



AD

699

Finding My Future Practice

Through Critical Analysis
and Personal Enquiry

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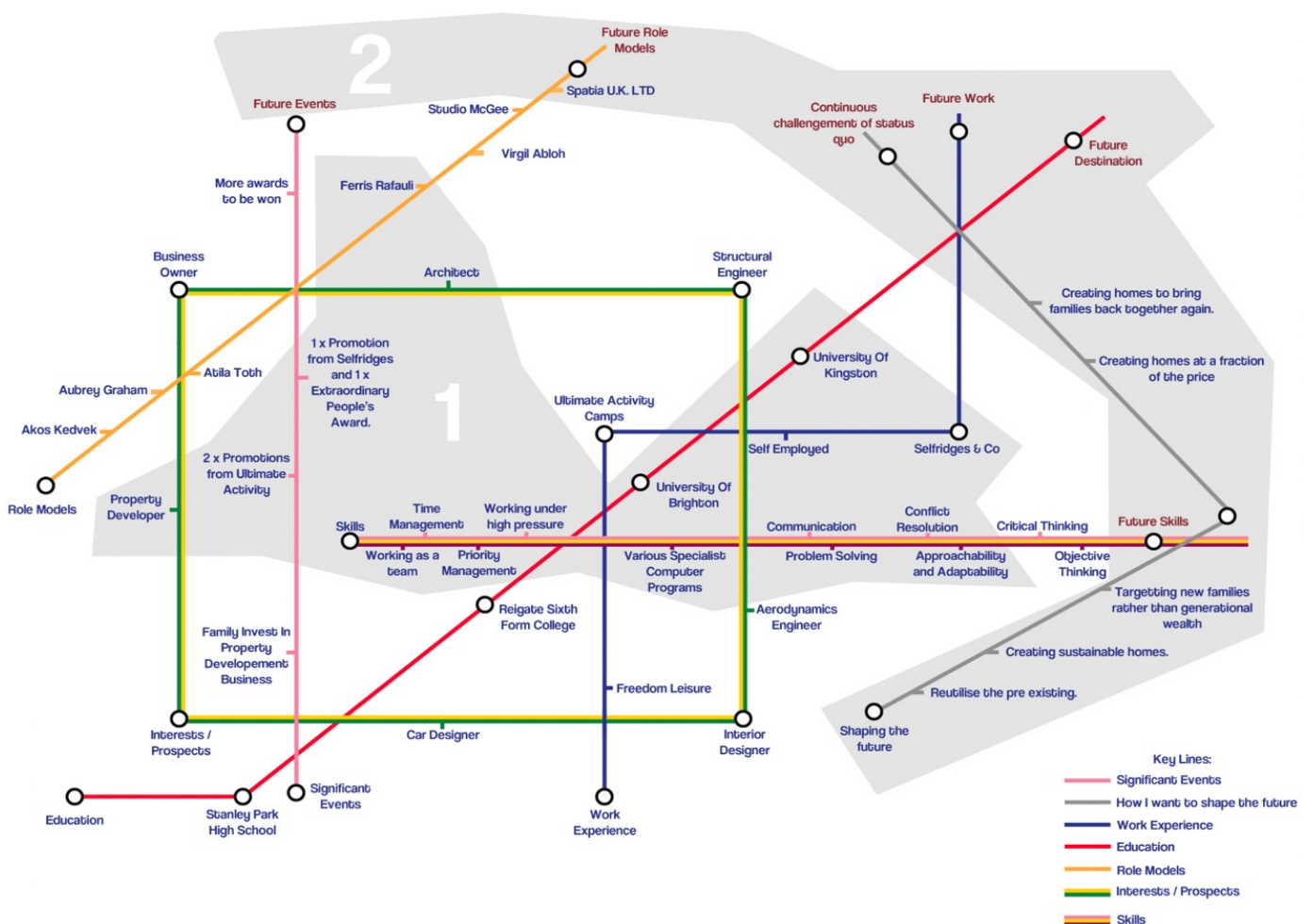
**FUTURE PROJECTS
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'TABULA RASA' - Life Map Manifesto

Throughout this document, I will critically analyse and investigate my experiences and aspirations to identify my future practice. Additionally, I will examine how my early education and surroundings affected my development.

Key influences led me through a series of developments to challenge and learn new skill sets and develop my creativity. Throughout the document, I identify the skills, I must work on to achieve my goals. Furthermore, analysing the potential implications my work may create on society, economically and environmentally.



