Sussex Industrial Archaeology Society **Newsletter**

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Newsletter 197

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Editorial

Welcome to Newsletter 197 and the start of a new year.

On the day after the November AGM Peter Holtham, our long serving treasurer and membership secretary died. There is a personal obituary for Peter by John Blackwell on page 6.

It is these times that one realises just what are the unsung activities of the officials of our society silently perform. Please bear with the committee while transition arrangements are made.

Further, regrettably I have to record two former Committee members who also have sadly passed away :-

Bob Allen was our Newsletter editor for a number of years and a trustee of Amberley Museum where he appeared as that red coated gentleman at Christmas, to the delight of many children.

Chris Bryan was a long serving member and with Alan Allnutt instigated the restoration of Poyntz bridge at Chichester and the beam pump at Coultershaw providing in recent years much historical research for the Coultershaw Trust.

Visit our website - www.sussexias.co.uk

Forthcoming SIAS Events

All the autumn and winter SIAS meetings are held at West Blatchington Mill Barn, Holmes Avenue, Hove, BN3 7LF

Saturday January 21st 2023 2.00pm. Sussex and its wonderful Narrow Gauge

Our member Peter Williams takes us on a journey from west to east across our County to look at narrow gauge railways. We shall travel from Chichester in the west to Rye in the east and look at many railways from 18 inch to 3 foot gauge that our County supported, both in industry and as a means of passenger transport. Some of these lines are well-known but this talk will reveal those that are more obscure.

Saturday 18th February 2.00pm. Film Nite (Matinee!)

Back by popular demand. Martin Snow will be showing an informative and entertaining series of film clips from many obscure sources. All material not shown before on too many subjects to mention here.

Saturday 18th March 2.00pm. By Rail to Chichester 1846 to 2016

Alan Green describes the long history that Chichester has had with railways. The railway reached Chichester in 1846 when what was to become the West Coast Line of the LBSCR was extended from Shoreham. The following year it opened to Havant and then on to Portsmouth. Passengers for London had to change at Brighton, but the journey time was still a fraction of what it had been by stagecoach. In 1881 a new line opened to Midhurst and in 1897 the infamous Selsey Tramway opened, so it was now possible to travel North, South East and West of the city by train. Chichester was also the freight frontier between the Central and South Western sections of the SR and had a large marshalling yard, so there was still plenty of steam activity even though the line had been electrified in 1938.

In this illustrated talk the rise of the railways serving Chichester will be plotted and also the decline from 1935 when the lines north and south were closed following the Beeching report and the ending of wagon-load freight.

Events from Other Societies Malcolm Dawes

Detailed below are events organised by other societies, which may be of interest to our members. If you have details for future events please send these to: Malcolm Dawes, 52 Rugby Road, Brighton, BN1 6EB or e-mail to *malcolm.dawes@btinternet.com*

Thursday 19th January 2023 8.00pm. *From the Ox to the Fordson Major* The modernisation of agriculture with the arrival of tractors. Wivelsfield Historical Society talk by Ian Everest. Visitors £4. Wivelsfield Village Hall. www.wivelsfield-historical-society.co.uk

Saturday 4th February, 10am to 4pm. Open day at the Brede Steam Engines.

Steam and working industrial engines. Situated 6 miles from Hastings on A28 to Ashford. For any enquiries email bsesgiantsofbrede@btinternet.com or phone 01323 8976310.

Tuesday 7th February 7.30pm. Step back in time – The Argus Newspaper

Paul Green will explore the history of the local paper. Newhaven Historical Society & Museum evening event at the Hillcrest Centre, Bay Vue Road, Newhaven. Free parking next to the Hillcrest Centre. Non members £5. www.newhavenhistoricalsociety.org.uk

Wednesday 8th February 7.30pm. *Real Natives: the unexpected human history of the Chichester Harbour Oyster Fishers*

Chichester Local History Society talk by Dr Ian Friel, maritime historian and author. Non-Members £5. New Park Centre, New Park Road, Chichester. 01243 784915

Thursday 16th February 8.00pm. *The Lewes Workhouse, 1868-1959* Wivelsfield Historical Society talk by Matt Homewood. Visitors £4. Wivelsfield Village Hall. www.wivelsfield-historical-society.co.uk

Saturday 18th February 2.30pm. Orientalism-on-Sea

The use of the oriental style during Victorian times. Brighton and Hove Archaeology Society, Local History Forum talk by Kathryn Ferry. £4 non-members.

