury 6 Jul, BR Thunderstorms were widespread in England and S Scotland but reports were mainly of lightning damage. Horncastle (Lincs) 1.86" in 2 h Lincoln 1.00 in 2 h 20 m

Gardens shrubs and trees were much damaged. The storm was confined to Wellingborough and especially the Victoria Estate. There has been nothing approaching this storm since 1845 when there was a similar storm.

<Cambridge>: There were 2 storms. During the first on 24th at Hasting Field large hailstones fell and did great damage to crops but also to glasshouses and windows. On the next day the storm lasted with slight intermission from 11 until 3.00 pm. St Botolph's church was struck and damaged as well as some houses. Some of the basements of larger houses had 4 to 5 feet of water in them. The Midsummer Fair was much disrupted and the Midsummer Common was almost like a sea.

<Royston> <North Herts>: Rain and hail affected north Herts and in Royston cellars were flooded.

<Kempton>: A house was struck by lightning and a child killed.

<Norwich>: A man was killed by lightning.

<South Willingham>: A man was killed wby lightning when his house was struck.

<Norwich>: The thunderstorm was preceded by a period of excessive heat. Several streets were impassable especially those at low levels. Gulleys became choked with grit and rubble or the drains were incapable of carrying the flow. Park Lane as usual was converted into a lake as a stream flowed into it from Earlham road. Houses were invaded and flowed in the front door and out the back. Broad deep pools were formed in parts of Gladstone Street and Stafford Street in the hollow between Heigham Road and Alexandra and St Phillip's Roads; several houses were flooded. Some streets between Tinkler's Lane and Old Palace road were likewise impassable. On Newmarket Road, Unthank's Road there was temporary inconvenience and water made its way into some houses. A man was killed by lightning at Earlham when a building was struck. Another man was killed when he sought shelter under an elm tree. St Martin at Oak Church was struck and damaged by lightning.
<Fakenham>: The storm lasted nearly an hour causing flooding of all the streets which became like rapid rivers. The water was a considerable depth in some low lying houses yards and cellars. At <Newton> nearby a small stream inundated a bouse to a depth of several feet and carried away a portion of the bridge.

<North Elmham>: The storm was accompanied by large pieces of solid ice which caused great damage to greenhouses. At <Broomgreen> a man was struck by lightning and killed.

<Lincoln>: On late 29th the thunderstorm was accompanied by rain and hailstones some as large as walnuts. The storm on 30th afternoon was even more violent with many of the streets and a large number of cellars were flooded. The water rushed through the Stonebow like a mill stream and from there to the High-bridge it was up to the knees of horses. It was 28 inches deep in the cellars of the spread Eagle Hotel. In Baggeholme Road there was an accumulation for some distance to a depth of 3 feet. The Lincoln and Honington Line was

3 Jul 1883 Leeds Mercury 5 Jul, Webb et al 2009

14 Jul 1883 Nottingham Evening post 16 Jul, Essex herald 16 Jul, BR 31 Jul 1883 Cambridge Stevenage 1.79" in 2 h 45 m Ipswich 1.58" in 3 h flooded and trains had to proceed with caution. A cow was killed by lightning and several buildings were struck and damaged. At <Briacebridge> too the main road was flooded and tram traffic was curtailed; people who had lived there for 50 years said they had never seen such a rush of water down the hills. Two men sheltering under an ash tree were severely injured by lightning. At <South Willingham> a man in a house was struck and killed by lightning. There was a landslide on the Louth to Lincoln line near the Donington tunnel.

<Newark> Heavy rain fell, flooding some of the streets and houses.

<Sleaford>: The principal streets were flooded and many houses in lower district lanes were deluged. There has been considerable damage in surrounding country districts with lightning damage to churches and houses and deaths of sheep.

<Holbeach>: The streets in some parts of the town were flooded in a few minutes, the drains being quite insufficient to carry off the water.

<Horncastle><Hemingby> (Lincs): Severe thunderstorm, 1.-86" in two hours, producing disastrous floods.
<Barton on Humber>: The storm between 9 and 10 pm was accompanied by hailstones the size of walnuts and upwards and lumps of ice 2 ½ inches long and weighing from 1 oz to 2 ½ oz. Great damage was done to greenhouses and conservatories and private dwellings as well as churches and public buildings. The fury was unbounded for 35 to 40 minutes. Webb reports: Great destruction accompanied this H6 hailstorm across North <Lincolnshire>. It is commemorated by a monument in Barton-on-Humber which was made out of bricks dented by the hailstones while being sand dried; 15 tons of glass was reported broken in the town. The swath was SSE-NNW from Caistor to Barton (Meteorological Record, R Met Soc 1883). This storm was the culmination of a very thundery week; e.g. severe hailstorms also featured in the Midlands on 29th June.

<Grimsby>: The hailstones broke innumerable windows and stopped drains thereby causing floods to a depth of several feet in the streets. Buildings were damaged by lightning and cows killed. Many other villages in North <Lincolnshire> were similarly affected by hail and lightning but flooding was not reported.

<Boston>: An immense quantity of rain fell in a short time flooding the streets in the lower parts of town.

<Spalding>: The rain fell in such torrents that the sewers were unable to carry off the flow flooding the streets and rendering them impassable.

<Barking>: The rain came down in torrents for over an hour and the streets presented the appearance of a river. At the lower end of the town many houses were flooded and occupants had to seek refuge upstairs. At Levy's Jute Works damage was done by the flooding to machinery and stores of jute. There was a heavy fall of hail which lay in some places 3 or 4 inches deep causing damage to corn crops and vegetables.

<Ely>: A violent storm lasted 20 minutes so that at the bottom of the Forehill the road was converted to a rapid river, no portion of earth or stone being visible. However, little rain fell in the upper part of St Mary's Street

independent Press 4 Aug		
29 Sep 1883 BR	Persistent rainfall – not a flash flood ?	Several rainfall stations recorded their greatest ever fall in one day covering areas of <lincolnshire>, <rutland>, <norfolk>, Cambridge, <bedford> and Northampton. Highest total was 4.30" at Skegness in <lincolnshire> and</lincolnshire></bedford></norfolk></rutland></lincolnshire>
		4 others in SE <lincolnshire> had over 3 inches. List of daily totals photocopied.</lincolnshire>
		The rainfall observer reported 'a great flood in the Nene valley'
		Map of rainfall distribution as Frontispiece of British Rainfall 1883
4 Jul 1884 Stamford Mercury 11	Alconbury (Huntingdon) 1.90" in 45 m	<alford>: A thunderstorm occurred and was the first copious rain for 6 weeks, total rainfall for May was 1.07 in and for June was 0.48 inches. The rains were generally welcomed and no flooding was reported. <northampton> (Sedgebrooke) A heavy thunderstorm with heavy hail about 1 p.m.</northampton></alford>
Jul, BR		<guilsborough> (9 ½ miles NE. of Daventry) Glass was broken at the Grange by hailstones quite as large as marbles.</guilsborough>
		<west haddon=""> (7 miles NE of Daventry), pieces of ragged ice of unusual size fell as hail.</west>
		<staverton> (2 miles SW of Daventry), the hailstones resembled, in size and appearance, pieces of lump sugar</staverton>
		broken for the table.
5 Jul 1884 BR	Hillington (Norfolk) 0.90" in 20 m	
9 Jul 1884 Eastern Evening News		<yarmouth>: A severe thunderstorm lasted about an hour and the rain was generally welcomed after a period of hot dry weather. The rain quickly blocked up the gullies and flooded portions of some of the roadways. A farm barn was destroyed by fire after a lightning strike.</yarmouth>
11 Jul		<baldock> (Herts Headwaters of River Ivel): The rain flooded the streets and lanes with rushing streams. For some time White Horse Street was one sheet of water, and quite impassable to pedestrians. The lower rooms of one house in this street were flooded, and a hole was sawn in the floor to get rid of the water. The low-lying houses in Norton-street were also flooded</baldock>
10 Jul 1884 Birmingham Mail 11 Jul		<northampton>: Rain flooded many parts of the town. A woman was struck and blinded by lightning. Much injury was done to livestock and property.</northampton>
20 Jul 1884 Ipswich Journal 22 Jul		<aldeburgh>: A thunderstorm with hail and rain visited the town and the hailstones were as large as an ordinary marble. The streets in several places were completely flooded. A waterspout was seen off Sizewell over the sea.</aldeburgh>
27 Jul 1884 BR	Willey (Warwicks) 1.30" in 75 m	
12 Aug 1884	Yarmouth 1.73" in 90 m	<great yarmouth="">: The heavy rain continued without intermission for two hours flooding many low lying</great>

Eastern Daily press 13 Aug, Norfolk Chronicle 16 Aug, BR	Peterborough 1.00" in 15 m	places, finding its way into cellars and through roofs. Hail fell occasionally and was of large size. On Albion road Market road and Church Plain, the sewer grating became quickly choked and the thoroughfares became like rivers. Some cottages were flooded with much damage to furniture and effects. Part of the parish church was flooded. BR reports: During a thunderstorm which passed over Great Yarmouth between 9 and 11 a.m., rain descended most copiously for nearly an hour, flooding the thoroughfares, choking sewer gratings and damaging cottages. Hail stones as large as marbles mingled with the rain. <bacton>: A woman was killed by lightning coming downstairs in her house with a child in her arms. The child was only slightly hurt.</bacton>
BR 6 Aug 1885	-	<oundle>: One of the most severe thunderstorms that have occurred for many years caused drains to be</oundle>
Stamford Mercury 14 Aug		blocked and houses flooded. Hailstones could have been gathered in large quantities the following morning.
7 Aug 1885 BR		<ketton hall=""> [Stamford]: A thunderstorm with hail at 11.50 am 0.56"; of which 0.42" fell in 30 minutes. About 4 miles E. of Stamford the hail stripped all plants and covered the ground to a depth of about 6 inches</ketton>
7 Sep 1885 BR 1 Jun 1886 Stamford mercury 4 Jun	Elsfield (Oxon) 1.15" in 40 m	<spalding>: So sudden and heavy was the downfall of rain that a portion of the town was flooded. In the Sheep market and at the corner of Hall Place the water was ankle deep affecting access to the railway station. On the Holbeach Road the water overtopped the paths and ran through the lower rooms of some of the houses. Business at the market was suspended and many stall keepers had their goods damaged.</spalding>
8 Oct 1886 BR	lpswich 1.80" in 2 h	<ipswich>: Extraordinary local storm; 1.80" of rain fell in two hours, the greater part of it fell in half-an-hour. Many parts of the town were flooded, and a windmill was struck by lightning.</ipswich>
15 Jul 1887 BR	Northampton 0.76" in 43 m	
31 Jul 1887 Lincolnshire Chronicle 5 Aug	Bucknall (10 km E of Lincoln) 0.71" in 45 m Alford (Lincs) 1.18" in 1 h	<spilsby>: An immense downpour of rain flooded the streets, the channel outlets being choked and several houses were flooded. The rainfall in one hour registered over i ½ inches as much or more than what occurred during the whole of June and July <alford>: Two horses were killed by lighning.</alford></spilsby>
22 Jun 1888 Ipswich Journal 23 Jun, BR	Several places in Suffolk reported thunderstorms but without flooding	<spalding>: the rain fell in such torrents for two hours that the drains could not carry away the water and some of the streets were flooded and impassable. Many of the shops and cellars were flooded. The crops and fruit have also suffered. <newark>: A boatman was killed by lightning</newark></spalding>

25 Jun 1888 Pall Mall Gazette 26 Jun, Swindon Advertiser 30 Jun, BR	Stretham (near Ely) 1.05" in 20 m	<colchester>: A deluge of rain and hail fell after midnight blocking the sewers and flooding the lower parts of town. People were wading on Waldon Road waist deep. Buildings were struck and damaged by lightning.</colchester>
26 Jun 1888 Bury Free Press, BR	Bury: 0.51 inch of rain in 30 minutes and total of 0.96 inches. Chelmsford 1.09" in 58 m	<bury>: It has been 30 years since we have had such a storm. Churchgate Street came in for the greatest rush of waters (as has been known from time immemorial) by reason of half a dozen branch streets emptying into it; it then rushed to Chequer Square where the residents felt the full rush of the torrent. The water went into underground cellars and kitchens reaching 8 or 10 feet deep. The worst case was at the corner of Bridewell Lane and at tower corner. The water also entered St James Church. The Angel Hotel was affected but with rain penetrating the roof. A resident in St Mary's Square had badly damaged contents in the basement with water and silt rushing in from the brewery yard. A shoemaker in School Hall Street at the foot of Honey Hill was also flooded. A wall was knocked down by the flood at the Crown Street Carriage factory. Houses were flooded in Southgate Street and Raingate Street. A sewer burst in Spring Lane and another in MustowStreet forcing up the asphalt. In Hospital road the water came in at the back of the houses and through to the front as it did in the West, the lower part of which was so flooded that ducks and chickens succumbed. The flood also damage property in Northgate, Eastgate Street and the Botanic Gardens. The storm of rain and hail occurred between 3 and 4 o'clock and within a few minutes every walk had become a river. Some crops were drowned in mud up to a foot deep. Potatoes turnips and even broad beans are flattened down as if a roller had passed over them.</bury>
5 Jul 1888 Ipswich Journal 6 Jul	Hillington (Norfolk) 2.04" in 2 h 10 m	<eye>: The thunderstorm lasted nearly an hour and the streets presented the appearance of rivers and found its way into houses and shops. The storm was accompanied by severe hail which damaged crops. The water reached the level of the horse's knees. <aldeburgh>: For 5 or 6 minutes immense hailstones fell many of them as large as horse beans, completely covering the streets. In many parts of the town both streets and footpaths were flooded. <norwich>: The effects of the storm were experienced mostly in the centre of the city where there was a deluge between 12 and 1 o'clock. From St Stephen's and Theatre Street the water flowed into Rampant Horse Street and entered cellars to a depth of 2 to 3 feet. The storm was severe in the vicinity of Castle Meadow that the Quarter Sessions were suspended at the Shire Hall. <coddenham>: There was a heavy downpour of rain and hail which flooded the streets. <ashfield>: hailstones and rain completely washed the beetroot from the earth and cut the tops of the onions.</ashfield></coddenham></norwich></aldeburgh></eye>
30 Jul 1888	Long Stratton (S of Norwich)	Wethersfield>: Heavy rain fell for an hour. Many houses were flooded and the inhabitants suffered great

Essex Herald, BR

1.83" in 55 m Diss 0.90" in 75 m Aylsham (Norfolk) 3.09" in100 m

discomfort. The water in Raven's brewery yard was 2 feet deep and cellars were much flooded. The water rushed through some cottages in Silver Street.

<Barking>: Many premises were flooded.

<Beckton>: A man was killed by lightning.

<Brentwood>: The water streamed down the hills from Brentwood and Warley to the line of Railway, flooding the station yards and flowed through the booking office.

<Harold Wood>: Some cottages near the railway line were flooded. The brickfield was wrecked.

<Rainham>: Several cottages were flooded in this parish.

<Romford>: North Street was for a time impassable for foot passengers and business premises in South Street were flooded and business premises in south Street were also flooded.

<Upminster> and <Hornchurch>: The roadway near the Bridge House Inn was cut up and the bridge house was flooded.

<Badwell Ash>: There was a dreadful downpour of rain which lasted 20 minutes which completely flooded the streets and flooded cottages opposite the church.

<Woolpit>: Hailstones larger than horse beans fell and part of the main street was covered to a depth of 1 foot.
<Diss>: A horse and a cow were killed by lightning. Flooding was not reported.

<Deben Valley>: Acres of Swedes and turnips were completely washed away and standing corn was much beaten down. Houses in low lying parts were flooded to a depth of 6 inches. 1.55 inches of rain fell in one hour.

<Sudbury>: Rain fell heavily in the town but heavier in adjacent parishes. Hailstones of large size fell at Glemsford and Clare where they were the size of a cob nut and pyramidal in shape. Twelve of the largest hailstones weighed an ounce each. The roads and lanes were sheets of water and the meadows were flooded.

2/3 Aug 1888 BR, Leeds Mercury 3 Aug, Chelmsford Chronicle 3 Aug, 2/3 Aug Essex Herald 4 Aug Very heavy rainfall in Essex extending to Wilts with the highest totals in Romford 4.56 and 4.50" but many stations over 2.00".

Such a flood in Chelmsford has not occurred since 1824 when the water was up to the windows in the lower part of High Street Broomfield Hall rf 30 Jul 1.26" 31 Jul 0.24" <Botesdale>: Several houses were flooded.

The <<River Roding>> overflowed its banks and the road from <Woodford bridge> to London was impassable. A landslip occurred between <Ilford> and <Chadwell Heath> blocking the railway line. The line between London and <Tilbury> was flooded at <Plaistow> station. In <<Cobbin Brook>> the water is 10 feet deep and the bridge is covered. The land for many miles between <Barking> and <Tilbury> is flooded in some cases to 10 to 15 feet deep.

< Rainham> and <Purfleet> Many houses were flooded in the Rainham and Purfleet areas and water is rushing over the roads 4 feet deep.

<Romford>: The main streets of Romford were flooded by an overflow of the <<River Rom>>; walls were overthrown and bridges destroyed. Many hundreds of cattle sheep and pigs have been drowned. Ind Coope brewers lost 4000 barrels washed out of their premises. One man was drowned falling off a raft. 500 houses in

the town were flooded some to the second storey.

Essex Herald gives more details: The water came down in volumes from the uplands to the north and the railway provided a conduit in the east. High Street, North Street, South Street and the London road as far as the Slater's Arms became powerful streams and houses were flooded to a great depth and extended into the Market Place beyond the police station. For miles the course of the <<River Rom>> was marked by a broad expanse of water. From the railway large streams flowed into Junction and Eastern roads flooding gardens and houses. At one point in the High Street the water reached 8 feet deep and was almost on the level of the window sills of the bedrooms in the Coach and Horses Inn. In south Street the water stood 3 feet deep in the Post Office and shops and in North Street it reached a higher level. The lower rooms at the Vicarage and all the houses in this thoroughfare were flooded. The property on the Mawney's Estate suffered and the new Wesleyan Chapel was inundated; in some of the houses the water rose half way up the staircase. The water rushed through the Corn Exchange like a river and the wood paving in the yard of the Golden Lion Hotel was washed up. The bridge at Oldchurch was damaged and eventually gave way.

<Upminster> and <Hornchurch>: The roadway near the Bridge House Inn has been cut up and the bridge house was flooded. Premises were also flooded at <Hornchurch>.

<Barking>: Low lying parts near the Quay were flooded to a great depth.

<Ingatestone>: The Main street and several houses were flooded with furniture floating about in their rooms. The rail line to Margaretting was so flooded that trains stopped at Ingatestone. The Gas Works were so flooded that all the fires were put out.

<Ongar>: Several houses in the lower part of town were flooded and fields near the bridge were completely covered.

<Walpole>: the roads were quickly converted to rushing rivers with hay and barley floated away.

<Enfield>: Extensive damage has been done to property and several bridges are washed away.

<Ilford>: A wooden bridge was washed away and was smashed to pieces on Ilford bridge downstream where the water on either side flooded the neighbourhood cutting off occupants from their homes which were flooded up to their window sills. On the London side of the road the water rushed through a builder's yard and gained access to backyards of 150 houses. At St Mary's church the churchyard was flooded and water ran up to the chancel rail to a depth of 2 inches. At the brickyards and the paper mills the ground was covered to a depth of 8 feet.

<Chelmsford>: All the lower parts of the town were submerged to a depth of several feet in turbulent waters. The London road Iron bridge built around 1840 has been swept away (the brick buttress gave way). Furniture and timber has been whirled downstream. The lower part of High Street Mentsham and London Road were early affected with water rushing into their basements but by daylight the lower rooms were covered to a

depth of several feet and in some places nearly up to the ceilings. Affected were High Street, London Road, Springfield Road, Moulsham, The Friars, Baddey (-ow?) Road and the Barrack Square. The river overflowing at the back of the New London Road formed a strong stream, swept through the doctor's house and orchard and poured across London road and into Friars Place, the basements of the houses being several feet deep in water and eventually into the High Street. On the other side it poured into the Congregational Chapel filling the schoolrooms below, carried away 40 yards of wall and into the barrack Square. In the High Street water came through the Queen's Head gateway and covered the road many feet deep. Another stream came up Vickridge's Square and rushed down the Springfield Road as far as the << Chelmer>> bridge. French Square was covered several feet deep. In Springfield all the fields were covered but luckily the houses were not reached. The houses in Museum Terrace suffered badly; gardens were swamped and water covered their basements up to the ceiling. At the Club basements and kitchens were filled and in the billiard room the water came up to the top of the billiard tables. The stone bridge in Moulsham was not affected. The floods at Barnes Mill and Sandford Mill were a foot deeper than has been known for 20 years. On Wolseley road, New Writtel Road the water rose to the level of the mantelpieces. Writtle bridge parapet was damaged. Widford bridge remained secure. In consequence of the floods at Romford traffic between Chelmsford and London was suspended. Meteorological Magazine ref to this flood (date not given)

28 Aug 1888 Herts and

Cambs

Reporter 31

Aug

29 Aug 1888

Herts and Cambs

reporter 31

Aug 24 Sep 1888 BR No thunder reported

<Grantham>: Rain continued incessantly for 12 hours. The Witham has risen rapidly and flooded the low lying fields near its banks

<Royston>: Torrents of rain and hail in a thunderstorm suddenly converted the streets into deep watercourses.
Melbourn street and Baldock Street were converted into rivers. Areas nearby experienced little rain.

Lavenham (Suffolk) 1.50" in 30 m

<Lavenham> (Suffolk): The oldest inhabitants agree they never witnessed such a downpour ofrain. I was about 10 miles off, but from enquiries I have made I am satisfied that 1.5" of rain fell in half-an-hour. My gauge was empty that morning, and after the rain it indicated a fall of 1.62". Houses were flooded, and roads nearly stopped by banks slipping in. It commenced, as near as may be, at 3.20, and left off at 3.50 p.m., it was accompanied by terrific thunder.

23 May 1889 Cambridge independent Press 31 May, Grantham Journal 1 Jun, BR 27 May 1889 Cambridge Independent Press 31 May

Ketton (Rutland) 0.73" in 30 m and 1.01" in 1 h

Main flooding was from

thunderstorms on 23 and

but was preced by

persistent rain on 26 and 27th

<St Neots>: A severe thunderstorm passed over the area with a deluge of rain and hail which did immense damage to bean crops in the parishes of Croxton and Yelling.

<Eaton>: The water rushed down the street and through the houses. Few people can recollect such a heavy fall of rain in such a short time.

<Somerby> (Leics): Ad ownpour of rain and hail caused several houses to be flooded. A bullock was killed by lightning.

<Ketton Hall> (Rutland): 1.01"fell from 5.30 to 6.30 p.m. The river Chater rose 4 ft. in one hour; two trees in the park were struck, and Barrowden Church was much damaged by lightning.

<Godmanchester>: Nearly 9 years have elapsed since the last great flood as that which was experienced this week. For some time the River Ouse and tributaries have been heavily charged but this was aggravated by the rainfall on 27th and preceding days. The result was a disastrous overflow ib the land and in several streets of the borough. At Lions Cross near Gravely Road the water overflowed and came rapidly into the town flooding Silver Street, Old Court Hall, Corpus Christi Lane etc. The water later reached the Horse Shoe corner with a lake of water along the Causeway. The Ouse overflowed the school hill from the river and several houses in Cambridge Street had water flowing into them. Then there was a strong rush of water in Post Street which became like a river. People had to be conveyed from place to place in carts and the water was up to the horses' knees. Water extended along the street until it reached The Swan. Water rushed through a farmyard and out at the back in East Chadley Lane. Some portions of West Street were flooded.

<St ives>: Water in the river steadily and persistently rose on the morning of 28th when it rose rapidly reaching a level not exceeded since July 1875 and rising inches in a few minutes coming down like an avalanche. The large Hemingford Gray Meadow was flooded from end to end. Houses in Bridge Terrace were flooded more than a foot in depth.

<Swaffham>: The thunderstorm was accompanied by hail with the hailstones 4 and 5 inches in diameter. Windows and greenhouses facing south were smashed including 100 panes at the workhouse and damage done to gardens and fields.

<Sporle>: Similarly suffered from the large hail including one piece of ice picked up measuring 8 inches. Thick glass in the chapels was smashed to pieces and large branches knocked off trees.

<Ipswich>: Hailstones fell of remarkable size and solidity so that in many parts of the town cellars and ground floors of houses were flooded. The hail was most prejudicial to corn and fruit. The hailstones were fully the size of walnuts and conservatories etc have suffered terrible havoc. Down the Spring Road and other high lying areas the flood water tore like a mill stream reaching side to side on the broadest thoroughfares and seriously tearing up the road. The wind was from the south and that is where the most damage was done by the hail.

2 Jun 1889 Western Daily Press 4 Jun, Thetford and Watton Times 8 Jun 7 Jun 1889 Evening Star 7 Jun, Dundee Courier 8 Jun,

Ipswich

Aylmer Hall (W of K Lynn) 1.31" in 90 m

Journal 14 Jun, BR

Pavements were covered in sand and mud. Five hours after the storm hailstones were measured ½ inch in diameter and one 7/8 inch diameter and a lump of ice 3 inches thick. The water rushed down Woodbridge Road and was joined by the torrent from the steep Christchurch Street. A wall was washed down in Anglesea Road. Water rushed down Brook Street 8 inches deep on the left hand side and flooding shops on that side. In the Butter Market several shops have been flooded including Gurney's Bank and a print business. The rushing streams of water from Bishop's Hill, Grimwade Street and the Back Hamlet meeting at the foot of Church street caused a great quantity of water to accumulate there and to run into warehouses on the Quay with damage to warehouses of grain merchants. In Tavern Street the hail formed masses of ice which caused water to flow into the cellars. Torrents of water poured down the Norwich Road and blocked the drains with sand and mud. Passing down the cross streets leading to Bramford Road the current cut up the roadway to a depth of several inches. It is estimated that nearly 100,000 panes of glass have been broken in greenhouses etc. and much damage done to fruit and flowers. Another account was that the hailstones were the size of a pigeon's egg. < Whitton>: The hailstones were the largest ever seen, hexagonal in shape and again smashing the glass in greenhouses etc. Hundreds of tons of earth were washed into Whitton road where connected with Henley road. The hills around the town are streaked with miniature canyons enlarged at the base to channels a foot deep

<Felixstowe>: The torrent carried away the railway line in the cutting opposite the Ordnance Hotel. Tons of ballast were removed and all trains stopped.

<Spexhall>: Eight bullocks were killed by lightning.

<Saxmundham>: Many houses gardens and parts of the town were flooded. The water rushed in a torrent into the main road which became more like a river. Rendham road was also flooded such as has never occurred before.

<Harwich>: The heavy rain soon flooded low lying land and a number of houses were flooded to a considerable depth.

<Cambridge> Exceptionally heavy rain 3.20" between 6 p.m. on 12th, and 10.30 a.m. on 13th. Beyond flooded basements there was little evidence of such a heavy rain having occurred, as the river was not over full.

12 Jul 1889 St Neots (Huntingdon) 1.00" in 1 h BR Biggleswade (Beds) 1.20" in

90 m

Sudbury (Suffolk) 2.40 in 2 h 10 m

Essex Newsman 22

Jul 3 Aug 1889 **Epworth Bells**

13 Jul 1889

<Bures>: In a thunderstorm banks and hedges were washed away and the neighbouring roads were covered with soil from the fields. Some of the houses in the village were badly flooded.

<Belchamp St Paul>: the heavy rain did great damage to growing crops of wheat and barley. In many instances the water stood more than an inch deep in many buildings.

<Gainsborough>: A thunderstorm was accompanied by hail and for a time some of the streets were flooded. At <Walkringham> the ground was covered several inches deep in hailstones the size of marbles.

10 Aug 4 Aug 1889 BR 10 Aug 1889 BR	Bylaugh Park (Norfolk) 0.60" in 15 m Bylaugh Park (Norfolk)	<morton>: A man was killed by lightning.</morton>
21 Aug 1889 BR	St Neots 0.62" in 30 m	
2 Sep 1889 Essex Newsman 7 Sep 1889, BR	Ilford (essex) 1.32" in 3 h	<brentwood>: The roadways were washed up and the railway station flooded to a depth of 2 feet above the rails. The water came down Warley Hill and rushed through the booking office and waiting rooms. The <<ingrebourne brook="">> overflowed and its course was marked by a broad belt of water. In Ross Valley the force of the water was so great that it flooded the basements and ground floors of many of the houses. A cottage near Thorndon Park was flooded. Three sheep and a horse were reported killed. BR notes: From early evening to break of day a thunderstorm raged without cessation, accompanied by a hurricane of wind and a deluge of rain (2.13"), which burst open the drains and ploughed up the roads in every direction. <chelmsford>: The water in the <<river cann="">> rose with great rapidity until the Baddow and Springfield fields and also those on the Writtle and Rozwell side were flooded. <north ockenden="">: Five pigs were drowned at Corner Farm. The Post Office and adjoining cottages were flooded. <romford>: No flooding occurred [in spite of the high rainfall total]. <shenfield>: the station masters house was flooded to a depth of 8 to 10 inches.</shenfield></romford></north></river></chelmsford></ingrebourne></brentwood>
23 Oct 1889 Diss Express 25 Oct, Ipswich Journal 25 Oct	lpswich 1.75" in 6 hours	<yoxford> and <darsham>: A severe thunderstorm was accompanied by hail . Several places were flooded and quite impassable for foot passengers. The parks and gardens in Yoxford were also under water. <framlingham>: The rain caused the river to overflow its banks and flood the lower parts of town so that it was impossible to gain access to the post Office. A fellmonger's yard was flooded to a depth of 18 inches and caused much damage. The Reading Room was also flooded.</framlingham></darsham></yoxford>
19 May 1890 Cambridge independent press 24 May 28 Jun 1890 Northampton chronicle 30	Stamford (Lincs) 1.46" in 30 m	<st ives="">: In a thunderstorm with rain and hail which lasted half an hour the bottom of the Bridge foot opposite the White Horse oart of bridge Street and the Station road were flooded. Roof spouts were inadequate for the intensity of rain and several houses and shops were flooded <higham ferrers=""> in <<nene>> valley: Hailstones of great size fell for nearly half an hour and the rain flooded the houses and streets and did damage to growing crops. Trees were stripped of leaves and branches broken off.</nene></higham></st>

Jun		<spilsby> A man was killed by lightning and also his horse. There were 2 other lightning deaths in East Lincolnshire.</spilsby>
17 Jul 1890 Northern Whig 19 Jul	Diss (S Norfolk) 1.20" in 2 h	<bury edmonds="" st="">: Vast tracts of land were submerged in Suffolk and streets were flooded in Bury St Edmonds.</bury>
11 Aug 1890 Stamford mercury 15 Aug, BR	Southwell (Notts)0.57" in 25 m and 0.89" in 30 m	<caistor>: there was en extraordinary downpour of rain the highest since July 1883. Between 2 and 3 pm there was a fall varying from 3 to 4 inches. (No flooding was reported). <gainsborough>: The rain fell in tropical style and cellars and lower apartments were flooded and may of the streets were impassable. 1.2 inches of rain was registered at the railway station.</gainsborough></caistor>
25 Jun 1891 Northampton chronicle 27 Jun, Bucks herald 27 Jun, Bedfordshire mercury 4 Jul	Thunderstorms were reported at several other locatrions with lightning damage to buildings and death of sheep etc.	<higham ferrers="">: the thunderstorm was of short duration and not only were low lying houses flooded but houses that have never been known to flood before were flooded by the rushing roaring torrent. <rushden>: The storm lasted from 3.30 to 4.30 pm and flooded all parts of the place and rendered the High Street impassable. By the post Office there was a sheet of water for 50 yards and lower down from the Rose and Crown to Queen Street the road was covered to a depth of 18 inches to 2 feet. A shop next to the post Office had its cellar flooded to a depth of 2 feet. And a residence called The Cottage was badly flooded with great damage to carpets and furniture. <finedon>: Houses in every part of the village were flooded and the Co-operative field was one mass of water. <great missenden="">: The main street was flooded for a time. Hailstones of enormous size cut fruit from the trees and at Springfield, Potter Row the hailstones measured 2 ½ inches in circumference. <dean>: There was a heavy fall of hail with many of the stones nearly an inch across; glass was broken and much injury done to crops.</dean></great></finedon></rushden></higham>
6 Jul 1891 Oxfordshire Telegraph 8 Jul		<buckingham>: In a thunderstorm many of the low lying streets and houses were flooded and the drains were blocked by the washing out of heaps of sand.</buckingham>
21 Jul 1891 Norwich Mercury 25 Jul		<norwich>: The rain was so heavy that the drains could not carry off the water and many houses were flooded. The rain was accompanied by large pieces of ice.In Caister road the water was 1 to 2 feet deep</norwich>
2 Aug 1891 Yarmouth Independent		<beccles>: The rain fell in torrents for nearly an hour accompanied by hail as large as marbles. The streets and many low lying house were flooded. In Ingate Street one house was flooded level with the fireplace</beccles>

8 Aug

3 Aug 1891 Rendelsham (Suffolk) 0.90" in

BR 30 m

Hillington (Norfolk) 0.83" in

4 Aug 1891 BR

20 m

10 Aug 1891 East anglia Daily times 11 Aug

<Colchester>: During the height of the storm the High Street looked like a river and splashed to the knees of cab horses. In Crouch Street opposite the Horse and Groom a drain burst and forced up the pavement with the water spouting up like geysers. The Maldon Road in its most thickly populated part was flooded to a depth of 3 feet with water pouring down the steep inclines of Alexandra and Burlington roads The Firs was flooded to a depth of several feet and opposite into a row of villas. The Salvation Army Barracks in John Street was flooded as were also some stables on Butt Road. All the damage was done in a few minutes during a terrific downpour of rain and hail. In Maldon Road the water rushed down from the higher level of Wellesley Road and swept through houses. The rush of water put out the fires and covered the floor in mud. St Botolph Street which lies in a hollow between Queen Street and the Mersea Road was completely swamped and in a few moments the main business establishments were flooded. The approach to St Botolph's Church had the appearance of a mill race; gravel was swept up from the paths and the churchyard converted to a swamp and the water flowed half way up the aisles of the church. In Magdalen Street a number of cottages were flooded together with a builder's premises. Serious damage was done at Moore's Corner in Barrack Street especially on the north or lower side of the street. Brook Street was worthy of its name and when the water had subsided looked more like the bed of a mountain torrent. The northern quarter of the town had better fortune but a few houses in Factory Lane, now St Peter's street were flooded. Butt road was completely flooded. The water poured down the steep slope of St John Street and East Street was also flooded including some cottages. Stanwell Street was also flooded.

<Overton>: 47 sheep were killed by lightning

<Spalding>: Two horses and several sheep were killed by lightning.

<Stradbroke>: Rain and hail fell in torrents and the streets were flooded and for a time impassable. The church was struck by lightning and the NE pinnacle knocked off and broke through the roof of the north aisle.

19 Aug 1891 Yarmouth Independent 21 Aug

25 May 1892 R Nottingham

Evening Post 26 May, East

Reported rainfalls were <0.50" but hail will have been poorly measured.

<Ipswich>: A hailstorm with hailstones of large pieces of ice as big as bantam eggs fell for eight minutes causing serious damage to glass in greenhouses and fruit blossom. Glass that sloped to the south or was flat was completely destroyed. BR notes: Many of the hail stones were over an inch in diameter, and much glass was broken in a limited area on the east side of the town

Anglia Daily Times 27 May, BR

28 Jun 1892 Essex Standard 2 Jul Storm Rainfall at Ramsey was 2 33"

<Braintree>: The thunderstorm lasted several hours but finished with a heavy fall of hail which did much damage to fruit trees.

<Harwich>: Considerable damage was done, nearly every house having windows broken as well as in the station and churches. Some of the hailstones were as big as a good sized egg and others were pieces of jagged ice several inches in size.

<Grundisburgh>: The hailstones were the size of a walnut.

<Colchester>: Terrible hail storm with thunder, much damage done to glass.

<Manningtree>: Here and in adjoining Lawford some of the houses were completely flooded and the road leading from the town past Bendall's foundry to the Colchester road presents the appearance of having been recently ploughed.

<Lingsea>: In the thunderstorm torrents of rain fell and completely flooded the streets.

<Harwich>: Many houses at Bathside and the Dover court were flooded in their basements to a depth of 2 feet.
<Saffron Walden>: Several houses in Bridge Street were flooded with water. Three horses were reported killed and several sheep.

<Witham>: The storm continued for nearly four hours. The streets presented the appearance of rivers and houses in Bridge Street were inundated. Several tradesmen in the High Street also suffered through the water getting through their roofs, owing to the gutters being inadequate or blocked.

<Colchester>: The heavy rain was accompanied by a howling wind with the rushing water doing much damage. In Maldon road in spite of recent new drains several houses were flooded. In No 36 it was 6 inches deep. At the Firs it was 18 inches deep in the basement. A row of cottages in Butt Road were partially flooded while the cellars of a bakehouse in Princess Street and adjoining houses were also flooded. In Childwell alley about 100 feet of wall fell down. The water rushed in through the main door of St Botolph's Church and a large wall in the churchyard fell down. The water was 18 inches deep in portions of St Botolph's Street. In Magdalen Street from Barrack Corner to the Duke of York Inn houses were flooded and two cottages to a depth of 2 to 3 feet of water. There was also extensive flooding of houses in Water Lane and a number of houses in Kendal and Winnock Roads New Town were also flooded. The houses near the Salvation Army in St john Street were also flooded and water penetrated the lobby of The Rink. The roadway at the back of the Salvation Army barracks was rendered impassable by about a foot of mud and sand.

<Nayland>: The sewers were incapable of carrying off the flow and the streets and some houses were flooded. Two sheep and a horse were killed by lightning.

<Coggleshall>: A good number of houses and cellars were flooded. The storm raged for several hours.

<Halstead>: A man died following a lightning strike.

<Purfleet>: An 8-year old child died from the shock of lightning.

