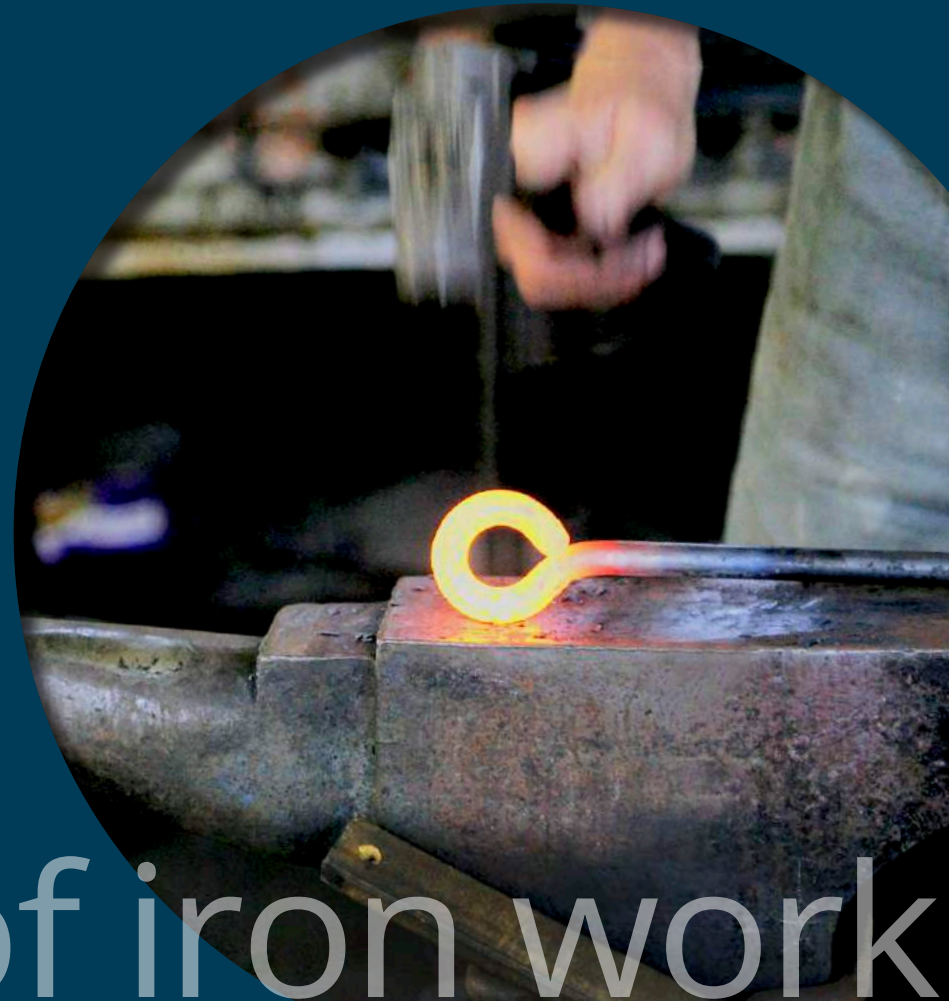


# WROUGHT IRON



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## JB WROUGHT IRON ARE RENOWNED FOR:

- > High quality, well designed work
- > Attention to detail
- > Project management skills
- > Good processes

## GOOD DESIGN IS THE FOUNDATION UPON WHICH WE BUILD

*Following our 12 Design Principles will add value to your property.*

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# THE 12 DESIGN PRINCIPLES OF HIGH QUALITY METALWORK

## 1. Aesthetically pleasing

First impressions count – especially on entry gates, fences and staircase balustrades. We aim to create aesthetically pleasing designs that add value to your property.

## 2. Architecturally correct

Metalwork must complement the architectural style of the existing building. Exterior work must additionally be sympathetic with the local precinct – for example on rows of inner city terraces.

## 3. Functional and comfortable to use

Well designed, skillfully crafted metalwork is easy to use and feels comfortable.

