

# FACT SHEET

### The Port Arthur Bells

Today there are seven bells hanging in the area that was once the Vestry of the Port Arthur Convict Church. These bells were cast at Port Arthur in 1847, making them the earliest known chime of bells cast in the country. They may also be the only chime pitched like this in Australia. They are part of an octave set, of which one is missing, and are pitched approximately in the key of G Major.



Port Arthur Church c. 1870

(Archives Office of Tasmania)

I was aroused from my reverie by the sound of bells pealing lightly upon my ear... They chimed in so be a utifully with the bright and peaceful scene around and seemed to float upon the air intinkling echoes from afar, that one almost fancied they were ringing in the sky. But this was not the case, they proceeded from the tower of the church, and in a few minutes I found myself within its walls awaiting the commencement of morning service. (G. Gruncell, c.1874 - Reminiscences of Port Arthur and Tasman's Peninsula)

#### Casting the bells

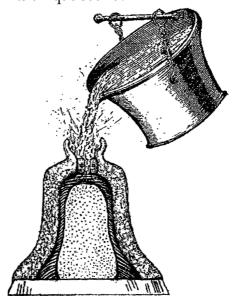
Bell casting requires knowledge of music, metallurgy and mathematics. The name of the Port Arthur bell founder is so far unknown, but he was clearly a man of considerable skill and experience. Presumably he was one of the convicts working in the penal settlement's blacksmith shop and foundry, where a wide range of high quality metal items were made for use on the settlement, for government use and for export.

The bells have been analysed to see what metals the bell founder used. No two bells are the same. Five are of bell metal, varying in quality from good to poor; two are of soft gun metal, which is not really suitable for bells. Only one bell is considered to be cast from correct bell metal. Presumably the bell founder had to work with whatever was available at the time.

The moulds were constructed in two parts, a 'core' and a 'cope'. The core which shaped the inside of the bell was made by constructing a curved armature or skeleton and covering it with a loam (usually consisting of sand, clay, possibly manure all held together with wool or chopped straw).

The cope (the mould for the exterior) was then lowered over the core; the two moulds were fired and fixed to a base plate.

The gap between the two components of the mould was the exact space required for the molten metal to be poured in, taking into account that the thickness and diameter of the resulting cast metal is what gives a bell its unique sound.





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#### A 'chime' not a 'peal'

Port Arthur's bells are a 'chime', not a peal. A chime is the technical name for a set of bells (less than 23), which are rigidly suspended and played by pulling a rope attached to a metal clapper so that it strikes inside the rim of the bell. Today, several of Port Arthur's bells display an abraded and discoloured band where the clapper struck them.

A peal is the name given to a specific type of performance of bell ringing. The precise definition of a peal has changed considerably over the years and historically it was common that a set of bells regardless of their technical situation was called a peal.

The church – a very pretty structure, having a steeple 100 feet high, and a peal of eight very sweet bells, which are used to ring solemn peals on Sabbath days, and are also in requisition occasionally when a wedding or a christening is performed. (The Mercury 25.03.1870)



#### Chiming timing

Each morning the bells were rung to signal time to go to work; they rang twice a day for prayers, and possibly also to tell the men to down tools in the evening. They chimed for both the Protestant and Catholic services. The slow tolling of a single bell accompanied burial parties from the church to the jetty, en route to the settlement cemetery, the Isle of the Dead. With two of the seven bells unplayable and one missing, the chiming bells you can hear on site today are a recreation of the octave using the five playable bells as well as digital sound reproduction technology.

#### Well travelled bells

In 1877, when the settlement closed, the eight bells were sent to the New Norfolk Insane Asylum, an institution with which Port Arthur had strong links. In 1897 they were lent to the New Norfolk Municipal Council and hung in the St Mathew's church tower. Unfortunately this tower was structurally deficient, and in 1906 the bells were split up and distributed to churches and other institutions in the Upper Derwent valley, including the New Norfolk Convent, the Fire Brigade (where it was used for fire warnings), St Mathew's Church, Lachlan Park Hospital, and other churches at Bushy Park, Molesworth, Lachlan and either Black Hills or Glen Fern.

At some point one of the bells went missing; it has still not been located. In 1928 the largest bell was returned to Port Arthur. In 1995 New Norfolk Council agreed to return the six remaining bells.

#### For more information:

Port Arthur Historic Site Management Authority Arthur Highway, Port Arthur TAS 7182 Phone 03 6251 2300 Facsimile 03 6251 2311 Email info@portarthur.org.au www.portarthur.org.au