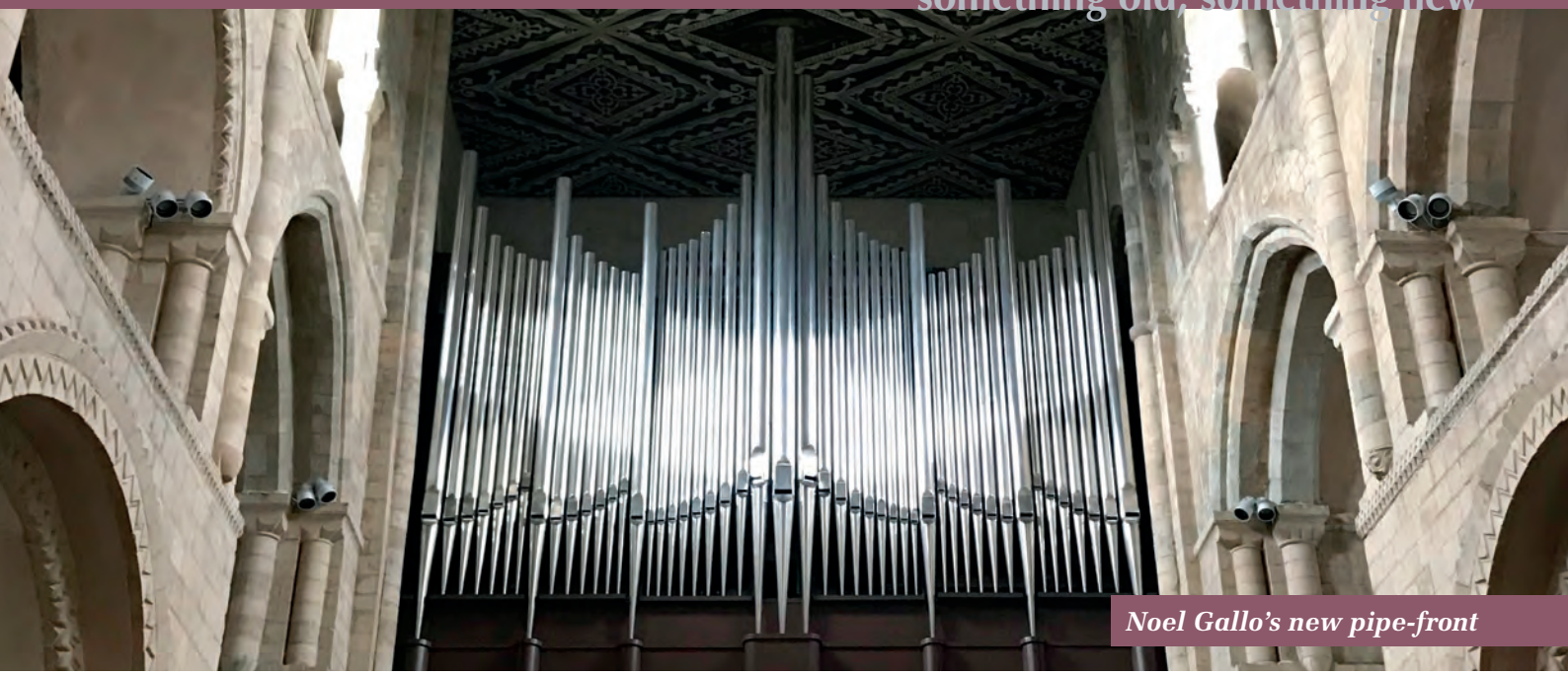


Noel Gallo's new pipe-front

MAINTAINING THE TRADITION

The rebuilt organ at Waltham Abbey

Paul Hale

One organ leads to another – it's the law of consequences. During 2013–16 I had the enjoyable and rewarding experience of working with Robert Stokeley, the organist of St Michael's church, Bishop's Stortford, to develop and bring into being a complete reconstruction of their 1940 Walker organ – itself a much-rebuilt instrument dating from 1888. Mander Organs carried out the work in an exemplary fashion, in effect building a new organ underneath the old pipes, plus some new ranks. Readers may care to turn to my article about this fine instrument in the September 2016 issue of *Organists' Review*; it can also readily be accessed at: https://paulhale.org/or-articles/ph16-09.pdf