## 4. Correct Proportions

We use materials of appropriate weight and proportions to suit the items being made, whilst also blending well with the proportions of the property.

## 5. Life of building durability

The materials, manufacturing and installation methods should ensure the work only ever requires periodic maintenance and can last the life of the building. Long lasting, quality products are more environmentally friendly.

## 6. Traditional Methods and Appearance

The appearance of the work should be as close as possible to that of genuine wrought iron work made and installed

using the traditional, centuries old techniques.

For cost reasons, this may need to be achieved by innovative, modern techniques that provide the most authentic appearance. On heritage restoration projects though, we still use the same traditional methods as used by blacksmiths for centuries.

## 7. Corrosion proof

Genuine wrought iron is a very corrosion resistant metal that is no longer mass produced. The Eiffel Tower was made from wrought iron when it was built in 1889. Today we use mild steel, which must be protected with a zinc coating to provide life of building longevity, when exposed to the elements.

## 8. Minimal visual welding

Ideally, there should not be any visible weld beads. Visible weld beads are unsightly and a sign of poor workmanship.

Visible weld beads can be avoided by good design. On non heritage work, we can usually achieve the same appearance as traditional joining methods by the innovative use of modern techniques.

## 9. The use of tube sections

Traditional wrought ironwork never included hollow tube, using only solid steel sections.

Wherever possible, we try to avoid using rectangular or square tube sections, as their rounded corners and 'chunky pool fencing' look detract greatly from the overall appearance.

## 10. Avoid using catalog components

Because hand forging decorative elements or components such as scrolls is labour intensive and increases cost, mass produced, catalog components have become widely used. In Australia, only a relatively small selection is available and we see the same old designs everywhere. Their inappropriate and indiscriminate use has caused a race to the bottom where price is the main difference. Nothing looks worse than a magnificent property cheapened by the inappropriate use of mass produced catalog components. We generally avoid their use.

## 11. Finishing

When a colour finish is required, powder coating is a modern, low cost method of 'painting' metalwork. We generally do not use it over hot dip galvanised steel when it is installed in a corrosive environment. It can break down and cause unsightly 'white rust' to appear, often requiring total replacement to rectify.

2 pack polyurethane paints are more expensive initially but offer the best long term protection over galvanised steel in corrosive environments. On internal

work, there are many finishing options, including patina finishes. We will advise on the appropriate method when specifying and quoting.

## 12. Feel and weight

Functional metalwork must feel right to use. A lightweight gate or a balustrade that flexes under load doesn't feel right. Only through the use of correct materials can metalwork feel right to use. Cutting costs by using lightweight materials is false economy, as it doesn't add value, even if it is functional.

## OUR AUSTRALIAN MADE = QUALITY GUARANTEED

*Despite the wider availability of metalwork fully manufactured overseas, in low labour cost countries, we are still committed to manufacturing bespoke metalwork in Australia for many good reasons.*

*Unpredictable and variable quality is still a major problem from our experience using imported work in recent years.*

*If you are considering the option of overseas manufactured work, read the article following on from the Design & Quoting Process.*



## THE DESIGNING AND QUOTING PROCESS

Stages 1-3 are not required when we have well detailed and specified Architects drawings. When we are not provided with well detailed architect's drawings, our process goes through the following 5 stages:

### 1. The Design Brief Stage

This is where we discuss and clarify client expectations in terms of budget and time constraints, preferred style of work, functional requirements and so forth.

This is usually arranged as a site meeting, with notes and photos taken and sketches made. Different product and design options are explored, and approximate costs of these options can sometimes be given. The fee for this service varies according to the time required, personnel required and complexity of the project.

We will provide an itemised, costed design & detailing proposal as the first step in the process.

### 2. Concept Drawings Stage

Once the client's requirements are known, we will outline the work required and the cost to proceed to the next stage - usually being the provision of hand sketched concept or schematic drawings.