I based my manifesto on the London Underground Tube map as multiple lines interlinked and crossed over. Time may be linear; however, the factors that make me are not linear and are like the crossover of the tube lines. Different elements complement each other, progressing toward a shared goal—the end of the line.

Tabula Rasa is Latin for clean slate. The concept's basis is that, as humans, we are born without impressions, ideas, goals, or social constructs, and we construct our fate through exposure. I relate to this concept as I have been created by exposure to various values, skills, concepts, and experiences interlinked to create my development.

This changed me by allowing me to be objective in the world, learn things that would benefit my development and know when to take criticism on the chin.

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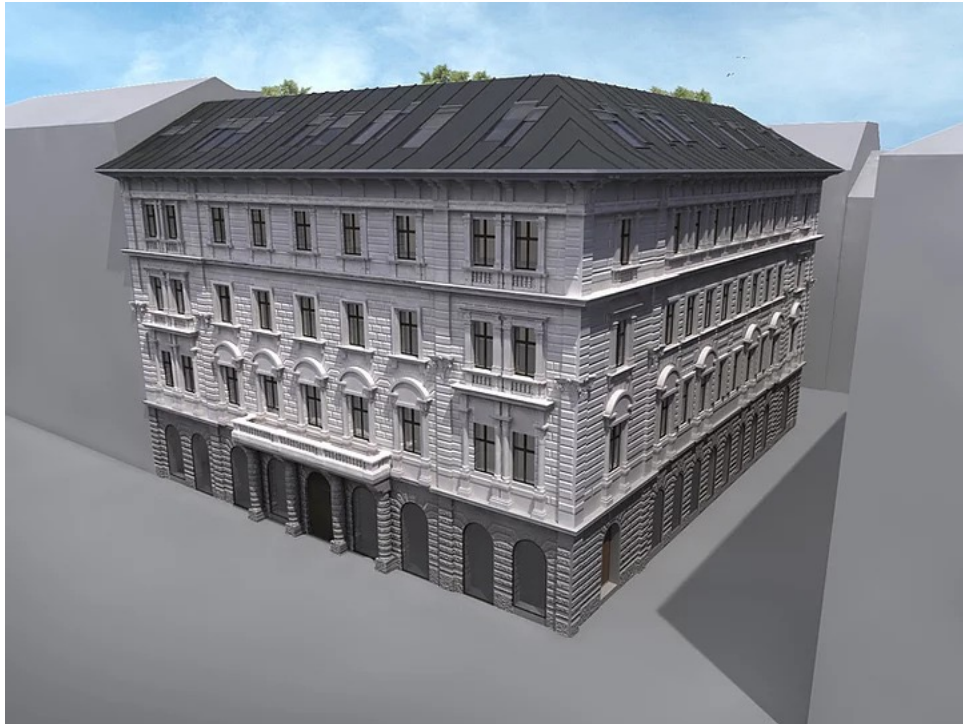
orn in the United Kingdom, having my mother from Hungary and my father from Sri Lanka, I had a unique perspective on life. My multi-ethnic background gave me the opportunity to experience different cultures.

I travelled to Hungary and Sri Lanka yearly. Because of this, I developed an awareness of my roots and how my parents differ vastly from each other. Through this awareness, I learned more about myself and my values. I had always wanted to help the less fortunate and challenge why people do things a certain way. In addition, my culture and experiences gave me a unique point of view on society and the world we live in and allowed me to incorporate them into my work. One implication of my Hungarian roots was the use of a circular economy, as in Hungary, we would reuse items and building materials to create new uses and functions. For example, a large roof tile would have versatility in its role, allowing us to repurpose it to build fences and shelter for livestock or storage.



Another way my Sri Lankan roots have influenced my design is that I would only buy the quantity needed and not overestimate, so we were not wasteful. In Sri Lanka, we would be grateful for what we have. The small things made the largest of differences.

Throughout my childhood, I explored many countries and learned from many cultures. I saw different building techniques and how the end user differentiates over the continents. This was highlighted by a further discovery into the historical impact on building designs and how the climate, economies, traditions, and social factors also change the utilisation of spaces.



Andrássy 6: Kenway BP

Fig 1.