Whilst the Bishop's Stortford work was going on, the organist of Waltham Abbey, Jonathan Lilley, was casting about to find the best firm to deal with the Abbey's 1953 Walker rebuild. A visit to see Mander's work at Bishop's Stortford, whose Walker console is a close match for that at Waltham Abbey, enthused him and convinced him that Mander's approach was just what they needed. A visit to their similar work at King's College, London, confirmed the decision and gave Jonathan additional ideas for Waltham. A scheme was drawn up, a new case-prospect designed (by Noel Gallo), permissions obtained, funds secured (which had taken ten years), and the contract was signed at the end of March 2018. The work was completed during the summer of 2019; Jonathan Lilley gave the opening recital on 29 September and the following day the organ was Dedicated by the Bishop of Chelmsford.

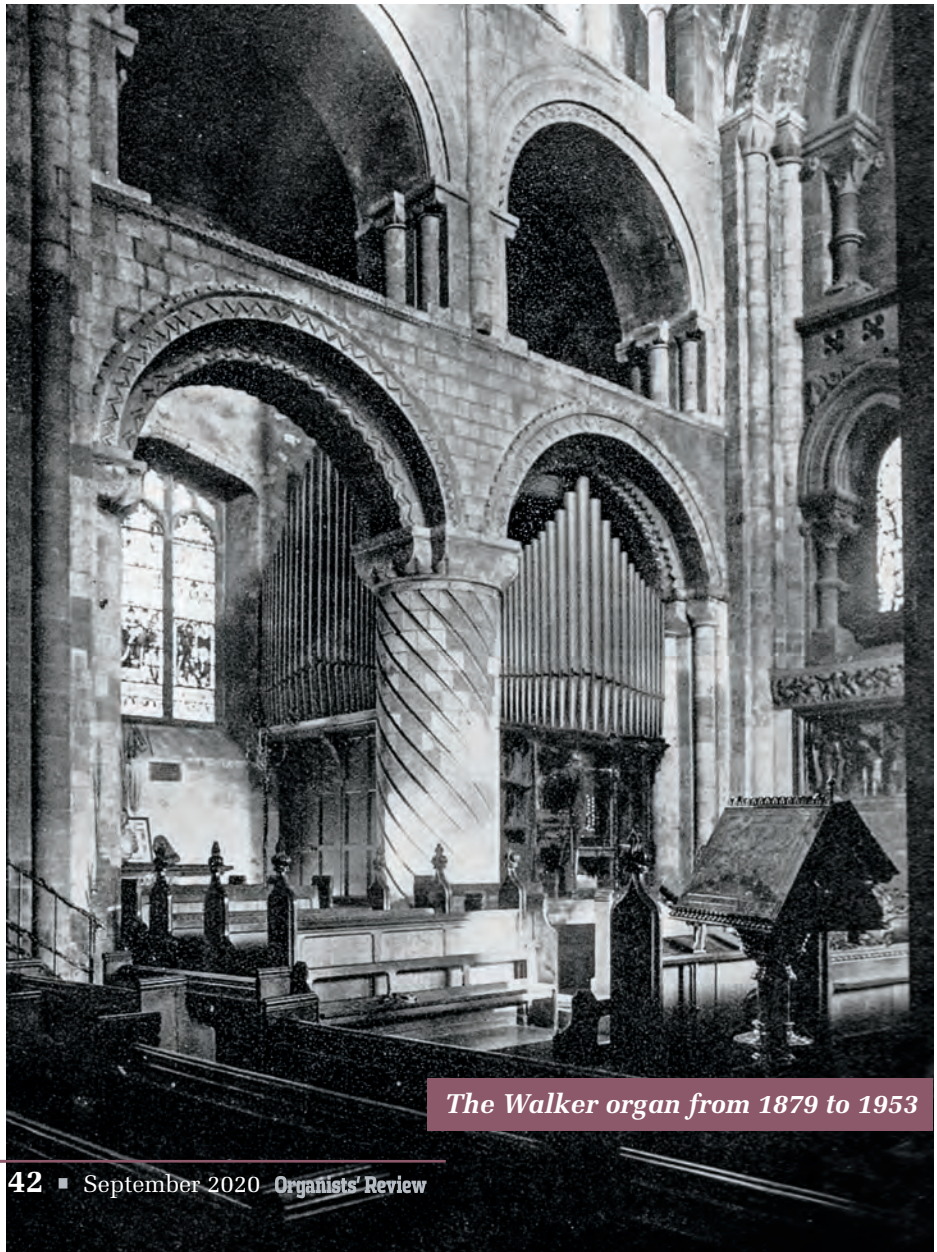
So much for the bare bones of the project. The flesh on the bones is far more interesting!