The Fellowship Room, Central United Reformed Church, 102 Blatchington Road, Hove. www.brightonarch.org.uk

Saturday 4th March, 10am to 4pm. *Open day at the Brede Steam Engines* Steam and working industrial engines. Situated 6 miles from Hastings on A28 to Ashford. For any enquiries email bsesgiantsofbrede@btinternet.com or phone 01323 8976310.

Wednesday 8th March 7.30pm. *A Great War survivor: Ralph Ellis, soldier, artist and Inn Sign Painter*. Chichester Local Historical Society talk by Sue Hepburn, historian and writer. Visitors £5. New Park Centre, New Park Road, Chichester. 01243 784915.

Monday 13th March, 7.30 pm. Railways of the 1980s part 2

Southern Electric Group presentation by Andrew Marshall. £3 non-members. Deall Room, Southwick Community Centre, Southwick. www.southernelectric.org.uk

Thursday 16th March 8.00pm. The Ashdown Forest

Wivelsfield Historical Society talk by Geoffrey Mead. Visitors £4. Wivelsfield Village Hall. www.wivelsfield-historical-society.co.uk

Saturday 18th March 2.30pm. *The rise and decline of Country House Estates on the South Downs, 1400 to 1970s.* Brighton and Hove Archaeology Society, Local History Forum talk by Sue Berry. £4 non-members. The Fellowship Room, Central United Reformed Church, 102 Blatchington Road, Hove. www.brightonarch.org.uk

Wednesday 22nd March 7. 15pm. The Great Train Robbery

RCTS Chichester Branch Meeting. Bassil Shippam Centre, Tozer Way, St Pancras, Chichester. https://rcts.org.uk/branches/branch-chr-chichester.

Saturday 1st April, 10am to 4pm. Open day at the Brede Steam Engines

Steam and working industrial engines. Situated 6 miles from Hastings on A28 to Ashford. For any enquiries email bsesgiantsofbrede@btinternet.com or phone 01323 8976310.

Tuesday 4th April 7.30pm. *Newhaven Museum Showcase.* Dr Jenny Flood will look at some of the interesting and curious artifacts in the Newhaven Museum collection. The talk will follow the AGM. Newhaven Historical Society & Museum evening event at the Hillcrest Centre, Bay Vue Road, Newhaven. Free parking next to the Hillcrest Centre. Non members £5. www.newhavenhistoricalsociety.org.uk

Thursday 20th April 8.00pm. *Travel in the Past: the problems and pleasures of the Journey.* Wivelsfield Historical Society talk by Janet Pennington. Visitors £4. Wivelsfield Village Hall.www.wivelsfield-historical-society.co.uk

Weekend 21st April - 23rd April. Branch Line Weekend

Vintage Branch Line Trains running all weekend. Visiting locomotive will be Lancashire& Yorkshire 'Pug' No 19. Bluebell Railway www.bluebell-railway.co.uk

Wednesday 26th April, 7. 15pm. *An evening with my father's (Derek Cross) slides* RCTS Chichester Branch Meeting. Bassil Shippam Centre, Tozer Way, St Pancras, Chichester. https://rcts.org.uk/branches/branch-chr-chichester

Saturday 6th May, 10am to 4pm. Open day at the Brede Steam Engines

Steam and working industrial engines. Situated 6 miles from Hastings on A28 to Ashford. For any enquiries email bsesgiantsofbrede@btinternet.com or phone 01323 8976310.