Later in my childhood, my parents invested in a property in Budapest, Fig 1-3 to increase their investment portfolio. This is how my journey into creating spaces began. I observed the transformation of a building's loft, which was converted into a series of apartments. Once I returned to see the completed construction, I was amazed and knew precisely this was what I wanted to do with my life.



Fig 2.

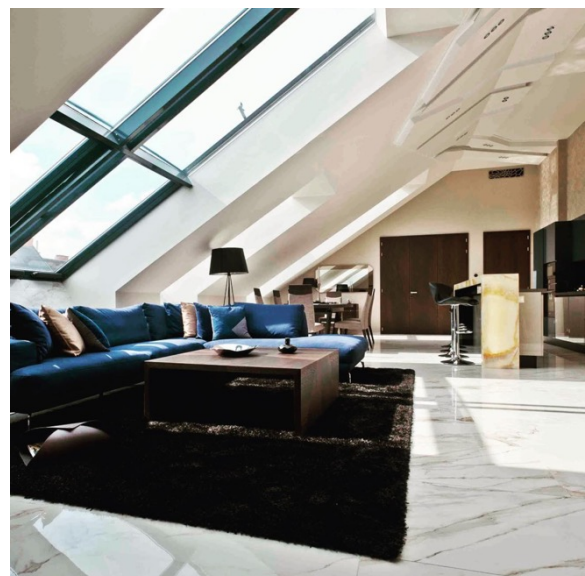
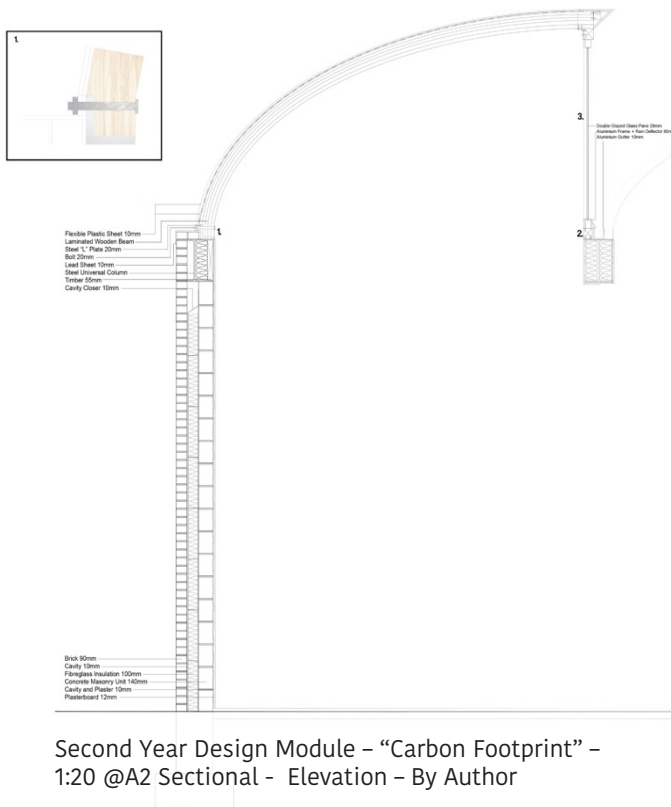


Fig 3.



Education was critical when considering how I would reach my goals in my future practice. It set the foundations for specialist skills and knowledge that were interchangeable. I often found them to be interdisciplinary, thereby keeping my options open to have a plan B in case plan A failed. Evaluating my education, secondary school was the first significant impact on my development. I studied eight GCSEs with a broad range of subjects to keep my prospects wider, until I knew what industry I wanted to develop a career in. Subjects I enjoyed at the time were Science and Fine Art. These two subjects were the stepping-stones for higher education and laid the foundations of my creative development. My love for science continued, as I enjoyed using physics, mathematics, and statistics to prove the theory. That is why I took Applied Science with a specialism in Applied Physics at A level. I also took Business Studies as I have always been fascinated with entrepreneurialism and businesses. In addition, my work ethic and drive always led me to think about my prospects and how I would try and create a business one day.

Unfortunately, my college did not allow four subjects at once, so I could not continue my creative development between 2018-2020. If given the opportunity to rectify this, I would have taken a fourth A level in Engineering or Fine Art, as this would have facilitated the development of my creative skills. Engineering would have been helpful as I was intrigued and considered a career in structural engineering, aerodynamics engineering, and supercar engineering. These steps could have changed the route I took when later pursuing a career in Architecture, as well as benefiting my technical drawing skills.

