

The Effect of the Building Control (Amendment) Regulations 2014 on Small Construction Projects in Ireland

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Declaration

I, Andrew Monahan, declare that this research report is my own original work and that it has never been presented to any institution or university for the award of Degree or Diploma. In addition, I have referenced correctly all the literature and sources used in this work and this work is fully compliant with the Dublin Business School's academic honesty policy.

Signed: 

Date: 17th August 2015

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Abstract

The introduction of the new Building Control (Amendment) Regulations 2014 (BC(A)R) has been a major change in how construction projects are managed and certified. There are very limited studies on the topic so the author decided to take an in-depth look into the effect BC(A)R has had on small construction projects such as one off houses and extensions.

The purpose of this study was to investigate the effects both positive and negative BC(A)R has had to determine if it has been an overall positive or negative development. To do this eight semi-structured interviews were carried out with all of the main professional groups affected by the change in Regulations. The professional groups consisted of Architects, Engineers, Building Surveyors and Builders/Contractors. The findings were firstly analysed per professional group under categories such as cost, quality, and schedule. Also the options the Minister for Environment tabled for review to change BC(A)R and the proposals he has since decided to implement are discussed. Then the overall findings were discussed and conclusions were determined.

The conclusions found from this study are that BC(A)R has increased quality which means that building standards and compliance with the Regulations has increased which was the main purpose of the new Regulations. The overall opinion of BC(A)R is that it is a very welcomed step forward but it is just a step and there are many more improvements required before issues like Priory Hall can be prevented from ever happening again. Also it was determined that costs have increased by approximately 1% of the total project cost and this does not match the “outlandish charges” the Minister states. The options put forward by the Minister and the changes he has decided to implement have been universally seen as a backwards step and not welcomed by the professionals interviewed in this study.

It is this authors hope that this study sheds some much needed light on BC(A)R so that an overall balanced view of the subject is formulated prior to knee jerk reactions and conclusions being taken on the subject. It is also the hope of the author that the Minister reconsiders the changes he plans to implement which will make BC(A)R optional for one off houses and extensions as this is seen as a backwards step that will lead to worse quality of building and increased non-compliance with the regulations.

Table of Contents

List of Tables & Figures.....	8
List of Abbreviations.....	9
1. Introduction.....	10
1.1 Construction Industry & Certification Requirements Background:.....	10
1.2 Priory Hall Incident:	11
1.3 Smaller Sized Projects:.....	13
1.4 Existing Research:.....	13
1.5 Significance of Study:.....	14
1.6 Purpose Statement:.....	15
2. Literature Review	16
2.1 Construction Industry Background:.....	16
2.2 Building Control (Amendment) Regulations 2014	16
2.3 Project Success Definition.....	20
2.4 Minister for the Environment Calls for Review of BC(A)R.....	21
2.5 Relevant Professionals Research and Articles:.....	23
2.5.1 Introduction:.....	23
2.5.2 Legal:.....	26
2.5.3 Contractors / Builders:	27
2.5.4 Architects	29
2.5.5 Engineers.....	31
2.5.6 Building Surveyors	34
2.5.7 Summary	35
3. Research Methodology and Methods	36
3.1 Introduction:.....	36
3.2 Research Philosophy	38
3.3 Research Approach & Strategy	38
3.4 Time Frame	40
3.5 Data Collection.....	41
3.5.1 Overview	41
3.5.2 Primary Research.....	42
3.5.3 Secondary Research	44
3.5.4 Data Analysis	44

3.6	Sampling and Population.....	45
3.7	Ethical Issues	46
3.8	Limitations to the Research.....	47
4.	Data Analysis & Findings	48
4.1	Introduction.....	48
4.2	Literature Review Data & Findings	48
4.3	Interview Findings	56
4.3.1	Introduction.....	56
4.3.2	Contractors/Builders	56
4.3.3	Architects	59
4.3.4	Engineers.....	62
4.3.5	Building Surveyors	66
4.3.6	Summary	69
5.	Discussion	72
5.1.1	Introduction.....	72
5.1.2	Contractors/Builders	72
5.1.3	Architects	73
5.1.4	Engineers.....	74
5.1.5	Building Surveyors	75
5.1.6	Overall Findings Discussed	76
5.2	Benefit of Findings.....	82
5.3	Limitation of Findings	82
6.	Conclusions & Recommendations.....	84
7.	Reflection.....	86
7.1	Introduction	86
7.2	Kolb's Learning Styles	88
7.3	Belbin's Team Role	90
7.4	Positive Improvements Made	91
7.5	Conclusion	92
	Bibliography	93
	Appendices.....	98
	Appendix 1 Timeline of Dissertation Work	99
	Appendix 2 Dissertation Log Book for Proposal.....	100

Appendix 3 Build Control Management System..... 102
Appendix 4 Questionnaire for Interviews and Information Sheet for Participants. 108
Appendix 5 Information Consent Form & Signed Consent Sheets 111
Appendix 6 Summary Interview Responses 118
Appendix 7 SWOT Analysis of Myself in Relation to My Long-Term Goals 138

List of Tables & Figures

Figure 1: The Research Onion	p 37
Figure 2: Kolb's learning Style	p 89
Table 1: Summary of Literature Review of Legal Opinions	p 50
Table 2: Summary of Literature Review of Contractors/Builders Opinions	p 51
Table 3: Summary of Literature Review of Architects Opinions	p 52
Table 4: Summary of Literature Review of Engineers Opinions	p 53
Table 5: Summary of Literature Review of Building Surveyors Opinions	p 54
Table 6: Summary of Literature Review of All Professionals Opinions	p 55, 56
Table 7: Summary of Interview Findings of Contractors/Builders Opinions	p 59, 60
Table 8: Summary of Interview Findings of Architects Opinions	p 62, 63
Table 9: Summary of Interview Findings of Engineers Opinions	p 65,66,67
Table 10: Summary of Interview Findings of Building Surveyors Opinions	p 68, 69
Table 11: Summary of Interview Findings of All Professionals Opinions	p 70,71,72

List of Abbreviations

ACEI	Association of Consulting Engineers of Ireland
BCA	Building Control Authority
BC(A)R	Building Control (Amendment) Regulations 2014
BCMS	Building Control Management System
BCS	Building Control System
CIF	Construction Industry Federation
CIRI	Construction Industry Register Ireland
CPD	Continuing Professional Development
DBS	Dublin Business School
EI	Engineers Ireland
GNP	Gross National Product
PI	Professional Indemnity
PMBOK	Project Management Body of Knowledge
PSDP	Project Supervisor Design Process
RIAI	Royal Institute of Architects of Ireland
SWOT	Strengths, Weaknesses, Opportunities, and Threats
TD	Teachta Dála (Member of Irish Parliament)

1. Introduction

1.1 Construction Industry & Certification Requirements Background:

In Ireland the Construction Industry has always been one of the largest industries and employers. The industry peaked at close to €39 billion or almost 25% of Ireland's Gross National Product (GNP) in 2006 (Society of Chartered Surveyors Ireland, the Irish Construction Industry in 2012 survey). This level was never going to be sustainable and when the "property bubble" burst it had a devastating effect on the Irish Economy and the Construction Industry. The Industry has only in recent years started to rebound and in 2014 it equated to just below €11 billion (Society of Chartered Surveyors Ireland, Irish Construction Prospects to 2016).

The method of certification for any building project was commonly referred to as "self-certification" method and this had little or no involvement by Building Control which is a department in the local councils. Only if an issue occurred or was highlighted did Building Control generally get involved. "Self-certification largely pertained to conveyance and generally confirmed that there was substantial compliance with the building regulations as opposed to ensuring that all building standards were fully met" (Hollingsworth, 2014). This meant that an Architect, Chartered Engineer or Building Surveyor would carry out inspections at periodic stages along the construction process. Then in the majority of cases the certificate that they would produce at the end of the project would clearly state that they did not supervise the works but that they only monitored the works. Their opinion of compliance certificate would state that "based on the monitoring of the construction it was in accordance with the building regulations".

Another issue frequently discussed in relation to this type of self-certification process was that the contractor/builder would not have to sign off any certificate or document at completion of the project. This resulted in a situation where the contractor/builder had

nothing tying them legally to the project which stated that they constructed the building in compliance with the architectural and engineering drawings and that the project was built in accordance with the relevant building regulations.

1.2 Priory Hall Incident:

A couple of major incidents occurred which resulted in a review and eventual overhaul of the certification method for any construction project. The main incident was at Priory Hall which was an apartment complex that was constructed in North Dublin with inadequate fire separation. This resulted in the entire complex being evacuated by order of the High Court in 2012. This complex is currently being rebuilt at a cost of €27 million by Dublin City Council. The council has to foot this bill because the developer has since gone out of the business. On developer type construction projects, in a lot of cases, the developer is the designer, contractor, certifier and they can also be the client. This can create a number of issues for example where an unforeseen event such as localised bad ground conditions may result in additional costs being incurred. On a project where the contractor is separate to the client the builder would just get the additional costs associated with the unforeseen works at the clients' expense. But on a developer type project the additional cost would have to come out of the possible profits from the development. It is more likely that the developer would look to cut back on some other part of the project which might have a detrimental effect on the standard of construction and compliance with building regulations.

This incident and others like it highlighted deficiencies in the current self-certification system and primarily due to these type of incidents the Minister decided to create new regulations and these was called the Building Control (Amendment) Regulations 2014 (BC(A)R) and these were implemented on the 1st of March 2014.

The main change is that it is now a mandatory requirement for certification of buildings by "assigned certifiers". BC(A)R still creates a form of self-certification but there is more of an

onus on the person carrying out the role of assigned certifier by firstly requiring them to display how they plan to ensure that the building will be constructed in accordance with the building regulations. Secondly they must confirm that they did in fact carry out what they said they would prior to construction on the final certification. The assigned certifier is a new role that can only be undertaken by an Architect, Chartered Engineer or Building Surveyor and adds an additional expense to any project (Hollingsworth, 2014). These professionals all have Professional Indemnity (PI) insurance which is a form of liability insurance that helps protect professionals who offer services such as design works. The role firstly consists of entering specific documents including drawings, calculations, notices of appointments, commencement notice, schedule of inspections onto the Building Control Management System (BCMS) which is then authorised by Building Control Authority (BCA), the local authority. The schedule of inspections is required to be a lot more thorough than previously and the Minister has produced a guidance document on this. This states that any critical point of the construction should be inspected and this should be determined by a risk analysis. Then at completion of the building project a Certificate of Compliance on Completion must be lodged on the BCMS system and any changes to the initial design that have occurred must also be submitted with drawings, specifications and particulars that are relevant. This certificate is signed by the builder and the assigned certifier and confirms the inspection regime was completed and that the building is in compliance with all the relevant building regulations. It is not until this certificate is placed on the register and validated by the local authority that the building can be opened, used or occupied. When validating a certificate of compliance on completion the authority does not do a technical assessment it only assesses whether the certificate itself is in compliance with the regulations (Cummins, 2013).

1.3 Smaller Sized Projects:

The effect of BC(A)R on small construction projects, primarily one off houses and extensions, was chosen for this study as the additional costs associated with the assigned certifier role and additional inspections would have a greater effect on these small sized projects than the larger developments. This point is backed up as Minister for the Environment Alan Kelly who called for a review of the BC(A)R “because of what he said were outlandish charges being sought for inspections required under the new system” (Kelly, 2014). Mr Kelly went on to say that the cost burden especially for people building their own homes has become a cause for concern.

1.4 Existing Research:

As the regulations have only been implemented for just over a year studies carried out to date have been very limited and most have just been articles by professionals with their opinions on the topic. These articles produced by numerous professionals of the new regulations have been seen in differing lights with some thinking they were much needed and others saying that they have not solved the underlining issues. Cummins (2013) states that the intentions behind the Regulations are good and that it is step in the right direction but he has a word of warning by going on to say that the Regulations will have little or no impact unless they are strictly enforced and those found in breach are held accountable. The article continues saying that “given the low level of activity in the construction industry at this moment, it may be some time before the effects of the Regulations are actually seen in practice”. O’Cofaigh (2014), a former president of the Royal Institute of Architects of Ireland (RIAI), is very critical of BC(A)R and says that all that is achieved from the new system is “traceability and accountability but not better building” which is what we should be striving for. The article continues stating that what is required “is an independent system of both design and construction under the control of the Building Control Authorities (BCA)”. This is already in place in a number of other sectors such as food safety and hospitals. Also if this is

paid for by the client but licensed and answerable to the BCA then it can prove very successful as it has been proven in England and Wales (O' Cofaigh, 2014).

The most thorough study to date has been by O'Connor (2014), a chartered Engineer, who investigated BC(A)R from a fire safety perspective and to do this the study consisted of interviewing nine professionals who are involved in the fire safety of buildings. This was a very insightful study and the findings were informative and very balanced in relation to BC(A)R. The study states that BC(A)R is a significant improvement on its predecessor but that in his opinion it has not gone far enough. But instead of being overly critical of the revised Building Control System (BCS) the study is concluded by stating "stakeholders should embrace the revised BCS and exploit its positive aspects in an attempt to improve building construction and promote an improved culture of compliance to provide better, safer buildings for all" (O'Connor, 2014).

1.5 Significance of Study:

Due to BC(A)R only recently being implemented and with limited studies on the subject the author was of the opinion that a study on BC(A)R would be very beneficial. The study consisting of semi-structured interviews with a number of people involved with the system in differing roles would be beneficial for all parties involved in the construction of one off houses and extensions. The people affected by BC(A)R are designers, architects, engineers, project managers, surveyors, builders and self-builders, councils, developers and building owners.

Secondly the subject was of interest to the author as he is a structural engineer and project manager who is involved in numerous projects of this type. Thirdly it would be a good benefit for a discussion on the review that was recently completed by the Minister and the subsequent proposed changes to BC(A)R that the Minister plans to implement.

1.6 Purpose Statement:

The purpose of this study was to investigate the effect BC(A)R has had on the construction of one off houses and extensions. This included looking at the three main components of any project which are cost, quality, and scheduling or timescale from a project management point of view (Banaitiene, N, Banaitis, A, & Norkus, A, 2011). What the most affected professionals such as Building Surveyors, Chartered Engineers, Architects and Builders/Contractors think of BC(A)R, the Building Control Management System (BCMS) and also the Ministers proposals for changing the system. Also will BC(A)R solve the issue highlighted by the Priory Hall?

2. Literature Review

2.1 Construction Industry Background:

The construction industry is crucial to the Irish economy and out of the almost €11 billion spent in the industry in 2014 almost €3 billion of this was attributed to general repairs, maintenance and improvement, such as extensions etc., of residential properties and over €2.1 billion was attributed to new housing (Society of Chartered Surveyors Ireland, Irish Construction Prospects to 2016). Although not all of these projects would come under the remit of the BC(A)R, as extensions under 40 square metres are exempt, a high proportion would so BC(A)R has effected a large proportion of small scale construction. Also the Central Statistics Office estimates that over 70% of housing in rural areas would be classed as one off houses this again shows that BC(A)R has effected a large number of construction projects.

2.2 Building Control (Amendment) Regulations 2014

BC(A)R is only applicable to the design and construction of new dwellings, extensions to existing dwellings over 40 square metres and works to which Part III (Fire Safety Certificates) of the 1997 Regulations apply to (Cummins, 2013). The new regulations require a number of documents to be forwarded to the relevant building authority and this is all managed on a new system called the Building Control Management System (BCMS). Prior to any works commencing there are six steps/pages on the BCMS system that have to be completed, see Appendix 3 for a screenshot of each of the six pages. The assigned certifier, who can only be an Architect, Chartered Engineer or Building Surveyor, is responsible for firstly creating the project on the system. The first page is called Project Details and it requires the assigned certifier to enter in the following details:

- The relevant local authority;
- commencement date;

- proposed completion date;
- planning permission number;
- date planning was granted;
- date of expiry of planning permission;
- project name;
- activity type;
- notice type, description of proposed development;
- number of phases;
- number of buildings;
- phase for this notice;
- number of units in this phase;
- amount payable;
- location details.

The second page is called Project Assessment and it requires the assigned certifier to enter in the following details:

- Use of building,
- sub group,
- construction type,
- project type,
- number of storeys,
- height in metres,
- fire safety certificate (if applicable),
- disability access certificate (if applicable),
- quantity,
- material alteration works,

- material use of change (if applicable).

The third page is called Nominate Roles and it requires the assigned certifier to enter in the following details:

- Building Owner name and email address;
- Builder/Contractors name and email address;
- Designer/s name and email address;
- Assigned Certifier name and email address.

Once this information is entered an automated email is sent to all of these people from the BCMS and they must accept their role by clicking on the link. No information can be entered passed the third page until these four roles are accepted. The next page, page four, is called Statutory Documents and it requires the assigned certifier to firstly print out the following documents:

- Commencement Notice;
- Design Certificate/s;
- Notice of Assignment of Builder;
- Notice of Assignment of Person to Inspect and Certify Works (Assigned Certifier);
- Certificate of Compliance (Undertaking by Assigned Certifier);
- Certificate of Compliance (Undertaking from Builder).

Then the Assigned Certifier must get all the required signatures on these documents. The two no. certificates of compliance documents have to be signed by the assigned certifier and the builder respectively. The Design Certificate/s has to be signed by the designer or designers if there are more than one. The two no. notices of assignments have to be signed by the assigned certifier and builder as well as the client. Finally the commencement notice is signed by the client.

Once all of these documents are signed they have to be loaded onto the BCMS and then the fifth page requires *“such plans, specifications and particulars as are necessary to demonstrate how the proposed works will comply with the requirements of the Second Schedule of the Building Regulations”*. This page is called Supporting Documentation and it requires the assigned certifier to enter in the following details:

At least one of the following documents must be entered in the following 3 sections:

- Section 1:
 - General Arrangement Drawings;
 - Plans;
 - Sections;
 - Elevations.
- Section 2:
 - Schedule of Plans;
 - Calculations;
 - Specification and Particulars.
- Section 3:
 - Inspection Plan;
 - Inspection Notification Framework.

Then the final page, the sixth one in total, requires payment of the commencement notice and the works must commence not before 14 days after the payment is made but not after 28 days of the payment being made. If the dates on any of the signed documents or any dates entered on the system are not the same such as the date of commencement then the Building Control Authority (BCA) will not accept this submission. Also if any of the required documents or information is not loaded onto the BCMS then again the submission will not be accepted.