If the design is contemporary, we engage our Australian architect. If a very traditional, English or European style of work is required, we engage our UK based designers, who have a deep understanding of these styles, are highly trained in design and have hands on experience in blacksmithing shops and in the field.

*To see an example of a concept or schematic drawing click [HERE](#)*

We often provide 3 design alternatives in a proposal. This investment in concept drawings is relatively small, but it is vital in ensuring the work is architecturally correct.

### 3. Detailing and Scope of Works Stage

Once a preferred concept design is chosen, we sufficiently detail the concept drawings and create a scope of works. This allows a realistic and accurate quote be provided to the client.

Detailing includes such things as nominating material sizes, ornate component details, finishes, weld and joining methods, surface finish grade, rustproofing method, locks and furniture, electrical items, methods of installation, dimensions and notes. We also have an engineer who may need to be involved in the detailing and specifying process. Thorough detailing minimises the risk of the finished product not being what the client was expecting and ensures a high standard of work.

A detailed scope of works, ensures there are no misunderstandings about what is included and excluded. It is

invaluable to have when multiple trades are involved, so nothing is overlooked. The cost of this stage of work will be quoted after the presentation of the concept drawings. It will vary according to the complexity and size of the project and the number of other trades involved. It may involve meeting with other trades at site to explain the proposed work.

Our method is to co-ordinate the other trades on behalf of the client but allow them to bill the client directly. We include a fee to cover our co-ordination time but do not markup prices or take responsibility for their work, as it would not be covered by our contractor licence.

### 4. Quoting

With sufficiently detailed drawings to work from and a detailed scope of works written, we will provide a quote. Having a well detailed quote ensures all our design principles have been incorporated into the finished product. As one of the industry leaders, you can be assured you are being quoted to a standard and not just a price.

Detailing and estimating the cost of high quality metalwork can be very time consuming and we normally charge for the time involved. If a client requires quotes on multiple design options, we

charge for the estimating time involved. The cost of estimating variations is charged once a project is commenced.

When a quote is estimated, a provision will be made for supplying detailed CAD drawings for final client approval before work commences. These drawings are essential for doing high quality work and are always provided.

Adjustments to the quote can be made if the CAD drawings show the need for any changes.

*To see a typical example of a CAD drawing for the front fence and gate of a home click [HERE](#)*

### 5. Project Implementation

Once a quote is accepted, a 10% deposit is paid, accurate site measuring is done and often a sample section is provided for approval. The final CAD drawings are then submitted for approval before production commences.

Once drawings and any samples are approved, a progress payment arrangement commences with final payment being due on completion.

*Our thorough design and quoting process virtually ensures that your property's value is increased.*

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## WHY WE ONLY **MANUFACTURE LOCALLY**

*Some Australian companies are importing work which is fully manufactured and finished in low labour cost countries, at what appear to be very low prices. We have tried this ourselves in recent years, but have decided it is false economy due to the variable work quality causing long and short term problems that are very expensive to rectify.*

*To assist clients considering the option of low priced imported work, to at least make an informed decision, we've outlined the problems we have experienced and why we believe our long term, value adding solution is best.*

### **1. The quality of imported work can vary greatly and be problematic in the following ways:**

#### **A. PAINT FINISH PROBLEMS:**

Paint finishes are not accurately specified by suppliers (nor can be relied upon as true or complying with any Australian standards) and often cannot be colour matched with paints available in Australia. Scratches and minor damage always occurs during shipping and installation, especially when site welding is involved and these require immediate touch up.

The appearance on touched up areas can be very different and chemical compatibility is problematic, leading to lack of adhesion and/or an 'orange peel' effect. Occasionally we have had to completely repaint jobs with a poor paint finish, after attempting touch ups.

#### **B. RUST PROOFING:**

Overseas suppliers' rust proofing process descriptions are not always accurate and can be very misleading. For example, sometimes the term 'galvanised' is used to describe the rust protection. It can mean anything, including just a light zinc paint sprayed on the outside of a product. We clearly define our galvanising by using the term 'hot dip galvanised', which is the only high quality method of galvanising, where the finished work is dipped in a bath of molten zinc, protecting the outside surfaces (and inside when tube is used).

