



North Yorkshire Building Control Partnership GUIDE TO EXTENDING YOUR HOME





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Introduction

Background

Your home is likely to be one of your biggest assets, it is a major long-term investment and over the course of your occupancy your home will have to adapt to the changing needs of you and your family.

Within England and Wales most construction work is covered by the Building Regulations. These are minimum technical standards set by the government and all but the most minor building work carried out must conform to these standards.

The standards cover many aspects of health and safety within buildings as well as energy consumption and accessibility. The Building Regulations are detailed technical standards set to ensure that the building stock within England and Wales is built to a reasonable standard and that it meets the needs of the population.

The Building Regulations are minimum standards, they do not cover quality of workmanship beyond that required to ensure the basic safe construction of the building. It is possible therefore that a building which complies with the Building Regulations may not meet the finishing standards that you require and you should be mindful of this when you are entering into contractual arrangements with your builder.

There is a legal requirement on both the builder and the owner of the building to make an appropriate Building Regulations Application and to comply with the Building Regulations. Failure to do so can result in prosecution through the Magistrates' Court.

Purpose of this Guide

This guide will take you through the Building Control process. It is not a substitute for professional advice but it aims to show how your project will be affected by the Building Regulations. The guide is divided into chapters that contain advice about typical building projects and it is hoped that when you have read the guide you will have a better understanding of what is involved in a domestic building project.

Domestic projects that may require Building Regulations consent include:-

- Extensions
- Garage conversions

- Loft conversions
- Cellar conversions
- Structural alterations e.g. removing load bearing walls
- Alterations to drainage, hot water or heating systems
- New or replacement windows
- Electrical work
- Replacement roof coverings
- Cavity wall insulation
- Some garages
- Some conservatories

If you are considering a building project and you are unsure as to whether it will require Building Regulations consent please feel free to contact us and we will be happy to advise you.

The Building Regulations Process

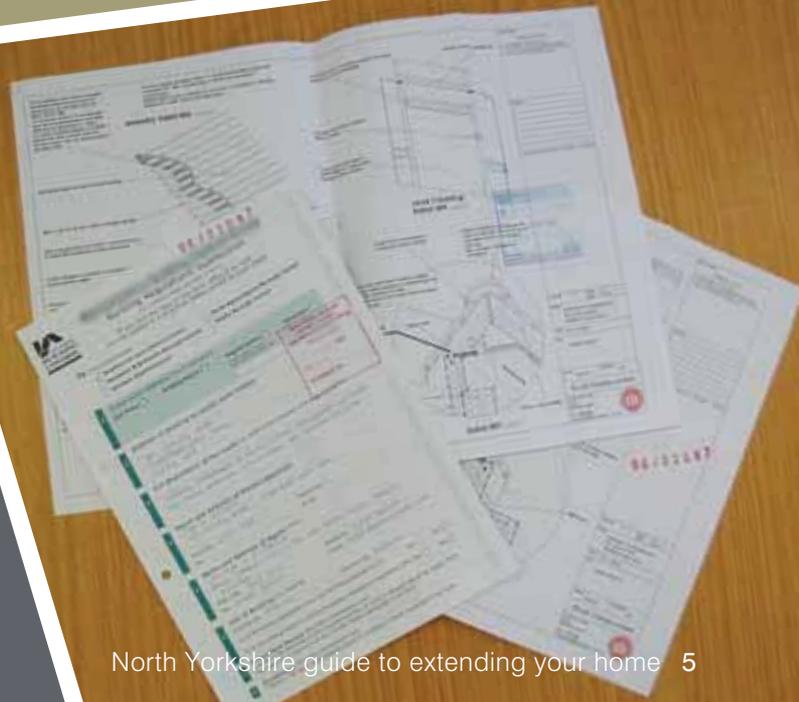
If your project needs Building Regulations consent you will need to make a Building Regulations application.

How to Proceed

Unless you are experienced in construction you will need to get some professional advice. There are a number of ways of obtaining this including:

1. **Appointing an architect/technician or building surveyor:** these will prepare drawings and designs for your proposal, obtain the necessary approvals and if required they will also help you to find a suitable builder and manage the project for you.
2. **Appointing a design & build company:** these companies offer a one- stop shop for construction projects, their design department will prepare

WHATEVER TYPE OF PROJECT THAT YOU ARE UNDERTAKING WE WILL ARRANGE TO CARRY OUT A SERIES OF INSPECTIONS OF THE WORK IN PROGRESS.



the necessary drawings and obtain the necessary approvals and their construction departments will translate these drawings into reality.

