







### **FOREWORD**

Vince Holden has almost 45 years' experience in construction. He began his career from school with a local construction company that specialised in timber frame construction, obtaining an apprenticeship in carpentry and joinery, and then carrying on with education in site management and surveying.

By the time he formed Holden Management Services to focus on Project Management in 2010, Vince's all-embracing experience had taken him through sub-contract carpentry, his own roofing company, and then on to wide-ranging construction and house building.

His strong work ethos enabled him to maintain the exemplary status of A1 Zurich Registered Builder for 15 years.

Vince is passionate about and has many years of experience in the sustainability sector, working on renewable technology, energy efficiency, and related matters. He has worked on developing and proving new technologies, reducing energy costs and the environmental impact of buildings. His extensive knowledge of traditional and timber frame construction places him in a position to offer advice on the management of numerous methods of domestic system build.

In 2012, Vince Holden was accepted into the Chartered Institute of Building.







## **Choosing the Right Architect**

The important aspect for you before deciding on the best architect is to first understand exactly what you want from them, which of course, is influenced largely by what you are building.

An architect has a role to play and is a commodity to be employed in just the same way as, say, a carpenter. However, as there are good and bad carpenters; so also there are good and not-so-good architects.

There is a lot of difference between the input required for a virgin plot of land with no planning yet, and a plot purchased with detailed planning ready to go.

Take the case of you, the client, who have bought a plot of land, probably knowing that you will obtain some form of planning for your dream home. In that case, you need the services of a highly qualified architect. They will need to first understand the limitations of what you can build, and then go about designing it with you. A lot of skill and experience is required here, not only in the architectural sense but also in using the knowledge of the planning process.

However, if your project already has detailed planning approval and, therefore, only requires the mechanics of the build process to be put in place – Building Regulations, drawings, and so on – then a totally different level of expertise and qualification is needed and, therefore, a different level of expenditure from you.

Let's explore the different professionals who sit under the general umbrella of an 'architect'

#### **Architects**

Around 70 per cent of architects are chartered, which means they are members of the Royal Institute of British Architects (RIBA), which provides a free clients advisory service offering a database of all registered practices, including a profile of their work and the range of services they offer. All practices included in the register must hold professional indemnity insurance (PII) cover appropriate to the scale and type of work they undertake.

## **Architectural Technologists**

Like an architect, a fully qualified architectural technologist can undertake a building project from conception through to final certification, including the application of computer-aided design (CAD) techniques.

Architectural technologists have their own professional body: the Chartered Institute of Architectural Technologists (CIAT), which publishes a directory of practices and ensures that members achieve approved standards of training, adhere to a code of conduct.

## Going Out to Tender

So, you have your schedule of works and your detailed drawings, structural engineer's designs, surveys, and so on. The next thing is to establish just how much the project is going to cost and to find the people to do it.

It is now time to go out to tender and obtain quotes. There are basically three ways of going about this: first, get a quantity surveyor (QS) to create a bill of quantities (BoQ); second, to send out drawings and Schedule of Works (SoW) to different trades and ask for a quotation; and third, a combination of the two which is my preferred method;



#### Get a QS to create a Bill of Quants

A bill of quantities is a document created by a QS that involves firstly measuring or 'taking off' the numerous individual items as specified in the schedule of works and drawings.

This is either shown in a unit form as a square metre (M2), cubic metre (M3), linear metre (M), or number (no). During the course of his measurement, for the sake of calculation, he will, if asked, factor in any wastage on items that will be specified in the document, or if not measured 'net' for contractors to decide their own wastage. He will then apply standard method of measure (SMM) to each item, which will in turn differ according to geography and any other deciding factors.

Whilst in most cases materials are much the same cost throughout the country, labour rates in say, Newcastle are significantly different from London, which are then reflected in the rate to give a true figure.

# Send out the SoW to the trades and ask for quotations

Part of the information that you will need to give the relevant trades will include exactly what they should be quoting for and including. The object here is to ensure like-for-like quotes, and also, that all items throughout the SoW are covered. You want to arrive at a cost conclusion that leaves no stone unturned or nasty surprises later.

You should send the SoW in its entirety so the contractor gets a complete picture of the works, and you should always list the reference number of each item to be quoted, insisting that each item be quoted separately.

#### Combination of the two

Whilst the BoQ gives you a good indication of the costing, it also provides useful information to you and the trades who are quoting. Once again, the more information that you can provide, the more likelihood of accurate like-for-like quotations, and no matter how good the SoW, the inclusion of information in the BoQ will add to the picture.

