

## **NOTES FROM THE 'CIF STUDENT Q&A SESSION WITH INDUSTRY PROFESSIONALS'**

Held on Friday 05<sup>th</sup> February 2021 at 12:30PM

Online Zoom Meeting

### **Panellist Attendance:**

Ms. Orla Fitzgerald, Director	Fitz.Gerald Associates Architects
Mr. John O'Shaughnessy, Managing Director	Clancy Construction (Main Contracting and Housebuilding)
Mr. Ciaran King, General Manager	King and Moffatt Building Services (Speciality Contracting)
Ms. Sinead Savage, Head of BD and Marketing	Mannings (Main Contracting)
Mr. John Sweeney, Senior Contracts Manager	Collen Construction (Main Contracting)

### **Also Present:**

Ms. Alison Watson	Class of Your Own
Ms. Denise Tuffy	CIF – Administrator, Main Contracting
Ms. Morghan Hall	CIF – Administrator, Main Contracting

### **Introduction:**

Following the excellent webinar hosted by industry professionals on Friday, 5 February 2021, we're very pleased to provide all participants, especially those who were unable to join us, with a summary of the discussions held. You might find some of the references a little advanced so please don't get bogged down in the detail! The secret is always, keep it simple and use your creativity and imagination. Remember to always justify your choices.

There are excellent links to websites at the end of the document should you wish to explore a little further and we hope you'll find them useful!

### **Questions:**

- 1. QUESTION:** Regarding the sourcing of materials, it seems impossible to find consistency in costing due to factors such as Brexit. We are seeing a 5-10% increase weekly. How do we factor this into the design of our home and the materials associated with it?

#### **RESPONSES:**

- Due to current situations such as lack of demand and Brexit there has been an increase in the cost of materials. For example, in the industry now cost inflation can be seen with materials such as steel and timber.
- Currently inflation is at a 2% increase. A great place for inflation cost information is the SCSl website (see below links). QS firms AECOM Annual report also shows the cost increase for 2020 and the predictions for 2021.

- Advice for the competition: think about the costs of maintaining your house. It may be a good idea consider the overall costs during the life cycle of the home.
- Tip: gather the costings for your materials on a specific date and work off these. Be sure to record and refer to this date in your project and what inflation was on the costs at that time.

**2. QUESTION:** How long do houses last these days? What is the lifecycle for modern homes built in this century?

**RESPONSES:**

- The current building regulations state 60 years.
- Tip: ensure your home will last for at least 60 years.

**3. QUESTION:** What are the most important aspects we are being judged on?

**RESPONSES:**

- All aspects are important so ensure to complete each one.
- In terms of energy efficiency:
  - Think about the electric and mechanical elements of your house (water, gas, power, etc.) as these are some of the largest costs to run your home. [SEAI.ie](http://SEAI.ie) the sustainable energy website lists grants to improve homes which may give you some clues as to areas to think about in order to make your home more energy efficient.
  - Some areas you may want to consider are double / triple glazed windows, heat pumps, insulation and ways to save water. Some of these may seem very costly in the beginning but will be a good investment for energy saving long term in your home.

**4. QUESTION:** What level of detail are we expected to have across all headings?

**RESPONSES:**

- The judges understand that the teams may not be experts in construction. They are encouraging your ideas, creativity and imagination. They are looking forward to seeing what you come up with to improve the industry.
- Be sure that whatever decisions you make are clearly justified; your reasons should be clear. Also, ensure to use references in order to back up your justifications.

**5. QUESTION:** Does the house have to be a passive house?

**RESPONSES:**

- A passive house is a highly energy efficient building standard that also promotes indoor comfort and acoustic insulation.
- You are effectively creating the energy that is needed to make the things in your home function. You can use things such as solar panels or geothermal pumps. The idea is that you are taking nothing, and you are passive in terms of the homes energy demand because you're only generating what you actually need.
- The building itself is designed in such a way that it gains from the natural heat. The idea is that the cost is virtually nothing.

- The current building regulations require what is called NZEB (Nearly Zero Energy Building Standard). A high percentage of your energy must come from a renewable source. SEAI.ie has more information on this.

**6. QUESTION:** Can you touch upon batteries and smart meters?

**RESPONSES:**

- At the moment, you can get a domestic house battery for around €500.00 with a 15-year lifecycle.
- Smart meters will hopefully be implemented in Ireland within the next few years.
- Tip from panel: the house your designing would not be ready for at least a year. If you think about the realities of when the house would be built and lived in, you could include things that are coming out in a few years' time such as smart meters. However, you need to be innovative and justify your reasonings.

**7. QUESTION:** Do we need to include plumbing? If so, how is plumbing done?

**RESPONSES:**

- Don't be too concerned about the expert level details – we understand you might not be expert plumbers (or mechanical and electrical system designers!).
- Efficient plumbing systems to consider:
  - Think outside the box & try to limit your demand on natural resources. Think about how you can secondarily use things.
  - Plumbing is associated with water. You can think about using things like water pots to collect rainwater off your roof to use for toilet flushing. Within the house, the water you generate to use for washing machines could be used to flush toilets.