My A levels prepared me for Undergraduate study by developing essential skills and setting a requirement for higher quality work. I knew at this point that I was interested in properties and could use the qualifications I had worked over the past few years to create a career in Architecture. I also completed a short course in architecture and design at the University of Arts London: Central Saint Martins to prove to my prospective universities, that I could develop critical drawing skills utilised throughout the Undergraduate Degree.

I then applied for Interior Architecture BA at the University of Brighton (UoB). I visited a range of universities and different courses such as Interior Design, Interior Architecture to Architecture. I found Interior Architecture at UoB was perfect for me as it covered Architecture, allowing me to learn all the essential skills, whilst exploring what broader industry sector, I wanted to specialise in. I had the freedom to experiment and incorporate the development into my work to explore what appealed to me the most.

I then joined the University of Brighton, where I found it hard to revive my educational journey after Covid-19. I suffered from a post-pandemic mind fog which impacted the first few modules of my first year as I tried to readjust to an academic setting after several months of pandemic lockdown. Through reflection over the period I spent isolated in my house, I would've benefitted from a home with an open plan layout; however, they are rare in England unless they are new builds. Of which, new builds are mostly only accessible to the middle class.

During the pandemic, I and the rest of the U.K. were confined in their houses, some in their apartments and many in single rooms. Some of the lowest income earners of the U.K. are confined to rooms with their families, many being essential workers and having to continue to work, going home and not having the space to isolate. In my dissertation, I am focusing on urban density, and the housing crisis in London, an example I explored was the London borough of Newham Fig 4, which had the “second highest coronavirus death rate”¹. This was due to overcrowding and being confined to a room with their whole family. In the future, I would like to implement more open-plan layouts in the houses I redevelop. This would provide more area to isolate if another pandemic happened and increase social interaction, as technology divided physical interactions over the years of its growth.

Though my academic education was halted for several months, my creative development bloomed through my hobbies of strategic building games. Minecraft, Prison Architect, and several other games taught me different design styles, building functionality, structural stability, strategic planning, and problem-solving.



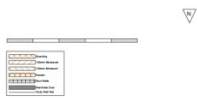
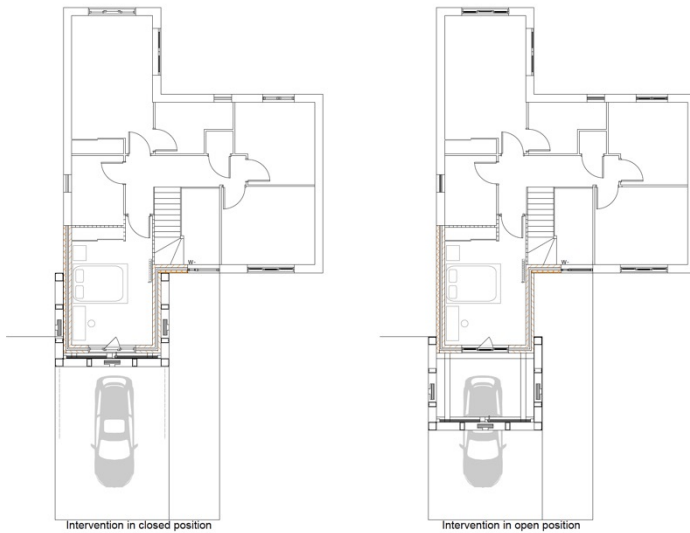
Newham Council Houses Fig 4.

During my time at UoB, I investigated further into the history of my Hungarian culture. In one module, I researched Hungarian collective memory behind Soviet Architecture. I wanted to understand more about Hungary's history and the USSR's reign over the Eastern bloc. I was grateful to learn how the USSR affected the life of my parents and grandparents and to understand more about their upbringing and our values further.

I like to research and incorporate real-world events that affect the people around me, for example, the housing crisis in Central London. The topic I chose to write about for my dissertation due to the current political and economic state of the U.K. is very prominent currently, affecting the day-to-day life of my peers and me. In addition to this, my upbringing and values made me want to fight for change and solutions to the neglected history, which is abandoned, surrounding us.

