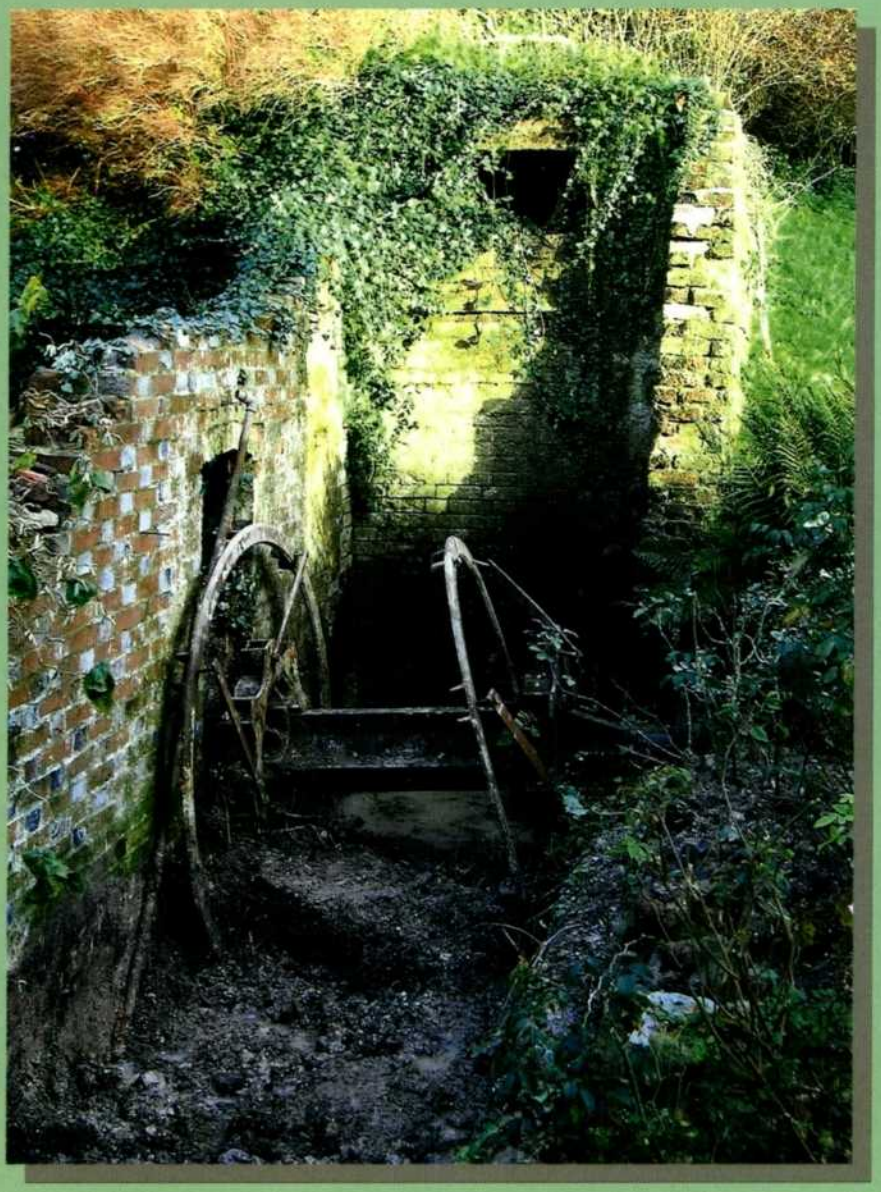
SUSSEX INDUSTRIAL HISTORY



Poynings Mill - Lavington Park Pump House
Tollhouse & Milestone Survey
A Colonel Stephens 'Find' - CVA Eaton Road
Cowfold and Henfield Turnpike

ISSUE 37 **Price £4.25** **2007**

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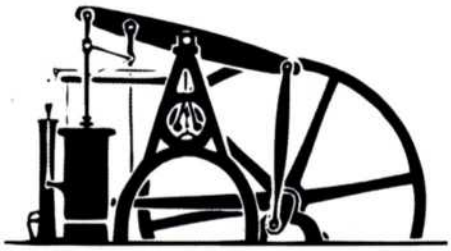

Journal of the Sussex Industrial Archaeology Society

THIRTY-SEVEN **2007**

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Cover illustration—Manor Mill, Poynings, Water wheel and pit (Peter Hill)

Edited by Dr. Brian Austen, 1 Mercedes Cottages, St. John's Road, Haywards Heath, West Sussex RH16 4EH (Tel.01444 413845). The Editor would be interested to hear from prospective contributors of articles of any length. Shorter notices can be included in the Society's *Newsletter* which is issued four times a year.

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HISTORY OF MANOR MILL, POYNINGS

This report was prepared at the request of Mr. Kevin Thornton, owner of the Mill House, Mill Lane, Poynings, to establish its history and with the longer term view of perhaps restoring the old mill itself, which has now all but disappeared.

Description of the Site

Poynings is a small, scattered community, situated at the northern foot of the South Downs, a few miles to the north of Brighton. At one time it boasted two mills, but the other one, known as Spring Mill, only seems to have had a short life from about 1860 to some time in the 1870s, when it burned down, and now very little remains of it.

Manor Mill (sometimes referred to as Poynings Mill) is situated to the north of the main part of the village (TQ 262123) and occupies a long, narrow plot, tapering slightly towards the end. Immediately to the south is the former mill pond, although this appears to be now silted up and overgrown. However, at the far end of the present garden (south) is the remains of a brick construction adjacent to a sluice gate, through which the stream continues to flow, from its source further south at the foot of the Downs.

Fig. 1 Poynings Manor Mill, present condition of wheel and wheel pit

Further along the garden stand the remains of the wheel pit of the old mill. This is of brick construction, and although in a partially ruinous state, is perhaps the only extant evidence that a watermill once occupied this site. Within the pit are to be seen the rusting remains of the old water wheel (fig. 1). The course which the water from the mill would have followed has now been filled in.

Nearby stands a small brick building with a slate roof, currently used for the storage of garden furniture. From photographic evidence, it once housed the pump for the mill, when it was converted to steam power during the latter part of the nineteenth century.

The mill house, which stands at the northern edge of the site, is a Grade II listed building, of two storeys. It is of flint construction, with brick dressings and quoins, and has a half-hipped tiled roof. The date "1625" is carved into the lintel over the front door. On the south side of the house is a projection which, as photographic evidence shows, is the point where the old mill was attached to the mill house.

Description of the Mill

Although the mill has all but disappeared, fortunately photographs survive to give us some idea of what it once looked like (figs 2 and 3). Even more fortunately, the mill was visited in 1939, when it was still standing, by Sydney Simmons (1901-1973), who made it his life's work to visit and record as many mills (both water and wind) as he could. His description of the mill reads as follows:-

"Inspected 17-5-1939

Undoubtedly a very ancient building, and probably one of the oldest watermills in Sussex. It is now in a very bad state of repair, and was already in a weakened condition when its working days were brought to a close in 1919.

A comparatively small mill, comprising two floors of tarred weatherboarding on a ground floor of brick. Its structural timbers are for the most part rotten, and it is ending its days peacefully as a store for discarded household effects and miscellaneous lumber.

Fig. 2 Mill Wheel and pit c.1910-20

The upper floor, which is partly formed by the steeply pitched tiled roof, contains some very old and time-worn bins, whilst the middle floor which is entered by a door from the ground level on the east side, contains two pairs of stones by Hughes, the only modern touch being a flour bin by T & V Summers, of Gloster.

On this floor will be found a most interesting wooden crown wheel of the clasp arm type, which is mostly solid, iron bound and wedged in position on a slender and probably modern upright shaft of iron. The line shaft which engages with it by means of an all-iron nut, has a pulley attached at the outer end which protrudes from the mill for use when auxiliary power was required, but the outbuilding which housed the steam engine has been demolished.

To gain access to the pit-room it is necessary to walk round the west side; the pit wheel is iron. The waterwheel was overshot: today only the arms remain. The watershaft is similar to that at Bolney". [1]

The History of the Mill & Its Owners

At the time of the Domesday Survey of 1086, according to the *Victoria County History*, there were two mills in Poynings. Poynings came under the Rape of Lewes, which was held by William de Warrenne, and the manor was held for him by William son of Rainald, who was most likely Rainald de Poynings, son of Reiner. The Poynings were an important family during the Middle Ages, and the barony of Poynings was created in 1337.

When Thomas de Poynings died in October 1339, among his properties was "a water mill in the manor of Poynings, worth yearly 20 shillings and not more because of scarcity of water in summer time". During the years 1339 and 1369, it was recorded that the mills were idle during the summer through lack of water.

The manor stayed within the Poynings family until 1430, when Robert de Poynings died, leaving no male heir. His son, Richard, had pre-deceased him, and the manor passed to Richard's daughter, Eleanor, who was married to Henry Percy, the heir to the Earl of Northumberland. It was to remain as part of the Northumberland estates, until 1531,

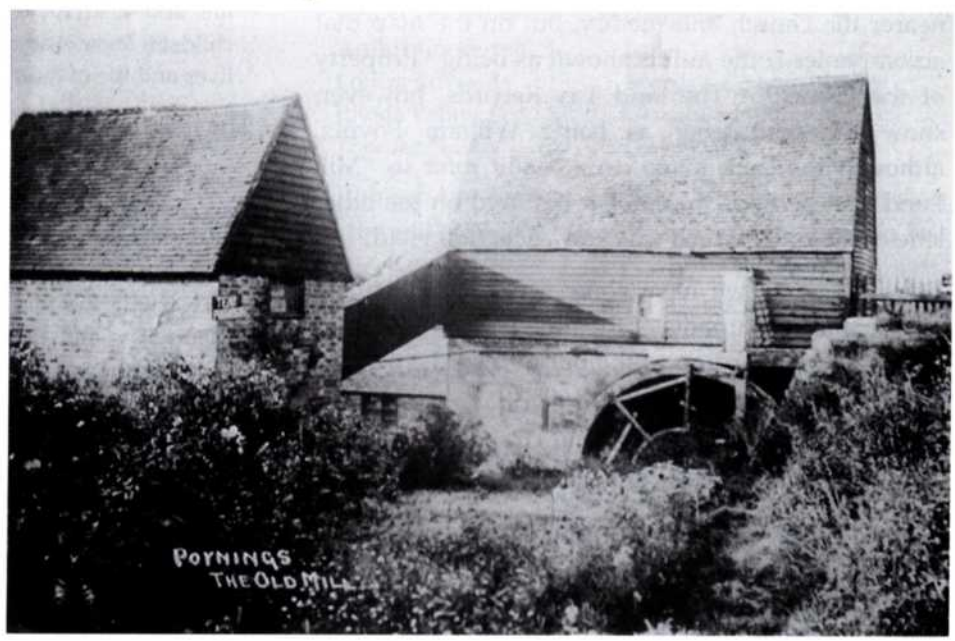


Fig. 3 Mill and mill house c.1910-20. The occupier of the mill house was providing teas to visitors to the village at this date

when Henry, the 5th Earl, mortgaged it to Sir Edward Seymour, and in 1535 it was conveyed to trustees for the use of the King (Henry VIII). In 1537, Henry granted the reversion of the manor to Sir Anthony Browne, who was King Henry's standard bearer, and his wife Alice, with the remainder to his male heirs .

Apart from Poynings, the grant included Perching (in Edburton), Preston Poynings (in West Firle), Pangdean, Ashcombe, and Waldron, and included all messuages, lands, mills, etc., within those manors.

Thus when Sir Anthony died in 1548, the manor passed to his son, also Sir Anthony Browne, who owned Battle Abbey and Cowdray Park, and was created Viscount Montague in 1554. The manor was to remain within the Montague family until 1797, when the 9th Viscount died, leaving no heirs, and the estate reverted back to the Crown. However, in 1804, Elizabeth Mary Browne, the sister of the 8th Viscount (who had tragically drowned in the Rhine some years earlier) married William Stephen Poyntz, and they were granted a 31 year lease on the estate, but when that lapsed, it once again became Crown property.

During the Poyntz period of occupation, however, the mill seems to have been something of an exception. In an agreement drawn up in 1826, the Rector of Poynings (Samuel Holland) exchanged his glebe land with the Commissioners of His Majesty's Woods Forest and Land Revenue, for some land nearer the church and rectory, but on the map that accompanies it the mill is shown as being "Property of the Crown". The land Tax Records, however, show the landowner as being William Poyntz, although the documents do actually refer to "Mill Land", so perhaps that meant the field on the other side of the road, which was known as Mill Field.

The first name we have come across that actually relates to the occupants of the mill, is that of Thomas Payne who, according to the burial records, was the miller when he was buried in 1606.

The Land Tax Records show that in 1780 the mill was in the ownership of Lord Montague, and the miller was James Souch. The land was assessed at £10, and he was paying £2 tax. The following year, the land was reassessed at £15, and his payment duly rose to £3. A note in the Cowdray archive shows that his rent to the Cowdray Estate was £10 per year, although for some reason he received an allowance of £1 2s 6d, so he in fact paid £8 17s 6d. Possibly the balance was paid in kind.

From 1799-1801, the name of the miller is given as Diggens, in 1802 the name Thomas Souch appears, and then in 1803 it is Robert Loase. The Defence Schedule of that year mentions Robert Loase, noting that he would be able to produce 30 sacks of wheat every 24 hours. However, in their book, *The Watermills of Sussex*, Stidder and Smith comment – "With just 2 pairs of stones and an irregular water supply, this must have been some feat, and is probably wrong".

In 1804 the owner is shown to be The Treasury, but the following year William Poyntz becomes the owner, and it is his name that appears each year until the final Land Tax Assessment was made in 1832. However, as mentioned earlier, the Crown appears to have retained ownership over the mill and, as we shall see later, seemed to have a particularly special relationship with the Souch family.

From 1809-13, the miller was Jacob Caffyn, while from 1814-15 it was John Caffyn. The following year the miller was James Graimes, whose family was to be associated with the mill for the next half century.

In 1826, written into the agreement mentioned earlier between the Commissioners and Samuel Holland, are the following paragraphs:-

> "subject to the interests therein of Thomas Souch of Poynings, who holds the same for and during his own life and also for and during the lives of his two children Mary Ann Souch and Thomas Souch, and the lives and life of the survivors of them".

The document then goes on to state:-

> "saving and reserving to His Majesty and his successors and his and their lessees and tenants and occupiers for the time being of the mill called Poynings Mill, the use of the water in the ponds, for the purpose of working the said mill, and also a right of way for themselves and their servants and all workmen and others employed by them on foot and with horses carts and carriages across the north of the piece of land numbered 1 on the said plan for the purpose of repairing from time to time the said Pond head and otherwise preserving the water in the pond for use of the mill aforesaid".

It seems clear from this that the Souch family were effectively head lessees of the mill, although they had not worked it themselves for a quarter of a century. The Census of 1841 tells us that the

following people were living in the Mill House:-

1841

Name	Age	Occupation
James Graimes	60	Miller
Elizabeth Graimes	60	
Charles Graimes	25	
Ann Septima Graimes	15 [2]	

At 25, one would have expected Charles Graimes to have an occupation, but there may have been a reason why he was unable to work. In the Census of 1881, he appears as an inmate in the Chailey Work House, although he must have been married at some point, for he is listed as being a widower.

In the Tithe Apportionment of 1843, the owner of the mill is stated as being Queen Victoria. James Graimes, as well as occupying the mill, was also in possession of a number of fields around the village, amounting to just over 14 acres.

In the Census of 1851, the following were living at the mill:-

1851

Name	Age	Relation to Head of House, Occupation
James Graimes	73	Head (Widower), Miller
Timothy Graimes	32	Son, Miller
Elizabeth Graimes	35	Daughter in law, -
William Graimes	5	Grandson
Sarah Coppard	15	Servant

Ten years later, the Graimes family were still in occupation:-

1861

James Graimes	83	Head (Widower), Miller
Timothy Graimes	40	Son, Miller
Elizabeth Graimes	41	Daughter in law, -
Louisa Graimes	15	General Servant

In an article that appeared in the *Sussex Archaeological Collections in 1863 (Vol. XV p.54)*, about Poynings, by the Rev. Thomas Agar Holland, the Rector, he wrote

> ".... at the other mill, lower down the stream, the dwelling house attached to which bears the date 1625 over the door, the original apparatus is not inaptly represented 'clappering' in primitive, yet still efficient simplicity".

By 1871, although still in the family, James Graimes must have passed away. Young James Hollingdale was probably the son of James Hollingdale, who appears as living at Mill Cottages in the 1841 Census, and was working as an agricultural labourer.

1871

Timothy Graimes	48	Head Miller
Elizabeth Graimes	49	Wife
James Hollingdale	15	Miller's Servant

Shortly after this Census came the end of an era. *Kelly's Directory* for 1874 lists the miller as Charles Tulley, and so it would appear that after half a century the Graimes family was no longer involved with the mill. It is unlikely that Tulley worked the mill himself as he is later listed as being the farmer of Manor and Hill Farms. In fact the 1881 Census states that the occupants of the mill are Joseph Cockerton and his wife, and his occupation is that of a "Journeyman Miller", thus indicating that he was actually an employee.

1881

Joseph Cockerton	26	Head, Journeyman Miller
Sarah Cockerton	23	Wife

The 1882 edition of *Kelly's Directory* shows that Albert Hill was the miller, and he is also listed as a shop keeper. The mill itself is noted as being of both water and steam. However, as we see in the 1891 Census, the Cockertons were still at the mill, so presumably Hill was trying to make a go of it, although his tenure did not last for very long, for in 1890 it appears back under the name of Charles Tulley.

1891

Joseph Cockerton	36	Head, Corn Miller
Sarah Cockerton	33	Wife
Edith Cockerton	3	Daughter
Arthur Cockerton	1	Son
Louisa Edwards	19	Boarder, Chapel Teacher
Rhoda Pelling	13	General Servant
Thomas Nutley	20	Corn Miller

Although the Tulleys continued to be in possession of the mill site until the 1930s, it seems that the last miller was William Sayer, whose name appears on Land Tax Records in 1896 as occupying the mill, house and mill bay. However, his name is crossed off the schedule for 1899/1900, indicating that the mill ceased working, at least on a commercial basis, around that time, which is in fact a few years later than had previously been thought.

Certainly many small, locally based mills like the one at Poynings were closing down all over the country during the latter part of the nineteenth century. This decline began after the repeal of the Corn Laws in 1846, which allowed cheap, foreign

wheat to be imported, and was further hastened by the introduction of large steam powered roller mills, from the 1880s onwards, which meant that the imported wheat would be ground at the ports themselves, before being despatched as flour up and down the country, on the railway system.

When the 1901 Census was prepared, the Mill House was listed, but not occupied, and there was a tick in the box which reads "Not up to occupation"

By then, the Cockerton family had moved to Hurstpierpoint, where Joseph's occupation was listed as "Miller's salesman", perhaps working for one of the three mills that were still operating in Hurstpierpoint at that time.

It seems that the mill continued working for some years as a farm mill, and Simmons says that it finally ceased working in 1919, yet under the entry for Poynings in the *Victoria County History*, which was published in the 1940, it states:

> "The village of Poynings lies at the mouth of the coombe (Devil's Dyke) having apparently been founded on the stream which flows thence and still works a mill at the northern edge of the village".

A photograph taken of the mill in 1939 shows it to be in an extremely dilapidated condition, and Sydney Simmons wrote in his notes on 28 February 1946:

> "Poynings Mill has just been pulled down. The brick foundations are still very obvious. Some shafting remains on the ground nearby. The mill house has been repaired slightly on the south side where the mill stood."