Then at completion of the building project a Certificate of Compliance on Completion must be lodged on the BCMS system and any changes to the initial design that have occurred must also be submitted with drawings, specifications and any particulars that are relevant. This certificate is signed by the builder to certify that the works are in compliance with the submitted drawings, specifications etc. already on the BCMS and the assigned certifier also signs this document to confirm that the inspection plan has been implemented. It is not until this certificate is validated by the local authority and placed on the register that the building can be opened, used or occupied. When assessing the validity of the submitted certificate of compliance on completion if within 7 days of lodging the document the BCA finds any issue with it they can reject it. Then they must notify the person who submitted it in writing why it was rejected and what has to be done to satisfy them so a valid cert can be submitted and then accepted. When validating a certificate of compliance on completion the authority does not do a technical assessment it only assesses whether the certificate itself is in compliance with the regulations (Cummins, 2013).

2.3 Project Success Definition

The three main components of any project from a project management point of view are cost, quality, and scheduling or timescale (Banaitiene, N, Banaitis, A, & Norkus, A, 2011). For a cost point of view the project must come on or under the project budget, for a quality/scope point of view the project must deliver all that is set out in the scope and for a time management/schedule point of view the project must be completed within the agreed set out schedule.

Project cost management can be defined as cost of assets necessary in order to complete a series of schedule activities (PMBOK 2013). However, when defining the project cost, this should also reflect the effect of unplanned decisions and its impact on the overall project cost.

Taking PMBOK approach and considering project cost management as “project life-cycle cost”, estimating, budgeting and controlling are the most efficient manner to achieve accurate estimations on a constrained environment and are mandatory in order to succeed on a project. Correct cost estimation at an early stage is the key to avoid cost overrun, moreover, cost project success depends on accurate integration of project information, resources and control over project execution.

Appropriate consideration of these uncontrollable risks during the initial stage of the project, significantly reduces any mistakes over the project life-cycle (Doloi, H., 2013).

Taking the PMBOK reference by having “a knowledge based approach to project management”, it is imperative that the project scope is well defined before the project work begins. A well-developed scope must include all the procedures required to ensure that all the work required, in order to complete the project successfully, is taking into consideration. This detailed scope, will give the project team and stakeholders such as the client, an overall understanding of what will be delivered at the completion of the project. The main scope requirement for any construction project is that at completion the building is built in compliance with building regulations and in accordance with the designers’ drawings, calculations and specifications.

Time management applies to effective time control according to certain priorities. In other words, time management prioritise the most important, urgent and relevant activities within a given period of time. Designers, builders, and assigned certifiers all need to work together to firstly make sure the schedule for a construction project is achievable and then secondly to do all they can to achieve this schedule.

2.4 Minister for the Environment Calls for Review of BC(A)R

Minister for the Environment Alan Kelly has called for a review of the Building Regulations “because of what he said were outlandish charges being sought for inspections required

under the new system” (Kelly, 2014). Minister Kelly went on to say that the cost burden especially for people building their own homes has become a cause for concern. A consultation period was put forward and four options have been put forward for review. These are discussed in Information Document No.2 New single dwellings (including self-build) and extensions to existing dwellings and the options are as follows:

1. For single dwellings and extensions the statutory certification would be advisory rather than mandatory.
2. Additional qualified professionals could be added to the list of people who can act as Assigned Certifiers so competition would be increased in this market and costs should then be reduced.
3. Guidance on the fees for certifying single dwellings could be put in place.
4. Allow exemptions for extensions to existing dwellings based on a building plot ratio and not the current across the board exemption to developments of less than 40 square metres.

The review will also consider the impact of the 2014 regulations on owners and occupiers of buildings in relation to issues such as public safety, accessibility, energy efficiency, and good building practice.

During the course of this dissertation the Minister completed the review of BC(A)R and the following decisions were made on the 31st of July 2015 (Department of Environment, 2015):

- New amendment regulations will be made to remove the mandatory require for statutory certificates of compliance in respect to new dwelling on a single unit development or a domestic extension.

- A client can opt of statutory certification and may instead demonstrate by alternative means that their general obligation to build in accordance with the minimum requirements of the building regulations has been met.
- Local Authorities will be tasked with carrying out a new inspection process to ensure that standards do not slip.
- Also a new statutory process for the registration of Architectural Technicians will be introduced and this it is anticipated will broaden the pool of assigned certifiers.
- The new regulations will come into effect on the 1st of September 2015.

As this was announced when the author had the literature review completed and also was half way through the interviews it was unfortunately not possible for a thorough investigation into these amendments and the results from the consultant process. The author did still endeavour to discuss with a number of the interviewees, some of who had already completed their interviews, these amendments and their opinion on them.

2.5 Relevant Professionals Research and Articles:

2.5.1 Introduction:

As stated previously due to the regulations only being implemented for just over a year studies carried out to date have been very limited and most have just been journal articles on the subject. The new regulations have been seen in differing lights with a wide range of opinions and issues and these are discussed throughout the literature review section. The most thorough study carried out to date was done by O'Connor (2014) who investigated BC(A)R from a fire safety perspective. Although this study was primarily based around fire safety aspects a few points relevant to this study were also discovered and they were:

- Overall BC(A)R is a significant improvement on the previous Building Control System and this will result in improved building construction. Although there are still areas of concern where further improvements are required.

- The Certificate of Compliance on Completion finally addresses the issues with construction in accordance with the Building Regulations compliant design approved by the Building Control System.
- The current situation where a builder / contractor do not have to be assessed or on an approved register is a weakness. The client is responsible for employing a competent builder but there are no specific guidelines to evaluate the competency of a builder.
- The inspection and certification arrangement is still not seen as ideal and adopting a system similar to the one used in England and Wales would be more beneficial. In England and Wales the building owner has the choice of having building works inspected and certified by an officer from the building control authority or by a third party 'approved inspector'. Many people interviewed feel that this system would be more beneficial as it would be independent of any commercial relationship between the client and the person certifying the works.
- One of the major issues with BC(A)R is that the building control authorities are not required to perform technical assessments of compliance with building regulation at commencement or at completion stage. If a technical assessment of compliance were to be conducted by the building control authority, at commencement and completion stages for all projects, this would constitute a second level check to capture the vast majority of non-compliances.

The author now discusses the literature found on BC(A)R per professional category and these are as follows:

- Legal
- Contractors / Builders
- Architects

- Engineers
- Building Surveyors

These five professional categories were chosen for the following reasons:

1. Legal – If BC(A)R is to have any effect then it must have consequences for non-compliance or fraudulent construction such as what happened in Priory Hall. The legal effects must be investigated to see if this will be the case.
2. Contractors / Builders – They will be affected as they will need added coordination to achieve the significant amount of additional inspections required by BC(A)R. They will also have to sign the certificate of compliance on completion along with the assigned certifier so legally they will be more responsible than ever previously for building in compliance with the building regulations.
3. Architects – They are one of the three professionals who can fulfil the assigned certifier role and they are also designers. For the majority of construction projects Architects would be the lead consultants and over the years any new design team roles created such as Preliminary Safety Design Process (PSDP) role for example were just added to the Architects brief for any project.
4. Engineers – They are the second professional who can fulfil the assigned certifier role and they are also designers. To do this though they must be Chartered Engineers and go through Engineers Ireland (EI) process to achieve this.
5. Building Surveyors – They are the third and final professional who can fulfil the assigned certifier role.

The summary of the findings from the research of each professional group was then put into a summary table with comments under the following headings:

- Cost – The effect on the overall cost of any project due to the introduction of BC(A)R is obviously important. If clients have to pay more than previously then this must be known at the start of the project or it will likely have a detrimental effect on the project being successful. Also at a time when the construction industry is only now rebounding after a significant recession where costs were at extremely low prices any additional costs may result in the project not being deemed financially viable.
- Schedule – The effect of any change on the schedule of any project due to the introduction of BC(A)R is again important. If projects are taking longer due to BC(A)R then in the majority of cases this will lead to a cost implication with clients having to pay more. This must be known at the start of the project or it will again most likely have a detrimental effect on the project success.
- Quality – The most important section as the main purpose of BC(A)R is to ensure that construction projects are built in accordance with the building regulations. This should result in the standards of construction increasing and this will result in clients having more confidence in the construction industry. Also if there is an issue found with the quality or compliance the client should have a legal recourse which should allow them not to lose out due to non-compliant or substandard construction.
- Overall Opinion – This heading is to catch any other comments that the professionals might have such as any other issues not related to the 3 headings already discussed.

The summary of findings tables can be found in Chapter 4 Data Analysis and Findings.

2.5.2 Legal:

Cummins (2013) states that the intentions behind the Regulations are good and that it is step in the right direction but then has a word of warning by going on to say that the Regulations will have little or no impact unless they are strictly enforced and those found in breach are held accountable. The article continues by saying that while the BCA will have

greater oversight of the building process it is disappointing that they will not have “any responsibility for directly controlling the quality of building”. The article is summarised by saying that “given the low level of activity in the construction industry at this moment, it may be some time before the effects of the Regulations are actually seen in practice”.

According to Heneghan & Byrne (2014) it is likely that costs will be increased but they are hopeful “that the Regulations will play an important role in the pursuit of an improved culture of building control with an increased focus on care and safety in the construction industry”.

At a recent one year on review of BC(A)R held by the Association of Consulting Engineers of Ireland (ACEI), which was attended by the author, a legal expert discussed BC(A)R and they said that there had not been any cases taken yet and until this happens the added liability taken on by the assigned certifier, builder and designers is unclear.

A summary from the findings for this Legal literature review is found in Table 1 in Chapter 4.

2.5.3 Contractors / Builders:

According to the Construction Industry Federation (CIF) (‘New building regulations will reward quality building’, 2013) BC(A)R was very welcome and a number of benefits were highlighted in this article:

- BC(A)R will help to stamp out projects that have blighted Irish construction which has resulted in tarnishing the name of the entire industry.
- It will help to stop builders who cut corners which in turn will reward builders who take pride in their work.
- It will help to establish traceability and accountability for all steps in the building process.

- By the regulations imposing an obligation on all clients appointing a competent builder, no matter if it is a company building an office or a person building their own home, this will hopefully remove the black economy builders.

A word of warning is also highlighted though as the new process will add to the overall costs at the time when CIF feel all regulatory costs should be critically examined so that other unsustainable regulatory costs can be minimised.

A point already highlighted by O'Connor (2014) previously regarding how anybody determines if a contractor is competent is a valid one and one that the Government has tried to address. In early 2014 the Minister asked the CIF to forward proposals for the development of a robust voluntary registration scheme. It is the government's view to review this within 12 months of operation so that a robust statutory scheme can be put in place by 2015 (Fitzpatrick, 2014). This is called the Construction Industry Register Ireland (CIRI). There are a number of headings which builders can register under such as extension and refurbishment, house building, main contracting etc. and steps required to gain entry to the register include:

- Submit their current Tax Clearance Certificate;
- Undertake to adhere to the required Industry Code of Ethics and Commitments;
- Demonstrate that they have the required competence and experience of construction. In this respect, practical hands on experience of working in construction, generally for a period of no less than three years should be demonstrated;
- Have a knowledge of building practice, building regulations and regulatory obligations;
- Commit to ongoing training and development so that membership can be maintained and renewed; and

- Where applicable, an acceptable record which demonstrates compliance with regulatory requirements pertinent to the industry.

A summary from the findings for this Contractors/Builders literature review is found in Table 2 in Chapter 4.

2.5.4 Architects

As already discussed O’Cofaigh (2014) is very critical of BC(A)R and some of the key points discussed are as follows:

- The Pyrite Panel set up to find out how this issue arose and to prevent it happening again had a number of recommendations. One of these was that a system of independent inspections should be carried out by building control officers. If this was the case the chances of Priory Hall happening would have been significantly reduced. This was not implemented in BC(A)R.
- To make the assigned certifier responsible for everything creates a blame trail but it does not improve building standards.
- The corner stone of the regulations the Certificate of Compliance on Completion requires the builder to sign along with the assigned certifier. The builder certifies that he has built per the plans but not specifically per the building regulations. It is the assigned certifier who takes full responsibility by signing that “the building or works is in compliance with the second schedule to the building regulations”. This leads rise to a system which allows the builder to stay quiet while someone else takes the majority of the slack when it comes to complying with the building regulations so why would this promote builders to build any better?
- Good building regulations should ensure better building and a quick cost free redress for the client but these regulations do neither.

- Although the regulations have an inspection and certification arrangement in place it is still not seen as ideal and adopting a system similar to the one used in England and Wales would be more beneficial. In England and Wales the building owner has the choice of having building works inspected and certified by an officer from the building control authority or by a third party 'approved inspector'. Many people interviewed feel that this system would be more beneficial as it would be independent of any commercial relationship between the client and the person certifying the works.

Fitzgerald (2014) put together the additional requirements for a notional project with a project value of €500,000 and a schedule of 26 weeks. A total of six additional days would be required up to and including the submission of the commencement notice. Then an additional thirteen days would be required during construction stage to satisfy all the required site inspections and finally an additional one day to prepare and upload the compliance on completion certificate. This would result in a total of twenty additional days which although only a rough guide would still suggest that the costs to any project of this size would significantly increase and this could equate to as much as 2.5% of the overall project cost. Also as thirteen additional days occur during the construction phase mostly for site inspections to keep the project on schedule will require more coordination so the risk of project over run would also increase.

A summary from the findings for this Architects literature review is found in Table 3 in Chapter 4.

2.5.5 Engineers

As already discussed in the introduction of this section O'Connor's (2014) research found a number of relevant findings for the effect of BC(A)R on construction projects.

Bradley (2014a) was involved in the consultant process with the Minister on behalf of Engineers Ireland and when he discusses BC(A)R the following points are highlighted:

- The new regime of building control has not been met with universal accord.
- The documentation came about through a consultation process with government officials and five different institutions. These consisted of two engineering, one architectural, one surveying, and one construction industry institutions respectively.
- The self-build process was not outlawed but there are additional requirements to self-build projects under the new regulations.
- BC(A)R places more emphasis on communication and records and without either of these the Certificate of Compliance on Completion will not be able to be lodged on the BCMS system so the building will not be able to be opened, put in use or made habitable.
- The fear that the assigned certifier will be the main focus of any legal proceedings if anything goes wrong is what the new system creates but this is not new. The professional party who previously would supply a certification of compliance with building regulations was undertaking a similar role. The one difference being that generally these certificates would contain a "get out of jail free card" by adding such disclaimers as "they did not supervise the entire works" and "from what they saw" the building was constructed in compliance with the building regulations.
- The Construction Industry Register Ireland (CIRI) has been developed and although it is on a voluntary basis currently it is expected to be made mandatory by the end of 2015. It will involve an annual registration with a number of requirements such as

CPD requirements and tax compliance. This will hopefully eliminate operations in the black market and lead to improvements in building standards.

In response to a number of damning articles about the BC(A)R and his first article, by people like O’Cofaigh, Bradley (2014b) replied with the following:

- Although the majority of the 500 submissions to the Department advocated an independent inspection regime the resources and finances are not available and would not be made available to put this in place.
- In relation to any inspection regime whether it be self-employed or independent on its own does not promote better building but an enhanced sense of accountability would be a first step towards that ambition.
- The suggestion that BC(A)R will just improve the paperwork but not improve building standards is short sighted and it does not take a number of things into account. These include the CIRI and also builders now have to sign certification documentation which should create a willingness on their side to build better. Also the requirement that an inspection regime is required to be produced prior to construction and then at completion the certification must be signed stating that the inspection regime was undertaken. These additions must at a minimum reduce the chance of substandard or non-compliant construction.
- Any person who wants to undertake a self-build project needs to realise that the four roles of building owner, builder, assigned certifier and design certifier must be still catered for. The documents and certification required should be known prior to starting so that at completion the self-builder is not in a position where they are not capable of producing the documentation required to the BCA that will enable the property to be legally habitable.

In relation to the review requested by the Minister which is currently in progress Engineers Ireland (EI) had a number of comments regarding this (*Engineers Ireland, 2015*):

- Now that Ireland is currently experiencing growth in the construction industry it is critical that there is no easing of compliance with the building regulations.
- Engineers Ireland is in support of any review of the BC(A)R and BCMS systems to ensure smooth running of the certification process.
- Engineers Ireland “firmly believes that the mandatory to comply with the building regulations for self-build properties, single dwellings or extensions to existing dwellings should remain in place”.
- In relation to widening the pool of professionals that could be assigned certifiers Engineers Ireland is of the opinion that the nature of the 3 professional titles, currently held by assigned certifiers, means that they are the most competent people to fulfil this role. They continue to state that they do not believe that there is a valid case for broadening the pool of professionals to undertake this role.
- The Minister responded to these comments by stating that engineers should expect further changes in his final report after the review is completed.

A summary from the findings for this Engineers literature review is found in Table 4 in Chapter 4.

2.5.6 Building Surveyors

Isadell (2014) discusses changes to the building regulations as follows:

- The new system is still a self-certification system but it will require input from the client, builder, designers and the new role of assigned certifier.
- There will be additional costs for the building owner due to the assigned certifier role and increased site inspection requirements.
- There will be programme implications due to the additional paper works required prior to submitting the commencement notice. Also at the completion of the project additional documentation is required to be entered on the BCMS and then it requires validation from the Building Authority prior to the building being able to be put in use.
- The CIRI is set up and this will eventually, when made mandatory, assist clients to choose a builder/contractor at procurement stage.

Ramsey (2014) goes further by discussing the additional costs associated with the new system. Senior Government ministers and others state that “to sign off on work completed will cost somewhere between €1,000-€2,000. But this does not take account of the resource or complexity of a project nor the additional work to ensure quality assurance within the new regulations. Based on a construction period of 40 weeks for a one-off house it is a reasonable estimation that the additional time taken to perform the Assigned Certifier and Design Certifier roles over and above normal professional scope of service will be in the region of 155.5 hours. Even if a very conservative figure of €40 per hour was assumed for fulfilling these roles this would equate to a figure of over €6,000 which is a significant amount more than the €1,000-€2,000 the senior Government ministers stated.

A summary from the findings for this Building Surveyors literature review is found in Table 5 in Chapter 4.

2.5.7 Summary

Table 6 in Chapter 4 shows the results from the literature review when the professionals' opinions are all collated under the main topics. The main purpose of the updated regulations was to achieve a better standard of building with more / full compliance with the building regulations so that issues like Priory Hall do not happen again. The majority of the professionals who produced literature / studies on the topic do seem to think that BC(A)R will be an improvement. The exception are architects who seem to think that all that is created is a paper exercise so that one entity, the assigned certifier, can be held responsible if an issue is found.

