



DAVID FENNING'S ORANGERIES

FREQUENTLY ASKED QUESTIONS - WHAT IS AN ORANGERY ?

I am often asked this question or told by people what their interpretation is. 'Even if your ultimate desire is to grow citrus trees an ORANGERY can be whatever you wish it to be. Designs can vary from an extremely elaborate and expensive structure costing many thousands of pounds to modest full Orangery designs, with a central glazed lantern and internal perimeter ceiling having down lighters, within a very realistic budget'.

Much will depend on materials to be used, overall dimensions and design.

I trust that the following 'Questions and Answers' will help when embarking on the journey of thoroughly researching the very best design and materials, whilst working within your desired budget.

Q. What is an Orangery ?

A. Most people have a picture in their heads of an insulated flat roof, predominately glazed extension, designed with a centrally positioned glazed lantern

Q. Is there a realistic financial outlay that I should be considering ?

A. Most certainly not. If you have deep pockets and a country mansion, then most certainly your ultimate project may cost many thousands of pounds. There are however opportunities to purchase a superb Orangery design which fulfils all your needs within a realistically economic budget.

Q. Will we require preparatory foundations and special construction requirements ?

A. There should be no greater needs other than an appropriate foundation, depending on supporting soil stability and the percentage of solid walling within the side elevations. Generally speaking, there should be absolutely no further requirements than if you were adding a standard extension to your home

Q. What designs should we choose for the side elevations ?

A. Whilst tradition may suggest a low dwarf wall and narrow glass panels, there is a popular move towards glass to ground with very large glazed panels, even up to 2 metres in width. You may however wish to have brick or stone columns but do fully consider not just outward appearance but looking from within and if you feel that these might interrupt your view of the garden and surrounding countryside.

Q. What materials should we consider for construction within the side elevations ?

A. Absolutely whatever you wish. Hardwood, High Specification PVCu, Architectural Aluminium and in some cases GRP. Each will of course vary in price with Hardwood being the most expensive and whereas PVCu would previously have been frowned on for use in an Orangery, the very high specification extrusions which we offer have been chosen by architects and customers demanding the very highest of standards with a traditional appearance

Q. There is obviously a wide opportunity for different windows and doors. How can we best choose a design to fully please our overall wishes

A. Whilst Bi-folding doors often are initially considered but in our British climate you need to carefully consider whether the full advantage of these more expensive systems can be fully taken advantage of – when fully opened they can be fully opened for the majority of each year in the British Isles. Outward opening hinged French Doors can provide you with a 2 metre opening and you may even wish to have two or more within the side elevations. Windows need to be carefully considered and whatever you wish, factored into your ultimate choice of design. There are numerous different window styles both large and small. The principal reason for their introduction will be ventilation

Q. We understand that the roof is an extremely important area, both structurally and the general design. What options do we have ?

A. A single large lantern with a perimeter internal ceiling of some 900 has proved to be the most popular. However for a larger structure, which may be rather long compared to its depth, two lanterns may be considered. Most importantly, you need to be fully reassured that whoever is constructing the roof, fully complies with Current Building Regulations as your project will most certainly fall under these requirements. A very important issue is how the lanterns are supported and whether this is to be Steel, Glulam Beams, with perhaps double or triple joists. Most certainly a structural engineer's full assessment with appropriate calculations will be required, as your project will need to be compliant with Current Building Regulation Stipulations

Q. What lighting is popularly chosen for their Orangeries ?

A. The most popular would be down lighters, within the surrounding perimeter ceiling, controlled by a dimmer switch. You may choose to have a decorative chandelier set at the centre of your lantern.