To clarify here, the QS will provide you with a copy of the BoQ without rates, to send out. The information on the cost version is just for you. To this extent, in theory, the only difference between two quotes should be the amount of P&O, if any, that the different contractors expect to make.

#### Main Contractor or Subbies

Clearly there are two distinct ways of going about the build: one way is to employ individual sub-contractors and manage them, either by yourself or with the help of professionals; the other way is to employ a building contractor.

The main difference between the two, apart from the obvious cost benefit, is the way that you will need to manage your expectations.

Now without getting too academic regarding the subject of project management, people who know how to manage expectations are able to more seamlessly navigate the choppy waters of their build. Why? Because they know how to communicate, organise, and direct conversations around getting things done, which is no mean feat when dealing with construction workers.



If you are effectively carving up the build into individual trade elements, you are at the same time multiplying the amount of communication requirements by the same number. Conversely, if you employ a building contractor, you only have to (in the main) understand and be understood by the boss / contracts manager of the one outfit. It is then his job to filter the information and pass it down through the workforce.

#### Main Contractor

With the above in mind, assuming you have followed all of the procedures in my book, the main advantage of using a main contractor is that you only have to concern yourself with analysing quotes for the entire package, and then engaging with one contractor for the works.

Personal recommendation is the best approach but it needs to be in relation to a similar type of job, a builder who largely deals with a modest suburban extensions may be out of their depth with a multimillion pound extension and refurbishment to a listed building or new build house. Try to see examples of their work and ask previous clients what their experience of them was.

However, even with similar types of work experience can vary. Many builders dealing with home extensions are often small companies with just a few employees (although some are literally a 'one man band') however some medium sized organisations may have small works departments to deal with this type of contract.

It does not have to mean losing control entirely – you will still need to make regular site visits – but you will need to find a contractor who you have full faith in. This route suits people who are lacking in time and/or building experience.

## Managed Sub Contractors

This has the potential to save money but it is not without its problems particularly for those unfamiliar with the building industry and its procedures. Some points to consider!

The overall co-ordination of the work and ensuring the right materials are on site at the right time will be down to you!

It can be difficult to locate good subcontractors who deal with this type of work, although once you have they are often a good source of recommendation for other trades.

Some subcontractors don't like working with self-builders or laypeople because they perceive that the job is going to be poorly managed and that their lives are not going to be made easy.

However, once the self-builder has a worthwhile contact with one good tradesperson, they will often do all they can to see to it that the guys they generally tend to work alongside are brought into the job.

That's where the project manager comes in. His (or her) job is to choose the correct tradesman; once found, to programme, to manage and to wipe his brow; to point out fundamental ways towards a common goal; to show him that it's not his way or no way; to remind him of who's working for whom; and then to pat him on the head and send him on his way when his job is finished.



## Site Management

Who is going to do this? Who is directing the day to day operations and how? If you plan on doing this yourself, do you have the necessary technical experience? Do you have the required managerial skills and programming know-how? Do you have the ability to act quickly and calmly when problems occur and panic abounds? That's a lot of questions and they all need answering if the project is to be a success. It's good being prepared in advance, but to maintain a healthy project is going to require the use of all of the above skills in the continuous reassessment of progress.

The site manager should knit the contractors labour with the flow of materials. This keeps the whole thing moving forward. The manager should be able to motivate the labour force and develop a team spirit to make best use of everyone's talents and expertise. The manager must also be able to mediate between the various personalities in the team to ensure that friction is kept to a minimum. Managing a site is not about ordering people about and shouting, no matter how stressful the job may become. A cool calm head needs to be maintained at all times. This however does not mean ignoring problems in the hope that they will go away. An attribute often underestimated, is the ability to communicate with operatives at "site level". In an ideal world, many years in the industry, as tradesman and manager, is needed to provide the tools to comfortably interconnect, therefore gaining the respect of the man on site and streamlining the production.

Whoever is going to run the site on a daily basis should be set up in the site office and prepared for action. The storage containers and the welfare facilities should be plumbed in and wired up and the first set of contractors should be on site ready to begin. They will have been briefed on the Health & Safety regime and they will have been instructed with what they are doing and in what order for that day.

Liaising with all parties calls for the ability to converse at all levels and without missing the point or causing offence. The job requires a good set of negotiating skills in order to keep to the prime objective, which is to complete on time and on budget. The site manager will need to work with anyone involved in the build. This will include building control officers, conservation officers and any other environmental representatives. They will also need to interact constantly with the design team to deal with any design issues or alterations which may occur.

