

## **Sculptors @ Foundries** **procedures and recommendations**

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**These guidelines aim to promote understanding between foundries  
and artists in the casting of sculpture.**

Although the wording is, in places, directed primarily at the artist, this document has been written by sculptors and founders and is intended to encourage harmonious and constructive relationships between them. We have used bronze as the metal example, but the following advice is the same for all metals used in art founding.

Companion document: contract etc [www.rbs.org/foundrycontract.htm](http://www.rbs.org/foundrycontract.htm)

## **Choosing a foundry**

For a sculptor, the closest or cheapest is not necessarily the best or the most suitable. Matters sculptors should consider when choosing a foundry are quality of work, price of work, turnaround time and terms of service. Foundries should offer a professional approach, someone responsible for overseeing quality, well organised departments and a friendly, helpful service. There should be attention to finishing details, enthusiasm for patinas, well-crafted fixings and sensitive presentation of work.

Foundries use two casting methods.

- Lost wax <sup>i</sup>
- Sand casting <sup>ii</sup>

Building a good working relationship is essential. Ongoing projects become a great deal easier once foundries and sculptors understand each others' methods, needs and concerns. Requests should be made clearly and within reason, providing visual or written matter where necessary. The sculptor may find it useful to identify one person with whom they can discuss all matters regarding their work.

## **Obtaining/providing a quote**

Whenever feasible, the foundry will want to see the work, in the round, in order to provide a comprehensive quotation. If this is not possible, the sculptor can provide a detailed description complete with

- Clear and informative photographs of sculptures in the round
- Dimensions
- Materials
- Issues (such as fragility) that may affect moving, moulding and storing the work

However, given insufficient information, the foundry may wish to see the work in situ. It must be absolutely clear whether the price given is a quotation <sup>iii</sup> or an estimate of cost (sometimes called an order of cost estimate <sup>iv</sup>)

The quote should cover all points relevant to the transaction and may include all, or some of the points listed below. The sculptor should be aware that the quotation will probably incorporate, or refer to, the foundry's standard terms and conditions: it is important that the sculptor should see, understand and agree to those standard terms and conditions before he accepts the quotation and thereby creates a binding contract.

- Mould cost - note that the size and duration of the edition may affect this
- Casting cost
- Fixings and base
- Patina
- Structural considerations
- Installation and fixing of exterior works
- All transport costs (this can include moving the original to and from your studio)
- Storage and insurance of mould
- Payment schedule
- Completion dates (check your position on this in the foundry Terms and Conditions)
- Lifespan of the quote. It is normal to set a time limit on a quote and we recommend, unless otherwise negotiated, 90 days.

- Should an edition run over the time limit for the quote, costs for subsequent casts may have to be re-negotiated.
- Once you have agreed a price, get it in writing.

## **Specification**

The contract between sculptor and foundry will, or should, refer to a specification.

- Essentially the specification is the technical description of what the foundry is going to make, the metal, patina and colour being the most obvious - but not the only - details.
- Unless the parties' expectations and obligations are defined in the contract by reference to a specification, there is a substantial risk of disagreement and dissatisfaction over the end product.
- The relevant details should all have been recorded already in the quote from the foundry, and merely need to be repeated in the contract itself.

## **Payment Schedule**

This will vary and depend largely upon cash flow requirements so try to be flexible. We suggest the following benchmark:

- £0-2,000.00 – initial deposit (typically 50%) with settlement on completion
- £2-20,000.00 – initial deposit 30%, interim payment 30%, completion 40%
- £20,000.00 upwards – a negotiated deposit followed by monthly payments spread evenly over the duration of casting.

**In general, foundries will not release work until all stage payments due up to the point of release have been made.**

## **Structural Report**

With work that may have liability implications for the public or the foundry, it may be that a structural report must be undertaken.

- The sculptor, the client or the foundry can request this at any time during the making and casting of the sculpture.
- Do note that any recommendations made in a structural report may incur additional expense for the foundry. This extra cost will be passed on to the sculptor or the commissioning agent, unless the original quotation expressly provides otherwise. The sculptor or commissioning agent must ensure that he/she is in a position to bear this cost should it arise.

- Provision for this should be made at the initial negotiations and in relevant contracts.