29 Jun 1892 BR 4 Oct 1892 Norfolk Chronicle 8 Oct 4 Jun 1893 BR	Worsted (Norfolk) 0.89" in 25	<kensworth> (mid Beds): At 1.45 a.m. a terrific hail storm passed over this district during a heavy thunderstorm. The fall of hail lasted only about nine minutes, but every pane of glass in greenhouses and skylights, and many windows were completely smashed. The masses of ice weighed 2 ½ ounces, some being perfectly round like balls, others ½" in thickness, quite flat, but serrated, elliptical in form, four inches in length. It is believed that this house was in the centre of the storm, by the extraordinary crackling sound heard as if it were surrounded by electricity, arid a curious smell of sulphur filled the atmosphere. A walnut tree 100 yards distant was struck by lightning. <winterton>: The thunderstorm was accompanied by hail and cottages were flooded.</winterton></kensworth>
19 Jun 1893 Eastern Evening News 20 Jun 22 Jun 1893 Norfolk News 1 Jul	m	<haverhill>: The rain fell with awful severity from 5 to 6 o'clock and hail fell as large as pigeon's eggs. <bury edmonds="" st="">: After a long period of drought and then intensive heat, the storm broke in the late afternoon. In front of the houses in Northgate street near Tayfon Road the roadway became completely flooded. One house in Chruchgate Street was flooded <kenninghall>: The streets were rivers for a time and were at least a foot deep in the middle of low roads. The large drains were unable to take the water and were soon blocked. Houses do not seem to have been flooded.</kenninghall></bury></haverhill>
3 Jul 1893 BR 8 Jul 1893 Sheffield Daily Telegraph 10 Jul	Apethorpe (W of Peterborough) 2.47" in 1 h	<peterborough>: there was a heavy fall of hail and streets and houses were flooded. <lincoln>: The thunderstorm was accompanied by hail, the majority the size of marbles but some the size of small walnuts.).66 inches was register in 20 minutes. Cellars were quickly flooded and High Street was almost converted into a river. <thorne>: Hailstones as large as big marbles fell and thousands of panes of glass are broken. In some streets facing the east hardly a pane remains. The New road was impassable the water being a foot deep the whole have the of the great deep the whole.</thorne></lincoln></peterborough>
11 Jul 1893 Norfolk chronicle 15 Jul, BR	Fakenham Daily rf 4.48" of which about 2.50 fell in 1 hour (Total rainfall Mar to Jun 3.61") Maxey (Lincoln) 1.05" in 22 m Fakenham 2.40" in 75 m	breadth of the road. <fakenham> (Norfolk): Streets were inundated and several houses flooded. BR reports: At Cranmer Hall a thunderstorm broke over this house about 2 p.m., and 2.40" fell in about 75 minutes; further heavy rain fell in the evening and night, making the fall for 24 hours 4.48". <walsingham>: The streets of the town were flooded and also several low lying farms.</walsingham></fakenham>

12 Jul 1893 Norfolk **Chronicle 15** Jul. BR

Little Saxham (W Suffolk) 2.05" in 105 m

13 Jul 1893 East Anglia **Daily Times** 14 Jul, Chelmsford Chronicle 14 Jul, BR

Several farm buildings set

alingt and people injured by lightning. Maldon (Essex) 0.94" in 30 m

4 Jun 1894 Stamford mercury 8 Jun, The People 10 Jun 2 Jul 1894 Diss Express 6 Jul, BR

< Norwich>: Thunderstorms had occurred on the previous few days but without reported damage. But in this later storm a row of houses at New Terrace in St Pauls was flooded.

<Long Stratton>: A man was killed by lightning and another seriously injured whilst sheltering under a tree. <Little Saxham>: Some rain fell about 11.15 p.m. on 11th, about 1 a.m. on 12th there was a heavy shower, At about 7.30 a.m. it began to pour, and in an interval at 9 a.m. 3.00 in. was measured. Rain began again in two or three minutes, and at 10.45 a.m. 2.05" more had fallen, making 5.05 in. in less than 12 hours. In the 24 hours ending 9 a.m. on 13th, 2.10" fell. There seems to have been a waterspout over a field about half a mile distant; a portion of the field was completely washed away, the main gullies being over 4 ft. wide. At the bottom of the field for about 18 yards wide it looked exactly like a sea-shore. A platelayer said he saw two clouds meet, and then apparently double over.

<Braintree>: Between 1 and 2 inches of rain fell in an incredibly short space of time. The streets were soon covered with water and cottages and other tenements were flooded. The storm of rain and hail lasted an hour. At Hoppet Hill the torrent washed the road away so that the gas pipes were exposed. Both sides of the river were flooded at Hoppet Bridge with water going right over the road.

<Manningtree>: Rain in the neighbourhood of Manningtree nearly drowned pigs and other livestock at a farm and flooded the low lying parts around.

<Framlingham>: A rainstorm occurred the like of which has not been known here for half a century. The streets in the lower part of town were rendered impassable and sewers burst in several places. In Station Road the water was 16 to 18 inches deep.

<Oundle>: the streets were like a flowing river; drains were blocked and houses were flooded. In St Osythes lane which lies rather low the water was knee deep in some houses. Down Station road the water was 6 inches deep.

<Peterborough>: In a heavy downpour some of the low lying streets and houses were flooded.

<Diss> (S. Norfolk): At 2.00 pm the rain descended in torrents and the streets were quickly flooded and the drains and gullies choked with sand. Rain was followed by very large hailstones. The storm was quite localised. BR reports: At 1.30 pm. a violent squall occurred with a thunderstorm and heavy hail, destroying much glass and damaging crops. The hail stones were singularly alike in form and size, 1 inch to 1 ½ inches across, double convex compressed at the poles, and each surrounded by a zone of transparent ice projecting slightly from the equatorial line. Nine of them weighed 320 grains.

<Roydon>: Hail here was more severe and gardens were beaten down and cucumber frames and glasshouses broken or destroyed. The hail consisted of lumps of ice larger than walnuts continued for 10 to 15 minutes and on one farm completely destroyed 70 acres of crops.

6 Jul 1894
East anglia
Daily Times 9
Jul, Diss
Express 13 Jul

Hurricane winds accompanied the thunderstorm and caused loss of a fishing boat at sea. Diss (S Norfolk) 1.15" in 30 m <Stowmarket>: The water ran down the streets in a stream. The market place resembled a small lake and every shop on the north east side was quickly flooded some to nearly a foot deep. On the other side of the Market Place the offices of Hunt and Peddar were flooded and left a thick coat of mud on the floor. A similar state of things prevailed on Finborough Road near the Vicarage where the water was over a foot deep on the road.
<Diss>: The basements of some houses especially near the Post Office were flooded and furniture damaged.
There was a great rush of water down Market Hill and found its way into cellars at the bottom of the hill. Much damage was done in Mount Street near the Post Office from the rush of water from the hill by The Grove and the parish fields and St Nicholas street. The entire width of the road and the raised footpaths were covered to a depth of several inches and the water rushed into houses on both sides of the road. From the Saracen's Head Inn to Newton's house hardly a dwelling escaped. Some flooding was from foul sewage. The inhabitants of the lower part of Denmark street also suffered between Denmark Arms and the Crown Store. The butcher's shop

and an adjoining row of houses ere flooded. The roadway against the Old brewery was quite submerged. A large number of dead small birds was found killed either by lightning or rain. A horse was killed by lightning. <Eye>: Rain and accompanying hail did great damage to corn and garden crops. At the Horse Shoes Hotel the billiard and other rooms were flooded. Hens were killed by falling hail at Rock Hall. Houses were flooded at

<Fisher Murton>: the hail made terrible haveoc with fruit trees and bushes and vegetables>

<Saxmundham>: The storm was preceded by a whirlwind which raised clouds of dust.

<Diss> (S Norfolk): A sudden gale and thunderstorm occurred at 10.20 p.m., with hail and drenching rain, filling cellars and flooding streets. The fall in 24: hours was 1.27", 1.15" of which fell in the first half hour.

23 Jul 1894 BR 25 Jul 1894 Essex Herald

Brundall (E of Norwich) 0.79" in 1 h

Ludgate Causeway.

<Maldon>: A thunderstorm lasted an hour and a half and the streets quickly presented the appearance of a swiftly flowing river and some parts of the town were completely inundated. Many shops and houses were flooded doing great damage to furniture. It rose to nearly a foot in some houses. The deposits of sand and gravel at the foot of the hills was very great

10 Aug 1894 BR

31 Jul

Alderton (Northants) 2.00" in 2h

24 Sep 1894 BR Witham (Little Braxted Hall) DR 2.28"

< Billericay> <Wilham> (Essex): In the early morning a very violent thunderstorm with excessive rain extended from near Billericay to near Wliham in Central Essex. At <Wickford>, the storm began about 8 and ended about 9.30 a.m., there was quite one foot of water on the roads, but no houses were flooded. At <Danbury>, the storm was violent beyond precedent, the roads being steep the rush of water cut them up very much and carried soil and gravel from one part of the parish to another: several houses were flooded and the lower roads

26 Jun 1895 Nottinghams hire Guardian 29 Jun, BR	<mildenhall>Suffolk 0.97" in 30 mins</mildenhall>	were impassable for several hours. At <woodham ferris=""> station the water was 1 ft. 7" deep over the level crossing and the traffic had to be stopped. At the Whalebone Inn, between 6.40 a.m. and 8.30 a.m., the water in the tap room rose 7 feet; in some houses the water was 6 feet deep, one side of a cottage was swept away, and the door of the post office burst in. At <heybridge> near <maldon> the workmen had to go to the foundry in boats. <langford> Rectory had 2 feet of water in the sitting rooms and became uninhabitable. At <great totham=""> the roads were much damaged and the church and several houses were flooded. <spalding>: A violent thunderstorm passed over south Lincolnshire accompanied by a heavy fall of hail fully as large as marbles</spalding></great></langford></maldon></heybridge></woodham>
10 Aug 1895 Cambridge Chronicle and Journal 16 Jul		<godmanchester>: There was a thunderstorm of shor duration but some severity. The rainfall was so heavy that the drains could not carry off the water fast enough and some portions of the streets in all parts of the town were flooded.</godmanchester>
13 Aug 1895 Cambridgeshi re chronicle and Journal 16 Aug, BR	Salhouse (Norfolk) 1.50" in 2 h Diss (S Norfolk) 1.50" in 3 h 30 m	<lowestoft>: Rain fell between 6.00 and 6.30 in the evening and the water was unable to get away quick enough and all the low lying parts of the town were soon flooded and impassable to pedestrians. In some streets the water was 2 feet deep and entered many private houses and business establishments. London road north for a distance of about 50 yards from the corner of Suffolk road to the corner of Waveney road was flooded to a depth of 2 feet. Cabs were submerged to the level of the floors. Bevan Street was similarly affected and all the basements in the neighbourhood were flooded. The water put out the fires in the kitchens of the Suffolk Hotel and other named business premises were similarly affected including a dairy. At the twlephone Exchange in Bevan Street there was 14 feet of water in the basement.</lowestoft>
14 Aug 1895 East Anglia Daily times 15 Aug, Norfolk News 17 Aug	Westley (Bury St Edmonds) reported thunderstorms on 6 days between 3 rd and 14 th with 1.39" on 13th	<harleston>: In thunderstorms the streets for hundreds of yards were completely under water and a considerable amount of damage was done. Very little time was given to make preparations against the inroads of the flood. A large volume of water came down the whole width of the London road and through the principal streets flooding shops and houses.</harleston>
22 Aug 1895 Portsmouth evening News 23 Aug,	Cambridge an inch of rain in 1 hour Northampton 1.33 inches during the night	<northampton>: A number of houses were flooded by the storm and immense damage was done to corn and fruit trees. The accompanying hailstones were very large and in a few cases windows were broken by them. The water flowed over the pavements and filled hundreds of cellars. The drains were burst in several places notably in Houghton road where chasms were made by the pipes bursting; the water stood 12 to 15 inches deep there.</northampton>

<Kettering>: Water was running through the streets like a brook

Northampton Mercury 23 Roads were badly damaged. A house furnisher's in Abingdon Street was flooded to a depth of 4 inches.

Aug, Herts and Cambridge Reporter 23 Aug, Norfolk chronicle 24 aug

2 Jun 1896 BR

4 Jun 1896 BR Sheffield Daily Telegraph 5 Jun, Grantham Journal 6 Jun, BR

Lincoln 1.00" in 30 minutes Lincoln 0.85" in 25 m <Gayton> A publican's wife was killed by lightning.

<Thrapstone>: The streets were flooded to a depth of several feet. Several houses in Market Street were flooded 6 inches deep and the Denford Road looked like a canal. Several hailstones were as big as peas.
<Cambridge>: In spite of the elaborate system of drainage in Romsey Town, one or two houses were flooded.
<Whittlesey>: Several of the main streets were flooded. The hailstones were of an extraordinary size and windows facing the south were broken. Great damage was done to fruit crops.

<Norwich>: the heavy rain caused low lying parts of the city to be flooded to a depth of several inches. Heigham Street suffered severely and experienced much difficulty in leaving their houses. The storm continued for about an hour.

<Easton-on-the-Hill> (Northants): In a thunderstorm the main street of <Wansford> flooded, a horse killed and other damage by lightning at Market Deeping.

<Lincoln> The middle of the city was under water 1' to 1' 6" deep. In five minutes the streets were converted to rushing torrents with water running down the main street. Approaching the Witham as the streets become narrower the water became very deep. It fell over the stone walls of the river like a waterfall and 80 yards of masonry was washed into the river. The water invaded the Drill Hall to a depth of several inches. In many cases water flowed right through houses and many cellars were flooded in Lincoln and in Lindsey Bank. There were hailstones the size of hazel nuts and in a very short time the Sincel Drain rose 6 feet. This rain followed a long continued drought. In the lower part of the city the sewage was forced up in spouts 1 to 2 feet high. BR reports: Lincoln was visited by a very severe thunderstorm, from 5.30 to 6 p.m. an inch of rain was recorded. In the middle of the city, where the rainfall was heaviest, in five minutes from the beginning the streets were converted into rushing torrents, the water varying from 1 ft. to 1 ft. 6 in. in depth. At the Stonebow, which spans the High Street in the very centre of the city, the water was leve with the naves of the wheels of the passing vehicles. The streets running north and south are steep, and as the grates and sewers were quite incapable of dealing with the tropical downpour, the water rushed along a foot deep the whole width of the streets. As two of these streets approach the river Witham they become narrow courts, and in these the water was very deep. It fell over the stone walls of the river like a waterfall, and 80 yards of the solid masonry were either washed into the river by the flood, or struck away by the lightning; part of a gas main also was carried away. In many cases there were streams flowing right through houses and shops, and numberless cellars were flooded. Much of the flooding was caused by the welling up of the water from the sewers. In the course of the storm there were hailstones as large as hazel nuts.

<Claypole>: A heavy shower of rain flooded the streets and gave them the appearance of a river. At the same time there was a tremendous hailstorm with hail the size of large beans. Vegetables are much damaged

15 Jun 1896	Stamford (Lincs) 0.64" in 20	
BR	m	
7 Jul 1896 BR	7th—8th.—Serious flooding occurred through thunderstorm rains, notably at Faringdon, Leicester, Grantham, Rhyl, Cork and Dublin. Great loss of life and property by lightning.	
30 Jul 1896 BR	Stretham ferry (cambs) 2.15" in 2 h 30 m	
8 Aug 1896 Norwich mercury 12		<lowestoft>: The rain descended for a couple of hours after 11.30 pm. The water rushed down London road like a river and in Bevan Street and the neighbouring areas, the lowest in town, it found its way into houses shops and basements. A military camp was seriously affected.</lowestoft>
Aug		
25 Aug 1896 Bury free press 29 Aug		<boxford>: A severe hailstorm affected the town. The hail quickly melted so that many of the houses were flooded. Some garden crops were washed away. In some places the hail was 3 inches deep. Opposite the White Hart the water was 2 feet deep on the road. At Brook Hill nearly all the cottages were flooded some of them to a depth of 2 feet. Many of the houses in Swan Street were also flooded and the banks in several places were</boxford>
21 4 1906	Carlton (Leics) 1.78" in 55 m	washed down. Butcher's Lane and Cox Hill suffered from the flood and was impassable.
31 Aug 1896 BR	Canton (Leics) 1.76 III 33 III	
1 Sep 1896 BR	St Neots 1.75" in 2 h	<ipswich>: Much flooding with sewers overcharged and the water rushed up through the manholes.</ipswich>
11 Sep 1896 BR	3t Neot3 1.73 111 2 11	
14 Oct 1896 Dundee		<beccles>: In a thunderstorm hail bigger than walnuts fell. A flour mill at Weston nearby was struck by lightning and burnt to the ground.</beccles>
Evening Telegraph 14 Oct		<bungay>: A hailstorm broke over the town with the stones ranging in size from walnuts to hen's eggs and continuing for 30 minutes. Windows conservatories and glasshouses were broken in all directions. A heavy downpour followed causing many houses to be flooded notably the White Lion Hotel where the water was 10</bungay>

16 Apr 1897 London **Evening** Standard 17 Apr 24 Jun 1897 Webb et al 2001, Lamb 1964, Evening Star 25 Jun, Barking and Dagenham Gazette 26 Jun, Essex herald 29 Jun, BR, Webb and

elsom (2016)

The hail swathe extended from Slough (Bucks) to Brightlingsea (near Colchester)
Chelmsford 1.14" in 15 m and 1.37 in 20 m
Hatfield Peverel (Essex) 0.92" in 20 m
Fringringhoe (Essex) 0.68" in 20 m
Writtle (Essex) 1.08" in 25 m and 1.34" in 30 m
Danbury 0.83" in 26 m

to 12 inches deep. Rain and hail was also reported at <Attleborough> and <Diss>.

<South Lincolnshire>: A thunderstorm raged for nearly an hour accompanied by hail and low lying districts were flooded.

<Chelmsford>: A hailstorm occurred in which windows were shattered, blinds shredded and roof tiles 'broken like a hammer' with hail 50 to 60 mm across and weighing 3-5 oz (85-140 g). Chimneys were blown down and trees uprooted and in some places the windward side of tiled roofs was demolished. The storm only lasted half an hour but the damage it caused was worse than any storm lasting hours. The wind blew with hurricane force. The sewers were unable to cope and the streets were turned into rivers. The roadway in the new London road and Moulsham Street could not be seen for several minutes. The storm came from the west and every house that faced that direction suffered the effects of the hail, as could be seen in Duke Street, High Street, Moulsham Street and the New London road. Water poured in through broken windows. Everywhere cellars were wrecked and goods in tradesmen's basements ruined. Crompton's Engineering Works were flooded to a depth of 2 to 3 inches. Damage was done at the Rainsford end of the town where chimney stacks were blown over and windows broken. The river has risen very considerably. Glasshouses are destroyed and produce ruined. The storm was accompanied by high winds and large trees were blown down.

<Colchester>: The main damage was from lightning. The lower part of Maldon Road was flooded 2 feet deep and houses were flooded.

<Writtle>: Hundreds of windows were smashed in the village. Many of the houses were flooded.

<Ingatestone>: Many of the hailstones weighed over 2 ¾ oz. Fortunately the storm only lasted a quarter of an hour. All houses facing westward have their windows broken. The high road to Chelmsford was blocked by fallen boughs of trees. The roofs of many houses had tiles smashed. Chimneys were blown down whilst many trees were blown down one destroying a cottage.

<Stock>: Some of the hail was as large as a crown piece and broke many windows, tiles and slates. Many trees were uprooted.

<Ongar>: Most of the windows on the east side of the town were broken from a storm lasting above 20 minutes. The station waiting room was under 6 inches of water.

<Burnham>: Several houses were quickly flooded to a depth of several inches. The water rushed down Burnham

Hill and caused heavy manholes to lift several feet into the air.

<Southend>: The hailstones were of great size some being as large as hazel nuts.

<Maldon>: Large pieces of ice and hailstones larger than ordinary marbles fell and did considerable damage to glass of many houses and gardens Some measured % to 1 inch across. The High Street had the appearance of a swiftly flowing river and considerable damage was done to roads on Cromwell Hill and Church Hill. Several houses were flooded.

<Margaretting>: Pieces of ice fell in the neighbourhood 6 inches round and all the wheat beans and barley were destroyed.

<Burnham on Crouch>: With sewers getting blocked several houses were flooded.

<Epping>: Houses and shops were flooded; the street was like a river. Windows were smashed and fruit trees stripped. In Jubilee festivities the food was washed off the tables. A hailstone picked up in Theydon measured 3 inches in length and 1½ inches across. Horses were killed by the hail. BR reports that some of the stones were as big as walnuts, making so much noise in falling that the thunder was not heard. Several panes of glass were broken, and great damage was done to crops.

<Kelvedon common>: Hailstones were measured at 2 ¼ inch across.

<Hitchin><Biggleswade><Luton>:Severe damage occurred from a separate (H5) storm in this area. (Essex Field Club, 1898). Webb does not report flooding.

<Henlow> (Beds): Many windows were broken by the hail, trees were blown down and the roofs of several cottages were stripped.

<Norwich>: Two men were killed by lightning

<!pswich>: Two boys were killed by lightning; a pony with them was also killed. The rain fell in torrents for an hour and great damage was done. Blocks of wood pavement were washed away and shops were flooded to a depth of several feet and tramcars were thrown off the metals. The rush of water in the sewers lifted iron manholes. The fire brigade was in demand everywhere for pumping out of cellars and basements.

<Colchester>: Several shops in St Botolph's were flooded and also The Firs Maldon Road at the north end of town. Shops were flooded in St Botolph's Street to a depth of 1 foot and Arthur Street. In the churchyard there was over 18 inches depth of water. There were also severe flood on Maldon Road and Stanwells Street the water flowing off St John's Green into the latter street bringing down 50 tons of brick rubble and gravel. Cellars in St John's Street, St Botolph's Street and shops in Crouch Street were invaded by the water. A wall at the back of a house in Chapel Street was carried away by the rush of water. The storm crossed the town from southwest

21 Jul 1897 London Evening Standard 22 Jul, Evening Star 22 Jul, BR Colchester 1.57" in <50 mins Ipswich Bishop's Hill 2.95" in 1 hour between 4.15 and 5.15. On the other side of the Orwell Noval scotia House registered 4.20" in 1 hour and 5.02" in 2 ½ hours Ipswich 2.95" in 1 h

26 Jul 1897	Little Ponton (Lincs) 1.75" in	to northeast and scarcely touched the north end or The Hythe whilst in Lexden Straight Road to the extreme west no rain fell at all. In the centre of the town the hail which fell was small but elsewhere the hailstones were reported to be as large as horse beans. BR reports: Two boys and a horse were killed by lightning, trees were struck and other damage was done within a mile of Bishop's Hill. <haverhill>: The High Street presented the appearance of a river and the cellars in Woolpack Inn were flooded. A butcher's shop, a bank and the Post Office were similarly affected. A number of cottages were also flooded. <eye><pulham mary="" st="">: Many houses in various parts of the district were flooded and low lying roads were rendered impassable. <breentwood>: A thunderstorm raged for over an hour with a sharp fall of hailstones for two minutes which</breentwood></pulham></eye></haverhill>
Chelmsford Chronicle 30 Jul, BR	90 m	damaged soft fruit and vegetables. In many places roads and basements were flooded. Channels three and four inches in depth were washed in the gutters and the road surfaces were washed quite bare. The water covered the road at the downside of the rail station. The storm was very localised with places a mile or two distant comparatively free. <barnston>: A horse was killed by lightning</barnston>
5 Aug 1897 London daily News 6 Aug, Northampton mercury 6 Aug, Sussex and Essex free Press 11 Aug	Sudbury (Suffolk) 0.79" in 40 m	<royston>: A thunderstorm affected Royston and neighbouring parts of Cambs and Herts. The water rushed down from the upper part of the town flooding cellars and houses and drowning poultry. Hailstones smashed glass in greenhouses. Much damage was done to fruit and corn. <market harborough="">: the thunderstorm continued for more than an hour and the basements of several houses were flooded and the roads were blocked for a short time. <northampton>: For a few minutes hail of phenomenal size fell, some jagged, other oval pieces of ice 1 to 2 inches in circumference. <sudbury>: Near Acton Square the road was under water and a few houses in the lower part of town were flooded.</sudbury></northampton></market></royston>
8 aug 1897 BR 24 Aug 1897	Fawsley (Northants) 2.25" in 4 h 30 m	<uppingham>: Many houses were flooded.</uppingham>
BR	Newport Pagnell 1.89" in 45	
29 Sep 1897 Croydon's Weekly Standard 2 Oct	m Hillington (Norfolk) 2.12" in 4 h	<newport pagnell="">: Downpours of hail and rain caused a rapid onrush of water which flooded the streets and found its way into cellars and low lying rooms. It was impossible for the drains to carry off the tremendous fall of water</newport>
8 Jun 1898		<mildenhall>: there was a deluge of rain culminating in a very hail storm, the hailstones being remarkably large.</mildenhall>

Bury and Norwich Post 13 Jun 6 Aug 1898 BR 15 Aug 1898 BR	Ely 0.95" in 25 m Longstowe (Cambs) 0.95" in 35 m Newport Pagnell (Bucks) 0.85" in 40 m Wootton (Beds) 0.80" in 1 h	The roadway from the Police Station to the corner of West Street was entirely flooded and access to the prince of Wales Inn could only be gained by walking on planks. Glass was broken in greenhouses and damage was done to fruit trees and garden crops in places.
12 May 1899 Buckingham Express 20 May		<buckingham>: Hail fell to such an extent that it covered gardens and fields to a depth of 2 inches and robbed fruit trees of blossom and foliage. It stopped the drains with the result that many houses were flooded to a considerable extent. A horse and several sheep were killed by lightning.</buckingham>
24 May 1899 BR	Folkingham (Lincs) 0.75" in 12 m	
15 Aug 1899 Evening Star 16 Aug, Cambridge Independent press 18 Aug, BR	Storms were widely reported but with few cases of flooding. They followed a period of drought. Oundle (Northants) 1.63" in 30 m	<fakenham>: In a severe thunderstorm lasting over 4 hours rain fell with hailstones as large as marbles. Some parts of the town were inundated to a depth of 3 feet. <haddenham>: A thunderstorm lasted nearly 3 hours. The High Street for 70 yards was flooded knee deep when one of the sewers became blocked. <wilburton>: Heavy rain with large hailstones blocked the sewers and flooded some parts of the street. <northampton>: Severe rain knocked down the corn and flooded the principal thoroughfares of the town.</northampton></wilburton></haddenham></fakenham>
11/12 June 1900	Thunderstorms with loss of life and large hailstones were reported from Blyth in	Eight severe (H3+) events, most affecting the Midlands but with a rare H5 storm in the Lothian area of Scotland on 12th. Webb does not report flooding.
Northants evening telegraph 11/12 Jun 1900, Stamford Mercury 15	Northumberland to London Blisworth (Northants) 0.84" in 45 m Kibworth Harcourt (Leics) 1.45" in 2 h 45 m	<northampton>: From 2 in the afternoon till 10 at night the thunder was almost continuous. Heavy rain was followed by hailstones of phenomenal size as blocks of ice the size of walnuts continuing for 10 minutes. Damage was extensive and serious especially in the Kingsthorpe area where windows and conservatories were broken and fruit trees and flowers were damaged. Streets in the lower portion of the town were flooded. The majority of hailstones were as large as hazel nuts but many were as big as small walnuts or hazel nuts and some were of even greater proportions. Several were measured 1 ½ inch in diameter and almost round. Blown from the southeast they did damage to windows looking in that direction. Nearly all the green houses on the east</northampton>
Jun,		side of the town along Billing road especially were damaged. Glass was broken in Abington church.

Northampton Mercury 15 Jun, Webb et al 2009, BR

16 Jul 1900

Hampshire

Cambridge

Jul. BR 20 Jul 1900

London

Chronicle 20

Jul,

Advertiser 18

Temperatures reached over 90F and there were deaths from heatstroke. Hailstorms were widespread but flooding was infrequently reported.

Odsey (Cambs) 1.09" in 30 m Kensworth (Beds) 1.00" in 45

Shillington (Beds) 1.25" in 20

<Wellingborough>: Low lying districts were quickly flooded on 12th. Gloucester Place was the first affected (as usual). Streams of water which came down Church Street, Park road and Cambridge Street formed quite a lake. Cambridge Hotel was flooded. Gloucester Place end of Market Street was impassable.

<Market Harborough>: Hail fell as large as walnuts and cut off the fruit and did much damage to glass.

<Holbeach>: the hailstones were as large as pigeon's eggs.

<Bury St Edmonds>: There was a phenomenal hailstorm with the stones breaking many windows in shops and houses. Several thoroughfares were flooded.

<Ely>: A tornado tore up small stones and sand then the rain descended in sheets, choking the surface drains and flooding the streets.

<Chatteris>: With the heavy storms of hail and rain the water flooded the streets and ran with great force int houses, many of the drains being so blocked that the water could not get away.

<Northampton>: In a heavy hailstorm some of the hailstones measured 5 inches in circumference causing damage to greenhouses and damaging fruit trees. Scarcely a building in the centre of the town escaped without injury. Six selected stones together weighed 2 pounds, an average of 5 ½ oz each. The hail lasted just 7 minutes. The section from Northampton to Market Harborough seems to have experienced the hailstorm but hardly any elsewhere. Cattle and sheep in the fields were killed by lightning.

<Duston>: Hailstones were the size of a moderate sized hen's egg. Six of them were weighed at over 6 oz. The water covered the street like a river from side to side.

<Guilsborough>: For half an hour the rain and hail come down in torrents and flooded the roads and all the low lying parts. A few hailstones measured 4 inches and weighed 1 ½ oz.

<Market Harborough>: The rain flooded all the streets and the market square.

<Newark>: the streets guickly assumed the appearance of small rivers.

< Newmarket>: the whole town was in a state of flood, several place in the High Street being under 6 to 8 feet of water. Many birds were beaten down with the rain and hail. The rivers <<Lark>>, <<Ca,>> and <<Ouse>> rose rapidly and soon everywhere was in a state of flood.

<Langham>: Heavy rain was followed by an overwhelming downpour of hailstones averaging the size of an ordinary marble but some were as large as walnuts or bantam's eggs. Windows were smashed everywhere and hardly a house escaped. The stones appeared to be in concentric rings.

<Great Easton>: Drains were insufficient to carry the floods away and the streets were flooded. Three days later the Welland overflowed its banks and flooded the meadows. 10 sheep were killed by lightning.

<!pswich>: Severe thunderstorm in the early morning, with unusually large hail. Much glass broken.

evening standard 21 Jul, Northampton Mercury 27 Jul, Bury free

Press 28 Jul,

Journal 28 Jul.

chronicle 28

Jul. Webb et

al 2009, BR

Grantham

Leicester

Webb reports: Very severe storms in the Midlands (some overlapped with areas hit on 11–12 June) and East Anglia. An H6 storm tracked from Northampton, NNW into Leicestershire; 50 km swath, hailstones 50–60 mm across.

5 Aug 1900 BR	Burgh Castle (Gt Yarmouth) 1.00" in 2 h	
17 Aug 1900 Chelmsford Chronicle 24 Aug 21 Aug 1900 BR	Swaffham (Norfolk) 1.09" in 45 m Navenby (Lincs) 1.25" in 1 h	<dunmow>: In the High Street opposite the town Hall where three roads converge, the water ran level with the crown of the road making the street look like a river. The storm was very localised and Felstead 2 ½ miles away was scarcely affected.</dunmow>
25 Jul 1901 Reading Mercury 27 Jul	neverlby (Ellies) 1.25 III 1 III	Newmarket: Hailstones as large as marbles along with rain caused the streets to resemble a swollen stream. A child was injured by lightning and cattle were reported killed. <lincolnshire fens="">: Rain fell in torrents for several hours accompanied by very heavy hail. Corn crops were badly laid and some streets were flooded. <northampton><eeton>: A waterspout was said to burst here. The volume of water split the branches of several large trees and inundated the road. A torrent tore down the hillside to the railway.</eeton></northampton></lincolnshire>
10 Aug 1901 Stamford Mercury 16 Aug 12 Aug 1901	Blisworth (S Northants) 0.80"	<north lincolnshire="">: A heavy thunderstorm was said to be the worst for 50 years occurred over a group of villages, New Holland, barrow, Barton, Ulceby, Wootton, Brocklesby and Goxhill. At South ferriby a hailstone measured 1½ inches in length and windows were shattered in many places. The village of Wootton was practically under water. Pelham Arms at Brocklesby was flooded.</north>
12 Aug 1901 BR	in 1 h	
2 Oct 1901 BR 3 Oct 1901 BR	Cambridge 1.00" in 30 m Brigg (N Lincs) 1.86" in 1 h	<brigg>: The gauge being near the centre of a very small area of heavy fall. At the Great Central Railway Station, about half a mile S.E., only 0.75"was measured, and at places two or three miles distant only slight showers fell.</brigg>
30 May 1902 BR	Cambridge 1.10" in 10 m and 1.30" in 30 m Trumpington (Cambs) 1.30" in	

20 m

1 h

4 Jun 1902 East Anglia daily times 5

Jun

16 Jun 1902 BR

19 Jun 1902

BR

29 Jun 1902

BR 1 III

1 Jul 1902 East Anglia Daily Times 2 Jul, BR Fingringhoe (Suffolk) 1.53" in

Rendlesham (Suffolk) 1.50" in 1 h

Wisbech (Cambs) 0.90" in 30

Since the great storm of July 1897 no such scene has been witnessed in Ipswich. The

lightning was not as severe as in the previous storm.

A flood marker was place on a wall in college Street to show this and former levels and this storm as ½ inch short of the 1897 flood.

Ipswich museum 2.81 in 24 h of which 2.55" between 12.44 and 2.15 pm

Ipswich 3.36" in 2 h

<Felixstowe>: Several streets were partially flooded during a thunderstorm which lasted about half an hour.
Newmarket: the storm was accompanied by large hailstones. Cattle were killed by lightning in several places.

<Ipswich>: Within a few minutes some of the main streets became raging torrents of water especially at white Horse Corner and the top of Upper Orwell Street. Handcarts were swept before the torrent. At certain junctions the water reached a depth of 3 to 4 feet. On St Margaret's Plain water went straight through a large house carrying articles into the street. Shops at white Horse Corner were flooded. Up St Helen's Street the stream extended quite across the road from Major's Corner to bond Street. Between the Shire Hall and the County Hotel the roads were impassable. The borough road near the Gaol was perfectly dry but at the bottom of Church Street at the junction with Fore Street the water was estimated to be 3 ½ feet deep. The bottom of duke Street was a muddy swamp with houses on both sides being flooded. Key Street and college Street were impassable with damage done by flooding of large factories and other businesses. The the bottom of Key Street the water was at ceiling level in cellars of most houses. The whole surface of Lower Orwell Street was washed down in a bed of shingle to the junction with the road with Key Street. At Whitehorse corner, Northgate Street was changed within a few moments of the start of the storm into a roaring torrent and a stream passed over Tavern Stream and into Brook Street. The flood coursed down Northgate Street meeting the streams from Tavern Street and Carr Street and then pursuing its way down Brook Street where in the distance the water piled up against a shop which stands forward at Tacket Street Corner. A torrent of water poured down St Margaret's Street from the Westerfield Road and roads adjacent. Cellars in Upper Orwelll Street were full of water. Proceeding along St Helen's which was more than a foot deep from water that came from the California area shops and houses on either side of the road were swamped with mud and water. From the quantity of debris left after the storm, it is believed water must have rushed down Spring Road with the force of a mountain torrent. At the Warwick road corner roads and pavements were covered with debris. Cottages in the neighbourhood of the Rope Walk and the Potteries were badly affected by slimy mud on their floors. Poor tenements in Duke Street were flooded to a depth of 2 feet. Fore Street and the bottom of Church Street which

is always flooded in storms of exceptional severity was again rendered impassable with houses flooded from water which poured down Fore Street and the Back and Fore Hamlets. There were deep ruts on the road in Back Hamlet. The water poured through Lower Wash and key Street formed the receptacle into which this great volume of water emptied where the water was several feet deep. Paul's Maltings were again flooded and all the houses in the neighbourhood were flooded. In Salthouse Street there was even more water than in the great storm 5 years ago- the last time merchants and manufacturers suffered the effects of the flood. In Lower brook Street, the bar in the Seahorse Inn was soon under water. Turner's Iron works on either side of College Street had their premises flooded to a greater extent than in 1897. At Wolsey Street outside the entrance to the comissioner's yard it was flooded to a depth of nearly 2 feet and the Zulu Cavern and the houses opposite had water several inches deep. The Cattle market close by was flooded. Princes Street outside the Cattle Market and as far as the British Lion was under water and found an outlet in the side streets where tenants were also flooded. At either end of Tacket Street the water poured in through shop entrances. Large ells were caught in the main street. Some roach were caught in St Mary Key church which was also flooded. The low lying district of the Mount suffered from the water which came down George Street and Black Horse Lane and great damage was done to houses in Mount Street and Great Gipping Street to a depth of 3 feet. Orford Street was completely scoured at the crown of the road with stones of great size carried along. Houses on Norwich road were flooded with water rushing trough from front to back. At the Ipswich Arms at the bottom of London road the water rushed through the front door and flooded all the downstairs rooms; the aged landlady was unable to reach the stairs and took refuge on a chair! At Gippeswyk Hall Farm the water swept through barn and premises. At Wingfield Street houses with living quarters below the road level suffered terribly with ruined furniture.

The tremendous volume of water which gathered in th elevated districts found one great outlet in High Street and other thoroughfares debouching onto Westgate Street, Crown Street and the Tower Ramparts. A corset factory was flooded to a depth of 18 inches. Many other businesses were flooded. A wedding and a funeral were postponed.

<Felixstowe>: the storm lasted about an hour and a half and several streets were flooded. In Ranelugh Street the water reached several shops.

<Framlingham>: Rain fell in torrents for an hour and a half. The roads in the lower part of town were flooded to 18 inches. The road to the Railway Station opposite Mill's Almshouses became a stream and the Reading Room in an adjacent road was flooded. A sewer burst in fore Street and the water rushed down the road.

<Aldeburgh>: Here and adjacent villages considerable damage was done. At <Snape Watering the water rose to a considerable height.

<Blaxhall>: At Red House Farm the top soil with crops was washed away and a channel created wide enough for

19 Jul 1902 Ipswich Journal 25 Jul a wagon and several feet deep. Cartloads of hail filled the ditches. The storm also affected <Bawdsey>.