Of course, Poynings Mill was not the only mill to disappear. Mills, by their very nature, are relatively fragile, and very expensive to maintain. Once their working days were over, most owners would see little point in spending further money to maintain these old buildings that had outlived their usefulness. Of the 132 mills that once stood in West Sussex, 83 have all but vanished. It is only in recent years that we have begun to fully appreciate these testaments to our industrial rural past.

References

1. Science Museum, H. E. S. Simmons Collection
2. The Census of 1841 rounded down to the nearest five years the ages of all persons over the age of 15. Evidence from the 1851 Census suggests that James Graimes was 63 in 1841 though incorrect ages were not uncommonly provided to Census enumerators. Age discrepancies are to be found in the later Census returns.

Postscript

Following a day in December 2006 spent by three members of the Sussex Mills Group excavating the many decades of silt from the wheel pit, the rims of the old water wheel, the axle, associated bearings and the pit wheel were all found to be in remarkably good condition. This fact the owner found most encouraging, particularly as there are plans mooted to restore the mill. Further working days to excavate more of the site are planned for the near future.

All photographs are from the Peter Hill Collections

Fig. 4 Mill remains and mill house today

LAVINGTON PARK (SEAFORD COLLEGE) - PUMP HOUSE

Ron Martin

General

Lavington Park is situated to the west of the A285 Petworth to Chichester road immediately to the south-west of Duncton village. It is located entirely within the parish of East Lavington. The house was originally built in 1589 by Giles Garton but it was rebuilt in 1790-94. The estate had various owners and in 1936 was owned by the Wallace family, Mrs. Wallace being the daughter of Sir Edwin Lutyens. During WWII it served as a commando HQ and in 1946 was bought by Rev. C. E. Johnson for the present owners, Seaford College.[1]

Fig. 1 The Pump House
(north side of Area A on key plan)

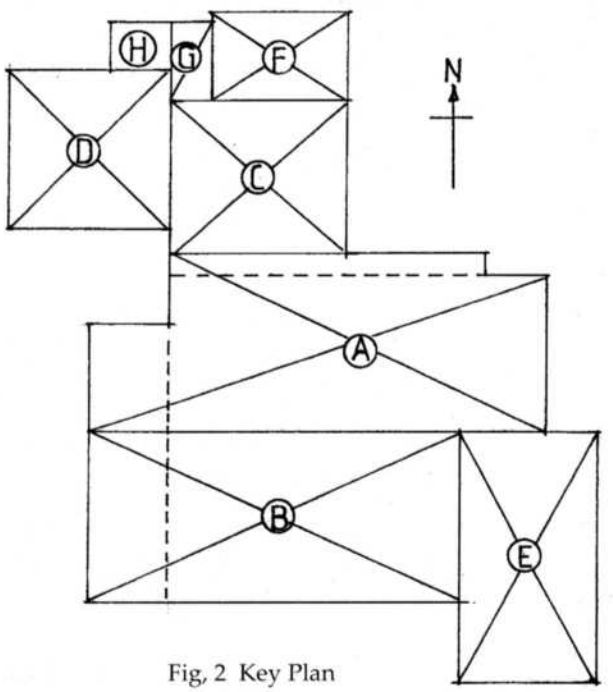
The Pump House (fig. 1) is located at SU 949162 on the south side of Beechwood Lane on the Lower Chalk. The site falls about 2.5 m (8 ft) from north-west to south east and the ground has been excavated to create a level platform on which the pump house sits. The ground at the east side has probably been made up and falls steeply away to a small lake, at the west end of which is the live well at SU 9499 1623. The principal room in the complex, the Engine Room, runs east to west and this orientation has been used throughout this report. For the convenience of identification the various areas of the buildings have been given a reference letter A-H and these are shown on the key plan (fig. 2).

Description of buildings

Area A, the Engine Room, is 11 x 4.4 m (36′0″ x 14′5″) with an extension to the west 2.5 x 3.4 m (8′3″ x 11.2″) and to the north 9.0 x 0.85 m (29′6″ x 2′9″), the latter partially overlapping Area C. In the east end of the Engine Room is No.1 Dry Well. This is 1.70 m (5′7″) diameter and 4.26 m (14 ft) deep brick lined with two steel channel bearers at the bottom supporting the pumps. The roof is hipped at both ends and runs east to west with the roof over the north extension taken out as a small catslide (see Appendix 1). The Engine Room houses a Gardner diesel engine, powering a DC electric generator and No.1 dry well with three-barrel pumps driven by AC and DC electric motors. A steel cat ladder gives access to the pumps. The switchboard controlling the electric supply to the estate is located in the west extension. The encroachment into Area C is of limited height and is finished with a false ceiling. There is a pair of external double doors in the north side.

Area B, the former Battery Room, is located immediately to the south of Area A and is 10.08 x 4.4m (33′0″ x 14′5″), with a roof hipped at both ends running east to west. It was used recently as a workshop. There is a single external door in the south side and a former single door in the east wall, now blocked up. A work bench runs along the south wall.

Area C is located to the north of Area A and is 4.85 x 4.1 m (15′11″ x 13′5″) with a roof, hipped at both



Fig, 2 Key Plan

ends, running north to south and contiguous with the roof over Area A. In the north-east corner is a Store Room with shelves. There is a single door to the north and one external door to the east and at the west side is an opening 2.8 m (9'2") wide, partially filled with a boarded framing and with a sliding door. In the south-west corner is an air compressor and tank powered by an electric motor.

Area D, a workshop, is located to the west of Area C, and is 4.7 x 4.3 m (15'5" x 14'1") with a pyramidal roof with a short ridge running east to west. There is a single door leading into Area F. A work bench runs along the north and part of the south walls.

Area E is located to the east of Area B and is 3.9 x 6.8 m (12'9" x 22'4"). It is divided into two rooms, the north end housing No.2 dry well, which is 1.70 m (5'7") diameter and 4.26 m (14 ft) deep brick lined with two steel channel bearers at the bottom supporting three-barrel pumps, formerly electric powered, but with a later stationary engine; the south room was formerly a forge. The roof is hipped at both ends and runs north to south. There is a single external door in the east side of the forge and in the south-east corner is a disused cast iron hearth with flue.

Area F, now a garage, is located to the north of Area C is 3.9 x 2.8 m (12'9" x 9'2") with low pitched mono-pitch roof falling towards the north. There was formerly a single door to the east later widened when the garage was created.

Area G is located immediately to the west of Area F is 0.85 x 2.70m (2'9" x 8'10"), is a lobby leading into Area H, with a door opening from Area D. It has a low pitched mono-pitch roof falling towards the north.

Area H is located immediately to the west of Area G is 2.1 x 1.1 m (6'11" x 3'7"), with a door opening from Area G. It has a low pitched mono-pitch roof falling towards the north. The use of this area is unknown.

Construction

Walls

The external walls from the north-east of Area H clockwise around to the south west corner of Area B are faced with flint random rubble backed with brickwork, generally in stretcher bond but with occasional headers. The external walls generally are 345 mm (1' 1½") thick. The external faces have red/brown facing brick quoins and a projecting plinth four courses high above floor level in English bond capped with a splayed plinth course.

The external walls to the west side of Areas A and B and the south side of area D are 265 mm (10½") thick faced with flint random rubble and with common brick quoins and dressings. The brick plinth is in stretcher bond in common bricks, probably Warnham common pressed bricks and is flush with the flintwork.

The external walls to the west and north sides of area D and north side of Area F are of brick in Warnham common pressed bricks, 300 mm (1 ft) thick.

All internal walls are 215 mm (9") thick except the division wall in Area E which is 115 mm (4½") thick.

The wall at the north side of Area A, where the extension has been built, has been cut away and the roof and wall supported by a 215 x 150 mm (9" x 6") timber beam supported by two 75 mm (3") diameter cast iron posts.

Roofs

The roofs generally are constructed of softwood with 50 x 100 mm (2" x 4") rafters at 380mm (14") centres, and 75 x 100 mm (3" x 4") purlins. The roofs to Areas A, B, D and E have 50 x 100 m (2" x 4") collars/ceiling joists, one to each rafter and that to area C has similar collars to every alternate rafter.

Roofs to Area A-E are covered with hand made clay plain peg tiles hung on softwood battens. The ridge tiles are half-round. The hip tiles to Areas A, B and C are arris pattern tiles bedded in mortar to a slight angle. Similar tiles are used on area D but with the hip tiles bedded on top of the roof tiles. The hips to Area E are covered with bonnet pattern hip tiles bedded in mortar. (See Appendix 2.)

The roofs over Areas F, G and H are mono-pitched, covered with corrugated asbestos-cement sheeting laid to shallow pitch, falling towards the north and supported by timber purlins.

There are steel roof lights to the roofs of Area A (north and west), Area B (south, east and west), Area C (west) and Area D (south). These have opening lights and are glazed with lapped glass, except to the west side of Areas A and B which have horizontal and vertical glazing bars.

In the ridge of the roofs of Area A, B and C there are galvanised steel roof ventilators. The one at the west

end of Area A is louvred, with a "coolie hat" top. All the rest are rotating pattern ventilators, some with the moving parts missing.

Floors

All the floors are of solid concrete.

The paving to Areas A (including the north extension) and the north end of E is mainly in ceramic tiles, comprising 150 x 150 mm (6" x 6") red octagonal tiles with 75 x 75 mm (3" x 3") black square tiles laid diagonally. The area where the earlier diesel engine was removed has been made good in cement and sand paving lined out to imitate the pattern of the ceramic tiles.

The paving to Areas B, the Store in C, D and F are precast concrete flags, part 300 x 300 mm (12" x 12") and part 600 x 760 mm (2'0" x 2'6").

The flooring to the west extension to Area A is of herring-bone pattern hardwood block.

Windows

The windows to Areas A, C and E are timber in two lights with mullions and with one opening casement to each window. All windows have stone external cills and timber lintels. The window in the east side of Area C has a two ring segmental arch over.

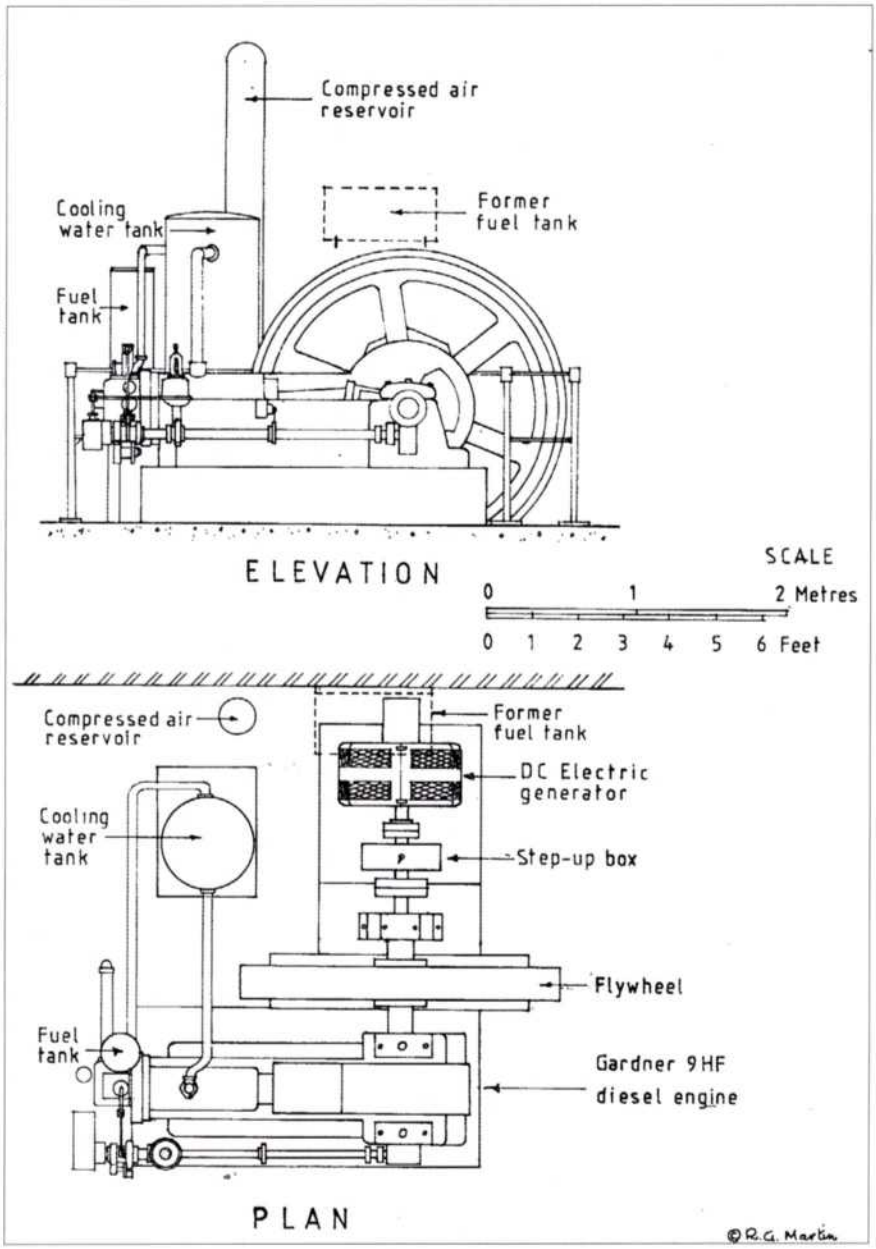


Fig. 4 Gardner diesel engine and associated equipment

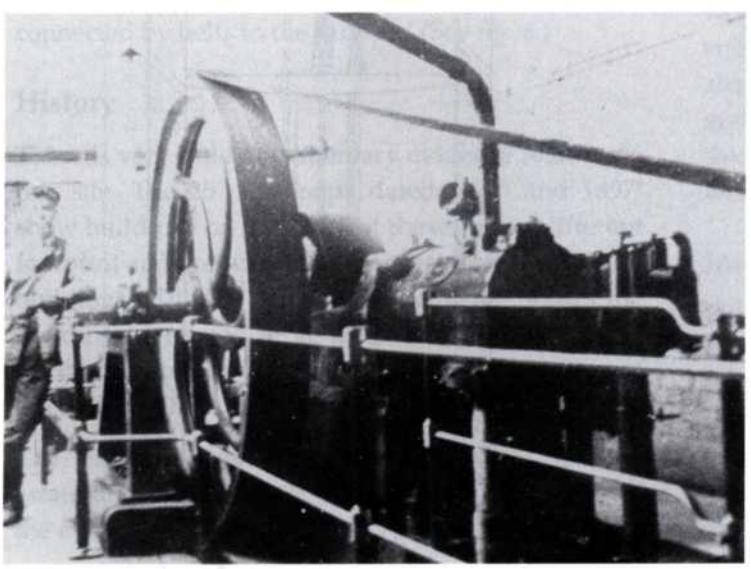


Fig. 3 The original diesel engine

The window to the south side of Area E is a seven light window with vertical glazing bars and a projecting timber cill, filled in with lapped glass.

The windows to Area B are standard pattern horizontal bar, domestic type steel casements in timber surrounds, with stone cills.

Machinery

The power plant is a Type 9HF, single cylinder heavy oil engine manufactured by Messrs. L. Gardners and Sons. Ltd (fig. 3). The cylinder diameter is 270 mm (10½") with an 450 mm (18") stroke and it is rated at 42.46 h.p. at 290 r.p.m.[2] It is mounted on a concrete plinth. and

is connected by a shaft via a step-up box to an electric generator rated at 22 kW. This provided DC power to drive the pumps and to charge the batteries which were housed in the adjacent Battery Room and which provided back-up when the engine was not running. The exhaust from the engine runs in an underground duct and discharges through a 200 mm (8") diameter vertical pipe located at the south side of Area E. (See fig. 4.)

There is an underground oil tank located at the north-west corner of the adjacent property and oil was pumped from here by rotary pump at the east side of area C to a "ready to use" oil tank at high level in Area C. The fuel was run down to a 75 litre (20 gallon) galvanised steel day tank previously mounted on brackets on the south wall of the Engine Room. These are no longer used and have been recently replaced by a 575 litre (126 gallon) cylinder mounted on a concrete plinth at the south side of the Gardner engine.[3] Cooling water was originally circulated through four 575 litre (126 gallon) galvanised steel cylinders, mounted on brick stollages (see Appendix 3) externally, to the west of Areas A and C.[4] Compressed air, for starting, was supplied by an electric powered single-cylinder pump mounted in the south-west corner of Area C with an adjacent floor-mounted 125 litre (27 gallon) cylinder. This supplied air to a 15 litre compressed air cylinder, mounted on the south wall of the Engine House, for starting from cold.[5]

No. 1 well pump has three pump barrels 200 mm (8") diameter and a stroke of c.450 mm (1'6"). It is supported on two steel channels. The pump is actuated by a triple-throw crank shaft and pump rods with plain cranks and is supported on a steel channel framework at floor level (see fig. 5). The water was drawn through 100 mm (4") diameter pipes up from the live well which is located at SU 9499 1623 at the west end of the lake in the adjacent property. This well is approximately 10 m (30 ft)