Waltham Abbey has long had a tradition of a west gallery organ. A Flight & Robson 6-stop barrel organ first served duty from 1819 to 1850 – a lengthy time span for such an instrument. In 1850 it was remade by Joseph Walker (later J.W. Walker & Sons), who fitted a keyboard so that it could be played manually. A short-compass 6-stop Swell was added, along with a pedalboard and pulldowns; Pedal pipes were incorporated later. In 1860 Walkers returned, doubled the Great in size and completed the compass of the Swell. With the advent of a robed choir at the east end of the building, Walkers moved the organ to the north-east corner to accompany it – the typical 'Oxford Movement' story seen in most churches. Although this took place in 1879, along with the addition of a third manual and the entire replacement of the Swell, most additional stops were 'prepared-for' until 1893.

This organ was written-up by Gilbert Benham in *The Organ* (quarterly), volume 15, no.57 (July 1935 – see image on the next page). He was not wildly enthusiastic, writing of the Diapason chorus: 'I think the mildness or flutiness of the build-up of this Waltham organ robs the whole ensemble of some impressiveness and tonal boldness. The best stops in the chorus are the Great unison Diapasons and the weakest is the Great Fifteenth.' Benham goes on to compliment Walkers on their 'no.1' Diapason (probably an 1893 stop) but then adds 'The Principal seems to have in its bass nearly the power of the large unison, but not nearly its strength of

tone, which robs it somewhat of its usefulness; its treble is definitely fluty and weak. It seems to me as though it were trying hard to serve flutes and diapasons, and it has been shown time and time again that this can never lead to much success. The Fifteenth is very mild indeed and more fluty. The Mixture performs a most embarrassing task; without it, the Great (save for the large Open) would be swallowed up in the reed'.

A clear inference one can draw from Benham's surprisingly forthright description is that the organ must have had seriously insufficient impact in the nave, even if its tones accompanied the Abbey choir well enough. So it is not perhaps a surprise to discover that in 1953 Walkers were called in to remove the organ back to the west gallery. This was no easy task, as the organ had grown hugely since it was last there: it was now a 32-stop three-manual complete with 16ft Open Wood and an enormous 14-stop Swell. Nevertheless, Walkers, who like John Compton had become adept at fitting organs into tight spaces, often using extended ranks to help achieve this, managed the job, adopting a compact layout with the Swell and Great side by side, the Pedal Trombone/Tromba basses being between them and at right-angles to them, the Tromba trebles being at the extreme south end, next to the relay cabinets; the Choir box was behind the Great soundboard on the south side. On the north side, behind the Swell, stood the Pedal and Great Bourdons, with the Open Wood pipes running along the west wall.



The Walker organ from 1879 to 1953

The stop list grew, despite the small space, though the number of ranks grew only by two; the only pipes discarded were those of the Choir Piccolo and a few basses from the Great Open no.2. The Pedal had 15 stops from seven ranks (only three of which were Pedal ranks, the rest being manual derivations), the Great 10 stops, from a rather modest nine ranks (the Mixture had only two), the Swell maintained its 14 stops, from 17 ranks, and the Choir grew from six ranks/stops in 1893 to 12 stops from eight ranks plus the Gt/Ped reed. There was much revoicing and rescaling, new 8ft & 4ft Swell chorus reeds, a new bass and treble to the Choir Dulciana to turn it into a 95-note 16ft unit, a new Trombone bass, Swell Gamba, Great Twelfth, some Mixture ranks, and many additional Pedal extensions, as might be expected.