Weekend 13th- 14th May. National Mills weekend

See Mills newsletter for further details

Sunday 14th May. *Historic Commercial Vehicles Run, between London and* Brighton. www.hcvs.co.uk

Monday 15th May 7.30 pm. The Atlantic Project – The final phase

Southern Electric Group presentation by David Jones. £3 non-members. Deall Room, Southwick Community Centre, Southwick. www.southernelectric.org.uk

Local Exhibitions of interest.

Novium Museum, Chichester.

- 200 years of Chichester Canal
- The Art of Chichester 60 years of creativity. On until 25^{th} February. Recommended by Alan Green

Pallant House Gallery, Chichester.

- Sussex Landscape, Chalk, Wood and Water. On until 23rd April. Recommended – includes Turner's painting of Chichester Canal on loan from Tate Britain.

Do please check details before travelling

The details of these meetings and events organised by other groups are only included as a guide and as a service to members: Inclusion here is not intended to be seen as an endorsement.

Peter John Holtham 1937–2022

Our Treasurer and Membership Secretary died suddenly the day after our AGM. The following is a personal tribute by our Chairman.

Peter was born in Bromley two years before The Second World War and in 1939 he was evacuated to Somerset where he stayed with his grandmother and grandfather, a signalman on the Cheddar Valley Line. Returning to Beckenham later in the war, his memories were of interrupted schooldays in air raid shelters and of the V1 and V2 rockets, where he recalled the front door of his home being blown off its hinges, duly re-hung and being blown off again a few weeks later. Following the war the family moved to Poplar Avenue in Hove where the track bed of the closed Dyke Railway ran at the bottom of their garden, this he claimed started his interest in railways. Completing his education at Brighton and Hove Grammar School Peter did his National Service with the Royal Navy serving in the far east on HMS Gambia. On return he joined HM Customs and Excise and was posted to Lydd airport assessing dutiable goods and cargoes. HMCE was to be life's career and a change to assessing and auditing beer, wine and spirit duties meant visiting Sussex breweries.



I first got to know Peter in 1977 when I responded to his request in our Society's *Newsletter* for information on a local brewery. I soon discovered we had a mutual interest in the subject, myself in sampling their products and Peter in researching their history. This was Peter's passion and life's work, which dovetailed neatly with his job. He wrote extensively about Sussex breweries and malt-houses and his vast

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archive of documents will now be deposited in the County Record Office. In the year 2000 Peter took on the role of Treasurer and Membership Secretary for the Society, roles in which he has excelled and he continued to manage and report on until the days before his untimely passing. When I retired Peter and I decided the Monday of every week would be devoted to industrial archaeology research. During the course of the last 20 odd years we visited and photographed every railway station in Sussex both those operational or now closed. Over several years, along with Brian Austen we studied the history of the Turnpike trusts that existed in the county. We



journeyed all over from Chichester to Rye via Crawley and Lewes looking for sites of milestones and toll houses and publishing the results in SIH. Our last project with Martin Snow was to write and compile and edit *A Guide to the Industrial Archaeology of Sussex*,. This was an illustrated record and description of sites and buildings relating to Sussex's rich industrial history and was published by AIA. During these years Peter and I cemented a unique friendship both having the same interests and working closely together to ensure information would available to researchers in the future.

Peter was a kind and compassionate person, who was devoted to his wife Jennie, a true gentleman who would always open the door for a lady. He had a droll sense of humour and we shared many laughs together, this is just one. We were standing at a pub bar and as it was Halloween there was a skeleton decoration sitting on the counter. Service was very slow and when the barman came to us he apologised and asked if we were next; Peter replied indicating the skeleton "You'd better serve this chap first he's been waiting longer than us".

He was the best of friends and I shall miss him very much, especially on Mondays.