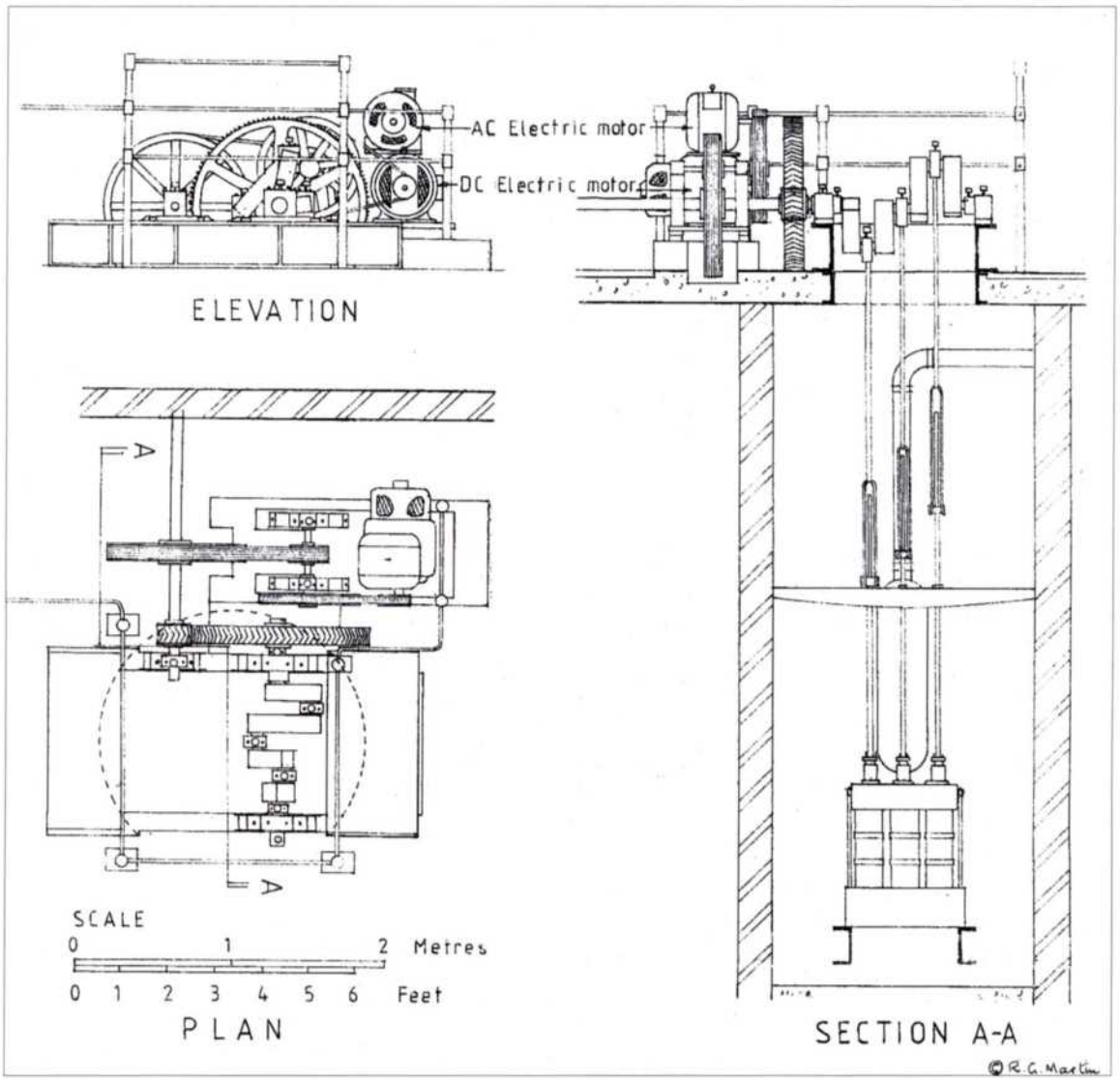


Fig. 5 No. 1 Well and triple-throw pump and headgear

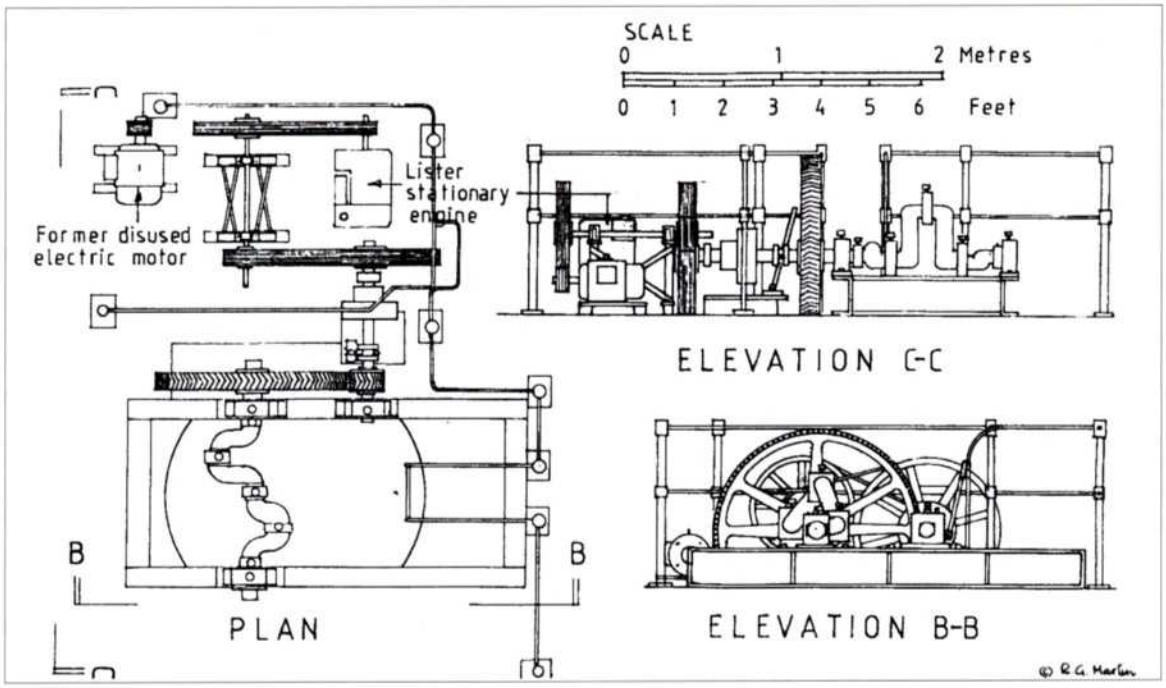


Fig. 6 No. 2 Well pump headgear

deep. The pumps were originally driven by a DC electric motor through belt drive and helical reduction gear. A later AC motor was added when mains electricity became available in c.1953. The pumps also pumped the water up to an underground reservoir located at SU 944161. It is understood that this is a two chamber brick structure with a vaulted roof. During WWII this was supplemented by two Braithwaite type steel tanks.[6]

No. 2 well pump is similar to that at No. 1 well apart from the crank shaft being a continuous one-piece casting. It was driven by an AC electric motor through a belt drive and helical reduction gears. A Lister stationary engine was added in the 1970s, connected by belts to the pumps.[7] (See fig. 6.)

History

There is very little documentary evidence relating to this site. The 25" OS maps dated 1875[8] and 1897[9] show buildings on the site, but these have a different footprint and are further to the west than the present buildings. The 25" OS map dated 1913[10] shows the buildings of Areas A, B, C, D and H, but not the north extension of Area A and the west extension of Areas A and B.

The original installation supplied water for the estate and for Graffham village[11] and electricity for the estate.

A photograph[12] of unknown date shows the original diesel engine at the east end of the Engine Room, with a driving band running westwards towards an unseen machine (see fig. 3).

The Gardner diesel engine was commissioned on 30 August 1926[13], and this powered the DC electric generators, being used for electricity supply and for charging batteries. The AC electric motor unit which powered both pumps was presumably installed when mains electricity was made available in c.1953.[14]

The live well has electric submersible pumps, one installed in 1970 and an additional one in the 1980s, which relieved the diesel engine from its pumping duties except as a stand-by.[15] The power to No. 2 well pump was later converted to a Lister stationary engine in the 1970s.[16] The pump house was abandoned in May 2006, when a new chlorination system was installed in a fibreglass kiosk located in the north-east corner of the site and the water pipes were diverted from the old pump house.

Interpretation

The buildings shown on the 1st and 2nd Editions of the 25" maps are of different footprint and location to the extant buildings and it is presumed that they were demolished before any work to the current buildings was commenced. There is no evidence of them on site, although further excavation might reveal them.

It is probable that the pump house was built in 1903

by the architect Detmar Blow at the same time as he was carrying out extensive alterations to the house and building the entrance lodges and stable block.[17]

The footprint of the original buildings as shown on the 1913 OS map[18] comprised Areas A, B, C and D but not the north extension of Area A nor the west extension of Areas A and B. Area D was extant at that date but may have been an open-roofed yard for the storage of barrels of oil.

When the Gardner engine was installed in 1926, the earlier engine was still in place in order to maintain continuity of service. To provide additional space for the two engines the extension to the north and west sides of Areas A, B and C were built. The similarity of the construction of these areas in Warnham bricks, without a projecting plinth confirms this. The south side of Area D also has a similar construction, which suggests that this Area was reconstructed at this date, with the current pyramidal roof, probably after the oil tank was installed.

It seems probable that at the same time Area F and dry well No.2 was built as the ceramic paving in the Area A and the northern extension is also to be found in this area. Subsequently when the original engine was removed the paving was made good, but this was done in cement and sand paving lined out to imitate the ceramic paving.

The south side of Area B was also probably rebuilt above a plinth to incorporate the new steel casements which would not have been available in 1903.

Area H also is shown on the 1913 OS map.[19] Its use is unknown but it is possible that this was used as a toilet, although there is no evidence of this.

Area F is of unknown date and use. It originally had a single door in the east side and this was later widened when the space was converted into a garage. The south wall was probably originally flint faced on the north side as this was the original external wall of Area C. It appears that the flint face was cut back and replaced with a half-brick skin of brickwork . The presence of the short length of the original flint wall and projecting plinth at the south side of Area G confirms this.

Area G appears to have been created when Area F was built, in order to get access to Area H. The presence of the short length of flint walling at the north side might be the remains of an earlier retaining wall.

My thanks are due to Seaford College for allowing me access to the Pump House and in particular to Peter Marsh who used to operate the pumps and has given much help in interpreting the machinery.

Appendix

1. A "catslide", strictly speaking, is used to describe a high level roof being continued outwards, usually with reduced pitch and often to a lower storey level. In this instance the roof over the extension has been lifted and taken down to a slightly lower eaves level.

2. Arris hip tiles were originally designed with a horizontal bottom edge to line up with the courses of plain tiling. As the pitch of tiled roofs varies, this presupposes that the arris tiles are accurately manufactured to suit specific roof pitches. When this is not possible the arris tiles are raised at their external corner and bedded in mortar. Bonnet hip tiles are always bedded to accommodate different roof pitches.

3. In Sussex, the word "stollage" is used to describe a support to a barrel or tank. However this word appears to be regional and the normal word, to be found in the dictionaries is "stillage".[20]

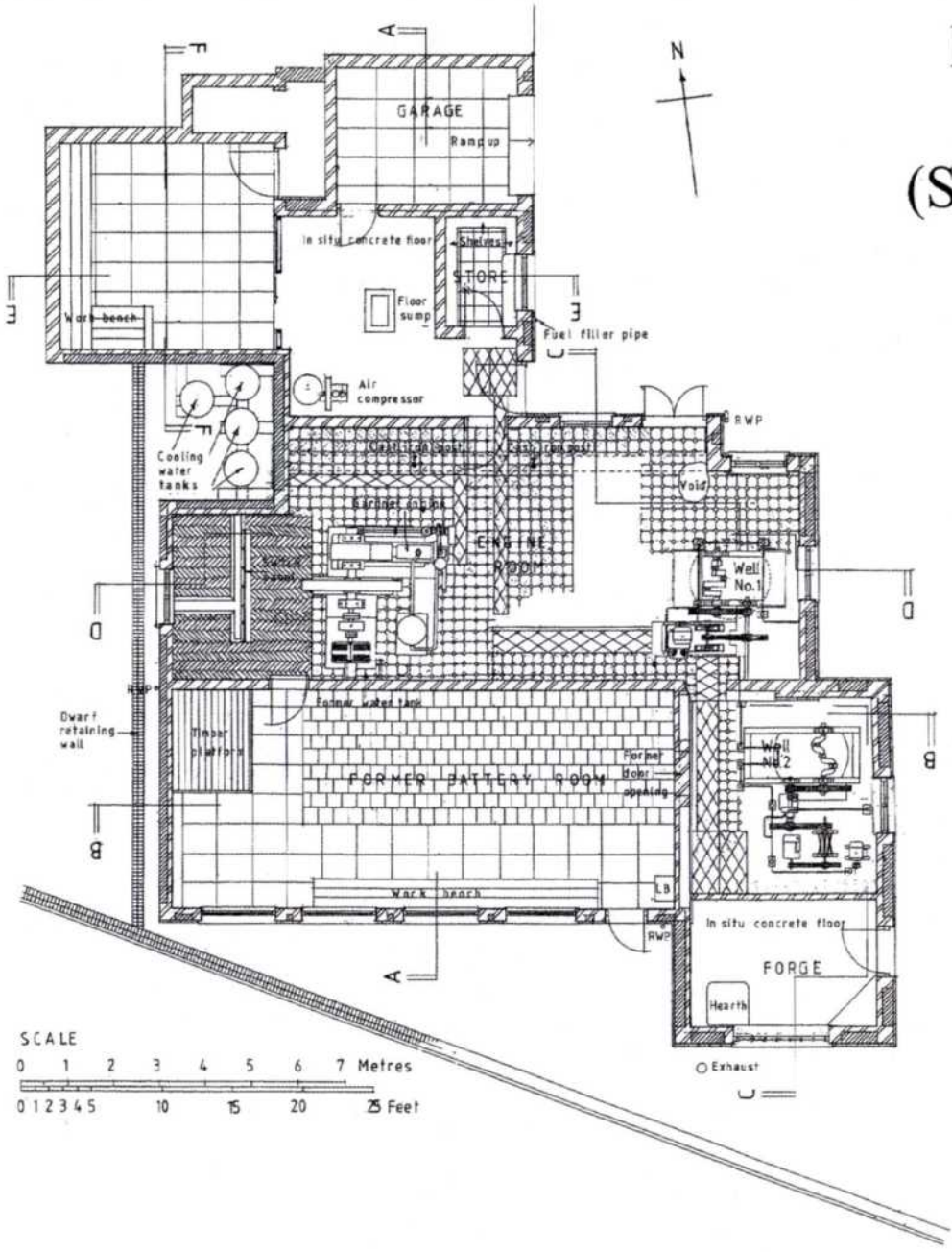
References

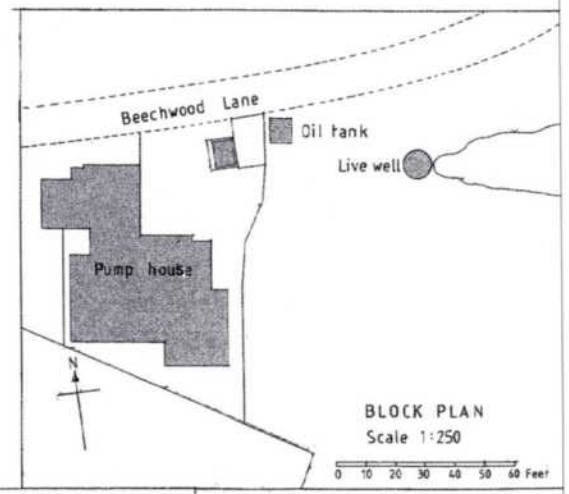
1. English Heritage, *Listings description for Lavington Park*
2. L. Gardner and Sons Ltd. *Catalogue No. 514A*
3. Peter Marsh, who operated the engine, personal comment
4. *Ibid*
5. *Ibid*
6. *Ibid*
7. *Ibid*
8. 25" OS Map First Edition, Sheet XXXV/10 , 1875
9. 25" OS Map Second Edition, Sheet XXXV/10, 1897
10. 25" OS Map Third Edition, Sheet XXXV/101913
11. John Foxley, former water manager for Southern Water, personal comment.
12. A photograph of unknown date and origin, a copy of which is in the possession of Peter Marsh and is reproduced in this report as fig. 3.
13. L.Gardner and Sons, Ltd., commissioning instructions.
14. Peter Marsh, *op. cit.*
15. *Ibid*
16. *Ibid*
17. English Heritage, *op. cit.*
18. 25" OS Map Third Edition, *op. cit.*
19. *Ibid*
20. Miles Jenner of Harveys Brewery, personal comment.

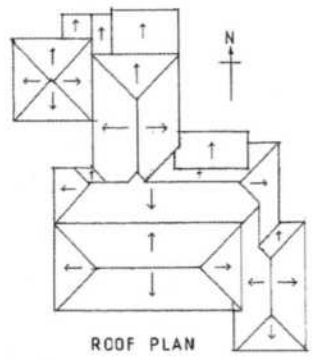
LAVINGTON PARK

(SEAFORD COLLEGE)

PUMP HOUSE



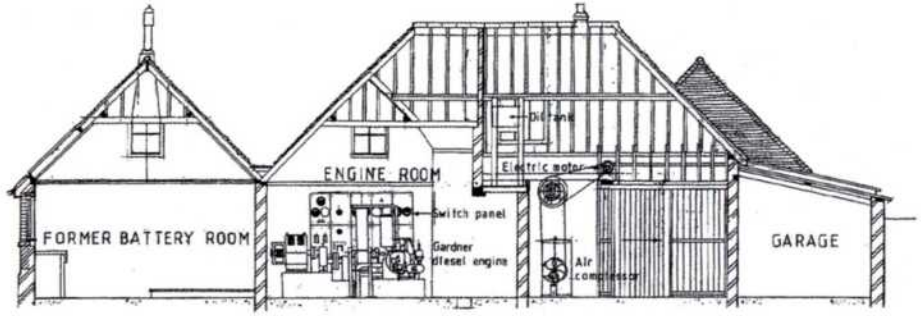




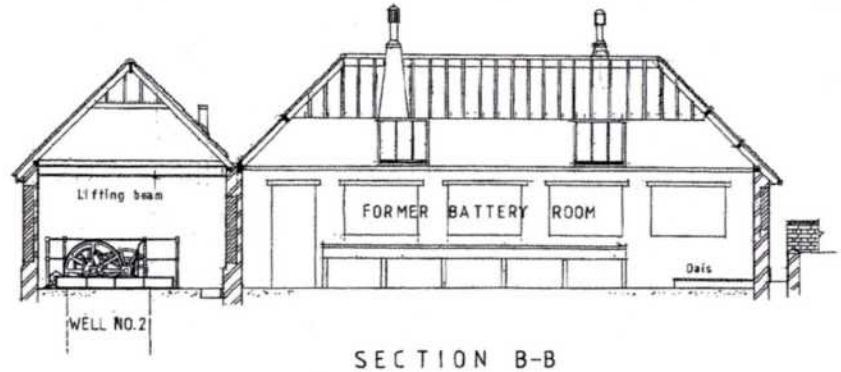
LAVINGTON PARK (SEAFORD COLLEGE)
PUMP HOUSE
Drawing No. 1
PLANS
SCALE: 1:50 (on A1 sheet)
DATE: May, 2006
Drawn by and © R.G.MARTIN

LAVINGTON PARK (SEAFORD COLLEGE)

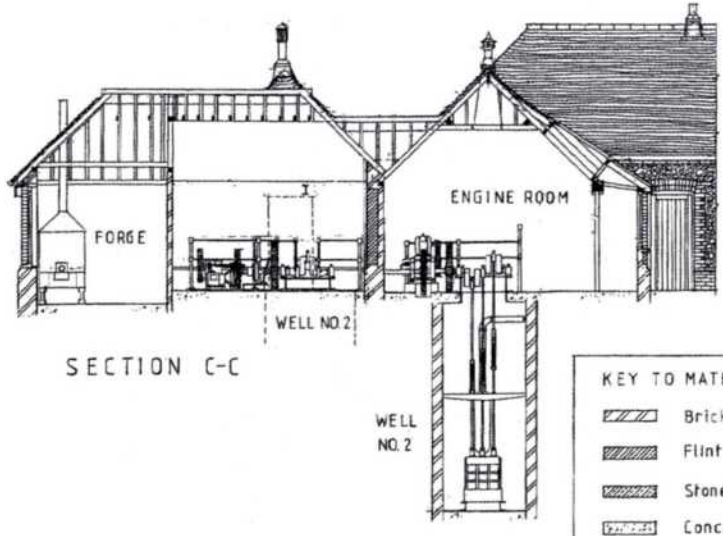
PUMP HOUSE



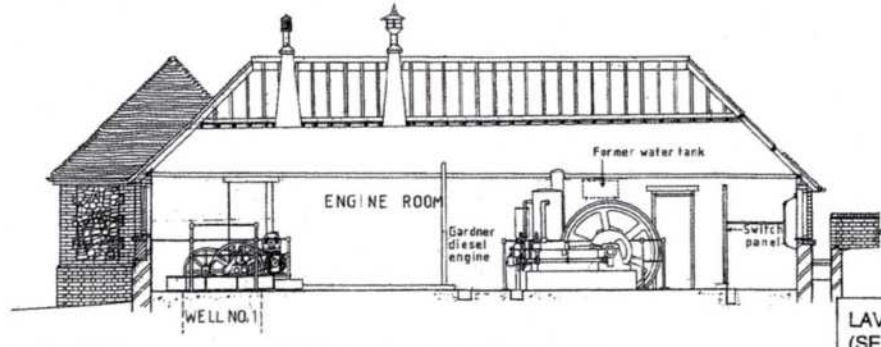
SECTION A-A



SECTION B-B



SECTION C-C



SECTION D-D

KEY TO MATERIALS

- Brickwork
- Flint rubble
- Stonework
- Concrete
- Ceramic floor tiles
- Wood block flooring
- Chequerplate duct covers
- Timber sections

