

THE CHURCH OF ST FRANCIS OF ASSISI BOURNVILLE

THE NICHOLSON PIPE ORGAN

REPORT AND PROPOSALS



Introduction

The organ now in the Church of St Francis of Assisi left our Worcester workshop in 1903 for the Bournville factory; we added the Choir manual in 1906, replaced the key action in 1933, and added the Trombone in 1953. As Ian Bell has noted in his thorough report, the most musical and best quality parts of the instrument date from these years.

This is an instrument that has fallen on somewhat hard times in the hands of others and general wear and tear, but there is now a rare opportunity to restore the pedigree of what was once a splendid instrument that befitted the philanthropy of the Cadbury family who commissioned it.

Given the comprehensive nature of Ian Bell's report, we will not go over the same ground again; the remarks that follow therefore reflect our additional (and occasionally different) observations and recommendations if the organ is to be brought up to a consistently high standard throughout, and returned into the Nicholson thoroughbred it once was. A detailed proposed scope of work then follows.

Remarks

Pipework

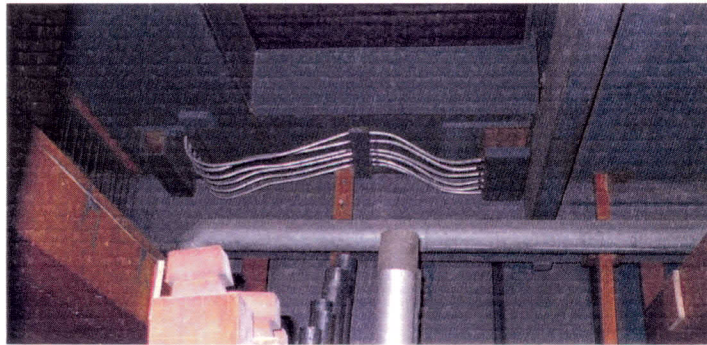
Open Diapason nos. 1 and 2 are almost identical in tone and dynamic. We have included for regulation of the two stops to restore their intended roles so that the second rank acts as a contrasting but complementary foil rather than a duplication of the primary rank.

The Great Mixture, which was added using second-hand pipework in 1989, has a tierce (seventeenth pitch) rank up to b24. This composition is not in character with the organ, so we propose this be recomposed.

The tuning slides are quite rusty. The case for renewal is borderline so we have priced it as an option.

Soundboards

We noted that the Great soundboard has pallet boxes at the front and back, linked by pneumatic tubing. Hence two sets of motors and pallets in the bass will need releathering.



Great soundboard pallet linkages

Flexible Kopex tubing is used for the off-note conveyances. This is not best practice but replacement in pipemetal or copper tuning is not an insignificant cost. We have assumed the Kopex will be retained and made sound where necessary but can quote on request for replacement in metal.

Slider actions

We recommend replacement of the present electro-pneumatic machines with heavy-duty slider solenoids. They are simple, virtually silent and reliable. As they will make no demand on the high-pressure wind supply, the audible shaking of the wind to the Tromba when the stops are moved, as noted in Ian Bell's report, will be eliminated, avoiding the need to reroute the slider action wind supply directly to the blower.