James Gray Collection Geoffrey Mead

Anyone researching 19th & 20th century history in the Brighton area will have come across the photographic images collected by the late James Gray. Gray was an insurance man who amassed an incomparable collection of B&W photographic images, recording the buildings and streets of Brighton. Some he had taken himself, others he acquired over many years of his researches; on his death the collection of several thousand images was acquired by the Regency Society of Brighton and was made open access for all researchers. The originals were lodged with The Keep archive at Falmer, after all had been scanned for digital use. The images were arranged in a series of 39 volumes with broad geographical areas e.g. 'The Old Town' or 'eastern Brighton (inner)'. The problem with this system was that an area that was being studied could be in overlapping James Gray areas. As example, I was recently engaged in research into the West Street area and the district that now contains the Churchill Square shopping mall. To locate images of this location had me looking at one of the four Old Town volumes as West Street forms its western fringe, one of the six Seafront volumes as that is the southern edge, plus the Western Road volume. All this takes much time as the entire Gray archive is over 7,000 images and having seen one image, at for instance, #175 in volume 19, you realise an associated image was seen way back in that volume at #33 or at #133 in another one you had been working on.

The Regency Society decided the whole archive needed a refresh and a decision was made to replace the area volumes and to list the locations in alphabetical order street by street. As all of Gray's images had a rubric accompanying them, there was a deal of useful information stored in the collection, but much of that was contemporaneous to the entry and as this collection was started in the 1950s a deal of it was now redundant as slum clearance road widening and the general 'churn' of urban development had taken its toll. A bold move was to have a team of volunteer researchers locate the position of the original photographer and take a modern image. This was then positioned alongside Gray's historic image with both Gray's text and a more recent assessment of the scene. After four years diligent work the new website was launched just before Christmas 2022 to much acclaim. With the introduction of photographic processes in the 1840s that allowed efficient reproduction of the images there was added to the historic archive a fascinating selection that could build on the earlier reprographic processes of printing, engraving, sketching and painting. As Brighton is a major urban area with a plethora of industries there is much here for SIAS members to spend time studying. I have only in the last few days accessed the site to follow up on my West Street studies, and here in one small area are the pictures of the West Street brewery and of its

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near neighbour the Kidd & Hotblack's Cannon Place brewery. North of the latter in Upper Russell Street were a range of small manufacturers, boot maker and repairers, a laundry, the Central Zinc Works, a large meat cold store in a former church, the Alhambra music hall later the Palladium cinema and any number of pubs, some such as the 'Boatman's Arms' and 'The Fisherman at Home' which reflect a former industry of the area, plus the Lord Nelson, the Fountain and the Russell Arms. Alongside the manufacturing trades that were located in the city, Gray's images show us views of period buses, fishing boats and railway systems and any number of period cars and lorries.

The pictures that Gray collected allow a glimpse into a not too distant past that many of us grew up in and it is comforting to delve into views of city streets replete with their distinctive buildings and transport systems and to spot the vehicles that I last encountered in my oblong yellow boxes of Dinky Toys!



Russell Street meat stores and brewery 1922



West Street brewery 1910

See:- www.regencysociety-jamesgray.com

October Talk Iron and the Sussex Seaside Resort Report by John Blackwell

It was a pleasure to welcome Professor Fred Gray, architectural historian and author, including an excellent history of the ill fated West Pier, 'Walking on Water' (1998). A visitor to Brighton in the late eighteenth or early nineteenth century would have seen wooden fences surrounding the Steine, at the edge of the Cliffs to the east of the Steine and along the low cliffs to the west as well as enclosing the gardens of fashionable residences, some with wooden balconies. Between 1798 and 1807 a speculative crescent was built on the East Cliff, Royal Crescent. The 14 five storey houses, the first in the town to be built facing the sea, were faced with black mathematical tiles and had cast iron balconies and railings protecting the basements and gardens, the first development to use this material. By the mid 1820s when the Kemp Town and Brunswick Town estates were being constructed cast iron had become the defining feature of Regency buildings not only in Brighton but also Eastbourne Hastings and Worthing. The Royal Pavilion's minarets had a cast iron core and the domes were framed using the same material. The interior has a fine cast iron staircase disguised to imitate bamboo and decorative columns are disguised as palm trees in other rooms. From about 1869 the transition of the seafront began with iron railings, cast at John Every's Phoenix Iron works in Lewes, gradually replacing the wooden fencing along Kings Road and Marine Parade. The Aquarium of 1872-4 with its 'Grand Entrance' of cast iron surmounted by a clock tower, the Madeira Terraces, 1890-1897 designed by Borough Engineer Phillip Lockwood and noted for their fine facade of cast iron arches, now in a sad state of decay, the band stand of 1884 with its oriental decoration, and the many shelters and lamp posts along the seafront.