SCALE

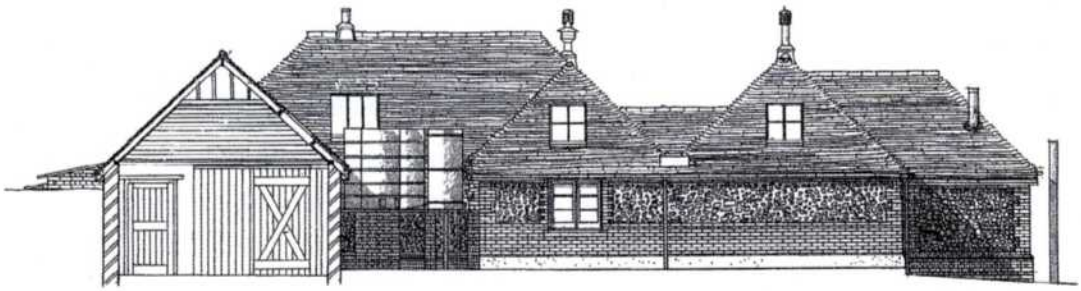
0 1 2 3 4 5 6 Metres

0 1 2 3 4 5 10 15 20 Feet

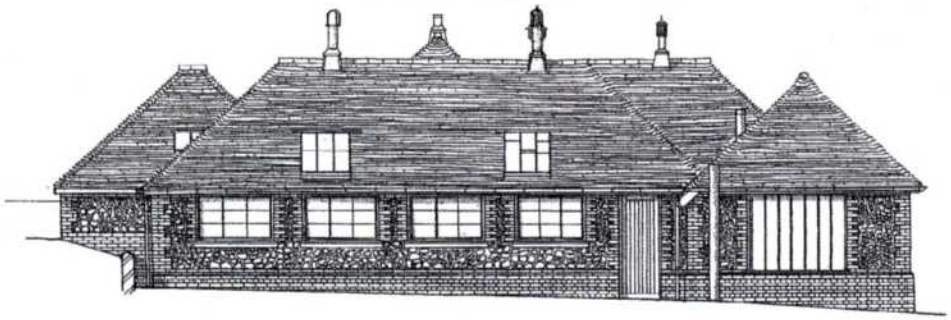
LAVINGTON PARK (SEAFORD COLLEGE) *PUMP HOUSE*
Drawing No. 2
SECTIONS E-E, F-F, G-G and H-H
SCALE: 1:50 (on A1 sheet)
DATE: May, 2006.
Drawn by and © R.G.MARTIN

LAVINGTON PARK (SEAFORD COLLEGE)

PUMP HOUSE



SECTION F-F / WEST ELEVATION



SOUTH ELEVATION

KEY TO MATERIALS

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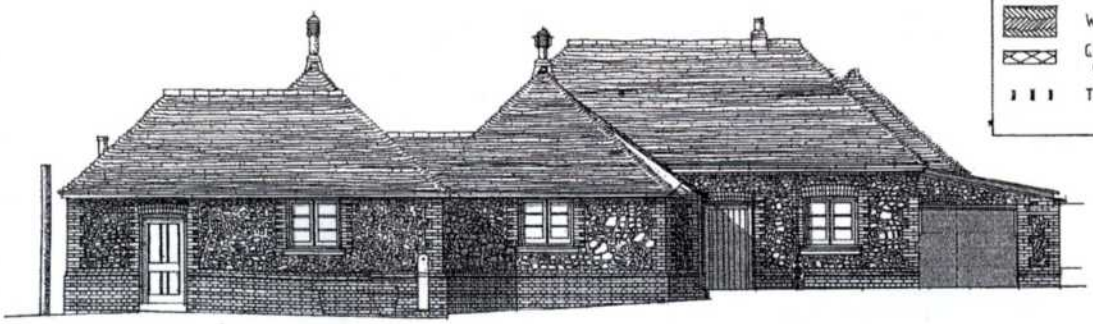
- Flint rubble
- Stonework
- Concrete
- Ceramic floor tiles
- Wood block flooring
- Chequerplate duct covers
- Timber sections



EAST ELEVATION

SCALE
0 1 2 3 4 5 6 Metres
0 1 2 3 4 5 10 15 20 Feet

NORTH ELEVATION / SECTION E-E

LAVINGTON PARK (SEAFORD COLLEGE)
PUMP HOUSE
Drawing No. 3
ELEVATIONS and SECTIONS E-E and F-F
SCALE 1:50 (on A1 sheet)
DATE: May, 2006
Drawn by and © R.G.MARTIN

WEST SUSSEX TOLLHOUSE AND MILESTONE SURVEY

- additional information

Brian Austen

Articles appeared in Sussex Industrial History vol. 35 (2005) concerning the turnpike roads in the Chichester, Midhurst and Petworth area and in vol. 36 (2006) for the Arundel, Worthing and Littlehampton area. Additional information has now come to light, partly as a result of publication.

S.I.H. 35 (2005) Chichester, Midhurst and Petworth

1. Kingston-upon-Thames and Petersfield Trust (1749)

A short section of the London to Portsmouth road is within the county of West Sussex. This has a milestone on it, just north-east of Rake on the B2070 at SU 796271. The inscription is unreadable except for the figure "4" (i.e. 48 miles from London).[1]

2. Chichester and Fernhurst Trust (1749)

An additional milestone has been located at Midhurst (SU 889220) on the east side of the road adjacent and to the south of North Mill with distances of

To LONDON / 49 MILES / CHICHESTER / 12 [2]

3. Petworth Trust (1757)

A number of additional milestones have been located and surveyed thanks to information from Lionel Joseph who has surveyed this road as part of the Milestone Society's National Data Base.[3]

SU 953281 A rectangular milestone inscribed

45 / MILES / From / LONDON / 4 / To / Petworth

incorporated in the front elevation of 1 & 2 Tanland Cottages at ground floor level (figs. 1a & 1b). The cottages are on the west side of the A283.

SU 960268 An iron plate, rectangular with indented curved corners, inscribed

LONDON / 46 / PETWORTH / 3

attached to the wall of the Petworth Estate on the west side of the road at the northern end of a lay-by (fig. 2). This plate can easily be missed as brambles and undergrowth obscure it. The road at this point has been realigned in recent years and the wall is set back from the present line. The plate is of the same pattern as that at Tillington on the A272, which was never turnpiked between Midhurst and Petworth.

SU 966254 A rectangular milestone inscribed

47 / TO / LONDON / 2 / TO / PETWORTH

attached to the front of a cottage at ground floor level. The cottage is, unusually for this Trust, on the east side of the road. It is presently named "Conifer Cottage".

SU 966237 The inscription on "Mile Cottage" should read

48 / MILES / From / LONDON / To / Petworth / 1

North of the border in Surrey two further stones are recorded at Witney Village (SU 947397) and at

Fig. 1a Tanland Cottages, Petworth

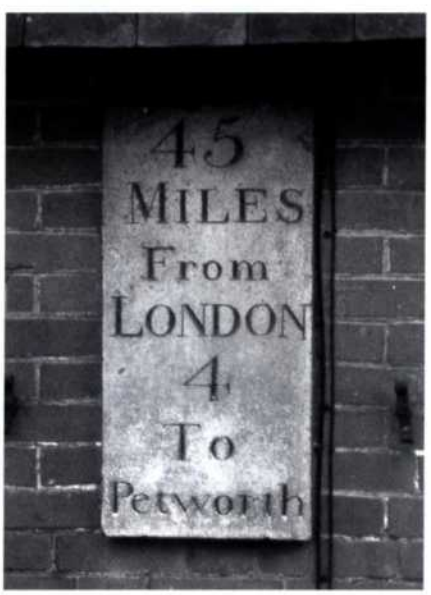


Fig.1b Close-up of Milestone

Fig. 2 Milestone at SU 960268

Ramsnest Common (SU 948326). Both are on the west side of the road and show

HYDE PARK CORNER / 35 MILES / PETWORTH / 12 MILES / GODALMING / 3 MILES / CHIDDINGFOLD / 3 MILES

and

HYDE PARK CORNER / 40 MILES / PETWORTH / 7 MILES / GODALMING / 8 MILES / CHIDDINGFOLD / 2 MILES

respectively.

Mr Joseph also comments on the stone set in the wall in New Street, Petworth and suggests that this is not in situ but should be at Hampers Common to the north of Petworth (SU 976225) where the mileage of 49 from London would fit correctly with the existing stones on either side in the sequence. He suggests that the stone may have been incorporated into the front elevation of the Petworth Boys' School destroyed in a German bomber raid in September 1942, but this has not been substantiated as yet by photographic evidence. It is of course possible that the stone was originally on the front elevation of Petworth tollhouse in the same vicinity (fig. 3).[4] There was almost certainly a milestone here but this does not invalidate the possibility that the New Street, Petworth one was set up by the town authorities. The style of lettering and the type of inscription (miles to London only) differ from other Petworth Trust ones.[5] It is possible that there were two milestones both indicating 49 miles to London though separated by a distance of nearly half a mile.

Whilst undertaking the survey it was noticed that the cottages incorporating the milestones were almost exactly in the correct position suggesting that they may have been erected for the purpose of displaying them. This in its turn might suggest the involvement of Lord Egremont who commissioned them for estate workers and also to display the mileage stones. He was known for his interest in improving communications in the area. The two identical iron mileage plates mentioned earlier, one

Fig.3 Petworth Tollgate (c.1870)

on a non-turnpiked road, might again suggest Petworth Estate involvement.

Mr Joseph records that during the Second World War, the milestones fixed to cottages were obscured by the application of a cement screed. It would not have been practical to remove them, as other free-standing milestones were, to comply with Ministerial Orders under the Defence of the Realm Act of 1940.

Easebourne Tollhouse (SU 891228)

A photograph of this tollhouse appears in a recently published history of this parish.[6] It was a brick bungalow with tiled roof and projecting centre bay of an identical pattern to those on the Midhurst and Sheet Bridge Trust of 1825.

4. Cosham and Chichester Trust (1762)

A correspondent, Ralph Cousens of Havant, has provided additional information about the milestone above the shop front at West Street, Havant (Hants.). This was originally a wooden board but was replaced about 1996 by a stone fabricated by a local builder from an old gravestone. When the building was sold for redevelopment about two years ago the replica milestone was incorporated above the shop facade in its present location, a stipulation in the planning consent for the new building.

Lionel Joseph records a milestone at Bosham (SU 811053) with an unreadable inscription on the north side of the road. A replica cast iron plate has been manufactured at the Amberley Working Museum by Leslie Taylor and was put in place in September 2006. The plate inscribed

Havant / 6 Miles / CHICHESTER / 3 Miles

with pointing fingers appears to have been based on the Havant milestone mentioned above.[7]

5. Haslemere Trust (1764)

Lionel Joseph has recorded two further milestones on this Trust within Surrey at Grayswood (SU 913342) and Witley Common (SU 931400). The inscription on the first of these stones is unreadable but probably showed 39 miles to Hyde Park Corner, 9 to Midhurst, 9 to Godalming and 1 to Haslemere. The second stone reads

HYDE PARK CORNER / 35 MILES /
MIDHURST / 13 MILES /
GODALMING / 3 MILES /
HASLEMERE / 5 MILES [8]

S.I.H 36 (2006) Arundel, Worthing and Littlehampton

The Worthing Branch Turnpike (1802)

Ashington Tollhouse (TQ 133156)

It was stated that no illustration of the tollhouse had been located but its appearance probably followed the pattern of other cottages being a weather-boarded bungalow with a slate roof and a doorway and window in the front elevation. This has been confirmed from a postcard of c.1920 with the title "Swan Hill, Ashington". This shows part of the tollhouse at the extreme left side of the image.[9]

Storrington and Ball's Hut Trust (1812)

On page 21 mention was made of the Warbleton tithe map. This should have been the Walberton tithe map.

REFERENCES

1. Lionel Joseph, *Surrey 2005 Milestone Survey, available* from Petworth Public Library.
2. *Ibid*
3. Lionel Joseph, "Milestone Finds in West Sussex", *Milestone Society Newsletter.*
4. A photograph of Petworth tollgate was published in James S. Gray, *"Victorian and Edwardian Sussex from old photographs" (1973) plate 162.* Unfortunately the tollhouse is outside the frame of the photograph.
5. Brian Austen, "Turnpike Roads to Chichester, Midhurst and Petworth", *Sussex Industrial History 35 (2005)* p. 36.
6. Andrew Guyatt & Vic Mitchell, *Cowdray and Easebourne* (Midhurst 2007) p.141.
7. Amberley Working Museum, *"Wheelbarrow"* 81, November 2006.
8. Lionel Joseph, *Surrey 2005 Milestone Survey*
9. Daphne & Brian Norton, "My Ashington Then & Now", *West Sussex Gazette*, 16 August 2006.

The survey on which this article is based was carried out by Brian Austen, John Blackwell and Peter Holtham in the autumn of 2006.

A COLONEL STEPHENS "FIND"

Alan H. J. Green

Introduction

Many readers of this journal will be well acquainted with the joys of historical research; joys such as the thrills of finding that vital piece of evidence needed to prove a theory or stumbling across something momentous quite by chance. However these joys have to be offset by the frustrations of hours wasted in pursuing avenues that prove to be utterly fruitless, and trying to overcome the temptation of getting sidetracked. In order to avoid the latter, and ensure that searching remains strictly focused on the job in hand, *Rule No. 1* has to be "No Sidetracking", application of which is highly necessary (and very difficult) in a treasure house like the West Sussex Record Office.

The WSRO Raper Archive

The long-established Chichester firm of solicitors, Raper and Co, deposited their vast archive with WSRO several years ago but the cataloguing of it was never completed and most of the collection, consisting largely of property deeds going back to the seventeenth century, is known as the "Raper Uncatalogued Archive". Being uncatalogued, items in the collection do not appear on the card index system, hence the only way into it is via a three-volume listing compiled when the collection first arrived. In this listing the documents are grouped by town or village but the individual descriptions can be rather brief, e.g. :

> "Deeds of a tenement or dwelling house, malthouse and garden on the east side of North Street, Chichester, 1720 (6 docs). Temporary No. 117."

For those in the know, the Raper Uncatalogued Archive provides rich seams just waiting to be tapped but, in order to do so, it is necessary to plough through the lists and call up every promising document on the chance that it may be relevant.

Serendipity

Horace Walpole introduced the term '*Serendipity*' in the eighteenth century, coining it from the Persian fairytale *The Three Princes of Serendip*, and it is taken to mean the making of fortunate discoveries by accident. I can now vouch for this concept; whilst searching the Raper Uncatalogued lists for material for a new book on the building of Georgian Chichester, the following entry caught my eye:

> "Plan of a bridge over a ditch, with covering letter from HF Stephens to Sir Robert Raper (possibly designed for use over the Lavant Stream Chichester) 1897 (2 docs) Box WWW."

The combination of the name H. F. Stephens and the date 1897 stopped me in my tracks – this H. F. Stephens *had* to be "The Colonel"* and, more significantly, it had to be a drawing relating to the Selsey Tramway. Having never seen a civil engineering drawing for this railway, you will understand how, in my excitement, *Rule No. 1* went out of the window and I duly called up the documents. I briefly nurtured a hope that the alleged ditch might prove to be the Chichester Canal, such that the drawing would be of the eccentric bridge across it at Hunston[1], but sadly this was not to be. However, despite this initial disappointment, the results of allowing myself to be sidetracked are sufficiently interesting to be reproduced as the centre spread of this journal; it was indeed a chance find – a demonstration of serendipity.

A Selsey Tramway drawing

The drawing (fig. 1) turned out to be a folded, colour-washed tracing (on tracing paper) of a proposed bridge, but it was clearly not one over the River Lavant, or indeed any "ditch" as the listing had suggested: it was a bridge over a railway— an *overbridge* in railway parlance. The attached letter, bearing the magical address *Tonbridge* (fig. 2), proved that this was indeed from "The Colonel", and the heading "Tramway" that it was about the Hundred of Manhood and Selsey Tramway. As with so many engineers, Stephens' handwriting is barely legible, so I have transcribed it :

Tonbridge
May 25th 1897

To R C Raper
Chichester

Dear Sir

"Tramway"

I had hoped to have heard if Monday, Tuesday or

*At this time, of course, Stephens had not assumed this rank so the letter would not have borne this title, but I have freely used it in this article because, well, he can only be "The Colonel"!