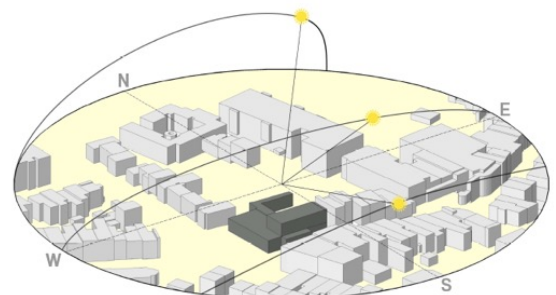
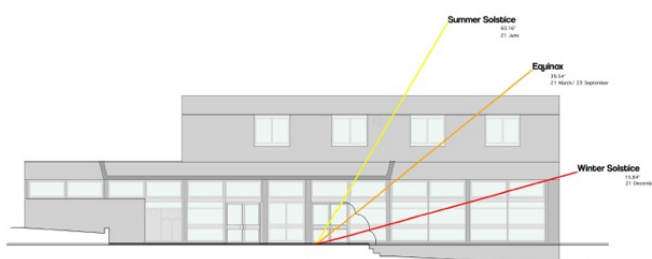
In the future, I would like to provide solutions to real-world problems like the housing crisis, economic decline, social interaction decline, and global warming. History repeats itself, like the housing crisis in the reign of the USSR; with the mass housing blocks produced at the time as a response to the need for housing, I would be able to work with the remanence of previous solutions to reutilise the existing. This could potentially give the remaining building's purpose to the society nearby. Learning, understanding, and evaluating the past allows me to incorporate it into my potential future work as it is ingrained in me from a young age, the history which affected my late family.

1. “Bad housing kills’: How coronavirus overwhelmed the UK’s most overcrowded community.” Adam Forest. 2020. <https://www.independent.co.uk/news/uk/home-news/coronavirus-deaths-uk-housing-overcrowding-newham-london-a9646301.html>.