From a cost point of view everyone is in agreement that there will be additional costs due to the assigned certifier role requiring more time to enter documents and also due to the additional site inspections required. The magnitudes of these additional costs are significantly more than the Government estimated from the literature reviewed. The schedule should be slightly affected but the construction phase of any construction project should not be affected. Only the entering of documentation onto the BCMS should add time to the overall schedule.

The majority of professionals feel that the introduction of the Construction Industry Register Ireland (CIRI) will be a major positive. When this becomes mandatory it has a strong possibility of reducing and hopefully eliminating the cowboy builders who tarnish the entire construction industry. If finally builders are required to attend Continuing Professional Development (CPD) seminars they will be more competent as they will be more up to date with the Building Regulations and any changes that might occur to them.

In relation to the opinion on the Ministers review of the regulations there is very limited information with only Engineers Ireland coming out against the proposals put forward by the Minister. This will be researched in more detail in the primary research during the interviews.

3. Research Methodology and Methods

3.1 Introduction:

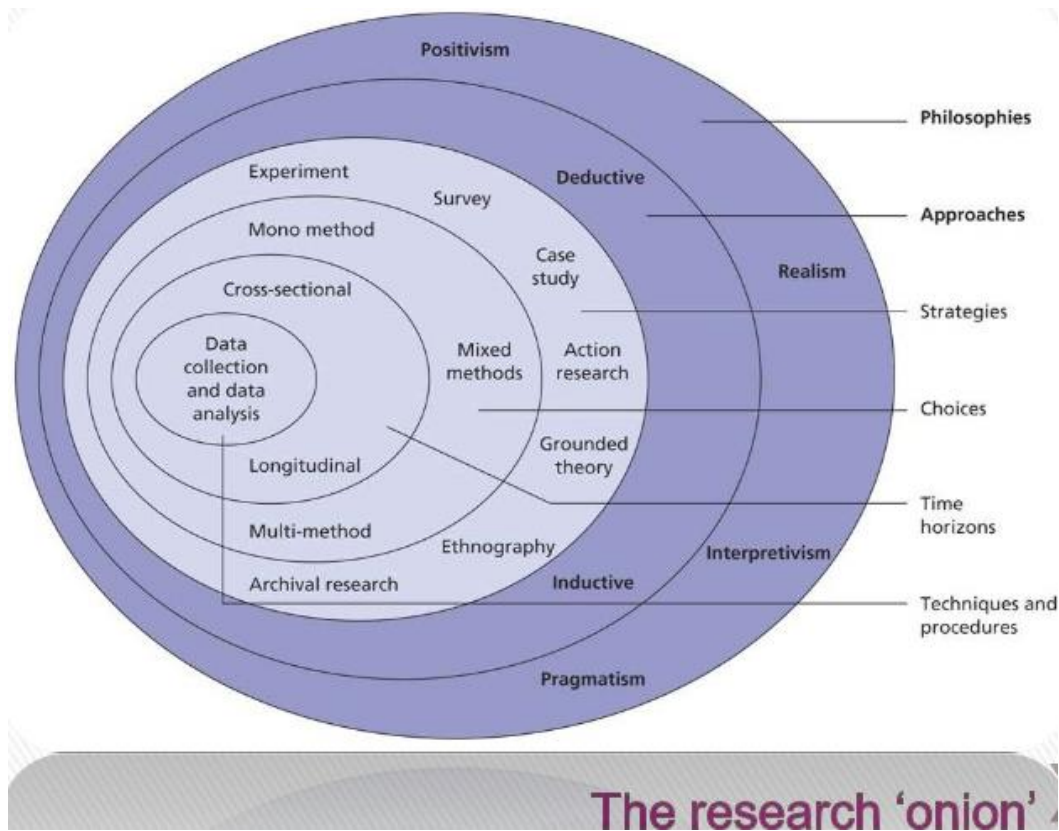


Figure 1:

Source: The Research Onion (Saunders et al., 2012, p. 128)

The author decided to carry out the research process as per Saunders et al. (2012) 'Research Onion' as this process requires the researcher to go through each layer making educated decisions in a linear fashion as they progress. The layers consist of the following processes:

1. Philosophy.
2. Approach.
3. Method Choice.
4. Strategy.
5. Time Horizon.

6. Techniques and Procedures.

The author found this a very straight forward process to follow and enabled the research to flow in a logic well worked manner.

The author will attempt to answer the following question:

“The Effect of the Building Control (Amendment) Regulations 2014 on Small Construction Projects in Ireland”

In order to gain a better understanding of the topic the author conducted both primary research and secondary research and adopted a deductive method approach to primary research.

Primary research consists of analysing data that the researcher has collected specially for the research project being undertaken (Saunders, Lewis and Thornhill, 2012, p. 304). This can take numerous forms such as surveys and interviews. Semi-structured interviews were chosen in this study.

Secondary research consists of analysing data that has already been collected from different sources such as academic research previously undertaken. Once this is obtained the data can be further analysed to provide additional or differing knowledge on the researchers' topic (Saunders, Lewis and Thornhill, 2012, p. 304). In this study the secondary research was primarily based on technical journal articles on the topic.

Where an author wishes to adopt a clear theoretical position that they will test through the collection of data, their research project will be theory driven and this is a deductive approach (Saunders, Lewis and Thornhill, 2012, p. 48). A deductive approach was used by the author to carry out their research.

These will all be discussed further throughout this chapter.

3.2 Research Philosophy

Creswell, J. (2014, p. 5-11) discusses 4 world views or “a basic set of beliefs that guide action”. These are postpositivism, constructivism, transformative and pragmatism. Postpositivists hold a philosophy that problems that are studied “reflect the need to identify and assess the causes that influence outcomes such as found in experiments. Constructivists generally use a qualitative approach and they believe that people “seek understanding of the world in which they live and work”. The goal is to rely as much as possible on the participants’ views of the topic being researched. A transformative philosophy “contains an action agenda for reform that may change lives of the participants, the institutions in which individuals work or live, and the researcher’s life”. And finally the pragmatic worldview “arises out of actions, situations, and consequences rather than antecedent conditions.

The author is proposing the philosophy of constructivism as during the interviews the author hopes to rely heavily on what the interviewees have to say on the topic. By asking open ended type of questions it is hoped to get a better understanding of the topic and also to understand the interviewees’ position on BC(A)R.

3.3 Research Approach & Strategy

Silverman (2007) emphasises that your choice of research method should depend on what is the best way to answer your research question. The author chose to carry out semi-structured interviews to gain a detailed insight into the interviewees opinions on BC(A)R. This method was selected because the literature research discovered a number of differing opinions on a number of differing topics relating to BC(A)R. There were several reasons pointing to why semi-structured interviews were the best method to investigate this study. These include:

- Some of the questions that the author wanted and needed to ask are open-ended and interviews would be a much more preferable method of research than questionnaires or surveys in this situation.
- It is necessary to understand the reasons for the interviewee's attitudes and opinions on the subject (Saunders, Lewis and Thornhill, 2012, p. 378).
- There are a large number of questions to be answered so getting the required amount of time by a significant number of people to take a survey may not be possible or practicable.

Easterby-Smith et al. (2008) and Jankowicz (2005) (both cited in Saunders, Lewis and Thornhill, 2012, p. 379) state that "an in-depth or semi-structured interview will undoubtedly be the most advantageous approach to attempt to obtain data if the following circumstances"

1. Where there are a large number of questions;
2. Where the questions are either complex or open-ended;
3. Where the order and logic of questioning may need to be varied.

This situation is very similar to the situation the author faced so this is why semi-structured interviews were chosen.

In a semi-structured interview, a set of prepared questions acts as a guide for the researcher. The literature review helped to create a number of set prepared key questions that the researcher wanted to discuss in more detail than a survey could have allowed. The semi-structured interview format also allows the researcher to ask these key questions to all of the people interviewed but also allows and encourages the researcher to interject with additional questions as appropriate. The flow of the interview is meant to be primarily driven by the participant as the researcher wants to find out their opinion on the topic so the interviewee is asked to talk openly and freely about whatever he or she views as important

and is thus encouraged to elaborate and even take the conversation in an unanticipated direction (Deibel, 2011).

As mentioned in the introduction a deductive approach was used to carry out this research. This was done by firstly using the literature on the topic to create a hypothesis. Then the author carried out the in-depth interviews. A hypothesis was then drawn up from the interviews and then was compared and contrasted to either support or contradict the hypothesis created from the literature and conclusions and recommendations were then determined.

By carrying out qualitative research i.e. by performing individual interviews with numerous experts an in-depth view into their opinions on BC(A)R and the effect it has had on small construction projects could be achieved. The author did investigate the possibility of carrying out surveys instead of or as well as interviews but it was decided that the in-depth knowledge gained from interviews would far outweigh the information received from surveys. This is mainly due to there being numerous variables involved and they each need some detailed investigations which in-depth interviews would be far more beneficial for.

The information gathered from the interviews was then compared and contrasted to the information gathered from the literature review. Conclusions were then reached that were beneficial for this study.

3.4 Time Frame

As the introduction of BC(A)R only occurred in March 2014 the time parameter discussed in this research was from then to present day. This allowed the author enough of a time frame to gain a full understanding in the topic but did create a couple of limitations that are discussed in section 3.9. A benefit of the time frame being this short was that all the literature and studies researched were current and relevant and getting out of date material

was not an issue. Also as the entire construction industry is effected by BC(A)R the entire industry is very interested to read any studies on the topic so that a greater understanding can be achieved so the relevance of the study of high importance.

The review that was ordered by the Minister was just completed on the 31st of July. This was in week 9 of the 12 week timeframe given to complete this dissertation so a thorough investigation into this was not possible. But as this will have a big effect on BC(A)R the author added this to this study and tried in the very limited time frame, of less than three weeks, to include this in interviews and also to carry out a literature review on this.

3.5 Data Collection

3.5.1 Overview

Data collection is a critical component of research as without it the ability of a researcher to gain data/information, which could be from numerous methods such as interviews, surveys etc., to back up their hypothesis would almost be impossible to achieve.

In this study the researcher carried out the following steps to gain data/information:

- Firstly the information from the literature review was collated in categories relating to each relevant professional type i.e. legal, building/contracting, architecture, engineering, and building surveying.
- These were chosen as the legal ramifications of BC(A)R will form a critical part of it and the builder/contractor plays the major role in constructing in accordance with the regulations and also will have to sign the certificate on completion. The last three professionals are the only professions who can fulfil the roll of the assigned certifier and also perform the role of designers.
- Then the categories chosen were the 3 main components of any project from a project management point, which are of cost, quality, and scheduling. Then an

overall opinion category was added so that any other information in relation to how the BC(A)R has effected small construction projects is captured.

Then by gathering information from the in-depth interviews and analysing the data from these professionals in each professional group the information could be analysed to see if they all have similar opinions or if there is differing opinions from professional to professional. Then each professional group could be compared and contrasted. Finally all this information and data could then be collated into an overall opinion so that an entire industry view on BC(A)R, BCMS, CIRI, and the changes the Minister is proposing could be found and discussed.

3.5.2 Primary Research

The author preformed eight in-depth interviews. The interviews were held with two number engineers, two number architects, two number building surveyors and two number builders who are all primarily involved in small construction projects. The author decided not to interview any legal experts, even though the literature research consisted of a legal category. This was due to there being no legal cases taken so far and as discussed in the literature review until there is case related to BC(A)R brought before the courts it is very difficult to know for definite how the legal system will interrupt the new regulations. Also the researcher did contemplate including clients in the interview propose but it was decided that there was little of no benefit to this. The main effect on clients was the additional costs and this could be determined by discussing the topic with the professionals. Also unless the client was involved in multiple construction projects like a small time developer they would not know any change in the professionals costs borne out by the introduction of BC(A)R.

The questions chosen for the semi-structured interviews can be found in Appendix 4 and the interviews took approximately 25-30 minutes each. All the interviewees were asked if they had any issues with the tape recording of the interviews and none of them said they had.

The interviewees were also told that it was their opinions and not that of their company or any organisation they were affiliated with that the researcher wanted to find out. The interviewees were also told that their name, company or any personnel information would not be given out as part of the research.

There were some common questions asked to all interviewees and these were made to be very open-ended so that the interviewee could give their opinion on the topic in question and not be restrained to a very specific or limited response. The first 3 questions were related to the interviewees' background, experience in small construction projects and major differences between when they started in small projects to today. Then the next few questions were related to BC(A)R and they ranged from is the interviewee aware of BC(A)R?, to what is their opinion of it?, to will it prevent issues like Priory Hall happening again? A couple of questions were then asked about some comments found in the literature review including "has BC(A)R only created traceability and accountability but not better building" and would an independent system like the one used in England and Wales be a better system than BC(A)R? A few questions then relating to the Building Control Management System (BCMS) were asked as again during the literature review it was mentioned as adding time to the construction project and that it was not the most user friendly system. Then questions relating to the factors to determine a projects success cost, schedule and quality were asked.

Then questions relating to the Ministers call for a review were asked and each of the four proposals were put forward to each interviewee to determine if their opinion on each and then they were asked what their preferred option going forward was. Then the interviews were all asked a couple of questions relating to the Construction Industry Register Ireland (CIRI). Finally the Ministers three recent proposed changes to the regulations that he intends to implement from the 1st of September were discussed.

A summary of the responses to all the questions for each interview can be found in Appendix 6 and this information enabled the author to formulate results in a similar format to that found from carrying out the literature review. These can be found in Chapter 4 of this study and by creating tables and using the same categories for the literature review and for the interviews a clear easy to interrupt comparison can be found for each professional group and then for an overall industry view on the topic researched.

3.5.3 Secondary Research

Saunders, Lewis and Thornhill (2012, p. 317-318) talk about secondary data and how it has numerous beneficial advantages such as it can result in fewer resources being required which can in turn result in enormous savings in the researchers time and money. Also far more data can be analysed by using secondary data so the research undertaken can be more comprehensive and thus lead to more accurate and in turn more beneficial results being achieved.

The secondary research for this study was a literature review which was accessed through the Dublin Business School (DBS) Library and also academic search websites UBESCO and Emerald. Engineering, construction, surveying and architectural journals all formed a major part of the literature review also as the topic is a technical one which requires the in-depth research from professionals in such fields for progress and relevant information to be gathered. Section 3.6.1 discusses how the secondary data was collated and presented and this can be found in Chapters 2 and 4.

3.5.4 Data Analysis

As previously discussed for the literature review the data found for each professional group was collated in a summary table. Then an overall summary table with all the topics and the

level of agreement with the prevailing finding for each of the main topics was produced. This produced very clear and concise findings for the entire industry on each topic.

A similar process was then undertaken for the interviews so that for each professional group again a summary table was produced. Then again an overall summary table with all the topics and the level of agreement with the prevailing finding for each of the main topics was produced.

These tables firstly allowed each professional group to be able to be compared and contrasted from the primary and secondary research point of view. Then the summary tables produced from the primary and secondary research allowed the entire industry findings to be compared and contrasted. Finally this information could be discussed and then conclusions and recommendations could be made.

3.6 Sampling and Population

For the secondary research the author researched all the relevant literature on the topic in Ireland so that the hypothesis drawn up will be as accurate as possible. As already discussed the literature and studies are limited as BC(A)R has only been implemented for over a year.

In relation to the interviews eight in total was deemed a practicable number from a gathering of enough information and also from a time point of view. By interviewing two professionals from each relevant professional group this was deemed by the author as a representative number so that a commonality of opinions could be achieved that could be said to be a fair reflection on the professional group. The author estimated from previous research he has undertaken that for every 30 minute interview approximately 4-6 hours would be required to thoroughly go through the interview and discuss all the main points. As the author only had a 12 week time period to complete this masters dissertation it was determined that any more

than eight interviews would lead to a detrimental effect on the remainder of the dissertation. For example this could result in a very detailed primary research being carried out but not enough of a secondary research or conclusions.

3.7 Ethical Issues

According to Creswell (2014, p. 92) researchers' need to protect their research participants and develop trust with them. They also must guard against misconduct. This is an issue with all forms of research undertaken and researchers need to make sure that all ethical considerations are considered as they can have a major effect on the data collected. This can be detrimental to the final outcomes of the research so by not considering the ethical issues at the outset and also create a plan for catering for them the researcher could be left in a position where they have very relevant and useful research but they are not in a position to use it.

The author has an ongoing working relationship with the majority of the interviewees so it is important that firstly the interviewees felt comfortable and at ease during the interview. The interviews were all held at the convenience of the interviewees and it was made clear in the consent form, found in Appendix 5, and also by the researcher emphasising it verbally prior to the interviews commencing that if at any time the interviewee did not feel comfortable they did not have to answer any question and that they could leave the interview at any stage. All the interviewees were asked if they had any issues with the tape recording of the interviews and none of them said they had. The interviewees were also told that it was their opinions and not that of their company or any organisation they were affiliated to that the researcher wanted to find out. The interviewees were also told that their name, company or any personnel information would not be given out as part of the research.

3.8 Limitations to the Research

As discussed previously BC(A)R was only implemented in March 2014 so this is a relatively short period for any new regulations to be bedded in. Normally major regulation changes in the construction industry would take a few years before their full effects are realised by all relevant parties. The author has carried out what he believes to be a thorough literature review but unfortunately studies and journal articles on the topic are not as plentiful as one might wish so this may create an issue with some of the findings.

Another limitation of this study was that only small construction projects were looked at and in an ideal situation with unlimited time available a study of the effect of BC(A)R on the entire construction industry would be more beneficial. The author is of the opinion though that BC(A)R is having a greater effect on the smaller projects and he is confident that this study will still have benefit for the entire construction industry.

Also the interviewees primarily work in Dublin and the surrounding counties so a more thorough approach to look at the effect of BC(A)R in more rural areas would have been beneficial but the author was not able to get professionals from these areas.

As previously discussed in section 2.4 the Minister completed his review and is amending the regulations again. As this was announced on the 31st of July 2015 which is 3 weeks before this dissertation was due to be submitted a thorough investigation into this was not possible. The author did still endeavour to discuss this in the findings and conclusions sections.

The author only had 12 weeks to carry out this study while working full time so if he had a longer time frame he would have carried out possibly 1 or 2 more interviews per professional category. This would have enabled the author to be more certain that the findings from the interviews were a fair representation of the entire professional group.

4. Data Analysis & Findings

4.1 Introduction

This section is broken into 3 separate sections:

- Literature Review Data & Findings.
- Semi-Structured Interviews Data & Findings.
- Comparison of Literature Review Findings and Semi-Structured Interviews Findings.