#### **C. MANUFACTURING ERRORS:**

Mistakes in dimensions regularly occur, especially when angles or curves are involved. In fact, very often curves are not consistent on buildings and the work needs to be curved at site and test fitted. Our on site steel rolling equipment allows this to be done. With work manufactured offshore, this is impossible, so installers try to force the components to fit, hoping the mistake is not noticed by the client, so as to avoid reordering from overseas with the cost and time delay involved.

#### **D. HIDDEN PROBLEMS:**

The rust proofing on some imported work cannot be determined as it is hidden by the paint, and for this reason, the importers give no discount for supplying an unpainted finish or simply won't do it, as its real purpose can be to hide what lays underneath.

#### **E. PLASTIC FILLER PUTTY:**

Plastic putty (bog) is extensively used to hide gaps, poor welding, and poor quality blacksmithing or forging. The paint covers the plastic putty initially but it becomes obvious a year or 2 later when the plastic filler delaminates from the metal and corrosion starts.

#### **F. LACK OF WARRANTY:**

Some importers specifically exclude any warranty on paint finishes in their trading terms (despite it contravening consumer laws

to sell products without a warranty and the catch all provisions of statutory warranties). Their trading terms openly state this and they claim that because the paint is supplied 'free', they don't have to provide a warranty.

### **2. Long delays to rectify errors:**

When problems occur that cannot be rectified, it's a very long delay to replace faulty products given the distances and shipping times involved.

### **3. Parts missing:**

Containers sometimes arrive with parts missing, causing delays or necessitating some type of sub standard workaround.

### **4. Poor design quality & proportions:**

The design quality can be low. Many overseas manufacturers seem to have no appreciation of our good design principles or of traditional European/English styles of wrought ironwork. They use chunky hammered tubes that look fake and grossly out of proportion. They often use excessively ornate components that might suit a grand palace but are architecturally incorrect on many Australian buildings. Unfortunately, examples of this 'over the top' work are being used on modest Australian homes and it greatly

devalues the property by far more than any cost savings on the cheap work.

### **5. Unable to test fit during manufacture:**

Working with staircase balustrades and gates in particular requires precision manufacturing and installation. Human error is always a possibility on jobs of this type. Sometimes we even test fit the work at the early stage to ensure final fitting will be accurate. Occasionally, we must partly fabricate at site to avoid mistakes when curves or angles are not consistent. This is not possible when the work is not manufactured locally.

### **6. Lack of client involvement during manufacture:**

Quite often it is necessary for the fabricator to use good judgement at the time of manufacture to achieve good proportionality of parts in a job. He may decide to change a material or a shape from the design drawings or even ask the client to be involved. This cannot happen when a product is manufactured offshore in mass production situations.



## OUR BETTER ALTERNATIVE

Sometimes a client wants a fairly ornate design, but the cost of having parts like heavy forged scrolls, locally made, seems prohibitive and catalog components seem to be the solution.

Because we take a long term view of costs and factor in the value of good design, we would argue it is false

economy to use mass produced, catalog components to achieve ornamentation. Having the same design as everyone else does not add value.

Hand forged components can be made cost effective if their design and method of manufacture is discussed with the blacksmith forging them. The blacksmith

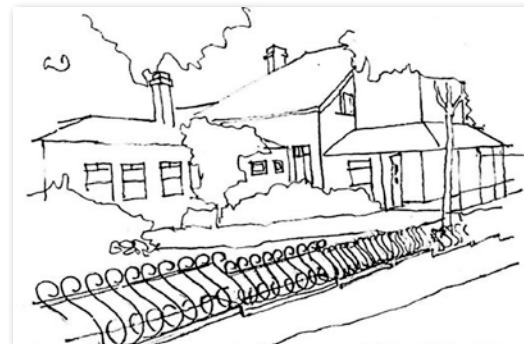
may have templates, jigs, or moulds from previous work that can be adapted for a new job.