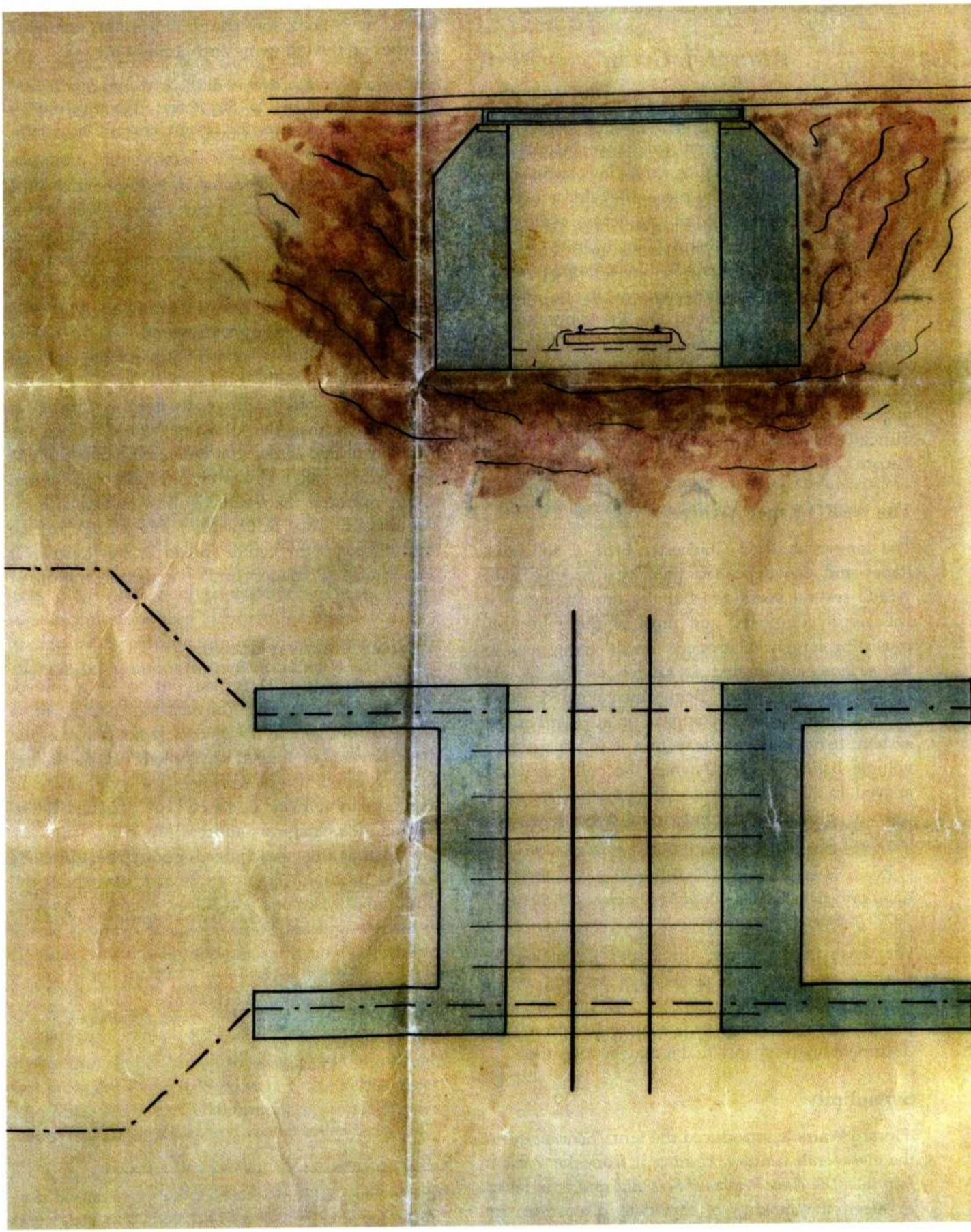
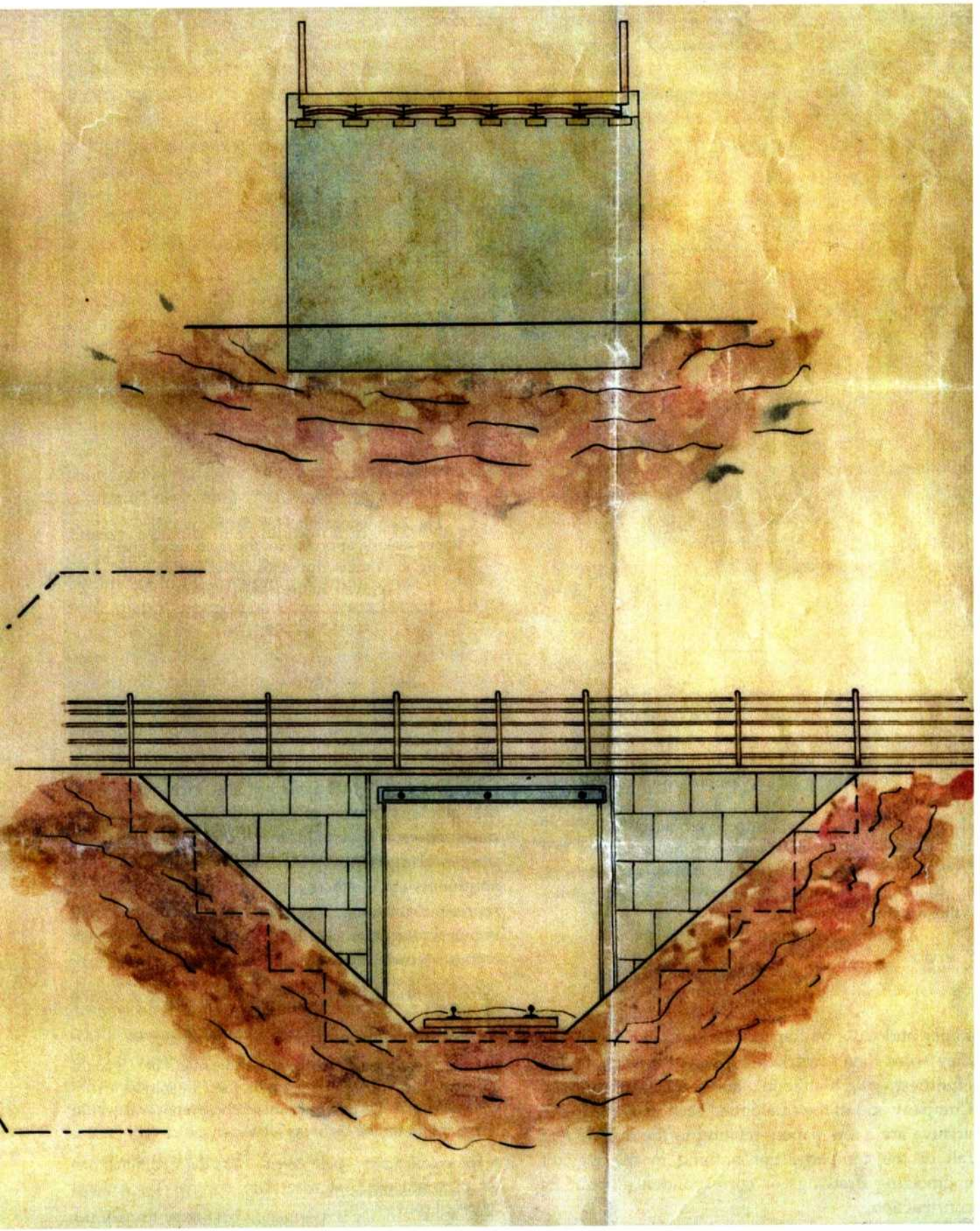
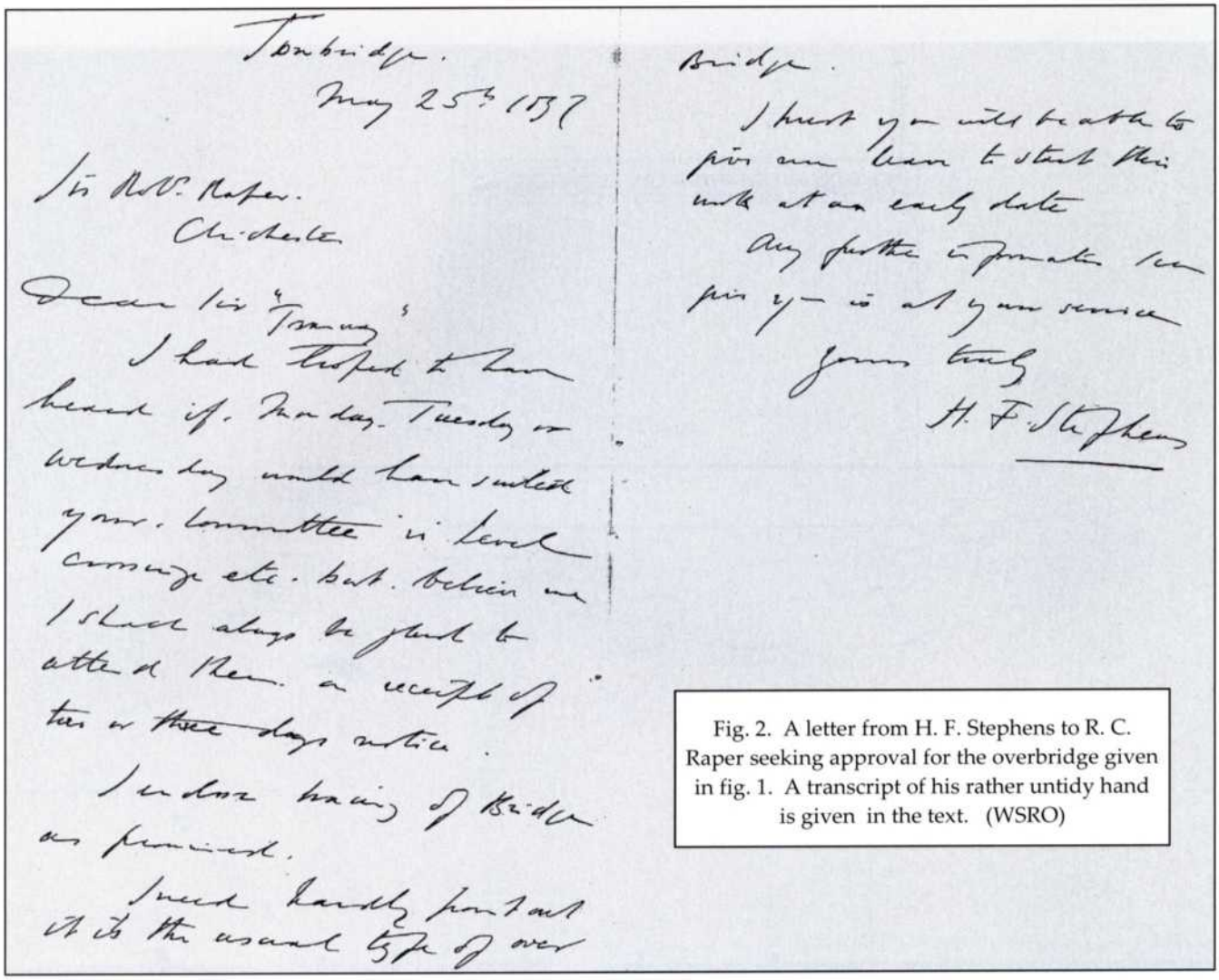


Fig. 1 A colour-washed tracing of a drawing for a railway overb



sing the Selsey Tramway that accompanied the letter in Fig. 2. (WSRO)



Tonbridge.
May 25th 1897

H. W. Raper.
Chichester.

Dear Sir & Friend,

I had hoped to have heard if Monday, Tuesday or Wednesday would have suited your Committee in Level crossing etc. but believe me I should always be glad to attend them on receipt of two or three days notice.

I enclose tracing of Bridge as promised.

I need hardly point out it is the usual type of overbridge.

I trust you will be able to give me leave to start this work at an early date.

Any further information I can give you is at your service.

Yours Truly
H. F. Stephens

Fig. 2. A letter from H. F. Stephens to R. C. Raper seeking approval for the overbridge given in fig. 1. A transcript of his rather untidy hand is given in the text. (WSRO)

Raper and Co - or Raper, Freeland and Tyacke as they were then - worked as legal advisors for the Hundred of Manhood and Selsey Tramway Company and in the catalogued section of the Raper archive are a few papers relating to the decline and fall of the company, but nothing in the way of engineering drawings or correspondence about its construction.

It is obvious here that Stephens was seeking urgent approval from the Committee* for this overbridge and had either made, or had caused to be made, a tracing of an original drawing. The tracing carries no title block, is devoid of dimensions or notes and is unsigned so we are told very little. It shows a very simple bridge over a cutting with mass-concrete abutments†, the faces of which are scored to represent masonry, carrying a superstructure of either wrought or cast-iron beams with brick‡ jack arches spanning between their bottom flanges.

With no title we are not given the location of the

* We are not told which committee this might be – it could be either the Tramway Company itself or maybe a sub-committee of the parish council whose approval would be necessary for the highway alterations.

† The colour used – pale green – was the traditional one for mass-concrete, but who is to say that The Colonel followed convention?

‡ He has used dark red, the traditional colour for brickwork, on the jack arches.

proposed bridge and, as the letter is equally vague, the Committee were obviously expected to know all about it. However, if the proposal was executed it can only be the bridge at Bridge Halt near Selsey, that being the only overbridge on the line and built to carry the main Chichester-Selsey road. At that point (Grid Reference SZ 857939), the railway was in a cutting making a level crossing, which would always have been the Colonel's preferred option, impossible. This drawing shows that the proposed bridge would be over such a cutting.

Interestingly it was planned to have the terminus of the line here, thus saving the expense of crossing the road, but at the second AGM, held on 1 July 1897, the Company Secretary, Walter Lintott, announced that the line would be extended to take it a little closer to Selsey. Unfortunately by the time of the official opening, on 27 August 1897, the bridge had not been completed so services had to terminate short of their destination at Bridge Halt, which they continued to do until 14 November 1897.[3]

There is a picture of a train near Bridge Halt on page 16 of Edward Griffith's *The Selsey Tramways*[4] with the bridge in the background, from which it can be seen that it bears a striking resemblance to the structure in the drawing. The only variance would seem to be that the concrete was not scored to represent masonry, doubtless the result of more penny-pinching. This, and the date of Stephen's correspondence, would seem to confirm that the drawing and letter relates to the structure at Bridge Halt.

The question then has to be asked whether this tracing was made by "The Colonel" himself. Alan Blackburn, a fellow railway civil engineer, has made a study of many of the known drawings relating to 'The Colonel Stephens' empire and he advises me that they were generally signed, but not by Stephens, implying that either Stephens used a draughtsman to work up his ideas or they were the designs of another engineer. At this time Stephens was a young man of 28 and his sole employee was W. H. Austen, his "outdoor assistant", who was only 19[5] so his office was not exactly awash with either staff or experience. As such he may have had to suffer the expense of engaging a consultant for structural matters such as these.

Alan Blackburn's view is that Stephens used a number of standard designs for all his lines that were then simply copied and given to the respective contractors when the need arose. This theory is borne out by the fact that the Hundred of Manhood and Selsey Tramway drawing is virtually identical to one for an overbridge on the much later East Kent Railway[6] so, however it was procured, the Colonel got further use out of the design.

Whatever its parentage this is an interesting drawing as it can be attributed positively to the Selsey Tramway, and it would be interesting to know whether, apart from the route surveys, any other civil engineering drawings of this line have survived.

The site of Bridge Halt is near the present police station, but no trace of either the platform or the bridge is to be seen there today.[7]

Acknowledgments

My thanks are due to the ever-patient staff of West Sussex Record Office who gave permission for the drawing and letter to be reproduced, to Alan Blackburn for giving his views on the drawing and to John Blackwell, Chairman of SIAS, for commenting on the draft and giving me the benefit of his vast knowledge of Colonel Stephens and his empire.

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5. I am indebted to John Blackwell, another Colonel Stephens authority, for this information.
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CVA / KEARNEY & TRECKER MACHINE ASSEMBLY PLANT, EATON ROAD, HOVE

Peter Groves

Hove machine tool manufacturer CVA was once one of the largest manufacturing employers in the area. At its peak in the 1960s over 2000 staff were employed at seven locations around the Brighton area[1]. One of these locations was the Machine Assembly Plant in Eaton Road, right in the centre of Hove.

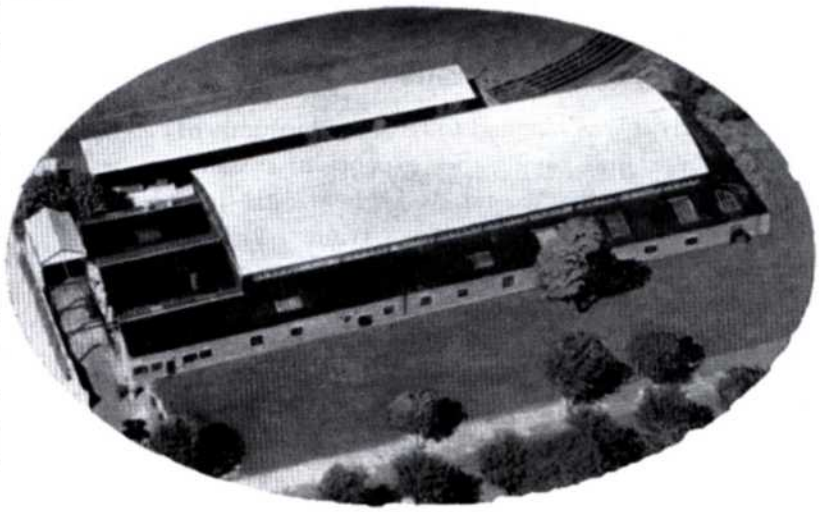
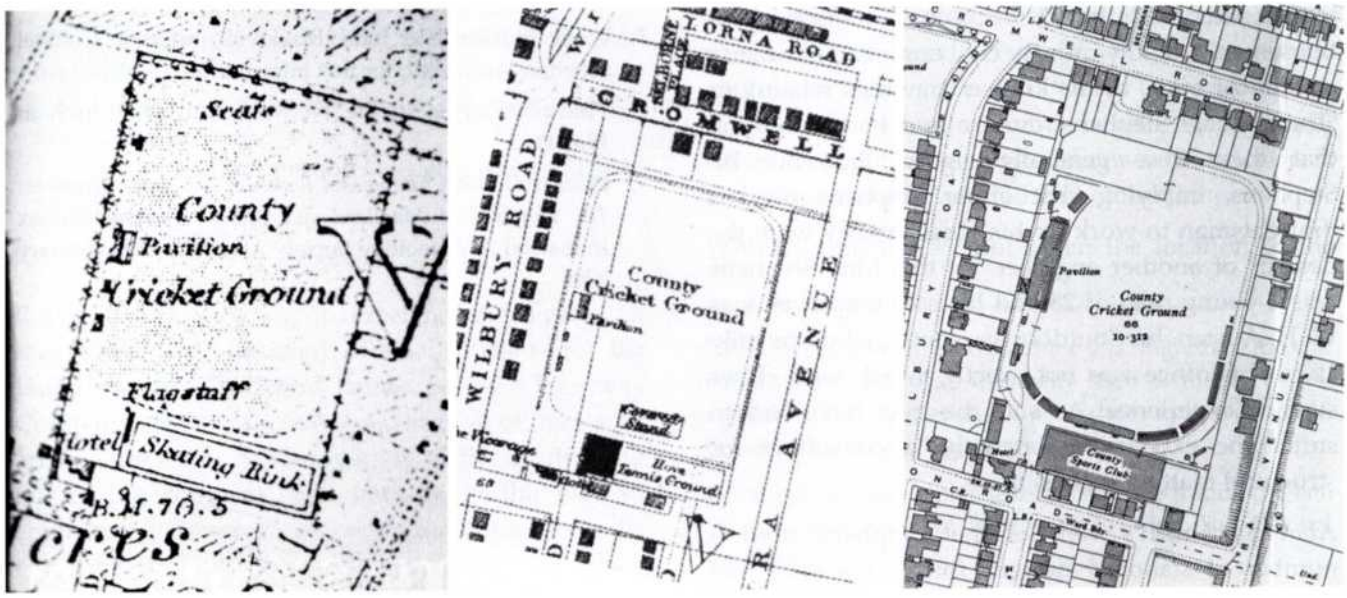


Fig. 1 CVA Eaton Road, Hove, c.1950

The Company had expanded during World War II and in 1946 the Eaton Road Assembly Plant was acquired. The building had previously been an army drill hall, and was located next to the Sussex County Cricket Ground, adjacent to the main entrance and the Cricketers Public House[2]. Ashdown, the large block of flats with frontage on to Eaton Road, currently stands on the site, which was once a hive of industrial activity. Fig. 1 shows an aerial view of the factory with the cricket ground just visible at the top. The curved seating can just be seen at the top right.

Sussex County Cricket Club was formed in 1839. There were three locations in the Brighton & Hove area where they played before finally acquiring the Eaton Road site in 1871 from the trustees of the Stanford Estate[3]. The area in the south-east corner of the ground, which was to become the assembly plant, is marked as a Skating Rink in the 6" Ordnance Survey map of 1873. Bacon's map of 1896 has the same area is marked as Hove Tennis Ground. In the Godfrey Edition of the Ordnance Survey map of 1930 the area is marked as the County Sports Club. See fig. 2.

A number of large machine tools were assembled at the Eaton Road factory, one of which was the CVA



1873 1896 1930

Fig. 2 Sussex County Cricket Ground between 1873 and 1930

Fig. 3 1000th Automatic Lathe under final test at Eaton Road, Hove, c.1949

Automatic Lathe. This lathe was developed by the Company in Portland Road Hove during the early 1940s and the first single spindle automatic lathe was completed in 1945[4]. During the late 1940s and early 1950s these were being assembled at the rate of 33 a month, and a waiting list to purchase grew. This lathe was to become quite famous in the precision engineering industry, and eventually there was a full range of different models, which were exported all around the world. Fig. 3 shows the production line and the lathes under final test. The size of the factory can be appreciated. The significance of the photograph is that the lathe in the foreground was the 1000th off the production line. The number can just be seen attached to the lathe.