## **Sculptors Input**

Once the moulding and casting is underway, your input will be required at the following stages.

- Initial brief
- Checking and passing the wax for investment
- Checking and passing the metal prior to patination
- Advising on and checking the positioning of work
- Discussing your ideas for patina
- Checking the final patina prior to application of wax or lacquer

Having a foundry cast your work can be a very emotive issue. The subjective aspects of the process – faithful rendering of form and colour – can lead to disagreement. It can be a shock to suddenly see your work in wax and raw, unpatinated metal. Inevitably, it will look worse at these stages and you should be aware of technical aspects of the founder's craft. Do not over-react. Take your time to examine and comment upon work in a constructive manner.

Examining a wax.

- If you have the original, compare from all angles and stand back from it. If you do not have the original and feel it necessary, ask for a plaster to be cast from the mould – this will incur extra cost and you should give notice of this to the foundry well before your visit.
- Although rare, you should look for major distortions and then minor dips or swellings.
- Check that the undercuts are crisp and intact – note that with very deep undercuts, it is sometimes impossible to release a wax positive without tearing the mould - you may only get the full depth on the first pull.
- Check the seams are carefully repaired and concealed by texture consistent with the surrounding form
- Check there are no air holes – if there are, ring them with a marker for repair.

An experienced wax worker will be able to repair just about anything, but do put relevant points in writing and request a written response if you feel the foundry has not addressed your concerns. It may also be worth photographing the wax from a number of angles for later reference

Signing

- Please note that the sculptor's copyright is inherent in the work, and does not depend on the signature. However, custom and good practice does make the signature both normal and desirable.
- Do not sign your original.

- Signing, dating and numbering should only be done onto the wax. This procedure indicates that you are happy for the work to proceed to investiture and renders unauthorised casts from the mould worthless.
- In the case of sand casting, you can sign the resulting metal – try to contrive a signature that will work well applied to both metal and wax

### Examining the metal

Bear in mind that the work shrinks down to as much as 96% of the original.

As in the wax examination, step back, comparing from an original where possible, and look for any major distortions. Use the photographs of the wax as reference.

Check that the seams blend in with the form and that the chasing of sprues is neat and invisible. Lastly look for air holes and, if noticeable, ask for them to be welded up and chased.

### Assembly of large bronzes

Large sculptures are usually cast in sections and welded together.

- In the presence of your original, discuss and draw where the sections might fall and make registration marks (using a plumbline, lines scored across the cuts and measured points) which can be removed once the final cast has been successfully aligned.
- Be present when the pieces are being assembled and check the alignment

### Edition numbers.

If you choose to publish an edition, you are free to set the edition number at whatever you please, but bear in mind that some countries have rules governing this.

- The US considers an edition numbering 9 or less as being legally unique. Anything above this is seen as mass production and becomes due for different taxes.
- In France, you can number to a maximum of 8 + 4 artist's proofs for your own personal use.
- Although we have advisory traditions, there are no hard and fast rules governing edition size in the UK.
- Judge your edition to maximise your profit while not devaluing work.
- Number and date each bronze cast in the wax, e.g. title, signature, date, 2/3.

Here is a rough guide relating edition size to dimensions of work.

- Small: 9 + 2 artist copies
- Medium: 6 + 1 artist copy
- Large: 3 + 1 artist copy
- Portraits: 3 + 2 artist copies

### Mounting and fixing

Once you are happy that the finished metal is ready, this is the time to fit a lug if the work is to be mounted. Pay special attention to the positioning of the lug on the work, as this will determine how your work stands on the plinth. The lug should blend in well with the movement and form of the sculpture so as not to attract undue attention.

Bear in mind the structural requirements of a lug. The foundry (or structural engineer) will advise you on this. Discuss this at the wax stage, as it may be advantageous to model a lug into the work prior to investment.

#### Bases

- The size of and material for the base should have been arrived at early on in the process.
- Organise supply of the base well in advance of the final fixing date.
- If using stone, marble or granite obtain a template from the foundry after the final positioning of the work and have a stonemason drill the appropriate holes.