**8. QUESTION:** Do we have to add in interior design?

**RESPONSES:**

- It is not specified within the deliverables but feel free to reference how your homes interior design would be sustainable if you desire.
- If you wish to include this think about the sustainability of your interior:
  - Materials to think about: floorboards, wall finishes, insulation, etc.
  - An interesting area is to think about the use of space and how it can be used over a long duration of time. Think of the space needed for people of all ages from the day they are born until their elderly years. Accessibility is a part of sustainability.

**9. QUESTION:** What specific rules are there regarding accessibility?

**RESPONSES:**

- It is important to look up the building regulations. There are a group of documents called the 'Technical Guidance Documents'. Part M will list all the criteria which can be found at [www.housing.gov.ie](http://www.housing.gov.ie).

**10. QUESTION:** When pricing materials and systems in a QS report should we include the gross price, or should we highlight potential grants from the SEAI?

**RESPONSES:**

- Check out the link from the AIB website (see below link) which has a detailed costing template. This may be too much detail to go into for this competition. To give you an idea normally a contractor would price a detailed bill of quantities where they look at every element of the project and cost it. If you have a grant it would be beneficial that you have included in your project that the grant is there and that the final cost of the building will be X amount. The template should give you a good idea of the various elements but don't get too bogged down in the details.

**11. QUESTION:** What future trends are there in construction for house building in Ireland?

**RESPONSES:**

- Construction point of view: a trend will be offsite and modular building (see more details in the response to question 13). You may wish to do some research on 'pods' which are essentially a room that comes in a box. Pods are often built for hotels. However, in the future we may begin to see pods being implemented within the offsite construction of house builds.
- Construction point of view: a trend will be the use of BIM (Building Information Modelling). This is the 3-D way of designing buildings which can be passed onto all stakeholders (client, architect, electrician, main contractor, etc.). This way all the information is in one model which helps to identify issues and save time. This type of innovation is the way of the future.
- Design point of view: with more energy efficient houses people aren't as limited in terms of making sure there is a room with a door to keep the heat in. This has allowed for design changes such as open floor concepts. The Japanese use space in a very functional way. They have small houses because of the population demand and limited space. They use concepts such as sliding doors to make spaces smaller or larger which makes their homes very functional. Think about mobile homes, although they are very small spaces designers have found ways to use the space in extremely smart ways. In the future, houses will be much more dynamic and adaptable in terms of space.

**12. QUESTION:** What changes do you envision in house design with our changing world?

**RESPONSES:**

- Climate change, COVID-19 and population increase are some of the factors that will shape the way house design changes.
- Design point of view: with COVID 19 people are more aware that spaces need to function for more than one need. Dual function of space is the ability to have a room function for numerous different needs. For example, a bed can be lifted into a wall and become a desk for a study space. The concept of upsizing and downsizing may become the way of the future by having a house that can change and adapt depending on the space needed at a specific time in a person's life.

- There needs to be more focus on design and what the client wants upfront. This ties into BIM which is the 3-D model that allows all individuals within the chain as well as the client to work on the design at once. This will save on cost variations, time and overall improve designs.
- In larger areas such as Dublin city there should be more high rises. Dublin City Council has stated that semi-detached and detached houses are no longer a viable trend. The population is increasing by approximately 60,000 people per year, so construction needs to reflect this. In the upcoming future in Ireland, we may begin to see more high rises with smaller spaces in cities and cluster housing in rural towns and villages. Check out [www.rebuildireland.ie](http://www.rebuildireland.ie) for a broad overview of housing in Ireland and the government strategy; Pillar 3 is all about housing.
- Think about technology and how this may shape the future of construction. For example, Smart Meters can track how much electricity we are using with domestic appliances which make people more aware of how much they are spending, which generates a positive change. Another example of positive technology in construction is Fit Homes. These homes can have smart carpets installed which track movement and can be very helpful for the elderly. The carpet can detect if a person falls and is on the ground for a long period of time and send services to help. It is important to think about how technological advancements can help to make a home for everyone.

**13. QUESTION:** Can you explain the building process when working in groups with COVID-19 and the changing environment?

**RESPONSES:**

- COVID-19 has brought on many challenges and has forced everyone to think differently. Innovation can be seen with offsite construction. The idea is to have the least amount of people on site for the least amount of time in order to reduce the risk of spreading the virus. Modular builds have now become very popular. This is where projects can be made in a factory then delivered to a site.
- Modular construction (including pods) will usually reduce the time onsite, saving money on the hire of the temporary site offices, site management fees, temporary electrical costs etc. but they can be a bit more expensive.

**14. QUESTION:** For wastewater treatment is it better to have one onsite or go into a main line?

**RESPONSES:**

- It is a very tough area at the minute depending on what part of the country your home is in due to planning permissions. It is also important to think about sustainability.
- It is important to research if you can tie into a main line or a town line as this is the best option. Getting into new onsite septic tanks depending on your drainage and soil quality can cause you to run into huge unknown costs.