3. **Using an experienced builder:** some builders have experience in carrying out domestic projects and may be able to offer you a package similar to the design & build companies.

Making a Building Regulations Application

There are two ways of making a Building Regulations application:-

Full Plans Application

This is often thought of as the traditional way of applying for Building Regulations Approval. The building designer will draw up detailed plans and supporting information for the proposed scheme and will send them to us together with an application form and the necessary fee. We will then check the details and following any necessary consultations and liaisons with the building designer a Building Regulations Approval will be issued.

Work can start any time after the application has been received although it is wise to wait until the scheme has had its initial check under the Building Regulations, this usually takes between two and three weeks.

Our team of surveyors will liaise with your builder and inspect the work in progress on site. When the project is satisfactorily completed a Building Regulations Completion Certificate will be issued showing that the project has been independently inspected and that it complied with the Building Regulations.

Building Notice Application

This system is best suited to small projects carried out by a competent builder and is not recommended unless your builder and designer are very experienced in the type of project that you are undertaking and are fully aware of the requirements of the Building Regulations. Under this scheme no formal

Approval of plans is issued and work is approved on site as it progresses.

To use the Building Notice process you or your agent will need to submit a Building Notice application form together with a site location plan and the required fee. Work can commence 48 hours after the notice has been accepted.

When work commences one of our surveyors will meet with your builder to discuss your intentions, to agree how the work should be carried out, agree when the work will need to be inspected and to establish whether any further information will be required e.g. structural calculations or drawings.

When the project is satisfactorily completed a Building Regulations Completion Certificate will be issued showing that the project has been independently inspected and that it complied with the Building Regulations.

The forms for making a Building Regulations application can be obtained by telephoning or calling into our offices, or can be downloaded from our website www.nybcp.org

Self Certification

To help you to gain Building Regulations approval more easily the government have allowed certain trade bodies to self certify their members' work and to issue Building Regulations certificates. Currently the bodies which can issue these certificates are:-

1. **FENSA** – Contractors registered with FENSA can issue certificates for replacement windows.
2. **CERTASS** – Contractors registered with CERTASS can issue certificates for replacement windows.
3. **GAS SAFE** – Registered contractors can issue certificates for installations and alterations to gas, hot water and heating systems so long as the contractor is a registered installer and not just a service engineer.

4. **OFTEC** – Registered OFTEC installers can issue certificates for installation of and alteration to oil burning boilers and appliances.
5. **HETAS** – Registered HETAS installers can issue certificates for installation of and alteration to solid fuel burning boilers and appliances.
6. **Part P** – Electrical Contractors registered under one of the Part P schemes can issue certificates for domestic electrical work.

For a comprehensive and up-to-date list, please go to the following www.communities.gov.uk/planningandbuilding/buildingregulations/competentpersonsschemes/existingcompetentperson

Tips for using Self Certified Contractors

1. Always ensure the contractor is registered for the work they are undertaking, eg. If you are having a new heating system installed ensure the contractor is a registered installer not a service engineer.
2. Always ensure that at the end of the job the contractor issues you with a Certificate confirming that the work complies with the Building Regulations, you may need this when you come to sell your property.
3. If you are in any doubt about anything either contact the relevant trade association.

Other Permissions you may Require

Planning Permission: many domestic alterations will also require Planning Permission, further advice is available from the Planning Portal www.planningportal.gov.uk or to confirm whether Planning Permission will be required for your project please either contact the

appropriate Planning Officer for the Partner Council area.

Party Wall Act: if your proposal affects a Party Wall or if you will need to excavate foundations close to your neighbour's house you may need to give them notice under the Party Wall Act. This is a Civil Act and Partner Councils do not have any enforcing power under the Act. Further details of this can be found on the Planning Portal www.planningportal.gov.uk or contact us for the latest guide to the Party Wall Act.

The Inspection Process

Whatever type of project that you are undertaking we will arrange to carry out a series of inspections of the work in progress. Whilst we cannot be on site all of the time the inspections will be carried out at key stages so that we can be reasonably sure that the work carried out complies with the Building Regulations.