This rebuild was written-up by E.W. Gallagher in *The Organ*, volume 38, no.149 (July 1958). Gallagher mentions Benham's 1935 reservations and confidently asserts that Walkers have dealt with them all in the rebuild. Gallagher's main reservation is in the organ's appearance – a pipe array which was supposed to be temporary until something more worthy of

Slider soundboards awaiting their upperboards

Compound magnets on the underside of a soundboard

the Abbey could be contrived. As things turned out, this uninspiring pipe-front was to remain in place for 55 years! Although Gallagher does indeed consider the organ transformed by the rebuild, he questions the fact that the console was – and remains to this day – placed at the east end, leading to 'certain problems of co-ordination and of the effective control of the subtler elements of organ-playing, and co-ordination of a different sort – i.e. between organist and choir – also comes into it in this case, where the choir remains in the chancel.' Gallagher in general waxes lyrical about the tonal aspects of the organ, and at such length that the article (most unusually) carries on in the November issue! It is perhaps worth noting here that he states that the Walker Vox Humana in the Swell is 'of identical scale to its famous counterpart at St Margaret's, Westminster' (Lemare's renowned 1897 Walker) and that the Choir 8ft Stopped Diapason (a Flight & Robson chimney flute, he asserts) is 'outstanding in its rippling limpidity'. This stop survives at 4ft, but may actually be a set of 1840 Joseph Walker pipes from his 1840 Exeter Hall organ (removed in 1885), as the pipes are marked thus.

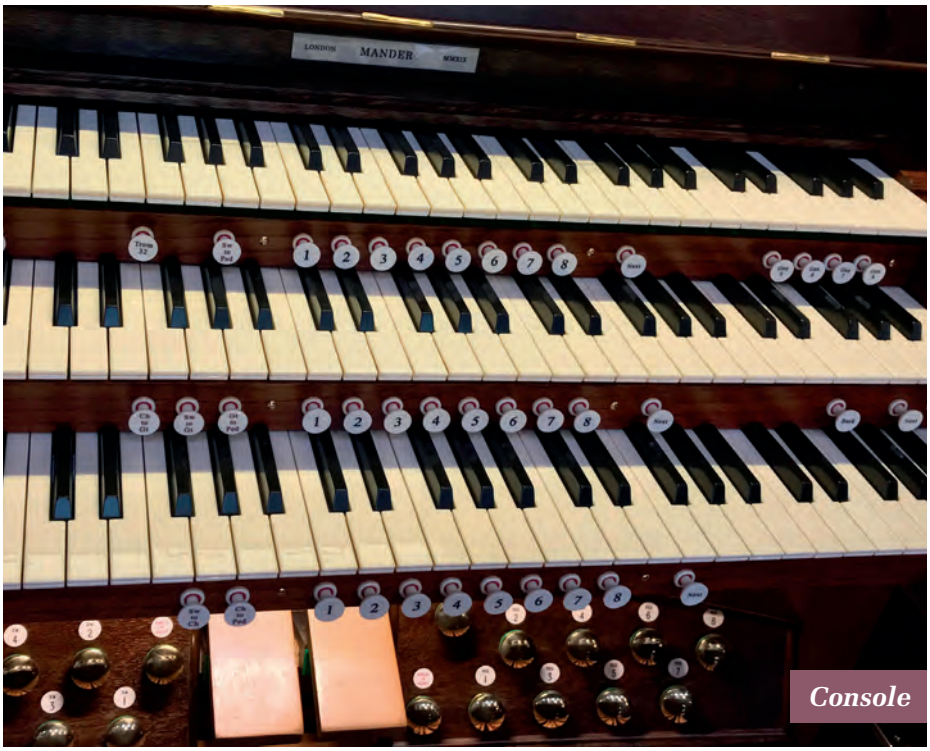
The 1953 work lasted well, as one would expect of a Walker rebuild, so it was not until 1994 that Principal Pipe Organs undertook some remedial work, also adding a Great chorus Trumpet and providing a Nazard, Flageolet and Tierce on the Choir instead of three Dulciana extensions.