**15. QUESTION:** Does the 6-page report include everything or just the written report?

**RESPONSES:**

- Within your 6-page report make sure you have the body and account for the 6 specific themes. You can add in an appendix for all your drawings, diagrams, photos, models etc.

**Overall tips:**

- Clearly justify all your reasonings.
- Reference all sources in order to support your ideas.
- Be creative in your presentation; this is one of the key things the judges are looking for.
- Don't get too bogged down with the details.

**Biographies of the panel:**

- **Orla Fitzgerald** is an Architect who has been in practice for over 30 years primarily in working in the residential sector delivering private residential units and multi-unit developments.
- **John O'Shaughnessy** is the Managing Director at Clancy Construction. He has been in Main Contracting and House Building for over 30 years working nationwide.
- **Ciaran King** is the General Manager at King and Moffatt Building Services. He studied Business and Accounting. He has been involved in Management within the company for over 6 years.
- **Sinead Savage** is the Head of Business Development at Mannings Construction Group. She has worked in the construction industry for over 20 years. She started out on a HND Diploma Building Technology course, moved on to complete a Quantity Surveying Honours degree and then a Post Grad Diploma in Project Management.
- **John Sweeney** is a Senior Contracts Manager for Collen Construction with over 39 years of experience in the industry. He has managed projects in housing, commercial and education. He commenced his career as an apprentice carpenter and progressed his career to his current position. He is a member of CIF Education, Training and Skill committee and is the outgoing chair of the Chartered Institute of Building in the Rep of Ireland.

### Useful Websites as mentioned:

- Roadstone Ireland have some information on the use of thermal blockwork for house construction.
- The Irish Concrete Society and Engineers Ireland have information on eco-friendly concretes along with Roadstone and Kilsaran.
- Some of the Irish Precast Contractors Association have information on precast solution for houses.
- SCSi Website [www.scsi.ie](http://www.scsi.ie)
- <https://aecom.com/about-aecom/annual-report/>
- <https://www.linesight.com/en-gb/reports/ireland-2020/>
- <https://ireland.aecom.com/>
- <https://mitchellmcdermott.com/wp-content/uploads/2020/01/New-Market-InfoCard-2020-WEB.pdf>
- SEAI Sustainable Energy Authority of Ireland website [www.seai.ie](http://www.seai.ie)
- <https://www.seai.ie/grants/home-energy-grants/>
- SEAI Energy Awards Finalist 2018 Georges Place, Dun Laoghaire  
<https://www.youtube.com/watch?v=JcESAKoRL00&feature=youtu.be>
- 52 sec video summarising an A1 rated home  
<https://www.dlrcoco.ie/en/architecture/architecture-projects-case-studies/georges-place-rapid-delivery-housing>
- Kingspan link to the development which also provides other case studies  
<https://www.dlrcoco.ie/en/architecture/architecture-projects-case-studies/georges-place-rapid-delivery-housing>
- [www.ecohome.net](http://www.ecohome.net)
- <https://architizer.com/blog/inspiration/collections/affordable-housing/>
- [www.passivehouse.com](http://www.passivehouse.com)
- [www.bregroup.com](http://www.bregroup.com)
- A very “accessible” publication to prompt students to think about how homes work and creating communities <https://www.opr.ie/wp-content/uploads/2019/08/2007-Quality-Hsing-for-Sustainable-Communities-1.pdf>
- <https://www.trendhunter.com/slideshow/housing-concepts1>
- [https://www.google.com/search?q=home+rainwater+harvesting&rlz=1C1CHBD\\_enIE885IE885&source=lnms&tbn=isch&sa=X&ved=2ahUKEwiP0q3W5tLuAhWKUcAKHaQrALUQ\\_AUoAXoECBcQAw&biw=756&bih=870](https://www.google.com/search?q=home+rainwater+harvesting&rlz=1C1CHBD_enIE885IE885&source=lnms&tbn=isch&sa=X&ved=2ahUKEwiP0q3W5tLuAhWKUcAKHaQrALUQ_AUoAXoECBcQAw&biw=756&bih=870)
- <https://www.gov.ie/en/collection/d9729-technical-guidance-documents/?referrer=http://www.housing.gov.ie/housing/building-standards/tgd-part-d-materials-and-workmanship/technical-guidance-documents#technical-guidance-document-m-access-and-use>
- <https://www.seai.ie/business-and-public-sector/triple-e-register-for-products/categories-and-criteria/>
- <https://www.gov.ie/en/publication/78e67-technical-guidance-document-m-access-and-use/>
- <https://aib.ie/content/dam/aib/personal/docs/our-products/mortgages/self-build-detailed-costing-template.pdf>
- <https://cif.ie/coronavirus/>
- <https://www.youtube.com/watch?v=qJyQUSLGw0>
- [www.rebuildireland.ie](http://www.rebuildireland.ie)
- <https://gradireland.com/career-sectors/construction-civil-engineering-and-gs/top-jobs-in-construction>