We will tailor the inspections carried out to suit your individual project (a list of inspections is issued with your Approval/Acceptance) and these will generally be arranged through your builder. If during the project you have any concerns, if you want something specific inspecting, or if you would like to meet to discuss any issues please contact us and we will make the necessary arrangements.

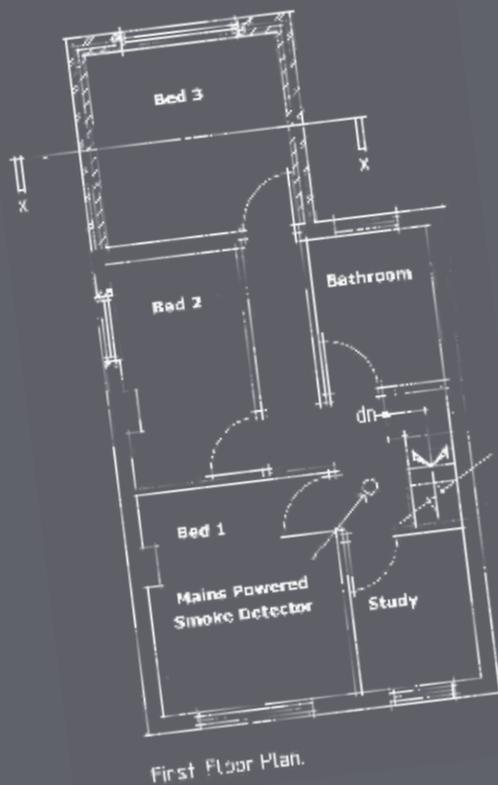
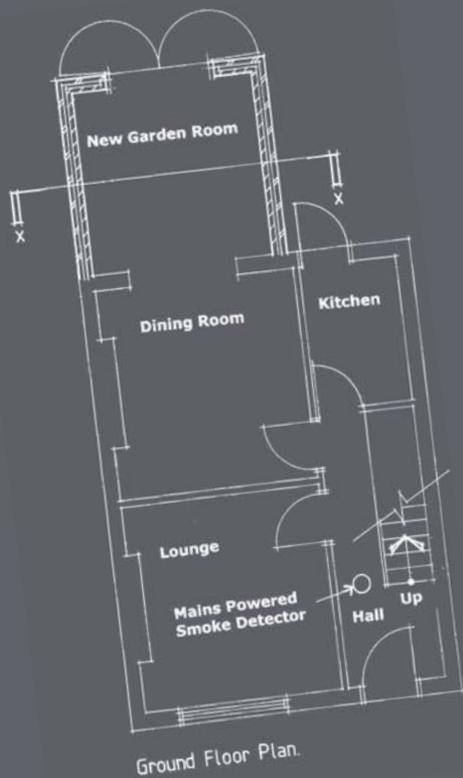
Completion Certificates

When your project has been satisfactorily completed under the Building Regulations we will issue a Completion Certificate. This is a legal document that you will need if you want to sell your house, you may also need it for re-mortgaging or insurance purposes. Please ensure that we are called in to carry out our final inspection at the end of the project to ensure that your Completion Certificate is issued.

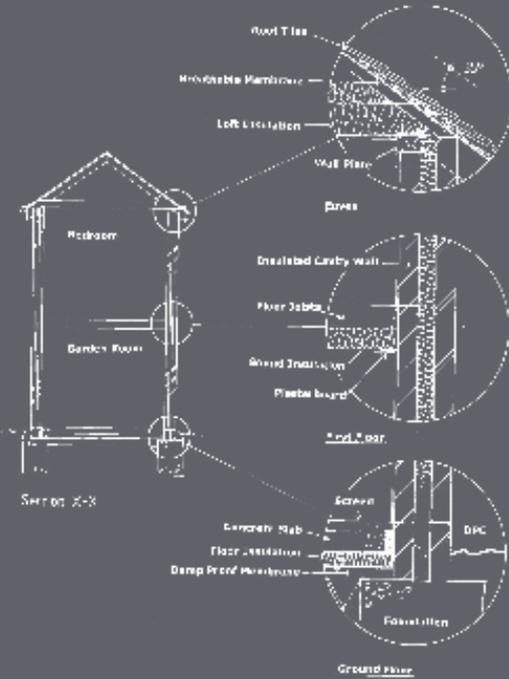
Domestic Extensions

Introduction: if you need more space and you do not want to move house you may wish to consider extending your home. Your home is probably your most valuable asset so it is important that your extension project is carefully planned. This guide is not a substitute for professional advice but has been written to provide you with useful information about how the Building Regulations will affect your extension.