6 Aug 1902 Sudbury (Suffolk) 1.00" in 40

BR

7 Aug 1902 Tylney St Lawrence (Norfolk)

BR 1.18" in 30 m

Burgh Castle (Gt Yarmouth) 0.80" in 40 m and 1.48 in 70

m

11 Sep 1902 Fingringhoe 3.41" in 2 h

BR

5 May 1903 Gloucester Citizen 6 May, Stamford

mercury 8

Northampton

mercury 8

May

9 May 1903

Leighton Buzzard

observer 12

May,

Buckingham

Express 16

May

<Northamptonshire>: After a storm of rain and hail the River Nene burst its banks flooding many miles of land along its banks. ~the Trent is overflowing its banks.

<Oundle>: The streets were like a river in a terrific storm of rain and hail.

<Earl's Barton>: The rain was accompanied by hail which created a 2 inch cover. The streets were like rivers and the cooperative premises at the bottom of High Street were flooded to a considerable depth. The bakehouse there was flooded to 10 inches. In houses in Wellingborough Road water rushed through houses from back to front. The hail blocked gutters and added to the flood problem.

<Thrapston>: A storm of rain and hail flooded the streets flooding some shops and houses

<Leighton Buzzard>: The roads were flooded in many places including Leighton B but especially in <Hockliffe>,
<Milton Bryan> and <Woburn>. Lake Street was impassable by the Chain Bridge. In south Street there was also several fet of water that reached as far as Claremont. The Bell Close was flooded. The Recreation Grounds and the fields nearby were flooded. Pigs in danger of being downed in their styes were taken into dwellings for their safety.

<Northamptonshire>: Previous flood levels were increases by the storm on 9th. In the valley of the <<Nene>>, highways are underwater and bridges washed away.

<Fens>: Many thousands of acres are flooded. Boats are bring used to drive cattle from flooded meadows.
Between <Spalding> and <Peakirk> there is a lake 15 miles long and from half to three quarters of a mile wide.
This ground had not been flooded for 25 years.

<Buckingham>: The water in the Ouse rose rapidly and the meadows were soon filled but no houses were flooded.

<Tingewick>: The drains were insufficient and the street became like a flowing river and several houses were inundated.

<Finmere>: At the station the water was several inches deep and much damage was done to gardens. Large

11 Jun 1903 BR	Bedford 2.77" in 90 m	hailstones fell. <thornborough>: the whole village was flooded when the water came into the village so rapidly. Several houses were flooded to a depth of several inches.</thornborough>
16 Jun 1903 Evening Star 17 Jun, Bedfordshire Mercury 19 Jun	A thunderstorm in W Suffolk and Cambridgeshire followed continuous rain in the previous 3 days. Floods were reported on the Stour, Blackwater Lea and Chelmer but not flash floods	<sudbury>: there was a sharp fall of hail with some thunder. The common lands were all under water and the embankments leading to Brunsdon Hall were in places washed away. The Ballingdon Sewage Works Pumping Station was flooded and Ballingdon Street and Church street were flooded. A number of houses near the river were flooded. <haverhill>: The town was severely flooded on 15th from the incessant rain of the previous few days. Houses along the Cronland and Queen Streets etc were flooded with furniture floating about. The water in some places was 3 to 4 feet deep. <sandy>: A terrific hailstorm continued unabated for half an hour. The stones were like large marbles some half</sandy></haverhill></sudbury>
11 Jul 1903 Leeds mercury 13 Jul Sheffield Daily Tel 13 Jul		an inch in diameter and covered the streets to a depth of several inches. Early crops and vegetables are badly damaged. the storm seems to have been confined to the parish of Sandy. Many of the lower rooms of houses are under water but perhaps mainly due to the previous persistent rain. <boston>: A thunderstorm was accompanied by hailstones or large pieces of ice measuring from half an inch to one and a half inches in length and half an inch thick causing great damage to crops and to glasshouses. The pieces of ice were jagged and of all sizes and shapes. A train from Newark to Lincoln arrived with the windows completely smashed by hailstones.</boston>
23 Jul 1903 Phillip Eden Great British Weather Disasters, BR	Cambridge 1.00" in 1 h	Persistent rain for 9-12 hours fell in Se England and E Anglia on 23 rd with over 100 mm in northeast Kent and SW Essex (Dartford 112 mm). Newspapers have no reference to thunder or flooding.
10/11 Sep 1903 Evening Star 12 Sep	Severe gale and storm at sea with 60 lives lost. Eastern Evening News list 17 different incidents	<ipswich>: Destructive gales and heavy rain continued for 24 hours was followed by a thunderstorm. The Somersham road part of which is known as The Wash was knee deep for a length of 600 yards. <newmarket>: A man was killed by lightning.</newmarket></ipswich>

(Should this be 3 /4 sep

Sep?)

31 May 1904

Sheffield

Daily

Telegraph 1

Jun, BR

25 Jul 1904 BR

Lexden (Essex) 0.57" in 6 ½ m

Clare (Suffolk) 1.11" in 30 m Hevingham (Norfolk) 2.00" in

Brigg (N Lincs) 2.27" in 4 h

26 Jul 1904 **Evening Star** 27 Jul, Easter **Daily Press 28**

Jul

BR

and 1.32" in 25 m

2 h

Stowmarket 1.53" in 2 hours

A sharp thunderstorm in the 27 Jul 1904

> eastern counties, which lasted barely two hours, brought large falls to a number of stations, in some cases in the form of terrific hail. this may be looked upon as the continuation of the

<Bishops Stortford>: Hold Trinity church was flooded. Great damage was done to greenhouses. A horse was killed by lightning.

<Bourne>, S Lincoln: A thunderstorm with large hailstones caused damage to the early potato crop where the tops were cut off level with the ground.

<Peterborough>: Rain descended in torrents followed by a sharp hailstorm. The market Hall was flooded and the fruit and flower crops suffered terribly. Several cattle were killed. BR observer reports T'he heaviest thunderstorm for many years.

<Stowmarket>: Ipswich Street became like a river and there was 18 inches of water in many cellars.

<Colchester>: Practically the whole of Maldon Road was flooded and torrents of water flowing from Crouch Street made matters worse. The Firs Maldon road was badly flooded to a depth of 5 feet and windows were broken by the water pressure. A large quantity of water accumulated in Abbeygate Street.

<Norwich>: Heavy rainfall continued for a couple of hours causing flooding of many thoroughfares and the basements of houses and businesses. Flooding occurred in Davey Place and Arcade Street and Orford Place. In the outlying parts of the city the Unthank Road and Earlham Road districts suffered most severely. In Unthank road between Gloucester Street and College Road the water was waist deep and the water flowed over garden walls and into basements. In Park Lane the water rushed down the hill at a great rate and collected at the bottom opposite Alexandra Road in a great lake; here lao basements of houses were affected.

<Sporle>: Three horses were killed by lightning (and other in the neighbourhood).

<Diss>: Hailstones as large as marbles fell for half an hour and played havoc with the fruit. Mere Street main thoroughfare was like a mountain stream taking in its course the King's Head yard.

28 Jul 1904	S C N S I F K
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30 Jul 1904	3
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22 Aug 1904	T n
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13 Jun 1905	
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27 Jun 1905	S
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journal 1 Jul	
20 Jun 1005	

28 Jul 1904 BR 30 Jul 1904 BR	storm of the preceding day DR Cooling 2.66" Meldreth (1.43 Southend 1.60 Ingatestone (1.60" Fritton [Yarmouth] 2.62 Keswick Old Hall 2.55 Fingringhoe (Essex) 1.50" in 1 h Hillington (Norfolk) 1.56" in 35 m	
22 Aug 1904 BR	Terlong (Essex) 1.33" in 2 h 30 m	
13 Jun 1905 Carlisle Journal 16 Jun		<spalding>: A thunderstorm brought to an end the drought of 8 weeks in south Linclonshire. The Streets of Spalding were completely flooded spoiling trade in the market. It was generally considered beneficial to crops.</spalding>
27 Jun 1905 East Anglia Daily times 28 Jun, Diss	Sheep were killed in several places and many buildings struck. Billingborough 0.75" in 30 mins	<aldeburgh>: In a heavy storm of rain and hail many places were flooded and the hail did much damage. <northampton>: A boy was struck by lightning and killed whilst bowling in a cricket match. <diss>: the thunderstorm prevailed for more than an hour. The drains were unequal to carrying off the water and the roads in some places were flooded.</diss></northampton></aldeburgh>
Express 30 Jun, Grantham journal 1 Jul	Darsham Sibton: 0.85" in 40 m	<billingborough>: Three quarters of an inch of rain fell in a little over half an hour. The sewers were unable to take the volume of flow and the water flowed down the streets in some places from side to side and in some low lying places a foot deep. The water found its way into many houses. The hailstones were of an exceptional size. The district from Billingborough to Grantham was badly affected; flower beds were washed out by the downpour and plum trees and glass houses suffered from the hail. Four cattle and a horse were killed together under a tree.</billingborough>
28 Jun 1905 Diss Express 30 Jun		<north walsham="">: In a thunderstorm the streets became impassable. The roads under the railway bridges had several feet of water. Houses were flooded in the lower part of town.</north>
9 Jul 1905 Barking etc Gazette 15 Jul,	Shenfield rectory 1.75" in 1 hour Market Overton (Rutland) 2.07" in 1 h	<brentwood>: The storm water rushed in torrents down the hill leading from the town and washed away a considerable amount of road material. <romford>: The rain flooded some localities principally in the centre of town. Two horses were killed by lightning.</romford></brentwood>

Buckingham Advertiser 15 Jul, BR

Great Leighs (Essex) 0.98" in 30 m

Brentwood (Essex) 1.73" in 45

Enfield 2.44" in 50 m Haileybury 1.23" in 50 m Loddington (near Kettering) 1.00" in 1 h <Ongar>: the streets were converted into rivers and hail the size of large marbles fell. At Noak Hill mangolds were washed out of a field on to the road.

<Great Bursted>: At Church Street a channel 100 yards long and nearly afoot deep was made by the water rushing down the hill.

<Laindon>: Some of the hailstones were as large as walnuts and caused considerable damage. The roads were flooded and torn up and vegetable and fruit trees seriously damaged.

<Kettering>: the storm continued more or less severe from 12.30 to 15.00. The streets in the lower portion of the town were flooded through the drains being insufficient to carry off the water and the water stood 7 or 8 inches deep on the streets. A nursery in Mill Road was completely flooded. Various houses were struck and damaged by lightning.

<Rothwell>; Several houses were flooded by the heavy rain. Hailstones many the size of walnuts fell and filled the gutters. Every drain in the town street became flooded and the water burst several drains and forced up large kerbstones. In Well Lane water stood as high as the tables and houses were flooded right and left. On all sides glass was shattered by the large hailstones. Birds were knocked out of trees and killed. In New Street the water ran down like a river and at one spot a dozen birds lay drowned.

<Desborough>: The storm raged for over 2 hours with very large hailstones. The storm was said to be the worst there for 50 years; it flooded the streets with the water running down the pavement like a stream. Numerous cellars were flooded. One house which was flooded in Union Street caused the floor to sink 6 inches. The road to the Congregational Chapel was flooded to a depth of several feet (it was a Sunday). Fruit trees and garden produce were much damaged.

27 Aug 1905 BR 28 Aug 1905 East Anglia Daily Times 29 Aug Shefford (Beds) 1.13" in 2 h

Ipswich 0.85" in 8 hours

<Ipswich>: The most severe thunderstorm lasted from 3.45 to 4.30 pm. The rain was mixed with some hail in western districts. Many of the thoroughfares became partially flooded and there was some scour. In Bramford Road in the neighbourhood of the Council School the water accumulated to the depth of horse's knees.
<Yarmouth>: Several roads were flooded especially in the lower parts of town and in a few offices on the South

Quay the water was over a foot in depth. The water invaded the offices from the Town Hall corner. The wood pavement in Middlegate Street, recently laid, was washed up and the Police Station and fire Station were flooded. At the foot of Regent road another lake was formed.

<Gorleston>: In Queen Street some of the cellars were flooded to a depth of 14 inches.

<Pulham St Mary>: The rain quickly flooded the roads and found its way into some of the houses.

<Cromer>: Two fine waterspouts were observed about 12 miles out to sea. They gradually diminished as they approached land.

13 May 1906 Wells Journal 17 May, BR 16 Jun 1906 Bucks herald 23 Jun 6 Jul 1906 BR 25 Jun 1906 BR 27 Jul 1906, BR BR	Swaffham (Norfolk) 0.77" in 35 m Somersham (Cambs) Reepham (Norfolk) 1.13" in 45 m	<lowestoft>: Streets were flooded. <denton>: 8 bullocks were killed by lightning. <buckingham>: The rain caused the gratings to be blocked causing flooding of low lying houses notably on the Stony Stratford road</buckingham></denton></lowestoft>
2 Aug 1906 Webb et al 2009, British rainfall, Eastern Evening News 3 Aug, Gloucester Citizen 4 Aug, BR	Three storms converged on the borders of Lincs, Cambs and Northants Yarmouth 0.85" in 45 m	Webb notes this H6 storm tracked SW–NE over 105 km from Moulsoe (Bucks) as far as The Wash. <yarmouth>: Rain came down in torrents and there was a sharp fusillade of hail. The streets ran with water and the police station was one of the places washed out. The water coursed along Caistor Road. On Albion Road, Boreham road, Tower Street, Blackfriar's road. Abyssinia Street and Stanley road houses were flooded to a depth of 6 inches. <bedfordshire>: Hailstones were jagged lumps of ice many measuring an inch in length. They covered the ground up to people's shoe tops. On many farms crops are utterly ruined; nothing is left of potato plants but bare stalks. Fruit trees are leafless. An incredible number of windows has been broken including 170 at <staughton> Church. <newport pagnall=""><bucks>: Hailstones were as large as pigeon's eggs and growing crops were enormously damaged. Two horses were killed by lightning sheltering under a tree. <murrow> (near Wisbech): Hailstones weighing 1 oz. each fell</murrow></bucks></newport></staughton></bedfordshire></yarmouth>
8 Aug 1906 Diss Express 10 Aug 13 Aug 1906 Stamford	Burnham Overy Staithe (N Norfolk)1.30" in 30 m	<norwich>: In a very few minutes the streets became flooded in many cases to a depth of several inches. The water from the streets opening on to Magdalen Road which shorly became a big waterway. The storm exhausted itself in about 10 minutes. The rainfall was 0.80" (compared to 0.78" for the whole of July). <yarmouth>: Another storm struck here causing roads and paths to be inundated. Houses were also inundated including on in southtown to a depth of a couple of feet. In Northgate Street the water stood over the level of the steps of electric cars. Several shops were inundated. The police station was again flooded and also a number of offices on south Quay. No rain was experienced at Diss. <grimsby>: Low lying districts were flooded by the heavy rain which gave way to hail the size of peas. It did enormous damage to standing crops.</grimsby></yarmouth></norwich>

<bedford>: In many places small rivers were formed. Probably one of the worst places was at the bottom of Goldington Avenue where the water stood inches deep and yards wide. ems <peterborough> Hailstones as large as marbles fell and the River Nene is said to be in its biggest flood since 1879. <holbeach>: A labourer was struck by lightning and killed</holbeach></peterborough></bedford>
South <lincolnshire>: Rain descended in torrents and hundreds of low lying houses in <lowton>, <glazebury>, <abram> and <platt bridge=""> were flooded. <ruskington>: A tremendous quantity of hailstones and rain fell for 3 hours. The streets were flooded and much damage done to the vegetation. <braintree>: There was a terrific fall of hail followed by a heavy downpour of rain so that streets and gardens were flooded. <newmarket>: A severe thunderstorm was accompanied by hail which did considerable damage to fruit and hay. Some cattle were killed by lightning.</newmarket></braintree></ruskington></platt></abram></glazebury></lowton></lincolnshire>
 < Colchester>: Hail storms lasted nearly half an hour. Water poured down the streets in torrents and the down side booking office at North Station was flooded. < Lexden>: The Kitchen was flooded and the pub was struck by lightning. < Bletchley> and <fenny stratford="">: There were torrents of rain and hail which lay on the ground for the rest of the day. All the roads and streets were flooded, the drains and gulleys being quite inadequate. The storm was quite local. </fenny> in 20 < Retford>: The storm lasted about half an hour and caused the streets to be flooded. A farm worker was killed by lightning at <gamston> nearby.</gamston>
11

13 Jul 1908 Reepham (Norfolk) 1.00" in 1 BR Milton (Cambs) 1.33" in 90 m Great Glemham (Suffolk) DR 3.45" Oving (Bucks) 0.75" in 30 m 14 Jul 1908 BR 18 Jul 1908 East anglia daily times 20 Jul 22 Aug 1908 Eastern **Evening News** 24 Aug

25 Jun 1909

East Anglia
Daily Times
25 Jun

<Felixtowe>: A deluge of rain lasting half an hour flooded the streets in many parts of the town. Hail also fell for a few minutes.

<Walton>: torrential rain fell with almost tropical violence and High street ran like a river with water.

<Yarmouth>: In the space of an hour and a half the streets became flooded. Newtown was isolated by a deluge of storm water which lay a foot deep extending nearly 200 yards south of Estcourt road. Houses and shops on both sides of Northgate Street were invaded. The side thoroughfares of Stanley Road, Victoria street, Hammond Road, belvedere road and Kitchener Road all presented the appearance of houses bordering canals. There was an astonishing quantity of water in a short time. In <South Yarmouth> the water on Blackfriars road was a foot deep and houses were flooded. There was also flooding on Albion Road where a boat could easily have been floated. In Market Row a confectioner's shop was flooded owing to the blockage of pipes. On a milder scale Southtown experienced inundation due to the drains not carrying off the water as fast as it fell. The Police Station on Middlegate Street was also flooded.

<Pulham St Mary>: Torrential rain fell for 2 hours. The drains were unable to take it away and the roads were flooded and many houses were flooded

23 Sep 1908 Norwich 1.50" in 3 h **BR**

<Lowestoft>: Several thoroughfares were flooded for a time and the gulleys could not carry off the unusual volume of water. Basements and kitchens were flooded

27 Jun 1909
Lincolnshire
Echo 28 Jun

Horncastle 2.10" in 2 hours
but seemed confined to the
town with no hail within a
mile.

<Horncastle>: Hail fell first the size of peas and covered the roads to a depth of some inches. In a short time the streets became miniature rivers. The storm raged from 4.30 to 7.00pm. In many houses the water had backed up from the drains and water ran in the front door and out the back. Cellars everywhere were flood to a depth from one inch to 4 feet. Hailstones blocked house gutters and water came through roofs. The Bull Hotel was severely flooded. Over the bridge at a grocery shop the water covered the floor leaving a quantity of mud. London Inn was flooded. A shop on East Street was flooded and the main drain burst there forcing up a

		bakehouse floor and causing flooding to a depth of 3 feet. Fields of potatoes and other produce were cut to
16 Aug 1909 Lincolnshire Chronicle 21 Aug	Widespread thunderstorms in England but few references to flooding	pieces by the hail. <lincoln>: The streets in low lying parts of the town were flooded to a depth of many inches and even 2 feet in one instance. The latter was experienced in the Carholme Road district. Flooding also occurred in Baggeholme road and Stamp End quarter.</lincoln>
17 Sep 1909 Banbury Advertiser 23 Sep	Thunderstorms affected Bucks, Berks, Oxfordshire. S Warwick, Hants and Surrey but with few references to flooding	<buckingham>: In the low lying portions of the town houses were flooded by water and filth from sewers. All traffic was stopped for 2 hours.</buckingham>
23 Sep 1909 Lincolnshire Echo 24 Sep, BR	Castle Bytham 3.38" in 3 h Grantham 1.80" in 3 h Wittering 2.84" in 3 h	Between <peterborough> and <grantham> serious flooding took place to the Great Northern main rail line especially in the neighbourhood of <essendine>, in some places reaching the level of the rail metals. The hail was at least 3 inches deep. Considerable flooding occurred in the <bytham> district. <castle bytham=""> (Lincs): The severest storm in living memory began soon after 7 a.m., and in three hours 3.38" of rain fell. Many houses were flooded, corn was floated away out of the fields, cattle were swept off by the flood, and the school could not meet.</castle></bytham></essendine></grantham></peterborough>
21 May 1910 Sunday times 22 May	Buckingham 1 ½ inches in 30 mins	<buckingham>: Low lying houses on the Stratford Road were flooded to a depth of over 1 foot.</buckingham>
8 Jun 1910 BR 9 Jun 1910 Shepton Mallett Journal 10 Jun	Peterborough 1.09" in 1 h	<peterborough>: The rain flooded many cellars in the town, shops were swamped and the water ran down the streets in torrents.</peterborough>
10 Jun 1910 East Anglia daily times 11 Jun	Widespread thunderstorms over East Anglia with many animals killed and buildings struck. Ipswich 0.75"	<ipswich>: The downpour of warm rain flooded many parts of the town. Eleven sheep were killed by lightning. At the west end of the town and water poured down Chevallier road like a mill race. A busy spot at the White Horse Corner was impassable for pedestrians. Even in the higher parts of the town such as in Foxhall Road the sewers were overwhelmed and water forced up as much as 1 foot with iron covers lifted off. A large amount of earth and gravel was carried down Grove Lane and accumulated at the lower corner of Warwick Lane. In Borough Lane the floods were like a river and running to the end of Church street they formed a pool of considerable depth. Flooding was severe in the neighbourhood of The Mount. At Little Gipping and Great Gipping Streets several houses had to be bailed out. Cellars on the Cronhill were flooded as well as some shop</ipswich>

floors. Gardens on the low part of the hillside suffered wash out, the growing plants being washed bodily away. Amongst the places flooded were Cowell's cellars, Fish and Sons basement, Turner's foundry, The Feathers Inn, and Hyde Park corner. Many of the houses in Milner Street near Alexandra Park were flooded. Fore Street was more or less flooded and and in Duke Street one house had water running in from both the back and the front. <Leiston>: The hailstones were so large that it was not safe to be out of doors. Waterloo Avenue, Main Street and Valley road were converted into a lake. Manhole covers were forced up and washed away. Two of the workshops at leiston Works were flooded. Much damage was done to Carr's brickworks.

<Aldeburgh>: Although the storm was of short duration the rainfall was so heavy that the streets were speedily flooded. The rush of water down the steep hill at Sterling's Corner from The Terrace gutted out the soil and laid bare the sewer pipes whilst at the south end of Lee road the centre of the raod was washed out to the foundation (quite 18 inches). Pieces of ice were observed amongst the downpour of rain and hail and did damage to fruit.

<Frinton on Sea>: Rain fell so heavily that the water covered several feet of the footpath but owing to the excellent storm water outfall it soon subsided.

<Skegness>: Rain and hail descended torrentially and the drains in Lumley Road the principal thoroughfare could not carry the flow away fast enough and a long row of business premises were soon flooded. Other roads were also flooded from pavement to pavement and all the pleasure grounds were under water. Rainfall in one hour was 0.82".

<Southend><Crowle>: and many other places suffered similarly.

<Norwich>: the storm lasted the best part of an hour and some of the lower parts of the city were flooded. On Unthank road the trams ran through floods a foot deep.

<Woolpit>: The road by the White elm was turned into a roaring torrent and soil from a field close by was carried into the roadway in tons. But after a break a hailstorm occurred with a roaring sound. Greenhouses were completely wrecked and windows broken in a great many houses and 100 squares were broken in the church. The hailstones measured 1 ½ inch across. There was great damage to fruit and crops.

<Hadleigh>: With such a deluge of rain the ordinary channels for surface water were quite inadequate; drains burst and soon got blocked and then water accumulated in the streets. In one part of High Street there was quite 2 feet of water. Many of the cellars, shops and houses were flooded. In Bridge Street boats were used to convey people from one point to another. Angel Street was turned into a river.

<Finningham>: A heavy downpour of rain and hail totalled nearly an inch.

<Walsham le Willows>: The hailstorm was very severe and glasshouses panes were broken here an in neighbouring villages. Pear trees suffered the most damage.

<Newmarket>: A labourer was killed by lightning.

25 Jun 1910 Leicester Daily Post 27 Jun

11 May 1911 Diss Express 19 May, Buckingham Advertiser 20 May Arkesden (Essex) 2.52" in 2 h

3 Jun 1911 BR	20 Aug 1911 Spilsby (Lincs) 0.95" in 30 m Buckingham Advertiser 26	<tingewick>: In a heavy deluge the drains were blocked and the street was flooded as were some houses. Some of those on the higher ground suffered equally to those in the lowlands through the blocking of drains. A hailstone was measured at 2 inches across</tingewick>
20 Aug 1911 Buckingham Advertiser 26		<buckingham>: Heavy rainfall blocked the drains and flooded many houses. Hail accompanied the rain but did little damage in the town but in the villages to the south a quantity of glass was broken by the icy missiles some of which were larger than marbles.</buckingham>
Aug, BR		<boston>: A violent storm inundated the low lying parts of the town. In a few minutes the streets were flooded and houses were flooded. The water tore down the thoroughfares in a flood. The storm was severe for half an hour but rain continued into the night; gauges recorded 1.40". glasshouses, orchards and growing crops suffered some damage.</boston>
22 May 1912	Sporle (Norfolk) 1.10" in 1 h	Suffered Soffie damage.
BR 9 Jun 1912 Peterborough advertiser 15 Jun		<farcet>: The rain and hail fell tremendously and in a few minutes everywhere was flooded. At claypit Terrace water had to be bailed out of houses. The streets were like a river for some time.</farcet>
19 Jun 1912 Hull daily Mail 20 Jun, Herts and Cambs Reporter 28		<grimsby>: For nearly an hour there was a torrential downpour of rain and hail the size of garden peas; in another account as large as cherries. All the streets were quickly flooded and the sewers were quite inadequate to cope with the inrush of water. Several business premises were inundated in Victoria Street . Both the Doughty Road and the Wintringham Road subways were submerged. The storm was wholly local; while the bottom of Isaac's Hill was in a state of flood the top part at St Peter's Avenue was dry and Cleethorpe was completely missed.</grimsby>
Jun .		<lincoln>: Nearly an inch of rain fell in half an hour and damage to agriculture is serious. In the High Street water reached the axles of cabs within ten minutes and large manholes were torn up by the force of the water beneath them.</lincoln>
13 Jul 1912 Cheltenham Chronicle 19	Sudbury (Suffolk) 1.40" in 30 m	(<withernsea>: in East Riding was also affected by large hailstones and had flooded streets) <brentwood>: The thunderstorm produced floods on roads at Shenfield Common. Some damage was done to greenhouses. <great baddow="">: The rain quickly flooded the streets and some of the roads looked like rivers in flood.</great></brentwood></withernsea>
Jul, BR 23 Jul 1912	Cranford (Northants) 0.80" in	<finchinfield>: Some cottages had 250 panes of glass broken by hail as large as pullets' eggs and jagged; other said as large as walnuts causing great damage to crops. BR notes: A day of very local thunderstorms affecting chiefly the east midland counties of England. The most</finchinfield>

BR 15 m prominent feature of the rainfall on this day was a well defined strip of heavy rainfall stretching in a due north Radford (Herts) 1.30" in 55 m to south direction from Lincolnshire almost to London. Horkstow (N Lincs) 2.12" in 1 24 Jul 1912 h 30 m BR 6 Aug 1912 **Daily Herald** stones about an inch deep. 12 Aug destroyed.

25/26 Aug 1912 Philip **Eden Great** 4 h **British** Weather Disasters **2008, COL Sep** in 6 h 1992, BR

Not a flash flood? Worstead (Norfolk) 1.36" in 1 h and 1.96" in 1 h 30 m and 2.66" in 2 h 40 m and 3.41" in Norwich 1.15" in 1 h and 2.25" in 2 h and 3.75" in 4 h and 4.90 in 6 h Baconsthorpe (Norfolk) 4.50"

<Buckingham>: the thunderstorm was remarkable for the heavy fall of hail which covered the roads with ice-

<Oundle>: A young man and his horse were killed by lightning and the hay he was managing was fired and

<Lincolnshire coast>: The precise location was not mentioned but the hailstones were said to be the largest ever seen in the district and were 2 inches thick on the ground. The streets were deeply flooded. <Norwich>: The great Norfolk storm and flood with 205 mm at Brundall near Norwich in little more than 24 hours, said to be one of the greatest floods of the 20th century in Britain. (Chapter 6 of Eden), Continuous rain fell in a steady downpour but no thunder or lightning was reported at any stage during the storm. The rain started at 4 am and after 4 pm the rainfall decreased but was still rather heavy up to 10 pm. Very little rain fell after 4 am on 27th.

<Norwich>: The rainfall on 25th and 26th August was 7.36 inches (187 mm). The resulting flooding in Norwich was the most severe on record and caused damage to bridges, buildings and railway lines. Hundreds of houses in low lying areas were flooded. Three people lost their lives in the floods. Wind speeds were very high and at the Cantley sugar beet Factory the force of wind and rain broke every glass in the factory. COL gives historic flood levels in Norwich. The August 1912 level was 1 foot higher than the previous highest in 1570. Of the 9 floods listed all are winter floods from October to February except for the 1912 flood. BR notes: On a wall in the city is a tablet which records the position of the high water mark of all the bad floods from which Norwich has suffered during the last 300 years. The highest and oldest of these marks bears the date 1614, but the flood mark of August, 1912, stands some 15 inches higher. The chief feature of the flooding was the destruction of bridges and the dislocation of traffic over road and rail over almost the whole of Norfolk. The damage to roads and bridges in the county of Norfolk alone was estimated at £27,800. In the Fen District,, between Spalding and Peterborough, the floods stretched for 20 miles, resembling a lake, in places a mile wide. Enormous damage to the crops, both of hay and corn, was reported, and great quantities of hay were carried bodily away and washed into the sea. A very large area of land remained under water for the whole of the following winter.

BR

29 Apr 1913 Lincolnshire Chronicle 2 May

27 May 1913

Northampton Chronicle 28

Chronici

May, Nottingham Evening Post

28 May, Essex

County

Chronicle 30

May,

Bedfordshire

Times 30 May, BR

Dengie 1.16" in 45 m

<Lincoln>: A storm of near tropical violence occurred for nearly an hour and a half. Low lying places in and around Lincoln were quickly flooded.

<St Neots>: Large hailstones did great damage to fruit and vegetables. Under the trees the leaves lay as thickly as in autumn and many boughs were broken. Many houses were flooded. Hailstones were said to be the size of pigeons' eggs.

<Castel Hedingham>: The glass in many greenhouses was broken, branches of trees were snapped off and many birds and rabbits were killed by the hailstones. Another report says hailstones fell as large as ordinary sized hen's eggs. At the vicarage 72 panes were broken. The hail only lasted about 5 minutes. One market gardener had 600 panes broken.

<Southend on Sea>: The rain poured down and the principal streets of the town were impassable for nearly an hour. The dep beneath the railway bridge on High Street became a lake a foot or two in depth. In the lower portion of <Leigh> and especially the High Street, roads and houses were flooded.

<Great Maplestead>: Three men were injured on the head by the falling stones and at the parish church some windows were smashed. Hailstones were weighed at 12 to the pound.

<Chelmsford>: The hailstones were larger than hen's eggs. The storm was similar to one 16 years ago; many hailstones were over 6 inches in circumference. Thick plate ribbed glass tiles have been smashed to atoms. The storm travelled from Saffron Waldon across Bartlow, Ridgewell, Toppesfield, Yeldham, Castle hedingham to Buree. In the Great Yeldham district the roads were strewn biwth branches and leaves and farmers have picked up partridges, wood pigeons from roads and fields whilst chickens, ducks and rabbits have been killed by the hailstones. Lightning killed several cows.

<Dovercourt>: Huge hailstones accompanied rain falling in torrents. Water poured down the High Street. The drains were quickly blocked and the water overflowed in Victoria Street. Scarcely a house escaped the resulting flood and basements in many cases were flooded to a depth of 3 feet. The Victoria and Anchor Hotels were also great sufferers.

<Manningtree>: Hail and rain fell copiously for several minutes and the hailstones were as large as Barcelona nuts [whatever they are?]

<Saffron Walden>: There was not much rain but large lumps of ice rugged and ill shaped were picked up in the street.

<Riseley> (north of Bedford): Many drains were blocked and houses flooded. Much bloom was cut off the trees

and gardens lacerated.

<Eaton Socon>: Some of the hailstones were quite an inch in diameter. Some glass was broken.

<Great Gransden>: Many of the hailstones were as large as hen's eggs and at nearly every house in Great and Little Gransden windows were broken. Many of the stones were 2 ½ inches long and several were as large as cricket balls.

<Cromer>: With the rain and hail the streets soon became miniature streams

<Halstead>: In the Halstead district hailstones of a very unusual size fell, and an immense amount of damage was done to buildings, crops and animals

17 Jun 1913 BR Elvenden Hall (Thetford) 2.85" in 58 m

Great Paxton (Cambs) 2.80 in

90 m

Stapleford House (Cambs)

1.35" in 30 m

Crowland (Lincs) 2.21" in 55

m

Brampton (nr Huntingdon)

2.12" in 75 m

Cambridge 0.99" in 50 m

18 Jun 1913
Suffolk and
Essex Free
press 18 Jun,
Bury free
Press 21 Jun,
Hertford

Mercury 21

Jun

27 Jun 1913 Lawford (Essex) 0.93" in 20 m

BR

9 Aug 1913 Wangford (Suffolk) 2.60" in 2

BR

2 Oct 1913 BR Newport Pagnell (Bucks)

1.25" in 30 m

3 Oct 1913 BR Dilham (Norfolk) 2.00" in 1 h

Norwich 1.25" in 30 m

<Lavenham>: Rain and hail fell in torrents for over half an hour and the hailstones were as large as marbles.
Several cottages were flooded the water rushing in the back door and out the front. Water Street was quite a river the road being covered to a depth of 6 inches. The roads were washed up in places and large stones were carried.

<Cockfield>: The hail was in some cases as large as walnuts. The fruit trees have suffered severely whilst vegetable leaves are much cut up. The roads were flooded. Several birds were killed and greenhouse glass was broken.

<Royston>: In a thunderstorm many of the streets were flooded and cellars had to be pumped out.

22 May 1914 BR	Upminster DR 3.35"	<upminster> (Essex): Thunderstorm rains yielded rather more than an inch at a number of stations in Lincolnshire, but the only record of sufficient magnitude to quote occurred at Upminster, in Essex, where 3.35" rain fell during the night. The nearest stations to Upminster lying some four miles in all directions recorded only about 0.50", so that the area affected was extremely small.</upminster>
8 Jun 1914 BR	Daventry (Northants) 0.93 in 20 m	
19 Jun 1914 Coventry	Great Chesterford (Essex) 0.92" in 45 m	<newmarket>: Immense hailstones like cubes of ice fell just east of Newmarket. In <kennet> village the water flowed down the road like a river.</kennet></newmarket>
Evening		<saffron walden="">: Hailstones of great size broke much glass and a number of houses were flooded with</saffron>
Telegraph 20 Jun, Cambridge Independent Press 26 Jun		furniture floating. The iron manholes were lifted off and the water came up in jets four feet high in High Street. In the lower part of High Street the water was 6 to 8 feet deep in a shop cellar. Houses were flooded all along Hill Street. Beer barrels were afloat in the George Inn cellar and a row of cottages and the Greyhound Inn also suffered. The water was several feet deep in the Bridgend district and poor people's homes badly flooded. The water was 12 to 18 inches deep in East Street and so quick was the onset that furniture was floating about
		before it could be removed. Large hailstones have done great damage to fruit trees and crops. <grays> A 4-year old girl was struck and killed by lightning. <glemsford>: In one part of the village 2" rain fell and in another part only a quarter of an inch. A sow was killed by lightning.</glemsford></grays>
20 Jun 1914 Nottingham	East Rudham (Norfolk) 2.10" in 2 h	<grimsby>: In a short thunderstorm hailstones the size of pigeon's eggs were picked up and stones the size of a filbert nut were quite common.</grimsby>
Evening post 22 Jun, Diss Express 26		<ixworth>: Flooded houses were found all over the parish and the river overflowed at Bowbeck bridge and the road was under water for a considerable distance. Nearly 3 inches of rain fell in two hours. Houses situated even on a slight slope were speedily inundated. Few were the houses that escaped the rush of mud sand and</ixworth>
Jun, Bury Free		water. The Cemetery and Crown Lane suffered badly; graves fell in and some stones were levelled.
Press 27 Jun,		<hepworth>: roads were washed up and some cottages were flooded to a depth of 6 inches.</hepworth>
BR		<great barton="">: In the torrential rain The Street was soon flooded and water entered some of the houses that stand low. Hailstones as large as nuts fell causing much damage to fruit and vegetables. <pakenham>: It was the heaviest rainfall in so short a time for several years. The rather steep hill leading into Pakenham Street from the direction of Barton was washed bare to the stones. The road was flooded to a considerable depth near the Fox Inn. Fortunately the water did not enter many houses, but the school house</pakenham></great>

<Stanton>: The storm raged fro 3 hours and great damage was done; corn was beaten down, hedges subsided

into the roadway in which large holes were torn. Flower fruit and vegetables were beaten down.

was flooded. Large hailstones fell.

1 Jul 1914 Huddersfield Daily Examiner 2 Jul, **Biggleswade Chronicle 3** Jul, Luton reporter 6 Jul, BR

6 May 1915

30 Jun 1915

Lincolnshire

Echo 30 Jun

BR

Biggleswade (Beds) 1.83" in

65 m

Helmingham (Suffolk) 1.53" in

2 h

<Kentford>: Enormous hailstones with sharp points resembled acorns fell for nearly half an hour and in some places a depth of 10 inches was measured. The hailstones blocked the drains and some houses were flooded. The Newmarket and Bury Road had the appearance of a river a foot to 18 inches deep in front of the Cock Inn. There was a huge bank of sand and stones near the Post Office.

<Bardwell>: The storm lasted 3 hours with hailstones of enormous size doing damage to growing crops. In various parts of the village residents were baling water out of their houses. At Beck Bridge the water overflowed the banks and flooded the road for a considerable distance.

<Hepworth>: The roads were washed up and some cottages were flooded to a depth of 6 inches.