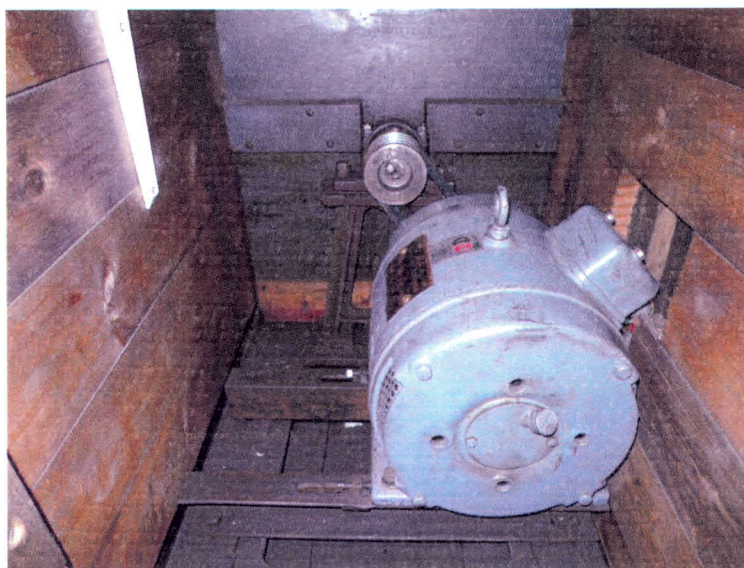
Key actions

When the underactions were converted to electric in 1989, the leatherwork and valves were not renewed. New leatherwork is now a priority. Some of the magnets in the middle of the compass are developing worn pivots. The magnets have some useful life remaining but they will not last until the leatherwork next needs renewal in another 40 or 50 years' time so we recommend replacing the magnets now, while the underactions are on the bench, thereby extending the life of the underactions by another 25-30 years. We have offered this as a separate price. The pedal chests are generally subject to less wear so we have assumed the 1989 magnets will be retained.

The pneumatic touch boxes were retained in 1989 but the touch is indistinguishable from one with straight springs. We therefore think that the touchboxes should be discarded to reduce the complexity and number of moving parts in the action, and to improve its responsiveness.

Winding

The blower failed recently due to lack of oil in one of the bearings. Fortunately, the burning smell due to the fan rubbing against the old wooden fan casing was noticed before it developed into something more serious. In these days of heightened awareness of health and safety obligations, a wooden fan housing is a risk that should be avoided.



Wooden blower housing

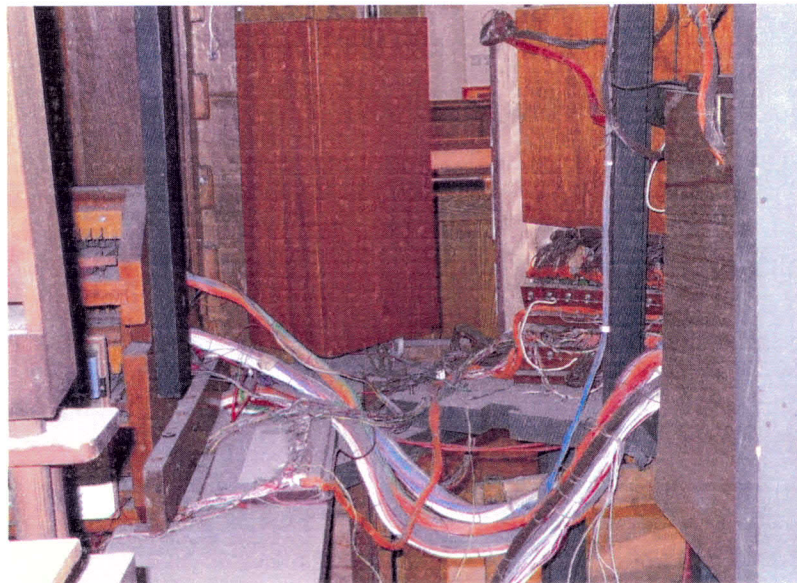
Furthermore, the blower 'plays out' easily on full organ which is very evident in the pitch of the two stops which work on the highest pressure, namely the Tromba and Clarion. Our recommendation is therefore to replace the old blower by a modern unit of increased capacity with a metal casing and long-life bearings with a generous oil reservoir and warning indication of low oil level. The existing belt drive and two of the four bearings will be eliminated. The whole unit will require far less maintenance.

There are two wind reservoirs. One is of an appropriate size but the other is unnecessarily large, being a hangover from the days before electric blowing when substantial reservoirs were needed to provide, literally, a large reserve for the person blowing by hand. Removing the old reservoir would be a major undertaking as it was placed in position before the remainder of the

organ was built on top; it would now mean dismantling much of the organ to remove it. Such significant dismantling, together with stripping off the old leather and re-leathering would cost significantly more than supplying a new reservoir of a size that would be ample with modern electric blowing. In the circumstances, we think the appropriate approach is to cut up the old reservoir in position and install a new one.

Electrical work

The low-voltage wiring was very poorly executed in 1989. Since the two ends of the wiring will need reconnecting to the key contacts and solid state control system respectively, we recommend that complete replacement of the cable looms would be the appropriate way forward to ensure longevity and ease of future maintenance.