Providing technical aid to the contractors is required to assist the smooth operation of their work. It also makes certain that works dovetail in with any subsequent contractors. A reasonable level of surveying skills would be useful as any mistakes made at this point could prove very costly indeed. The manager should also provide advice to the contractors on materials and processes as well as updates on operational progress. This may require translation of technical language into layman's terms....

A common problem in construction is the architects drawings not containing enough information for the contractors to perform a given task. This could be due to a complex design, or more likely because the architects brief didn't include a request for detailed drawings. This will then need discussions to enable the contractor to finish their task properly. In order to achieve this, a good deal of technical expertise and skill in problem solving is required. A trained and impassive set of eyes is essential to inspect the work for quality and to spot all and any departures from the specifications or design. It is only with expertise gained from experience will some of these deviations be revealed. Sometimes what appears to be a small error at an early stage may be responsible for much larger problems later. Mistakes in foundations for example, can have disastrous and expensive outcomes. The site management is probably the most underestimated, daunting but important aspect of self-building, so consider this role very carefully.



## Project manage yourself or to bring in the professionals.

There are fundamentally two different ways forward with self-building, and with it, two requirements to manage the process.

The simple way forward is to obtain your project, place all your pre construction ducks in a row, then employ a builder as the main contractor to effectively take over from there. The amount of involvement from you towards the preambles is, of course, your choice. Some would prefer to simply employ an architectural practice to handle just about everything – from planning to handing over the keys at the end. But of course, this is not self-building and, without doubt, comes at a cost.

To an extent, the builder would assist with some elements of the pre-construction works for you and, therefore, the project management. Whilst technically this is still self-building, you are giving up control to the builder, and with it, the satisfaction of knowing that you created the end product.

However, by deciding to use a building contractor, you are dramatically reducing your own input, and with it, the knowledge and control, both in terms of cost and specifications.

The second and most exciting way forward is to obtain the project, have a significant input in the design and execution of the pre-construction requirements, and then manage the whole construction phase yourself with sub-contractors till the end. This to me is the most invigorating way to self-build, but clearly, it is not for the faint-hearted. This way forward is where high competence with project management is absolutely essential, and you really do need to know your onions. You do not want to firefight your way through the project but, instead, carefully plan and manage each element with confidence and strength.

I have over forty years of experience – but it does not take all that time to understand, plan, and manage your build if you have the right tools at hand.

With the knowledge gleaned from my book, an investment of time, and the correct attitude, you will be able to see your project take shape right before your eyes, knowing that all bases are covered and that you have controlled as much as possible.

### The Project Manager

Project management is the application of processes, methods, knowledge, skills and experience to achieve the project objectives. A project is a unique, transient endeavour, undertaken to achieve planned objectives, which could be defined in terms of outputs, outcomes or benefits.

#### To put it simply:

Project management entails making sure that the right person is in the right place, doing the right job, with the right materials, for the right cost, at the right time.

Unless you have many years' experience in construction – both in the mechanics and the management – there will be elements where you will require knowledgeable help. Whether its knowing how to actually navigate the pre-construction process, or understanding the mechanism of the build and the sub-contractors, you will need that knowledge.

Now, I am not trying to discourage you from taking up this role; my book is aimed at providing you with practical advice, but part of that advice is, know your limitations. There may be aspects that you can happily tick yourself and there may be ones that you cannot. A good manager will delegate certain parts but will at least understand what they are.



## A BASIC GUIDE TO ORGANISING YOUR SELF-BUILD.

#### The Self-Builders Checklist

Below is a rudimentary outline for the pre-construction phase works, which ideally need to be in place before you can say that you are ready to commence the build. Each item is accompanied by a small note that offers a basic explanation.

## Post Planning Approval/Pre-Construction.

Pre-Commence Planning Conditions – This involves applying to Planners to have the numerous conditions discharged. A fee is usually levied by L.A. per application so best to submit as many as possible in one go. Pre commence conditions have to be submitted and agreed before works can commence. If not employing a Project Manager (P.M.) then the Architect would often take care of this.

Pre -occupation Planning Conditions – Same as above but have to be agreed before occupation. Ideally dealt with at same time as Pre-Commence, but not always possible. Easily overlooked though but will need satisfying before a sale can conclude.

Building Regulations Drawings/Design and Application – Most often this is created by the same Architect as created planning drawings since fundamentally the same model is used for the drawings but with a lot more detail and reference for the mechanics of the build. If timber frame (T.F.) construction, then the T.F. company supply a lot towards this procedure as part of their package including structural design. Building Control can either be via Local Authority or Private Company.