<Potton>: The town was flooded and much glass broken by hailstones of abnormal size. A boy was killed and his father and mother injured by lightning whilst sitting in their house. This was the nearest approach of the storm to London. Hailstones the size of hens eggs were quite common and one lump of ice was picked up the size of a tennis ball. Chickens were killed and vegetables destroyed.

<Biggleswade>: Many thoroughfares were flooded and the hailstones were as large as walnuts. Numerous panes of glass were broken. The water ran down the streets like rivers and several houses in low lying parts were flooded. At <Newtown> the water ran through one cottage. Stratton Street residents suffered severely and the Bay Horse Inn and cottages opposite Fletcher's were flooded to a depth of several inches. Some of the shops in the town were also flooded. Crab Lane, Cemetery Street, Chapel Fields and Hicks Pits were under water. The children's playground adjoining the Council Schools was flooded to a couple of feet; some of the classrooms were also flooded.

<Langford>: In many streets there was 2 to 3 feet deep of water and many houses in the village were flooded. The Station road was a miniature river.

<Arlesey>: The storm was accompanied by large hailstones and oblong pieces of ice. The main road near the Wesleyan Chapelwas flooded for a distance of 250 yards causing the flooding of several houses some to 1 feeot deep. The water on the roads was up to the horses' knees.

<Dunstable>: Church Street soon presented the appearance of a shallow stream; the gullies and drains became blocked and the water found its wy into the basements of houses. A new drain in the North Ward proved effective in preventing flooding.

<Lincoln>: The heavy rain was mixed with large hailstonesand miniature lakes were seen in many parts of the city. A huge lake formed at the bottom of The Avenue and the basement of houses in St James Terrace were flooded. The trenches on the Brayford Wharf were soon flooded and there were huge rushes from the manholes at the bottom of Water Lane. In Newland an extensive sheet of water stretched across most of the

30 Jun 1 Bigglesv Chronic Jul, BR	wade	Mildenhall 2.63" in 50 m Boxworth (Cambs) 1.42 in 90 m Lincoln 2.50" in 105 m	road in front of the Palace Theatre. In many other parts of the city similar conditions prevailed. <clifton><beds>: Rain fell in torrents for more than an hour and a half accompanied by a violent fall of hail causing much damage to young plants. Village roads were flooded in several places and many houses suffered likewise.</beds></clifton>
4 Jul 19	! ! :	Boxworth (Cambs) 0.76 in 8 ½ m Hagworthingham (Lincs) 1.25" in 30 m	
24 Jul 1 BR		Colchester o.70" in 25 m Sloley (Norfolk) 0.80" in 30 m	
27 Jul 1 Diss Exp 30 Jul			<diss>: The storm mainly affected neighbouring villages where hail broke glass and smashed vegetables to pulp.<thenetham>: Hailstones approached the size of walnuts; chickens were killed and apples stripped from trees.<aldeburgh>: Parts of the High Street and other thoroughfares were flooded. The footpath in Park Road skirting the Alde House grounds was gutted by the rushing water to a depth of 18 inches and the Tennis Club Lane ran inches deep.</aldeburgh></thenetham></diss>
10 Aug BR		Royston (Hertfordshire) 0.76" in 25 m	
12 Aug BR		Hawkedon (Suffolk) 1.37" in 40 m Haverhill (Suffolk) 0.92" in 45 m	
14 Aug			<mundesley>:The roads quickly became like rivers and many houses in the lower part of the town were flooded to a depth of 4 feet. The storm lasted more than an hour and was assemblated by hail.</mundesley>
Diss exp 20 Aug, Free pro	Bury		to a depth of 4 feet. The storm lasted more than an hour and was accompanied by hail. <stalham>: the storm lasted an hour and many of the houses ere flooded. The low lying roads resembled rivers and even on the main roads a boat might have been floated.</stalham>
Aug			<reepham>: hailstones fell in great quantities and were 4 inches deep on the roads and did great damage to greenhouses, skylights and fruit trees. Many houses in the lower part of town were flooded and residents had to seek shelter upstairs. In some houses there was 9 to 12 inches of water. Some hailstones were as large as hazel nuts.</reepham>
15 Aug	1915		<sudbury>: This was the worst storm of the year and the rain descended in a perfect deluge accompanied by hail that beat on windows of the houses (but no breaking glass was reported) and causing flooding for a period. North Herts and South Beds: The area was visited by four separate storms of great violence. Hailstones of</sudbury>
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exceptions size fell and some were measured at 1 inch in circumference. Great damage has been done to the

Gloucestershi

re Echo 16 Aug, Bury free Press 21 Aug		fruit crop. In many of the villages and towns the floods have been 2 to 3 feet deep. <pakenham>: The street was flooded to some depth.</pakenham>
16 Aug 1915 Diss express 20 Aug, BR	Early summer drought followed here by a succession of thunderstorms Sloley (Norfolk) 1.30" in 45 m	<stradbroke>: Heavy rain and enormous hailstones fell and the streets in several parts were covered with water 4 to 6 inches deep. Crops were greatly damaged by the hail.</stradbroke>
17 Aug 1915 Diss Express 20 Aug 27 Apr 1916 BR	Rettendon (Essex) 1.37" in 30 m Thetford 1.26" in 1 h	<ipswich>: Rain fell in torrents for 20 minutes and some streets were rendered impassable. Several houses and shops in St Helen's Street were flooded. <felixstowe>: A soldier was killed by lightning.</felixstowe></ipswich>
28 May 1916 BR 17 Aug 1916 BR	Great Moulton (Norfolk) 1.85" in 1 h Eye (nr Peterborough) 2.05" in 2 h 15 m	
29 May 1917 Hull daily Mail 30 May, Diss Express 1 Jun	Lexden (Colchester) 1.86" in 2 h	<colchester>: It was visited with the worst thunderstorm in living memory and shops and houses in all directions were flooded. At Constantine and Maldon road manholes were lifted up by the pressure of flood water. At St Botolph's church the water was up to the altar rails. Numerous shops in the High Street were flooded as well as the basement of the Town Hall. The storm lasted 3 hours. <brentwood>: The Great Eastern railway lines were submerged. <ipswich>: the rush of water caused considerable scouring in some places. The Princes Street end of Mill street was impassable to pedestrians. The storm was very localised; Woodbridge had very little rain.</ipswich></brentwood></colchester>
13 Jun 1917 BR	Haverhill (Suffolk) 1.32" in 30 m	
14 Jul 1917 Diss Express 20 Jul, BR	Norwich 0.47" in 150 seconds	<pulham mary="" st="">: A man was killed by lightning. <loddon>: the storm lasted about a quarter of an hour and the hailstones were as big as good sized walnuts; considerable damage was done to windows and to growing fruit and vegetables. <norwich>: The storm was of great suddenness and violence and rain came down in torrents for 5 minutes Pieces of ice broke many windows and glasshouses and damaged growing crops. Some hailstones were over an</norwich></loddon></pulham>

inch in diameter and 3 ½ to 4 inches in circumference. Some parts of the city escaped with little rain; the track of the storm was perhaps half a mile wide.

<Stalham>: Hailstones, some as big as walnuts were driven by a strong wind and ruined crops and gardens. Hundreds of trees were uprooted and broken. Trees were stripped of fruit and leaves. Windows of houses facing eastward were smashed and the houses flooded. The parish of <Sutton> suffered the most where the roofs of many houses were damaged. The storm lasted 15 minutes but the intensity was worse than in the great flood of August 1912.

<Yarmouth>: The storm continued for more than an hour and the rain exceeded the capacity of the drains so that roads were flooded especially in Northgate Street (Usually subject to inundation in such storms). At the foot of Salisbury Road the water was several inches deep. Some houses were flooded.

<Acle>: Nearly two inches of rain fell in a little over an hour accompanied by large hailstones. A mare was killed by lightning.

<Framlington>: The storm raged for at least an hour and houses were quickly inundated with several inches of water appearing in the most unexpected places. The rain was accompanied by hailstones of unusual size.
<Castle Hedingham>: A road was washed away.

< Saffron Walden>: Much damage occurred from flooding. 3.08 in is said to have been recorded in 2 hours, but we have not been able to obtain any confirmation of the record.

<Wellingborough>: Streets in several localities were like miniature rivers causing cellars and houses to be flooded. However there was no repeat of the floods that had occurred a few years ago in Gloucester Place and Sheep Street; the improvements made by the Urban Council stood the test.

<Ruskington>: The storm came practically without warning and caused great damage to houses and property through flooding. A girl was swept from her bicycle into a river and across a field; the road was blown up for yards and traffic completely stopped. The beck began to rise rapidly in Ruskington village and the water extended up the side streets on both sides for a distance of 100 yards and in many houses there was up to 2 feet of water and at the doctor's surgery there was 2 feet 3 inches. Efforts to stem the flow were completely unsuccessful. Many poultry were drowned by the flood and pigs had to be rescued from rising water. The railway line was swamped for a distance of 300 yards and beside the platform there was a flowing river 2 feet 5 inches deep while in places nearer Lincoln the depth was 3 feet.

<Billingborough> and <Bourne> Immense damage was done to the young crops. Potatoes and mangolds were completely washed out of the ground. Roads were torn up and the railway between <Eippingale> and <Millthorpe> was so badly damaged that it was necessary to cancel part of the train service on the following day. The service between Bourne and Sleaford was also suspended. Hail lay several inches deep after the storm

5 Aug 1917 BR

14 Aug 1917

DR Halstead 2.45" Sudbury 2.00"

Hail was reported in neighbouring areas causing damage to crops.

Northampton mercury 17 aug 17 May 1918 Lincolnshire Echo 18 May, Yorkshire post 20 May, Biggleswade Chronicle 24 May, BR

BR records: Highly localized thunderstorms, in some cases of unusual severity, occurred in parts of the English Midlands. The rainfall reached 2.00 in. at Stafford; near Wolverhampton; at Brigg in north Lincolnshire, and over a considerable area in the south of Lincolnshire Billingborough 2.10" in 1.5 hours Milton Bryant 3.07" in 2 hr 30 m on southern outskirts of

storm

Lidington 3.25" in 3 hours to the north of storm centre. Swaffham 1.10" in 1 h Brigg (Lincs) 2.36 in 90 m

and fruit trees were greatly damaged. At <ittle Dowsby>, <Millthorpe>, <Aslackby>and <Pointon> houses were flooded 2 feet deep.

<Aslackby>: A young boy wandered from his house and was found dead in the flood.

<Woburn> and <Ampthill> The most remarkable centre of activity however appears to have been between these towns. No rain gauges were in existence in the central core of the storm but measurements at <Milton Bryant> and <Lidington> give a hint of an enormous rainfall near <Eversholt>, which suffered even more severely than the places mentioned.

<Woburn>: At Woburn Abbey the noise of the falling hail and rain was so great that for about ten minutes it almost drowned the thunder. The wall of Woburn Park, a very substantial erection, 12 ft. to 15 ft. high, was breached at Linden for a length of nearly one hundred yards, and masses of masonry nearly a ton in weight were washed across the recreation ground like toys. The park wall was also breached in two places, near <Foxfield>, and the bricks carried down the road for a quarter of a mile.

<Tingrith> and <Eversholt>: The roads were completely destroyed. The water in the valleys rose above the tops of the hedges. Near <Eversholt> walls were laid flat, haystacks washed across the fields and sheep and poultry drowned. Near <Tingrith> a horse and cart were washed over the hedge into the meadow at a point where the depth must have been fully 8 to 10 feet. The driver was drowned and it was ten days later before his body was discovered buried under three feet of gravel.

<Flitwick>: The bridge carrying the highroad from Ampthill to Dunstable was so badly damaged that it had to be rebuilt. A man was drowned in attempting to cross a swollen river in a light wagon.

<Steppingly> The rain was very heavy and here the road was in places washed out to a depth of 2 1/2 ft., although the village lies high and did not suffer from flood water from other localities. Great damage was done here to gardens and allotments, the top soil being completely washed away from the high ground, burying the lower gardens beneath eighteen inches of drift.

<Lidlington>: The road was badly torn up. The rain which fell at this spot caused heavy flooding at <Elstow> of the stream which joins the <<Ouse>> below Bedford. The floods were chiefly in the valleys of the <<Fli>, a tributary of the <<Ivel>>, and the <<Ouse>> at Newport Pagnell. All accounts agree that there have been no such floods at least since the memorable storm of August 2nd, 1879.

<Shefford>: The water rose very rapidly during the night of the 17th and early on the 18th was about three feet deep in the main streets of the town. A great deal of damage was done here, walls being washed down, gardens destroyed and furniture and goods ruined. The flood subsided very quickly, and had almost completely abated by the afternoon of the 18th. The River <<Ivel>> overflowed and the streets of Shefford were like a river. Warden road was submerged; planks were obtained so that the occupier of Lion Inn could reach his

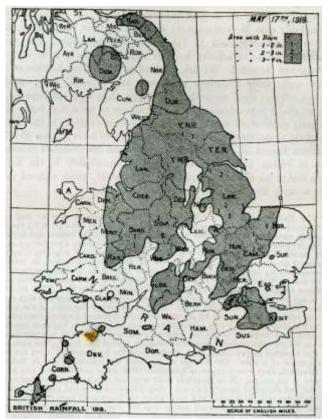
house. By the afternoon the water was 3 feet deep near to the Elm and Ivel Farm along the main road to Sandy and Bedford. The Broom road was almost inundated and was very deep near Holme Mills corner.

<Sandy>: the storm lasted over half an hour and in that period 1.25" rain was recorded at <Beeston>. The rain blocked the sewers and turned the streets into rivers and flooded a great number of houses.

<Hockliffe>: The floods were severe and at <Leighton> were the worst ever known: at <Newport Pagnell> they are described as being serious.

The hail was very heavy in the central area and is generally described as being as large as walnuts, or pigeon's eggs. It was washed up in places into drifts of three feet in depth and some remained against the north wall of Milton Bryant church until May 20th, although the weather remained very warm.

The BR map shows the extent and severity of the storm.



The heaviest rainfall was too local for the distribution to be shown in detail in a map, but it is indicated diagrammatically in the sketch given. It will be seen that the area with rain occupied approximately the centre and north-east of England. Over the greater part of this district, however, the fall was trifling. The abruptness of the falling off of the rainfall in the neighbourhood of these intense storms is indicated by the fact that whilst 3.25 in. was recorded at Lidlington, near Ampthill, no rain fell at Salford, less than 4 miles west, and only .23 in. at Crawley about 2 1/2 miles south-west. A similar phenomenon was observed at Wednesbury, and in the north and south of Lincolnshire, and was undoubtedly one of the characteristics of the storms in all parts of the country.

17 Jul 1918 BR Little Saxham (Suffolk) 1.56" in 45 m Hawkedon (Suffolk) 2.00 in 1 h Bury St Edmonds 1.90" in 1 h and 1.93" in 90 m High Ongar (Essex) 1.15" in 1

1 Jun 1919 BR (Northampto nshire Mercury) BR notes: Rain and hail fell near Belhus and Billericay, in mid-Essex, with some damage by hail and about an inch of rain; falls of 0.55 in at Colchester, and 0.22 in. at Woodbridge, point to a still more extended strip, the whole being practically straight. The severest conditions, where the hail was undoubtedly of a highly unusual character for this country, were along the south-eastern margin of the strip, beyond the sharply defined edge of which no hail and little rain fell.

<Silverstone><Whittlebury><Paulerspury> (S Northants): A very violent hailstorm visited South Northamptonshire on Sunday evening. The districts which suffered most were Silverstone, Whittlebury and Paulerspury. Over a much wider district there were heavy peals of thunder and vivid lightning. Several persons had narrow escapes from death; and many farmers, allotment holders, and gardeners suffered heavy losses

from the extensive damage done. The hailstorm lasted about half an hour, and was most serious in Paulerspury, where fields were almost as white as after the last snowstorm. Many windows were broken at Pury End, where stones as big as pigeons' eggs were found lying about. A basketful of these was taken into Paulerspury as a curiosity Heaps of hailstones three feet high were lying about the Park after the storm had passed."—

25 May 1920 BR Hatfield Broad oak (Essex) 2.79" in 45 m

27 May 1920 BR Hackthorn (Lincoln) 1.59" in 90 m

Heavy rainfalls on 29 May

29 May 1920 BR, Gloucestershi re Echo 5 Jun

were widespread but the most intense occurred in a tract from Lancashire to Lincolnshire especially the two extremities. The May 29 storm was preceded by very hot May weather on 25 to 27 May with temperatures over 800F Further meteorological details in BR and elsewhere Louth (Hallington) >4.10" in 2 h (gauge overflowed) Elkington Hall 4.59" in 3 h Horncastle 3.59" in 3 h

Wold Newton 2.50" in 3 h

Woodhall spa 2.70" in 4 h

Grainsby Hall 3.40" in 3 h 20

<Louth> <Lincolnshire>: At the eastern end of the rain belt, in Lincolnshire, the storms were more widespread, and locally even more intense. They culminated on the Wolds to the west of Louth and southward to Horncastle where the most remarkable being that of 4.59" in 3 hours at Elkington Hall. At Hallington the gauge overflowed at 4.10", but this amount fell in 2 hours. Ten miles to the south Horncastle had 3.95 in. in 3 hours. In the town of Louth, in 22 lives were lost and damage to the extent of £100,000 was done.

On the rainfall day of the 29th, practically no rain fell to the south of a line drawn from Plymouth to the mouth of the Thames. In the north no rain was .observed over the centre and west of Scotland and in Ulster, and in the west the south coast of Wales and the west coast of Ireland were rainless. The southern half of Ireland, Wales, and the Midlands of England were marked by isolated patches of rainfall of considerable, but not remarkable, intensity. These patches tended to fall into the characteristic linear arrangement so often seen in thunderstorms. In a southern strip, splashes occurred at Cork, in Breconshire, Northamptonshire, and Cambridgeshire, and, slightly farther to the north, a second strip included parts of Cos. Clare and Tipperary, and more or less isolated falls at Kilkenny, Dolgelly, Oswestry, Birmingham, Market Harborough, Peterborough and central Norfolk. The most remarkable rains were, however, grouped in a third line, extending eastward from Dublin and stretching across the north of England. The centres of heaviest rainfall were in England, and more than 2 in. fell in three districts respectively in Lancashire, South Yorkshire, and Lincolnshire.

The Lincolnshire rainfall was even more severe; more than 2 in. fell as far west as Lincoln, but the extremely intense fall appears to have been confined to part of the low hills known as the Lincolnshire Wolds. In Louth itself the fall amounted to only 1.42", but at Elkington Hall, 3 miles to the west, 4.69" was measured, of which

4.59" fell in 3 hours. About 2 miles south of this 4.10" fell in 2 hours at Hallington, but the gauge overflowed at this point so that the precise amount of the fall was lost. There is reason to think that it was at least as great as at Elkington. Ten miles farther south, at Horncastle, 3.95" fell in 3 hours. The evidence suggests that the fall of rain somewhat farther west than the points of observation near Louth may possibly have been even more remarkable, but in the absence of any direct confirmation this cannot be stated positively.

The amount certainly fell off somewhat abruptly towards the northwest, only 1.82" falling in the 24 hours at Kirmond, some 11 miles W.N.W. of Louth, and only 0.61" at Market Rasen. It is extremely unfortunate that no records are available for the district between Hallington and Horncastle, as it is a matter of interest to enquire whether the enormous rainfall occurred along the whole ridge or only at intervals. The statement of a witness at the inquest that a large part of the rain ran into the River Bain, indicates some extension westward, and it appears probable that the area of intense rain was widest at its northern extremity, which one may assume to have been near Welton le Wold.

Little definite information is available bearing on the time relations of the storms. It is clear that more than one storm occurred during the day, and that the Louth flood was associated with rainfall which; commenced about 13 h. G.M.T. In the district lying immediately to the east and west it was distinctly later, at Heckington to the south, earlier. At Horncastle, however, nearly midway between Heckington and Louth, and, therefore, in the direct line of the storm, the rain is said; not to have commenced until 14 h. The heaviest rain seems to have been over by 16 h.

The effect of the remarkable rainfall in the Lincolnshire Wolds was felt in a disastrous manner in the town of Louth. Towards the town several streams flowing from the Wolds converge and form the River Lud. The water in this normally placid rivulet rose extremely rapidly, by report, as much as 6 feet in 10 minutes, and was at one time 15 ft. above its usual level, and a torrent 200 yards wide was sweeping through the town. Twenty two people are known to have been drowned, and an enormous amount of damage to property was caused, the cost in Louth alone being estimated at £100,000. Much loss to stock and destruction of several bridges were also reported from the neighbourhood.

A good deal of controversy has been aroused as to the cause of the great suddenness of the flood in Louth. As

to the rainfall itself, it was certainly remarkably heavy, though by no means unprecedented, either for total amount or for intensity, so far as it is possible to judge from the few records obtained from the Wolds. It was clearly an exceptionally severe case of local "cyclonic" rainfall associated with the interaction of two air currents of different temperatures travelling respectively from southeast and southwest, both conveying a good deal of moisture. This is clear from meteorological records, and receives strong confirmation from the following letter from Rear.Admiral Sir Francis Harrison.Smith, of Stamford, which we quote from Mr. E. V. Newnham's official report:

"....... the wind was fitful and uncertain in its direction, but the upper clouds were travelling slowly from S.E. At 14 h. 45 m. a very heavy warm squall struck us from S.W., driving great masses of dense low cloud before it. In England I have never seen the cloud so extraordinary, rolling and tumbling over and over exactly as I have seen it do in cyclones, hurricanes, and the like abroad and reminding me of the clouds from which I have seen waterspouts descend at sea or down the valley of the Yangtse. This warm disturbance travelled right over Easton and Stamford in a direct line for Louth, and I have very little doubt that as it approached the coast it met a colder current from the North Sea, which caused the sudden precipitation of the masses of obviously dense vapour which the shift of wind was collecting in its course."

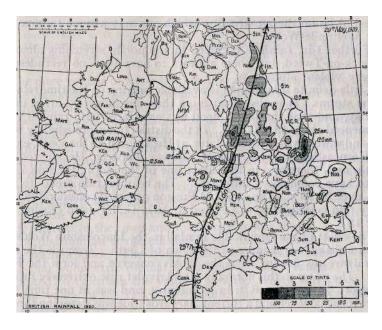
The mere volume of water flowing down the streams which converge on the outskirts of the town would probably have been sufficient to account for the extremely serious nature of the damage inflicted, but it appears from such information as we have been able to obtain, that it is probable that the stream was temporarily blocked with debris brought down by the earlier rains, and that the devastating flood which poured through the town was the result of the sudden breaking down of this obstacle, which had been able to hold up a considerable volume of water owing to the comparatively gentle gradient of the valley at that point. This hypothesis is confirmed by the observed fact that the rate of subsistence to the west of Louth was extremely rapid, whereas in the town and to the east it was slow.

The distribution of rainfall during the day is indicated in the map which we reproduce. The areas affected by excessive rainfall were so small that volumetric estimates can only be very rough. We have attempted to calculate the volume of water which was precipitated over the valley of the Lud above Louth, but it can be accepted only with reserve.

This gives a general rainfall for the 22 square miles of 3.85 in., and a volume of precipitation amounting to the enormous total of 1.236 million gallons or 5.5 million tons of water. Whilst this figure cannot be accepted as more than a rough approximation, it may be taken as certain that the actual volume of water flowing off immediately was considerably less, and it might be put with some justification at less than 5 million tons.

It is abundantly clear that whilst the amount of rainfall in three hours was of an extremely remarkable nature, the disaster to the town of Louth must be attributed in an almost equal degree to the accident of its geographical position. A similar rainfall in many districts would have undoubtedly drained away without causing exceptional damage, but the valley of the Lud and its tributaries form a veritable bottle-neck, and if, as is surmised, the bottle was inadvertently corked by a blockage in the stream, the awful suddenness of the disaster may be to some extent explained.

VII. (Eng. N. Mid.).	in.
Horncastle"	3.95
Lincoln (Sessions House)	2 .06
Louth (Hallington)	4.00
S.Elkington(ElkingtonH.)	4.69
Wold Newton	2.50
Grainsby Hall	3.40
Grimsby (Abbey Road)	2 .00



Gloucs Echo reports on the Inquests: There was evidence that the flood had come in waves. In bridge Street it attained a height of 16 feet in a quarter of an hour. A woman at Hubbard's valley said 'a great stream of water 15 feet high came down the valley and struck her house which stood 30 feet at the side of the valley. It happened in a quarter of an hour'. Another noted that there were many great gullies and at a height of 485 feet a field of spring corn had been washed out of the ground.

<Buckingham>: In an evening storm the water rushed down the main thoroughfare with torrential speed and force and penetrating some of the premises. The old cottages in the Broadway felt the effects of the flooding and some places in High Street, market Square, Red Lion Street, and Waterside had unpleasant experiences. The Nag's Head Yard was flooded. Heavy quantities of sand and stones were washed off the hills and accumulated on the roadway. The water poured out of the Cricket Meadow and washed down \new road with great pace and force.

14 Jun 1920 Buckingham Examiner 18 Jun

16 Jun 1920 Wolverton 1.97" in 1 h

21 Sep 1920

BR

<Lowestoft>: Rain and hail fell heavily for nearly an hour and floods resulted, while a waterspout was observed at sea.

16 Jul 1921 Yorkshire Post 18 Jul		<thetford>: Rain of 1 ½ inches occurred in 20 minutes. Cottages in low lying parts were quickly flooded. Great damage was done to crops and fruit. Other towns and villages in the vicinity of Thetford had no rain.</thetford>
11 Aug 1921 BR	Peterborough 1.91" in 65 m	
22 May 1922 Yorkshire Post 23 May, Northampton chronicle 23 May, Western Gazette 26 May, Boston guardian 27 May 25 May 1922 Webb 2009, Western Gazette 26		<grimsby>: there was a remarkable downpour of rain and hail, the hailstones being as big as cherry stones, striking roofs with such violence as to break slates and skylights and to admit the downpour. Low lying streets and subways were soon flooded and there was a great demand for the fire brigade to pump out cellars of business premises. Next to the People's Park the roads resembled a lake district. <market rasen="">: A thunderstorm was accompanied by hailstones the size of marbles which played havoc with blossom on the fruit trees and field crops and broke innumerable windows. <kettering>: Violent rain overtaxed the downspouts and flooded some buildings. <little harrowden="">: Lumps of ice fell a cubic inch in size and one monster hailstone measured 2 ½ by 1 ½ by ½ inch. Many windows with a northerly aspect were broken. Drains became fountains of storm water and sewage. The rainfall was registered at 0.62". <scunthorpe>: For about 10 minutes hailstones fell, the largest ever seen locally. Some measured 1 ½ inches in diameter. Glasshouses were wrecked and fruit trees damaged. <cleethorpes>: A house was flooded when a wedding party was in progress. <grantham>: Torrential rain fell and the roads had the appearance of rivers. <louth>: It was the worst storm since the great storm of 1920. Rain was preceded by a windstorm which was like a sandstorm. Many streets were flooded and fruit trees were damaged by the wind and rain. <mildenhall> Hail 50 mm diameter fell at Mildenhall (Suffolk) (Meteorol Mag 1922). (Webb 2009).</mildenhall></louth></grantham></cleethorpes></scunthorpe></little></kettering></market></grimsby>
May 7 Aug 1922	No mention of lightning and flooding was mainly from	<grantham>: It had 3 ½ inches of rain in 20 hours. Several hundred houses were flooded from the River</grantham>

BR Yorkshire Post 8 Aug, Grantham Journal 12 Aug prolonged heavy rainfall. Very severe flooding in Yorkshire. Saltersford: 4.5" in 15 h and 1.5" in 1 h 40 mins

<<Witham>> in many instances to a depth of 4 or 5 feet. A footbridge at Witham Place was washed away. Hundreds of homes – mostly of the poorer class were swept by the torrent and so deep was the water that people were rescued with difficulty. The volume of water which suddenly made its appearance was staggering and streets and dwelling were flooded several feet deep. The streets which suffered most were Witham Terrace, Inner Street, Harrow Street, Eton Street, Welham Street, East Street, Agues Street, Redcross street, and Alford Street. The water backed up into streets adjacent to those named with houses affected in the lower parts. Boats were used in the streets and some overturned. At one time in East Street the water reached the rear of The Empire. In Spittalgate it passed the bottom of Houghton Road and rushed round by the Cooperative stores into Inner Street while in the opposite direction it extended as far as the houses of Old Somerby Road. Streets contiguous to the <<Mowbeck>> were affecte. In West Gate, Water Gate and Brook Street large quantities of water got into cellars but even worse were the conditions at the end of Dysart Street and the north end of Alexandra Road where houses were flooded. The deluge caused slips on the railway at Peascliffe and Barkston and at the High Dyke at the north end of Stoke Tunnel. A relief fund was set up for sufferers.
<Westborough cum Dry> <Doddington>: In a thunderstorm nearly every house was flooded. The river was in full flood and spread over a wide area.

Many villages and towns in the county suffered similarly.

12 Apr 1923 Biggleswade chronicle 13 Apr <Biggleswade>: the thunderstorm was accompanied by hail as large as marbles. In Biggleswade and villages south of it the hail lay 6 inches deep and drains were quite unable to cope with the intensity of rain and hail. Shortmead Street near The Oak was flooded and a butcher's shop was flooded surging from rising ground behind Stratton Street.

<Beeston> <Sandy>: They report that rain and hail was heavy there and the streets flooded in places. <Arlesley Church End>: Low standing houses were flooded.

<Mid Village> and <Three Counties end>: the High street was flooded and the hailstones were very large. <Stotfold>: Shops in Regent street were flooded and the water ran down the street like a river. The hail lay nearly 6 inches deep.

<Lincolnshire>: A thunderstorm of tropical violence lasted from 3 am to 8 am and caused extensive flooding.
Many thoroughfares were rendered impassable and houses flooded. Soil and plants were completely washed

10 Jul 1923 Sheffield Daily

telegraph 11

Jul,

Lincolnshire

chronicle 14

Jul

15 Jul 1923 Overstrand (Norfolk) 1.50" in

30 m

BR Beccles (Norfolk) 1.30" in 45

m

14 May 1924

The Scotsman

15 May

19 May 1924

Gloucestershi

re Echo 20

May

19 May 1924 Sussex and Essex Free press 22 May, Western Gazette 23 May out of gardens. 7 sheep and a horse were killed by lightning. LC gives extensive description of the storm with many lightning deaths to sheep but no reports of flooding.

<North Essex>: After the thunderstorm flooding was particularly severe and damage was done to young crops. <Kelvedon>: The river overflowed into the meadows.

<Colchester>: The northern quarter of the town was flooded to such a depth that the railway station was isolated and tramway services were suspended. Many houses were inundated.

<Braintree>: An inch of rain fell in the worst 10 minutes of the storm and the downpour caused remarkable flood scenes with some houses flooded to a depth of 3 feet. A large drain burst and water spurted up two yards high. Work at local factories was stopped and men had to climb on benches to escape the flood.

<Brentwood>: Several buildings were struck and damaged by lightning.

<Boxford> Not since 36 years ago when there was a cloudburst at <Groton> have the inhabitants of Boxford seen such devastating floods. In a very few minutes Ellis Street and the whole of the road in front of the Fleece Hotel were knee deep in swirling muddy water. The <<River Box>> rose and overflowed its banks flooding the surrounding meadows. After the rain stopped water began to flow down ellis Street from Brook Hall where the <<Holbrook Brook>> had overflowed its banks causing a brick wall on its banks to be thrown down. In ellis Street the course of the river was changed and a hole in the road 4 feet deep was cut. Houses were flooded to a depth of 1 foot 6 inches. A motor garage was swept from end to end. Considerable damage was also done in Stone Street.

<Sudbury>: A severe storm was reported but with lightning damage but no reports of flooding.

<Hadleigh>: In a short time a torrent of considerable magnitude was rushing down Anchor Street into High

Street. At the bridge the road was covered to some depth. The water ran like mill races carving out large holes

and carrying granite and stones as it rushed along. Near the river and in the low lying parts of the town the water flowed right through the houses. Gardens were washed up and destroyed. Fowls and young pigs were drowned. Stone Street was flooded and in one place it was waist deep. Water Lane was converted into a raging torrent. On the other side of Hadleigh, Callis Street, Tinker's Lane and the roadway near Toppesfield Hall and a portion of Bridge street were rendered impassable to pedestrians. The force of the river overturned boats and canoes at Hadleigh Mill. Flooded cars had to be towed out at Coram Street.

<Bures>: The cloud appears to rush in a solid formation earthwards and broke into spirals, whirlwinds. At the Essex side of the station the Alphamstone road in a few minutes became a roaring torrent and the water dashed against the cottages at the foot of the hill and forced open the doors. The area comprising The Swan, The Secretaries and Whitehouse was transformed into a lake. Chickens were drowned. At the White House a substantial door was washed out. Houses were invaded on Colchester road. Little Bevels was severely affected with water at least a foot in depth. Even on Cuckoo Hill houses were flooded. The Bures to Sudbury Road was changed in places into a river and in several places reached 3 feet deep. The road was badly cut up and covered with soil and stones.

<Aldham>: A cloudburst brought tons of water running down the hills and piling against the walls of a house reaching a height of 5 feet caused the wall to collapse and flood the garden and the house. All the roads between Aldham, <Naughton> and <Whatfield> were flooded. Water collected to a depth of 5 or 6 feet and covered 5-barred gates and a large proportion of the cottages were flooded.

<Polstead>: Roads and houses at Bell's Corner and Mill street were flooded.

<Belchamp>: Serious damage was done to the roads at <Lamarsh>, <Alphamstone>, <Middleton> and <Henny> where roads looked like they had been ploughed or had tons of soil deposited on them. The cellars of the Wagon and Horses, <Twinstead> were flooded.

<Halstead>: Roads were flooded and trees blown down in all directions. Gardens were denuded of their soil and potatoes washed out of the ground. Crow Bridge and Slough Farm areas were deeply flooded and the houses in Stanley road stood as in a lake. The Cinema was also flooded. Courtauld's silk factory was also flooded. Hundreds of panes of glass were broken. Hail broke hundreds of panes of glass in Gosfield Hall and blew down an avenue of trees and blew in a window in <Gosfield> parish church.

<Braintree>: Hailstones were as large as brazil nuts and the district was flooded. The thunderstorm lasted half an hour and in the worst 10 minutes an inch of rain fell. Shops and a cinema in the High Street were flooded. A

20 May 1924
Coventry
evening
Telegraph 21
May, Shields
Daily News 22
May,
Bedfordshire
Times and
Independent
23 May,
Biggleswade
Chronicle 23
May, BR

Biggleswade 1.5" Shefford 2.0" Clifton >2.0" Woburn (Beds) 1.06" in 20 m Shillington (Beds) 2.00" in 1 h Ispwich ~2.00" in 2 h Clifton Bury (Beds) 2.25" in 2 main drain burst throwing a fountain 9 feet in the air. Houses in the lower parts of the town were flooded. Work at a local factory was suspended as workmen climbed on benches to escape the flood.

<Chevington>: In many parts the roads were flooded. At the Assington end of Newton a pond overflowed and covered to road to a depth of a foot.

<Colchester>: Houses in many parts of the town were flooded and access to the railway station was cut off.
<Leighton Buzzard>: The storm raged for 5 hours and part of the railway bank was washed away and trains were delayed for 2 hours. Many families in low lying parts were imprisoned in upper rooms. The Grand Junction Canal and neighbouring rivers overflowed their banks. The <<River Ouzel>> which encircles the town rose with extraordinary rapidity and completely isolated the town from the surrounding country. Many families spent the day retrieving articles of furniture washed out of the houses.

<Biggleswade>: The town had floods of considerable depth in the north and west of the town and the Great North Road between <Biggleswade> and <Sandy> and at Girtford bridge was under 3 feet of water. Many houses in Biggleswade and <Langford> were flooded. Biggleswade streets were flooded especially at Shortmead Street being worst at Bridge End where a house was flooded. There were three separate periods of intense rain with the third the heaviest. The North road Garage was flooded. The market Square was covered with water ankle deep. Sloping Roads like Stratton Street and Church Street were raging cataracts and in several places the water cut great holes in the road. Houses on the west side of Hitchin Street and residents in Manchester terrace where the houses are lower than the roadway were flooded. The Lion Pub at the Bell Brook corner was flooded to a depth of more than 18 inches. <<Bells Brook>> like all the other little brooks in the district overflowed and flooded Hill Lane on the way to Old Warden. Elm Cottage and neighbouring houses were flooded. The <<Ivel>> had forsaken its usual course and run riot over the land. <<Sheep Brook> which runs into the river at Black Locks had overflowed owing to water coming from Upper Caldecote. From near the Sheep bridge almost to Lower Caldecote the North Road was under water being nearly 3 feet deep at Tingey's Corner.

<Long Marston>: Chairs floated about in kitchens and cottage pianos were ruined.

<Fenny Stratford>: Along Watling Street between here and <Hockliffe> the water in the fields in some places was 4 feet deep.

<Shefford>: The late afternoon storm lasted an hour. A quarter of an hour after the storm stopped water from the hills towards Hitchin and Meppershall descended on the town flooding houses on the hill to a depth of 3 or 4 inches but lower down at Digswell House the lawns and gardens were under 3 feet of water. It invaded

houses near the junction of the Hitchin and Clifton Roads. The cellar of the Woolpack was soon under water with considerable losses. The water began to rise in North and South Bridge Streets and High street where houses and shops were flooded. Towards midnight there was a subsidence of the flooding but three hous later the water from the upper reaches of the <<Fli>litt>> and the <<Hit>> began to arrive and by morning the streets were under water to a depth of 3 feet. The general consensus was that this flood outrivaled the great floods of August 1879 and 17 May 1918 while it was easily worse than floods in 17 Feb 1900 and 2 Jan 1915. All the houses and shops in the central part of the town were flooded with much damage to furniture. The fires at the gas works were flooded out. A landslip poccurred on the railway embankment. The parish church was flooded. Two lesser footbridges and a portion of the wall at the Working Men's Club were washed away. Paving stones around the war memorial were washed out. The following morning the water began to rise again as the headwaters came down the <<Chicksands>> stream.

<Clifton>: Very soon many of the cottages were inundated and some to a depth of 12 to 18 inches whilst tenants had not enough time to remove furniture to safety before mischief was done by mud and water. Crops everywhere were injured or destroyed.

<Woburn Abbey>: Basements were a foot deep in swirling water and several houses in the vicinity were flooded [copy unclear].