1989 low-voltage wiring

The piston setter switches are in sound condition and could be reused but the associated relay contacts are in poor condition. While the relays could be replaced like-for-like, an organ of this size and profile really deserves a piston capture system. It is surprising that a capture system was not fitted in 1989 as the trade by then had generally abandoned setter switches. We therefore propose to install a new piston capture system.

Console

The console doors were poorly made and do not hang or lock properly. They clearly date from a later period to the console insert and are not the work of a mainstream organ builder. Ideally, a new set of doors would be made and we would be pleased to quote for that work on request.

Conclusion

The Cadbury family chose to build an organ that reflected the highest ideals of quality organ building in the Edwardian era. The organ has given well over a century of service in its two guises of entertainment and the support of Christian worship. The fine pedigree – and the musical quality – of the instrument has been eroded by some of the work carried out in recent years, leading to this being a critical point in the organ's history. Any work carried out now

must seek to restore the integrity and reliability that has been lost, and must be done well. We have considerable experience in the sensitive and appropriate restoration of organs of this period, recent examples of which have been included in our accompanying brochure.

We would be privileged to have the opportunity to give of our best to restore this instrument that our firm has built and worked on, to make it wholesome again, and to ensure its reliable and effective service for the twenty-first century.

SCHEDULE OF WORK

Preparation

The organ will be partially dismantled and components requiring factory renovation will be returned to Malvern. Remaining parts including most pipework will be neatly stored in an agreed position within the church.

Building frame

The building frame will be checked over and repaired as required.

Soundboards

The soundboards will be taken apart to table and bars. All splits filled, plugged and table screwed. Windways flooded with glue and vented. New cloth fitted below the bars and impregnated with glue. Table and bars planed true and flat.

Pallets cleaned off and recovered with felt and leather. Springs cleaned, lubricated and reset. Upperboards planed true and flat, broken sliders repaired. Table and upperboards grouted and polished. Slides adjusted for free and smooth working on reassembly.

Soundboard underactions

Actions renovated. Pneumatic motors recovered with new sheepskin leather. Valves replaced. The primary lever-arm magnets will be retained. Alternatively, at extra cost, the magnets will be replaced.

Stop action

The existing soundboard slider machines will be discarded and replaced by heavy-duty solenoids with only one moving part and no leatherwork to perish. Solid state controllers will be adjustable for power. Drive pins will be bushed for silent operation.

Chests

All splits screwed and filled, windways flooded with glue. Pallets cleaned off and recovered with felt and leather. Springs cleaned, lubricated and reset. Motors releathered. Existing magnets retained.

The pneumatic off-note chests for manual basses will be releathered.

No work on the 1989 Pedal Principal and Tertian direct action chests has been included.

Wind system – reservoirs

The large reservoir will be cut up in position and discarded. A smaller new reservoir of ample capacity for its purpose will be installed.

The second, smaller, reservoir will be taken apart to well and bottomboard. All leatherwork cleaned off, including bedding. Panels rebedded with leather. Ribs and gussets releathered with top grade sheepskin. Webbing fitted to heavy pressure. Internal timber faces sized, joints leathered. New tapes and cords fitted. Waste pallet recovered with felt and leather. Counterbalances cleaned, painted and lubricated.

Wind controls and trunks will be repaired. Kopex trunking to off-notes will be repaired and made sound. It can be replaced by copper or pipe metal tubing at extra cost.

The tremulant will be releathered.

Blower

The present blower will be discarded and replaced by one of larger capacity made by Laukhuff of Germany. The belt drive will be eliminated and four bearings will be replaced by two. The motor will be provided with long-life and silent running plain bearings with a generous oil reservoir that will considerably cut down on the amount of maintenance required. The reservoir will be provided with a float switch and warning light to militate against a repeat of the low oil level incident that led to the recent bearing failure.

Pipework

All pipes to be individually cleaned, any damaged or collapsed pipes being rounded out in the body and repaired. Extra stays will be fitted where required. Missing pipes will be replaced with, where required, new pipes made to the appropriate scale.

Wooden pipes will have splits repaired then flooded with glue. Stopped pipes to have stoppers greased and refitted.