Structural Engineer – Most builds involve some form of structural design, to be included within the Building Regs application.

This can be anything from foundations design if unstable ground, to steel beams incorporated within the build. Often the Architect would instigate this as the Engineers design is incorporated in the drawings and Building Regs. If using T.F. then any structural calculations would usually be included in their package.

SAP/EPC – This is the Energy Performance model created, which includes, and is included in, numerous aspects of the design. Usually conducted in two stages – DER Dwelling Emission Rate and TER Target Emission rate are created as the design value, which is then re-modelled as an "As- Built" calculation when the eventual works (including an air leakage test) are completed. This is a very complex calculation and requires a specialist.

Code Assessor – If you are required to build under the Code for Sustainable Homes (CSH), a Code Assessor should be employed which will also encompass the SAP above.

Schedule of Works – The Bible! In order to receive accurate quotations from Contractors, a document literally spelling out the works involved, as a list, should be created. I cannot emphasise enough how valuable a SofW is in whatever form. This should also incorporate certain specifications and details that will ensure like for like quotations. You cannot have too much information in a SofW but just the Architect's detail drawings is not enough for contractors to provide accurate quotations.

Surveys – This could involve Asbestos or Bat survey if demolishing, Ground survey to establish soil conditions and any contamination, or Hydrology survey to confirm Soakaway sizes and construction. If not already dealt with by Architect, a Topographical survey is essential. It is worth at this stage to do a Water Board Search to ensure no sewers etc. on the site.



Party Wall - The Party Wall Act 1996 provides a framework for preventing or resolving disputes in relation to party structures, boundary walls and excavations near neighbouring buildings. At its basic form an agreement is required if your build is within 3 meters of a neighbouring property. Quite often, a Party Wall Surveyor is required.

Incoming Utility Services Enquiries – If demolishing an existing building, main services (Gas & Elect) need to be disconnected and any temporary building supplies arranged, including the eventual new supplies required. If new build on virgin plot, new supplies applied for to include temp supply for building works (Elect and Water)

Building Warranty Application – Most new build houses require a Structural Defects Insurance which is usually in the form of a 10 year policy, taken out before works commence and inspected in stages similar to Building Control.

Tender for Elements – Once you have a detailed drawings package and Schedule of Works, you can go out and obtain quotes for the individual elements – (Groundworks, Carpentry, Plastering etc). The number of contractors tendering for each trade is a personal choice – realistically three of each to achieve a good cross section of prices. Remember that each element contractor should be responsible for all aspects of his works including any certification (mainly mechanical trades) and guarantees.

Client Supply Items – If you elect to supply certain key items, quotations should be sought to include in final costings analysis. Bear in mind any lead times.

Notices – If demolishing, a Section 80 notice has to be submitted to L.A. Building Control, main service providers and all immediate neighbours six weeks before demolition commences. L.A may reply with a section 81 notice giving restrictions/conditions or simply wait for the six weeks to expire if there are no conditions. In most cases the first inspection request acts as notification to Building Control for Building Regulations. I always consider it a worthwhile exercise to write to immediate neighbours informing them of your start date, length of project, contact numbers etc. Nosy neighbours make excellent security.

CDM – Construction Design Management is fundamentally about Health and Safety on site. With the recent introduction of CDM 2015, now all construction projects require certain roles and documents be fulfilled by law. Therefore a decent level of knowledge is required on the subject.

Program/Costings/Cash Flow Forecast – Once all quotes are in, an analysis of the figures need to be conducted to arrive at your decisions who to employ, but equally to know how much the project will cost. From this, a program of works and a cash flow forecast can be created which will plan the works but equally important, plan when elements should be paid for.

Contractor Selection – Once the decisions are made regarding contractor selection, an agreement needs to be in place with each, and this is where it can get messy for the Self-builder. It is unlikely that a formal contract would be used so a letter to each should be sent, firstly agreeing to the quotation price, then setting out the program to be agreed, and most importantly the payment agreement schedule. If a retention is to be agreed, it must be noted at this point. This letter and a subsequent return letter from the contractor effectively forms the contract so make sure all aspects which need agreement are included.



Site Insurance – If demolishing an existing property that you already have Buildings insurance on, the insurer will need to be notified of your intentions, and upgrade to some form of Contract Works cover. Alternatively, a Contract Works policy should be taken out to cover the building as it grows and therefore changes in value, but also for items such as Public Liability, hired in plant etc.

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**Start Works** – When all the above are in place .... You can get on with enjoyable part!