After considering replacing the organ with a suitable redundant instrument from elsewhere, the decision was taken to contract with Mander Organs to build – as at Bishop's Stortford – a new organ in a revised layout, using the best of the existing pipework. In addition, it was decided that the 'temporary' 1953 front pipe display had more than had its day. Designer Noel Gallo was commissioned to design a new pipe display, using the basses of the new 16ft and 8ft Diapasons. This deceptively simple-looking array of pipes hides a fascinating process of considerable complexity. In such a large facade (7.2m high 7.1m wide) both dimensions and the enormous overall area present challenges. Ideally the pipework would be arrayed in two or three levels to extend the vertical view, but since the facade was initially planned as a 'pipe-rack' on a single level, this was not possible. The unusual width was another challenge. All in all, a solution had to be found to make a facade that can be easily viewed, without appearing too busy, and one which visually overcomes the awkward proportions of the area to be filled with pipes. The final design was made into a 3D model to observe and check the form, the perspective, and the 3D dimensional effects.

Noel Gallo explains how this was achieved:

> *Height: Bottom C of the 16ft rank was set in the middle of the façade. The pipe mouths have been arranged in an interrupted wave line, running from bottom to top. This was directly traced from a chain connected to two points; gravity pulls down this curve in a natural way. This technique was used by the famous Catalan architect Antonin Gaudi. This has been repeated in several places in a pointing form to drive the eye to the centre, so that the height will not look so great, as the eye is directed to a focal point. To avoid making the smaller pipes too long (which can look unsatisfactory and lead to tuning difficulties), these stand at a higher level than the larger pipes.*

The Great Organ, the new shiny pipework clearly evident



Console

Width: This needed to be divided in some way, the start of the middle three pipes helping to identify a benchmark in the view and cut a line to divide the rather wide facade into two. Additionally, to divide the façade into more segments to interest the eye, the larger pipes have been made somewhat projected, to suggest dividing pillars. Together with this, the wave shape of the pipe mouths helps minimise the apparent width. The articulation of the pipe tops is driven mostly by the mouth articulations, where the middle groups are reflections of the mouths and the remaining pipe fields are made in a mirrored layout. Both are slightly angled to the middle, which helps reinforce the central focal point to the façade.

Finally, the pipes needed to have a reflective finish. One reason was to reflect the beautiful Abbey ceiling; the other was to reflect light from the side windows, as the Abbey is rather dark.

Mander Organs made new slider soundboards incorporating electro-pneumatic actions with compound-magnet primaries, for all manual departments. The three divisions are placed side-by-side, with the Great taking pride of place in the centre, between the two new expression boxes. The Pedal department uses some overhauled 1953 Walker 'Roosevelt' chests, placed around the perimeter of the gallery. A new chest was built to accommodate the Pedal trebles, located at the back of the organ, behind the Great soundboards.

Before the Mander work the Great Diapason chorus was still considered unsatisfactory, as Benham had noted way back in 1935, and this despite the 1953 revoicing and rescaling. Michael Blighton, Mander's Tonal Director, writes:

'The real challenge of this organ was to tie up the pipework of varying vintages into one coherent instrument. We had

Specification

GREAT ORGAN	
Double Open Diapason (A)	16
Open Diapason I	8
Open Diapason II	8
Wald Flute	8
Principal	4
Harmonic Flute	4
Twelfth	2⅔
Fifteenth	2
Mixture (19.22.26.29)	IV
Trumpet	8
Swell to Great	
Choir to Great	

SWELL ORGAN	
Bourdon (D)	16
Open Diapason	8
Stopped Diapason	8
Viola da Gamba	8
Voix Celeste (tenor C)	8
Principal	4
Flute	4
Fifteenth	2
Mixture (19.22.26)	III–IV
Oboe	8
Vox Humana	8
Contra Fagotto	16
Trumpet	8
Clarion	4
Tremulant	
Octave	
Unison Off	
Sub Octave	