<Eversholt>: Linden Lake already well stocked overflowed bursting down the Park walls and turning the countryside into a river.

<Husborne Crawley>: The corner at the Whitehorse turn was impassable and water flowed into the houses nearby. Potatoes and other seed were washed out of the ground.

<Flitwick>: The <<River Flit>> overflowed its banks and a filed adjoining the Westoning road was covered with 3 feet of water and a bungalow lodge was flooded 1 foot deep and extended across the main road 8 inches deep. Neighbouring allotments were badly damaged. Greenfield School was closed because of flooding a foot deep.
<Harlington>: Much land was completely under water in a very short time. The low roads leading to Westoning and Toddington were under water for some distance.

<Ampthill>: The sewers were unable to take the water away fast enough and the water sprayed up like fountains from manholes. Some houses were flooded and nearly every cellar was flooded.

<Maulden>: Thunder and lightning were continuous for 4 hours. Parts of George Street and the Ampthill road were under water whilst several houses were flooded on The Knoll.

<Henlow>: Cottages and farms were flooded, the Turnpike row of cottages near the Crown Inn were flooded to a great depth. The water was very deep on the Clifton road from the Crown Inn.

<Arlesey>: The High Street and Station road were flooded and many houses also.

<Sandy>: Rain in a short time completely blocked street drains and most of the roads were flooded as well as low buildings and cellars. The river overflowed and the land on either side from Biggleswade to Tempsford was covered to a considerable depth. At the junction of Bedford road and London road the water in the deepest part was 4 or 5 feet deep.

<Potton>: In a few minutes the streets were turned into rushing torrents with houses and shops flooded to a depth of several inches. Much damage was done to crops with potatoes washed out of the ground. A storm drain burst and swept through several cottages.

30 May 1924 Shefford (Beds) 2.25" in 2 h

BR

2 Jun 1924 <Chelmsford>: A thunderstorm was accompanied by large hailstones.

Sheffield

Daily

Telegraph 3

Jun

11 Jun 1924 <Biggleswade>: As a consequence of the heavy rain and hail several streets were flooded. In Crab Lane and Lawrence road the water was several inches deep across the road.

Chronicle 13

Jun

12 Jun 1924 < Peterborough>: Rain and hail fell heavily for an hour. In lower parts of the city houses were flooded.

Sheffield

Daily

Telegraph 13

Jun

Jul 31 Aug 1924	Bury St Edmonds 1.59" in 90	only three miles distant there was no rain. <bocking>: Torrential rain and hail fell. The road near King's bridge (and houses nearby) and Courtauld's Mill were soon flooded and the water entered the Almshouses.</bocking>
BR 5 Sep 1924 BR 9 Sep 1924 Birmingham Daily Gazette 10 Sep	m Peterborough 1.04" in 30 m	<rushmere>< Ipswich>: 22 sheep were killed by lightning in a field.</rushmere>
10 May 1925 Chelmsford Chronicle 15 May		<cressing>: Roads were flooded to the extent that people were unable to get to church. Hailstones were as large as marbles. AT nearby ,White Notley> the village street was quickly flooded. The hilly roads were cut up by the rushing flood. <terling>: Hailstones about the size of a small nut fell and covered the ground and much damage was done to fruit trees, bushes and rhubarb leaves were cut to ribbons. Hailstones filled house gutters causing overflow and flooding. <rivenhall>: Two colts were killed by lightning.</rivenhall></terling></cressing>
16 May 1925 Yorkshire Post 18 May 18/19 May 1925 Yorkshire Post 25 May, Sheffield Daily Telegraph 20 May, Boston	Anwick (Lincoln) 1.01" in 30 m Surfleet (Lincoln) 0.99" in 30 m Sywell Hall (Northants) 0.85" in 30 m Boston (Lincs) 1.70" in 1 h	<mareham-le-fen>: nr <horncastle>: A man was killed by lightning in his house. The thunderstorm was accompanied by big hailstones and heavy rain and streets were flooded to a depth of 1 foot. Thunderstorms had occurred in Lincolnshire on 18th and 19th with hail which damaged fruit and flower crops and a man was killed at Horncastle in Lincolnshire. <bourne>: A youth was killed by lightning. <south lincs="">: Two inches of rain fell in less than an hour and many streets and roads were converted into rivers. <boston>: A storm lasted an hour and a quarter and caused flooding in parts of the town including Oxford Street. At Fishtoft School, 3 miles to the south-east of Boston, the following measurements were made:— Between 13.45 and 14.45, 1.70 in. and between 18.30 and 19 h, 0.65 in. Both storms appeared to travel from</boston></south></bourne></horncastle></mareham-le-fen>

May, BR 23/24 May 1925 Yorkshire Post 25 May, Skegness Standard 27 May

3 Jul 1925 Nottingham Evening post 4 Jul, Banbury Guardian 9 Jul

Great chesterford (Essex) 1.44" in 25 m

11 Aug 1925
Birmingham
Daily Gazette
12 Aug, Diss

Violent storms were confined to comparatively small areas. In south Lincolnshire half an inch of rain fell in 15 minutes.

express 14 Aug,

Lincolnshire Standard 14

Aug

9 Sep 1925

<Horncastle>: On 24th there was renewed thunder and this time there was flooding in Horncastle and the storm again was accompanied by hailstones as large as sugar lumps. Roads quickly became impassable and some houses had 5 feet of water in them. The deluge was so great that sloping streets such as Queen Street, Foundry street, Lincoln road, Linden Road and Stanhope road were converted into rivers. East street suffered the worst and shops and houses near the Town bridge were flood from accumulated water from the higher levels and backwater from the drains. Stow's corner shop was one of the first to be flooded. A yard at the bottom of Queen Street was converted into a lake. Alongside The Becks the manholes were lifted bodily by the force of water. This week marks the anniversary of the Horncastle flood of 1920 but according to inhabitants of Queen Street this flood was more severe than the one in 1920.

<Buckingham>: The thunderstorm was accompanied by large hailstones. Houses were flooded. Four bullocks were killed by lightning whilst standing under a tree. The rain lasted 2 hours and 0.90 inch was registered. Where gardens sloped towards houses the water burst open back doors and flowed into the houses and out the front door. Some houses were flooded to a depth of 15 inches.

<Spalding>: The principal streets of the town were flooded. In Station Street the gullies could not cope with the onrush of water and the road in front of Boots chemist was flooded right across with water 8 to 10 inches deep and the shope was flooded to 3 or 4 inches.

<Yarmouth>: There was a fusillade of heavy hailstones followed by a deluge of rain. A restaurant on the sea front had a foot of water in its basement and there was flooding in other parts. Flooding occurred on the South Quay, northgate Street and under the railway bridge in Beaconsfield Road where a lake formed.

<Felixstowe>: Fire engines were called to pump water from hotels restaurants and houses. Several cafes closed their doors because their kitchens were flooded. Some houses were flooded as much as 2 feet deep in Undercliff road. A blocked drain at the junction of Langer and Beach Station roads caused a flood in that area.
The Count United was flooded and areatize the all the called in the town was flooded.

The Grand Hotel was flooded and practically all the cellars in the town were flooded.

<Skegness>: Rain and hail fell in torrents but for a short duration. Much flooding of streets and cellars resulted.

Lincolnshire Echo 10 Sep 4 Apr 1926 Hartlepool Northern Daily Mail 5 Apr	Highest Easter temperatures for 50 years at Kew
21 May 1926 BR	Wellingborough (Northants) 0.92" in 25 m Sywell Hall (Northants) 1.05" in 30 m
6 May 1927 BR	Mildenhall (Suffolk) 0.95" in 40 m
6 Jul 1927, BR	Mildenhall (Suffolk) 1.49" in 50 m
11 Jul 1927 BR	Widespread thunderstorms especially in London and in Somerset
5 Sep 1927 BR	Fordham (Cambs) 1.75 in 1 h <downham> (Norfolk) 1.55" in 3 h Waterspouts were seen at</downham>
20 May 1928	Wissington in Suffolk
•	
Bury free	
press 26 May	

4 Jul 1929 BR

21 Jul 1929

Guardian 27

Boston

Jul

Felixtowe (Suffolk) 1.00" in 45

<Southend>: In a thunderstorm the drainage system was unable to cope causing a flood under the railway bridge in the High Street. People were compelled to wade through 15 inches of water where water poured in torrents across Victoria Circus.

<Barnham> and <Euston>: A localised storm said to have a 2 ½ mile radius struck these two villages. Heavy rain first fell for 10 minutes then hail fell in sheets for half an hour reaching a depth of 1 ½ inches. Much damage was caused to garden and field crops. In the low lying parts of Barnham cottages were flooded to a depth of 6 inches.

<Great Hale Fen><Lincs>: Trees were uprooted and rain and hail fell in such a deluge that even bedroom floors were inches deep in water. Growing crops were all but stripped of their leaves. A major portion of the damage was confined to a stretch half a mile wide. The approach of the storm was heralded by a rushing mighty wind. The rain and hail was of such intensity that people could scarcely see a yard away. Huge trees were hurld up by

26 May 1930 Northampton chronicle 27 May, Yorkshire
Post 27 May 18 Jun 1930 BR

Northampton: 0.84" in <1 and ½ hours

the roots and blown across the road by the dozen. A fowl house was hurled over a nine foot high hedge and into the field beyond. Pig pens were blown away. Hailstones were as large as pigeon's eggs. A flock of 50 sparrows was killed by hailstones

<Northampton>: Low lying districts of the town were flooded. Whilst rain was falling in torrents on Market Square on parts of Billing Road there was no rain. In the St James' District houses were flooded in less than a quarter of an hour including the Forge Hammer on Alma Street flooded nearly knee deep. Far Cotton suffered badly with deep water covering the road at South Bridge and St Leonard's road. The back ways to the houses on Euston Road were sheets of water. The storm did not reach beyond the western outskirts of Wellingborough. <Southend>: Hail did much damage to crops.

<Grantham>: Rain and hail combined to flood the streets and a number of basements were flooded. The storm was very localised.

from N Wales to SE England Northampton 1.00" in 20 m Retford 0.98 in 30 m Dunstable (Bedford) 0.78" in 30 m

Widespread thunderstorms

Brigg (Lincoln) 0.97" in 45 m Swanton Morley (Norfolk)

2.11 in 50 m

Anwick (Lincs) 1.53" in 50 m Forest Gate (Essex) 1.61" in

65 m

29/30 Aug 1930 Hull Daily Mail 29 Aug

12 Jul 1931

Lincolnshire
Standard 18

Jul, BR

Boston: 1.61" in 1 hour; 1.71 in day Cranwell: 0.80" Billingborough:1 .00" in 45 minutes

Widespread damage by storm winds and lightning

<Lincolnshire>: Rain was accompanied by large hailstones resembling large pieces of jagged ice. The Barrow Market Place was flooded.

<Aldborough>: Giant hailstones fell as large as pigeon's eggs measuring from an inch to an inch and a half, breaking much greenhouse glass and causing much damage to fruit trees.

<Boston>: Many residents suffered great inconvenience from flooding in Broadfield Street, Queen street, London road and elsewhere. Water was ankle deep in a butcher's shop at 15 London Road. 1.61" rain fell within one hour. The water from the flooded portion of London Road ran past a public house into a yard at ransome Place. Four houses in Broadfield Street 4, 6, 8 and 10 were flooded for the second time within a month. A resident said that during the floods about a month ago the water was a foot deep in the house. 47 Queen street

Brigg (Lincoln) 1.00" in 60 m East Kirkby (Lincs) 1.59" in 2 h and neighbouring houses were also flooded. The junction of Carlton Road and Fydell Street was also flooded to a depth of 6 inches and water flowing from Witham Place and Union Place into the lower lying Union street flooded a house in Union Street. Houses were struck by lightning. The Council was blamed by residents for their flooding!

<Horncastle>: The thunderstorm of rain and very strong winds lasted an hour. Damage by the wind included chicken houses blown to pieces, trees uprooted and roofs damaged. Animals were killed by falling trees. Cars were trapped between fallen trees. [No flooding was reported].

<Skegness>: The torrential rain was accompanied by strong wind and damage by lightning with serious effects for thousands of holiday makers. Due to the heavy rain subsidence occurred on the Grand Parade. Severe flooding occurred on Lumley Road and practically every basement and cellar was flooded and water poured into shops and houses. In Prince George Street a baker had sacks of flour ruined. A section of Butlin's was flooded and the dodgem track submerged. Only the crown of Lumley Road remained clear of water.

<Sleaford>: The storm raged for about 20 minutes and the streets were turned into rivers and soon covered the paths in Southgate. The lower part of King Edward Street, the subway nearby and parts of Boston Road and Eastgate were covered with water 3 inches deep. Houses were flooded especially in West Banks and in one house in Martin's Court the water rose to the second step of the stairs.

<Walesby>: Part of a bridge was swept away and turkeys and ducks were carried away in the flooded stream.

<Billingborough>: Many houses were flooded and plants were washed out of gardens

<Pakenham>: nr <Bury St Edmunds>: The main street was flooded to a depth of several feet by the overflowing of a stream. Pigs swam about in the flood

<!xworth>: The cooperative store was flooded.

<Lincolnshire>: The rainfall of August 8th was associated with the regeneration of an old depression during the night of the 7th to 8th, while travelling eastwards across Wales and England. Rather intense cold fronts with hail and thunderstorms developed during the 8th and the rainfall was most remarkable at <Boston>, where 6.10 inches was recorded at Black Sluice, at the south end of the Borough, and 5.12 inches at Grand Sluice to the north. At Black Sluice .45 inch fell between 5h. and 9h., 4.96 inches from 9h. to 12h. 45m. and 14 inches from 12h. 45m. to 16h. and it is estimated that 4.00 inches fell between 10h. 30m. and 12h. 30m., i.e., in two hours. At Grand Sluice 4.96 inches was recorded between 8h. and 14h. 30m. Mr. F. H. Tomes, Engineer to the

5 Aug 1931 The Scotsman 6 Aug 8 Aug 1931

BR

Chingford: 85 mm fell in less than 1 hour Cleethorpes: 41 mm

Tydd (North Level Sluice) 2.27 Spalding (Spalding Marsh) 2 Fishtoft School 3.14" Boston (Black Sluice) 6.1" Boston (Grand Sluice) 5.72" Boston (Bargate End) 4.98" New Leake (Lade Bank) 2.01" Witham and Steeping Rivers Catchment Board makes the following comments:

"The point of maximum rainfall appears to have been immediately south of Boston and the worst flooding occurred in the Borough and the parishes of <Skirbeck> Quarter,< Wyberton>, <Frampton> and <Kirton>. Flooding elsewhere in the district was of a temporary character and the land surfaces were generally clear by the afternoon of the 9th, although the main drains and rivers were swollen. The floods in and surrounding the Borough were intensified by a neap tide which closed the automatic drainage sluices for a long period. For instance, the flood doors at Black Sluice, at the outfall into the River Witham, were closed from 8h. 45m. until 15h. 25m. and low lying streets were flooded in places to a depth of four feet."

The storm was associated with the rapid passage of a deep depression directly across England from the Bristol Channel to East Anglia. The greatest rainfall previously recorded in one day during the last 60 years occurred on September 29th, 1883, when 3.10 inches fell at Boston (High Street) and Boston (Grand Sluice). As much as 4.31 inches was recorded at Skegness for that day.

The heavy rainfall of August 8th, 1931, was confined mainly to the neighbourhood of the Wash. More than 2 inches was recorded at Leicester, Kettering, near Ely between Cromer and N. Walsham, and over a large area stretching from Sleaford to Swaffham. In the latter area falls of 3 inches or more were confined to the south of King's Lynn and the neighbourhood of Boston.

- <Cromer> and <East Runton>: Basements were flooded and a ridge of tiles blown off a hotel roof.
- <Boston>: Six hours of torrential rain fell and half the streets of the town were flooded up to the axles of motor vehicles. The local electricity station was put out of action.
- <Kettering>: The lower rooms of many houses were flooded including houses in Grange road Woodgreen N. <Northampton>: Streets were flooded when 0.83" fell in 1 hour.
- <Yarmouth>: the roads were white with hail. The main road was flooded deeply for 150 yards and shops and houses were inundated.

<Southwold>: In a remarkable hailstorm some of the hailstones weighed 2 oz and many people including bathers were bruised or cut. Some hailstones were 2 inches in length. Hundreds of panes of glass were smashed, sun-blinds were perforated and cattle stampeded

15 Aug 1931 Nottingham Journal 17 Aug

30 May 1932 BR 11 Jul 1932 BR, Grantham Journal 16 Jul, BR, Maya U Reading dissertation 2014 12 Aug 1932 Nottingham	Hingham (Norfolk) 1.05" in 27 m Hockliffe (Bedford) 1.50" in 30 m Raunds (Northants) 0.90" in 30 m Cranwell (Lincoln) (The largest amounts of rain occurring in specified times: 1.25, 1.96, 2.51, 2.93, 4.18 and 4.96 inches in 15, 30, 45, 60, 90 and 120 minutes respectively). Stainby (nr Grantham) 2.16" in c 1 h Assington Hall (Suffolk) 12th 1.72 in 75 m	<cranwell>: An autographic siphon recorder at Cranwell in Lincolnshire gave unprecedented falls of 4.18 inches in 90 minutes and 4.96 inches in 2 hrs. <oakham>: Flowers vegetable and corn crops were flattened by the heavy rain. In one or two places the water came into houses and in one house floor tiles were uprooted. <market overton="">: Streets were flooded to a depth of 2 or 3 inches. <cranwell>: The falls of 4.18 inches in 90 minutes and 4.96 inches in 120 minutes are probably unprecedented. (BR shows a trace from the recording raingauge). Maya dissertation notes: Temperature records (Met office monthly weather report) indicate that East Anglia was the hottest part of the country with highs of over 30C. North Easterly winds of 8.10 ms-1 blowing along the line of raised precipitable water levels of around 35kgm '2 advected cool moist air over the hot land mass. This combination of high levels of moisture being transported inland and the high temperatures would have led to instability and the build'up of CAPE which led to the intense thunderstorms which were reported on this date. Flood reports were found only for the Lincolnshire area, however, an extreme rainfall event of 61.5mm was also identified in Kent on this date (Table 4.3), where according to the reanalysis data, wind speeds and moisture levels were slightly lower than in Lincolnshire. <newmarket>: Violent thunderstorm with hail buffeted 500 horses that were being exercised on the heath. The hailstones were about an inch in diameter.</newmarket></cranwell></market></oakham></cranwell>
_		
13 Jun 1933 BR 17 Jun 1933 Essex Newsman 24 Jun	Oakington (Cambs) 1.01" in 35 m	<braintree>: A thunderstorm with hail caused much damage to fruit and flower gardens and the hail lay thick on the ground.</braintree>
19 Jun 1933 Essex		<braintree>: A thunderstorm raged for 15 minutes. There was a flood at south Street at the bottom oh New Street where people barricaded their doors to keep the water out. At the bottom of Notley road near the</braintree>

Newsman 24		< <river brain="">> a sewer burst.</river>
Jun		
24 Jun 1933 BR	Spooner row (Norfolk) 2.05" in 45 m	
25 Jun 1933 BR	Peterborough 1.79 in 2 h	
15/16 Jul	Apley Guise (Beds) 2.14" in 1	<blankney hall=""> (S of Lincoln): Heavy rain lasted about 30 minutes and gave 1.92" and caused considerable local</blankney>
1933 BR	11	flooding.
6 Aug 1933 BR	Yaxley (Suffolk) 1.02" in 20 m	
23 Jun 1934	<thetford> 1.70 in 1 h</thetford>	<syresham>: there was extensive flooding of houses some to a depth of several feet. Hail accompanied the rain</syresham>
Buckingham advertiser 30		to a depth of 2 $\frac{1}{2}$ inches. Allotments were awash and presented the appearance of an inland sea.
Jun, BR		des Cales III and a design of the deal ALIPPA ARE CLOSE AND CONTRACT A
12 Jul 1934		<ipswich>: Houses and shops were flooded. At Highcliffe, the High Street was flooded and water entered</ipswich>
Eden (2008)		several houses and water was up to car axles.
Yorkshire post 14 Jul		<frinton> (Sussex) 2.94" fell during the day.</frinton>
14 Jul 1934	Oundle 1.45 in 45 m	
BR		
25 Jun 1935 BR	A large part of southern Britain was affected by intense rain with thunder and lightning. BR reports intense rains qualifying for inclusion have been received from London, Berkshire, Hampshire, Oxford, Wiltshire, Gloucester, Hereford, Northampton, Leicester, Rutland, Warwick, Monmouth and Caernarvon	

Northampton 1.94" in 65 m Market Harborough 1.21 in 80 m Northampton 1.88 in 2 h Gretton (Northants) 1.46" in 2 h

22 Jul 1935

Yarmouth 0.75" in 20 m

BR

8 Aug 1935 Cromer 1.19" in 45 m

BR

Thetford 2.16" in 75 m 18 Aug 1935

BR

BR

Buxton (Norfolk) 0.74" in 20 28 Aug 1935

Northampton. NW

22 Sep 1935

Daily Herald

23 Sep,

Bedfordshire

times 27 Sep,

Webb et al

2001,

Buckingham

Advertiser 27

Jun, Essex

Newsman 27

Jun, BR (The

great

hailstorm)

Northampton

shire

were at least 70 mm diameter and there was extensive damage to glass, tiled and thatched roofs aerials and telegraph wire. The hail swath extended 300 miles from the Bristol Channel through Gwent, across to Norfolk (Webb).

Cambridgeshire: Hailstones

The amount as measured at 9h did not much exceed one inch anywhere in the county and was much less at most places. The highest measurements were 1.55 inches at Upton and 1.53 inches at the Berrywood

Mental Hospital.

<Cromer>: Three hundred houses and shops were flooded where 1½ inches of rain fell in ¾ of an hour. The water rushed along the low lying streets and poured into houses and basements where it reached a depth of 7 feet. On reaching the Esplanade, the storm water poured down the west cliff making a deep hole outside a hotel.

<Wellingborough>: Extensive damage was done to greenhouses and market gardens by large hailstones and floods.

< Rushden>: Hailstones as big as tennis balls were picked up by a man who had had one of them crash through his slate roof.

<Bedford>: Houses were invaded by the torrents that rushed through the streets. In Midland road, Alexandra road and Ford End Road there was road flooding and a property was flooded in High Street. Three electricity sub-stations were flooded on Union Street, Rothsay Gardens and Devon Road.

<Podington>: Hundreds of panes of glass were broken. Greenhouses suffered most and one house was flooded.

<Stevington>: Hailstones broke windows here too but not so much as in Podington.

<Wavendon>: Water entered some houses in the village but no windows were broken.

<Thornborough>: The storm broke over the <Buckingham> district but the village most affected was Thornborough. Lying in the valley it naturally suffers from some flooding and houses at Lower End near the brook have commonly been flooded but never have the whole of the houses in Bridge Street and those in the centre of the village been flooded causing much damage to carpets and furniture. The storm broke at 2 pm and the brook at Bridge Street burst its banks at 2.30 forcing down a brick wall and rising quickly to a height of 6 feet. Houses commonly flooded had taken precaution but those across the road were unprepared as the water swept over a 6 foot wall and entered houses to a depth of 1 foot. In one house a cat was carried away when the water rose to the sixth stair. A seventy year old resident said he had never seen such a flood. Other cottages on Buckingham road were flooded to 1 foot and a resident said he had not experienced such a flood in 48 years. In the centre of the village the Old Manor House was flooded. Making its way to <Thornton> the water streamed into the front windows of the New Inn and out the back; it swept up the three steps of the General shop nearby and poured into the windows and doorway. Many homes were invaded at Lower End. The water entered 17 or 18 houses in all.

<Leckhampstead>: Five bullocks and 2 heifers were killed by lightning.

<Great Horwood>: Hailstones were large and wind driven. Houses which had never before been flooded were invaded.

<Wolverton>: Householders were kept busy baling water from their flooded cellars and tenements.

<Winslow>: Serious flooding occurred in the Sheep Street area and manhole covers were lifted up causing flooding of houses especially those near Winslow Hall. Houses at the end of Avenue road were flooded. A bull and a cow and sheep were killed by lightning. Water rushed into the basements of a block of houses just below the Police Station at the end of Station Road. In none of the Winslow houses did the water reach much above the ankles. Water also entered houses in High street in the neighbourhood of the Golden Lion.

<Grays>: The storm affected <Grays>, <Tilbury> and <Orsett> with torrential rain flooding roads and entering low lying houses. Near the church at <Chadwell St Mary> the water was over a foot deep and nearer <Orsett> at the foot of the hill there was a raging torrent 3 feet deep. Damage was done to crops and orchards by hail with some of the stones half an inch round.

<Chelmsford>: The lower part of Victoria Road became flooded and for a while the road was impassable for pedestrians. The water swept over the garden steps of some of the houses. The railway line between Chelmsford and Witham was flooded under the White hart Bridge at <Boreham> to a depth of 2 feet delaying trains. Chelmsford daily rain was 0.91".

<Colchester>: Several areas were flooded including Stockwell Street, St Botolph's Street, Fair Street and Maldon

road.

<Braintree>: Down the hill at Bradford Street which is a mile long and divides <Braintree> from <Bocking> water rushed like a torrent. Half a dozen manholes in the centre of the road quickly became fountains and there was flooding of houses and property nearby. <Bocking> Church Street was flooded and also at Panfield Lane, <Black Notley> and <Cressing>.

<Great Billing> (Northants) BR notes: Hailstones fell that were bigger than one's fist. Every pane of glass in the greenhouses was broken, and any form of skylight. A garage roofed with asbestos 1/8 inch thick was pierced in at least a dozen places. We have evidence that some of the stones which fell in this storm may have been 4 inches in diameter.

<Wellingborough>: The rain caused some local flooding, particularly at Wellingborough.

<Rushden>: A stone as large as a tennis ball was picked up at Rushden. The newspaper account says that when split open it "was seen to be composed of four distinct spheres, the smallest the size of a walnut, the whole made one solid ball of ice". This rather suggests that it was really an aggregate of four hailstones which became fused together after they had fallen.

<Northampton>: The same newspaper account contains numerous details of other large stones, and includes a photograph of a piece of glass from a greenhouse at Lower Thrift Street, Northampton, pierced by a hole stated to be 3 inches in diameter. Stones which fell at <Weston> are stated to have weighed 4 oz. and to have been 6 inches in circumference. These data are inconsistent; a hailstone 6 inches in circumference, or say, 2 inches in diameter could not possibly weigh more than about 2 "2 oz. If these stones actually weighed 4 oz. their circumference must have been nearer 8 inches than 6 inches. Serious damage is known to have occurred over an area in the form of a strip not more than about 10 miles wide, extending from Banbury north-eastward to a point just beyond Irthlingborough, a distance of about 40 miles.

6 May 1936 BR Dunstable Cement Wks 2.08" in 45 m (total 2.12")
Rainham (Essex) 2.34 in 80 m

<Dunstable>: The town caught the storm very badly. Many basements were flooded out, and considerable damage was done to gardens and fruit trees. The hailstones were in some instances fully an inch in diameter. Locally the floods in the streets reached a depth of 4 ft. 6 in. The Plough Inn, on the Icknield Way, just below Dunstable Downs, suffered severely. Many pigs were drowned in mud washed from the hillside fields by torrential rain. At Edlesborough, about 3 miles west-south-west of Dunstable, gave seven-eights of an inch as the diameter of some of the hailstones. Great damage was done to greenhouses in the track of the storm, and also to Waterlow's, the printers, of Dunstable. At Whipsnade Zoological Park -25 in. of rain was registered. The

hail there was extremely local: some fell at the Tiger Pit, but none at the Lion Pit, a short distance away.
Ivinghoe, on the south-west margin of the storm area, had only a little rain."

		Than there was extremely local. Some remark the riger rit, but none at the Flori rit, a short distance away.
		Ivinghoe, on the south-west margin of the storm area, had only a little rain."
17 May 1936		
BR		
20 Jun 1936 BR	Stretham engine (Cambs) 0.80" in 30 m	
21 Jun 1936 BR	Corringham (Essex) 1.87" in 2 h	<market harborough=""> The worst effects were experienced a few miles north-east in the direction of <uppingham>. A gale of wind uprooted small trees, branches were broken off and the roads littered with debris. <hallaton>: Panes of glass were cracked by the hailstones.</hallaton></uppingham></market>
7 Jul 1936 BR	Theydon Bois (Essex) 0.55" in 10 m Grimston (Norfolk) 2.07 in 1 h	<northwood> (Bedfordshire): an extraordinary rainstorm occurred here. Next morning, I measured 3.09". I am informed that practically the whole of this rain fell in about half-an hour, between 15.05 and 15.35. The storm was apparently moving in a north-westerly direction, for a party which reached Sandy Golf Club at 15h. just before it began, reported that their train had passed through a heavy storm at Kenton and parts of the golf links were under water. Here, within a few minutes after the rain suddenly commenced, torrents of water rushed down a gravel slope and through the back door flooding the kitchen. At Sandy Lodge the total was only 1.40"</northwood>
9 Jul 1936 BR	Lincoln 1.25" in 1 h	
5 Sep 1936 Chelmsford Chronicle 11	Mildenhall (Suffolk) 1.06" in 30 m	<dovercourt>: In High Street a torrent poured down from Kingsway and Watts Hill. In Victoria Street many houses were flooded in some cases to a depth of 2 feet.</dovercourt>
Sep, BR		
36р, БК 15 Sep 1936		<daventry>: Hail fell in sheets and the roads were soon covered with a thick white layer. Branches have been</daventry>
Rugby Advertiser 18		stripped from trees. In the Inlands water was several inches deep and a manhole cover on the London Road was forced up. The main road between Daventry and Weedon was flooded and near Sand's cafe the water was a
Sep		foot deep. Several houses were flooded.
15 Jul 1937 Lincolnshire Chronicle 17	A map showing the distribution of the rainfall over England and Wales for this day is reproduced	<norton>: The Post Office was flooded; the water rushed in the back and out the front. <lincoln>: The storm broke about 6 pm and the torrential rain was accompanied by a gale of wind. Manholes were forced up and geysers of waters spurted yards into the air. Paving blocks were forced up at Lincoln-Stonebow and the water flooded into basements of shops on either side of the High Street. Abandoned cycles</lincoln></norton>

Jul, BR, Hull Daily Mail 16 Jul

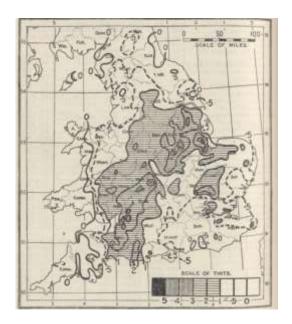
together with a synoptic chart (BR 1937) showing the general meteorological situation at 13th on the 15th. The main feature of the rainfall map is that while there was no rain at stations in the west of England and Wales, there was a belt of heavy rain, exceeding two inches stretching almost continuously from Somersetshire to Lincolnshire. Leasingham (Lincoln) 1.07" in 20 m Lincoln 1.70" in 30 m Blisworth (Northants) 1.10 in 30 m Forest Gate (Essex) 1.04 in 40 Grantham 1.44" in 60 m

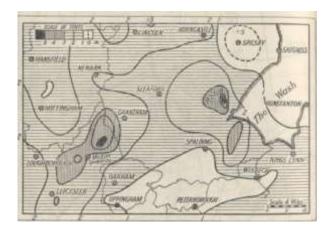
were swept along the High Street. Cinemas were flooded and customers obliged to leave. In 30 Minutes 2 ½ inches of rain fell. The Witham overflowed in places and embankment on a section of the LNER line between Lincoln and Grantham was washed away. Hailstones as big as marbles covered the ground and were piled in drifts. Lakes formed in the Stamp End and Carholme road districts and in some of the streets off Carholme road residents were marooned in their upper rooms. The flood forced open doors and furniture floated down the streets into the canal. Roads were also blocked by fallen trees. Grocery handcarts and wheelbarrows laden with goods were abandoned and were swept away. A boy in Unity Street waling from his home to the Drill Hall was knocked off his feet by a rush of water more than 2 feet deep. There was a river of water over the Carline Road and left mud a foot deep.

BR notes: A landslide occurred on the South Park embankment of the main line from Lincoln to Grantham and the line was impassable. The River Witham overflowed in several places, one place nearby being flooded to a depth of four feet. The Foss Dyke near Lincoln rose five feet in an hour. Trees fell in two roads, holding up traffic and breaking down telephone lines. Over 500 lines were dislocated by the storm.

<Grantham>: Women were wading in water 2 feet deep.

The was more than five inches at one station in Leicestershire and two in Lincolnshire, viz., Waltham-on the-Wolds, Wyberton (Tytton Hall) and Boston (Black Sluice) with 5.76, 5.47 and 5.46 inches, respectively. In the Transactions of the Institution of Water Engineers, 1937, mention is made of the heavy fall at Boston and the 5.46 inches described as falling in 12 hours, when the drains became over-charged and whole neighbourhood flooded and crops destroyed. A more detailed map showing the distribution of the rainfall over the area between Leicester and Boston is also reproduced. In the Boston area it is considered that 5 inches or more fell over 1.25 sq. mi.; 4 inches or more over 2.5 sq. mi., and 3 inches or more fell over 32 sq. mi. The area in Leicestershire with over 5 inches was about 4.5 sq. mi. and with over 4 inches about 37 sq. mi. The whole area to the north of Leicester with over 3 inches was about 143 sq. mi.





It is interesting to compare the distribution in the neighbourhood of Boston on July 15th, 1937 with that of July 11th, 1932. In both cases the distribution is typical of thunderstorm rains. In July 11th, 1932, the area of heaviest rain was more local and occurred between the two areas of heaviest rain on July 15th, 1937. On July 11th, 1932, 5.41 inches was measured at Cranwell Aerodrome where 2.93 inches fell in one hour. For July 15th, 1937, the total at Cranwell Aerodrome was only 1.82 inch, the heaviest rains occurring a few miles to the southwest and east-south-east of that station. This illustrates the capricious distribution of intense rains during thunderstorms.

<Scunthorpe>: The pump house of the steel works at Scunthorpe was flooded. At the junction of High Street, Wells street and Cole Street water accumulated to a depth of 2 feet; shops were flooded and extensive damage done to stock.