In addition, because we use designers who have hands on experience and knowledge of blacksmithing techniques, they are able to create unique designs while avoiding very labour intensive

techniques. Some designs can look good on paper but are very expensive to make. Another way to create affordable unique designs, is to keep the design fairly minimalistic or modern and use elements of traditional/ornate work.

## CASE STUDIES

### CASE STUDY ONE



Hunters Hill - **Scheme 1** - Driveway Fence

This job required a wrought iron style fence along the driveway, on top of the stone wall. The design needed to be in keeping with the very substantial, heritage home overlooking the Parramatta River at Hunters Hill.

Part of the brief was that the new fence did not look like a cheap tubular pool fence. Our in-house architect provided 3 schematic drawings based on the site photo.



Hunters Hill - **Scheme 2** - Driveway Fence

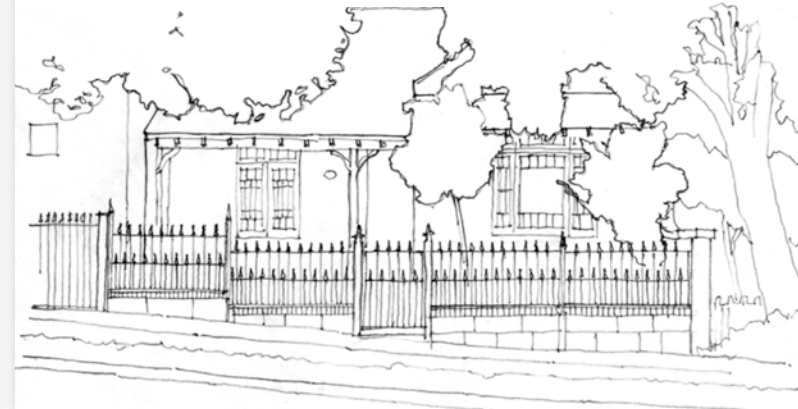


Hunters Hill - **Scheme 3** - Driveway Fence

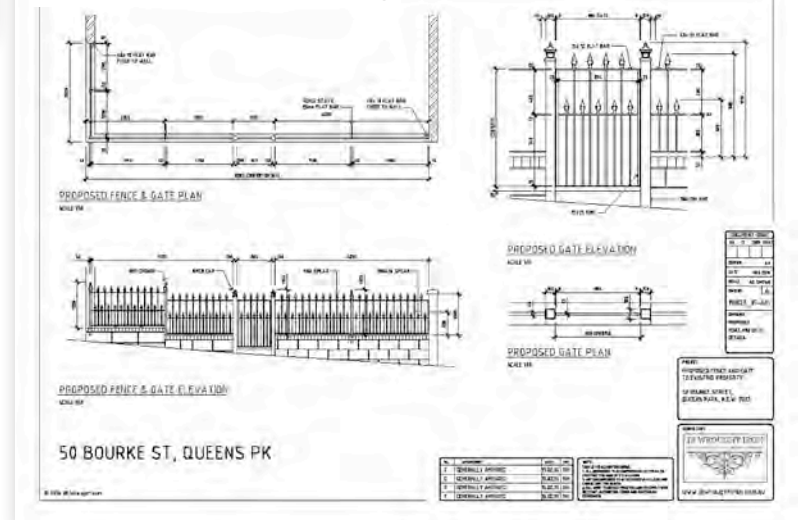




Queens Park - Entry gate and front fence concept sketch



Queens Park - CAD shop drawing



## CASE STUDIES

### CASE STUDY TWO

This job at Queens Park required a new metal palisade style fence and entry gate to replace the existing timber one which was rotting. The client had quite a definite style in mind, based on other examples in the area and requested some special features on the posts. Our in-house architect drew just one concept sketch, which was approved and then a CAD drawing with very specific detailing, was created for final approval. We also arranged for a stonemason to make good the stonework after our work was installed.



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Thank You



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