The author decided to create tables which will categorise the main findings and make it more transparent to see the effects BC(A)R has had on small construction projects.

4.2 Literature Review Data & Findings

As discussed in the section 3.5.1 the main points from the secondary data received from the literature review was placed in tables per professional group. Each table has common topics to allow for clarity so a comparison of opinions on each topic can be easily read.

Table 6 has a summary of all the literature collated under each topic with a column titled agreement level added. These will all be discussed in Chapter 5.

Summary of Literature Review of Legal Opinions		Effect
Topic	Effect caused by BC(A)R	(In terms of BC(A)R)
Cost	It is likely that there will be increased costs.	Negative
Schedule	Not discussed.	Unknown
Quality	Should result in increased compliance with building regulations.	Positive
Overall Opinion	1. It is a welcomed improvement.	Positive
	2. Disappointing that Building Control Authority will not take on any responsibility for directly controlling the quality of building.	Negative
	3. Until a case is taken to litigation it is difficult to tell the effect of the added liability taken on by the client, assigned certifier, builder and designers.	Unknown

Table 1:

Summary of Literature Review of Contractors/Builders Opinions		Effect
Topic	Effect caused by BC(A)R	(In terms of BC(A)R)
Cost	There will be increased costs.	Negative
Schedule	Not discussed.	Unknown
Quality	Will stamp out projects that have blighted the construction industry and result in better construction.	Positive
Overall Opinion	1. It is a very welcomed improvement.	Positive
	2. It should help to stop builders who cut corners which in turn will reward builders who take pride in their work.	Positive
	3. Help to remove black economy builders.	Positive
	4. The creation of the Construction Industry Register Ireland should give confidence back to anybody wanting to get construction works carried out.	Positive
	5. The added costs are an issue.	Negative

Table 2:

Summary of Literature Review of Architects Opinions		Effect
Topic	Effect caused by BC(A)R	(In terms of BC(A)R)
Cost	There will be increased costs.	Negative
Schedule	Possible effect on the schedule of construction projects.	Unknown
Quality	No improvement.	Negative
Overall Opinion	1. A system of independent inspections carried out by building control officers as recommended by the Pyrite Panel was not introduced.	Negative
	2. To make the assigned certifier responsible for everything creates a blame trail but it does not improve building standards.	Negative
	3. Good building regulations should ensure better building and a quick cost free redress for the client but these regulations do neither.	Negative
	4. Significant additional costs required.	Negative

Table 3:

Summary of Literature Review of Engineers Opinions		Effect
Topic	Effect caused by BC(A)R	(In terms of BC(A)R)
Cost	There will be increased costs.	Negative
Schedule	Not discussed.	Unknown
Quality	Will lead to improved building construction.	Positive
Overall Opinion	1. It is a welcomed improvement but there are areas of concern.	Positive /Negative
	2. An independent inspection regime would be the preferred option but this is not possible due to resources and finances.	Negative
	3. The inspection regime, although not an independent one, will at the very least create a sense of accountability that will be a first step towards that the ambition of promoting better building.	Positive
	4. The creation of the CIRI is a major step forward and when this is eventually made mandatory for the first time in Ireland clients will have a simple register so that they can select a competent builder/contractor.	Positive
	5. Concerns about the Minsters review firstly by possibly easing of compliance with the building regulations. Secondly by possibly widening the pool of professionals who can perform the role of assigned certifier.	Negative

Table 4:

Summary of Literature Review of Building Surveyors Opinions		Effect
Topic	Effect caused by BC(A)R	(In terms of BC(A)R)
Cost	It is likely that there will be increased costs.	Negative
Schedule	The BCMS will require additional time that previously was not required.	Negative
Quality	Should result in increased compliance with building regulations.	Positive
Overall Opinion	1. It is a well needed improvement.	Positive
	2. Additional costs to fulfil the new regulations requirements have been underestimated by the Government.	Negative
	3. The CIRI is set up and this will assist clients to choose a builder/contractor at procurement stage when it eventually becomes mandatory.	Positive

Table 5:

Summary of Literature Review of All Professionals Opinions		Agreement Level	Effect
Topic	Effect caused by BC(A)R		(In terms of BC(A)R)
Cost	It is likely that there will be increased costs.	Full Agreement 5 out of 5	Negative
Schedule	The BCMS will require additional time but for the overall timescale of a small construction project this will only have a minor effect.	Majority Agree 4 out of 5	Positive
Quality	Should result in increased compliance with building regulations.	Majority Agree 4 out of 5	Positive
Overall Opinion	1. It is a well needed improvement.	Majority Agree 4 out of 5	Positive
	2. There are issues and further improvements required.	Majority Agree 4 out of 5	Negative
	3. An independent inspection regime would be preferred.	Majority Agree 4 out of 5	Negative
	4. The independent inspections should be carried out by Building Control Authority (BCA).	Majority Agree 4 out of 5	Negative

	<p>5. Additional costs to fulfil the new regulations requirements have been underestimated by the Government.</p>	<p>Majority Agree 3 out of 5</p>	<p>Negative</p>
	<p>6. The creation of the CIRI is a major step forward and when this is eventually made mandatory for the first time in Ireland clients will have a simple register so that they can find a competent builder/contractor.</p>	<p>Majority Agree 4 out of 5</p>	<p>Positive</p>
	<p>7. Issues with all the proposals in the review called by the Minister.</p>	<p>Limited literature on topic</p>	<p>Negative</p>

Table 6:

4.3 Interview Findings

4.3.1 Introduction

As discussed in the section 3.5.1 the primary data received from the semi-structured interviews was placed in tables per professional group. Each table has common topics to allow for clarity so a comparison of opinions on each topic can be easily read. This information can then be used in two ways. The first is where each separate professional group findings can be compared to the literature review separate professional group findings and comparisons and contradictions can be discovered and discussed. Secondly a summary of the overall industry professionals' opinions from the interviews could be collated, see table 11, and this again can be compared and contrasted to the overall industry findings from the literature review, see table 6.

4.3.2 Contractors/Builders

The two Builders interviewed both have 18 years and 20 years of experience respectively. They both mainly construct houses and house extensions. The summary of the findings are found in Table 7 below. The first interviewee is of the opinion that BC(A)R is overdone and that it creates a situation where every minor detail has to be inspected. The second interviewee does not think it has changed anything especially in the way he builds; the only change he sees is that there is more of an onus on coordinating the additional site inspections.

They both agree that BC(A)R will help prevent another 'Priory Hall' as long as the building is built properly and inspected at the critical phases. The first interviewee is of the opinion that the council is to blame for 'Priory Hall' as they should have to inspect developments of this nature. Both would not have an issue with the council inspecting their projects but they were

both concerned that this would possibly slow down the projects if the councils couldn't come to site at short enough notice for their inspections.

Both builders said that BC(A)R has not added costs to the project from their point of view but they both stated that professional fees must have gone up due to the additional site visits required. In relation to the effect of BC(A)R on the project schedule both agree that it should not be affected but one of the interviewees stated that it could delay projects. Both are also in agreement that the quality should not be affected as they already construct their buildings to a high quality in accordance with the regulations.

They have differing opinions when it comes to the Construction Industry Register Ireland (CIRI) as one of them is of the opinion that by introducing this system bad or 'cowboy' builders will be found out and also that it will help cut out black economy building. The other is of the opinion that there is no benefit as the bad builders don't last long anymore because of word of mouth. This interviewee says visiting previous completed projects is a normal occurrence for any clients carrying out new projects so a bad builder will be found out at this stage.

In relation to the Ministers Review and the four options proposed both are in agreement that by making BC(A)R optional it would reduce professional fees for clients. One interviewee then has reservations about this as he says that it should be one way or another, by giving an option it is confusing the situation although he believes that most clients would not carry out BC(A)R unless they had to.

Finally in relation to the amendments the Minister has just announced both Builders are in agreement that by getting the local authorities involved in inspections it may lead to delays. Also both don't mind if Architectural Technologies are added to the assigned certifier role.

Summary of Interview Findings of Contractors/Builders		Agreement Level	Effect
Topic	Effect caused by BC(A)R		(In terms of BC(A)R)
Cost	No cost increase from their view point but they are aware of additional professional fees.	Both Agree	Positive /Negative
Schedule	No negative effect.	Both Agree	Positive
Quality	No change as they worked to a high quality and in compliance with the building regulations prior to BC(A)R being implemented.	Both Agree	Negative
Construction Industry Register Ireland	One thinks it will not have any benefits while the other thinks it will highlight the bad builders.	Differing Opinions	Positive /Negative
Building Control Management System (BCMS)	It is fine.	Both Agree	Positive
Use the English Style System instead of BC(A)R	One says they would have no issue with this while the other says he would have grave concerns that the council would not inspect on time so the schedule would be affected.	Differing Opinions	Positive /Negative
Minsters Option 1: Not Mandatory	An improvement, but one builder feels by leaving it optional it might create confusion.	Both Agree	Positive
Minsters Option 2: Additional Qualified Assigned Certifiers	No opinion.	Both Agree	Unknown

Minsters Option 3: Guidance for fees	No opinion.	Both Agree	Unknown
Minsters Option 4: Change 40m2 exemption to one based on plot ratio	No opinion.	Both Agree	Unknown
Amendment 1: BC(A)R not mandatory	An improvement.	Both Agree	Positive
Amendment 2: local Authorities to carry out inspections.	Might lead to delays.	Both Agree	Negative
Amendment 3: Architectural Technologists be added to pool of assigned certifiers	No issue with this.	Both Agree	Positive

Table 7:

4.3.3 Architects

The two Architects interviewed both have a wealth of experience with over 50 years between them and both have set up their own practices. They both carry out the majority of their work in small construction projects such as one off houses, extensions and refurbishments to existing dwellings. The summary of the findings are found in Table 8 below. Firstly their views differ on BC(A)R with one Architect feeling that it is just another method of self-certification and that is adding costs to the professional fees for a client. The second Architect feels that it is very welcomed and it finally sets out all the professionals' roles and requirements. In relation to will BC(A)R prevent another 'Priory Hall' both are in agreement that it probably won't. This is down to people always finding ways to take advantage of systems and also because in developer type projects this will not change anything and developers will have someone employed by themselves to sign off projects.

Both Architects have decided not to carry out the role of assigned certifier. The main reason for this was that they both felt that architects of all the professionals have been affected most

by the changing regulations since 1999. They both feel that fees had gone down significantly over these years and that Architects were left carrying out more services. Architects have been carrying out services such as project management, preliminary supervisor design process (PSDP) and disability certificate applications while their fees were being reduced. This has led to a situation where Architects have had enough so they are not going to carry out the assigned certifier role. One of the Architects has even said that they have to go to site less now as the assigned certifier carries out some site inspections they would have done previously.

They both agree that costs mainly professional costs have increased due to BC(A)R and one interviewee stated that due to the additional paperwork required a builder requested more money on the completion of the project. In relation to the effect of BC(A)R on the project schedule both agree that it should not be affected. Both are also in agreement that the quality should be slightly improved. They both believe the Construction Industry Register Ireland (CIRI) is essential and is much needed. If it is made mandatory and if it requires continual CPD and annual re-assessments it will improve the standards of the small builders especially. It will enable clients to be able to compare like with like for the first time in Ireland. Also one Architect who does a lot of Health and Safety work said that this should lead to improvements in Health and Safety standards which for small builders especially are extremely poor.

In relation to the Ministers Review and the four options proposed both are in agreement that a couple of these are negative and would be a step backwards. They both feel additional professionals to fulfil the assigned certifier role would be okay as long as they were adequately qualified and were able to get Professional Indemnity (PI) insurance.

Finally in relation to the amendments the Minister has just announced both Architects are in agreement that by making the assigned certifier optional that no one will do it but they are very positive about getting the local authorities involved in inspections.

Summary of Interview Findings of Architects		Agreement Level	Effect
Topic	Effect caused by BC(A)R		(In terms of BC(A)R)
Cost	It will increase professional fees. Also one architect is of the opinion that builders will slowly increase their costs to cover the additional paperwork required.	Both Agree	Negative
Schedule	The schedule should not be affected.	Both Agree	Positive
Quality	Should result in slightly better quality.	Both Agree	Positive
Construction Industry Register Ireland	If it becomes mandatory and requires CPD, tax certificates etc. is it a well needed improvement.	Both Agree	Positive
Building Control Management System (BCMS)	Don't use the system much, no issues from just accepting their roles as designers.	Both Agree	Unknown
Use the English Style System instead of BC(A)R	One says it would be their preferred method of certification while the other says the councils do not have the resources to do this.	Differing Opinions	Positive /Negative
Minsters Option 1: Not Mandatory	They need to be mandatory to have an effect.	Both Agree	Negative

Minsters Option 2: Additional Qualified Assigned Certifiers	No issue as long as the professional is qualified and that they can get PI insurance.	Both Agree	Positive
Minsters Option 3: Guidance for fees	One thinks this is fine while another thinks all projects are different so how can you price them the same.	Differing Opinions	Positive /Negative
Minsters Option 4: Change 40m2 exemption to one based on plot ratio	The current situation of 40m2 is about right so no need to change it.	Both Agree	Negative
Amendment 1: BC(A)R not mandatory	No one will do it if it is not mandatory so we will be back where we started and no improvement will have been made.	Both Agree	Negative
Amendment 2: local Authorities to carry out inspections.	A good development if it can be resourced correctly.	Both Agree	Positive
Amendment 3: Architectural Technologists be added to pool of assigned certifiers	Both agree as long as they are qualified and that they can get PI insurance.	Both Agree	Positive

Table 8:

4.3.4 Engineers

The two Engineers interviewed both have over 20 years' experience each and they are both directors of small sized engineering consultancies. A high proportion of both of these consultancies work are one off houses, extensions and refurbishments. The summary of the findings are found in Table 9 below.

They both agree that BC(A)R is an improvement but that it still needs further improvements. One of Engineers states that there is no difference between a large developments and small developments, except for the exemption to a development less than 40m². This seems unfair as a project costing €100k would have to undertake the same level of inspection and paper

work as a project costing in the millions. The other Engineer was involved in the consultation process that took over 18 months that was used to create BC(A)R and at the start of the process it was made clear that the preferred option of having the local council through building control to carry out the inspections was not possible due to personnel and financial constraints. Both Engineers agree that this would have been the preferred option.

They both disagree over whether BC(A)R will prevent another 'Priory Hall'. One Engineer states that in developer lead projects the risk of another 'Priory Hall' is always going to exist and that in his opinion 'Priory Hall' was a case of fraud on the developers' part. The other says that although BC(A)R is not 100% fail safe no system is and if a project is carried out in line with BC(A)R then the chances are very slim of a repeat of Priory Hall.

Both Engineers are of the opinion that the assigned certifier role will add costs to any project but that it is not of the magnitude that the Minister has stated when he called for his review. One Engineer says an increase of 1% of the overall project cost would be a realistic additional cost for this role and that is in the region of how much they charge for carrying out the role. In relation to the effect of BC(A)R on the project schedule both agree that it should not be affected. Although they do say that there is increased panic created by having to get all the information entered on the system so that commencement notice matches all the dates on all the signed forms that are required.

Both do not agree over quality as one thinks it will not be approved as builders will build the way they always have while the other says that previous mistakes that might have been missed will be caught now. They both believe the Construction Industry Register Ireland (CIRI) is good but they both state that until it becomes mandatory it has no benefit. They both are of the same opinion in relation to CPD and that it should be a major part of the system so that builders will be required to learn more about changing regulations and not leave it up to the designers/professionals to keep on informing them.

In relation to the Ministers Review and the four options proposed both are in agreement that all four of these are worse than the current situation. One interviewee does say he wouldn't have an issue with the plot ratio proposal but he thinks that legal issues may arise when someone is trying to buy or sell a property. Both agree that working towards the English style system would be preferred way to proceed and this can be done over time but that resources in the council are the biggest stumbling block for this.

Finally in relation to the amendments the Minister has just announced both Engineers are in agreement that by making the assigned certifier optional that no one will do it. They are both very positive about getting the local authorities involved in inspections and again feel that Architectural Technologies are not qualified enough to carry out the assigned certifier role.

Summary of Interview Findings of Engineers		Agreement Level	Effect
Topic	Effect caused by BC(A)R		(In terms of BC(A)R)
Cost	It will increase professional fees. Approximately 1% of the total project cost is a realistic figure for the increase.	Both Agree	Negative
Schedule	The schedule should not be affected.	Both Agree	Positive
Quality	One interviewee believes this can only create better building while the other does not think there will be any change.	Differing Opinions	Positive /Negative
Construction Industry Register Ireland	If it becomes mandatory and requires CPD it will be good.	Both Agree	Positive
Building Control Management System (BCMS)	Not great, it is very slow process that has to be followed and there should be	Both Agree	Negative

	more flexibility with it.		
Use the English Style System instead of BC(A)R	Both agree this would be the best system but one of the interviewees who was involved in the creation of BC(A)R says this was never an option due to council resources and lack of funding.	Both Agree	Positive /Negative
Minsters Option 1: Not Mandatory	They need to be mandatory to have an effect and it could be open to corruption.	Both Agree	Negative
Minsters Option 2: Additional Qualified Assigned Certifiers	Don't feel anyone else if qualified. Also one engineer says that these costs are related to time so he doesn't see how this would lower the costs.	Both Agree	Negative
Minsters Option 3: Guidance for fees	They don't think this will achieve anything. Also one Engineer says he would love to be getting these fees and the other says this would be creating a cartel.	Differing Opinions	Negative
Minsters Option 4: Change 40m2 exemption to one based on plot ratio	It might create uncertainty and legal issues.	Both Agree	Negative
Amendment 1: BC(A)R not mandatory	Very silly no one will do it if it is not mandatory.	Both Agree	Negative
Amendment 2: local Authorities to carry out inspections.	A good development but it will be mainly only pick out bad builders and professionals and focus on them according to one interviewee who was talking to someone in Building Control.	Both Agree	Positive

Amendment 3: Architectural Technologists be added to pool of assigned certifiers	Not qualified enough.	Both Agree	Negative
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Table 9:

4.3.5 Building Surveyors

The two Building Surveyors interviewed both have 10 years and 13 years of experience respectively. They both primarily deal with house extension and refurbishment projects. The summary of the findings are found in Table 10 below. They both agree that BC(A)R is an improvement but that it still needs further improvements. One of surveyors has raised a point that an engineer, architect or surveyor could have a conflict of interest as they can be designers and they can also perform the assigned certifier role as well. He feels that the assigned certifier should be removed from the design process so that they are independent. In relation to the assigned certifier role both surveyors perform this role and both of them feel the BCMS could be improved as it is not very user friendly.