<Peterborough>: Peterborough experienced an abnormally heavy rain storm accompanied by thunder and lightning and at its height between 19.00 and 20.00. Measured rainfall was only 0.74" in one case and 0.45" in another. However, when the storm was at its height, the water rose very rapidly in Midgate, the drains being unable to carry away the water, but this was not the only place to suffer. 'Like a river' was the description

19 Jul 1937 BR (Peterboroug h Standard 23 Spalding Grammar Sch 2.14" in 25 m Spalding Surveyors office 2.14" in 30 m Spelbrook (Essex) 2.11" in 115 m

Jul)		given to Fitzwilliam Street by eye-witnesses. <horndon-onthe-hill> (Essex): Two thunderstorms broke over Horndon-on-the-Hill: Ball lightning was reported. Two horses were struck and killed during one of the storms of the same evening. <spalding>: Six of the entries on the 19th rank as " remarkable falls " and two as " very rare " falls. The latter occurred at the Grammar School and The Surveyor's Depot of the Urban District Council at Spalding in Lincolnshire.</spalding></horndon-onthe-hill>
4 Aug 1937	The storm was said to be the	<everton><sandy>: There was torrential rain with hailstones as large as marbles. Hail did serious damage to</sandy></everton>
Biggleswade	heaviest since May 1924. Little rain fell at Sandy and	beans and marrow crops. The force of the rain caused havoc on the Old common Road with several holes some
Chronicle 6	none at Biggleswade.	3 feet deep cut.
Aug		<potton>: Several houses were flooded and much damage done to crops.</potton>
11 Aug 1937		<ely>: It was the centre of a terrific storm on Wednesday afternoon between 15.15 and 16.45 and 1.12 inch was</ely>
BR		recorded in an hour. The drains were unable to cope with the abnormal rush of water and almost every street
(Cambridgesh		in Ely was flooded.
ire Times 13		
Aug		
14 Aug 1937		<ilford>: Hundreds of returning workers found their houses marooned and women shoppers paddled knee</ilford>
Northern		deep in the flood.
Whig 14 Aug		
18 Jun 1938		<rudham><norfolk>: Storms extended over an hour and 160 tons per acre of rain fell. Heavy damage was done</norfolk></rudham>
Western Daily		to root crops and water entered houses. Road were flooded and motorists were stopped by water coming into
Press 20 Jun		their engines. There were hailstones as big as shillings.
1 Jul 1938		<barton humber="" on="">: A storm burst over North Lincolnshire and isolated farms became the centre of miniature</barton>
Aberdeen		lakes. The storm was accompanied by ice and hail as big as walnuts. One farmyard was flooded to a depth of 5
Press and		feet. At <deepdale> near Barton whole fields were under water and farm cottages were flooded to a depth of</deepdale>
Journal 2 Jul	East Kirkby (near Spilsby)	several inches. Sugar beet was badly damaged.
5 Aug 1938 BR	2.20" in 75 m	
6 Aug 1938 BR	Corringham (Essex) 1.57" in 57 m Lexden (Essex) 2.25" in 1 h	<lexden>: The thermometer showed a fall of 18 degrees from 83°F. to 65°F during the storm.</lexden>

11 Aug 1938 Coventry Evening telegraph 12 Aug, Eden (2008), Webb et al 2009, Bury Free Press 20 Aug	Peterborough 1.18" in 20 m Leigh (Essex) 0.98 in 30 m Haughley (Suffolk) 1.45" in 65 m Bilsworth (Northants) 0.81 in 20 m	<essex>: Huge hailstones fell on the Westcliff cricket ground where Essex were playing Northants and the pitch was flooded. Six separate severe (H3+) category hail events occurred on 12th, a day of exceptionally widespread lightning damage and hail in the East Yorkshire Wolds in the afternoon (walnut to golf ball size hail with drifted hail up to 4 ft deep and many broken windows), and Norfolk in the evening when crops were devastated by hail up to 50 mm across. <fakenham> and <sapiston>: They received the full force of the storm and houses were flooded and the hail played havoc with the gardens.</sapiston></fakenham></essex>
6 May 1939, H Lamb The English Climate (1964)	No hits in BNA	A violent thunderstorm was reported in Bedfordshire, hailstones 1 inch diameter
15 Jul 1939 Lincolnshire Echo 17 Jul, Sheffield Daily Telegraph 17 Jul,	Northeast Lincolnshire snow and hail fell to a depth that impeded traffic. Bury: 0.68" in less than 30 mins (rain and hail). Brigg: 1.50" in 60 m	<lincoln>: Streets were flooded in places to a depth of 2 feet. A third of an inch fell in half an hour. Chaucer Drive, Ruskin Avenue, Wragby Road (St Giles), Kingsley Street and Chelmsford Street in the lower part of the city were the most seriously affected. The water was 2 feet deep in Chaucer Drive. <binbrook>: Snow and hailstones fell and were swept into heaps 3 feet deep. Between <ravensdale> and Binbrook the hail was quite a foot deep and the hailstones were as big as chicken's eggs. Many houses were flooded and many growing crops were flattened by the hailstones. SDT says hailstones as big as walnuts. <barton>: Many houses were flooded with a sudden inrush of water. Hailstones as big as marbles threatened to break windows. The streets were like miniature rivers. <bury>: Hailstones like lumps of jagged ice caused great damage to fruit and garden crops</bury></barton></ravensdale></binbrook></lincoln>
19/21 Jul 1939 Bury free press 22 Jul 21 Aug 1939	Gosberton (20 th): 2.01 in 65 m Chalfont St Giles (21 st): 1.75 in 90 m Oakington (21 st): 1.75 in 105 m Bilsworth (21 st) 1.68 in 120 m	<bury>: The rain was so heavy that a considerable stream flowed down Albert Street and flooded the junction of that road with Risbygate Street and Grove Road <ilford>: 7 people killed by lightning and 18 injured when lightning struck a wooden shelter. (See also Thames</ilford></bury>

Essex newsman 26 Aug		chronology)
2 Sep 1939 BR 1939	Harncastle: 1.31" in 90 m	
27 Apr 1940 Br 1940		<south elkington=""><louth>:Large hailstones and jagged pieces of ice did much damage to growing plants.</louth></south>
10/11 Jul 1940, Eden (2008), BR 1940	Northampton: 1.34" in 35 m Brackley: 1.00" in 30 m Grantham: 1.60" in 60 m East Kirkby: 2.14 in 105 m	Thunderstorms with hail affected East Yorkshire and Lincolnshire on 10th. Horncastle rainfall was 98 mm and Grimsby 89 mm. Large hailstones damaged windows and roofs in Boston and East Kirkby. The observer reports that at East Kirkby Manor some of the hailstones weighed more than 2 oz. There was much damage to glass in an exceptionally severe hailstorm at Little Coates near Grimsby during the afternoon of the 10th. (Two children were killed by lightning on 11 th near Bristol).
8 Jul 1941 BR 1941 12 Jul 1941	Thunderstorms occurred in Hertfordshire, Essex and Suffolk. Hitchin: 1.07 in 38 m Braughing: 1.87" in 60 m Bishop's Stortford: 1.68 in 60 m Much Hadham: 0.98" in 60 m Saffron walden: 1.28" in 75 m Saffron Walden 2 1.10 in 90 m Mildenhall: 0.59" in 12 m Dagnall: 0.49" in 6 m Burnham: 0.88" in 30 m	<braughing>: During the thunderstorm of tropical violence at Braughing, there was hail, trees were uprooted and plants stripped of foliage. <saffron walden="">: There was a "terrific " thunderstorm at Saffron Walden at 18.15.</saffron></braughing>
BR 1941 13 Jul 1941 BR 1941	Blisworth: 1.76" in 60 m Northampton 0.53 in 7 m	
26 Jul 1941, Eden (2008), BR 1941		<chelmsford> (Essex): 115 mm fell at Wickham Bishops and 108 mm at <writtle> with serious flooding at Chelmsford, <witham> and <maldon>.</maldon></witham></writtle></chelmsford>
14 Jun 1942		<northampton>: Rainfall at Northampton in 2 hours was ¾ inch but at Weston Flavell it was estimated at 2</northampton>

Northampton Mercury 26 Jun, COL Aug 1987	
11 Jun 1943 BR 1943 13 Sep 1943 BR 1943	Ferriby: 1.88 in
11 May 1945 Eden (2008), Webb et al (2009), BR 1945	
5 Aug 1945 Manchester Guardian 6 Aug 22 Aug 1945 Diss Express 24 Aug	
28 Aug 1945 Eden (2008)	

Manchester

inches. <Abington Park>: Hailstones did damage to garden and fruit crops. In the town centre water flooded the streets but the north and west sides of the borough were practically untouched. <Dedham>: In a severe hail storm on 22 Aug 1987 the observer remarked that it was similar to one which occurred on 14 Jun 1942 <Lowestoft>: Heavy hail (hailstones between ¾ inch and 1 1/2 inch) at Lowestoft did much damage to vegetables. <Ferriby> (Lincs): In the fall at Ferriby Sluice to the south of the Humber, hailstones were about half an inch in diameter. The mean rate per hour of 7-52 in. has only been exceeded by the record fall of 1.25 in. in 5 minutes at Preston Corporation Offices on August 10th, 1893. Thunderstorms with hailstones 3-4 cm across were widely reported in Leicestershire, Northamptonshire, Oxfordshire and Buckingham. An aircraft was severely damaged in flight, while on the ground there was extensive damage to greenhouses with hail ripping clean through corrugated iron roofing. Also, hail up to around 40 mm across fell in a 35 km swath across south Leics. (Meteorol Mag-typescript 1945). BR reports: Hailstones were reported in the Market Harborough area to be as large as golf balls, while at Kibworth drifted hail measured 18 inches deep. <Bury St Edmonds>: Thunderstorms were also reported in Bury St Edmonds and <Ayr>.

< Harleston>: The thunderstorm caused serious damage to growing crops in the < Waverney>> Valley. The storm lasted well over 2 hours and was accompanied by hail. Several parts of the main street were flooded and on sections of the main Harleston to <Bungay> road the water was 9 inches deep. In several small houses in Harleston water was rushing in through the back door and out the front. A florist's shop was seen to be flooded. <Boston>: In the Holland district of Lincolnshire the rain was the heaviest since 1937 and at Boston 3.2 inches fell in 2 1/2 hours.

Guardian 30 Aug 23 Jun 1946 BR 1946

2/3 Jul 1946 Eden (2008), Webb et al 2009, BR 1946, COL Jun 1972 BR reports: Heavy rains accompanied thunderstorms in East Anglia and Lincolnshire on July 2; most of the rain fell in a short time during the afternoon.

Marlingford Hall: 0.64 in 5 m
Bury S Edmonds: 2.05 in 30 m (and 5.11 daily total)

<Market Harborough>: Several observers in the vicinity reported upwards of 2 in of rain between 1700h and 1915h. The centre of the town was badly flooded. Hail stones which were as big as marbles were lying in some places until 10 am on the 24th.

Six severe category hailstorms, two swaths across E Anglia on 2nd exceeding 50 km length. Hail 50–63 mm diameter in West Norfolk on 2nd. On 3 rd, much glass and many roof tiles were broken in the Farnham area of Surrey. (Meteorol Mag 1946)

<Bury St Edmonds>: Deluges occurred on successive days with a total of 130 mm causing urban flooding. BR notes: Bury St. Edmunds had a fall of "very rare" intensity, viz. 2.05" in 30 minutes. Bury St. Edmunds suffered the effects of exceptionally heavy rain again in the night of July 3-4. The Borough Surveyor reported that 2.46 in. fell in 4 ½ hours. The River Linnet overflowed its banks and low lying parts of the town were extensively submerged. Water reached first floor level in several cottages, and some people, marooned in upper rooms, were only rescued by firemen breaking through roofs to reach them.

<Coningsby>: (south of Horncastle) The storm was described as of tropical severity; unfortunately there is no measurement of the fall or its intensity.

A second area of heavy rain was on the east side of the Wash, extending southward from <Hunstanton>.

< West Raynham>: in this area, the rain was "torrential" from 13.30 to 13.45 with hailstones half an inch in diameter.

<Mildenhall>: The recording gauge was not working properly but it is estimated that in two intense showers 0.57 inch fell in 9 minutes (1220h.—1229h.) and 0.87 inch in 20 minutes (1430h.—1450h.).

<Marlingford Hall> (W of Norwich): A terrific hailstorm was reported lasting only 5 minutes. Half an hour after the hail stones had fallen they measured 1¼ inch. In one greenhouse 168 panes of glass were smashed.

Thunderstorms caused flooding in east Norfolk and elsewhere in E Anglia with totals of 80-100 mm widespread.

<Suffolk>: Torrential rain flooded cornfields and lumps of ice fell such that dogs ran for shelter. Hurst Park racecourse was flooded and the event cancelled.

<Bardwell><Suffolk>: 3 ½ inches of rain fell within an hour and was accompanied by falling lumps of ice.

<Epping>: Hailstones of 0.6 inch diameter were reported.

BR reports: The storm caused widespread havoc in East Anglia, and floods, which covered the country to the

26 Jul 1946 Eden (2008) Yorkshire Post 27 Jul Manchester

Guardian 27

Sible Hedingham: 1.10 in 50

Felsted: 1.00 in 60 m

Jul, BR 1946		west of <bungay>, Suffolk, in a great lake stretching for nearly 10 miles with an average width of one mile, were said to be the worst since 1912.</bungay>
27 Jun 1947 BR 1947	Boston: 1.00 in 15 m Layer de la Haye (Essex): 0.82 in 17 m Ashwell (Cambs): 1.59 in 30 m Wisbech: 1.35 in 45 m Newmarket: 1.17 in 45 m Thetford: 0.88 in 45 m Wyberton (Lincs): 1.50 in 60 m Mildenhall: 0.80 in 29 m	On the 27th, severe storms, following one of the warmest nights on record, developed by midday over southeast and east England. Squally winds accompanied the heavy rain in most cases, adding to the damage caused by floods and lightning.
16-18 Jul	Severe hail damage swath, 65	<sibsey>: Hailstones bigger than marbles cascaded from rooftops and covered the ground to a considerable</sibsey>
1947 Eden	km long and 8 km wide, across mid Suffolk and into	depth. The storm lasted from 3.45 to 4.20 but acres of land were flooded.
(2008), Webb	Norfolk. Extensive damage: to	<barking tye=""> (near Ipswich): A violent hailstorm ruined thousands of acres of corn. Other crops and fruit trees</barking>
et al (2009),	windows, timber, thatch and roof tiles by wind driven hail.	were damaged and poultry were killed by the hailstones, which were one and a half inches in diameter.
Lincolnshire	Sibsey 1.60"	According to the East Anglian Daily Times, Mr. A. J. Pratt of Tye Farm said, "When the electrical storm was
Standard 19	Thrapston (19 th): 1.11 in 80 m	moving away we heard a distant roar which got louder and louder as the ice storm approached. It lasted from
Jul, BR 1947		between 20 and 30 minutes. Afterwards there was a white carpet all round."
2 Aug 1948	Heavy storms occurred over a	Local thunderstorms brought 100 mm at Silsoe in Bedfordshire. Road flooding was reported in Oxfordshire,
Eden (2008)	wide area during the afternoon of Bank Holiday,	Berkshire and Essex.
	August 2.	<cranfield> (Berks): It had a fall of remarkable intensity.</cranfield>
6 Aug 1948 BR 1948	Violent storms were reported from many places in southern England on the 6 th .	<stanstead> (Essex): 1.40 inch fell in 2 hours.</stanstead>
7 Aug 1948	-	<cromer>: Nearly an inch of rain fell in two hours, streets became like rivers and the road from Cromer to</cromer>
Hull Daily		<runton> was flooded.</runton>
Mail 7 Aug		
12 Oct 1948	Cawston: 1.64 in 2 h	<cawston>: Heavy rainfall occurred during what was described in the Eastern Evening News as one of the worst</cawston>
BR 1948		October thunderstorms for several years. The rainfall was continuous for an hour and a half at <cromer>. Some</cromer>

parts of the coast road were flooded to a depth of between a foot and 18 inches, particularly near <Cley> and

<East Runton>.

16 May 1949 BR 14 Jul 1949 BR	In some places heavy rain was accompanied by a whirlwind. Stansted: 1.49 in 60 m St Neots: 1.12 in 35 m	<elstow> (Bedfordshire): the wind uprooted trees, smashed windows and lifted a wooden shed, used as a sports store, over a wall to crash against a house 20 yards distant. <st neots="">: Severe flooding occurred at St. Neots.</st></elstow>
15/16 Jul 1949 Eden (2008), BR 1949	No hits for flood and thunder in BNA March: 4" in 105 m Colchester: 1.50 in 75 m Bluntisham: 1.20 in 90 m Thorpe: 2.49 in 2 h Taverham: 1.90 in 2 h Kings Lynn: 1.37 in 2 h Leighton Buzzard (17 th): 1.38 in 30 m	<march>: (Cambridgeshire) had 105 mm most of which fell in 105 minutes. There was considerable local flooding in the town and the Fire Brigade was employed in pumping out water from houses and other property. Fields were flooded and crops of potatoes lost due to water standing on the land. The river rose 1 ft. 1 in. which is exceptional for the time of year when the level is normally falling. <doddington>: The flooding of property and damage to crops was even more severe than at March but unfortunately no rain-gauge is in use there. <thorpe> (Norwich): The Eastern Daily Press reported that " a freak storm which burst over the Thorpe area of Norwich created a torrent which flowed at 15 to 20 miles an hour down Wellesley Avenue At Thorpe Narrows there was shingle and gravel on the Yarmouth Road about a foot deep in places. This had come from the unmade roads which slope to the Yarmouth Road The City Fire Brigade had 26 calls to flooded premises."</thorpe></doddington></march>
21 May 1950 Eden (2008), BR	The storm was confined to Gloucestershire, Wiltshire, Oxfordshire, Buckinghamshire, Bedfordshire, and Huntingdonshire. On this day tornadoes developed near the northern edge of the Chiltern Hills and travelled towards the Wash. Great Gransden: 1.10 in 30 m Tring: 0.97 in 30 m Ramsey: 1.13 in 40 m Brampton 1.03 in 45 m Hemingford Grey: 0.95 in 45	Violent thunderstorms were accompanied by a tornado which tracked from <wendover> Buckinghamshire to <ely> with much damage at <linslade> and <bedford>. 5 cm hailstones were reported. <huntingdon>: A house was struck by lightning and much flooding occurred. <kimbolton>: To the west of Huntingdon, an eight-year old girl was drowned when a converted jeep was swept away. <hockliffe>(near Leighton Buzzard):, The observer wrote "the first warning I had was the fusing of all the electric lights in my house and village street. My house door was blown in and the floor covered with huge hailstones. Then there was absolute darkness. In the Vale of Aylesbury and in the valleys of the Great Ouse and Nene there was also serious flooding; traffic was interrupted on many roads, and farms, villages and towns suffered great inconvenience and damage.</hockliffe></kimbolton></huntingdon></bedford></linslade></ely></wendover>

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Hockliffe: 1.75 in 60 m

9/10 Jul	1950
BR (Norf	folk
News)	

Storms occurred on the night of 9/10 Jul in Suffolk and Norfolk.

E Dereham: 1.67 in 2 h Horsham: 0.96 in 40 m Mildenhall: 1.05 in 45 m Norwich: 1.46 in 55 m

Sprowston: 1.83 in 75 m

The Norfolk News of July 14 regarded the worst hit area as lying between Thetford and Norwich where hail occurred with considerable damage to animals, birds and crops.

< Illington>: 3,000 ducks were reported killed – presumably by hail.

<Wolterton Park>(north of Aylsham): 2.83 inches was recorded for the day and Lord Walpole was of the opinion that the bulk of this fell in just over one hour. He reported that 40 yards of a sunken wall were swept away, many cottages and farm houses in the district flooded, and mangolds and sugar beet were washed out of the ground.

<Norwich>: Another record of two inches in just over an hour, which has not been included because of the estimation involved, came from the observer at Ipswich Road, Norwich. The bulk of the rain was in the early part of the storm although the rain was audible for about an hour. The City Engineer, Norwich, reports 1.46 inch in 55 minutes of which -82 inch fell in 11 minutes.

At <West Raynham>, <Fakenham>, the rain fell at a steadier rate, 1.4 inch in just over 4 hours.

7	Aug	1950
В	R	

6 Aug 1951

Tolleshunt D'Arcy: 1.14 in 50

m

Peterborough: 1.20 in 50 m Pakenham: 1.34 in 105 m

Ilford: 1.23 in 2 h

18 May 1952 Daily Mail 20

May

10 Sep 1952

BR

BR

<Harrold> (N Bedfordshire): In a cloudburst the High street became a torrent 2 feet deep and homes were flooded.

Gretton: 2.25 in 2 h

Intense local rains occurred on the Leicester-Northampton border.

<Eyebrook Reservoir> (Caldecott): 1.03 in fell in 1 hour 15 minutes.

Heavy rainfall and floods also occurred in East and South Yorkshire.

<Kings Cliffe>: (9 miles east of Caldecott): An inch is considered to have fallen in about one hour.

<Market Harborough>: The storm there was severe between 12.15 and 13.10 and was accompanied by hail.

25 Jun 1953

Widespread thunderstorms at end of June especially 25 and

<Langham>: the Resident Engineer at Langham (Waterworks), Essex, said within a few minutes of the start of

BR 5 Jun 1954 Eden (2008), BR 13 Jun 1954 **BR** (Halstead gazette) 15/16 Aug 1954 BR 20/21 Aug 1954 BR (Cambridgesh ire Times)

Rugby

May, BR

26th

58 m

Langham WW 2.10 in 35 m

East Bergholt 1.26 in 40 m Market Harborough: 1.63 in

Abbots Ripton Hall 1.56 in 75

There was a further outbreak

of thunderstorms in the early

hours of 13 Junand villages in Huntingdonshire again

suffered damage and floods.

Widespread thunderstorms

Coddenham (Suffolk) 0.92 in

St Neots (20th) 1.00 in 60 m

Thorney Toll (21st) 1.05 in 45

occurred on the 15th-16th

45 m

m

Wyton: 3.15 in 105 m

St Ives 1.84 in 20 m

in May occurred in Norfolk, 6 May 1955 on the 6th. Thunderstorms associated with the passage **Advertiser 13** of a depression across southern England occurred at many places on the 5th and 6th with flooding in many towns in South Wales and the the deluge all telephones were out of order and within 15 minutes the topsoil was being washed off the fields on the upper slopes of the valley.

<Huntingdon>< Wyton>: 90 mm fell in a three hour storm of which 80 mm fell in 105 minutes causing severe local flooding. At Wyton Airfield the boiler houses of both the Officers' and Airmen's messes and several of the married quarters were flooded to depths of 5 feet; the sewage ejector pump was also flooded and the mass of water flowing through the drain pipes was such that sewage was being forced out of the manholes. <Broughton> (two miles to the north of Wyton): one street was under 5 feet of water and there was a report from a chicken farm at Ramsay of the drowning of 90 birds. Fuller details and an account of the synoptic conditions at the time are given in the Meteorological Magazine, No. 83, August 1954. The fall at Wyton was

<Wethersfield> (Essex): A fall of 1.41 inch in 45 minutes was unofficially reported from the U.S. A.F. station. The Halstead Gazette reported that at one farm the flood waters of a brook swept through the yard and washed half a ton of meal off the floor of one of the buildings. Empty milk churns floated out of the yard across the road and into the front garden.

the heaviest ever recorded in two hours or less in Huntingdon.

<< Jarvis Brook>> According to the Kent and Sussex Courier "miniature whirlwinds were seen at Jarvis Brook on the 15th. Paper was blown high into the air and the side of a kiln pulled out by the suction of the wind."

<Thorney-Wisbech>: Two "noteworthy" falls occurred on the 21st, fruit was bruised by hail and potato fields were 2 to 6 inches deep in water. The Cambridgeshire Times reported that milk bottles left outside homes collected 2 to 3 inches of water.

<Carlton Colville> (near Lowestoft) There was an unconfirmed report of a fall of 1.54 inch in 90 minutes. Flooding and structural damage were reported from the town.

<Daventry>: A thirty minute storm with rain and hail hit <Daventry>, <Newnham> and <Badby>. A manhole cover was forced up on London road and the road was flooded and found its way on to the Inlands leading to some garages. The entrance to the garages was blocked by hailstones 4 to 5 feet high. The Red Lion Inn on Brook Street had its cellar flooded. 'It was like a river from one end of the building to another'. Some houses in Brook Street had 2 feet of water on their ground floors. World's End Sheaf Street had 6 to 9 inches of water in

	English Midlands. W Raynham Airfield 1.13 in 55 m
15 May 1955 Birmingham daily Post 16 May 8 Jun 1955 BR (Mercury and Herald)	Northampton 1.75 in 75 m Hitchin 1.75 in 90 m
14 Aug 1955	lpswich (Belstead Hall) 0.89 in

16 m

Kettleburgh 2.57 in 3 h

Wyberton 1.06 in 65 m

Storms broke out in the

southwest, and spread quickly over southern England, the south and east Midlands and parts of East

Coddenham 2.22 in 3 ½ h

BR

BR

28 Jun 1956

9 Jul 1956 BR

it. The Saracen's Head yard and kitchen were flooded. The Methodist schoolroom and hall were flooded. A house at Burn Walls on Borough Hill was assailed by mud and sludge and water 3 feet deep from a sown field above it.

<Newnham>: At Walkers Hill a field of sugar beet sent flood water and soil down the road towards the village and finished at the bottom of the hill at Staverton Turn where the mud was 18 inches thick. The beet was ruined and 3 inches of topsoil stripped.

<Badby>: Water was a foot deep in The Gables and there were hailstones 2 feet deep in the back entrance.

<South Essex>: A fierce thunderstorm swept the area causing damage to fruit trees.

<uxbridge>: the spire of St Andrew's church was badly damaged by lightning.

<Northampton>: The Mercury and Herald, reported that a sunblind collapsed from the weight of storm water which had collected in it. At the Northampton General Hospital 1-58 inch fell during the day and most of this is believed to have occurred in 90 minutes. All basements at the Hospital were flooded. The engineer to the Nene River Board reported that at the height of the storm, sewers were surcharged and water was being forced from them to a height of about two feet. The Northampton Borough Engineer said that rainfall intensities in the district were by no means uniform. Flooding was mainly confined to the FarCotton area of the town where the gradients available for surface water sewerage are slight.

<Hitchin>: The observer said the downpour was terrific between 16h. 30m. and 17h and extensive minor damage was done to basements and ground floors of houses and shops through flooding.

<Ipswich> (Belstead Hall): Serious floods occurred in East Suffolk . According to the Ipswich Evening Star the fire brigade worked for 17 hours pumping away flood water. Manhole covers were removed and a few cover frames burst and wrecked the roadway.

<Wyberton> (Lincolnshire): the observer reported extensive local flooding for a few hours and some damage to crops. At the same time there was considerable flooding in nearby <Skirbeck> and <Boston>.

	Anglia. London, the Home Counties and north Kent suffered most from these storms which reached the capital around dawn and cleared the east coast by noon. Diss 1.09 in 60 m Bures 1.20 in 60 m	
18 Jul 1956	Hemingford Grey 3.35 in 90 m	<st ives="">: A fall of "very rare" intensity affected the St. Ives district of Huntingdon. The observer at <hemingford< th=""></hemingford<></st>
BR		Grey> quoted a report in the local paper of a fall of more than 4 in. at <fenington>, some 3 miles to the southeast. At St Ives Tenterleas, 3.35 inches was measured and it was reported that more than fifty low-lying houses in the town were flooded.</fenington>
5 Aug 1956		<brantham>: Horses were trapped in 6 feet of water in a flooded stable but escaped when the walls collapsed.</brantham>
Birmingham		Sugar beet crops were washed out of the ground.
Daily Post 6		<cambridge>: In a hailstorm drains were blocked .</cambridge>
Aug		
27 Aug 1956		<lincoln>: There were reports of a brief but violent storm leading to flooding and damage to roads in Lincoln</lincoln>
BR		
30 Aug 1956	Hatfield Peverel 2.00 in 90 m	
BR		
30 Jun 1957 BR	Thunderstorms and heavy rain were reported on the 30th from an extensive area	<yarmouth>: Thunderstorms in East Anglia were accompanied by squalls to gale force in places and there was damage to property in Lowestoft and flooding to a depth of one foot in parts of Yarmouth.</yarmouth>
	including much of southern	Many roads were flooded in north Wiltshire and adjacent counties. Heavy rain with hail did considerable
	and eastern England. On the same day storms also affected parts of eastern Scotland as far north as Caithness.	damage to the cherry crop in Kent just as it was about to be gathered.
5 Aug 1957		<bassingham>: In Lincolnshire a man was killed by lightning at Bassingham.</bassingham>
Eden (2008)		
8 Aug 1957 BR	Holme next the Sea 1.70 in 75 m	

2 Jun 1958 BR	Thunderstorms were widespread over England and Wales on June 1 st and there was heavy rain over the Midlands, East Anglia and Wales on the 2nd. East Dereham 0.90 in 30 m	
4 Jun 1958 BR		< Gorleston> and <wroxham>: East Anglia had further heavy falls on the 4th when there was flooding in these</wroxham>
		areas, and again on the 6th, when flooding occurred in the Stour Valley.
2 Jul 1958	Floods sweep across the	<market harborough="">: In the centre many people left their houses. In some streets the water was 4 feet deep.</market>
Lancs Evg	country from Essex to Shropshire but Yorkshire was	Roads in South Leicestershire were under 3 feet of water. It was noted that the River Welland was still rising but
Post 2 Jul	one of the counties worst hit	it is not clear whether this was the source of the flooding.
	(See S Yorks Chronology).	<shenton> near <market bosworth="">: A farm had 18 inches of water in the house and chickens were drowned.</market></shenton>
		The Hinckley to Coventry road had flooding to 4 feet and lorries were marooned.
		In Notts 20 vehicles were trapped in 3 feet of water on the Nottingham to Doncaster Road.
		<bassingham> (Lincolnshire): A bridge at Bassingham was destroyed and roads flooded.</bassingham>
		In Staffordshire, the A5 road was under 5 feet near Cannock. In Buckinghamshire, Thornborough near
		Buckingham was flooded with four feet of water in 40 houses.
16 Jul 1958		<newmarket>: A cloudburst flooded the racecourse and put back the start of racing. Approximately 1.7 inches</newmarket>
Daily Mail 17		of rain fell between 1.20 and 3.30. the bar was flooded to a depth of 9 inches and barmaids climbed on
Jul		counters.
10 Aug 1958	Waddington 1.23 in 20 m	
BR		
12 Aug 1958		<luton>: Although there were few heavy falls of rain and relatively little damage by flood-water, hailstones</luton>
BR		nearly one inch in diameter caused severe local damage at Luton,
20 Aug 1958	Wold Newton 2.13 in 2 h	<colchester>: A vicar was killed by lightning whilst playing golf.</colchester>
Lancs Evg		<wold newton="">: A remarkable fall was recorded at Wold Newton and villagers in the Wolds had to take refuge</wold>
Post 22 Aug,		in the upstairs rooms of their houses when houses and roads were flooded to a depth of 4 feet in places. The
BR		observer at Wold Newton Manor said that the storm could be compared in intensity with only two previous

storms within his memory, one on May 29, 1920, the day of the catastrophic Louth flood, and the other in 1940.

22 Aug 1958 BR

Torrential rain and thunderstorms affected East Anglia, particularly Essex and Suffolk. Bradwell on Sea 1.44 in 60 m Campsea ash 1.30 in 60 m Colchester 1.10 in 90 m Great Bardfield 2.50 in 3 h Brill 2.05 in 45 m

A Colchester man was struck by lightning and killed on the local golf course during a storm which, at the nearby Waterworks, was of "noteworthy" intensity.

<Kelsale> (near Saxmundham): Traffic on the main road from Great Yarmouth to London was diverted for 4 hours because of flooding in these Suffolk villages. Intense rain commenced soon after noon and was followed by heavy rain until the early evening; the road was blocked to all traffic except heavy lorries until late evening. <Peasenhall>: The village in the same area, was isolated as a stream of water 30 feet wide and 5 feet deep poured down the main street, overturning a small van.

<Swefling>: This village to the west of Saxmundham, was reported to have the worst flooding since 1924 <Campsea Ash>: Further south, a "noteworthy" fall was recorded, near Woodbridge

<Norwich>: Flooding was also reported in east Anglia: at Norwich traffic was brought to a standstill and sections of the ring road were flooded to a depth of 1 foot.

28 Aug 1958 BR

5 Sep 1958

Eden (2008),

(2001, 2009),

Webb et al

BR, Col Sep

2010, CBHE

damage from sudden flooding and lightning, particularly the latter. Lightning injured a number of people in Essex, Bedfordshire and Norfolk. Severe thunderstorms affected SE England. 75mm Essex.

Thunderstorms left a trail of

fell in a number of places in Tilbury Grays STW 3.17 in 2 h Chelmsford 2.98 in 2 h

Chelmsford 2 2.73 in 60 m St Neots (Hunts) 26 mm in 40

Wickford 3.27 in 90 m

m

See report for Southeast

<West Hanningfield>: The storm was preceded by a light ESE wind, 26C maximum temperature and relative humidity of 75%. Seen from Chiswick in W. London the sky gradually darkened during 1700-1800BST with high cloud thickening and the formation of black, almost stationary altocumulus castellanus and cumulonimbus until lightning commenced about 1830BST, mainly towards the SW and among the clouds. The storm gathered intensity, with up to 20 flashes per minute spreading elaborate pulsating "tributaries" throughout the clouds, while drifting toward the east. Lightning was visible until 2100BST. As the storm moved into Essex, more than 3 inches (80mm) fell at West Hanningfield, and severe disruption occurred, rivers burst their banks, and at one point, Chelmsford was entirely cut off. Storms also affected Horsham, with 30mm diameter hailstones, and Kent where rail disruption was the worst since wartime. This storm was reported as generating two and a half thousand flashes in just two hours. A full account of the event can be read in Ian Currie's "The Essex Weather Book". Reg W. Selfe Benfleet (From COL Sep 2010)

<<River Can>> Catchment This was a summer type of flood arising from intense rainfall of short duration on a saturated catchment over the River Can catchment. (Essex River Board Engineer's Report (1960) <Sheringham> and <Wells> (Norfolk): Violent thunderstorms and flooding being reported from a number of

10 May 1959

BR		places.
26 Jun 1959 BR 9-11 Jul 1959 Eden (2008), BR, Webb and Elson (2016)	This hailstorm covered a track 220 km long from Hampshire to Suffolk with a swath width of 10–15 km. 10 th Ponders Bridge PS 0.71 in 10 m Silsoe 1.48 in 30 m 11 th Thetford 2.10 in 60 m Felixtowe 1.07 in 20 m Mildenhall 1.75 in 100 m Cambridge 2.00 in 90 m Hindolveston 3.28 in 4 h 15 m and 2.50 in 20 m Fulmodestone 2.40 in 2 h	<cambridge>: Heavy rain caused flooding in many parts of the Home Counties, including shopping areas in Cambridge, and at Braintree, Essex; <newport><essex>: Many windows were broken by hail at Newport (Essex). <hindolverston> (Norfolk): Overnight 10th to 11th 88 mm fell in 4 hours of which 63.5 fell in 20 minutes and possibly 6 in. (estimated) of rain fell in 20 minutes [unclear]. The rain was accompanied by hailstones varying from ½ in. to 1 in. in diameter which completely covered the ground. <saffron walden=""> (Essex): On 9th scattered chunks of ice 38 mm began to fall. These large stones changed to an intense fall of smaller marble sized hailstones and then the hail turned to heavy rain. Glass was broken and crops damaged in neighbouring villages including Langley and Brent Pelham. <bury edmonds="" st="">: Walnut sized hail fell.</bury></saffron></hindolverston></essex></newport></cambridge>
19 Sep 1960 BR	It was another day of unusually heavy rain, particularly in south-east England, as a shallow depression from France moved northeast to the southern North Sea. Flooding was extensive. Martlesham 1.00 in 30 m Framlingham 1.50 in 45 m Shoeburyness 1.00 in 60 m	<saffron walden="">: Police worked late into the night placing warning traffic lights on flooded roads; houses in some villages were completely surrounded by floodwater. Intense rain was reported in Framlingham, Suffolk, at Shoeburyness and Martlesham, Suffolk.</saffron>
7 Oct 1960	There were exceptionally	<horncastle>: The town had a flash flood which tore through the centre of the town carrying cars and buses.</horncastle>
Eden (2008)	severe, but very localized, outbreaks of thundery rain	One man was drowned. The cloudburst occurred just to the north of the town; there was no wind; surrounding
Guardian 8	and thunderstorms in east	country a few miles away had no rain. Water poured into the < <river bain="">> and its tributary the <<river< th=""></river<></river>
Oct, BR	Lincolnshire Revesby Resyr 4.11 in 110 m	Waring>> and at one time the << River Bain>> rose at the rate of 1 foot per minute. One hundred houses in the

village were uninhabitable. Windows burst under the pressure of water. Near Town Bridge where the water,

was eight feet deep at the height of the storm, swallowed two fire engines and a police car. In a draper's shop

Revesby Resvr 4.11 in 110 m

and 6.26 in 2 h 50 m 7-24 in. of rain fell at

Horncastle 7.24 in 6 h
between 1100 and 1700.

nearby the water rose to within one inch of the counter top. A building at the edge of the Bull's Head car park was half demolished. Butts Bridge over the Bain was badly damaged; sappers replaced it with a bailey bridge. BR reports: <<<Revesby Reservoir>>, near <Boston>, more than 6 in. of rain fell in a little less than three hours. The height of the water in the reservoir rose from 8 ft. 2 in. to 11 ft. during the afternoon and boiler and filter houses at about ground level were flooded to a depth of about 10 ft. The <<River Waring>> overflowed its banks and the resulting flooding of the neighbourhood was reported locally to be the most rapid and disastrous in living memory.

<Horncastle>: Cars and caravans together with furniture and stock from flooded houses and shops were swept down the streets

28 Oct 1960	
BR	
4 May 1961	
BR	
4 Oct 1961 BR	
2 Jul 1963	
Lancs Evg	

Downham market 1.30 in 25 m

Upminster 1.08 in 18 m

Thunderstorms accompanying the movement of a depression north-eastwards across the country from a position south of Ireland. It was one of the unusually few falls of intense rain in 1961. No flooding was reported in BR for the year.

post 2 Jul 28 May 1964 Loxford Park 50.9 in 50 m < Wiggenhall, St Germans> (4 km S Kings Linn) Local thunderstorm gave 3.54 inches rain.

<Ipswich>: A thunderstorm in Ipswich flooded scores of premises. A farmhouse at Wherstead on the outskirts was struck and damaged by lightning.

Kings Lynn 25.4 in 60 m 12 Jun 1964

BR

BR

BR

Botolph Claydon 104.6 in 2 h 21 Jul 1964 30 m

20 Jul 1965 Woodford STW 20.0 in 20 m Sandford Mill WW 37.1 in 40 BR

Wingland Grange 26.9 in 40 22 Jul 1965

Intense rainfall on this day mainly in the London Area

BR

Faulkbourne Hall 28.7 in 20 m Wolterton 33.0 in 55 m

22 Aug 1965

Birmingham **Daily Post 23**

Aug, Daily

Mail 23 Aug,

Weather Jun

1966

17 Jun 1966

Lady Bank Br Lincs 34.5 in 60

m

12 May 1967

Wolterton Park 21.8 in 15 m Aylsham 23.1 in 30 m

BR

BR

10 Aug 1967

BR

Cranwell 25.0 in 60 m Stansted 45.9 in 85 m Barsham 28.0 in 90 m

Lincoln 33.0 in 35 m Marham 31.7 in 60 m Kilverstone Hall 50.8 in 2 h

2/3 Jun 1968

Lark PS 88.9 in 2 h

BR

Prickwillow 82.8 in 2 h 20 m

Great Yarmouth 36.6 in 15 m 28 Jun 1968

BR

9/10 Jul 1968

Lancs Evg Post 10 Jul,

Pike (1993),

CBHE (http://www. Severe persistent flooding occurred in a belt extending from the Southwest to the Wash. . More than 100 mm

fell over Somerset Gloucestershire, Worcestershire,

Warwickshire, Northampton

Cambridgeshire and

< Holdingham > < Lincs >: A half hour storm brought 2 inch hailstones and flooding. The hailstones were soft like snow causing the drains to be blocked and the roads and footpaths flooded. The hail blocked the drains and caused flooding on the A17trunk road from the coast. Weather Jun 1966 has 3 photos of hail lying 2 inches deep on grass and pavements. It affected only a mile along the road.

<Raunds> and <Fosdyke>: Pike (1993) reports an area around Raunds (Northants) to Fosdyke (Lincs) received more than 100 mm in the day (Salter, 1969).

<Gedney Hill>: The district experienced an extremely severe rainfall during the early hours of 11 July over 125 mm of rain fell in the Gedney Hill area and most of the Board's district received more than 75 mm" [South Holland Internal Drainage Board, Lincolnshire]

south- holland- idb.gov.uk/hi story.htm
13 Jul 1968
BR
31 Jul 1968
BR
11 Sep 1968
BR
14-16 Sep
1968
http://booty
org.uk/booty
weather/clim
ate/, CBHE
(Flooding
Report 17th
September
1968 River
Chelmer),

Prolonged heavy rain (enhanced by some long-lived thunderstorms forming in the vicinity of an occlusion across SE England, which in turn was associated with a slow-moving depression over northern France) on the 14th, 15th and 16th in 1968 caused widespread and severe flooding in the south east of England.
Wickford 69.0 in 90 m
Purleigh 56.9 in 42 m
Basildon 55.9 in 60 m

Lincolnshire. There was a 'notable' gale associated with

Heckington 44.5 in 60 m Surlingham 25.4 in 45 m Spalding 93.5 in 7 h 30 m Coltishall 51.0 in 54 m

Barking PS 54.1 in 2 h 3 m

Oakham 36.0 in 60 m

(?TORNADOES?), particularly affecting the Southend

thundery weather

(Essex) area. 10th

More generally, much of Essex, Surrey, Kent, and London recorded 150mm (locally 200mm) over these 2 to 3 days. Tilbury, Essex recorded 201 mm in two days - more than one-third of the normal annual fall. The impact was primarily due to the rapid/long-lasting nature of the intense rainfall (convective cells) - but was perhaps most unusual in that it affected such a large area of SE England. Newspapers in Kent (e.g. 'Kent Messenger') stated that it was "the worst FLOODING since 1814".