Brighton has retained much of this historic iron work but with the coming of the twentieth century architects turned to other materials, steel and concrete; new structures for their modern resorts. Worthing's bandstand was replaced by a lido, in Hastings borough engineer Sydney Little ushered in an age of concrete with shelters, underground car parks and a huge bathing pool. Even Brighton was not immune with 'Embassy Court' and the restyling of the exterior of the Aquarium sweeping away the Victorian



Madeira Terrace arches rainwater spout displaying foundry details

fussiness of the Grand Entrance in 1927-9 and reshaping it using white Empire stonework. Professor Gray then turned to the many piers that adorned the Sussex



An 1890s view includes the Chain Pier, the Palace Pier under construction, the West Pier, Volks Electric Railway, the Aquarium, and the seafront and cliff railings.

Coast starting with the earliest, the Brighton Chain Pier of 1823, and noting that the cast iron arches (which the wrought iron suspension chains passed through and from which the timber walkway was hung) were still supported on timber piles not cast iron. The invention by Alexander Mitchell of the screw pile rooted into the seabed accelerated the transition from wooden piers to iron with cast iron vertical members, braced by a network of wrought iron straps, forming a substructure to support the wooden decking. The West Pier, opened in 1866 was one of three Sussex piers designed by Eugenius Birch who used seating as railings to the deck. Built for promenading over the sea, the deck was originally furnished with six kiosks and two (surviving) toll houses at the landward end. Later a central wind break was added and a landing stage for pleasure steamers. In 1893 the pavilion at the seaward end was constructed entirely of iron and with the final addition of the concert hall in 1916, the change from a promenade pier to a pleasure pier was complete. Following the Second World War two decades of neglect led to closure in 1975 and destruction by fire and storms in the early years of this century. A look at Eastbourne and Hastings piers, both by Birch followed. St Leonards pier which opened 1891, was constructed with steel piled columns and girders; steel being cheaper and stronger than iron but corrodes faster. War damage and storms led to its demolition in 1951/2. Finally Worthing and Brighton's Marine Palace Pier were visited. The presentation featured a fine selection of images, many unknown to your reviewer, which neatly complimented Professor Gray's authoritative commentary. A most satisfying afternoon was appreciated by his audience.

Two men went to mow: the obsession, impact & history of lawn mowing Clive Gravett 2018 Unicorn Publishing Geoffrey Mead

In a past *Newsletter* I related how I had found in a Lewes charity shop a history of dustcarts...the theme has continued and recently at a Brighton WI Christmas bazaar I found a history of lawn mowers! And one signed by the author...at three books for a pound...a bargain. Generally a good sign of any reference work is the listing of sources and acknowledgements and this does not disappoint as not only are written works listed, but also museums and archives with useful sources and to put a cherry on the cake...one is listed as Evie Mead![no relation]. Of much Sussex interest is the fact that the well-known South Downs Heritage Centre at the Hassocks Garden Centre has a good collection of lawnmowers and the final chapters show the involvement of the author in the creation of the museum, at what was one-time known as Tates Garden Centre.