They both agree that BC(A)R will probably not prevent another 'Priory Hall' as people will probably always take advantage of whatever system that is put in place. They both feel that a system similar to that used in England and Wales would be better than BC(A)R.

Both surveyors are of the opinion that assigned certifier role will add costs to any project but that it is not in the magnitude that the RIAI has stated. One surveyor says an increase of 1% of the overall project cost would be an approximate additional cost for this role. The second interviewee agreed when asked if this was a ballpark figure that they used for carrying out this role. In relation to the effect of BC(A)R on the project schedule both agree that it should not be affected. Both are also in agreement that the quality should be slightly improved due to nobody checking before. They both believe the Construction Industry Register Ireland (CIRI) is good but one surveyor states that only if it is voluntary it is pointless. The same

surveyor also states that engineers, architects and surveyors have to be well qualified to fulfil their roles while currently builders/contractors don't need any qualifications or experience. The other surveyor says that it would be great as especially smaller builders don't know the regulations and rely too much on the consultants.

In relation to the Ministers Review and the four options proposed both are in agreement that all four of these are worse than the current situation. One interviewee calls the proposal to make BC(A)R optional as 'silly' while the other interviewee calls it 'barking mad'. Both agree that working towards the English style system would be the preferred way to proceed with one saying that this could be done as a long term goal with minor changes along the way.

Finally in relation to the amendments the Minister has just announced both Surveyors are in agreement that by making the assigned certifier optional that no one will do it and one interviewee asks what the legal and banks opinions on this may be. They are both very positive about getting the local authorities involved in inspections and again feel that Architectural Technologies are not qualified enough to carry out the assigned certifier role.

Summary of Interview Findings of Building Surveyors		Agreement Level	Effect
Topic	Effect caused by BC(A)R		(In terms of BC(A)R)
Cost	It will increase professional fees but this should only be low in relation to the entire project cost. Approximate 1% of the total project cost would be a realistic figure for this.	Both Agree	Negative
Schedule	No effect.	Both Agree	Positive

Quality	It should be better.	Both Agree	Positive
Construction Industry Register Ireland	If it becomes mandatory it is an improvement.	Both Agree	Positive
Building Control Management System (BCMS)	It could be improved as it is not very user friendly.	Both Agree	Negative
Use the English Style System instead of BC(A)R	Both agree this would be a better system to use.	Both Agree	Negative
Minsters Option 1: Not Mandatory	They need to be mandatory to have an effect.	Both Agree	Negative
Minsters Option 2: Additional Qualified Assigned Certifiers	Shouldn't be allowed as nobody else is qualified enough.	Both Agree	Negative
Minsters Option 3: Guidance for fees	If it is only guidance it is no use, nobody will follow it.	Both Agree	Negative
Minsters Option 4: Change 40m2 exemption to one based on plot ratio	Current situation of 40m2 is fine, no need to change it.	Both Agree	Negative
Amendment 1: BC(A)R not mandatory	No one will do it if it is not mandatory.	Both Agree	Negative
Amendment 2: local Authorities to carry out inspections.	A good step forward.	Both Agree	Positive
Amendment 3: Architectural Technologists be added to pool of assigned certifiers	Not qualified enough.	Both Agree	Negative

Table 10:

4.3.6 Summary

A summary of the findings from all the professional groups interviews have been collated in table 11. There are positive and negative points raised with BC(A)R and most of the professionals are in agreement about these.

The only topics which divided opinions were the quality and the additional of Architectural Technologists to the pool of professionals who can carry out the assigned certifier role.

It should also be noted that the builders interviewed did not have an opinion or did not think a number of the questions were relevant to them such as adding the Architectural Technologists to the pool of assigned certifiers and changing the 40m² exemption to one based on plot ratio.

Summary of Interview Findings of All Professionals Opinions		Agreement Level	Effect
Topic	Effect caused by BC(A)R		(In terms of BC(A)R)
Cost	Professional fees have risen to cover the assigned certifier role and additional inspections required.	Full Agreement 8 out of 8	Negative
Schedule	No effect.	Full Agreement 8 out of 8	Positive
Quality	Most say that they will be a slight improvement and the others saying there will be no change.	Most Agree 5 out of 8	Positive /Negative
Construction Industry Register Ireland	It will be a good thing but it has to be	Majority	Positive

	made mandatory.	Agree 7 out of 8	
Building Control Management System (BCMS)	The main users of the system think it needs improvement.	Majority Agree 3 out of 4	Negative
Use the English Style System instead of BC(A)R	Most agree that this would be an improvement.	Most Agree 5 out of 8	Negative
Minsters Option 1: Not Mandatory	This would be pointless as no one would do it if it was optional.	Majority Agree 7 out of 8	Negative
Minsters Option 2: Additional Qualified Assigned Certifiers	No one else is qualified and also there could be issues with other professionals getting PI insurance. The builders have no issue with this.	Majority Agree 5 out of 6	Negative
Minsters Option 3: Guidance for fees	Most feel this is pointless and also that every project is different so the fees should reflect this. The builders have no opinion on this.	Majority Agree 5 out of 6	Negative
Minsters Option 4: Change 40m2 exemption to one based on plot ratio	Most feel the current situation of an extension of less than 40m2 as fine and changing this may cause confusion.	Majority Agree 5 out of 6	Negative
Amendment 1: BC(A)R not mandatory	All except the builders feel this is a backwards step and no one will use BC(A)R. The builders feel it is an improvement and it will cut back what they feel are unnecessary site inspections.	Majority Agree 6 out of 8	Negative

<p>Amendment 2: local Authorities to carry out inspections.</p>	<p>Majority agree that this is good but a few have raised the issue about the Councils having adequate resources and if not then projects may be delayed.</p>	<p>Majority Agree 6 out of 8</p>	<p>Positive</p>
<p>Amendment 3: Architectural Technologists be added to pool of assigned certifiers</p>	<p>Split right down the middle with half of the interviewees saying that they are not qualified enough with the other half having no issue.</p>	<p>Undecided</p>	<p>Positive /Negative</p>

Table 11:

5. Discussion

5.1.1 Introduction

This section will discuss the information found in the literature review and the interviews carried out. The information gathered so far will be discussed firstly for each professional group. Then the information will be discussed in its entirety so an overall view on the effect of BC(A)R on small construction projects in Ireland can be determined.

In relation to the options proposed in the review by the Minister literature on the subject is very minimal so the opinions of the interviewees will be used to gather an overall industry opinion on each of these options.

Also in relation to the new amendments to BC(A)R that the Minister announced on the 31st of July there is no literature on this because it was only released just prior to the completion of this dissertation. Due to this the opinions of the interviewees will be used to gather an overall industry opinion on each new amendment.

5.1.2 Contractors/Builders

When the information gathered from the literature review and the semi-structured interviews of the two builders are examined, see tables 2 & 7, firstly it is clear to see that the literature review painted a picture that the effect of BC(A)R is all positive and that only the increased costs would be a negative. But when the interview data is looked at it is more of a mixed bag with the builders both stating that there is no change in quality due to BC(A)R. This was down to the builders both saying that they always work to the highest standard and in accordance with the building regulations. The literature review did talk about BC(A)R forcing bad builders to raise their quality so maybe this explains the disparity between the two opinions.

When asked about the CIRI the literature review and one of the builders are in agreement that it will be a benefit as it will help to prevent black economy building and also force bad builders into building better. This will hopefully restore the bad reputation some bad builders create for the construction industry. The other interviewee is of the opinion that there are little or no bad builders left in the industry as they have been found out due to word of mouth and references now being sought at tender stage for all projects.

The other main point raised by the interviews was that both builders are of the opinion that the quantity of inspections required is overboard and there is a possibility this could affect the project schedule if not coordinated. Also they are of the opinion that they do not mind any of the options proposed in the review by the Minister or the new amendments that have been introduced because of this review as long as whoever is carrying out the inspections is adequately resourced so they do not affect the schedule of projects.

5.1.3 Architects

When the literature review findings in table 3 are examined it is clear that Architects were not happy with the introduction of BC(A)R and every topic except schedule was seen as a negative. When discussing this with the Architects interviewed they are of the opinion that over the last 10 years their fees have been reduced time and again and also that they have had to do more services for these lower fees. The additional services they have to perform are PSDP, fire certificate applications and disability access applications to name but a few. The Architects both said that by taking on new services clients tend to ask for a discount even though the additional services are generally not related to the services they are already providing. For this reason both Architects are not performing the assigned certifier role.

The literature review also highlights that an independent method of certification and inspection similar to the one used in England and Wales would be a lot better than BC(A)R. Throughout the literature review and interviews this would be the most preferred system that

should be employed but the one major stumbling block that one of the Architects interviewed highlights that the building control authorities would not have the resources for this.

In relation to costs the literature review and interviewees agree that the professional fees will be increased but one Architect is also of the opinion that builders will increase their fees due to the additional paperwork required. This is not backed up though by the builders who were interviewed. The Architects interviewed disagree with the literature when it comes to quality as they both believe it will slightly be increased as the additional inspections are bound to pick up defects not noticed previously. Also when it comes to the creation of the CIRI both Architects believe this is a well over due step forward. By implementing this correctly and making it mandatory bad builders will find it extremely difficult to get on this register and stay on it unless their work is up to the required standards.

When it comes to the options proposed in the review by the Minister and the new amendments these were discussed previously in section 4.3.3 and they will be discussed in the overall findings in section 5.1.6.

5.1.4 Engineers

When the information gathered from the literature review and the semi-structured interviews of the two Engineers are examined, see tables 4 & 9, they are agreed that BC(A)R is a must needed improvement. They are in agreement that a system similar to the one used in England and Wales would be better than BC(A)R but the literature from Engineers goes into detail to explain that why this will not happen in the foreseeable future. This is primarily down to the building control authorities not being cable of undertaking this as they do not have the resources and they are not likely to gain additional resources in the foreseeable future.

They all also agree that there will be additional costs, the schedule should not be affected and that the creation of the CIRI is a critical step forward. But in relation to the quality

improvement both engineers interviewed do not agree with each other with one thinking it will not change. They are in agreement with the literature that the BCMS needs improvements.

In relation to options proposed in the review by the Minister both the literature and the interviewees are of the same opinion that they are all negative except involving building control authorities in the inspection process. In relation to the BC(A)R being made advisory both believe this is a backwards step and that no one will voluntarily carry it out. Also both are in agreement when it comes to widening the pool of assigned certifiers as they do not believe that any other professionals would have the qualifications or experience to carry out this role. Engineers have had a system in place since 1969 to enable any qualified Engineer to undergo an assessment process. This process is used to determine if they are competent enough to become a Chartered Engineer and this is rigorously upheld to ensure that the highest standards are required by anybody wanting to become a Chartered Engineer.

5.1.5 Building Surveyors

When the information gathered from the literature review and the semi-structured interviews of the two Building Surveyors are examined, see tables 5 & 10, they are agreed that BC(A)R has made some improvements. Firstly the literature and interviewees are of the opinion that there was a need for a change in Building Control Regulations and Certification as the previous system was not fit for purpose. They are also in agreement that the quality should be improved and that with the introduction of the CIRI it should increase the competence of all builders which can only be a good thing.

They are also in agreement that there will be increased costs but their opinions on the magnitude of these increased costs are not exactly comparable. The literature reviewed discussed an estimated hours required to complete a new build property and this equates to

approximately 2.5% of the project cost. The interviewees are both of the same opinion that they are charging approximately 1%-1.25% of the project cost.

The interviewees both are of the opinion that BC(A)R will not have any effect on the schedule while the literature did highlight that BCMS will require additional time but on the overall scale of a project it should not be significant. The interviewees are of the same opinion as the literature in relation to the BCMS in saying that it should be improved by making it more user friendly.

When it comes to the options proposed in the review by the Minister and the new amendments these were discussed previously in section 4.3.5 and they will be discussed in the overall findings in section 5.1.6.

5.1.6 Overall Findings Discussed

Firstly there is complete agreement that the previous Building Control Regulations and Certification of construction projects was not fit for purpose and that changes were required. The 'Priory Hall' incident was a catalyst for change and the purpose of the change was primarily to increase compliance with the building regulations and secondly to create documentation that will hold one person, the assigned certifier, primarily responsible in the case of non-compliance. BC(A)R was introduced to fulfil this purpose.

This study was to find out the main effects BC(A)R has had on small construction projects and when the summary of the findings of all the professional groups from the literature review in table 6 are compared to the summary of all the professional groups interviews in table 11 there are positive and negative points raised:

1. Costs:

There is full agreement that costs have increased but the magnitude of this increase differs from what the literature says to what the interviewees say. Studies undertook

by Architects and Building Surveyors both came up with an additional time requirement of over 150 hours which would equate to approximately 2.5% of an increase in the overall project cost. When the 4 interviewees who carry out the assigned certifier role were asked about this they were in agreement that a figure closer to 1% is what they charge to carry out this role. In this authors opinion an additional figure of 1% of would seem reasonable and most clients would be happy to pay this if they felt that it was guaranteeing good quality and in full compliance construction. This 1% figure is nowhere near the “outlandish charges” the Minister stated which brought upon the review of BC(A)R. The figures the Minister supplied of upwards of 4% of a project cost increase would be a major concern and this author would agree with the Minister that this should be looked at. But this author would disagree with the Minister about putting the 4 proposals he did forward in his review and these will each be discussed further on in this section.

2. Schedule:

In relation to any change in the schedule there is almost complete agreement that it is not affected. A couple of minor issues have been highlighted which are firstly to lodge the required paperwork on the BCMS takes more time than it should and this will be discussed further on in this section. Secondly the builders both highlighted the need for the additional site inspections to be carried out in a timely manner by the professionals so that there are no delays. This requires the professionals to be flexible and capable of coming to a site at a day’s notice in some instances. Also two of the interviewees, one engineer and one architect, were of the opinion that small builders may be forced into doing out more detailed project plans and schedules to accommodate the site inspections. This may actually help when it comes to scheduling projects. All of this points to BC(A)R not adversely affecting scheduling of small construction projects so this is positive.

3. Quality:

Quality is seen as a divided topic although the majority of the literature says that quality should be improved. Five interviewees believe that quality will be slightly increased while the other three interviewees do not believe there will be any change. Both builders do not believe quality will be improved as they are of the opinion that they can't do anything better than they currently do. This may be the case and if the builders comments are disregarded then the professionals, five out of six of them anyway, are of the opinion that at the very least the less good builders quality will increase. This is what the author sees as the most critical point of BC(A)R because if the standard of quality is not improved then the only other possible benefit of BC(A)R would be that clients would have more of a legal recourse against the assigned certifier, builder and designers. This legal route should be the last resort when all other measures are exhausted and as highlighted by the Minister the reason for BC(A)R was to increase building standards and compliance with the building regulations. BC(A)R on the basis of this study anyway does achieve this so from an end quality point of view BC(A)R has had a positive effect.

4. Construction Industry Register Ireland (CIRI):

The majority of the literature reviewed and the interviewees agree that this is a major step forward and it must be made mandatory. Although not directly connected to BC(A)R the CIRI was something that was born from the consultation process. For years in Ireland anybody could call themselves a builder and work in the construction industry without any knowledge or experience. Builders who were carrying out works designed by the qualified and experienced professionals did not need any qualifications themselves. This led to an unfortunately situation where some people wanted to earn quick money and took advantage of the property boom and what happened in numerous cases was that these 'unqualified builders' produced

substandard work. This painted the entire industry with a bad brush and the building industry has had this reputation for years. In this authors opinion he agrees with the majority of interviewees and the literature on the subject that this could be a major step on the road of recovery for the construction industry.

5. Building Control Management System (BCMS):

The majority of the main users of this system agree that it does need improvements to make it more user friendly and streamlined. They do also say that these are not major changes required but that small changes over time will hopefully allow the system to become a success. The author uses this system and is in agreement that minor changes could make the system better. Also in some councils the resources are extremely limited and in one instance when a submission was lodged to Kildare County Council it took five days for Building Control to check the information. When any system is implemented it needs time to be bedded in and then it also needs to be reviewed and updated regularly so hopefully this will be the case with the BCMS but as it stands the system is adequate but with a few glitches.

6. Use the English Style System instead of BC(A)R:

This study shows that all are in agreement that a system similar to the one used in England and Wales would be better than BC(A)R but the literature from Engineers goes into detail to explain why this will not happen in the foreseeable future. This is primarily down to the building control authorities not being capable of undertaking this as currently they do not have the resources and they are not likely to gain additional resources in the foreseeable future.

7. Minsters Review and 4 no. Options:

The majority are in agreement that the 4 options put forward for review from the Minister are not going to have a positive effect on the quality of building which is the main purpose of BC(A)R. The cost increase the Minister has talked about is an issue

but this study does not back up his findings. In this authors opinion a review of the costs being charged should be looked at instead of a review based around the 4 options put forward.

In relation to making BC(A)R advisory and not mandatory for one off houses and extensions all interviewees except one are in agreement that this is a backwards step. The author is in agreement with most of the interviewees when they say that given the option clients will choose the cheaper option and not implement BC(A)R. The previous system that everyone including the current Ministers predecessor, who implemented BC(A)R, all agreed was not fit for purpose will be used again. In this authors opinion and also the opinion of many of the interviewees this is very frustrating as the construction industry was finally making a much needed positive step forward.

In relation to the second proposal of adding professionals to the pool of assigned certifiers the majority interviewed and the author agree that no other professional body are qualified to the same degree as the current pool of assigned certifiers. If another professional body put in place the same or similar requirements to gain accreditation then most of the current assigned certifiers would be happy to add them to the pool of assigned certifiers as long as they could also get PI insurance.

The next proposal put forward was to set guidelines for fees and straight away by doing this firstly professionals won't agree with it and charge what they deem fit. Secondly this could be seen as creating a cartel which obviously would not be allowed in an open market place.

The final proposal put forward in relation to changing the exempted development from 40m² to a calculation based on the plot area of the site of the proposed development again most are in agreement that this would confuse the situation. The current situation allows a generous extension to be built to any property without the

need for planning and this most professionals agree is adequate. By changing this it could lead to issues such as developments negatively affecting neighbours by overlooking and interfering with their day light. In the authors opinion the 40m² is adequate and it should not be changed.

