

### Bringing it all back home

Dutch luthier **Geerten Verberkmoes** details the process of making a violin using local materials from his home town of Bergen op Zoom, between October 2022 and May 2023



An anchovy made from nacre decorates the tailpiece of the violin

The historic city of Bergen op Zoom is located in the south-west part of the Netherlands, where forests, farmland and water all intersect. In earlier centuries these particular conditions resulted in flourishing industries of both pottery and the dyestuff madder. As a maker, I began to wonder if these varied surroundings could also provide the majority of materials to make a violin. I then decided that the instrument's design should carry elements to honour the region's rich history and nature. Furthermore, the project would allow me to employ my previous experiences in biochemistry, organology and art sciences, as well as to re-explore my relationship with my native town and its environment.

All this, I felt, could result in an instrument with some out-of-the-box solutions and features. In short, I began this project as a test case for the use of alternative materials as well as to challenge my creativity as a violin maker.

To start with, maple for the back plate, neck and ribs came from the Vrederust estate north of the city. I had already obtained it in 2003, so it had had

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INSTRUMENT NOT  
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BUT A PIECE OF  
CONCEPTUAL ART

many years to air-dry to a stable density of  $0.6\text{kg/m}^3$ . This wood only has a faint flame but is nevertheless pleasing to the eye, owing to a slight brownish hue and a rich pattern of medullary rays. Planing and cutting this wood proceeded smoothly. The final tap tones of the back plate were rather ringing and open, yielding the expected frequencies at the intended thickness pattern.

For the purfling 'black', I stained a walnut veneer by boiling it with oak galls and iron sulphate. I collected the galls in a city park once used as a military exercise terrain, where many oak trees now grow.

I found spruce in the area several years ago, but its density proved to be much too high for proper top-plate wood: over  $0.6\text{kg/m}^3$  instead of the desired range of  $0.34\text{--}0.38\text{kg/m}^3$ . So after careful consideration, I decided to use Alpine spruce rather than the local alternative. Of course, this felt like a trade-off considering the project's scope, but investigation into suitable local spruce will continue.

For the varnish, I collected pine resin in a forest south-east of the city. Coincidentally, extensive maintenance was conducted there last winter, and many pine trees were felled. This provided the opportunity for me to collect fresh viscous resin from the stumps. I made a basic oil varnish by cooking the resin together with linseed oil pressed from seeds grown in the neighbouring province of Zeeland.

Two lake pigments were produced to colour the varnish. For red pigment, I collected madder roots grown in the historical garden of the city's Markiezenhof palace. As I said, madder used to be an important export product for the region, making the use of local



Maple from the Vrederust estate



Oak galls used to stain the purfling



Lilac wood was used for the fittings



Alpine spruce (below) was selected, rather than local spruce



Swan mussel (left) and medieval cowbone

growth even more attractive. A bright red lake was produced by applying methods described previously in *The Strad* (Trade Secrets, December 2009). For the yellow colour of the first few varnish layers, I prepared another lake, based on dyer's rocket (*Reseda luteola*).

One of the objectives of this project was to explore sustainable alternatives for the commonly used tropical hardwoods for violin fittings, such as ebony and rosewood. First I considered local fruitwoods but these proved too soft. Fortunately, I was offered some logs of lilac wood that came from garden maintenance in the city centre. This wood has a Janka hardness of 10,500N (compared to 14,000N for ebony), so it is hard enough for modern fittings. In addition, it cuts and turns well, although with a slight tendency to split longitudinally, and has a distinct appearance with alternating light

and dark streaks. I made the pegs, fingerboard, tailpiece, saddle and end-button from this wood, and despite being built from an alternative material, all the parts functioned properly during intensive use of the violin by musicians.

As well as being largely constructed from regional materials, the design of the violin incorporates several local references. Instead of the usual scroll, I carved the head of the bearded *Wildeman*, a mythological figure. His cudgel is depicted at the back of the pegbox. On the back plate, the coat of arms of Bergen op Zoom is applied in marquetry. For a decorative inlay on the tailpiece, I used indigenous nacre – from the swan mussel – to create a stylised version of an anchovy (a symbol for the nearby sea).

Lending a touch of local history to the violin, for the top nut I used medieval cowbone from recent excavations of a monastery on the north side of town. Despite being around 500 years old and being dug out of the ground, this bone was still hard enough to be used for the nut.

To emphasise this instrument is not a mainstream product, I incorporated some unusual features. On the top-block and upper ribs of the interior I painted the skyline of Bergen op Zoom, which can be enjoyed by means of a tube-shaped end-button and built-in light source. Furthermore, a small USB

storage device concealed under the fingerboard contains a 40-minute documentary about the gathering of the materials – with the aid of local experts – and the violin's construction. This way, the creation process itself is literally embedded in the resulting object. My son Daan helped me by filming the footage.

I consider this instrument not just a straightforward sound tool but a piece of conceptual art above all. The creative process allowed me to take a refreshing step back from the more traditional approaches in violin making, thus providing room for personal expression. The Markiezenhof museum has expressed interest in displaying the resulting instrument, and it had its inaugural concert there in May 2023, where local musicians performed dedicated compositions on it.

The documentary, and music videos capturing the violin being played, can be watched on YouTube: [bit.ly/3PdIOqJ](https://bit.ly/3PdIOqJ)



Samples of madder (left) and dyer's rocket



The head of a *Wildeman* surmounts the head

ALL PHOTOS: GEERTEN VERBERKHOES