Early mowing, before modern machines, was in the form of scything; the scythe having been 'invented' about 500BC, the tool appearing in Europe around the 12th century, but mowing for lawns, whether domestic, municipal or as cricket and croquet grounds starts with Edward Beard Budding, a Gloucestershire farmer's son. Budding was apprenticed as a carpenter and was involved in a very SIAS minded occupation of mending waterwheels. Gloucestershire had an extensive wool and weaving industry and the steep sided valleys around Stroud sprouted a number of water powered woollen mills and fulling mills. Allied to these aspects of the woollen mill trade was innovation in the preparation of the wool and the subsequent cloth. The mechanisation of the various processes led to protests similar to the Swing Riots of the South East. One such innovation was a series of blades that shaved the rough nap off the 'fulled' woven cloth. Previously this had been done by skilled hands using large scissor like shears. The inventor of this process, John Lewis of Brimscombe Mill, employed Edwin Budding as a machinist and it is suggested that he saw the possibility of using the system of a helical cylindrical device to trim grass as well as cloth. The mill that Budding worked at was sold to John Ferrabee, an iron founder who after making major changes to the mill site, creating the Phoenix Ironworks, took Budding as a partner with an agreement in 1830 to patent and manufacture a new machine for "he purpose of cropping or shearing the vegetable surface of Lawns, Grass plats and Pleasure Grounds". The patent description states 'the revolving parts may be made to be driven by endless lines or bands instead of teeth' but it was not until almost thirty years later in 1859 that Willoughby Green patented the first chain drive mower. Progress was however slow and by the time

Budding had died in 1846 less than 1,000 mowers had been made; but in 1832 a license was granted to JR & A Ransome later to become Ransome's, Sims & Jefferies one of the world's major lawn mower manufacturers, they had produced 1,500 Budding pattern lawn mowers by 1852. Budding was a born inventor and



'Gardening by Underground LPTB 1933 Courtesy of TFL

although he did not take a patent he invented what we would instantly recognise today as an adjustable spanner, marketed as *'Ferrabee's patent wedge spanner or adjustable screw wrench'* but working at the nearby Gloucestershire village of Dursley was another spanner designer who did take out a registered design for a suspiciously similar adjustable.

Buddings death in 1846 left Ferrabee in sole charge and although his two sons took over after his death in 1852 the business folded and production at Phoenix Iron Works ceased in 1863 and from then the major producer of mowers was WFL Carnegie of Arbroath, a man closely involved with the construction of the Arbroath to Forfar railway. Carnegie employed Alexander Shanks of Arbroath '... to construct a lawn mower for my purpose'. Shanks & Sons carried on business until merged with Charles H Pugh of Birmingham, makers of Atco mowers. After the American Civil War manufacturing in the USA of all types of machinery boomed and the first 'Hills Archimedean Lawn Mower' appeared in England in 1869. Electric mowers appeared as early as 1925 in USA made by Coldwell, and in England by Ransomes Sims & Jeffries in 1927, 'The Electra'. The interwar period saw a boom in lawn mower production as the surge in suburban housing came with extensive estates of bungalows and semis, mostly with back, front and side gardens, although many back gardens were allotments and only the front needed mowing [see GEF Mead thesis 'Scattered squalor-Downland Homes' for more garden detail!]. It is this period that saw familiar mower types appear; Rotoscythe, the first rotary mower in 1932, Allen scythes [for those with jungle gardens] in 1935. In 1933 HC Webb of Birmingham produced the first lightweight pressed steel side frames, as opposed to the heavyweight cast iron predecessors. The first radio controlled model was the one produced in 1948 in Portland, Oregon by Jim Walker, with Webb's & Co introducing theirs at the Chelsea Flower Show in 1959. The first robot mower was in 1995 by Husqvarna of Sweden. The adverts of the 1930s are serious looking, with men in flat caps and shirt sleeves grimly working the mowers, after WWII the advertising takes a remarkable change and one that would be difficult to repeat today...young women in summer frocks and sandals gaily waving from the mower or in gaudy tops and tight 'slacks'. By the 1960s 'flower-power' maxi dresses appear, which look decidedly dangerous next to whirring blades. Lawns and their mowing appliances have other literature devoted to them and there is another volume of a similar nature, less illustrations but a much longer bibliography 'The grass is greener: our love affair with the lawn 'Tom Fort. Harper Collins 2001.