#### Patination

- Patination is the application of chemicals to the surface of the bronze, often with heat, to change the colour of the metal. It is not an exact science, hence its capacity to surprise.
- Most foundries have patination samples but these are only a guideline and may not match the final colour.
- Be clear about your choice of colour and choose/show a sample to be matched.
- You may be charged if the colour has to be stripped off and re-applied.
- Finalise the colour before applying wax.
- Applying wax can darken the colour, especially if coated while the bronze is hot.
- Try not to take the bronze immediately after patination - it is best to leave the colour to settle for 24hrs before handling.

#### Moulds

The ownership, storage and access to moulds can be a source of confusion.

Factors affecting this issue are as follows:

- If the foundry makes the mould, you will pay for it.
- Once paid for, the sculptor owns the mould.
- Foundries, understandably, prefer to cast the full-published edition from a mould.
- Editions sometimes take years to run their course.
- Moulds can deteriorate.
- Storage space costs money
- In law, the foundry has a duty of care over your mould and/or original as long as it remains with them. However, placing a value on that mould is problematic.
- Sculptors often lack storage space and it may be convenient to keep the mould at a foundry with the tacit promise of further orders from the mould.

- It is discourteous to expect free storage from a foundry under the promise of future casts
- The sculptor should be free to remove his/her mould at will, once paid for.

We recommend the following practice.

- Discuss storage of the mould at the outset
- Whenever possible, a plaster or resin can be cast from the mould and stored at a separate location.
- The foundry should store the mould for an agreed time free of charge (normally whilst the mould is 'active').
- Responsibility for the insurance of the mould should be discussed and agreed.
- After that time, foundries may provide, for a charge:
  - Storage without insurance cover
  - Storage with insurance cover
- If asked to remove a mould, the sculptor must do so.
- The Sculptor, or the sculptor's estate, must inform foundries of any change in contact details
- Foundries must inform the sculptor, via registered letter, of any changes that may affect the safe-keeping of the sculptor's moulds

## Copyright

- Copyright on works by a sculptor (sculpture, drawings, paintings, prints, photographs) exists to protect the artist from other persons copying or using the sculptor's work without consent.
- The sculptor, his/her estate or any person to whom the sculptor has assigned or sold copyright owns copyright.
- Copyright in the European Union lasts for the sculptor's life plus 70 years from the end of year in which the sculptor died.
- Works in the public domain may be photographed without infringing the sculptor's copyright.
- Consent is usually sought for the reproduction of a sculpture in a magazine, catalogue etc. A license fee can be charged however this is cumbersome to administer as well as self-defeating because it can lead to non-publication.

## Posthumous Casting

This is work cast from an original or mould after the sculptor's death and must only be done with the permission or under the direction of the sculptor's estate.

- Casts made in these circumstances must be clearly marked  
© Estate + Date of cast + *artist name* (not signature) + edition number

## Surmoulage

This is the practice of making a mould from a bronze sculpture and casting from that mould.

- Unless good reasons exist, we strongly advise against surmoulage
- If the practice is unavoidable, bronzes should be clearly marked “**Copy**”

## Disputes and Arbitration

Should you be unhappy with the work you have received from the foundry, follow the path to determination as follows. Move to next step only if resolution eludes you.

- Explain your concerns to your main point of contact at the foundry
- Put this in writing, and copy to the foundry directors
- Be aware that the foundry’s standard terms and conditions may specify the procedure for the resolution of any disputes – for example, in the first instance by arbitration or mediation, which are more informal and private alternatives to full-blown litigation in the courts.
- If your concern cannot be satisfied amicably by steps 1 and 2 above, seek legal advice sooner rather than later, in order to avoid prejudicing your position vis-à-vis the foundry.
- A detailed contract, which clearly addresses all the issues listed under the earlier heading “**Obtaining/Providing a Quote**”, will greatly ease the process of resolving any disputes, quite apart from making them less likely to occur in the first place.

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<sup>i</sup> **Lost wax:** firstly a rubber mould is made from your original. A wax replica is cast from the mould, invested (this means making a hard shell and core structure within and around the wax positive), and melted out. The bronze is then poured into the resultant cavity.

<sup>ii</sup> **Sand casting:** this involves taking a hard original, building a one-off piece mould and casting from that.

<sup>iii</sup> **Quotation:** this, once in writing is a binding, definitive figure

<sup>iv</sup> **Order of cost estimate:** this is an indication of cost and is not binding