The basic price assumes that the original tuning slides will be retained. They can be replaced at extra cost.

Reed pipes will be taken apart for individual cleaning of tongues and shallots, broken wedges to be replaced with new. Damaged reed pipes to be repaired.

The Great mixture composition will be revised to make it a quint mixture.

Console

The keyboards will be renovated in our factory. Undue side play will be taken up and felts replaced. Key contacts will be replaced since pitted contacts will not work reliably with the new solid state transmission. Approximately 2½ octaves of worn ivory coverings will be replaced on the Great manual and damaged plates on the other manuals will be replaced. The old pneumatic touchboxes will be discarded.

The existing drawstop solenoids and heads will be retained.

The pedalboard is worn and requires complete restoration. Playing surfaces will be trued up and re-pieced as necessary. Felts will be renewed and springs reset and lubricated. New contacts will be fitted.

The expression pedals will be remade. The pedal travel will be adjusted in accordance with our normal standard. New balance weights will be calculated and fitted.

Setter switches will be discarded. LED displays and switches for divisional and general piston levels (see below) will be mounted as discreetly as possible.

The toe pistons date from 1989 and can be reused.

The console insert woodwork is in mainly good condition. Minor repairs will be carried out as required. The console doors are of poor construction. New doors can be made at extra cost.

Transmission

A new solid-state transmission system will be installed. This has printed circuit boards housed in a racking system for ease of maintenance. When an old design of board becomes obsolete, a new design of board can simply be substituted in the same position in the rack. The system, by AJ & L Taylor, uses microprocessor technology and is a development of the type used successfully in many organs by Nicholson since the early 1980s. It incorporates a stabilised power supply.

Regulated low voltage power supplies will be installed for the action and drawstop solenoids.

New low voltage wiring will be installed throughout. All cables will have copper conductors with PVC covering. Main cable runs will be housed in PVC trunking for protection and neat appearance.

Piston capture system

A piston capture action will be fitted, this being controlled by a microprocessor unit with integral power supply.

The system, which includes all piston and reversible actions, provides the facility of 16 divisional and 96 general levels, any one of which can be locked for the organist's exclusive use. Setter and General Cancel pistons will be located in the key slips of the lower manual.

A stepper or sequencer facility can be provided at extra cost.

Expression boxes and shutters (Swell & Choir)

The present expression boxes and shutter fronts will be repaired and made sound. Hard felt on the shutters will be replaced.

Small organ parts

This section covers such things as off-note blocks and concussions etc and the following work will be carried out:

All units will be opened up, cleaned inside and out. All perished and split leatherwork to be cleaned off and replaced with new. New felt and leather valves, buttons and felt cloths

fitted. Corroded wires and coupling replaced with phosphor bronze. Off-note blocks and conveyances repaired. All metalwork rubbed down and black enamelled. All bedded surfaces re-bedded with leather. Damaged timbers repaired and screwed. Stays and fittings repaired, painted or polished.

Casework

The casework is generally in sound condition. It will be cleaned down and waxed.

Case pipes will be rounded out, repaired and cleaned. They can be rubbed down and given a fresh coat of paint at extra cost if desired.

Finishing

On completion the action will be regulated and thoroughly tested. Our specialist tonal staff will carry out the tonal finishing of the instrument in the church. The Great Open Diapason nos. 1 and 2 will be rebalanced to provide more dynamic separation.

QUOTATION

Prices

Basic renovation as described above, excluding the items priced separately below:

£143,600

Addition for new magnets on the Great and Swell soundboard underactions:

£3,020

Addition for new tuning slides:

£3,560

Terms

10% with order

10% on commencement of work

Four equal payments at approximately monthly intervals during the course of the work

10% on completion of work

5% 30 days after completion

Exclusions

- VAT at standard rate.
- Simple scaffold platform and ladder.
- Mains supplies, wiring, switches and starter for the blower motor and low voltage equipment.
- Console lights, maintenance lights within the organ and associated switches and wiring.

Please note – our staff will travel daily from Malvern. We will transport the organ parts to the factory daily using our van, so there will be no additional transport costs. There will be no accommodation and subsistence costs.

Andrew D Moyes

7 April 2016