Suitability: most houses are suitable for extending, providing that you have the space. When you are thinking about whether your house is suitable for extending you might like to consider:



Certain ground conditions will affect the ground floor detail



1. How will you access your extension?
2. What effect will your extension have on the circulation in and around your home?
3. What effect will your extension have on your existing house and garden? Will it block out light from existing rooms or make some rooms unusable? Will you still be able to get into your garden?
4. Is your existing house built from an unusual construction for example prefabricated panels, concrete frame etc?

If you can resolve all of these issues then your house may well be suitable for extending.

How to Proceed: extensions are complex projects and unless you are experienced in construction you will need to get some professional advice. The introduction contained advice about obtaining this and with this in place we can now consider some of the technical issues that affect domestic extensions.

Technical Issues

Foundations: the foundations are one of the most important parts of your extension and often one of the most expensive. For domestic extensions trenchfill foundations are the most common, these should be taken down into firm natural ground and should generally be a minimum of 1m deep. In areas with clay subsoil trees up to 20m away can have a significant effect on foundations which generally means that they need to be deeper, sometimes as deep as 2.5m. If you are concerned about any trees please get in touch with us and we will give you some advice regarding foundation depths.

Ground Floor: the ground floor of your extension performs a number of tasks: it must support the floor loading, keep out damp and provide thermal insulation. Generally a ground floor is a multilayer structure, the top soil under the extension





YOUR HOME IS PROBABLY YOUR MOST VALUABLE ASSET SO IT IS IMPORTANT THAT YOUR EXTENSION PROJECT IS CAREFULLY PLANNED.

floor area is removed and a layer of compacted stone is placed over the site. This is blinded with sand and a layer of 1200g polythene is then placed over the sand and lapped in with the damp proof course in the wall. A layer of insulation is then provided and a concrete slab at least 100mm thick is poured over the insulation (some insulation may require an additional membrane). The concrete can either be float finished or a screed applied at a later date. On some sites where the ground floor is significantly higher than external ground level or where the site has been affected by trees, a suspended floor may be needed, these can be formed from either concrete or timber and if you need any guidance regarding suspended floors, please get in touch with us for advice.

Walls: the walls of your extension must carry the loads from the floors and roof, keep the weather out of the extension and provide thermal insulation. Cavity walls are commonly used for domestic extensions. These are made up from bricks and blocks and the cavity is filled with insulation as the work proceeds. When building walls remember to

ensure that you have adequate buttressing at the corner of your extension, lintels over all openings, wall ties to join the leaves of your cavity wall together and a suitable damp proof course. If you are building up against your neighbour's house you will also need to ensure that your wall provides adequate sound resistance.

First Floor: two storey extensions will require a first floor, these are generally made up from timber floor joists which span between load bearing walls, they support floor boarding above and plasterboard is then fixed to the underside of the joists to provide a ceiling finish and fire resistance. The size of the floor joists will depend on the span so please contact us for advice on the joist size required. The floor will also need to include sound insulation and in domestic extensions, 100mm of sound deadening mineral wool placed between the joists is generally sufficient.

The Roof Structure: the roof of your extension will need to be designed to keep out the rain and snow and may need to cope with some light loft storage loading.

Generally two types of roof are used for domestic extensions:-

Flat Roofs: this is the simplest type of roof structure and for some extensions, generally single storey, a flat roof can provide a practical and economic solution.

Timber joists are used to span between the loadbearing walls and beams and these are covered with a plywood decking laid on furring strips to provide a fall. Thermal insulation is then placed over the roof and it is generally finished with a waterproof covering of three layers of bonded roofing felt. Critical things to consider in this type of roof are the size and support of the roof joists and the way that the roof will be insulated and, if necessary, ventilated.

Pitched Roofs: if a flat roof is not suitable for your needs you are likely to require a pitched roof. These are generally more substantial structures that are finished with roof tiles or slates. The supporting structure of the roof can be formed in two ways:

1. Trussed Rafter Roofs: these are quick to construct, measurements are taken from site and roof trusses are made up in a factory, they are then delivered to site ready for installation. Each roof is

individually designed by the roof truss manufacturer using specialist computer software and the carpenter's time on site can be significantly reduced.