It is of some Sussex note that the most famous lawn mower racing circuit is in Wisborough Green, West Sussex and *Easimow* manufactured by EF Ranger [Ferring] Ltd was the first ride on mower; a 48cc, 4 stroke engine, and one advert from the late 1950s shows the film star Diana Dors (shorts and high heels) operating one!

Book Review An illustrated history of dustcarts Hinton J. Sheryn - 2000 - Ian Allen Geoffrey Mead

It is a known fact that I have a large collection of books and associated materials across a wide range of topics, and although 'senior management' indoors takes a dim view, the collection relentlessly grows. I have tried (generally unsuccessfully) to limit my book intake, but a recent visit to a Lewes charity shop threw all 'book caution' to the four winds...what member of SIAS could pass by the opportunity to purchase, for the princely sum of £2, a volume entitled '*An illustrated history of dustcarts*'..! and published by Ian Allen the stalwart of junior train spotters everywhere.

Disposing of waste from city streets was a perennial issue and after the Great Fire of London, when it was thought that the obstruction of highways has contributed to the calamity, measures were considered to alleviate the problem. Cities produced great amounts of refuse, domestic, industrial and commercial, notwithstanding the sheer volume of manure and associated bodily fluids from humans, transport horses and animals brought into the markets and slaughter yards of all urban centres. Cleansing streets in the period before the mid-19th century was particularly difficult owing to many road surfaces being cobbles or stone slabs or wood blocks. An early survey undertaken in London by the Health Officer mid-century showed 'The refuse from streets both in dry and wet weather consists of the debris of the paving itself, iron from horseshoes, powdered horse dung in varying proportions.' Dried mud from wood block surfaces could be moved onto nearby farmland and many market gardens benefitted from the constant supply of dung and detritus as a form of manure. Domestic debris had to be separated out and money was made from what today we would term 'recycling' of glass and bones, crockery and tin cans. Much of course we know was used in landfill, often in post industrial locations; the brickfields west of Brighton and into Hove were recipients of much of the resort's assorted debris. Inland communities used wetlands or larger rivers. Along the south coast the Channel received large amounts, often tipped over cliff lines into the tidal stream with no thoughts of where this rubbish would eventually turn up. The rakers and cleansers of the 18th century streets equipped with their primitive brushes, scoops and rakes, made little impact on the plight of many of our cities, so in 1817 the Metropolitan Paving Act was passed for London, in an effort to enforce the regular cleansing of the streets. The first mechanical street sweeping equipment was also developed at that time, in the early years of the 19th century. In 1828 a horse drawn machine with a water tank, scraper and a fixed brush of heather, was



Smiths sweeping machine

patented by Messrs Boase & Smith of London. The idea was later developed by William Smith, who added a rotating brush on his horse drawn patented sweeper. Separately in 1843 a mechanical sweeper was patented by Joseph Whitworth of Manchester. From then, with the added concern that all urban authorities had over public health from the 1840s, successions of sweeping apparatus were developed, with side lines in liquid wastes and incineration creating new opportunities for manufacturers.

The illustrations in the book are many and varied, all B&W photos with some earlier engravings; sadly I could find few mentions of any firms or municipal authorities south of London, (except for Portsmouth and Guernsey) with even American manufacturers and European municipal authorities illustrated. The illustrations stirred many childhood memories, not because the Mead family business were street cleansers (we were a auctioneers and removals firm), however I had a large Dinky toy collection and several models were straight from these images, with Scammell Scarab mechanical horse motive units. Commer Karrier refuse collectors and Dennis refuse vehicles. I found one picture of a small 1949 Ford refuse collector highly evocative; this picture showed the sliding side panels that revolved up towards a central bar. My Dinky was, I recall, a Bedford with the same collection panels which you could raise and lower; as a child all manner of 'rubbish' ended up in the rear hoppers of the Dinky version! As we know from recent press images Prime Ministers like to be photographed in large vehicles, as with Liz Truss and the tank...here we have on page 79 Mrs Thatcher driving a Schmidt street washer! A totally obscure volume, but who could resist one with such a title and it was revelatory in the range and history of the topic.