Q. What materials should we consider for the lantern construction ?

A. Whilst many traditional conservatories are constructed in Hardwood with low maintenance Aluminium Powder Coated Capping, the tide however is now changing. Even for Listed Buildings many local authorities will accept High Specification Architectural Aluminium, as long as the extrusions are designed to look like timber profiles. It should be considered that the roof is an extremely vulnerable area and if Thermally Separated Architectural Aluminium is chosen, this will give peace of mind for the foreseeable future. Not least of all, these latest Architectural Aluminium Lanterns are designed with extremely slim profiles and large panels of glass rather than having overpowering heavy timbers. This is extremely important as the lantern is such a predominant feature within an Orangery

Q. How can we be sure that the best glass chosen in all respects ?

A. The side elevations are relatively straightforward. These should most certainly be toughened to the very highest of specifications, Low 'E' for Heat Retention and Argon Gas Fill. For the roof lantern there is much more to consider. Easi-Clean, some call it Self-Clean but not strictly true, as it will require washing with a hose or rainfall. It is much easier to clean than glass which was available some years ago. Most people, unless surrounded by trees or a north elevation, would wish to have Heat Reflective Glass. This is available in Blue, Neutral or Clear and extremely effective in protecting you at the height of the summer whilst still allowing good light to penetrate with a degree of solar gain

Q. Will the lantern perimeter flat roof allow us to walk on and withstand the passage of time, unlike the older style felt roofs which justifiably have a notorious reputation ?

A. In this respect, you should thoroughly carry out your research. There are single ply damproof membranes which come with a 30 year guarantee but you need to be absolutely confident that claims by their providers and indeed who installs them, will live up to all of their claims. Alwitra by ICB is most certainly a Rolls Royce product and usually only available to those who have undergone intensive training to provide and fit this superb product. The manufacturers will then offer a substantial independent guarantee. You could certainly walk on this material but of course not in high heels or if any sharp objects have come to lay on its surface, for all the obvious reasons

Q. Will we be able to comfortably use our Orangery throughout the year ?

A. If you have carefully studied my outline above, then it is reasonable to assume that you will make all the right decisions and most certainly employ a company, to provide appropriate materials and structural design which will allow you to do so. A very high percentage of our customers not only employ us to construct an Orangery but also open up connecting walls to their home with the introduction of lintols, so

that the adjacent room becomes linked to your Orangery. This is very different from traditional conservatories which were a glazed structure fitted on an outside elevation with a connecting door. It is therefore extremely important that the overall thermal efficiency, not just within the structure but also beneath a new floor is of the very highest specifications.

Q. How is an Orangery best described ?

A. The concept of an Orangery has changed over the years and in the beginning gained its name as a protecting glass structure where citrus fruits could be grown. There is a very special light, bright and warm area within a glass building. When this was appreciated, many became lavish glazed palaces on country estates, where sumptuous dining and balls could be held. In modern times, the general perception of an Orangery is structured with a fair amount of glass in the side elevations onto which is constructed a flat roof, albeit with one or more glazed lanterns.

Q. What materials are they generally constructed ?

A. More expensive and traditional Orangery designs have Timber Hardwood framework, into which varying amounts of glass are introduced. They can have substantial corner posts, generally known as decorative pilasters. Some structures will have brick or stone columns. Glazing should be with sealed units which are Low 'E' & Argon Gas within. All glass should be toughened. Within the lantern you may well wish to have Heat Reflective Glass Panels and Easi-Clean, you have a choice of bronze, blue, neutral or clear Heat Reflective panels. If you are not a Listed Property or wish not to have Hardwood, then High Specification Thermally Separated Architectural Aluminium framework or Quality PVCu may be chosen.

Q. What preparatory foundations and ground work are required ?

A. This will very much depend on the sub-structure where your Orangery is to be built. You will certainly require appropriate foundations and the soil stability will dictate what depth these need to be. You may require steel reinforcing or even piling where ground has been made up or near water. Many people believe that these are dependent on the weight of the upper structure but the most significant factor is **how stable the ground is** onto which their Orangery will be built. Even a small lightweight structure may suffer from serious subsidence and consequential movement if the ground is unstable and appropriate foundations not constructed.