8. Minsters Amendments to BC(A)R:

As the minister has chosen to implement 2 of the 4 proposals put forward for review, i.e. make BC(A)R advisory for one off houses and extensions and also start the process for letting Architectural Technologists act as assigned certifiers, the author has already discussed these. The findings as discussed in the previous heading are not viewed upon with any positivity by the majority of the interviewees or by the author himself. The Minister has said he will issue some additional information on how certification can be done if BC(A)R is not chosen as the method of certification but at the time this study was written this information was not released yet. An article published in the Irish Independent on the 14th of August 2015 is very damning of this move by the Minister. It states that the relaxation of the Building Regulations will leave building owners vulnerable. It also quotes a report carried out by officials in the Department of the Environment, the Ministers own department, that the additional costs charged are in line with departments estimates. These costs are very similar to the findings of this study. Also the report states that the new system/regulations are working and that they are bringing a new order and discipline to the construction sector. The article goes on to talk about the decision being a political one and that it was made to protect the rural base of under pressure coalition TD's (Irish Independent, 2015).

The third implementation by the Minister is that Local Authorities will be tasked with carrying out a new inspection process to ensure that standards do not slip. From the additional research carried out by the author to find out more about this it seems that

an audit system will be put in place on the BCMS to select projects which the Local Authority will take a special interest in. Any professional or builder who has been highlighted to the local Authority previously for any issue will be more likely to be selected so that the chances of any issues happening again are reduced. This has not been confirmed yet but all the professionals interviewed think this is a very good improvement and it can be used as a stepping stone over time to get full inspections carried out by the Local Authorities. Again as highlighted previously how this is resourced will be interesting as the Minister has stated that he will not provide additional resources for this.

5.2 Benefit of Findings

The findings just discussed for this study show in this authors opinion that BC(A)R has had more of a positive effect than a negative one. It set out to increase building standards and compliance with building regulations and the findings have stated that this has been achieved. This allows the professionals, builders, clients, Ministers and any other stakeholders and relevant parties to understand what has changed and what other changes may be required in the future short and long term to continue the positive progression. Studies like this where all the relevant professionals and the literature on a subject are discussed allow an overall hypothesis on the subject to be formulated and in this authors opinion this is what was achieved in this study. This then is a major benefit to the entire industry so that a wider view is taken on a topic and not just a narrow view like from one professional as it affects the entire industry and not just one professional group.

5.3 Limitation of Findings

During the course of this study a number of issues were noticed by the author. The first one was that the interviewees all primarily worked in Dublin and the surrounding counties. There are a large number of professionals who can perform the assigned certifier in these areas so

maybe this is the reason why the author's findings especially in relation to the additional costs do not match the Ministers findings. In the isolated rural areas there are going to be far less professionals and as there are a significant quantity of additional site visits required professionals are less likely than previously to travel significant distances without looking for more fees.

Also a more detailed look into the local authorities' resources would have been beneficial as the author had to use what he was told by a couple of professionals but a more thorough investigation into this might have enabled a more conclusive opinion on whether they are in a position to carry out site inspections and even the assigned certifier role. As there are so many councils, 26 in total in Ireland, this would have been extremely time consuming and due to the limited timescale of this study this was not possible.

Finally as discussed previously the Minister published his findings on the review on the 31st of July when this study was almost complete. The Minister announced changes to BC(A)R and although the author endeavoured to get opinion from his interviewees by going back to a number of them and asking them additional questions a thorough investigation into the findings could not be undertaken.

6. Conclusions & Recommendations

When any regulation changes occur it is essential to determine the effects they have had.

This is why this study was undertaken to find the effects in terms of BC(A)R. As stated in the discussion section BC(A)R has had an overall positive opinion on the building industry. It has increased quality. The quality has been increased by requiring professionals to carry out site inspections at critical stages of the project so prior to items being covered up they need to be checked. This has increased the project cost but only by approximately 1% from the findings of this study.

BC(A)R has also implemented a more transparent system where a more thorough document trail is required and this is stored on the local authorities system, the BCMS. The new certification process allows a legal recourse for any client that should allow them to take action so that those found in breach are held accountable. Also a new major benefit not directly related to BC(A)R but connected to it is the introduction of the CIRI. This register will finally allow clients to appoint a qualified builder who has had to undergo an accreditation process so that they have the required qualifications and experience to carry out a particular project. This will also hopefully help to eliminate the large black economy operating in the building industry which will be beneficial to the economy.

There are some negatives and/or uncertainties due to the creation of BC(A)R. There has been a cost increase due to the additional site inspections and although this study found this only to be around 1% of the overall project cost the Minister has said he has been told that in some cases upwards of 4% of the project cost has been quoted. The author believes that further studies and a review of this should take place to determine why there is such a big discrepancy and this could down to a geographical reason. Also a number of people have said that the professionals should have been carrying the inspections the whole time so there should be no need for any additional costs. The professionals interviewed responded

to this by saying that their costs have been reduced significantly over the last few years and that when they give fee proposals clients want reductions even when their fees are at very low prices. To accommodate reducing their fees the professionals end up reducing their site inspections and they make this clear to clients in their fee proposals.

The BCMS system although very positive as it has records of drawings, inspection plans etc. does need improvements to make it more user friendly and streamlined. The added security BC(A)R has created for the client to take legal recourse has not been tested in court yet so this does create uncertainty although legal experts are of the opinion that BC(A)R will be a positive. The CIRI which is universally applauded is still only advisory so until this is made mandatory it will not have any effect on the industry.

The options the Minister put forward in his review and then the changes he is planning to implement on the 1st of September 2015 leave the industry and this author confused. The Minister called for the review of BC(A)R primarily because of the fees being quoted for carrying out the assigned certifier role but surely an investigation into why these fees have been quoted would have been the better way to proceed? This would seem to be a more beneficial and a less drastic move than removing the need for BC(A)R for one off houses and extensions. BC(A)R has been shown by this study to be more positive than negative and it did deliver what it set out to so by scrapping it in certain situations seems to be very rash and frustrating to anyone who wants to the building industry to gain positive recognition after years of bad publicity. The author feels the Irish Independent article discussed previously may have a valid point about the decision being a political one and decision making like this is to the detriment of the construction industry. Also in this authors opinion if the Government proceed with making this backwards step they should at least take some of the blame for any issues arising from the 1st of September onwards.

7. Reflection

7.1 Introduction

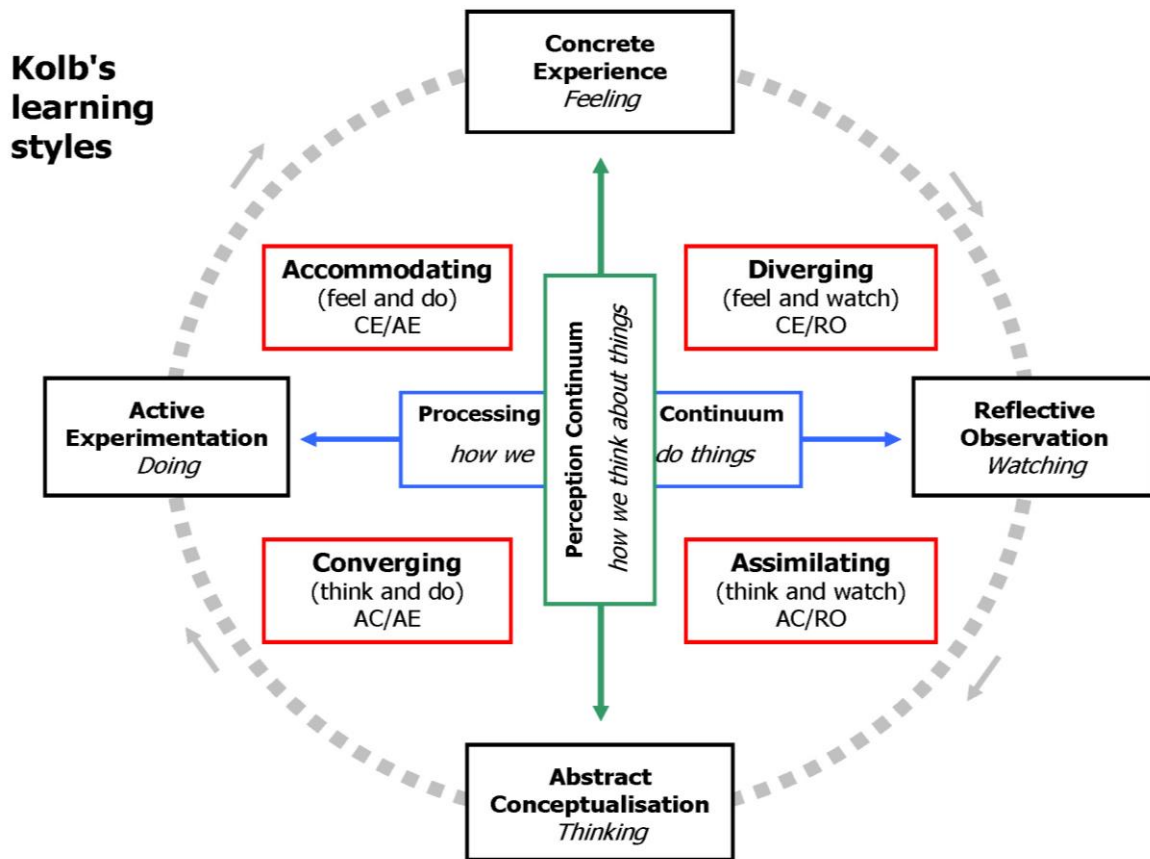
When I started the part-time MBA course in DBS in September 2013 I probably didn't really know what I wanted to get out of the course. I knew the course was a way of gaining a bit of knowledge about a varied number of subjects but I didn't realise how much of the process was self-reflection, self-evaluating, and self-improvement. I learned early on in the course, firstly in Personal and Professional Development class, that this was going to be a major part of the course. As the course consists of numerous group assignments and presentations I realised that knowing my own strengths and weaknesses would play a major part in my success or failure and I believe for anyone to be able to stand back and write down a list of their flaws shows how much of a strong character they are. I probably thought doing the course would be a good way of career advancement and so I took an activity in Cottrell (2010, p. 23) in which I listed and then ranked the things I wanted to get out of the course and I came up with the following:

1. Enhance my knowledge and become better at my job by being able to transfer the added skills I have learned in DBS into my every day work.
2. Know myself better.
3. Develop a wider range of skills.
4. Enhance my career opportunities.
5. Get the qualification.
6. Stretch myself intellectually.
7. Try out new things.
8. Make friends.
9. Achieve a good classification of degree.
10. Experience student life.

I summarised this activity by stating that most important things I hope to get out of this masters are I hope to be able to transfer the skills I learn in DBS to become better at my current job, I also hope to know myself better and to develop a wider range of skills that may lead to career enhancement to a role in middle management. I also carried out a SWOT analysis, see appendix 7, in terms of my long term goals so that I had an idea of my strengths and weaknesses so I could work on both and evaluate the progress or decline in both as I progressed through the masters course.

In this reflection chapter I will look at my learning style, my team role strong and weak points, and positive improvements made since starting the course. I will start by looking at Kolb's learning styles.

7.2 Kolb's Learning Styles



© concept david kolb, adaptation and design alan chapman 2005-06, based on [Kolb's learning styles](#), 1984

Figure 2:

Kolb produced a four-stage cycle showing the different learning concepts and styles and he discusses how they are all separate yet they are all interlinked (Kolb, 1984). This can be seen in Figure 2 and the four methods of experimental learning concepts are:

1. Concrete Experience: Where the person wanting to learn engages in the situation to learn. This is a feeling experience.
2. Reflective Observation: Where the person wanting to learn uses past experiences to learn. This is a watching experience.

3. Abstract Conceptualisation: Where the person wanting to learn attempts to conceptualise a theory of what is observed. This is a thinking experience.
4. Active Experimentation: Where the person wanting to learn is trying to test new ideas by honing skills in a new experience. This is a doing experience.

Kolb then identified four learning styles which correspond to these stages. The styles highlight conditions under which learners learn better. These styles are:

1. Diverging: This is a style for people who feel and watch. They gather all the information by observing before trying to solve the problem.
2. Assimilating: This is a style for people who think and watch. They have a logical approach again based on observing.
3. Converging: This is a style for people who think and do. They are more practical and want to learn by understanding the practical applications of concepts and theories.
4. Accommodating: This is a style for people who feel and do. They use hands on approach relying on their instincts rather than logic.

When I think of which learning style I am most suited I would say it would be assimilating as I would class myself more of thinking and watching person. Of course to carry out a study such as a dissertation a balance would be required and at times I do feel I would have employed all of these learning styles but primarily assimilating would have been the predominant style used.

7.3 Belbin's Team Role

During the course there were numerous group assignments so knowing my strengths and weaknesses in group dynamics was very important. Also as I am a project manager I need this in my everyday job so it was especially important for this. When I took the questionnaire on Belbin's team role I scored highest in implementer (14), and high in team worker (10) and complete finisher (10). I scored lowest in monitor evaluator. The summary of my strong points in Team Roles would be the following:

- Stable and controlled.
- Turns ideas into manageable tasks.
- Integrity and trustworthy.
- Very stable member of teams and sensitive to other members of the team.
- Good listener and encourage others to communicate freely.

The summary of my weak points in Team Roles would be the following:

- Compulsive about order.
- Can be bogged down in detail.
- Have a strong need for stable structure.
- Does not like confrontation or heated debates.

I kept this in my notes and for every group assignment I tried to implement some changes so that I could improve and take on different roles. I felt by doing this in my college assignments that I was able to transfer it easier to my work so that I become a more all-round project manager and ultimately a better one.

7.4 Positive Improvements Made

As I stated in the introduction to this chapter I was not fully sure of what I wanted from the course but I was sure that I wanted develop and improve myself and my skills so that I would be closer to my ideal position of being in a middle management role. The SWOT analysis I carried out, see Appendix 7, showed me what my main weaknesses were and to achieve my long term goals I need to improve these and if possible to eliminate them all together.

For example in my role in work I was project managing facility projects and on a daily basis I was being dragged into doing facilities day to day tasks and this was interfering with the projects I was managing. My numerous projects were suffering and so I arranged a meeting with my manager and relayed my fears to him. We both came to the solution that I had two options. The first was to just focus on my projects and not to get involved in the daily facilities tasks and the second was to allocate a certain percentage of my time to the facilities day to day tasks and reduce my number of projects. There was issues with both options like if I didn't help with the daily facilities tasks then those items would not be done in a timely manner so this would not reflect well on the department and if I was managing less projects then other projects would have to be postponed as there was no other resource to carry them out. But at least I knew the options and consequences of both so that an informed decision could be made on how to progress.

The next weakness I really felt I improved upon was my presenting skills. I felt by doing a significant number of presentations in groups and individually in college for assignments that when I had to do them in work I was much more confident and well prepared. Small things such as remembering that when you are presenting the audience is the most important element, followed by the material used for the presentation followed by you the presenter. This seems very obvious but it is crucial to the success of any presentation.

Another weakness I felt I improved was my long term scheduling and planning. I always felt that I was okay when it came to the short term but I struggled when it came to having to make longer term schedules. I felt by using the skills from the project management module I was able to accurately schedule and plan a lot more efficiently. For example I did a very simple schedule plan for the 12 weeks I had to complete this dissertation, see appendix 1, and by following this I did not get too bogged down or feel overwhelmed by the significant amount of work required to produce a dissertation in a short timeframe while still working full time.

These are examples of a few positive developments but of course I am human so I have many more weaknesses such as I back away from confrontations and I need to learn how to delegate. But I feel by doing this MBA and also doing this dissertation I am better enabled to firstly highlight any deficiencies I might have by critically evaluating myself and secondly I have added skills that should enable me to minimise and hopefully eliminate any deficiencies.

7.5 Conclusion

I feel that by doing this MBA I have developed into a more rounded person. I honestly had no idea that the course would involve so much self-reflection and self-evaluation. But as I said previously this takes courage to critically assess your own strengths and especially your own weakness. I don't believe this can be done overnight but as with any process a continual review and reassessment is required. I hope to have gained the required skills to do this and I think by doing this MBA I have so that I will be more beneficial and able to contribute more to my current employer. Also outside of work I hope to have become a more rounded individual from implementing what I have learned from doing this MBA.

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Appendices

Appendix 1 Timeline of Dissertation Work

Activity	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
	June 1-7	June 8 -14	June 15-21	June 22 -28	June 29 - July 5	July 6-12	July 13-19	July 20-26	July 27 - Aug 2	Aug 3-9	Aug 10-16	Aug 17-21
Assigned Tutor												
Agree Topic												
Literature Review												
Write up Literature Review Section of Dissertation												
Develop Theory from Secondary Research												
Develop and Review Interview Questions												
Get Interview Questions Approved by Tutor												
Carry out Interviews												
Review of Progress to Date with tutor												
Analysis Interview Data												
Update Dissertation												
Write up Interview Section of Dissertation												
Review Progress to Date with Tutor												
Final Revision of Dissertation												
Submit Dissertation												

Appendix 2 Dissertation Log Book for Proposal

Week 1

After I received the good news that I had passed all the modules to date and that I could proceed with the dissertation straight away I got my proposal and looked over it. The topic was based on the effect of new safety regulations on project management of construction projects. I was not 100% committed to this topic so I decided to do a quick literature research on a couple of other ideas floating around in my head so when I met my tutor in week 2 I could get advice from him.

Week 2

I met with Paul, my tutor, and I decided to choose a different topic than my proposal. It was the effect of the building control (amendment) regulations 2014 on small construction projects. As this was never new I thought the subject was very relevant and my findings could be very beneficial to the industry.

Week 3

I set about doing what seemed like a very difficult task of researching literature on the topic and found such varied opinions that it left me a bit confused as to what method I should use to best approach my primary research.

Week 4

I was away for most of this week with work so I was not able to do as much work as I had hoped so panic started to set in a bit. I did start writing up my literature research section of my dissertation after setting up the template of the dissertation as set out in the dissertation handbook.

Week 5

I finally seemed to make progress with my theory for my secondary research and my primary research and I started to formulate questions for semi-structured interviews. I choose interviews as I felt the in-depth nature of these would be more beneficial than surveys. I felt that I could allow the interviewees freedom to give their own opinions and with surveys a lot of people just tick boxes and don't put the required thought into it that I need.

Week 6

I met with Paul and I went over the questions for my interviews and after taking on his feedback I felt ready to commence my primary research. In the meantime I had also completed chapters 1-3 and I had started on the reflection chapter so I felt that half way through I was on top of what I had to do.