A more detailed and thorough account of the various elements including helpful details can be found in my books;



## The Self-builders Guide to Project Management



Written from the constructor's perspective, with useful advice, this book will familiarize you with construction management fundamentals and provide you with the everyday knowledge required to develop, plan and manage your project.

The Self-Builder's Guide to Project Managementexplains the process step-by-step and is designed to help you turn your dream into reality.

This is not a book about how to build your own house, it will not explain how to lay bricks, the correct mix of concrete or how to work out the plumb cut on a rafter. There are many publications both in books or on line to explain these mechanics.

This book will teach you how to manage the build of your home. It will explain the different Building Regulations and your responsibilities regarding Health and Safety. It will guide you through the process of creating the right documents, to get real, accurate quotations for the works and then how to make sure you have found the best people for the job.

It will go on to differentiate between the content of say the ground works package and the Brickworks contractor. I will explain the importance of a SAP calculation (Energy Performance), whether or not you need a Party Wall agreement, and much more. In short, each and every step to having your home built efficiently and correctly, with the knowledge required. You will be the Project Manager!

Available to buy now on Amazon



## The Self-Builders Guide to the Construction Phase



In my first book, The Self-Builders Guide To Project Management, I explored and explained many of the mechanisms involved to navigate the Pre-construction phase and therefore get you ready to tackle the construction works. That's where this book takes over!

The Self-Builders Guide To The Construction Phase will use all of the knowledge gained of the Pre-construction elements, and put them into practice during the build process along with a valuable insight and guidance on how to deal with the works and contractors.

Without doubt, there is a huge amount of information required between the designer(s), client and builder and too many gaps in the collation of this information.

Therefore, as the scale of work increases from, say extensions and modernisations, up through large re-furbs and new builds, so does the importance for someone to glue it all together.

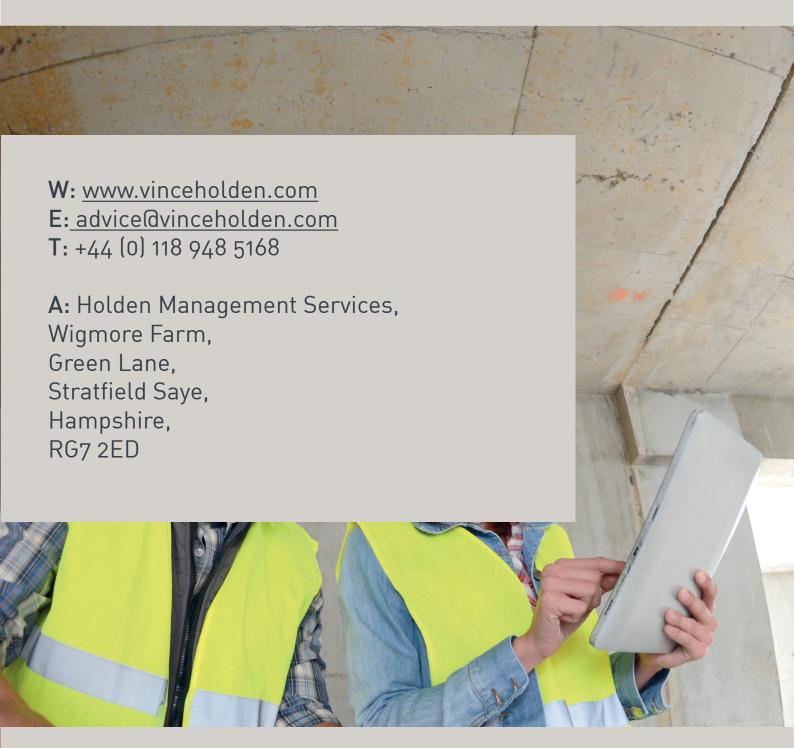
This required management role escalates also with the inclusion of recent energy performance requirements, and most importantly the thirst of Mr & Mrs Self Build to build their own dream home with the inclusion of renewable technologies, and low running costs.

Using the knowledge gained from this book, you will be the one able to manage this process with confidence. Each trade is discussed, with potential shortfalls highlighted so you can have the confidence to proceed through the construction phase with your nerves intact.

This book will not teach you say, how to lay bricks, but will provide the knowledge to ensure that the bricky is doing his job correctly. We will address the CDM (Health & Safety) requirements along with pointers on energy performance issues such as air-tightness, cold bridging and many other elements that should be incorporated within the build. I will teach you how to manage the site step by step and without drama. The information in this book will enable you to construct the home of your dreams by placing you in complete control.

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