Pike (1993) noted that around the Thames estuary 125 mm fell in 24 hours over northwest Kent with 200 mm in 48 hours over extreme southern Essex.

BR 1968 shows a map of the distribution of rainfall in a 2 day period from 09.00 14 Sep showing some totals over 200 mm north of London and a belt over 100 mm extending from Hampshire to Essex.

< Chelmsford>: "Flooding recorded on the river << Chelmer>> upstream from Chelmsford downstream of Paper Mills Bridge, on the road but negotiable by car. Flooding at Felsted Mill and Church End. No properties were affected in Chelmsford."

<Hullbridge>: 100 people stranded at a caravan site were rescued by20 police skin divers.

7 Jul 1969 Reading

16 Sep

Daily Mirror

Thunderstorms in Kent and Essex

Flooding was reported at <Canvey Island>, <Southend>, <Westcliffe> and <Hockley> (probably roads rather than houses). The A13 at Thurrick was one of several roads flooded to 2 feet deep

Evening post	
7 Jul	
27 Jun 1970	
Eden (2008),	
COL	
4 Jul 1971	0.66" in 1h at Coventry
Coventry	
Evening	
Telegraph 5	
Jul	

<wisbech> had 100 mm in 140 minutes of which 51 mm came in 12 minutes. At least 5 people were killed by</wisbech>
lightning and hundreds of glasshouses were destroyed in Leicestershire and Cambridgeshire by hailstorms.
<kings linn="">: 3.30" rain fell in 2 ¼ hours.</kings>

<Coventry: A thunderstorm broke at 7 pm. Tile Hill, Longford and the city centre were the worst hit. Road surfaces were widely damaged. Lightning strikes and electrical short circuits caused further damage.</p>
><Nuneaton>: Drains were unable to cope with the outburst and there were floods in the Market Place, Bond Gate, Queen's Road, Avenue Road, Coton Arches and Coton Road. The sales floor at Marks and Spencer was covered with water 2 to 3 inches deep. Woolworths and Tesco were also flooded and neighbouring shops in Queen's Arcade. Floods threatened the boiler houses at George Eliot and Manor Hospitals. The main kitchen at Eliot hospital was flooded.

<Rugby>: Flooding to 3 inches depth in the bar occurred at the Stag and Pheasant, Hillmorton Road, Rugby. No other flooding was reported at Rugby.

<Coleshill> Fire Brigade were called to flooding at the Bulls Head pub <Meriden>.

12 Jul 1971 COL	Downham Market: 1.08" in 30 m
23 Jul 1972	Newark 1.23 in 30 m
COL	
31 Jul 1972,	
COL, Daily	
Mirror 1 Aug	

<Old Costessy> (near Norwich): 5.51" fell between 06.15 and 10.00 (3 hr 45 minutes) and most between 06.15 and 08.15 (presumably BST. College buildings were flooded. A boy was killed by lightning. The observer notes that exact timing of the storm is difficult. The centre of thundery activity was remarkably static, it being estimated that the centre of the storm was overhead or not more distant than three miles during the duration of maximum rainfall intensity between 05.30 GMT and 07.15 GMT. There was widespread flooding of the flash flood type but the water stood only for a brief period. The most striking aspect of the storm was the very local nature of the erosion and movement of the sandy topsoil, the effect was only noticeable within half a mile radius from my station. The thunder and lightning were quite severe but not unduly so and what little movement of the storm that could be detected was from SW to NE. The nearest raingauge to mine though non-standard had a total of 3.80"

	evening of 31st.
	<amthill> (Beds): Homes were flooded and lightning started 3 fires in Amthill.</amthill>
	<taverham>: Rainfall was 1.99" between 05.30 and 09.30 BST. The storm was very local; Costessy is 2 miles to</taverham>
	the south yet 5 or 6 miles to the N or NW there was no rain. Just to the SE and SW of Norwich about 2" fell.
	<costessy): a="" affected="" and="" by="" event="" frontal="" many="" norwich="" of="" on<="" parts="" system="" td="" this="" triggered="" was="" weather="" which=""></costessy):>
	the same day local flooding was widely reported in North Wales and several other parts of England.Reports indicate that parts of Norfolk received some of the heaviest rainfall with Costessey near Norwich receiving
	137.7mm in three quarters of an hour (Met Office Monthly Weather Report) (This is mistaken – see
	above)causing heavy flooding. This event was partly caused by frontal rainfall, however there are indications
	that embedded convection caused some of the very intense thundery downpours which led to the flooding in
	Norfolk.
Colchester 0.65 in 80 m	Colchester: The storm caused flooding.
	<nuneaton>: The storm put streets roads and houses uner 1 foot of water in the second storm in a week.</nuneaton>
	Boilers at Manor Hospital were flooded. The kitchen at George eliot Hospital was flooded. Shops in the Queen's
	Arcade were flooded, particularly the Countdown furniture Warehouse. Other places affected were
	Woolworth's, a delicatessen and Cut Price Clothing Centre, frequently flooded previously.
Holkham Hall estate 3.40 Daily)	A small area of NW Norfolk had over 2 inches in thunderstorms in the early hours of 20thincluding Holkham Hall
Gainsborough 0.59 in 6 m	<gainsborough>: the storm caused serious flooding</gainsborough>
	<colchester>: Following a very dry spell of 39 days there was a violent thunderstorm on 15/16 September, the</colchester>
	worst for quite a number of years. The storm raged from 9.30 pm to 03.00 am with the maximum activity 11.30
	to 12.30 with 20 flashes of lightning per minute. Roads were flooded and rendered impassable. Daily rainfall
	was 1.38 inches.

1 Aug 1972 U Reading Maya

dissertation (2014),

3 May 1973

28 May 1973 Coventry **Evening** Telegraph 29

20 Jun 1973

13 Jul 1973

15/16 Sep 1973 COL

17 Jun 1974

COL

May

COL

COL

Colchester 0.72 in 20 m

Daily Mirror reports that there was widespread flooding of road in Essex and on the M1 in Bedfordshire in the

COL		
7 Aug 1974 Eden (2008)	Thunderstorms occurred in Southeast England.	<fyfield> (Essex): received 115 mm.</fyfield>
12 Sep 1974 COL	Buckingham 26.4 in 30 m September was an exceptionally wet month over England but mostly from frontal rainfall	
17 Jun 1975 COL	Scole (Norfolk) 24.9 in just over 1 h	
17 Jul 1975 Eden (2008), COL		<aylsham> (Norfolk): A localised thunderstorm gave 121 mm in 2 hours. The main street of Aylsham was crossed by a 50 yard wide river up to 8 inches deep and the local medical clinic was completely surrounded by water. Corn crops were flattened and a field of sugar beet had only the tops showing A local paper reported that 37 mm had fallen and the observer a little distance out of town had little rain.</aylsham>
21 Aug 1975 COL	Scole 36.0 in 45 m	<great barton=""> (Suffolk) Half the month's total rainfall fell in 15 minutes on 21st</great>
12 Jul 1976 COL	Souldrop (Northants) 42.4 in 90 m Higham Ferrers 35 mm in 80 m	<southam>: A woman was killed by lightning.</southam>
20 Jul 1976 COL	Colchester 44.6 in 3 h 30 m (39.0 in 95 m)	<belstead> (near Ipswich): Total rainfall was 53.6. Much flooding occurred especially at <wyvenhoe>, <manningtree> and low lying parts of <colchester>.</colchester></manningtree></wyvenhoe></belstead>
28 to 31Aug 1976, Eden	Following the long drought downpours caused local flooding in parts of the	<thorney> (near Peterborough): had 106 mm rain. A USAF transport plane crashed near Thorney with the loss of 17 lives.</thorney>
(2008), COL	Midlands and East Anglia. Kings Linn Four days of thunderstorms at the end of the month produced 167.9 mm Kings Linn 28th 31.3 in c 3 h 30th 55.0 mm in 2 h 15 m	The area of heaviest rain was fairly localised from Kings Linn to Hunstanton in the east with between 80 and 110 mm to Peterborough in the west. Quantities of sand soil and shingle were brought on to many roads.
23 Sep 1976		<westleton> (Suffolk): After a storm of rain and hail the village was cut off with flood water 2 to 3 feet deep on</westleton>

COL 12 Jun 1977 COL Late on 12th thunderstorms broke out over S England and these plus non-thundery rain gave up to 40 mm rain in the region during the night. Most	roads. Some houses were also flooded and a 6 foot high wall was demolished. Hailstones the size of marbles lay about 4 inches deep with drifts to a about a foot. Several parts of E Anglia and inland Kent reached 25-26° while only 100 km further inland the inland maxima were only 10-14°. That night some of the most spectacular thunderstorms for maybe 20 years affected SE England. During the early morning the storms moved northwards becoming less intense.	
	of England was cloudy and cold but the eastern side of the country lay on the edge of very hot continental air. Huntingdon 45 mm in 30 m; Chelmsford 58 mm in <1 h Writtle (Essex 38 mm in < 1 h Souldrop (Northants) had 63 mm in 2 h	Essex Fire brigade at Brentford answered over 400 calls due to flooding and fires resulting from the storm. Power cuts were widespread with over 100 transformers damaged. <chelmsford>: A main sewer burst causing a large section of the A 12 trunk road to break up. There were massive delays to rail and road users during the rush hour.</chelmsford>
1 Jun 1978 COL	Temperatures widely reached 27 to 28C. Storms occurred in SE Wales through central England to East Anglia	In West Norfolk power was cut off to 15,000 homes and the storm produced hailstones the size of small golf balls.
30 Jun 1978		<lincolnshire>: In parts of the country 74 mm fell in an intense local storm.</lincolnshire>
COL		<skegness>: the town had 55 mm.</skegness>
30 Jul 1978 COL		<wendling> (Norfolk): Severe lightning damaged many trees. Estimated rainfall was 25 mm in 1 h</wendling>
30 May 1979 Belfast Telegraph 31 May	Flooding mainly on the S coast at Bridport and Charmouth	<gorleston><lowestoft>: BT reports that there was still flooding in these towns.</lowestoft></gorleston>
28/29 Jul 1979 COL	Following the passage of a cold front across southeast England, several areas of the country experienced local severe thunderstorms often with hail	<mumby> (Lincs): 74.7 mm was recorded in the day <skegness>: A six year old girl was killed by lightning. <thorney> (Nr Peterborough) 58.3 mm was recorde in a 12 hour period. <bradwell abbey=""> (nr Wolverton): An intense fall of 45.7 mm was recorded in 42 minutes.</bradwell></thorney></skegness></mumby>

23 Aug 1979 COL 22 Jun 1980 COL 26 Jul 1980 COL, Eden (2008) Pike (1993)

The storm covered an area round the coast from Kings Lynn to south of Great Yarmouth. Norwich area seems to have escaped Blakeney: 4.5" in 4 h

COL, Richard Mabey (1983)

7 Aug 1980

Eden (2008),

14/15 Aug 1980 COL

2 Jun 1981 Wide throu

Widespread thunderstorms throughout England.

<SE Suffolk>: A severe thunderstorm with large hail inflicted damage on trees and buildings.

< Higham Ferrers>: Hailstones the size of peas and some the size of walnuts fell and damaged crops in gardens.

<Northampton>: A severe thunderstorm during the morning of 26 July produced the highest daily total since records began in 1974. The total of 65.5 fell between 05.30 and 10.00. As a result of the storm parts of Northampton were flooded to a depth of 2 feet and every fire appliance in Northants was engaged in pumping out flooded houses. (<Moulton Park> recorded 61.7 mm). Thunderstorms causing flooding were also reported in Leicestershire at <Brookside> and <Burbage> near Hinkley (where there was 12 inches of water on roads and fields) and 12 cattle were killed by lightning at Knaptoft and a house was damaged at Wigston. <Brixworth> had 98 mm and <Pitsford> 100 mm in Northamptonshire.

<Fleckney>: Sandbags were used to prevent water entering houses.

<Moulton Park> (Northants): Daily rainfall of 61.7 mm was reported.

Pike (1993) notes that a small area of Northamptonshire received 100 mm described by Waterfall (1982).

< Wells/Fakenham> (Norfolk): Flooding occurred in the area triggered by falls of 105 mm at <Cockthorpe> falling in about 3 or 4 hours, and 103 mm at <Houghton St Giles>, with most of the rain falling in 5 hours.

<Belton> (5 miles from Great Yarmouth): An estimated 25 to 30 mm fell between 01.00 and 02.30.

<Yarmouth><Gorleston>: The storm was reported to be the worst to hit the resort for years.

<Deeping St James> (Lincolnshire): The severe thunderstorm during the night of 14/15 August produced in approximately 6 ½ hours, a rainfall total just less than the average for the whole month. The storm started at 2045 GMT and by 0320 GMT 57.9 mm had fallen. As a result of these storms many areas were flooded, especially <Bourne>, eight miles north of my station. It was particularly noticeable that in spite of the intensity of the storms, damage to crops in the near, vicinity was minimal with flattening only around the verges of the fields.

Northamptonshire totals were: 98.7 at <Higham Friars>, 84.8 at <Kettering>, 66.2 at <Moulton Park> and 52.8 at <Northampton>.

<Desborough> (Northamptonshire) A landslide near Desborough blocked the London to Sheffield line.

3 Jun 8/9 Jul 1981 It was hot in eastern areas and thunderstorms broke out COL from Bedfordshire to Lincolnshire in the evening (of 8th). Much of southern central and eastern England were affected by widespread severe thunderstorms on 9th with local flooding. 6 Aug 1981 Severe thunderstorms <Kings Linn> had 65.6, <Byfield> in Northants had 70.2 occurred in many parts of the COL country on 5th and 6th August. 15 Jul 1982 <Cambridge>: 23 mm in 30 minutes followed by steady rain for a further 2 hours giving a total of over 40 mm. COL Parker's Piece resembled a giant lake. Roads and car parks were soon awash. <Ely>: 124 mm fell in 3 hours with severe local floods. During the first 20 minutes 20 mm fell in a storm on 3 4 Aug 1982 Aug with a total of 23.4 mm. On the 4th at Ely itself the total was 41.5 but that the Anglian Water Authority Eden (2008), station depot 2 miles to the east 123.6 mm was recorded. A further 2 miles to the east only 15.2 was measured. COL <Great Chishill> (Cambs): 75 mm in 30 minutes 5 Sep 1982 <Buxton> (Norfolk): There was a 56 mm downpour COL <Edgefield> (Norfolk): 54mm downpour <Honington> (Suffolk): 48 mm fell in a thunderstorm (duration not noted). 20 Jun 1984 COL <Colchester>: In a severe thunderstorm there was consequent flooding in Colchester and north Essex. 26.9 mm was recorded in 30 minutes. A total of 41.7 mm fell in 2 h 45 m. 75 km swath across Essex and <Essex> and <Suffolk>: Greenhouses were totally destroyed and there was widespread damage to west facing 26 May 1985 into Suffolk, 15 km wide Webb et al windows and to tiled roofs during the height of the storm. A second hail swath (H3) occurred just to the east. across NW Essex where hail (2009) The (Elsom and Webb, 1993). The largest hailstones (40 to 65 mm diameter) occurred around the villages of Good reached a max diameter of 60–65 mm (H5–6 intensity). **Guardian 8** Easter, High easter, Barnston, Pleshey and North End. There was much breakage of greenhouse glass, window May 1996 glass including in churches and even spit plant pots. There was much crop damage on 60 farms. <Chlemsford>: Damage to crops in the Chelmsford area was estimated at around £1.5 million. 14 mm rainfall (Bob

Prichard), COL		recorded in 15 minutes. <basildon>: In a 9 minute hailstorm, hail 10 to 13 mm diameter fell with 'rainfall' 9mm in 9 minutes. <lawford><dedham>: At Lawford hail the size of peas fell for approximately 15 minutes and drifting occurred due to strong winds. At a market garden lettuce were smashed to pieces and hailstones lay in drifts 14 to 18 inches in depth.</dedham></lawford></basildon>
5 Jul 1985		<honington> (Suffolk): 40.5 mm fell in under 1 ½ hours.</honington>
COL, COL Jun		<north weald="">: Storm total 49 mm</north>
1993		<hastingwood>: 50.8 mm fell in 50 minutes.</hastingwood>
12 Jun 1987	Chelmsford 12.0 mm in 30 m	
COL		
15 Jun 1987 COL	Severe local thunderstorms occurred in parts of Essex and Suffolk especially around	<sudbury>: Of a daily rainfall of 70 mm, 61.5 mm fell between 10.30 and 13.00 (2 $\frac{1}{2}$ hours). Sudbury and Peldon reported flash floods</sudbury>
	Sudbury and Colchester. Peldon 57.1 in 1 ½ hours	<layer de="" haye="" la="">: Daily rainfall 54.8 mm (presumably in a thunderstorm) <pebmarsh>: Daily rainfall 54.6</pebmarsh></layer>
	(25.4 mm in 15 m)	<colchester>: The <stanway> and <lexden> areas of the city reported 35 to 45 mm.</lexden></stanway></colchester>
		<linton> (Cambridgeshire): There was a heavy hailstorm with several inches of hail on the ground.</linton>
29 Jul 1987		<needham market=""> (Suffolk): A thunderstorm occurred between 17.55 and 18.10 with an estimated total of</needham>
COL and COL		more than 25 mm out of a daily total of 44.5 mm. The event caused flash flooding in the village with damage to
Jun 1993		houses with approximately 1 foot of muddy water at the observer's house.
		<colchester>: Falls of up to 40-50 mm were recorded in the west of the town and a TBR gauge recorded 17 mm</colchester>
		in 10 minutes. Shops in the worst hit area were badly flooded.
		<thornwood common="">: had 63 mm in 1h 15 m and 53.6 in 21 minutes.</thornwood>
		<north weald=""> (Mount Farm): It had 68.4 in 1 h 45 m or less. Two main rivers were involved the <<crispey brook="">> and the <<cobbins>>.</cobbins></crispey></north>
22 Aug 1987 COL	It was a very warm humid day in E anglia with storms moving north from Chelmsford through Colchester to Ipswich and	<chelmsford>: With a storm total of 68.9, 52.0 mm fell in 40 minutes. Hailstones 1 cem in diameter virtually ruined gardens Squalls gusted to 50 mph. The town was cut off for a time in the evening with all the roads floods. The Army and navy roundabout had 7 feet of floodwater. River <<chelmer>> burst its banks. <tiptree>: Roads and houses flooded 2 to 3 feet deep. Manhole and drain covers were forced into the air. The</tiptree></chelmer></chelmsford>

Woodbridge. Aircraft observers gauge was blocked with large hailstones. reported cloud tops at 36000 <West Bergholt>: 74.8 from 07.00 (presumably in 2 h to 09.00 observation?). feet. <East Bergholt>: Precipitation of approximately 66.0 mm with intense hail the size of a £1 coin. Great Waltham 37.5 in 3 h Springfield 45.0 in 2 h 20 m <Copford>: 53.6 mm in 2 h with hail approximately ¾ to 1 inch in diameter Further severe rain affected <Stanway>: 61.0 in 2 ½ hours with hailstones 1 to 1½ inch in diameter. East anglia from 24th to 26th from persistent rain but <Colchester>: Rainfall of 37.2 mm (duration not toted) but hailstones observed up to 40 mm diameter. mainly in N Suffolk and <Dedham>: Hailstones were 1 1/4 to 1 1/2 inches in diameter and the hail lay 6 inches deep in places (and seemed Norfolk (north of the area reminiscent of a similar storm on 14 Jun 1942) previously affected) <lpswich>: Storm rainfall 58.2 mm. Manholes were forced up <Woodbridge>: 45.3 mm of which 33.0 mm in 20 minutes.A very severe thunderstorm moved northeastwards through Ipswich, over woodbridge, Melton, Ufford, tunstall and Aldeburgh from 15.30 onward. It caused bad flooding with most roads affected and many blocked with several feet of water. Cars were moved by the force of water. Houses and shops were flooded. The hail which occurred varied in size from pea, marble and golf ball sizes, most severe in Woodbridge, Melton, Ufford and Tunstall. It smashed through greenhouse, skylight, car windows and corrugated PVC roofing. A glass covered walkway between two buildings was completely wrecked. Cars were very badly damaged on roofs and bonnets. The hail turned areas completely white. Crops were affected with some, mainly sugar beet, dwarf beans reduced to stems. <Aldeburgh>: Storm rainfall 34.3 mm (30.5 mm in 20 minutes). <Higham Ferrers> (Northants): 31.5 mm in 45 m Widespread thunderstorms < Holbeach> (Lincolnshire): had 116 mm. There was also flooding in parts of Essex. with local flooding occurred <Lowestoft>: 58.9 mm fell between 05.00 and 09,00 4 Jul 1988 COL <Skegness>: Localised flooding in the town centre occurred during a thunderstorm with basements and ground floors of shops flooded. Nearby Gibraltar Point had 23.5 mm in 30 minutes. <Framlington Earl> (Norfolk): 33.5 mm was recorded between 03.00 and 06.00 (3 hrs). <Kettering>: 37 of the 41.9 mm fell in a 45 minute period. < Higham Ferrers>: Rain started at 15.50 and by 17.10 57.3 mm of the daily total of 61.5 mm had fallen. Many

23 Aug 1987

Eden (2008)

25 Aug 1987

28 Sep 1988

25 May 1989

COL, Webb

COL

COL

(2016)roads were flooded to a depth of 2 to 3 feet including the A6 through Rushden and Higham ferrers bring traffic

to a standstill. Also many homes and factories were flooded.

<Wellingborough> (Northants): roads were flooded.

6 Jul 1989 COL Severe thunderstorms occurred in South Essex, notably daily (storm) falls of 50.3 at Rettendon, 49.1 mm at leigh

on Sea 46.4 at great Waltham and 46.0 at Southend.

<Bedford>: It recorded 45.0 mm on 6th within 4 ½ hours.

<Lowestoft>: although the station only measured 8.5 mm a severe thunderstorm hit central and north 13 Jul 1989

> Lowestoft and Oulton Broad where the rain and hail flooded shops. Firemen dealt with 30 calls to pump out premises affected by flooding. Dozens of households had water pouring under their doors. 18.2 mm fell in 30

minutes.

25 Aug 1990

COL

downpours in East Anglia. COL

Rushmere St Mary (Nr Ipswich) 31.9 mm in 90 m West Mersea 32 mm in 35 m Maldon 37.0 mm in 40 m Little Bromley 34 mm in 60 m

Isolated but locall torrential

23 Sep 1990

COL

1 Aug 1991 Isolated severe

thunderstorms affected parts of East Aanglia and Southeast

England

Hampstead by Holt Norfolk

44.7 mm

Upper Sherringham Norfolk

40.1 in 90 m

Thurston Suffolk 36.8 in just

over 1 h

7 Aug 1991

COL

COL

Maldon essex 24.0 Daily rainfall totals Basildon 156.8 Basildon 2 39.7

Little Waltam 35.8 Rettendon 28.1

<Yatton> (Nr Weston SM): 2.03 inches in a thunderstorm which also affected <Nailsea>:

Heavy rainfall affected southeast England and was particularly heavy with local flooding in South Essex

26 Sep 1991 <Chelmsford>: In a thunderstorm 22.9 mm fell in 1 hour COL 29/31 May Widespread thunderstorms <Hitchin>: recorded 112 mm in 2 separate storms. There were storms somewhere in the country in each of the caused flooding in first 10 days of June. 1992 Eden Hertfordshire, Bedfordshire, (2008) The Buckinghamshire and London. Colchester 24.0 mm in 1 h **Guardian 23** Chelmsford 40.7 mm in 3 h Dec, COL 19 Jun 1992 <Pulham St Mary>: Storm rainfall of 45.7 mm COL Thunderstorms affected 20 Jul 1992 southern and eastern England COL storm rainfall totals were: Ipswich 53.7 Rushmere St Andrew 53.7 Chelmsford 49.3 (32.4 in 2 h) Halstead 48.6 Little Waltham 47.1 Galleywood 46.0 (38.0 in 3 h) Potter heigham (Norfolk) 70.0 Loddon 60.0 Lavenham (Suffolk) 55.4 (45.0 in 45 m) Ormesby 54.4 Lingwood 50.0 Fritton 50.0 Acle 48.7 8 Aug 1992 In a thunderstorm Little Holland (Essex) received 2.60 The Guardian inches 26 Aug 9 Aug 1992 <Finedon> (Northants): Total rain 41.5 in 3 thunderstorms. There were reports of local flooding COL 18 Sep 1992 <Foulness> (Essex): Thicke and Bailey (1993) report on very heavy and large hail in Foulness which caused serious damage to the roofs of cars. The largest were said to be the size of a large chicken's egg. Local flooding Eden (2008) of roads was reported but damage was caused to trees by the hail and conservatory and greenhouse roofs and Met

Magazine Sep 1993 Thicke and Bailey), COL killed many birds. A list is given including 817 Black headed gulls, 526 Red legged partridges, 211 starlings and 210 bar-tailed godwits. One sheep and 8 hares were also reported victims. Col reports mean hail diameter 25 mm and the largest 48mm x 42 mm.

< Hadleigh> (Suffolk): 11 mm in 8 minutes with hail up to ¾ inch in length.

<Hindringham> (Norfolk): 59 mm in 2 h 30 m

22/23 Sep 1992 Pike (Met Magazine Sep 1993), Times 24 Sep, Independent 24 Sep The heavy rainfall followed a drought with high initial soil moisture deficits. Heavy persistent rainfall with initial and embedded thunderstorms occurred over much of southeast England with 36 daily totals reported as exceeding 70mm. 50 mm or more fell over 1160 km2 and more than 75 mm over 125 km2. The heaviest rain was over modestly rising ground to the west of the Fens.

Convective activity on 22nd gave heavy short period totals:

Rutland Water 54 mm in 120 minutes (31.5 mm in 1 hr)

<Bedford DRA>: 27 mm in 57 mins
<Litchborough STW>: 26 mm in 60 minutes
<Manthorpe> (Lincs): 56 mm in 180 mins
<Chesterton Resvr>: 31 mm in 120 minutes
Flooding in the Fenland lasted several days

<Finedon> (Northants): Daily rainfall 63.3 mm most of which fell overnight but without thunder. Many roads

were flooded and villages around <Kettering>

<Moulton Park> (Northants): Daily total 56.5 but again no thunder.

In Cambridgeshire parts of the A1 were under 10 to 12 inches of water but the police said floodwater was 6 feet deep in places.

2 Jun 1993 COL <Hadleigh> (Suffolk): 37 mm in 47 minutes (25 mm in 20 minutes). Extensive lying water was observed on Brett water meadows. Various shop premises were visited by the fire brigade. Layhom Road was closed by mud slips of fields. But nearby villages of Stoke by Mayland and Hintlesham had no significant rain. Another observer in Hadleigh had 50.9 mm.

<Brundall> (Near Norwich): A severe storm from 15.45 to 18.00 gave 49.3 mm and Hailstones damaged vegetation.

<Kettering>: Severe flooding occurred in an evening thunderstorm which was accompanied by hailstones up to the size of golf balls.

<North Weald> (SW Essex): The storm at North weald and <Thornwood> gave 25.2 mm in 90 minutes. The storm then changed direction but came back to North Weald with 105 minutes of more rainfall. In the peak half

9 Jun 1993 COL

10 Jun 1993

COL

hour of the storm56 mm was measured at north Weald and 52.6 mm at Thornwood. Over a period of 3 hours 15
minutes 120.8 fell at North Weald and 92.2 at Thornwood. Only one main river the < <crispey brook="">> was</crispey>
affected. North weald, Thornwood, <moreton>, <stanford rivers="">, <ongar>, <toot hill=""> and <hastingwood> all</hastingwood></toot></ongar></stanford></moreton>
had flooded premises but North Weald suffered more property damage.

<Lincoln>: A thunderstorm caused severe flooding.

<Louth>: A 55 minute thunderstorm caused localised flooding. Daily rainfall was 63 mm at the Met Office Station and 31.9 mm at another station.

<Loughton> (Essex): 18 mm fell in 20 minutes.

<Norwich>: A thunderstorm was accompanied by hailstones up to 12 mm diameter – the largest observed in Norwich for several years.

<Hunstanton>: A severe local thunderstorm in NW Norfolk with 56.0 mm at the station.

< Lowestoft>: Flash floods swept through the lower part of Lowestoft which lasted more than 4 hours, causing the drains to overflow. Some buildings were deluged with water 2 feet deep. Shop and homeowners were up all night trying to save personal possessions by candlelight after a power cut. The main surge of water was at 20.45 and the water took 2 hours to subside. The worst affected area was Tonning Street where residents saw a river of water sweeping into their homes. Houses in St Peter's Street were also flooded.

<Louth>: the worst flooding in north Lincolnshire since April 1981 but probably not a flash flood. Rainfall was spread over 3 days. The River <<Lud>> flooded riverside properties and the River <<Rase>> also flooded property as did the River << Bain>>.

15 Jul 1993

23 Jul 1993

12 Aug 1993 COL

15 Aug 1993

COL

COL

COL

16 Sep 1993

Lowestoft 41.6 mm

COL

No thunder reported 12 – 14 Oct Flooding made worse by very 1993 COL wet September

24 Jun 1994 COL

Thunderstorms moved NNE with the heaviest rainfalls across Berkshire Sussex, Essex and Kent, Daily totals as

follows:

Chelmsford 35.6

Little Waltham 33.5 in 2 h

Basildon 32.8

4 Jul 1994 COL Wells 20.0 mm in 20 m

24 Jul 1994

<Melton Mowbray> to <Grantham>: H6 hail damage on the Leics/Lincs border, between Melton Mowbray and

Eden (2008), Webb et al (2009), COL 30 Jul 1994 COL 17 Aug 1994 COL 31 Aug 1994 COL	Thunderstorms caused power cuts in the Norfolk Suffolk border area.	Grantham. The swath was 35 km long, 15 km wide and with hail 40 mm diameter or more. There was almost total destruction of greenhouse glass, many windows and roof slates were broken and there was visible damage to woodwork, brickwork and concrete. (Webb, 1996). (This detail not noted in COL) <hadleigh> (Suffolk): There was a brief squall of hailstones up to 2 cm in diameter with rainfall total of 22 mm. <rettendon> (Essex): 26.2 mm fell in 1 hour <beccles> (Suffolk): Heavy rainfall and hailstones up to 1.5 cm diameter caused local flooding. <thetford>: 22 cows were killed when lightning struck their feeder. <beccles>: Daily rainfall was 90.0 mm and the wettest day in a record from 1968. Homes and the hospital were flooded. <ditchingham> (Norfolk): Total daily rainfall was 146.8 mm. <hempnall> (Norfolk): Daily rainfall 122.0. there was 3 feet of water on the main road. <shotesham> (Norfolk): Daily rainfall 116.0 mm <framlingham earl=""> (Norfolk) Daily rainfall 105.8 mm <leigh on="" sea=""> (Essex):Daily rainfall 58.3 mm</leigh></framlingham></shotesham></hempnall></ditchingham></beccles></thetford></beccles></rettendon></hadleigh>
14 Sep 1994 COL 29 Jul 1995 COL 17 sep 1995	No thunder was reported. A quasi stationary front was located w-E across the Midlands. Heavy and persistent but not intense rainfall was reported across the Midlands Thunderstorms occurred in parts of Essex, Suffolk and Norfolk	<calthorpe>: Following heavy rain in the afternoon when 28.5 mm fell in 8 hours, there was a torrential downpour of 15.0 mm in 33 minutes which caused severe flooding with water running off fields and flooding roads to 1 foot deep. In the village of <north repps=""> a dozen houses were flooded up to 4 feet deep. <cromer>: Houses and shops were flooded. <earls colne=""> (Essex): In a localised thunderstorm 30.5 mm rain fell. Neighbours 1½ miles away had only 14 mm. <toftwood> (Norfolk): Of a daily total of 38.6 mm, 35 mm fell in 22 minutes with very heavy hail</toftwood></earls></cromer></north></calthorpe>
COL 17 May 1996, Eden (2008)		Thunderstorm with hailstones up to 3 cm across in Buckinghamshire and Bedfordshire where at <woburn> 86 mm fell in 2 hours.</woburn>
7 Jun 1996 Eden (2008), Webb et al	Reports focus on hail occurrence and do not mention flooding but it may have occurred.	After a short heat wave thunderstorms with giant hail affected Dorset, Wilts to Cambridgeshire and Norfolk. Hailstones were 2 to 4 cm across causing damage to glasshouses and cars. At Cambridge stones were 5-6 cm in diameter. Dozens of homes were struck by lightning.

(2009), COL		There were eight hail swaths, including six storms of H3 intensity or more and two others of H2 level. There were two swaths well over 100 km from SW–NE: 165 km long from the Dorset coast to Oxfordshire (hail 45–50 mm across in Dorset), and 180 km from NW Hampshire to south Cambridgeshire. Hail 45 mm or larger diameter was measured in the Luton area. (Webb and Pike, 1998a,b). <bourn> (Cambridgeshire): COL observer reports some hailstones were round and near golf ball size and other mushroom shaped. Many windows were broken and cracked by hail bouncing off the ground, television aerials were damaged and clear corrugated sheets broken with lots of damage to cars and broken guttering. Some people were bruised by the hail. <great gaddesden=""> (Herts): First small hail occurred then increased in size. The largest hailstone was lozenge shaped 27 mm long and 19 mm wide 13 mm thick. Rain 10.9 mm (no flooding reported) <cambridge>: A thunderstorm from 18.15 to 19.45 gave 10.9 mm rain and hailstones over 25 mm in diameter causing damage to greenhouses. Various other reports in Cambridgeshire gave hailstones the size of golf or ping pong balls.</cambridge></great></bourn>
27 Aug 1996 COL		<colchester>: A thunderstorm with marble sized hail gave 26.2 mm rain; a station 2 miles away had only 5 mm. <halstead>: There was much flooding and hailstones the size of 50p pieces. There was widespread loss of power for 4 hours.</halstead></colchester>
		<wickford>; flooding was reported.</wickford>
		<eaton ford=""> (Cambs): localised flooding occurred.</eaton>
17 May 1997 Webb and	Hailstorm from Hants to Bucks with limited information on flooding.	<woburn sands="">: Floodwaters up to 1.5 m deep burst open the doors of some high street stores. Sand was washed into the town from the neighbouring woods. Hailstones were up to golf ball size.</woburn>
Elsom 2016	Woburn Sands 86.4 mm mainly in 90 m	The hailstorm affected from Milton Keynes to Bedford and large hail was reported at Woburn (hailstones between golf ball and chicken egg size), Apley Guise. Brogborough, Lidlington, and Wootton with a tornado at the last named.
8 Apr 1998 COL, CBHE	Persistent heavy rainfall with much flooding but probably not a flash flood	The Easter Floods. The River < <ouse>> in <bedford> burst its banks on the afternoon of Saturday 11th April and swelled to proportions not seen since 1947. Many homes in the North of Bedfordshire and Bedford were flooded and more than 500 homes in Bedford were plunged into darkness as electricity supplies went down."</bedford></ouse>
1 Jun 1998 COL		Winterton> (N Lincs): 47.2 mm rain fell with hail > 5 mm diameter in a 2.5 hour thunderstorm.
3 Jun 1998		<norwich>: A thunderstorm caused damaged and flooding.</norwich>

COL		<wreningham>: In a 15 minute thunderstorm visibility was only 30 to 35 yards with a covering of marble sized hail.</wreningham>
		<buxton> (Norfolk): A total of 35 mm was reported in a thunderstorm nearby</buxton>
6 Jun 1998		<calthorpe> (Norfolk): 19.4 mm in 1 hour with hailstones 10 mm diameter.</calthorpe>
COL		
14 Jun 1998		<oulton broad="">: In a thunderstorm roads and houses were flooded.</oulton>
COL		<winterton> (N Lincs): Of a total rainfall of 71.3 mm, 20.3 mm fell in 1 hour.</winterton>
		<louth>: Town centre partially flooded.</louth>
15 Jun 1998		<bedford>: Of a total of 22 mm at Russell Park, 15 mm fell in 30 minutes with hail <5 mm diameter. Another</bedford>
COL		Bedford station gave 30.5 mm.
30 Jul 1998		<chelmsford>: thunder in the evening with total of 20.0 mm of which 18.1 mm in 20 minutes.</chelmsford>
COL		
31 Jul 1998		<rettendon> (Essex): Thunderstorm for 2 hours with local flooding at the M25/M11 interchange and the A12 at</rettendon>
COL		<brentwood>.</brentwood>
26 Sep 1998	Cambridge daily rainfall 32.2	<benfleet> (Essex): In a thunderstorm 37.9 mm fell of which 25 mm fell in 45 minutes.</benfleet>
COL	mm Royston 33.3 mm	<bedford>: 41.7 mm fell actually on the morning of 27th from 02.30 to 04.30</bedford>
4 Jul 1999	Noyston 35.5 mm	Widespread thundery activity spread over three days with locally heavy hail in West Essex which was hit by
Eden (2008)		flooding. <sible hedingham=""> had 122 mm.</sible>
14 May 1999		<great yarmouth=""><bradwell>: 27.8 mm fell in 1 hour</bradwell></great>
COL		
2 Jun 1999		<gt yarmouth=""><bradwell>: 23.4 mm fell in a thunderstorm causing local flooding of houses .</bradwell></gt>
COL		<pitsford hall="">(Northants): Flooding occurred throughout the county after rain on the previous night (19.9 mm</pitsford>
		in 4.5 hours) with 170 calls to the Fire brigade.
		<rushden>: A leisure centre was flooded.</rushden>
12 Jun 1999		<bromham> (Bedfordshire): Hail gave the appearance of a white landscape. Roads and garages were flooded,</bromham>
COL		plants damaged and phones out of order.
3 Jul 1999		<calthorpe> (Norfolk): Most of the 44.3 mm recorded, fell in two bursts 03.30 to 04.00 and 05.10 to 05.30.</calthorpe>
COL		Many houses were flooded.