2. Traditional Roofs:

A carpenter cuts a traditional roof on site. The roof structure will generally be designed by an architect or structural engineer and the timber is then delivered to site where the carpenter will set out the roof and cut each of the individual timbers to size before installing them. This type of roof offers the greatest flexibility in roof shape and is often the only way of roofing complicated extensions especially where the new roof must join onto an existing structure.

The size of the timbers and supporting beams required in a roof will depend on the loadings and spans involved in each case, complex roofs will require a structural engineer's design but our Building Control Surveyors will be happy to assist your builder in designing simple roof structures.

Once the support is in place the roof must be covered to provide weather protection, pitched roofs are generally finished with tiles or slates with a layer of roofing membrane or



felt under them. The tiles are supported by the rafters via a series of timber battens. To provide adequate weather resistance the tiles overlap each other and they must have an adequate pitch. For extensions it is common to use tiles or slates that match the main house although this is not always possible if the extension roof has a very low pitch. Our Building Control Surveyors will be happy to assist you with any enquiries that you have about roof finishes.

Stairs: if your extension has more than one storey you may need to install a staircase and careful design of this can be critical to the success of the extension. If a stair is installed it should be designed in accordance with the following guidance.

Width: there is no minimum width for stairs in the Building Regulations however they will need to be useable. Generally stairs are 850–1000mm wide.

Pitch: the maximum pitch for the stair should not exceed 42 degrees.

Rise and Going: the maximum rise of each tread of a domestic stair should not exceed 220mm and the going should be at least 220mm.

Headroom: the clear headroom over the stair should be at least 2m.

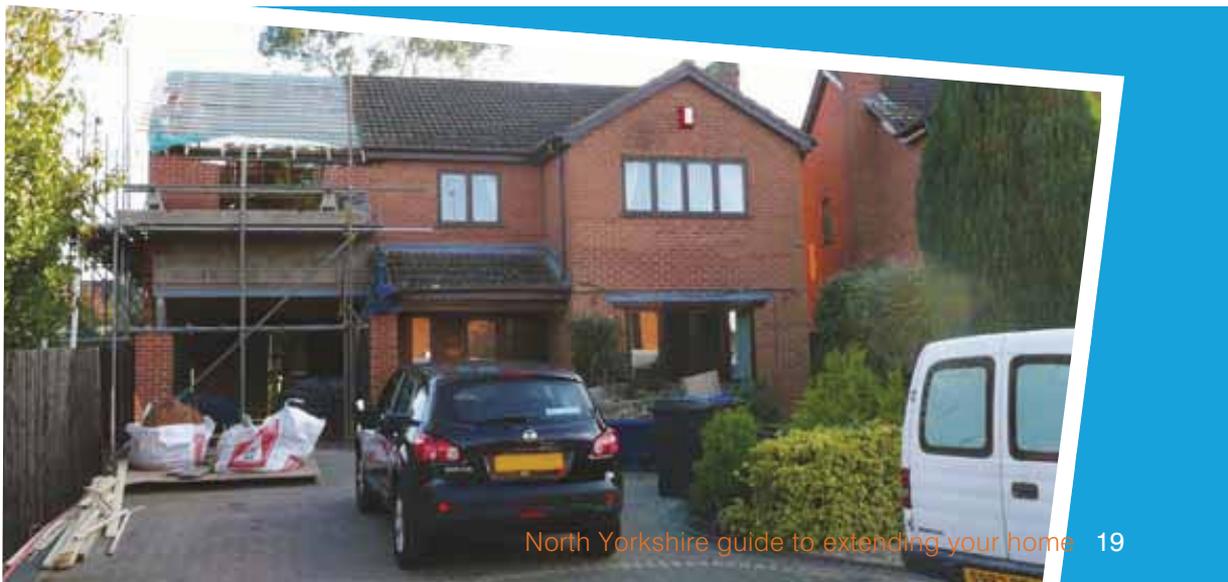
Handrails and Balustrades: the stair should be provided with a handrail at least 900mm high and any exposed edges of stairs or landings should be provided with balustrading at least 900mm high.

Fire Precautions: it is important that you consider fire precautions when you are designing your extension. The most dangerous fires generally occur at night when everyone is asleep and to give you awareness of a fire the Building Regulations suggest that mains operated smoke detectors should be installed on each floor of the house when it is extended.