Week 7

I carried out some interviews and they went well although there was a lot of work in formulating the findings so I knew chapter 4 and 5 of the dissertation Data Analysis and Discussion was going to take up a lot of time to get it to the level I required.

Weeks 8 & 9

I completed my interviews and I continued working on chapter 4. Also the Minister put a spanner in my works by changing BC(A)R so I had to go back over a few sections. I also had to contact some of the interviewees again to get their opinions on the changes proposed to BC(A)R.

Week 10

I started full steam into finishing chapters 4 & 5 and I finally felt back in control of the dissertation. I started writing chapter 6 the conclusion when I was fully happy with my analysis and discussion chapters.

Week 11

I completed the conclusion and I had my final meeting with Paul who gave me some advice in terms of what I had done and what way to present the data analysis. I felt content but I was aware that I had still had a lot of work to do to complete the dissertation. I set about reading over each section and finalising each one.

Week 12

I completed the abstract and gave the entire dissertation one final read over. I then submitted it onto Moodle. I am happy enough that it is to the required standard and that I have done all I could have to research the topic. It was a challenging process but I feel that it was one I enjoyed and that I learned a lot from.

Appendix 3 Build Control Management System

The screenshot shows a web browser window with the URL https://www.localgov.ie/en/bcms/applications/view/25cb9542-3253-637e-e74c-55b2d5cc5ed5/project_details. The page displays a navigation menu with tabs: Project Details (selected), Project Assessment, Nominate Roles, Statutory Documents, Supporting Documents, and Payment. Below the menu is a table of project details:

Application ID	8362763
Local authority	Meath County Council
Commencement date	17/08/2015
Proposed end date for this phase	09/10/2015
Planning permission No.	AA/150340
Date granted	03/07/2015
Date of expiry	02/07/2020
Project name	Single storey side extension
Activity type	Building
Notice type	Commencement Notice With Documentation
Description of proposed development	Single storey side extension and conversion of existing domestic garage for habitable use
Total No. of phases	1
Total No. of dwellings (all phases)	1
Phase for this notice	1
No. of units for this phase	1
Amount payable	€ 30.00

Below the table is a section titled "Location" with the following details:

Street	67 Racehill Park, Racehill Manor
Town	Ashbourne
County	Co. Meath
Postcode	
Easting	
Northing	

An "Edit" button is located below the location details.

Single storey side extension

https://www.localgov.ie/en/bcms/applications/view/25cb9542-3253-837e-e74c-55b2d5cc5ed5/buildings/view/b5dfa5e1-dfa2-1736-12d9-55b2d6f69a53

localgov.ie BETA Services Business And Economy Search English | Gaelge

Home - BCMS Home - List applications - Single storey side extension - View application

Single storey side extension

BCMS Home My Account List Notices New Notice Logout

Project Details Project Assessment Nominated Roles Statutory Documents Supporting Documents Payment

Use of Building	Residential (Dwellings)
Sub group	Dwelling House
Construction type	Brick,Block
Project Type	Extension to Building
Number of Storeys	1
Height (In metres)	4.10
FSC (If applicable)	-
DAC (If applicable)	-
Quantity	1
Material Alteration Works	N/A
Does this contain a material change of use?	-
Material Change of Use	-
Material Change of Use Description	-
Consequence Class	1

Edit

Údarás Áitiúla Éireann Local Authorities Ireland bcms about contact

start | Inbox - Microsoft Out... | H.B.S | Approved_AF_1_for... | Single storey side ext... | Document1 - Microsof... | 14:41

Page 2

Project: Single storey side extension

Home - BCMS Home - List Notices - View application

Project: Single storey side extension

BCMS Home My Account List Notices New Notice Logout

Project Details Project Assessment **Nominate Roles** Statutory Documents Supporting Documents Payment

Role	Name	Accepted Role	Confirm Nomination
Owner	Mr. Graham Flynn	Yes	
Builder	David Harding	No	
Designer	Mr. Jonathan O'Neill	Yes	
Assigned Certifier	Mr. Jonathan O'Neill	Yes	

Edit Roles

Udarás Áitiúla Éireann
Local Authorities Ireland

bcms about contact

start | Inboxes - Microsoft Out... | H & S | Approved_AF_1_Jfor... | Project: Single storey... | Document1 - Microsof... | 14:42

Project: Single storey side e: x

https://www.localgov.ie/en/bcms/applications/view/25cb9542-3253-837e-e74c-55b2d5cc5ed5/documentation

Project Details | Project Assessment | Nominate Roles | **Statutory Documents** | Supporting Documents | Payment

You need to download the Commencement Notice and the listed Statutory forms using the relevant 'Download' button. These should be printed, signed, scanned and uploaded back to the website using the Upload panel below.

Please note: 17/08/2015 will appear as the commencement date on the forms, please check that it is correct before printing. Click [here](#) to change the date.

If a new version of an existing document is uploaded, the existing document will be overwritten.

Statutory Document

Choose File | No file chosen

The maximum file size for this document is 10 MB

Statutory Document Type * - Select -

Upload

File Name	Document Type	Download	Remove File
-	Commencement Notice	Download	-
-	Design Certificate	Download	-
-	Notice of Assignment (Builder)	Download	-
-	Notice of Assignment (Assigned Certifier)	Download	-
-	Undertaking By Builder	Download	-
-	Undertaking by Assigned Certifier	Download	-
-	Supporting Documentation List	-	-

start | Inbox - Microsoft Out... | H.B.S | Approve_AF_1_for... | Project: Single storey... | Document1 - Microsof... | 14:42

Project: Single storey side extension

BCMS Home My Account List Notices New Notice Logout

- Project Details
- Project Assessment
- Nominate Roles
- Statutory Documents
- Supporting Documents
- Payment

Supporting Document No file chosen

Only PDF files are allowed. The maximum file size for this document is 10 MB.

Supporting Document Type *

Uploaded Supporting Documentation:
No document uploaded yet

As well as the 6 required Statutory documents, at least 3 supporting documents are also required for submission.

The additional support documents are as follows:

Select at least one of the following

- General Arrangement Drawings
- Plans
- Sections
- Elevations

And at least one of the following

- Schedule of Plans
- Calculations
- Specifications and Particulars

And at least one of the following

- Inspection Plan
- Inspection Notification Framework

Home - BCMS Home - List Notices - View application

Project: Single storey side extension

BCMS Home My Account List Notices New Notice Logout

Project Details	Project Assessment	Nominate Roles	Statutory Documents	Supporting Documents	Payment
-----------------	--------------------	----------------	---------------------	----------------------	---------

You can't make a payment before project details, roles, assessments and documentation are complete.

Appendix 4 Questionnaire for Interviews and Information Sheet for Participants

Questionnaire for Semi-Structured Interviews:

Remember the main purpose is to find “The Effect of the Building Control (Amendment) Regulations 2014 on Small Construction Projects in Ireland”

Start the interview by doing the following:

- Giving the interviewee a quick overview of why you want to talk to them.
- Then give the interviewee the “Information Sheet for Participants” and the “Informed Consent Form” and ask them to sign it if they are happy to proceed. Give the interviewee a copy of the signed consent form.
- Ask them if it is ok to record the interview and if not only hand written notes will be taken.
- Remind them that they do not have to answer any question that they don't want to and that they can leave the interview at any time.

Start Interview:

1. What is your background?
2. How long have you been involved in small construction projects (1 off houses or extensions i.e. value less than €1m) in Ireland?
3. What would the major differences be between projects when you first started to today?
4. Are you aware of the Building Control (Amendment) Regulations 2014 (BCAR 2014)?
5. What do you think BACR 2014?
6. Do you think they will prevent issues like Priory Hall happening again?
7. A number of people have published articles being very critical of BCAR and that the new system only creates “traceability and accountability but not better building”, do you think this is a fair comment?
8. Would a system similar to the one in England and Wales where there is an independent system of both design and construction under the control of the Building Control Authorities, where it is paid for by the client but licensed and answerable to the BCA, would this be a better system than the current BCAR 2014?
9. From your point of view what are the major changes since BCAR 2014 were introduced?
10. Have you used the Building Control Management System (BCMS)?
11. How do you find the BCMS?
12. Are there any improvements that you think could be made with it?
13. From a cost point of view have you noticed any change due to BCAR?
14. From a scheduling point of view have you noticed any change?
15. From a quality (end product) point of view have you noticed any change?
 - 15a. Would you have any reservations carrying out the assigned certifier role?

16. Are you aware that the Minister for the Environment Alan Kelly has called for a review of the BCAR especially in relation of the cost burden especially for people building their own homes?

He has put forward 4 suggestions (the next four questions). I will read them all out first and then ask the interviewee for their opinion on each one:

17. For single dwellings and extensions the statutory certification would be advisory rather than mandatory. What is your opinion on this?
18. Additional qualified professionals could be added to the list of people who can act as Assigned Certifiers so competition would be increased in this market and costs should then be reduced. What is your opinion on this?
19. Guidance on the fees for certifying single dwellings could be put in place. What is your opinion on this?
20. Changing the exemption rule for planning for developments less than 40m² are exempt to a plot ratio where the exemption will be a portion of the area of land owned, what is your opinion on this?
21. What would be your preferred option to keep the system as is, or to do one of the 4 options above, or to copy the English system?
22. Are you aware of the new Construction Industry Register?
22a. (For Builders Only) Are you on the register?
23. What is your opinion of it?

Questions 24-26 were only added after a few interviews had taken place as the Minister completed his review and changed BCAR (as follows):

24. The Minister has announced on the 31st of July that he was changing BCAR to make so for one-off houses or for extensions is was now not mandatory anymore, what is your opinion of this?
25. To ensure that building standards do not slip in respect of these types of builds; a new fit-for purpose local authority inspection process will be developed, what is your opinion of this?
26. Finally the Minister is proceeding with plans for the statutory registration of architectural technologists which it is anticipated will further broaden the pool of certifiers, what is your opinion of this?

INFORMATION SHEET FOR PARTICIPANTS

PROJECT TITLE

“The Effect of the Building Control (Amendment) Regulations 2014 on Small Construction Projects in Ireland”.

You are being asked to take part in a research study on the BCAR 2014 and how it has affected you in your role as a builder/engineer/architect/surveyor working on small construction projects. A small construction project is defined as a one off house or an extension with a value less than €1m.

I am carrying out this study as part of my part time MBA being carried out in DBS and my tutor is Paul Taaffe. Once obtained if required by DBS, that the project has been approved by the Research Ethics Committee.

WHAT WILL HAPPEN

In this study, you will be asked to give your own opinion about the above topic by answering a number of questions; your answers are entirely your opinion and they can be as short or as long as you want. The questions asked will be related to the BCAR and small construction projects so that the researcher will be able to discover what effects BCAR has had on small construction projects.

TIME COMMITMENT

The study will typically take 30 minutes and it will be carried out in one sitting.

PARTICIPANTS' RIGHTS

You may decide to stop being a part of the research study at any time without explanation required from you. You have the right to ask that any data you have supplied to that point be withdrawn / destroyed.

You have the right to omit or refuse to answer or respond to any question that is asked of you.

You have the right to have your questions about the procedures answered (unless answering these questions would interfere with the study's outcome. A full de-briefing will be given after the study). If you have any questions as a result of reading this information sheet, you should ask the researcher before the study begins.

CONFIDENTIALITY/ANONYMITY

The data I collect does not contain any personal information about you and all that will be

FOR FURTHER INFORMATION

I or / and Paul Taaffe will be glad to answer your questions about this study at any time. You may contact my supervisor at paul.taaffe@dbs.ie or (01) 4177500 or you can contact me on ajmonahan@hotmail.com or 085 7197480.

Appendix 5 Information Consent Form & Signed Consent Sheets

Informed Consent Form

PROJECT TITLE:

“The Effect of the Building Control (Amendment) Regulations 2014 on Small Construction Projects in Ireland”.

PROJECT SUMMARY:

You are being asked to take part in a research study on the BCAR 2014 and how it has affected you in your role as a builder/engineer/architect/surveyor working on small construction projects. A small construction project is defined as a one off house or an extension with a value less than €1m.

In this study, you will be asked to give your opinion about the above topic by answering a number of questions; your answers are entirely your own opinion and they can be as short or as long as you want. The questions asked will be related to the BCAR and small construction projects so that the researcher will be able to discover what effects BCAR has had on small construction project

By signing below, you are agreeing that: (1) you have read and understood the Participant Information Sheet, (2) questions about your participation in this study have been answered satisfactorily, (3) you are aware of the potential risks (if any), and (4) you are taking part in this research study voluntarily (without coercion).

Participant's signature

Participant's Name (Printed)

Student Name signature

Student Name (Printed)

Date

INFORMED CONSENT FORM

PROJECT TITLE:

"The Effect of the Building Control (Amendment) Regulations 2014 on Small Construction Projects in Ireland".

PROJECT SUMMARY:

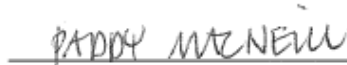
You are being asked to take part in a research study on the BCAR 2014 and how it has affected you in your role as a builder/engineer/architect/surveyor working on small construction projects. A small construction project is defined as a one off house or an extension with a value less than €1m.

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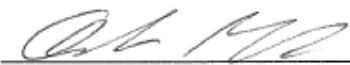
By signing below, you are agreeing that: (1) you have read and understood the Participant Information Sheet, (2) questions about your participation in this study have been answered satisfactorily, (3) you are aware of the potential risks (if any), and (4) you are taking part in this research study voluntarily (without coercion).



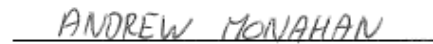
Participant's signature



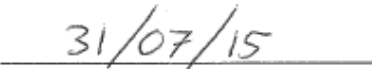
Participant's Name (Printed)



Student Name signature



Student Name (Printed)



Date

INFORMED CONSENT FORM

PROJECT TITLE:

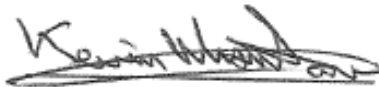
"The Effect of the Building Control (Amendment) Regulations 2014 on Small Construction Projects in Ireland".

PROJECT SUMMARY:

You are being asked to take part in a research study on the BCAR 2014 and how it has affected you in your role as a builder/engineer/architect/surveyor working on small construction projects. A small construction project is defined as a one off house or an extension with a value less than €1m.

In this study, you will be asked to give your opinion about the above topic by answering a number of questions; your answers are entirely your own opinion and they can be as short or as long as you want. The questions asked will be related to the BCAR and small construction projects so that the researcher will be able to discover what effects BCAR has had on small construction project

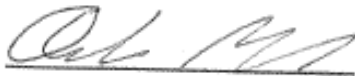
By signing below, you are agreeing that: (1) you have read and understood the Participant Information Sheet, (2) questions about your participation in this study have been answered satisfactorily, (3) you are aware of the potential risks (if any), and (4) you are taking part in this research study voluntarily (without coercion).



Participant's signature

KEVIN MARTIN

Participant's Name (Printed)



Student Name signature

ANDREW MONAHAN

Student Name (Printed)

28/07/2015

Date

INFORMED CONSENT FORM

PROJECT TITLE:

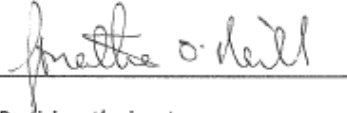
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Participant's signature

JONATHAN O'NEILL

Participant's Name (Printed)



Student Name signature

ANDREW MONAHAN

Student Name (Printed)

30/07/15

Date

INFORMED CONSENT FORM

PROJECT TITLE:


"The Effect of the Building Control (Amendment) Regulations 2014 on Small Construction Projects in Ireland".

PROJECT SUMMARY:

You are being asked to take part in a research study on the BCAR 2014 and how it has affected you in your role as a builder/engineer/architect/surveyor working on small construction projects. A small construction project is defined as a one off house or an extension with a value less than €1m.

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Participant's signature

RAY DONOHOE

Participant's Name (Printed)



Student Name signature

ANDREW MONAHAN

Student Name (Printed)

05/08/15

Date

INFORMED CONSENT FORM

PROJECT TITLE:

"The Effect of the Building Control (Amendment) Regulations 2014 on Small Construction Projects in Ireland".

PROJECT SUMMARY:

You are being asked to take part in a research study on the BCAR 2014 and how it has affected you in your role as a builder/engineer/architect/surveyor working on small construction projects. A small construction project is defined as a one off house or an extension with a value less than €1m.

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Orla Lonergan

Participant's signature

ORLA LONERGAN

Participant's Name (Printed)

Andrew Monahan

Student Name signature

ANDREW MONAHAN

Student Name (Printed)

12/08/15

Date

INFORMED CONSENT FORM

PROJECT TITLE:

"The Effect of the Building Control (Amendment) Regulations 2014 on Small Construction Projects in Ireland".

PROJECT SUMMARY:

You are being asked to take part in a research study on the BCAR 2014 and how it has affected you in your role as a builder/engineer/architect/surveyor working on small construction projects. A small construction project is defined as a one off house or an extension with a value less than €1m.

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Alan O Conner

Participant's signature

Alan O Conner

Participant's Name (Printed)

[Signature]

Student Name signature

ANDREW MONAHAN

Student Name (Printed)

7th August 2015

Date

Appendix 6 Summary Interview Responses

Interview No. 1: Building Surveyor No. 1 with 10 years' experience.

Question Number	Response	Effect (in relation to BC(A)R)	Important Point
1	10 years' experience chartered surveyor.		
2	10 years' experience in small construction projects.		
3	Building Regulation changes are the biggest difference.		*
4	Yeah		
5	Better than previously but it needs to be improved upon. (i) Conflict of interest exists with an architect/engineer/ surveyor designing and then certifying the works. (ii) Assigned certifier cannot stop works even if there is a major issue on site. (iii) Builder can refuse assigned certifier access to site. (iv) required paperwork for materials etc. is very difficult to get from builders. Builders are not experienced in having to produce this paperwork and they don't know why it is required.	Positive /Negative	*
6	No	Negative	
7	Yes	Negative	*
8	Yes it would.	Negative	*
9	Extra fees from fulfilling the new role as assigned certifier.	Negative	*
10	Yes		
11	Not good, very little instruction, not customer friendly, clients reported issues accepting their role, very time consuming having to print out documents then getting them signed by builder, client, designer etc. and then having to scan them	Negative	*

	back into the system.		
12	Make it more user friendly and easier to correct any incorrect lodgement documents.		*
13	Assigned certifier role adds approximate 1% to projects not the magnitude that the RIAI have discussed.	Negative	*
14	No time effect due to BCAR.	Positive	*
15	Yes because nobody was checking before. This was because nobody had to check before.	Positive	*
16	Yes		
17	Barking Mad!	Negative	*
18	Shouldn't be allowed, maybe not qualified enough and also maybe from a selfish point of view to protect own job.	Negative	*
19	No use if only guidance.	Negative	*
20	Barking Mad!	Negative	*
21	None to combine BCAR and English system to eliminate conflict discussed previously by allowing engineer/architect to be designer and certifier. Everyone makes mistakes and another set of eyes would be a major benefit.		*
22	Yes		
23	If it's voluntary it is pointless. Building contractor can be anyone currently and they do not have to know anything about building regs but Chartered Engineer, Building Surveyors and Architects have to be well qualified and prove this to get their qualifications.		*

Interview No. 2: Engineer No. 1 with 20 years' experience.