CHOIR ORGAN (enclosed)	
Violin Diapason	8
Lieblich Gedackt	8
Dulciana	8
Vox Angelica (tenor C)	8
Flute	4
Nazard	2⅔
Piccolo	2
Tierce	1⅗
Clarinet	8
Orchestral Oboe	8
Tremulant	
Tromba (unenclosed; F)	8
Octave	
Unison Off	

PEDAL	
Acoustic Bass (B&C)	32
Open Wood (B)	16
Violone (A)	16
Bourdon (C)	16
Echo Bourdon (D)	16
Dulciana	16
Octave Wood (B)	8
Principal (E)	8
Bass Flute (C)	8
Fifteenth (E)	4
Octave Flute (C)	4
Contra Trombone (F)	32
Trombone (F)	16
Tromba (F)	8
Tromba (F)	4
Swell Reeds on Pedal	
Swell to Pedal	
Great to Pedal	
Choir to Pedal	

the luxury of being able to get rid of the stops from the former organ, namely the Mixtures and Choir upperwork, but most importantly the old Great chorus, which was thick, heavy and rather loud, and which really didn't respond to any revoicing. The new Great chorus is quite large scaled with beautiful new spotted metal pipework, and was voiced very carefully so that the upperwork did not dominate, but left enough brightness to balance the plenum. I think this works very well.'

An interesting section of the splendid organ pages on the parish's website reads [somewhat edited]:

'The scaling of the Great chorus is such that the larger Open Diapason (which acts as the foundation of the principal chorus) is slightly larger than that of the Swell (though on a lighter wind pressure). The Principal 4ft is one note smaller than that, and the Double three notes smaller than the Principal. The smaller Open Diapason is a most interesting and promising stop, which needed to be of diapason scale in the bass, for the sake of its contribution to the case design, but which was also desired to be more like a broad-scaled viola, as a foil to the 'fatness' of the other diapasons and Great flutes.'

The trebles of this stop are 'slotted' to achieve more string tone than the lower octaves. A clever compromise.

The Swell regained its original 16ft Bourdon (moved back from the Great) and a new four-rank Mixture tops the chorus. The Choir division gained a new Piccolo and new mutation stops at 2⅔ft and 1⅗ft pitches to replace stops added in 1994 which turned out to be ineffective. The 12 lowest pipes of the former Dulciana unit on the Choir organ (a purring 16ft 'Haskelled bass', a Walker speciality) were relocated to the Pedal division as its 16ft Dulciana, the remaining twenty pipes being new. The Pedal was also enriched by the extending of the sonorous Walker Trombone to 32ft pitch (an excellent suggestion by the consultant, Dr William McVicker), the pipes being found room for behind the Choir organ and against the west wall. Michael Blighton again:

'The new 32ft reed has half-length resonators from bottom C to F, going in to full length from F♯–B; the match is excellent, and works well with the superb Walker Trombone. This is very much a full organ stop!'

The fine 1953 Walker console (which had been partially restored in 2003 after severe vandalism) was restored with new electrical components, the manual keys being remade with a revised thumb piston arrangement. The stop list is now as above.

In the autumn of 1538, Thomas Tallis became the organist at Waltham, at a time when it was still a large Augustinian monastery. His time in post was short, for the Abbey community was dissolved in 1540, when he was paid off. He moved to Canterbury Cathedral – not a bad promotion, especially as in 1543 he became a Gentleman of the Chapel Royal and began to compose for Henry VIII and his two successors. Waltham's musical establishment and choirs must have been glorious during Tallis's time – though he certainly had no organ remotely like the new Mander. How inspiring it is that the commitment to a tradition of fine liturgical music-making prevails at Waltham all these generations later. Long may it do so.

As this article was being prepared for publication the sad news came through that Mander Organs went into administration on 27 July 'owing to cash flow difficulties and the inability to secure sufficient work'. The Waltham organ is a worthy swansong for a fine company, the loss of which will be widely lamented.

Paul Hale, Southwell Cathedral Organist Emeritus, is a noted recitalist, choral director and writer, honoured in 2017 by the Archbishop of Canterbury with a Lambeth Award for his contribution to the Church's musical life, who now finds most of his time taken up with stimulating work as an organ consultant.