To prevent people being trapped by a fire all rooms that do not open directly onto a hall and all first floor rooms should have a window or door that is large enough for people to escape through. If you are using a window as your secondary fire escape it should have a clear opening of at least 0.33m² at least 450mm wide with a sill height of between 800 and 1100mm above floor level.

Fire is a very dangerous thing and careful design and planning are required to ensure that the risks it poses are minimised.

Ventilation: fresh air is essential to healthy living and the Building Regulations require your extension to have adequate ventilation, generally an opening window with a 'trickle



vent' is all that is required, the window should have an openable area equivalent to at least 1/20th of the floor area of the room that it is ventilating. The trickle vent is a small slot type vent that you can leave open to allow some background ventilation without the need to open the window, generally these are found in the top of the window frame. If your extension contains a kitchen, utility room or bathroom you will need to provide an extract fan in these areas and your Building Control Surveyor will be pleased to provide you with more detailed advice when they call on site.

Drainage: it is usually possible to connect drainage from extensions into the existing drainage systems. Drainage can be divided into two types, foul water and rainwater and generally speaking the drainage systems should be kept separate. Foul drainage is generally discharged through a series of pipes and manholes to a public sewer although some properties will have septic tanks or private sewage treatment plants. When planning your extension look for manholes and try and find out where your drains are running so that you can work out how any new drains will connect to them. It is important that all new underground drain pipes have a diameter of at least 100mm so that they do not block or freeze, are watertight and have manholes or access points so that any blockages can be cleared. Where possible rainwater drainage should not be discharged to foul sewers as this can cause problems with flooding, the preferred solutions are to discharge rainwater to soakaways located in your garden at least 5m from any building or to storm water sewers if they are available.

Heating: most extensions will need to be heated and you will need to check with your heating engineer that your existing system has sufficient capacity to heat your extended house. You may also need to move your boiler, if for example, your extension will cover the flue outlet. Any alterations to your heating system should be carried out

by a suitably qualified plumber or heating engineer registered with Gas Safe for gas fired boilers or OFTEC for oil fired boilers. Any new boilers will need to be highly efficient condensing boilers and the new radiators that you install in your extension should be fitted with thermostatic radiator valves so that you can ensure that they use heat efficiently.

Thermal Insulation: CO₂ emissions are a major concern in today's environment and you will need to provide a high level of insulation within your extension. Your extension should provide an insulated envelope so that the amount of heat escaping is minimised. The roof, walls and floors of your extension should all include thermal insulation; walls generally have insulation placed within the cavity, roofs generally have insulation in the loft area and sheets of insulation can be placed beneath the concrete of your ground floor.

Another major area where heat is lost from buildings is the windows and these require special attention: 24mm double glazing units incorporating low emissivity glass are generally required and, unless energy improvements are carried out in the existing house, the window area of your extension is limited by the Building Regulations to 25% of the floor area plus the area of any existing openings covered by the extension.

High levels of insulation can result in problems with condensation and care must be taken to ensure adequate ventilation is available to rooms and particularly in roof voids.

As well as insulating your extension you will need to consider the efficiency of any services you put into it. Low energy light fittings should be used where possible and any new heating systems should work to high levels of efficiency and have suitable thermostats and controls.

Sound Insulation: to reduce unwanted noise the walls and floor around bedrooms will need to be insulated to reduce sound transmission, this is generally achieved by placing 100mm of sound deadening quilt in the floor void and in the partitions around the bedrooms.

Electrical Installations: as part of the Building Regulations process you will need to supply British Standard Test Certificates for most new electrical installations, when selecting your electrical contractor please ensure that they are competent to provide you with these test certificates as otherwise you are likely to incur additional costs for testing the circuits.

Glazing: to reduce the risk of people injuring themselves, glazing in and around doors and all glazing within 800mm of floor level should be either toughened or laminated glass.

Conclusion: whereas a well designed and constructed extension is a definite asset to your home that can provide useful extra space and add value to your property, a poorly thought-out extension can reduce your property's value and in some cases compromise your safety and the structural integrity of your home. It is important to ensure that you plan your extension carefully and get the work carried out by an experienced contractor.

The Building Regulations exist to ensure that buildings are constructed to a reasonable standard; Building Control will be pleased to provide you with any further assistance that you require during the design and construction of your extension.

IT IS IMPORTANT TO ENSURE THAT YOU PLAN YOUR EXTENSION CAREFULLY AND GET THE WORK CARRIED OUT BY AN EXPERIENCED CONTRACTOR.