Question Number	Response	Effect (in relation to BC(A)R)	Important Point
1	20 years' experience structural engineer. Over 10 years as a chartered engineer.		
2	20 years.		
3	Changes in standards, software, quality management introduction.		
4	Yeah		
5	Better than previously but it is cumbersome. System has to be ironed out more. One of the big issues is that there is no difference between large projects and small projects, with the exception that extensions less than 40m2 are exempt.	Positive /Negative	*
6	No to material problems, to stop issues like pyrite it is completely dependent on suppliers; inspections would not help to highlight this. Priory Hall was a case of fraud, as the developer, builder and client were all the same this situation could happen again as they could also be the assigned certifier.		*
7	Their opinion is probably fair but BCAR has the potential to lead to better building.	Positive /Negative	*
8	Yes.		
9	Builders are finally becoming more aware of their requirements especially when it comes to paperwork, they are getting used to asking their suppliers for specification certs etc. which can only be a good thing. Previously there was no requirement for the smaller builders to ever have to produce this documentation.	Positive	*
10	Yes		

11	Very slow, the steps are clear but you have to wait to until step 3 is complete before you can move to the next steps.	Negative	*
12	There should be more flexibility with the submission and the ability to edit it right up until the final step which is lodging the commencement notice. There should also be more options on building types.		*
13	Construction costs haven't changed but assigned certifier cost has increased designers / design team costs. It used to take a half an hour to create and lodge a commencement notice and now it takes 2 days plus the additional inspections.	Negative	*
14	Probably hasn't increased the time to complete a project but it has increased panic again mainly down to lodging the commencement notice.		*
15	Quality is not affected as the builders and the way they build has not changed.	Negative	*
15a	We have enough experience to carry it out. From a legal point of view our PI insurers have told us as long as we follow the inspection guidelines we are covered and there should not be any issues.		*
16	Yes		
17	I can't see how this will be achieved as from a legal point of view a buyers solicitor will look for this documentation. Also the system could be corrupted as a developer could manipulate the system so it seems that they are only doing one houses when really they could be doing more than one. Plus the exemption for greater than 40m2 already exists.	Negative	*

18	<p>No one else would have the qualifications, for example the engineers register is in existence since 1969. What other professions would have the experience?</p> <p>Also the costs are related to time so even if there were more people who could do the assigned certifier role I don't think the costs would reduce. Also if the costs were reduced the qualified people would then just not find any benefit so they may not want to carry out the role anymore.</p>	Negative	*
19	<p>I would be very happy to be getting those fees!! Worried engineering or architecture services would be cut back. No scale of fees.</p>	Negative	*
20	<p>It would be okay for an exempted development to be based on plot ratio but again I think legal problems would arise when someone wants to sell a property as a solicitor will look for the certs.</p>	Positive /Negative	*
21	<p>Current system can be streamlined and we can be working towards the English system but in time.</p>	Positive /Negative	*
22	<p>Yes</p>		
23	<p>Until it becomes mandatory it has no benefit. CPD will be part of it and that is a major requirement in my opinion.</p> <p>It is unfair builders are pricing against other builders when the services they are delivering are not comparable.</p>	Positive /Negative	*

Interview No. 3: Architect No. 1 with 30 years' experience.

Question Number	Response	Effect (in relation to BC(A)R)	Important Point
1	30 years' experience as an architect. Over 14 years as a Health & Safety Advisor.		
2	30 years.		
3	Building Regulations have had the biggest impact. It has raised standards and contractors are working a lot more efficiently. Also Part L energy regulations have been very welcome and a great improvement.	Positive	*
4	Yeah		
5	Very welcomed. Sets out exactly what has to be done. Everyone now finally knows their role. For example who has to do what inspection and when. Also it now creates a standard approval for all construction projects.	Positive	*
6	I don't know if it will. On a project where the client, builder and design team are all separate entities it probably will but on developer projects it probably will not. It is very difficult to get developer to buy in.	Positive /Negative	*
7	No I do not believe this is a fair comment. It will result in better building.		*
8	It is an alternative but I am not sure if it is a better one. The local authority do not want to take responsibility for checking buildings and this comes back to the Stardust incident and after this the Fire Act put the onus on the building owner and the Councils / Building Control did not want this responsibility. This may be down to them not having enough resources also.		*
9	The industry has needed a methodical system that has to be in place prior to starting the construction phase of a project and I believe this system does that. Standards will rise or at least a	Positive	*

	higher standard of compliance will be achieved.		
10	No		
11	N/A		
12	N/A		
13	I don't think it adds costs to the construction of a project but it will add to the professional fees. I believe consultants are all under paid for what is required for any project. Fees across the board are too low.	Negative	*
14	No it shouldn't.	Positive	*
15	It should increase the quality of work produced. The lower standard will definitely be raised; contractors who were at a high level already maybe will not change.	Positive	*
15a	N/A		
16	Yes		
17	I think they should be mandatory; you cannot have a half way system. The system was created to protect the consumer who is either building a property or who is buying a property and this would be a backward step.	Negative	*
18	That's fine as long as they are competent and they can get Professional Indemnity Insurance which I see as being an issue. To be competent they need to prove that they have training and experience and the 3 current assigned certifiers all have organisations behind them to prove this so something along the same lines would be required for any additional professionals who could do this role. Possibly include the Local Authority in this.	Positive	*
19	Can't do this as every building job is different.	Negative	*
20	No it would just encourage cowboy builders to take on the exempted projects so that they don't	Negative	*

	have to prove that they are competent.		
21	Happy with the current system and I wouldn't mind additional professionals being added as assigned certifiers as long as they are competent and they have PI insurance.	Positive	*
22	Yes		
23	Absolutely essential. Biggest problem with the construction industry in Ireland is in relation to smaller builders and especially in relation to Health and Safety standards. Huge variation in standards of small builders and this register could be essential to helping a client being able to pick one that is competent.	Positive	*

Interview No. 4: Building Surveyor No. 2 with 13 years' experience.

Question Number	Response	Effect (in relation to BC(A)R)	Important Point
1	16 years' experience as a Building Surveyor.		
2	16 years.		
3	Building Regulations are the biggest difference, they have made a big difference to		
4	Yeah		
5	Good and bad, the good well the old system was not fit for purpose. The inspection plan is a good guide to the checks required but I would have preferred if the local authority were at least involved in some key inspection points.	Positive /Negative	*
6	It will help but there will still be some people who will take advantage of the system.	Positive /Negative	*
7	I think it is a bit unfair, I think it is an improvement but I also think from the local authority point of view it is just a tick the box exercise.	Positive /Negative	*
8	Yes I think this is a better system.	Negative	*
9	It is more work when I carry out the assigned certifier role but I do get paid for it.		*
10	Yes		
11	It's okay it took me a while to get used to it and I did make a mistake with the date on one commencement notice but the local authority talked me through changing it so it wasn't a big deal.		*
12	All the forms that have to be signed by the client assigned certifier, builder etc. if they could be made just accepting their role like page 2 I think it is when the builder and client just get an automated email and they click on the link that would be better. But I don't know legally if that		*

	would be acceptable.		
13	Yes it will add costs just for the assigned certifier role but that is the only additional costs and on a project cost it should be very low.	Negative	*
14	No it shouldn't.	Positive	*
15	It should make it better, any system will be open to people abusing it but I don't think you can ever prevent this so this is an improvement.	Positive	*
15a	No I wouldn't PI insurance is still valid.		
16	Yes		
17	Silly it is not mandatory no one will do it.	Negative	*
18	I don't think any other people are qualified enough.	Negative	*
19	If it is guidance no one will do follow it.	Negative	*
20	It will create issues and the current 40m2 exemption is clear to all while a plot ratio exemption rule would probably lead to more confusion.	Negative	*
21	Work towards the English System, but it can be a long term goal to get there	Negative	*
22	Yes		
23	Great it is well needed as especially smaller builders don't know the regs and rely on consultants too much.	Positive	*
24	If assigned certifier is mandatory no one will do it. I wonder what the banks will the banks still request it?	Negative	*
25	Local Authority involvement is a good step forward.	Positive	*
26	I don't think that they are qualified to perform this role.	Negative	*

Interview No. 5: Architect No. 2 with 20 years' experience.

Question Number	Response	Effect (in relation to BC(A)R)	Important Point
1	20 years' experience as an architect. Over 12 years running his own architectural firm.		
2	20 years.		
3	<p>There were no computers when I started so this has resulted in lots more drawings as it is easier to make changes now.</p> <p>Also the Building Regulations have had a big impact.</p> <p>Insulation requirements have increased significantly.</p>		
4	Yeah		
5	Bit of a joke, the onus is on the client it is just a different method of self-certification. Colleagues tell me they feel like they have to on site the whole time. It is an added cost as I don't want to carry out the assigned certifier role. My fees have stayed the same and if I took this role on clients may just want to knock some costs off my architectural fees.	Negative	*
6	No, people will always still take advantage of the system and get someone to sign it off. Some people acting as assigned certifiers wouldn't have the knowledge or experience to carry out the role correctly.	Negative	*
7	I think it is a fair comment. Everything might seem like it complies on a paper level but it mightn't on site.		*
8	Yes		*
9	No changes, probably less work as the assigned certifier makes most of the visits so I am not required on site as much as before.		*

10	Yes		
11	It seems okay, I have not used it much.		
12	N/A		
13	Yes it will add costs for example one builder who won the tender for a project I was involved in wanted more money for the requirement of more paperwork. Builders will slowly creep up their costs to cover this additional work.	Negative	*
14	No it shouldn't.	Positive	*
15	The same but maybe it will be a slight bit better.	Positive	*
15a	N/A		
16	Yes		
17	Bit of a joke, if it is only advisory no one will do it so we will just be back to where we were before.	Negative	*
18	Don't think this is a good idea. People will end up being able to fulfil the role but they will not be qualified enough. People must have done some kind of detailed course maybe over a couple of years. Also would they be able to get PI insurance?	Negative	*
19	No objection with that if it is set out properly. For example the fee should be x amount and then if there are issues an extra amount could be agreed.	Positive	*
20	I think 40m2 is about right, if large rear extensions were allowed it might affect neighbours more.	Negative	*
21	Copy the English System	Negative	*
22	Yes		
23	Great as long as it has tax certificates, CPD's etc.	Positive	*
24	If assigned certifier is mandatory no one will do it. I wonder what the banks will the banks still	Negative	*

	request it?		
25	Last point about local Authority is Good	Positive	*
26	Architectural Technicians would need proper training so that they are qualified if that was in place I wouldn't have a problem	Positive	*

Interview No. 6: Builder No. 1 with 18 years' experience.

Question Number	Response	Effect (in relation to BC(A)R)	Important Point
1	18 years' experience as a builder and 18 years as a director running his own building firm.		
2	18 years.		
3	Regulations have changed so much and this adds a lot more time.		
4	Yeah		
5	It is overdone. There are too many inspections required. A lot more expense to the client because of it. One person should be able to do all the inspections not have the requirement for so many separate people to inspect certain things.	Negative	*
6	In relation to pyrite because of the new material specification requirements it should never happen again. It is right too. Councils fault with Priory Hall they should have checked that.	Negative	*
7	That's fair, another point is that builders are always blamed.	Negative	*
8	Probably not, getting enough resources in the council could be an issue and if they were under resourced inspections would be delayed so projects would be delayed.		*
9	The inspections the amount of them has significantly gone up.		*
10	Yes		
11	It seems okay, I only have to accept my role as a builder.	Positive	*
12	N/A		
13	No change.		
14	It shouldn't but there is a risk that the inspections might delay projects if they are not coordinated in advance.	Positive /Negative	*
15	No difference if you were doing it right before as I was the added inspections will not be of any benefit.	Negative	*
15a	N/A		

16	No		
17	Better	Positive	*
18	Too many people as it is.	Negative	*
19	No objection.	Positive	*
20	No opinion.		*
21	One person to do the inspections.		*
22	Yes		
22a	No		
23	No benefit there is a scarcity of builders as it is and it is only going to get worse. Anyway the bad builders are being found out by word of mouth.	Negative	*
24	It would be cheaper for the client.	Positive	
25	Would the councils come out on time when they were supposed to, otherwise I would have no issue with it.	Positive /Negative	*
26	No effect on me.		

Interview No. 7: Builder No. 2 with 20 years' experience.

Question Number	Response	Effect (in relation to BC(A)R)	Important Point
1	20 years' experience as a builder.		
2	20 years.		
3	Method of building has changed, less labour now employed on sites. Also Regulations have changed.		
4	Yeah		
5	It doesn't change my job much, expect for coordinating more site inspections. I still build the same way.		*
6	If it built right and inspected then it should.	Positive	*
7	From my point of view I can't build any better.		*
8	As long as the site inspections didn't delay my schedules then it wouldn't matter to me.		*
9	More site inspections.		*
10	Yes		
11	It is fine, no issues.	Positive	*
12	N/A		
13	No change.	Positive	
14	I just have to notify the assigned certifier ahead of the required site inspections so it shouldn't.	Positive	*
15	No difference.	Negative	*
15a	N/A		
16	I heard something about it.		
17	It should be one way or another; an option should not be given. It would reduce costs for the clients.	Positive /Negative	*

18	It doesn't bother me.		*
19	It doesn't bother me.		*
20	It doesn't bother me.		*
21	The way it is fine for me.		*
22	Yes		
22a	No		
23	It would be good as bad builders would be found out.	Positive	*
24	It should be one way an option should not be given.	Negative	*
25	I would have reservations about the Council doing inspections as they might delay the schedule.	Negative	*
26	No issue with this.	Positive	*

Interview No. 8: Engineer No. 2 with 23 years' experience.

Question Number	Response	Effect (in relation to BC(A)R)	Important Point
1	23 years' experience as a structural engineer.		
2	23 years.		
3	When starting the Building Control Regulations which required calculations to be submitted to Building Control were being made obsolete. The Fire Regulations were a big change for how buildings were designed.		
4	Yeah		
5	I was on the panel that met the Minister over 18 months to discuss the new Regulations and BCAR was what we come up with. Straight away we were told that the local authorities had no resources or would then be given anymore so they were not going to be able to carry out design & inspections checks which are what the majority wanted. There was a lot of back and forth and what came about was the best we		*
6	It will go long way about prevent another 'Priory Hall' but I don't think any system is 100% fail safe.	Positive	*
7	No I don't. Once you have traceability and accountability it goes a long way to helping achieve better building.	Positive	*
8	Ideally but the local authorities do not have the personnel or resources.		*
9	Not much difference. Previously I would carry out site inspections for the critical elements and that has continued but maybe other professionals were not doing this.		*
10	No		
11	N/A	Positive	*
12	N/A		
13	There is a cost implication due to the more paperwork and administration required.	Negative	
14	I don't think it will add to any schedule in fact it might reduce the schedule as the site inspection plan will force the builder to do out a detailed	Positive	*

	project plan so the smaller projects might actually find an advantage from BC(A)R.		
15	It can only lead to better quality due to the site inspections. Drive by inspections will be a thing of the past.	Positive	*
15a	Not at all.		
16	Yes		
17	It be mandatory.	Negative	*
18	You are diluting the pool then. No one else is qualified. If Architect Technologists want to get on the pool then the RIAI should have some way of them being registered but this is not the case so there must be a reason and I feel that it is because they are not qualified enough.	Negative	*
19	This could be seen as an attempt to interfere with the market and engineers got in trouble for doing this in the past by setting a scale of fees.	Negative	*
20	No it will just cause confusion.	Negative	*
21	If costs were not an issue then I would prefer the English method. But because costs are an issue I would stick with BC(A)R.		*
22	Yes		
22a	N/A		
23	It is good but it is not mandatory yet, it has to be mandatory. It will be a money making scheme for the CIF so that should be looked at. CPD is a requirement for this system and any builder on it will have to keep this up on an annual basis so small builders will have to do this. They probably haven't gone on many courses like this so it will be additional learning for them and then professionals will not have to keep telling them the regulations and informing them when they change.	Positive	*
24	It is a backwards step. The Minister is being very disingenuous to some of his own staff who worked 18 months to create BC(A)R. He is not long in his role and he is muddying the waters. What if a builder wants to build two houses next door to each other? Will he just say they are separate one of houses and use a loophole like	Negative	*

	that?		
25	I understand from a friend who works in Building Control that they understand at this early stage that the BCMS will be audited like the revenue system. So it will focus on perceived bad builders and professionals and they will focus on them. It will be limited as the resources are limited in Building Control.	Positive	*
26	As before question no. 18.	Negative	*

Appendix 7 SWOT Analysis of Myself in Relation to My Long-Term Goals

SWOT Analysis in relation to long term goals (Cottrell, 2010, p. 75)

Strengths

- I'm a team player.
- I'm very dedicated to see things through to completion.
- Good motivator.
- Excellent people skills.
- Ability to manage several projects at the same time.
- Good at prioritising.

Weaknesses

- Unable at times to say no.
- Should be more willing to take the lead role more.
- Improve my presentations skills.
- Should be more willing to argue or at least be stronger in getting my opinion across.
- Need to learn to delegate more.
- Learn not to put off items I may not feel are critical to the projects.

Opportunities

- To receive coaching in service of improving my leadership skills.
- To learn from others in similar roles to mine in the company I am currently working for.
- To enhance my ability to manage the need to complete task quickly in order to be able to deliberate more carefully.
- Use the skills I learned from P&PM class to improve my presentation skills.

Threats

- Colleagues in similar roles with a lot more experience in certain areas which may allow them to be promoted ahead of me.
- If the corporate side of the company think that they have spent enough money in getting the manufacturing facility I am working up to a suitable condition then they may cut back on spending money at this facility which may result in me not having a role and being let go.