St. John's Hill Organ history and evolution

Rev04 17th February 2021



William Hill & Son was one of the main organ builders in England during the 19th century. In 1916 Norman & Beard and William Hill & Sons merged because Dr. Arthur George Hill who had no male heirs to sustain his business. The merged company was bought by John Christie in 1923, and remained in the Christie family until the business was wound up in 1998.

Mavis Martin and Micky Clare are the principal organists at St. John's. Claire Martin-Brown, Mavis' daughter, provided us some fascinating history: "*My Grandmother was approached by the then rector of Merrow as he had heard that she played the piano and was very accomplished. Until the time they came to St John's they attended the tabernacle in High Path Road, which is how there's a Methodist Church on Bushy Hill. The organ was in the gallery where the organ pipes are now situated, and mum played, and her sister Elise operated the bellows. Gerald and Dick were boys in the choir. Dick still helps out in the choir for when a bigger choir is requested. There's a* picture of the boys in the choir vestry. Mum often talks about the amazing window which is now hidden by the pipes."

Organ history:

Before 1881, a barrel organ was used. This had to be taken outside the church to run through the tunes on the drum until the right one was found and then taken back inside to resume its part in the service. The pipe organ was given to the church in 1881 by Mrs. Joseph Thrupp, was originally located in the memorial chapel, but was moved to the gallery at the west end of the nave in 1925. Until 1954 the organ was hand pumped, but it was then converted to electricity and moved to its present position in the chancel.

1881 Hill – The original organ was installed in the North chancel, at a cost of around ± 300 .

1925 The Organ (including the console) was moved from the North chancel to the gallery at the West end of the nave above the choir vestry.

1951 W.Hill & Son & Norman & Beard – The organ was reconstructed, with the casework left at West end and the console returned to the chancel again.

1998 - Mixture II inserted on Great; action and compasses inserted; case details added.

2019/2020 – Since 1951, apart from routine annual tuning and the installation of a humidifier a few years ago, no significant work has been carried out on the organ for around 50 years, so understandably upon inspection various components were found to be at the end of their useful life.

During the course of 2018/19, deterioration of some components began to manifest themselves at regular intervals in the form of cyphers (continuous sounding of a note), rogue notes and intrusive humming noises. As these problems began to cause disruption at some services, the decision was made to call in some expertise to diagnose the cause of the problems.

Inspections were undertaken by both a respected organ builder and the Diocesan Organ Advisor. They were broadly in agreement as to the scope of urgent works required. Consideration was also given to replacing the organ with a high quality digital



electronic organ, a solution adopted by numerous churches. The recommendation of

the Diocesan Organ Advisor was that St. John's pipe organ was of such pedigree and quality that it should be retained and fully refurbished. St. John's PCC took this advice and went to tender to specialist reputable organ builders in March 2019.

Pipe Organ Services from Melton Mowbray were awarded the contract for $\pounds 27,500$ and commenced work in January 2020. Of course, the COVID pandemic intervened, and completion of the work was delayed until Autumn 2020. The cost also increased by $\pounds 3,000$ due to additional work that became apparent once the organ was stripped down.



The result of all the painstaking work carried out is that we now have our very special pipe organ back in near perfect condition and ready to be played for the enhancement of worship and the enjoyment of the whole community. The organ will actually sound better than it ever has before, since one of the major improvement tasks completed was to modify the timber framework to allow the *Swell Box* and *Soundboard* to be lowered so that the sound is no longer partially blocked by the ceiling structure in the organ loft above the vestry. The images below show the hoisting effort from bell tower ringing chamber above and the work carried out to upgrade the console communication electronics and wiring.

2021 Key metrics

- 960 pipes.
- Pedals plus 2 manuals, a Great and a Swell.
- Stops & keys:
 - Pedals 4 Stops.
 - Lower Manual (keyboard) Great 8 stops.
 - Upper Manual (keyboard) Swell 6 stops.
 - Total 18 stops.
- Lots of interesting terminology:
 - Open Diapason- a pipe organ foundation stop having a full sonorous tone and consisting usually of metal pipes of 8-foot pitch length open at the top.
 - Stopped Diapason an organ flute stop of 8-foot pitch length consisting of stopped wooden pipes.
- 2020 refurbishment cost £33,000, in January 2021 the community still need to raise £9,500.

In "The National Pipe Organ Register" you'll find St. John's 1881 Hill Organ <u>https://www.npor.org.uk/NPORView.html?RI=N13810</u>