Fig. 4 Milling Machine Assembly Line at Eaton Road, Hove, c.1965

Another product range assembled at Eaton Road was the Kearney & Trecker milling machine. These machines were designed in the USA, by Kearney & Trecker Corporation, one of the biggest Machine Tool manufactures in the world. Agreement was reached with CVA in 1947 to manufacturer them under licence in Hove. The first milling machine was assembled in Eaton Road in 1948[5]. The major components for both the CVA automatic lathe and the range of Kearney & Trecker milling machines were cast at the Portland Road foundry. Some of these castings weighed up to 2 tons. They were then transported to Littlehampton where, in the 1950's the Company had its Heavy Machine Shop. Precision slideways were then machined onto the castings, before they were transported back to Eaton Road for final hand scraping* and assembly. Figure 4 shows the milling machine assembly line.

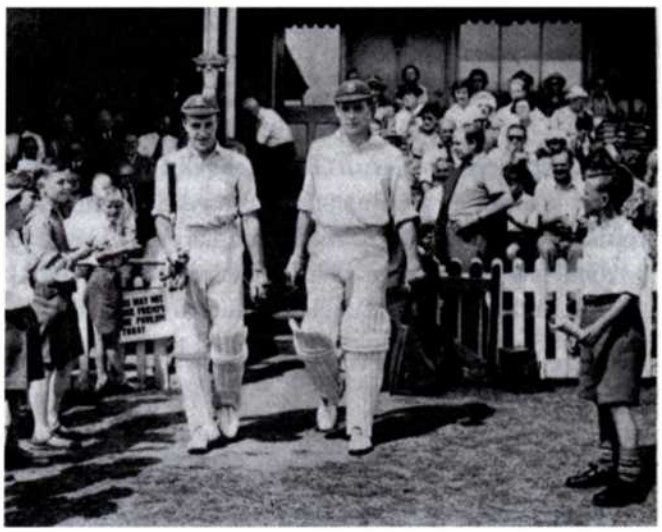


Fig. 5 Doggart and Shepherd at Hove c.1950

Cricket was of great interest to many of the employees. The rear wall of the factory yard backed onto the cricket ground. At tea break and lunch times in the summer the rear wall was crammed with employees watching the match for free. During important matches there was a temptation to sneak out for a quick check on the score during work time. The assembly manager Bob Morris had his hands full to keep minds on the job! Fig. 5 shows batsmen Doggart and Shepherd coming out after lunch. The Reverend David Shepherd was later to become the famous Bishop of Liverpool, who sadly died in 2005.

Another temptation to some of the workforce was the Cricketers Public House adjacent to the factory. It was not unknown for the manager Bob Morris to have to check the pub at the end of the lunch hour on Friday. Anyone who had drunk too much would be sent home for the afternoon!

* See note on hand scraping on page 28

Fig. 6 CVA Home Guard c.1944.

Bob Morris joined CVA as a 14 year-old apprentice in 1935 at the Portland Road factory. By the outbreak of World War II he had almost completed his apprenticeship. Like his chums he went to join up to fight, but was refused due to his "reserved occupation". His skills were much needed by the country in manufacturing, particularly building machine tools, which are the heart and start of every manufacturing process. Barely 20 years old, Bob joined the Home Guard; CVA had their own company. Fig. 6 shows the CVA Home Guard taken about 1944. Bob Morris moved to the Eaton Road factory soon after it opened in 1946 and was quickly promoted, firstly to supervisor and then assembly manager, before he was 30 years old[6]!

The range of CVA automatic lathes and milling machines were to prove to be a great success for the company during the 1950s and '60s. The machines were renowned for their quality, reliability and value for money. Thousands were sold in the UK, Europe and around the world. Fig. 7 shows Anthony Wedgwood Benn (Tony

Fig. 7 Anthony Wedgwood Benn far left, 1967

Fig. 8 Bob Morris and his family outside Lancaster House

Benn) Minister of Technology, examining a complicated steel spiral produced on the S Series Universal Milling Machine, which had been assembled at Eaton Road in 1967.

The pinnacle of this success was the announcement on 21 April 1969 that the Company had been awarded the Queens Award to Industry for Export Achievement. CVA was one of only 99 companies in the country to receive the award in that year, and the only one in Sussex. Special notices, signed by Bill Neill, the Managing Director, were posted on notice boards around the Company, paying tribute to all employees for the teamwork, which had led to the award. Speaking later on Radio Brighton Mr Newing, the Director of Sales, explained that exports sales had increased by 173% in the previous three years. In particular new markets had been opened up in Brazil, Mexico and Argentina, previously dominated by German and US manufactures. Almost 38% of everything manufactured by the Company had been exported[7]. The following year, further individual awards were made, and it was announced in the Queen's Birthday Honours List, that Bob Morris was to be awarded the B.E.M. in recognition of his services to the exports drive. Fig. 8 shows Bob and his family outside Lancaster House in London after being presented with his B.E.M. by the Rt. Hon. Sir John Eden, on behalf of Her Majesty the Queen[8].

Assembly of large machines continued at Eaton Road right up to the end of 1969. Since 1957 the US machine tool manufacturer, Kearney & Trecker Corporation, had a controlling interest in CVA, and their plans were to

Fig. 9 Closure of Eaton Road Assembly Plant 1969

centralise production at the new industrial estate at Hollingbury. Eaton Road closed late in 1969 with production and staff being moved to the new estate[9]. On the last day before the plant closed all 140 employees gathered with Bob Morris by the Eaton Road entrance for a last photo.

Its now not easy to imagine the industrial activity that once went on at Eaton Road. If you walk past the entrance to the Cricket Ground, Ashdown has a small frontage onto Eaton Road. However as cricket followers who go to the matches will know, once inside the ground, the large size of the rear of Ashdown can be appreciated, running almost the full length of the south side of the pitch. The householders in the flats now have an even better view than the CVA staff had all those years ago!

Author's note on hand scraping

Hand scraping is a technique once used extensively in the machine tool industry, which has now almost died out. The technique was used typically on machine slideways, to improve geometric and positional accuracy, reduce friction and wear between two moving mating cast iron surfaces.

The two (typically very large) cast iron slideway mating surfaces would first be machined as flat and accurate as possible and then (at the Eaton Road factory) the scraping process would start. A calibrated granite surface plate of extreme "flatness accuracy" would be coated very thinly with engineer's blue (very fine blue grease). The slideway component would be turned upside-down on the surface plate so that the machined surface mated with the engineer's blue. The component would then be pushed back and forth so that the blue would pick up just on the high points on the machined face. The fitter would then turn the component over and using a large file, which had had its front edge modified, scrape and remove the high points, just a micron at a time. This process would be repeated many times over until the complete surface was perfectly flat, showing blue all over. Finally, the surface once flat, would be mottled with the scraper, putting a uniformed pattern approximately 1 micron deep (like a curved triangle, or shape of a bird's wing) all over the surface, in uniformed lines. These one-micron pockets would trap and retain oil between the two surfaces, reducing the friction, and thus the wear!

This process has almost been replaced by modern materials like PTFE, or modern technology like Linear Bearings.

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Photograph Credits

Figs. 1,3, 4, 6, 7 & 8 are from the author's collection taken from various CVA publications.

Fig. 5 courtesy of Tony Brown

Fig. 9 courtesy of John Pawsey

Further reading about CVA/Kearney & Trecker

Sussex Industrial History, issues 21, 23 & 33

Further short stories of local interest by Peter Groves

www.mybrightonandhove.org.uk

About the Author

Peter Groves was born in Brighton in 1954 and has lived in the Brighton and Hove area all his life. In 1970 Peter joined Kearney & Trecker where he served a fully indentured 4-year apprentiship in mechanical engineering. He worked at Kearney & Trecker for over 20 years until it went into receivership in January 1994. He then joined the Brighton electronics company Amplicon Liveline where he spent 6 years as Quality Manager before moving to specialist furniture manufacture SBFI in Newhaven in 2000, also as Quality Manager. Peter has been a member of SIAS since 2003 and lives in Hove with his family.

THE COWFOLD AND HENFIELD TURNPIKE TRUST 1771-1877

PART 1—THE OLD ROAD

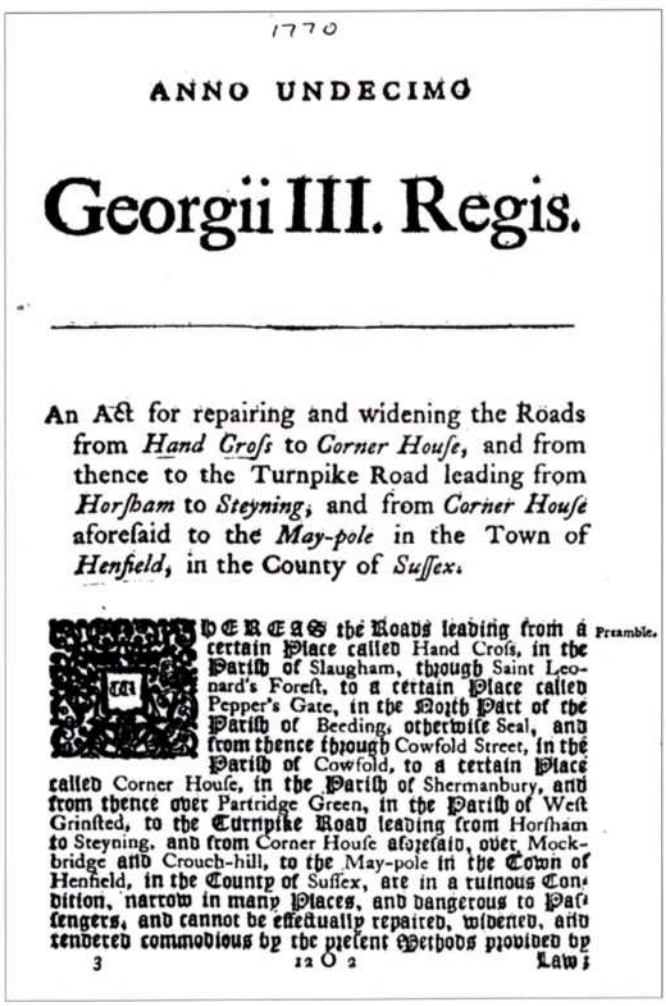
John D. R. Townsend

Before the mid-eighteenth century roads in the Sussex Weald, especially in winter or spring, were notorious because of their deplorable condition. Dr John Burton, an Oxford don, relates visits to his mother and step-father, Dr John Bear, Rector of Shermanbury in the 1730s and 1740s. He wrote about "entering a land desolate and muddy" where "our horses could not keep on their legs on account of the roads".[1] Although some of the roads he used on his approach to Sussex would have been improved by turnpike trusts, this movement was in its infancy in the County as a whole before the 1750s. Most roads were maintained by the parishes without enthusiasm to an indifferent standard.

Yet there were landowners and farmers who looked north towards London. Dr Burton noted the weekly market in Horsham "where salesmen from London buy with ready money so many thousand of the chicken race". He also commented on the fine beef produced in the district "worthy of ... Lord Mayors' banquets". Arthur Young claimed that after the completion of the turnpike road from Horsham to London in 1756 rents in the area rose from 7s to 11s an acre.[2] London was also the centre of government, the law, business and fashion. The nobility and gentry wanted easy access to it. At the same time, those interested in road improvements were looking south to the coast. Sea-bathing had been practised along the north-east coast of England in the late seventeenth century. Early in the following century it began to be taken up on the south coast and in 1736 Rev. William Clark, Rector of Buxted, took a holiday at Brighthelmstone.[3] He occupied his time sea-bathing in the morning and "riding out for air'" in the evening. He found the place pleasant but dull. Less than twenty years later publicity was given to the town by Dr Richard Russell of Lewes enhancing its fame. Visitors included royalty and its position was assured after the arrival of the Prince of Wales in 1783.[4]

Establishing the trust

An advertisement in the *Sussex Weekly Advertiser* of 18 June 1770 announced a meeting on the 26 June at the *George* in Henfield to consider the establishment of a turnpike road "from the South Downs, through the town of Henfield, over Mock-bridge, into the Turnpike-road now leading to Horsham". The road envisaged using existing highways in the main and it was proposed to commence the turnpike at the foot of Beeding Hill where a junction would be made with the Beeding and Horsham Turnpike of 1764. From this point the road would run north to Henfield and Corner House in the parish of Shermanbury, where a short branch to the west would extend to Partridge Green and a further connection would be made with the Beeding to Horsham Trust road. The proposed turnpike would then proceed north again to Cowfold and then north-east across St Leonard's Forest to connect with the newly established (1770) turnpike to Brighton via Cuckfield at Handcross. The next meeting at the *King's Arms*, Cowfold, on 22 August considered the report of the surveyor and it was now time to prepare the petition to Parliament and the details of the expected bill.[5] It was not until the 13 December 1770 at a meeting at Cowfold that the matter was finally decided. The southern terminus of the Trust was cut back to the Maypole in Henfield which stood



1770

ANNO UNDECIMO

Georgii III. Regis.

An Act for repairing and widening the Roads from *Hand Croſs* to *Corner Houſe*, and from thence to the Turnpike Road leading from *Horſham* to *Steyning*, and from *Corner Houſe* aforeſaid to the *May-pole* in the Town of *Henfield*, in the County of *Suſſex*.

WHEREAS the Roads leading from a certain Place called Hand Croſs, in the Parish of Slaugham, through Saint Leonard's Foreſt, to a certain Place called Pepper's Gate, in the North Part of the Parish of Beeding, otherwiſe Seal, and from thence through Cowfold Street, in the Parish of Cowfold, to a certain Place called Corner Houſe, in the Parish of Shermanbury, and from thence over Partridge Green, in the Parish of West Grinſted, to the Turnpike Road leading from Horſham to Steyning, and from Corner Houſe aforeſaid, over Mock-bridge and Crouch-hill, to the May-pole in the Town of Henfield, in the County of Suſſex, are in a ruinous Condition, narrow in many Places, and dangerous to Paſſengers, and cannot be effectually repaired, widened, and rendered commodious by the preſent Methods provided by Law;

Preamble.

3 12 O 2 Law;

Fig. 1 Act of Parliament of 1771 setting up the Trust

at the southern end of the High Street at Golden Square.[6]

The Act became law in 1771 (fig. 1) and the clauses allowed the appointment of trustees, permitted the borrowing of funds on the credit of the toll revenue, laid down the level of toll allowed, authorised the erection of toll gates and houses and created the offices of Clerk, Treasurer and Surveyor. Like other turnpike acts the powers were granted for 21 years after which they would need to be renewed.[7] The renewal act of 1792 not only provided permission for the Trust to continue its activities but gave powers to turnpike the road north from the *Crab-tree* in the parish of Beeding, through the parish of Nuthurst to Horsham.[8] This new section was referred to as the Branch Road and was administered separately from the original turnpike which was referred to as the "Old Road". Further renewals occurred in 1809[9] and in 1830.[10] The latter Act gave the Trust a new and final short road to maintain, linking the Old and Branch Roads, now Sandygate Lane (fig. 2).

Renewals were expensive; that in 1830 cost £466 4s 7d, an unwelcome burden on the Trust's funds.[11] This Act was to last 31 years, a helpful extension of the usual period. By the expiry in 1861 trusts were regulated not by individual local acts, but by general annual continuance acts until they were wound up.

The Administration of the Road

The affairs of the Trust were directed by the trustees, of whom 110 were named in the Act of 1771. Presumably they all backed the Petition to Parliament. Success in such a venture depended on the number and standing of the supporters of the scheme. Many of the trustees were local men. Miles Williams and John Woodward were the Rectors of Shermanbury and West Grinstead, respectively. Edward Wilson junior was the Curate at Ashurst. Sir Merrik Burrell Bt. lived in Shipley. Others may not have been so well known. Land Tax records show that John Margesson owned Offington Hall, Broadwater; Luke Spence came from South Malling but had property interests in Ashurst and West Grinstead; and "the Honourable George Lennox Esquire, commonly called Lord George Lennox", owned land in Chichester, Funtington and

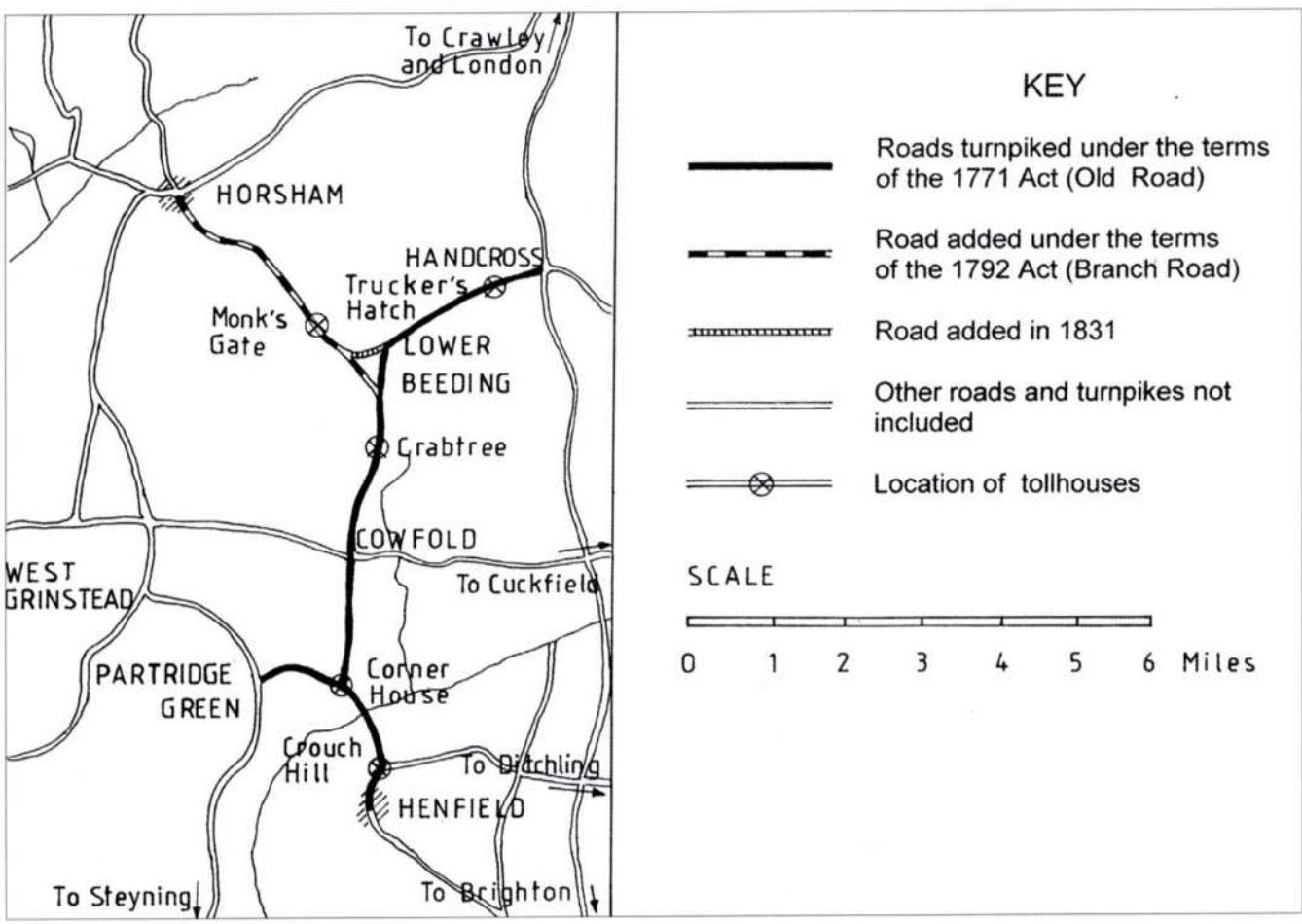


Fig.2 Map of the Cowfold and Henfield Trust (Ron Martin)