<High Wycombe> (Bucks): 23 mm fell in 30 minutes. <Sible Hedingham> (Essex): In a major storm between 15.00 and 15.45 39.1 mm rain fell. 5 Jul 1999 COL <Stewartby> (Beds): Flooding was reported here but none in Bedford. <St Ives> (Cambs): Of a daily total of 46.2 mm 36.8 mm fell in 45 minutes in an evening thunderstorm. <Chedburgh> (Suffolk): 27.0 mm fell in one hour in the afternoon. <Grantham> (Lincs): A funnel cloud was reported with hail and serious flooding. <Loughton> (Essex): 9th 25.5 total of which 16 mm fell in 8 minutes. 8/9 Aug 1999 <Broom's Barn> (Suffolk): Two violent thunderstorms passed over in quick succession giving a daily total of 64.9 Eden (2008), COL mm. <Lowestoft>: On 8th 19.1 fell at the observers station but town centre shops, offices and homes were flooded with manhole covers up. On 9th 1.75" fell between 11.00 1n3 13.00 and gain shops and offices in the town centre were flooded. There was 2 feet of water in Station Square. Bevan Street became a river. The warer was up to car windscreens in some areas. London Road south, St John's road and many side streets were knee deep in water. The Fire service pumped water into the harbour. <Gt Yarmouth><Bradwell>: On 8th there was heavy thundery rain with a total of 17.1 mm. On 9th the total was 79.1 mm with much flooding. Many properties were pumped out and a library flooded. It was the wettest day except one in the record (82.8 on 20/8/96). <Norwich><South Thorpe>: 17.3 mm on 8th and >40.6 mm on 9th with small hail here and up to moth ball size in vicinity. <Byfield> (Northants): 49.3 mm fell on 8th and 32.4 mm on 9th. There were no reports of thunder. <Northampton>'; Local flooding was reported. <Diss> (Norfolk): A thunderstorm brought 51 mm in 40 minutes and flooded the post office so that bank notes 9 May 2000 COL had to be dried out. <Chelmsford>: A short lived funnel cloud was seen. Local flooding occurred in West Suffolk. 3 Jul 2000 COL <lpswich>: 75 mm reportedly fell in a very short time. <Watton>: People had to dig hail from their driveways. <Peterborough>: 22 mm fell in 20 minutes followed by hail which completely covered the gorund. 20 Aug 2000

<Weybourne> (Norfolk): 30 mm fell in 2 hours.

COL

21 Aug 2000

COL <Louth>: Flooding occurred at the coastal resorts of <Mablethorpe> and <Sutton on Sea>. A waterspout was seen off the coast. 26 Apr 2001 <Cromer>: Hailstones the size of marbles rained down and roads were turned into skating rinks with drifts several inches deep. Flooding occurred on the Northrepps to Overstrand Road where a car was almost floating COL (Eastern daily Press) with two passengers who had to be rescued. Flooding was also reported at <Roughton>. <Dereham>: The hail and floods also caused floods at Bawdeswell Garden Centre near Dereham where hail came through the roof and giant hailstones filled the guttering even though the storm only lasted a few minutes. 16 May 2001 <Chelmsford>: Heavy rain fell in six different storm cells between 14.00 and 17.30. 28.8 mm fell in 1 hour at the peak. The storm caused flooding and loss of power for 8 hours. Daily rainfall was 48.2 mm. COL <Norwich>: Daily rainfall 53 mm <Pulham St Mary>: Daily rainfall 45.7 mm 7 Jul 2001 COL <Ely>: Daily rainfall of 47.2 mm with 38 mm falling in 1 hour from 22.30 to 23.30. Persistent rainfall caused 17/18 Jul COL serious flooding especially in N Norfolk but not flash floods 25 Sep 2001 <Oulton> (N Norfolk): 65 mm fell between 15.00 and 16.00 at a site 25 km N of Norwich. More than 40 mm fell COL at several neighbouring farms. There was much hail and some time later drifts of 15 cm were observed. The National Trust site at Blicking Hall was flooded to a depth of 1.5 m. Five fire engines spent the day pumping it out. <Guist> (Norfolk): the torrent which sped through Guist near Fakenham flooded 3 homes and demolished a barn. Estimates of rainfall ranged from an inch in 10 minutes at <Stibbard> to 2 inches over 50 minutes at <North Elmham>. 20 Jul 2002 <Chelmsford>: A hailstorm destroyed thousands of pounds worth of crops on farms north west of Chelmsford. The hailstones were reported in the local press as being the size of marbles and devastated up to 80 per cent of COL oilseed rape, peas and wheat crops on local farms. <Marham> (S of Kings Linn): 83.4mm fell in 24 hours, the greatest fall in any month there since records began in 30 Jul 2002 1957. COL 10 Aug 2002 <Southend>: Torrential rain turned roads into raging rivers in Southend and divided a north Essex village in two, COL during a freak rain deluge, when more than 50mm fell in about half an hour. The cloudburst in Southend was

15 Aug 2002 COL 15 Oct 2002 COL		followed by a landslip at Chalkwell Cliffs and some flooding. <tollesbury> (East Anglia): A tornado swept through and the local press reported that stunned locals watched the tornado speed across the sea, sucking up vast quantities of water before heading inland. Garden furniture was swept up and carried around a quarter of a mile to be finally dumped in a nearby pub car park. <buxton> (N of Norwich): Thunderstorms developed in the evening over Norfolk and Suffolk. Thunderstorms at Buxton from 1530-1845GMT kept developing to the SW giving 48mm to the west of Buxton with some 783 homes flooded and 1025 losing power in North Norfolk. <lowestoft>: A violent thunderstorm in Lowestoft from 1550 to 1700GMT resulted in a total rainfall for the day of 64.3mm. It is estimated that 50mm fell during the period of the storm. The Station Square area became a lake and shops were flooded. The Hollywood Cinema was inundated with floodwater. Cars were abandoned along several roads as surface water deepened. Seventeen homes in two roads were flooded to a depth of 18 inches. Liquid mud and debris surged off fields as Kessingland and into homes to a depth of four feet. <peterborough>: Daily rainfall 51 mm. <ely>: It was the second wettest day in October in a 32 year record with 35.9 mm. <calthorpe>: Daily rainfall 44.9 mm. <chipping norton="">: Daily rainfall was 52.8 mm.</chipping></calthorpe></ely></peterborough></lowestoft></buxton></tollesbury>
20 Jun 2004 COL	Thunderstorms affected parts of S Scotland and England.	<calthorpe> (Norfolk): Heavy hail accompanied a thunderstorm at Calthorpe around 1800GMT, with 20mm of precipitation falling at nearby Buxton in 15 minutes.</calthorpe>
21 Jun 2004 COL 7/6 Jul 2004 Eden (2008)	Reports of thundery activity during the day came from SE Wales, Somerset and Dorset, Cumbria and from several counties in the Midlands.	<buxton>: A severe storm with hail and thunder produced 32.4mm of hail in about one hour. The hail lay to a depth of 3cm, and caused serious damage to the potato and sugar beet crops, shredding their leaves. It was still lying in patches the next day. [I assume this is Buxton Norfolk rather than Derbyshire] <raf wittering=""> near <peterborough> had 109 mm in just over 24 hours with flooding where lightning damage also occurred.</peterborough></raf></buxton>
8 Jul 2004 COL	During the afternoon and into the evening heavy thunderstorms developed in E England;	<wittering> (3 m S of Stamford): (according to the Met Office) 108mm fell in 18 hours, with 51mm in two hours during a thunderstorm. Local floods resulted, causing disruption to roads and railways. <royston>: A wet day with 38.0 mm on 7th was followed by 33.9 mm on 8th. <galleywood>: 33.2mm of rain fell 1430-2150GMT, producing local flooding.</galleywood></royston></wittering>

17 Jul 2004 COL	Sferics were reported from the Isle of Wight to Norfolk in late morning, and these moved E (reaching Kent by mid-afternoon) as the day progressed. Severe thunderstorms occurred across the SE England and East Anglia;	<maldon>: (Essex): A thunderstorm lasted from 1140h to 1225h; torrential rain led to flash flooding in the town with several overhead strikes and some trees being reported to have been hit. East Preston had some heavy thundery showers for about thirty</maldon>
22 Jul 2004	A thunderstorm in W Northamptonshire in the	<daventry>: In Daventry, a day care centre roof collapsed, pubs were flooded and thousands of homes were</daventry>
COL	evening caused floods, fallen trees, and traffic	left without power. Eyewitnesses described the storm as "a mini tornado" and said six or seven inches of rain fell within minutes. [??].
	accidents and damaged buildings.	<scampton> (N of Lincoln): The evening brought 28.6mm of rain one hour</scampton>
9 Aug 2004		<northampton>: Several houses were struck by lightning on the 23rd when 22.4mm fell in just two hours</northampton>
COL		around lunchtime. Several streets in Northampton were under water with many houses suffering flood damage.
29 Jun 2005		<latchingham> (Essex): A violent thunderstorm brought golf-ball sized hail and flooding caused the local CofE</latchingham>
COL		junior school to be closed all day on the 30th. There was talk of '4 inches of rain in a bucket left outside'.
4 Jul 2006 COL		<pitsford hall=""> (Northants): A spectacular thunderstorm on the afternoon saw 15.5mm falling in less than an</pitsford>
		hour. Localised flash flooding was reported as well as damaging hail on the A43.
22 Jul 2006	Pitsford Hall 20.5 mm in 1.6 h	<northampton><lumbertubs>: Two houses in Lumbertubs were flooded by two feet of water and parts of</lumbertubs></northampton>
COL		Wellingborough Road resembled a river. Northamptonshire's Fire and Rescue received more than 30 calls during the peak of the storm.
		<ely>: The storm total was 32.6mm, but most of this rain had fallen in about 30 minutes and caused several</ely>
		instances of flooding in the town.
26/27 Jul 2006		<gainsborough>: The newspaper reported local thunderstorm damage to his television; there. Thunderstorms</gainsborough>
COL		led to flash flooding in Gainsborough, 8000 homes without power in Grantham with 3000 lightning strikes being
(Desborough		counted in the East Midlands area.
Observer)		<bassingbourn>: (Cambridgeshire) 40mm of rain fell in one hour in the early evening.</bassingbourn>
		<royston>: 75.5mm of rainfall in a two-hour thunderstorm commencing 1820GMT. This is the highest daily</royston>
		rainfall in July since at least 1972, and the second highest daily (0900-0900GMT) rainfall (after 78.1mm on 22.9.1992) in any month over this period.

<Ely>: On 26th after a few short bursts of thundery rain, it set in with a vengeance at about 1400GMT, depositing 24.4mm by 1445GMT when it stopped. At 1715GMT the next deluge commenced and by 1830GMT a further 29.6mm had been recorded. Much of this had fallen again within about 30 minutes with some hail. It finally stopped raining about 1900GMT but thunder continued for another hour. The day's total of 59.0mm exceeded my previous station record of 55.9mm which had stood since May 1978. On 27th Although the heaviest rain did not begin until 1440GMT we then had a fall of 30.5mm in about 40 minutes. This resulted in both new and repeat flooding incidents in the town, some for the third time within less than a week. I attempted to remove considerable quantities of water close to invading our own house, but having mainly succeeded then looked at the sky approaching us. After yet another half-hour deluge from about 1615GMT we were back to square one! Although no hail fell at my site, rain continued to about 1800GMT, leaving 13.6mm in this outburst. A further spattering brought the days total to 44.2mm.

2 Aug 2006 COL 18 Aug 2006 Thunder was reported from Suffolk and Norfolk

<Sheringham> (Norfolk): Parts of Sheringham were flooded by a thunderstorm.

22 Sep 2006

COL

COL

25 Sep 2006 COL Not sure if this was intense or continuous rainfall that caused the flood.

<Northampton>: Flash floods were reported in several areas of the county including <Blisworth> and in the Lake View and Lings areas of Northampton. Shoppers at Morrisons on the Kettering Road in Northampton had to wade through a flooded car park. Northamptonshire Fire and Rescue receive 40 calls for help. <Ely>: Rainfall of 26.3mm on 22nd was the highest September fall in 36-year record.

<Great Yarmouth> <Lowestoft>: There were reports of thunder in East Anglia during the morning, and associated heavy rain brought flash flooding which affected more than 90 properties at Great Yarmouth, and at Lowestoft. Norfolk Fire Service received between 200 and 300 calls in four-and-a-half hours from people having flooding problems. Schools and businesses were forced to close.

Heavy rainfall commenced at 0300h/25th and continued for nine hours. 63.1mm of rainfall credited to the 24th, followed by 12.9mm credited to the 25th, making a total of 76.0mm. Dykes burst their banks, roads were cordoned off, and water gushed into homes. Nine hours of constant rain caused thousands of pounds of damage across the town. The flood was the worst Lowestoft had seen for some four years, with many people unable to leave their homes all day. A local middle school was closed all week owing to flood damage <Stalham>: There was a report of 69mm during 0500-1600h.

<Great Yarmouth>: In a thunderstorm at Great Yarmouth 117 mm fell at <Gorleston>.

Eden (2008) 1 Oct 2006 COL

12 Jun 2007 COL

14 Jun 2007 COL

24 Jun 2007 COL Loughborough Observer) <Desford>: A thunderstorm at 0130GMT caused a local power failure for 30 minutes. Later the same day numerous heavy showers and thunderstorms during the afternoon caused further power supply problems. Local rivers had begun to flood by late afternoon, for the first time in many months.

<Midsomer Norton: There was a very localised severe storm, lightning, hail and squally winds where observed. The rainfall rate at one point was 183mm/h, fortunately the storm was fairly short lived.

<Calthorpe>: A thunderstorm in early afternoon gave a torrential downpour – the heaviest I ever seen in my 19-year record. 23.8mm fell in 35 minutes from 1250GMT, with 20mm in the first 10 minutes. Gutters overflowed, flower beds flooded and our street was like a raging river.

<Pitsford><Northampton>: Heavy rainfall causes chaos around Northamptonshire with many roads and buildings flooded by sudden downpours. 30.8mm of rain falls in an hour at Pitsford Hall between 1300GMT and 1400GMT with 11.5mm falling during a torrential downpour 1315-1330GMT. Motorists are subjected to gridlock after the downpours force part of Bedford Road in Northampton to lift upwards as underground sewers fail to cope with the volume of water. Several pubs lost stock as flood waters ran into cellars. Rainwater rose to waist height within 10 minutes in the basement of the Charles Bradlaugh pub in Upper Mounts, Northampton. The floods threatened to inundate one of Northampton's prized historic houses, the Charles Rennie Mackintosh House at 78 Derngate, with the cellars of neighbouring properties damaged. The heavy rain caused problems in the county's schools. Hunsbury Park Primary School closed as rainwater worked into the building through roofs damaged by thieves who earlier stole the lead flashing. Northamptonshire Grammar School, home to Pitsford Hall weather station, closed a classroom block as runoff from the downpours cascaded across a car park and through doorways. In the 24-hour period up until 0900GMT/15th 68.8mm of rain fell at Pitsford Hall, making this the wettest day since the station's inception in 1998, a total exceeding that recorded during the Easter floods of 9.4.1998 and beating the previous wettest day recorded by Moulton Park climatological station on 14.9.1994.

<Louth>: Wettest June day since 22.6.1982. Considerable disruption because of the intensive rain causing rivers/streams and dykes to overtop. Properties evacuated in Louth when <<River Lud>> overtopped, in Horncastle when <<River Waring>> overtopped and many other properties flooded in the area. Total rainfall for 24th and 25th 60.7mm.

<Horncastle> (Lincolnshire): The Loughborough observer writes - I had the unnerving experience of hearing the

		flood siren sounding repeatedly during the day - the < <river bain="">> flooded the centre of the town; ducks and</river>
40 1-1 2007		moorhens were happily paddling in Tesco's car park!
19 Jul 2007		<osbournby> (Lincolnshire)Heavy hourly falls reported by the Met Office included 22.8mm here.</osbournby>
COL		
27 Jul 2008		<madingley hall=""> (near Cambridge): Thunderstorms gave a total fall of 60mm of rain on the 27th.</madingley>
COL		
7 Aug 2008 COL		Torrential downpours led to muddy flood waters inundating homes and roads in parts of Cambridgeshire and Norfolk.
12 Aug 2008	A month with several heavy	<calthorpe> (nr Cromer): Heavy rain during the morning with 30mm in 2 hours from 0800GMT, torrential rain</calthorpe>
COL	downpours and	0900-0940GMT, 20.8mm with thunder. This caused flash flooding locally.
	thunderstorms	<buxton> (Norfolk): 40mm fell in the space of two hours with 28.8mm falling in half an hour between 1000h and 1030h.</buxton>
31 Aug 2008		<calthorpe> (nr Cromer): This was the hottest day of the month (26.9C) which produced a torrential</calthorpe>
COL		thunderstorm late afternoon with 15.7mm total in under half an hour and 14mm falling in 15 minutes from 1643GMT.
		<buxton>: 25mm fell in half an hour 1730h-1800h. Most of this fell in just 20 minutes and was accompanied</buxton>
		by periods of continuous thunder lasting several minutes, and with lightning every few seconds.
29 Apr 2009 COL		<northamptonshire>: 27.9mm of precipitation fell in one hour 1600-1700GMT near M69 junction 21.</northamptonshire>
15 Jun 2009		<bocking>: A torrential downpour in Bocking, Essex dropped 23.8mm in an hour.</bocking>
COL		<norfolk>: Very violent hailstorms battered parts of central Norfolk later on 15th. <carbrooke> near Watton</carbrooke></norfolk>
		bore the brunt of the storm with very large hailstones accumulating in places to a depth of over 15cm. Drifts of
		ice were still visible late on the 16th in spite of the warm weather. Rainfall at <carbrooke> was 104mm, <watton> 33mm, <morley botolph="" st=""> 33mm, <old costessey=""> 24.6mm. Along the track of the storm there was considerable damage to crops, with the kernels of malting barley being literally stripped from their stalks by the force of the hail. Predictably this very localised storm was quoted as being yet another indicator of global</old></morley></watton></carbrooke>
		warming. It is timely to remind readers that the Norwich Union, (now Aviva), began life in the 19th century as

the General Hail Storm Insurance Society, clear proof that such visitations were sufficiently common to merit insurance cover. Our storms are not as violent or common as those that regularly beset our continental neighbours and are the scourge of the wine-growing regions, but even our small island normally experiences several such storms each year, however the chance that a single locality would endure a hailstorm of the severity of that on the 15th

June more than once a century, or longer, is remote. (On 9 August 1843 hailstones described as large as walnuts and pullets eggs fell on Aylsham. 24 June 1946 saw lumps of hail, described as 'big as a fist' falling on Wroxham. On the 5 July 1985, there was a very severe hailstorm in the Dilham area. Hailstones of golf ball size caused damage to crops, greenhouses, windows of houses, and roofs of cars).

<Kettering>: Fire crews were called to seven flood related incidents in Northamptonshire after a burst of heavy rain. Homes, businesses and a school were hit and a manhole cover was swept away causing a hazard to traffic on a main road through Kettering.

<Clifton> (Bedfordshire): 32mm of rain fell on the 17th with 20.6mm falling in one hour from a slow-moving thunderstorm. This is the wettest July day since at least 2000 and the wettest day of any since 29.06.2005.
<Bramingham> (Luton): Wettest day for two years. The 34.6mm fell in three heavy showers; the first over lunch (centre to north) was accompanied by thunder and lightning for 2 hours; the third in late afternoon had 2 separate thunder/lightning cells and produced the heaviest fall.

<Calthorpe>(Norfolk): A thunderstorm on the 30th gave torrential rain and a hailstorm 1125-1143GMT. 8mm fell with a maximum rainfall rate on my AWS of 149.6mm/h. Hailstones were 8-12mm in diameter. Leaves on trees and plants were holed, torn and scarred, fruit bruised and a local farmer lost 50% of his oil seed rape crop.
<Calthorpe> (Norfolk): There was a very intense thunderstorm: 21.4mm fell from 1500 to 1545GMT (14mm in the first 15 minutes). The maximum rainfall rate was 198.6mm/h at 1507GMT. There was continuous thunder when the storm was overhead and also some hail.

Flooding was reported from parts of Kent, Essex and Suffolk. There was widespread damage to houses by lightning. Most stations reported little rainfall with the thunderstorm.

26 Jun 2009 COL

17 Jul 2009 COL

30 Jul 2009 COL

8 Jun 2010 COL

28 Jun 2011 COL A zone of active thunderstorms stretched across west Surrey and west London and the west of East Anglia to east Lincolnshire. This zone of activity drifted eastwards, whilst other storms developed to the east of it over Kent and moved into the east of East Anglia.

3 Aug 2011

COL

28 Jun 2012

Immingham 70 mm in 2 h

Section 19

Flood Investigation

report (NE Lincolnshire

15 Aug 2012

council)

COL

25 Aug 2012 COL

A depression drifting across **England brought** widespread very heavy downpours and thunderstorms over the West Country, Midlands, central southern England, London, East Anglia and Lincolnshire from late morning to early evening.

27 Oct 2012

COL

27 Jul 2013

There was lightning damage and flooding in parts of Suffolk and Norfolk in the early evening. [My COL record for August 2011 is missing; the note above is from the annual report for 2011]

<Immingham> (NE Lincolnshire): A localised flood affected only Immingham. The storm caused internal flooding in 5 properties and the library. A further 18 properties were flooded through air bricks in 7 different locations. One electricity sub-station in Washdyke Lane was flooded resulting in local power outage. The main locations flooded were Ash tree close (15 internal flooding through airbricks, Woodlands Avenue, Copse close and **Brocklesby Avenue**

<Pitsford Hall> < Northampton>: Thunderstorms accompanied by torrential downpours of rain work across the county during the early afternoon. The downpours caused shops to be flooded in Northampton town centre. 16.1 mm of rain is recorded over the 24 hours ending 0900 GMT on 16th, most of which fell during the 15 minutes before 1300 GMT.

<High Wycombe>: A stand was struck at Wycombe Wanderers' football ground during a League Two match; the ground was also partly flooded and the match was abandoned.

<Littleport>:A hailstorm devastated more than 100 acres of sugar beet near Littleport in the Fens <Cambridge>: 49mm of rain fell in about 90 minutes at Cambridge. Cambridge caught some intense falls of rain during the afternoon; there was hail and a considerable amount of thunder that accompanied it during three and a half hours, We saw 49.4mm fall during three main bursts, so it was probably only raining for just over one and a half hours despite hearing thunder for three and a half hours. This Intensity of rain inevitably caused local flooding and the tide marks of debris that had been washed about could be seen all over the Botanic Garden.

<Buxton> (Norfolk): The fall of 39.2 mm was our largest 24 hour total since August 2007. It included a thunderstorm at 1600 h producing 20 mm in about 30 minutes, and further storms overnight.

<Calthorpe>: Hailstones 10-15mm diameter fell at 0930 GMT during a day with frequent showers of hail, rain and sleet moving in from the North Sea. The largest whole hail stones were 10 mm diameter and the larger 15 mm diameter stones were conglomerates of smaller 3-5 mm diameter hailstones.

<Towcester> (S of Northampton): A thunderstorm followed by heavy evening showers produced 24.9 mm of

COL 24 Aug 2013 COL

Overnight rainfall was widespread across the UK with some heavy falls in E England due to a wave depression close to the SE and these continued during the day.

Southend DR 70.8 mm

25 Aug 2013

http://booty. org.uk/booty. weather/clim ate/2000_on. htm

27 May 2014 COL

The most general area of rain affected East Anglia and parts of NE England and the East Midlands - with some falls further W across England. Some of this rain was quite heavy in places. Thunder was not mentioned.

20 Jul 2014 COL rain, the most in a day so far in 2013, and the most in a July day since 20.07.2007 when 43.9 mm was logged. <Essex>: Heavy flooding caused major disruption in south Essex throughout the day - Essex Fire and Rescue dealt with more than 300 calls for help as the result of floods. Rainfall totals for the event included Heybridge 100.6 mm, Hadleigh 96.0 mm and Canvey Island 92.4 mm. At Benfleet 70.7mm of rain fell in the 24 hours from 0900 GMT

< Benfleet>: 70.7 mm of rain fell in the 24 hours to 0900 h on the 25th. Most of this fell between 0930 GMT and 1800 GMT. This was easily a record fall here (1985). There was much local flooding in Southend, Basildon, Rayleigh; and in Hockley where a family was rescued as a 4x4 vehicle sank to its roof under a railway bridge. Since 1921 at Shoeburyness the wettest day had been 77 mm in September 1968.

Heavy rain affected many parts of eastern England early on the 25th August. Over 50 mm fell across south Suffolk and much of east/mid-Essex; unofficial gauges in SE Essex recorded the most with 101 mm at <Heybridge>, 96 mm at <Hadleigh> and 92 mm at <Canvey Island>, all within 24 hours; Flooding hit Canvey Island and <Southend-on-Sea>. Children had to be rescued from a sinking car on a road in <Hockley>. Prichard assesses that the rainfall rates must have been in excess of 100 mm/hr for a time. [Eden/WxLog, RJP 'Weather images'/"Weather", MetO/NCIC, Eden/'Weatherlog'/RMetS.]

<Norwich>: Reports spoke of nearly a month's rainfall in one day leading to localised flooding, causing problems for homes, businesses and roads across Norwich. The fire service was called to more than 25 incidents and two nightclubs had to be pumped free of water. Anglian Water said it had drafted in extra staff and some drainage systems had been "overwhelmed" by the deluge.

<Norwich>: Active, slowmoving storms developed on the waving cold front over southeast Essex (30mm Shoeburyness) and east Norfolk (58mm Norwich Airport, with 46mm in one hour) in the early afternoon, Essex Fire and Rescue Service said resources were stretched as they dealt with flood and weather-related calls across the county, especially from <Canvey> (where there was a report of 76mm rain) but also <Southend>,<Harlow>, <Aveley>, <Ongar> and <Corringham>. Flooding near <Billericay> halted the train service between <Shenfield> and <Southend> for a time, and buses replaced trains between <Wickford> and <Southend University Hospital's accident and emergency department was temporarily closed due to flooding. The Lambeth Country Show at Brockwell Park in Brixton was abandoned</p>

COL

8 Aug 2014 COL

28 Jul 2014

Heavy showers and thunderstorms developed over Kent and western parts of East Anglia during the morning, and became widespread over eastern and northern England and southeastern Scotland during the day after torrential rain.

<Canvey Island>: Around 75 mm was recorded (according to Philip Eden in the Sunday Telegraph). Houses were flooded up to waist-deep, as pumps failed, reportedly struck by lightning. Canvey is mostly below sea level and while now well protected from sea floods, this makes it more vulnerable to heavy rain.

Rainfall reports include 43mm in one hour at <Great Dunmow> (Essex) with flooding at nearby Thaxted, There was 51mm at <Santon Downham>, near Thetford.

<Ely>: There was flooding in parts of Cambridgeshire (64mm fell at Ely)

19 Sep 2014 COL <Southend>: Storms occurred over northeast Essex and parts of Suffolk and Norfolk in the later afternoon whilst the evening brought storms over southeast Essex (with flooding in Southend). Very local storm developed flooding many local businesses. I recorded over 25 mm of rain in half an hour.

<Writtle>: A large thunderstorm during the night with a spell of torrential rain 0300-0320 GMT that produced 20.0 mm of rainfall.

<Prittlewell> <Spouthend>: The storm of the 19th resulted in 50 mm falling in about 1 hour and a lighting strike within 20 metres of the weather station. A man-hole cover was struck, leading to significant damage to the road surface. The storm was very localised, but led to some flooding. There were other similar brief but violent storms in different parts of Essex over a 30-hour period: reports of 55 mm falling in the early hours of 19th near <Billericay>, and flooding in Witham early on the 20th.

<Hepworth> (Suffolk): At 1500 GMT - thunderstorms developed 'in situ', which then became violent.
Accompanied by intense rainfall (151.6 mm/h very briefly) and a total of 38.8 mm by 1700 GMT. There were local power outages to both electricity and telephone services due to lightning strikes and widespread flash flooding from the rain.

<Stanton>: The main street of the village was inundated with mud up to 30 cm deep; soil being washed away off local, recently ploughed fields. Total rainfall from these storms made up 76% of the months total. The

storms were the most severe here since at least 2007.

<Witham>: Flooding was reported from thunderstorms

<Norfolk> Thundery showers developed most notably, over Northamptonshire, Cambridgeshire and across Norfolk in the late afternoon and early evening. Flooding and lightning damage were reported from various parts of Norfolk.

<Cambridge>: It was badly hit for three or four hours. Torrential rain flooded homes, schools and offices and forced the closure of roads, whilst hailstones as big as marbles were reported. At the Botanic Garden, 87mm of rain fell; the previous record 24-hour total there was 59mm in 1903.

<Docking>: A horse was killed by lightning at Docking in north Norfolk.

<Hepworth> (Suffolk): Rain which commenced around 1130 GMT became heavier after 1230 GMT and had reached a total of 25 mm by 1330 GMT. There were short bursts of torrential downpour, until about 1450 GMT, with a notable one of a rate of 183 mm/h around 1420 GMT. Rain ceased about 1520 GMT. Total for 0900-0900 GMT was 41.9 mm. Widespread surface water flooding occurred in the area.

<Towcester>: Torrential downpour 1415 GMT for an hour, in which time about 30 mm fell. The water running down the drive inundated my garage, something which had not happened for 30 years or more. Thunder and lightning for about half an hour. The day's total was 33.3 mm, a new June daily record for this station.

<Colchester>: Daily rainfall on the 23rd (back shifted to the 22nd) of 54.4 mm was the highest since 12.06.1999 when 40.5 mm was recorded.

<Benfleet>: Thunderstorms in the early hours caused local flooding; there was further heavy rain and thunder later in the day.

<Southend-on-Sea>: Rain and thunder on the 23rd produced 46.0 mm of rain - the wettest June day I've recorded (1978).

<Calthorpe>: A violent thunderstorm developed overhead early evening; at 1721 GMT as the downpour began and it gave 18.2 mm in 30 minutes. Hail started falling at 1730 GMT and lasted ten minutes with hail stones getting bigger towards the end. The hail stones reached 12-14 mm in diameter. The rain and thunder stopped at 1750 GMT by which time there was a raging river running down our street flooding people's houses at the bottom of the hill. Further heavy showers overnight brought the rainfall total for the 25th to 29.0 mm. The village of <Wickmere>, 1.5 km NW of Calthorpe (same direction of funnel cloud) had bad hail damage to plants and farmers crops where I was told the hailstones reached the size of 2 pence pieces!

<lpswich>: hailstones 3cm across were reported in parts of East Anglia, for example in the Ipswich area.

20Sep 2014 11 Oct 2014

COL

17 Jul 2015 COL

26 Aug 2015 COL

14 Jun 2016 COL

22 Jun 2016 COL

25 Jun 2016 COL

20 Jul 2016

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28 Jul 2016

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6 Jul 2017

COL

8 Aug 2017

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17 Sep 2017

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18 Sep 2017

COL

27 May 2018

COL, Report

by David

Smith

Associates –

(commissione

d by

Northampton shire County

Council)

The diffuse cold frontal zone, lying from north Wales through the west and south of the Midlands to near London, became the zone of an exceptionally powerful outbreak of storms during the afternoon and evening,

<Bedford>: A sudden deluge of rain 1830-2010 GMT with 23.8 mm falling. here was flooding in Bedford town centre.

< Oakham> (Rutland): Large hail was reported from Oakham reportedly including stones with a diameter of around 25 mm

<Calthorpe>: During the afternoon of the 8th a thunderstorm developed between here and <Cromer> and then became almost stationary between 1300 and 1430 GMT. Here in Calthorpe I was just on the southwestern edge of the storm which gave only 7.4 mm rainfall in 90 minutes, but in a localised area just 2-4 miles to the N-NNE rainfall totals of 45-56 mm were recorded in under two hours!

<Scampton> (Lincolnshire): 30 mm fell in a thunderstorm.

<Writtle>: Torrential shower 1540-1600 GMT produced light thunder and lightning, ice pellets and 16.6 mm of rain. There was some localised flooding.

<Daventry>: . Hailstones of up to 40 mm in diameter were reported from Daventry in the late afternoon Torrential rain and hail led to much flooding.

<Pitsford Hall>: Thunderstorms brought torrential downpours of rain and flash flooding to parts of Northampton. More than 100 properties in St Leonard's Road in Northampton were flooded. Lane closures were reported on the M1 and A45. Dozens of cars became stranded in the floodwaters. The storms were accompanied by significant hail stones.

<Northampton>: The surface water flooding on 27 May, 2018 was caused by intense heavy rainfall, which was experienced throughout south Northampton and also in Buckinghamshire and the West Midlands. Rainfall data for the incident indicates that up to 93mm of rain may have fallen in just one hour in <Wootton>, compared to the monthly May average of 54mm. The rainfall was beyond the design capacity of drainage systems across the St Leonard's Road catchment area. This combined with the geography of the St Leonard's Road area, which is situated in a localised bowl, led to excess surface water – up to 90cm deep in some places. The investigation identified that 70 properties on St Leonard's Road were flooded internally and many more affected by the flooding. It was reported that bags of refuse and loose litter, left outside properties for collection the following day, were moved by flood water to cover some road gullies and prevent them from draining flood water. Once these were removed water receded more quickly. The investigation also revealed that whilst some drainage

29 May 2018 COL

2 Jun 2018 COL, www.norfolk. gov.uk, Norfolk county council systems were reported to need maintenance and cleansing prior to the flooding incident, this was not the difference between the flood event occurring or not occurring.

<Benfleet>: Thunder first heard at 0900 GMT with intermittent lightning that remained quite close until 1100 GMT. The storm then intensified, passing overhead with torrential rain. The storm had ended by 1130 GMT, with 28.1 mm falling in total.

<Calthorpe>: A torrential downpour developed overhead at midday on the 2nd and became almost stationary. Half of my average June rainfall fell in one hour causing surface water flooding in the village. After a cloudy, humid morning with a variable wind direction, the light levels grew ominously dark. The rain began suddenly at 1125 GMT and 10 mm of rain fell in the first ten minutes, then 19 mm in 15 minutes, 23 mm in 20 minutes, 27 mm in 30 minutes and 31 mm in one hour. The rain continued a little bit longer to give a final total of 33.4 mm. Strangely no thunder was heard from this torrential shower. Our street was like a river with water running the whole width of the road down the hill. At the bottom of the hill the road had floodwater two feet deep and houses were lucky to avoid the flooding. Buxton only five miles away had only 0.9 mm rainfall!
<Wymondham>: Flooding occurred in various locations across Norfolk. The rainfall event on this date generated 60 reports of flooding, 47 of which were located in the South North and <Breckland> District; this in turn led to the identification of 24 properties that had suffered internal flooding within these districts. The properties affected were predominantly located to the South of Wymondham with a further two individual properties located to the South East of the town.

The report is based on the sub-catchments within which the incidents were located. A summary of the 28 properties affected in each sub-catchment are set out below;

- Upper Besthorpe catchment 13 properties
- Wymondham catchment 4 properties
- Dyke Beck catchment 3 properties
- Morley catchment 2 properties
- Mulbarton catchment 1 property
- Silfield catchment 1 property

Flooding causes

The flooding that occurred across South Norfolk can be attributed to several factors, as listed below

• The rainfall experienced on 2 June 2018 was recorded at the <Morley St Botolph> RG GSM monitoring station

27 Jul 2018 COL, News Flare, Dereham Times 28 Jul

5/6 Oct 2019 COL No thunder noted

as being a 1 in 126 year event1.

- A large number of the properties impacted are situated on overland flow paths and/or are below the level of the nearest highway.
- The flooding in several locations was exacerbated by the loss of drainage features within the catchment (such as ditches) and the amendments of principal drains and watercourses and their connections through culverting, infilling and lack of maintenance which caused a loss of integrity and capacity of the drainage network.
- The capacity of surface water drainage including land drains, highway drainage and private property drainage was exceeded due to the significant levels of rainfall that fell during the event.
- The capacity of the foul network was also exceeded due to the ingress of surface water into the foul network. This caused the foul network to surcharge in a number of locations during the event.
- Features such as kerbs or verges had the effect of containing or channelling flood water near to properties. Flood water entered properties through the unprotected structure of the building. This included via features such as low thresholds at entrances, unprotected air bricks and services conduits.
- <Norfolk>: Large hailstones fell over parts of north Norfolk. Huge hailstones fell in Fakenham, Norfolk on Friday."After almost two months without rain and 30-degree heat we finally get a huge storm".
- <Dereham: Giant hailstones cracked windscreens and dented vans in Dereham</p>
- <Grimston>:, The hail was large and we had to pull over and put the hazard lights on. Our side road quickly became a medium-sized lake as the rain poured down, and large hailstone fell all around. I estimate the larger stones to be 40+mm in diameter. Then travelling east we saw numerous large branches downed, including one large oak tree which had been toppled at the base by strong straight-line winds

[Very large hail also fell in York up to 6 cm diameter]

<Hepworth> (Norfolk): The 5th-6th gave periods of persistent heavy rain at this station with a total of 46.6 mm in about 33 hours. This caused widespread flash flooding in the area. The normally small, unnoticed stream, to the west of this station, rose rapidly during the morning of the 6th to become a torrent and flooding the adjacent road. There was also an intense muddy 'run off' from adjacent fields. I have not seen this happen so quickly before, even after thunderstorms.

<Calthorpe>: The 6th was a very wet day. A rainfall total of 48.6 mm fell in just 14 hours to 1600 GMT, of which 25.5 mm fell in 2 hours to 1200 GMT. There was lots of surface water flooding on roads and rivers came close to bursting their banks.

16 Aug 2020 ITV News 16 Aug <Sheringham>: Torrential rain has left roads closed and the beach off limits in the North Norfolk resort of Sheringham. The storm left roads underwater and sent rain water surging through the streets. Brown discharge flooded into the sea and lifeguards had to put up red flags to stop swimmers going into the water. Cromer Road, Cooper Road & Weybourne Road closed after heavy rainfall.

<Bury St Edmunds> (Suffolk) recorded 45 mm (1.8 inches) of rain falling between 3pm and 4.30pm.

<Swaffham>: Up to 160 millimetres of rain, more than six inches, fell in just six hours in some parts of Norfolk on Sunday.

References

Norfolk County Council (2019) Investigation Report into the flooding in South Norfolk & Breckland on the 2nd June 2018, Report Reference: 032 British Rainfall (1935) The great Northamptonshire hailstorm of 22 September 1935 p 281