Summary of the main 2020 works

| Item | Description | |
|--|--|--|
| Controls and electrical upgrades | To improve reliability (the neural network of the instrument): Install new electronic transmission system between console and the organ loft. Replace original cotton insulated low voltage cables with safer materials to a modern specification. Replace pneumatic actuators on the Swell Trompette chest with direct acting magnetic devices to improve reliability. | |
| Reconfiguration | To improve the sound of the organ: Reconstruct organ framework to lower the Swell Box and Soundboard as close as possible to the Great Organ level. Move the Swell Trompette Chest to the front of the Swell Box with the Swell Soundboard behind it. Alter wind trunks as necessary to suit the new positions. | |
| Pipes | Cleaning and repair: All pipes inspected and repaired generally in the workshop, but where too large to remove treated in-situ. Clean, repair and round out in the body all metal flues. Clean all wooden pipes and check for soundness, filling any splits with hot glue. Remove caps where possible to enable sharp edges to be removed and clean out flues and feet. Check stopping in feet for soundness. Re-fit stoppers replace denatured leather and grease as appropriate. Take apart and clean reed pipes. Cut out any broken or fatigued pieces and solder in new pieces of malleable metal. Check and true shallot faces and fit new wedges to replace any loose or broken ones. Replace all existing tinned tuning slides with new. On completion place each rank upon the voicing machine to check the speech and tonal regulation of the pipes. | |
| Wind System | The heart and lungs of the instrument: Open up bellows and thoroughly clean internally and externally. Check leatherwork and patch any leaks with sheepskin. Take apart wind control valves and fit with new blinds, tapes and wires Clean all flanges and plates. Check and re-bed as required to ensure wind-tightness. | |
| General work | Dismantling, cleaning and repairing virtually every moving and static part: Re-felting, repair and replace leatherwork. Clean and polish stop tabs, adjust movements and clean contacts. Take apart pedal board, clean and re-felt frame. Sand and re-polish pedal sticks. Dismantle, clean keys, key contacts and wiper plate surfaces. Clean, replace compressed felts and baizes. Clean, refurbish and repair Soundboards, Pallets, Rack-boards & Stays. Refurbish Underactions, including airtightness and operation. | |

| | Stops | Pitch - pipe length (feet) | | |
|------------------------------|------------------|----------------------------|--|--|
| 1881 Original 2 manual organ | | | | |
| Pedal | Bourdon | 16 | | |
| | Open Diapason | 16 | | |
| | | | | |
| Great | Open Diapason | 8 | | |
| | Stopped Diapason | 8 | | |
| | Dulciana | 8 | | |
| | Principal | 4 | | |
| | Wald Flute | 4 | | |
| | Fifteenth | 2 | | |
| | | | | |
| Swell | Open Diapason | 8 | | |
| | Hohl Flute | 8 | | |
| | Salicional | 8 | | |
| | Gemshorn | 4 | | |
| | Oboe | 8 | | |
| | Tremulant | 8 | | |
| 1951 Reconstruction 2 m | anual organ | 1 - | | |
| Pedal (department) | Open Diapason | 16 | | |
| | Bourdon | 16 | | |
| | Octave | 8 | | |
| | Bass Flute | 8 | | |
| | | | | |
| Great (department) | Open Diapason | 8 | | |
| | Stopped Diapason | 8 | | |
| | Dulciana | 8 | | |
| | Principal | 4 | | |
| | Wald Flute | 4 | | |
| | Fifteenth | 2 | | |
| | Mixture | II Not JML | | |
| | Trompette | 8 | | |
| | | | | |
| Swell | Open Diapason | 8 | | |
| | Hohl Flute | 8 | | |
| | Salicional | 8 | | |
| | Gemshorn | 4 | | |
| | Oboe | 8 | | |
| | Tremulant | | | |

For the organists amongst you:

Some notes about Pipe pitch and length:

Organ pipes are measured in feet. They are shown on the stop list by the length of the bottom pipe. So, the pipe connected to the lowest note of the Open Diapason 8 on the Great will measure 8 feet in height. This is the no.1 pipe of the 56 notes of the keyboard. 8 notes up and the pipe should measure about 4 feet. Another 8 and the pipe should measure 2 feet. That is, they get smaller and smaller obviously going up to the top.

Some Organ terminology:

Action

The connection between keys and pipes. The Merrow Hill Organ uses a combination of a remote console and electric/pneumatic actuators.

Combination Action

A device for turning on or off several stops at once.

Console

This holds the keyboards and stop controls for an organ. It is the control centre for the instrument.

Division

A self-contained part of the organ consisting of its own windchest, pipes, and keyboard. (Pedal, Great & Swell)

Manual

A keyboard played by the hands.

Organ

A collection of pipes. The console controls the organ.

Organ Case

The wooden housing around the entire organ or around one or more divisions of the organ. Cases are often beautifully designed and carved to add visual beauty to the Nave.

Pedalboard

An organ keyboard of between 30–32, beginning at Low C and played by the feet. **Pipe**

A whistle. Like a flute or a clarinet, organ pipes are long structures, which control vibrating columns of air. The pipe's length, shape, proportions, materials, wind pressure, and placement affect its ability to control the air column.

Rank

A set of pipes, one for each note on the manual (61 pipes) or pedalboard (32 pipes). **Stop**

A group of pipes or voice, which can be made to sound or be silenced by moving the stop knob to an ON or OFF position. Often, more than one rank is controlled by a stop, meaning that more than one pipe will sound when a key is depressed.

Swell Box

An enclosure, usually wooden, around a windchest and pipes, with louvers similar to venetian blinds at the front, which can be opened or shut to increase or decrease volume. Please note that a pipe plays at a constant volume. It can't be louder or softer. Instead, the opening through which we hear it is closed or opened. Hitting an organ key harder will not make the pipe speak louder.

Voicing

The regulation of a pipe's speech and tone quality. This is done by making delicate adjustments at the mouth (the hole in the whistle) and the foot (where you blow on the whistle) or the pipe, to control the flow of wind inside the pipe.

Windchest

A box (literally a chest) of wood, with airtight joints, having holes bored in its top, over which rest the pipes of the organ. Each division of the organ has its own separate windchest.

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