Rumboldswhyke.[12]

It is not immediately obvious what advantage most trustees derived from their position. The majority probably "lent" their names to the Trust without wanting to take part in it. Others, perhaps, were moved by the prestige attached to public office, or by the satisfaction of service to the community. Those like Luke Spence with local interests could hope to influence policy to their benefit. Frederick Weekes lived in Beckley near Northiam and wanted to be a trustee because he had property near the road.[13]

Replacements were chosen for those who had resigned or died and trustees seemed to be easy to find. Numbers willing to stand meant that an election could be acrimonious, as rival factions sought to increase their strength in the Trust. In 1838 J. L. W. Dennett sent a list of newly elected trustees to the Clerk and complained, "The Meeting consisted chiefly of the Borrers and their party so that we had no chance ... we were completely done having such a strong party of the Borrers against us."[14]

There was not, however, a comparable eagerness to attend the meetings of the trustees. They held a General Annual Meeting, and usually about two others in the year. They gathered in Cowfold at the *Red Lion* and in Henfield at the *White Hart* and the *George* - until, that is, counsel in London advised that under the Acts Cowfold was the only place where meetings could be legally held. Business transacted elsewhere might be invalid.[15] Henceforth, from 1842, all meetings took place at the *Red Lion*. Attendance was low. A return ordered by the House of Commons in 1848 showed that in the years 1843 to 1847 inclusive only nine trustees "acted as such"; and that in each year 1843 to 1846 there were three meetings with an average attendance of just over four; and that in 1847 there were two meetings with four and three trustees present.[16] What the return did not show was that a third meeting called in 1847 had to be abandoned for lack of a quorum (three); and there were times when nobody attended, as in March 1832.[17]

No doubt apathy affected many Trustees, but there were other reasons for low attendance. Mr Borrer asked the Clerk in 1837 whether the date of the next meeting could be changed because it clashed with "the Hickstead road meeting". Men willing to become active trustees were likely to serve on more than one trust. There was also the difficulty of travelling for those who did not live near the road. Writing from Brighton in December 1860, W. Boxall asked the Clerk to call the meeting intended for January towards the end of the month "as it then would be moon light, it would be very unpleasant for us to come home of a dark night".[18]

For whatever reason, business was in the hands of a small number whose names recur: Boxall, Dennett, Borrer, Hoper. The hospitality of their chosen venue rewarded them well for their trouble in attending. The twelve who met at the *White Hart* in 1833 enjoyed dinners, each costing 2s 6d, ale, sherry, port, brandy, sugar, cigars, tobacco, dessert, punch, brandy and water; and finally teas at 1s 6d each. Dinner for each trustee at the *Red Lion* in 1839 cost 2s 6d. The Surveyor, a mere "Mr" among so many Esquires, had to accept a cheaper one at 1s 6d. Possibly he had to eat apart.[19]

The Surveyor was William Kinchin of Clayton, near Hurstpierpoint. It is not known when he was appointed (he is first mentioned by name in 1836), but probably before the renewal Act of 1830. Whoever was in office then had his salary cut from £50 to £40 per annum at the second meeting of the renewed Trust.[20] The sum was reduced by stages until 1852, when it was set at £21 and remained so until the end of the Trust.[21] William Kinchin received other salaries, for he was Surveyor to at least two other trusts. By the early 1870s his letters to the Clerk were signed by his daughter, Ann Kinchin, which suggests failing health.[22] The final accounts of the Trust in 1877 carry the name of William Wood of Hurstpierpoint as the Surveyor.[23]

Equally long-serving was William Kinchin's colleague Thomas Coppard, the Clerk from 1822 to 1876. He was the third to hold that office. Notices in the *Sussex Weekly Advertiser* about the establishment of the Trust were issued by William Ellis. He called the meeting at the *Bull's Head*, by Mockbridge in Henfield, on 20 May 1771 to put the new Act into operation.[24] At his death in 1806 he was succeeded by Horace Ellis of Horsham, Clerk of the Peace, presumably his son. The latter's contract gave him an annual salary of £1, plus one guinea for every meeting in Horsham and two guineas for every meeting in Cowfold. This contract, with pencilled additions, was used for the appointment of Thomas Coppard in 1822 on the resignation of Horace Ellis.[25] The new Clerk was a partner in the firm of Coppard and Rawlison, attorneys of North Street, Horsham.[26] He later took offices in Henfield.

In 1833 the trustees set his salary at £30 per annum, exclusive of his charges as solicitor. It was reduced to £15 in 1843 and discontinued altogether in 1845.[27] However, it was restored in 1852, at £20, and his legal bills and expenditure on printing and advertising continued to be met.[28]

Like William Kinchin, Thomas Coppard sought work with other trusts. When in 1841 the post of Clerk to the Henfield Road (from Henfield to Poynings and Devil's Dyke) became vacant, he canvassed for it among the trustees of that road. He took bitter comfort from the fact that he lost the election by only one vote to his rival "notwithstanding he was supported by the interest of the Borrer Family." His career stretched almost to the end of the Trust. By then, "through failing health, and at times great pain" he felt bound to send a letter (January 1876) to the trustees. It was written by an office clerk, but signed by himself in a very spidery fashion ("it is with great difficulty that I can use a pen"). He asked them to appoint William Hodson, his nephew and business partner, joint Clerk.

In December 1876, he died, and the trustees appointed William Hodson of Henfield, solicitor, sole Clerk for the remaining few months of the Trust.[29]

The Treasurer, unpaid, was the final member of the trio who implemented the decisions of the trustees. The first was James Margesson of Shermanbury, a trustee. It fell to him in 1772 to collect the capital needed to begin the work on the road. Then there is a gap until 1830, when Richard Constable, Vicar of Cowfold, was appointed under the renewal Act.[30] Others were John Hamlin Borrer of Brighton, Thomas West of Brighton, and Eardly Nicholas Hall of Brighton, all trustees. The Trust's bank was the Union Bank in Brighton, whose Directors in 1839 were Messrs Hall, West, Borrer and Hall.[31] The link between the Treasurers and the Directors seems certain.

The Finances of the Trust

The first major task of the Trustees was to raise the capital for work on the road. On 24 June 1772 James Margesson, Treasurer, issued bonds or debentures to 36 creditors or mortgagees. The bonds were in values of £25, £50, and £100. Each earned 4% interest and lasted for twenty years, that is until the expiry of the 1771 Act in 1792. Then, it was hoped, the money received in tolls would be sufficient to repay the creditors. James Margesson lived at Outlands (now Oatlands), just north of Mockbridge. He continued to issue similar bonds, with reduced 'lives', until 1775.[32] He collected £2,225 on 24 June 1772, and a further £500 up to 1775, providing £2,725 for expenditure on the road.[33]

Over the years the debentures were assigned to others ("for a valuable consideration") and left in wills. John Smart, "Keeper of His Majestys Goal (*sic*) in Horsham" amassed the largest single holding; £625.[34] Interest was paid regularly; £101 in 1849, for example.[35] After Sir Robert Peel's introduction of income tax in 1842, payments were made clear of tax.[36] The mounting financial difficulties of the Trust after about 1850 forced the trustees to cut the interest rate in 1862 from 4% to 1%, and the mortgagees were asked for their consent. The Clerk explained that "The Revenues of this Road are wholly insufficient to maintain it, and the payment of the Interest on the Principal monies secured upon the Tolls". The reaction of Dr Hunt of London was probably typical. "I have signed the instrument consenting to the reduction and I conclude the reduction will take place whether I do or do not consent."[37] The bonds steadily lost their value. P L Gates of London told the Clerk in 1862 that he would gladly dispose of his debenture (£100) "if you know anyone who w(oul)d give a reasonable sum for it".[38]

The trustees made occasional attempts to pay off the debt of £2,725, which should have been cleared in 1792. In 1845 they decided to allocate £150 for this purpose, to be distributed by lot in six shares of £25 each.[39] The Clerk wrote to an investor that his security no. 7 was one of the numbers drawn and that he would be paid with interest.[40] The trustees tried a different method in 1872. They invited the creditors to state what they would accept in discharge of the debt owing to them, with a total limit on repayments of £200 12s 6d. The lowest bids were successful. Mrs Faulconer, for example, received £75 for her bond of £300. Altogether the Trustees were able to reduce their total debt by £750 for an outlay of £187 15s 0d. They paid the remaining £12 17s 6d into a sinking fund for use in a future such exercise.[41] When the Trust was wound up in 1877 the debt stood at £1,125 0s 0d.[42] Creditors received 3s 6d in the £ as a final settlement. J. L. W. Dennett's investment of £150 was worth only £26 5s 0d.[43]

The main income of the Trust came from the tolls.

The Act of 1771 set them out.[44]

> For every Coach, Chariot, Landau, Berlin, Hearse, Chaise or Calash drawn by Six or more Horses, Mares, Geldings, or Mules, the Sum of One Shilling and Six-pence; or drawn by Four Horses, mares, Geldings or Mules, the sum of One Shilling; or Drawn by Two Horses, Mares, Geldings, or Mules or One Horse, Mare, Gelding, or Mule, the Sum of Sixpence.
>
> For every Waggon, Wain or Other Carriage, going with wheels less than Nine Inches in Breadth, the Sum of One Shilling and Sixpence; or with Wheels Nine Inches in Breadth, the Sum of Sixpence.
>
> For every Horse, Mare, Gelding or Ass laden or unladen, and not drawing, the Sum of Two-pence.
>
> For every Drove of Oxen, or other Neat Cattle, the Sum of Ten-pence per Score, and so in proportion for every greater or less Number. And for every Drove of Calves, Sheep, Lambs or Swine, the Sum of Five-pence per Score, and so in proportion for every greater or less Number.

There were exemptions. No tolls were charged, for example, on the transport of corn or hay at harvest time; or on carriages at election times; or on residents in the relevant parishes going to church or chapel on Sundays. Later revisions of the tolls refined some of the details. In 1835 to "Coach, Chariot, Landau ..." were added "Machine, Chaise, Tax Cart or other Cart, Car, Fly, Chair, Caravan", no doubt to help the collectors to apply the correct toll.[45] Inevitably difficult cases arose. In 1844 Mr James Stone of Cuckfield objected to a toll of 5s for taking a "sowing machine" through the gate at Handcross. The Clerk accepted the complaint and directed the Collector to refund the money.[46] A second refinement was to introduce different charges for the width of wheels. The narrowest (less than 4½ inches) paid the most because they caused the greatest damage to the road; the widest, (over 6 inches) the least.

To stop travellers from evading tolls by using tracks which bypassed gates, the trustees were authorised in 1771 to set up locked side gates across these "Wapple Roads".* Owners and occupiers of property on them were provided with keys to gain free access to the turnpike. Parcel no. 107 on the Shermanbury tithe map (1840) is called Whapple Gate Field, through which a track ran westwards from the turnpike to Partridge Green.[47] The trustees could also erect gates across any "Lane or Bye-way". Such a "Bye-way" left the turnpike north of Mockbridge and led eastwards to the water mill, Shermanbury Place (the seat in 1771 of John Challen Esq.), the Church, and, nearly a mile further, the Rectory (now Waterperry House, privately owned, and still not easily accessible). Travellers along it towards Albourne could avoid tolls at the Crouch Hill Gate, until a locked gate closed it. In February 1781 the gate was the scene of a spectacular confrontation between Mrs Challen and the Rector, Miles Williams. The latter and John Challen had been at loggerheads over tithes.[48] The quarrel developed when the Rector was charged by his neighbour with brawling in the churchyard; and came to a head with a dispute over the keys to the gate. The Rector's two daughters, returning from a visit to Horsham, found the gate chained and the way to the Rectory blocked, but their father was waiting with "the Necessary Accoutrements for Action" and filed through the chain. Mrs Challen was "in a violent rage". When the Rector represented to her "the Impossibility of his permitting his Family to remain abroad all night", the "Virago" replied that "it was the most proper place for them".[49]

Despite occasional disputes at the regular toll-gates, proceedings never became as acrimonious as this. An appeal to the Clerk was possible, as in the case of Mr James Stone mentioned previously. Managing the tolls was ultimately the responsibility of the trustees. They could assume it themselves, or, preferably, let it by auction to an individual, who would provide the Trust with an assured income. In 1830 the tolls were leased for one year from Michaelmas to Elisha Ambler of Dalston, Middlesex for £700. The lessee had to offer two sureties. One of Elisha Ambler's was Lewis Levi of Brompton, Middlesex. These two gentlemen were well known in the world of turnpikes and tolls. Sidney and Beatrice Webb call Lewis Levi "the Napoleon of toll-farmers". He was contracted at any one time for as much as £500,000 a year, one-third of the total toll revenue of the Kingdom. Also as farmer of post-horse duty he had further contracts worth £300,000 a year.[50]

Sometimes the tolls for the four Old Road gates were put up in one lot, at other times separately. The latter was the case in 1831, when Elisha Ambler was again the successful bidder at £604. He offered most for the Corner House and Crouch Hill Gates (£192 each) and least for Truckers Hatch (£40), with Crab

*W. D. Parish's *A Dictionary of the Sussex Dialect* (1875) gives "Whapple-Way. A bridle way through fields or woods, where horses can go but carts cannot. Sometimes written Wapple"; also "Whapple-Gate".

Tree in between (£180). The order gives an indication of the revenue raised at each gate.[51] The gates at Corner House and Crouch Hill were usefully situated at junctions with other turnpikes, whereas at Handcross the main line of traffic through Cuckfield passed Truckers Hatch by. The sum of £645 was what the lessee had paid in 1835, and was a guide for the next year's auction, when the trustees set a reserve of £700. The bidding on 5 August reached only £657, and the public auction was abandoned. Privately, Robert Everett offered £670. The Trustees accepted it.

London bidders and sureties remained dominant until August 1837 when there was no bidding. The trustees tried again in September, but the reserve they set was not reached. The collection of the tolls reverted to them.[52] When again in 1838 no acceptable offers were made, John Bright of Findon, gardener, privately and successfully tendered £800 for fifteen months to December 1839.[53] This pattern endured for the next few years. Sometimes there was competition for the tolls, sometimes none; in which case the trustees had to administer them, or else someone would step in with a private offer. The advent in 1852 of Mr. James Batterbee of Preston, innkeeper, changed the situation. From then to the expiry of the Trust in 1877 he was the only named collector of the tolls. He had a particular interest in the Trust, as will appear later. In 1854 he made a contract for three years with the trustees, paying £345 per annum. There was no more competitive bidding for the tolls. This arrangement gave some financial stability at a time when income was becoming uncertain.[54] It was replaced in 1867 by annual contracts.[55]

From Michaelmas 1829 to Michaelmas 1830 a week-by-week record of the takings at the four gates was kept. Income over the year was £614 10s 11½d.[56] Thereafter, the general trend was downwards. Receipts from tolls over the final ten months of the Trust's existence in 1877 were £280.[57] By 1876 the situation was desperate. Meeting at the *Red Lion* in February, the trustees found that the estimate of expenditure for the current year was "far in excess of the Income of the Road". Therefore they applied to the Justices for an order to require the parishes through which the road passed to pay a portion of the highway rates they levied. These rates replaced Statute Labour in 1835 and were applied to parochial roads not turnpiked. The order granted (under an Act of 1841[58]), the Surveyor worked out what would be the cost to each parish if it had to maintain its stretch of the road. Cowfold, with the longest, was assessed at £80 5s 10d; West Grinstead, with the shortest, at £15 19s 3d.[59] The final accounts in 1877 show payments from parishes, £210 6s 4d: a valuable sum to add to the yield from the tolls.[60]

The Trust also received a small income from Scrapings and Parings. They seem to refer to the debris that accumulated on the road, and there were those who were happy to compete for the privilege (and to pay the trustees) of removing them. Indeed, the Clerk received an enquiry in 1848 from 13 Gloucester Road, Hyde Park Gardens, Paddington, about when and where the next sale would take place for "Disposing of Scrapeing and Sideing for the Cowfold Roads".[61] Almost certainly manure was the most sought after. Counsel in London responded to the Clerk's request in 1842 for advice about various matters by affirming that scrapings and parings from the sides of roads were not liable to tolls if bought for manure.[62] As with tolls, the right to take the scrapings and parings was put up for auction each year. The Old Road was divided into four sections:-

a. from Henfield to Partridge Green,
b. from Corner House to *Crab Tree*,
c. from *Crab Tree* to the *Plough inn*, which stood, and still stands, at the eastern point of the triangle of roads in Lower Beeding,
d. from the *Plough* to Handcross.

In 1845 the highest bidders were:

a. Mr Hoper at £4 15s 0d
b. Mr Pratt at £2 10s 0d
c. Mr Beauclerk at 10s.
d. Mr Kinshin (the Surveyor?) at 10s.[63]

The income from this source moved up and down from year to year, generally downwards because, it would seem, of the reduced traffic on the road. In 1873 only £3 13s 0d was raised;[64] and the next year the trustees decided that the scrapings and parings should "be left to the Surveyor to offer them to the owners or occupiers of .the property thro(ugh) which the Road passed, and at whatever sum he thought just".[65] In the final accounts of the Trust in 1877: "Revenue from incidental receipts, viz ., Scrapings of the Roads £1 15s 0d".[66]

The Maintenance of the Old Road

The Old Road, from Handcross to Partridge Green and Henfield, was 12 miles 3 furlongs 0 yards long.[67]

The cost of its maintenance and of improvements to it consumed most of the Trust's income. In 1849 £221 1s 2½d was spent out of £404 8s 2d;[68] in 1876 £462 14s 6d out of £496 17s 1d.[69]

Manual labour was a significant expense under this heading: nearly half in 1849. The pay for roadmen in 1843 was 13s. per week.[70] There were four of them in 1851. The census returns list one in Henfield, one in Shermanbury and two in Cowfold. A committee, charged in 1852 with reducing expenditure, recommended that three, instead of four should be employed, two at 11s per week and the third at 12s. Two years later these wages were increased by 1s per week.[71] Other men (and women and children too) were undoubtedly employed on a casual basis when a backlog of work built up. Their tools were another expense. Malls (heavy hammers) needed new handles, picks had to be sharpened, shovels and barrows mended, new road hoes and stone hammers provided.

Team labour was needed: the carters who moved the materials for the road to the point of use. One long-standing employee was Phoebe West: widow, yeoman (sic) and farmer according to the Cowfold census returns 1841-71. She carted (or had a labourer to do so) flints, stones and drain pipes. She earned £8 2s 6d in 1848. John Grinsted and Joseph Jupp carted 300 tons of flints at 3s per ton between Henfield and Handcross in 1874.[72]

Finally there were the tradesmen, like the carpenters and bricklayers, who repaired and improved toll-houses, gates, fences and bridges. One of them was William Vinall of Cowfold, bricklayer, whose work at Cotlands Bridge is described below. Their bills amounted to £24 1s 1d in 1849.[73]

Precise details of the construction of the road are lacking. Its maintenance was probably influenced by the ideas of John Loudon McAdam who was active in the county. T. W. Horsfield noted that "the celebrated M'Adam" made the turnpike road from Horsham to Crawley;[74] and in 1817 he was adviser to nine trusts in East Sussex.[75] He enjoyed the support of the Post Office and the Board of Agriculture. In *Observations on the Highways of the Kingdom* he explained his simple technique.[76] Only layers of stones (broken if necessary) that would pass through a screen with one-inch openings were to be used, without any other materials. The passage of carriages would consolidate the road bed. Any ruts in a new surface could be filled by cross-raking. Thereafter "the whole mass will become like one solid smooth surfaced stone".