IA over the border: The Natural History of Selbourne Geoffrey Mead

The parish of Selbourne lies just on the Hampshire side of the West Sussex border and is a delightful spot with some perfect examples of vernacular building materials and styles, lying as it does on the Upper Greensand at the foot of the Hampshire Downs with the parish extending up onto the Chalk and out onto the Gault Clay. These geological deposits give rise to some first rate agricultural soils, as well as a range of diverse building stones. Selbourne is best known as the home, in the 18th century, of the Rev. Gilbert White one of the first scientific observers of natural history. His journal is one of the best-selling books published in the English language, only Shakespeare and the Bible outselling it. Rev.White noted much of the economic life of the district as that originated in its basic geology and landscape.

In his account Rev.White notes about the 'Freestone' (Upper Greensand)

"...the houses are divided from the hill by a vein of stiff clay (good wheat land) yet stand on a rock of white stone, little in appearance from chalk; but seem so far from being calcareous that it endures extreme heat."

We know this to be the



Selbourne; St.Mary the Virgin

'malmstone' of the Upper Greensand that provided the firestone from the Merstham, Surrey quarries; it is the stone that gives its name to 'Quarry Hill' at Reigate. The 18th century accounts for Stanmer House contain a reference to '*Ryegate Stone*'.

"This stone is in great request for hearth stones and the beds of ovens, and in lining of lime kilns it turns to good account, for the workmen use sandy loam instead of mortar, the sand of which fluxes (there may probably be also in the chalk itself that is burnt for lime a proportion of sand, for few chalks are so pure as to have none) and runs by the intense heat and so cases over the whole face of the kiln with a strong vitrified coat like glass, that is well preserved from injuries of weather and endures thirty or forty years. When chiselled smooth it makes elegant fronts for houses, equal in colour and grain to Bath stone, and superior in one respect, that, when seasoned, it does not scale. Decent chimney pieces are worked from it of much closer and finer grain than Portland, and rooms are floored with it, but it proves rather too soft for this purpose. It is a freestone, cutting in all directions, yet has something of a grain parallel with the horizon and therefore should not be surbedded, but laid in the same position as it grows in the quarry. On the ground abroad this firestone will not succeed for pavements because probably some degree of saltness prevailing within it, the rain tears slabs to pieces...In Wolmer [sic] forest I see but one sort of stone, called by the workmen sand or forest stone. This is generally of the colour of rusty iron and might be worked as iron ore; it is very hard and heavy and of a firm, compact texture and composed of small roundish crystalline grit, cemented together by a brown, terrene, ferruginous matter; will not cut without difficulty, nor easily strike fire with steel. Being often found in broad flat pieces it makes good pavement for paths about houses, never becoming slippery in frost or rain; is excellent



becoming slippery in frost or rain; is excellent *Selbourne wall with 'tenpenny nails'* for dry walls and sometimes used in buildings...this stone is imperishable. From a notion of rendering their work the more elegant and giving it a finish, masons chip this stone into small fragments about the size of the head of a large nail, and then stick the pieces into the wet mortar along the joints of their freestone walls; this embellishment carries an on appearance and has occasioned strangers sometimes to ask us pleasantly *'whether we fastened our walls together with tenpenny nails.'*



Selbourne. Upper Greensand wall **NOTE**

Please let me have your images and memories for the next Newsletter (or two!) It may be it something you pass every day, but the rest of us may be unfamiliar with. Social media, Facebook, YouTube, etc are growing with increasingly interesting groups that I find impossible to keep up with, if you spot one please let me know. I am always looking for examples of our IA heritage.

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The Sussex Mills Group also produces a Newsletter

that is sent to members with this Newsletter

Sussex Industrial Archaeology Society - Newsletter



See : Iron and the Sussex Seaside Resort Page 10

A 1960s postcard view, taken from Embassy Court, includes the two piers, the bandstand, the seafront railings lamp posts and shelters.



An 1890s view of the Aquarium, with Madeira Terrace lift in the background and Chain Pier and Volks Electric Railway station to the right.



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