Glazing specifications:

Glass manufacturing and its composite specification can appear to be a very complex subject. It most certainly should not be because the main considerations are heat retention achieved with low emissivity double glazed units which have Argon Gas inside, appropriately toughened for safety and not least of all within any roof panels they should have an appropriate heat reflective element, which can be blue, neutral or clear. Another more recent opportunity is Easi-Clean, not self clean as some would suggest. Thus offering a glass from which it is easy to wash off any debris or accumulation of algae without too much elbow grease

Lanterns:

You may choose timber albeit capped externally with Architectural Aluminium to ensure minimum maintenance in this vulnerable area. Thermally separated Architectural Aluminium is also popular and this will have much slimmer glazing bars

Q. Should we be able to use an Orangery throughout the year in our English climate ?

A. The most important elements are Low 'E' Glazing throughout with Argon and substantial Celotex Insulation beneath the floor, usually 100mm. These combined with an overall structure which is fully storm proofed, will most certainly enable you to enjoy a comfortable evening with family and friends, any time of the year. Even in the depths of winter, where there may be snow in your garden and robins visiting your bird feeders

Q. Will Planning Permission and Building Regulations be required ?

A. Planning Permission may not be required if you are constructing on the rear elevation and no deeper than 4 metres for a detached property and 3 metres if semi-detached. The height should not exceed 4 metres above ground level.

Building Regulations:

This concerns the structural elements of your project, such as foundations, drainage, lead flashing and not least of all thermal efficiency. These will apply if you do not have 75% or more glass/translucent roofing materials. Structural Calculations will be required for most Orangeries. Many people choosing an Orangery will also desire an Open Plan configuration where adjoining doors or windows are removed, opening up your home to the new structure. Heat Loss Calculations are then required and to achieve these you may need to have extra insulation in the loft or upgrade your boiler.

Internal Floor:

The internal floor will generally include removal of any insecure sub soil. Compacted scalplings with sand blinding should then be layed plus sand blinding and appropriate dampproof membrane onto which will be constructed a concrete oversite incorporating 100mm of insulation. These will be topped with a sharp sand cement smooth screed finish ready to receive tiles, Karndean Flooring or carpets.

YOUR CHOSEN ORANGERY DESIGN THE BEST WAY FORWARD

- I. Decide if an Orangery design is really your desire and best option
- II. Carry out thorough research from all sources available and prepare a basic sketch and dimensions of your preferred design
- III. Select as many potential providers you feel reasonable. Whether three or a dozen, absolutely ensure that their trading history is all that is claimed – the construction and glazing industry is notorious for phoenix companies. If considering a substantial expenditure, then your solicitors guidance should be requested
- IV. Always request authenticated references and associated photographs of past projects
- V. Will we have the opportunity to view potential provider's past projects and speak with their customers?
- VI. With your thorough research in place, put together a substantial list of questions. This is very important, so that you will feel comfortably in the driving seat before ultimate decisions are made
- VII. Before any commitment is made, have those quoting carry out a detailed survey of your property, ground stability, drainage and every consideration regarding the project. Ask for details of all materials which are to be used in relation to framing, glass, damp proof membrane and ancillary elements such as electrics, heating, plumbing and final floor finish. You will then be able to carry out your own research with regards to how these materials are regarded within the construction industry in relation to suitability and long term performance
- VIII. It should not be a substantial cost to employ an architect or building surveyor to not only guide you at this early stage but oversee the project.

My concluding professional advice would be to ensure that any company you may approach for an Orangery quotation, can offer you not just a portfolio of many different designs but that these should very much include an extremely high percentage of projects actually completed by them. NOT JUST OVER THE LAST THREE OR FOUR YEARS. My company is often employed to carry out detailed technical reports for Orangery projects and sun rooms when they have failed to live up to the customer's expectations. This may involve numerous sealed units breaking down, foundations which have moved, inadequate lead flashing and for older projects, timber framework which has rotted. We have numerous photographs showing these failings.

The good news is that you do not have to 'pay through the nose for quality', if you carry out your research thoroughly and choose a company with, 40 years continuous and proven trading, you can obtain the very best value for money and not least of all within your desired budget.

GOOD LUCK! I AM ALWAYS AVAILABLE TO HELP AND GUIDE THOSE SEEKING THE VERY BEST ADVICE FOR THEIR PROPOSED ORANGERY PROJECT.

David Fennings