Although under the Turnpike Acts surveyors had the right to take the materials they needed wherever they found them (even on private property) on payment of compensation, this practice was uncommon. Bills like £7 2s 0d in 1836 for "Damage stone digging" were rare. The trustees bought gravel in 1832-33[77] and boulders in 1849,[78] but flint was preferred for surface repairs. Supplies were brought from the coast by barge up the River Adur to the wharf at Mockbridge.

Costs included river tolls and the wages of the bargemen. From 1850 to 1858, between 184 tons (1852) and 370 tons (1858) were bought each year.[79] William Winton of Steyning contracted to deliver at Mockbridge 214 tons of "good clean Flints & Boulders" at 4s 4d per ton.[80] Another supplier was James Batterbee, lessee of the tolls, whose interest and influence in the Trust was thus extended. The opening of the railway from Horsham to Shoreham in 1861 provided a new route for materials. In 1876 he arranged delivery of 638 tons of flints to West Grinstead, Partridge Green and Henfield stations. At the same time he had delivered 62 tons to Crawley station with carriage from there, presumably to the Handcross section of the road, all at a cost of £208 10s 4d.[81] The trustees maintained their confidence in him even though they complained once about "the dirty state of the Flints supplied by him ... there is nearly one third of dirt in the materials seen".[82]

The road laid and the regular dressing of flints applied, the Surveyor could leave passing traffic to consolidate the work. When W. Boxall of Brighton wrote to the Clerk in December 1860, asking for the next meeting in January to be held at the end of the month, he gave a second reason. "... the Roads being freshly flinted makes it heavy traveling the flints will be considerably worked in by the time I mention and will make it better traveling".[83]

McAdam wanted roads "to be laid as flat as possible ...water cannot stand upon a level surface".[84] It seems he did not advocate special measures for drainage. However, the Trustees thought differently. They instructed the Surveyor in 1865 to make two new drains across the road, one near Dragons Gate in Cowfold (perhaps a whapple gate leading to Dragons Farm and beyond), and the other near John Grinsted's farm, probably just north of

Corner House. He had also to "introduce a new pipe drain at the foot of the hill from Crab Tree Gate to Cowfold."[85] Pipes—1050 of them, at two-inch diameter—came from the *Crab Tree* brickyard owned by Richard Hoper, a Trustee, in 1873.[86] The sun and the wind helped to remove surface water. Arthur Young recognised that their effectiveness was reduced in Sussex because of its "forest-like appearance (which) cherishes every drop of rain that falls" and sheltered the roads from the wind and sun. His remedy: "those detestable screens of hedge-rows must be extirpated". [87] The Surveyor would have agreed with this assessment of the problem, but not the extreme solution. He was content in 1856 to instruct the residents by the road to keep their "Hedges Trees and Fences along the sides of the said Turnpike Road Cut pruned and trimmed" so that the road "shall not be prejudiced and the Sun & Wind excluded therefrom."[88]

Improvements to the Old Road

Apart from directing routine maintenance, the trustees carried out major repairs and improvements to the Old Road. The Surveyor and his work-force concentrated on the southern section. Traffic there was heavier than between Lower Beeding and Handcross. As has been shown, bids for the scrapings and parings from the *Plough* eastwards and for the tolls at Truckers Hatch were low. Also the setting was important. Truckers Hatch stood at about 475 feet above sea level; the Maypole at about 100 feet. Problems caused by drainage, flooding, and weak bridges affected Cowfold and southwards. Geology, too, was influential. Henfield, Shermanbury and Cowfold lie mainly on the Weald clay: a difficult base for roads. The more tractable sandstone of the High Weald appears at Lower Beeding. The documents rarely mention the long Crabtree Hill through that parish, and the road beyond. It caused no particular difficulties, it seems.

The trustees' first project concerned Mockbridge. A notice in the *Sussex Weekly Advertiser* of 22 October 1792 announced that at the next meeting "a proposition will be made to the trustees respecting Mock-Bridge". What this was is unknown, but it must have referred to the rebuilding of the bridge. An inscribed stone on it recorded: "Erected and supported by the Trustees of this Turnpike. William Lane 1794".[89] He was probably the Trust's first Surveyor.

The next work at Mockbridge was carried out in 1833. The Trustees resolved to improve the road on each side of the bridge and secure its 'wings', thus promoting the safety and convenience of passengers.[90] The causeway was to be raised above the level of normal floods. But flooding could then be more severe on the upstream side of the bridge, where Shermanbury Mill stood. J. G. Challen and Robert Stephens, its owner and occupier respectively, wrote to the trustees complaining that their proposals "will materially damage the said Mill" if the waters should rise higher than usual. Since, they argued, neither the Surveyor nor Mr Heath (possibly William Kinchin's assistant) "are Persons by experience or education competent to judge properly of the effects of Floods and Drainage", they asked for the opinion of an "Engineer of eminence".[91] So Mr James Hollis, "a very competent engineer", was called in. However, his plans proved too expensive for the trustees and they went ahead with their own scheme. It involved building an arch of ten-foot span "on each side" of the bridge (on each side of a central pier?) and inserting as many culverts or barrel arches as were needed; also the roadway was to be raised.[92] Much reconstruction was evidently necessary. Philip Kensett, brickmaker on Jolesfield Common, West Grinstead, provided 30,000 to 40,000 "hard well burnt Bricks". Traffic had to use a temporary wooden bridge, and on the completion of the work its timbers were sold to Mr Eldridge for £39. The project was expensive. It cost £426 14s 5d. Moreover Mr Hollis had to be paid £15 15s 0d for his rejected plans.[93] The new bridge was finished quickly during the summer of 1833 — and competently, for it lasted apparently until 1930.[94] The trustees rewarded the Surveyor with £10 for his supervision of the work.[95]

Another bridge that required attention was Chestlains (or Chess/Chest) Bridge to the south, towards Henfield. The trustees accepted the tender of John Butcher of Ditchling to lengthen the existing arch to eight feet, to raise the surface by one foot (eight feet from the bed of the brook), to introduce two barrel arches, and to raise the wing walls.[96] The intention, it seems, was to reduce the slope down to the bridge and to minimise the inconvenience of flooding. Again, the work was completed quickly, from the initial proposal in March 1839 to the settlement of John Butcher's bill in July.[97]

At the same time Cotlands Bridge, between Cowfold and Lower Beeding, was rebuilt in a new location.

Fig. 3 Crouch Hill Tollhouse, Henfield, pre 1907 (Henfield Museum)

The original plan was to lower the hills on either side of it, presumably to ease the approach to the sharp curve over the bridge. The trustees decided instead that the road should be re-aligned. William Vinall of Cowfold, bricklayer, built a new bridge over a tunnel arch of bricks,[98] and raised the surface by two feet.[99] To acquire the new land the trustees made an agreement with its owner, Rev. Richard Constable of Cowfold. He would let them have "a sufficient Quantity of Land ... for the Purpose of making a new Piece of Road in Exchange for such Part of the road as is to be discontinued."[100] William Vinall completed the project by May 1839, and the results appear on the Cowfold tithe map, 1840.[101] The Surveyor earned £5 for extra duty both here and at Chestlains Bridge.

The task of lowering hills was arduous and expensive. Possible improvements at Brook Hill, Cowfold, just north of the village, provoked much debate. The trustees decided in 1832 that the Surveyor should lower it, but suspended the order in 1833 for lack of money.[102] There were objections as well. John Smart, the principal investor in the Trust, feared that there would not be enough left in the funds to pay his interest. Rev Richard Constable refused to surrender some of his glebe land to the improvements.[103] The plan was revived in 1836 after an agreement between the Vicar and the Surveyor about the land required. The trustees then invited tenders for the work. They received two: £290 and £351. They decided they could afford neither and abandoned the scheme.[104]

Tollhouses and Collectors

The Trust maintained Gates on the Old Road at Crouch Hill TQ 215174 (fig. 3), Corner House TQ 205192 (fig. 4), Crab Tree TQ 217242 and Truckers Hatch TQ 258296.

Each of the four tollhouses on the Old Road had the same basic accommodation: living room, bedroom and wash-house. At Crouch Hill there was also a store-room, and, a few yards away to the north-west, a storehouse; and at Truckers Hatch a pantry. Each house had an oven. The houses at Corner House and Crouch Hill were "Part timber built weather boarded and part brick built and tile healed". The house at Crab Tree also had some sandstone in its construction. The most substantial of the four was that at Truckers Hatch which was brick built and tile healed. It had "a nice piece of garden ground", as had the other three, with fruit trees at Crouch Hill and at Crab Tree. The largest plot, measuring fifteen rod, was at Corner House; the smallest with eight rod, at Crouch Hill.[105]

The houses, even Truckers Hatch, do not seem to

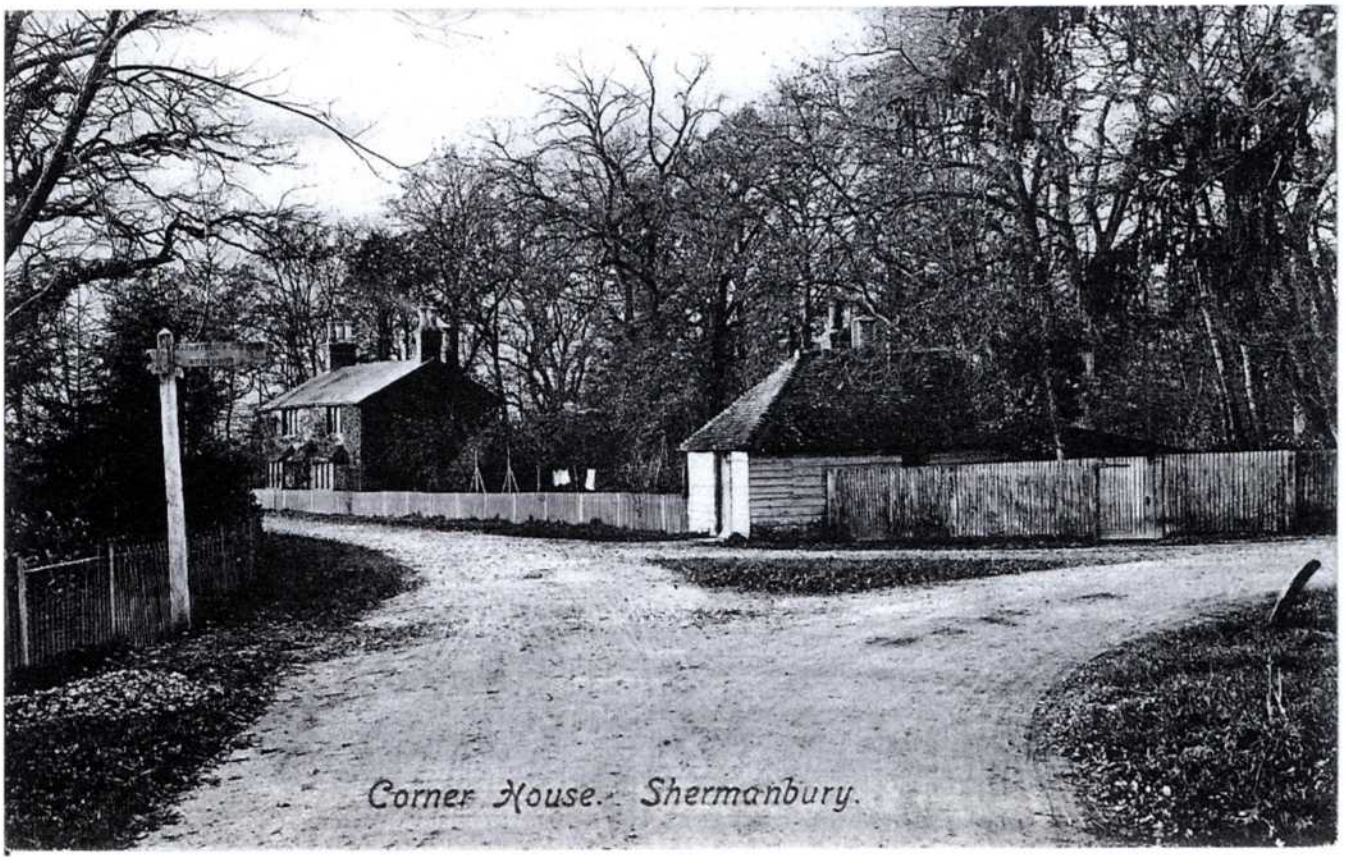


Fig. 4 Corner House, Tollhouse, Shermanbury, c.1910 (Henfield Museum)

have been particularly well built. There are many references in the records to the need for repairs. In 1856 the Surveyor reported that they were all in a bad state. The trustees authorised work which cost £69. General repairs were needed again in 1864.[107] Truckers Hatch was in a bad condition in 1873. Henry Brown, employed to put it in order, said he could do nothing without first removing the roof.[106] Then he mended the floor, replaced a window frame, painted and whitewashed where necessary, built a new roof with new tiles and put up new "shooting" (gutters) around the house: all for £11 13s 6d.[108] Another bill from him, undated but perhaps for work before 1873, was for a new Sussex stove, and for stopping the roof with mortar where rain penetrated into the bedroom. When the assets of the Trust were sold on its expiry, only the land at Crab Tree was conveyed, the toll-house having been demolished earlier.[106] Perhaps its condition (unlike that of the other three) rendered its sale as a dwelling impossible.

The family at Truckers Hatch enjoyed "an abundant supply of excellent water" from a brick-lined well.[100] Those elsewhere were not so fortunate. When the Collector at the Crab Tree Gate complained in 1835 that he was unable to obtain water, Mr Boxall enquired about the expense of sinking a well. He reported to the General Annual Meeting that in his opinion it was unnecessary.[111] The nearest supply appears to have been a large pond a little to the east of the toll-house.[112] Likewise the family at Crouch Hill depended apparently on a small pond (no longer in existence) to the south of the road junction.[113] There was a well on the opposite side of the road from the Corner House toll-house, whose occupants may have had access to it.[114] In addition there were large ponds nearby on either side of the road leading northwards. As for sanitary arrangements, there was a water closet, included in the repairs of 1873, at Truckers Hatch; but none were recorded elsewhere. Overcrowding was another difficulty. Even for a small family, life in the two basic rooms must have been inconvenient at the very least. How did Elizabeth Hill, Collector at the Crab Tree Gate in 1851, cope with a husband (an agricultural labourer) and five children?[115]

It is surprising that all these trials of everyday life did not cause serious medical problems. In fact, only the toll-house at Corner House appears to have been particularly unhealthy. In January 1867 Maria Ede, at Wymarks nearby, wrote to the Clerk about the "evil" at the Gate which was causing

"annoyance and dismay". She was acutely concerned about "the two fevers within the last seven months: Scarlet & Typhus - one child has lately died of the latter disease - they are a delicate family, and the mother being weakly, is doubtless unable to attend to the duties of the Gate and to her children - they are, I understand, generally crowded into one small sleeping room". She recommended that the trustees should place "a more suitable party at the Gate".[116] They complied by ordering Mr Batterbee, the lessee of the tolls and responsible for the collectors, to do so.[117] They instructed the Surveyor to carry out other measures, but these are not recorded. Two months later, in March 1867, W. Percival Boxall complained to the Clerk that nothing had been done, that "it is now nearly 2 years since Fever has been prevalent at that particular spot ... a remedy ought to be applied immediately...I really feel that delay is dangerous".[118] How the problem was solved (if at all) is not known.

Some seventy years earlier Corner House had been the scene of a tragedy. In April 1796 a runaway horse belonging to John Wood of Henfield killed Mary Attree instantly. It leapt over the gate as she was opening it and struck her on the head. The incident brought into play the curious custom of the deodand, by which any instrument causing accidental death was forfeited to the Crown or to the local Lord (in this case the Duke of Norfolk, as Lord of the Hundred of Wyndham and Ewhurst). The coroner's jury returned a verdict of accidental death, and valued the horse at £40. The Duke claimed it, but was willing to sell it back to John Wood at an "easy price in Comparison to his Real Worth". This proved to be fifteen guineas. Mr Wood accepted.[119]

A toll-board and a light had to be fixed outside every toll-house. The light was to be lit by six o'clock each evening from 30 September to 25 March, and by nine o'clock for the rest of the year. The lessee's contract contained this requirement, and he had to provide oil. He was responsible also for the window glass in the houses. He "shall & will repair & amend & keep (it) in repair".[120] A third fixture to the house was a board showing the collector's christian name and surname: "to prevent the Misconduct of the Persons employed as Collectors of the said Tolls".[121] For a similar reason every vehicle had to show the owner's name and residence.[122]

The toll collector's work was not easy. He (or she) was on duty day and night. He had to keep accounts and record the passage of vehicles. He had to use his judgement when the information on the toll-board did not fit the case before him. An appeal to the Clerk was not always speedily resolved. He might have to consult the trustees, as in 1851, when he could only advise the Collector, not very helpfully, "to endeavour to pacify the complaining Parties". The arrival of road locomotives caused another problem. The Locomotive Act of 1861 solved it by laying down a national scale of tolls. Then the collectors had to deal with those who tried to evade payment. Mr Leppard was summoned for this offence. The Justices in Horsham convicted him, but refused to inflict a penalty, merely ordering him to pay the Bench fees of one guinea: not an encouraging outcome for a Collector trying to do his duty.[123]

When Thomas Mobsby of Shermanbury, labourer, was appointed Collector at the Corner House Gate in 1829, his salary was £26 per annum paid weekly.[124] A record of the tolls taken by the week at the four gates 1829-1830 includes the collectors' salaries. They all received £26, except the Collector at Truckers Hatch who was paid £13. There, the receipts, £50 16s 5d, were far below those at Crab Tree, £168 5s 0d, and at the other two Gates.[125] A similar account, by the month, for 1848 shows a different method of paying collectors. They had a portion of the toll money, but not at a fixed percentage. Again, Truckers Hatch experienced the lightest traffic, and the Collector's salary was £7 16s 0d, whereas at Crouch Hill, with the heaviest, the Collector received £16 18s 0d. The total toll receipts were significantly lower than in 1829-1830 and indicate the declining fortunes of the Trust.[126]

(to be continued)

Abbreviations

SAC *Sussex Archaeological Collections*
SWA *Sussex Weekly Advertiser*
WSRO West Sussex Record Office

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The main sources for this article are the minute books, balance sheets, letter, bills and public notices of the Cowfold and Henfield Trust in the West Sussex Record Office classified as Additional Manuscripts and numbered between 9148 and 9245. These mostly date to the period after 1830. I am indebted to Kim Leslie for directing me to this material and encouraging my researches.

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74. Thomas W. Horsfield, *The History, Antiquities and Topography of the County of Sussex (Lewes 1835) Vol 2*
75. William Albert, *The Turnpike Road System in England 1663-1840* (1972) p. 144
76. W.J. Reader, Macadam: *The Mc Adam Family and the Turnpike Roads 1798-1861* (1980) pp. 37-39
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89. *Sussex Notes and Queries XVII No 7 (May 1971)*, G.D. Johnston, "Inscriptions on Sussex Bridges" p. 223
90. WSRO Add Ms 9156
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94. Johnston *op cit* p. 223
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