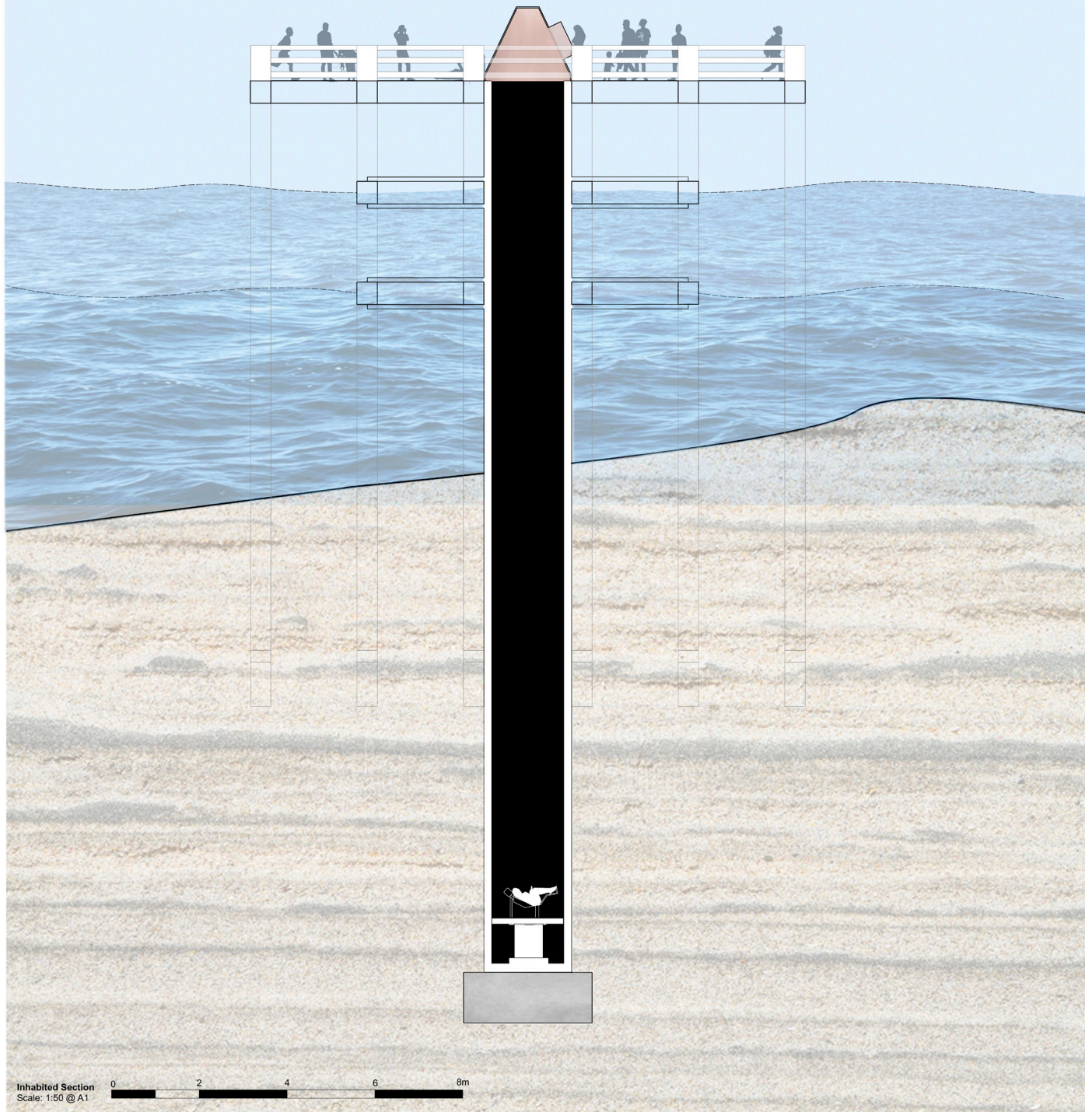


I worked on a project where we had to create an extension to our bedroom space. It was in connection to the effects of Covid 19’s isolation on people. I designed an observatory that extended from the bedroom, where you could sit and move around on a mechanical arm, viewing the stars with a telescope. I chose this as it is not common in the U.K. to take up astronomy as a hobby, so I wanted to bring it closer to the everyday person, having it accessible from their bedrooms. Unfortunately, there have not been any projects in my undergraduate degree where I have been able to pursue my future career ambitions in my design, as we have not focused on residential properties. However, this design module allowed me to explore the connections to a bedroom space which was helpful to my future practice as it gave me spatial knowledge and further investigation into the living area of a bedroom and what I could design in the future.

I learnt essential skills while studying for an undergraduate degree: specialist CAD software, Adobe software, technical drawing, rendering, video editing and stop-motion. These were essential to my skill set and future practice as they set the foundations of the skills I would use to compete in the industry. I developed them by practising over time as well as throughout different modules. I want to continue building on my rendering ability in the final year of my undergraduate degree. Additionally, learning new software and focusing more on my technical drawing as it would be the most essential skill in developing existing properties.



“Senseless Void”



Second Year Design Module – “Senseless Void” – 1:50 @A1 Sectional Elevation - By Author

Alongside my education, I worked at several companies. I started as a lifeguard for Ultimate Activity, a company specialising in seasonal childcare camps in 2019. I continuously risk-assessed and analysed design flaws that could harm a person. To this day, when designing, I think about its implications on the end user and how I could change different aspects to reduce the risks and make it safer. I worked my way up, progressing through 4 different roles until I became an area manager, covering 15 sites across three counties. This experience created the foundations of my leadership skills by using problem-solving skills to work under high pressure, team management, and priority management. As an employee of several companies, I observed different managers and analysed how strong managers would lead a team. In the future, when I am a business owner, I will not be inexperienced when managing a team. I will expect high-quality work; however, I will also value the quality of life of my employees and try to be objective in situations, as this will create a better work environment and increase efficiency without micromanaging.

With this experience and a high drive for success, I joined Selfridges & Co in 2021 as a sales associate. I worked hard, developed my skillset in a new environment and pushed myself to learn how to create relationships and a clientele portfolio. These skills were valuable for growing as in the future, I would like to work with investors in a property development business. Whilst working at Selfridges, we launched Project Earth, a sustainability strategy that we



Prada - Selfridges Pop Up - Fig 5.

implemented alongside the company's vision of reinventing retail. By 2030 our target is for 45% of transactions to come from products with a circular economy to encourage a zero net future. My role was to promote Project Earth and work with preloved items under our "Reselfridges" brand. Due to this, several employees nominated me for the Extraordinary Peoples Award for Leading with Purpose. In addition, not long after the launch of the new strategy, Prada launched a pop-up working with Project Earth, Fig 5 to promote their new sustainability range using recycled nylon. This first-hand experience working with an extensive sustainability campaign made me realise the importance of a zero net future and how we need to work as a team to minimise our environmental impact. In the future, I would like to pursue sustainability and make sustainable, circular economy houses more accessible to the public.

Load-bearing wall removal - By Author



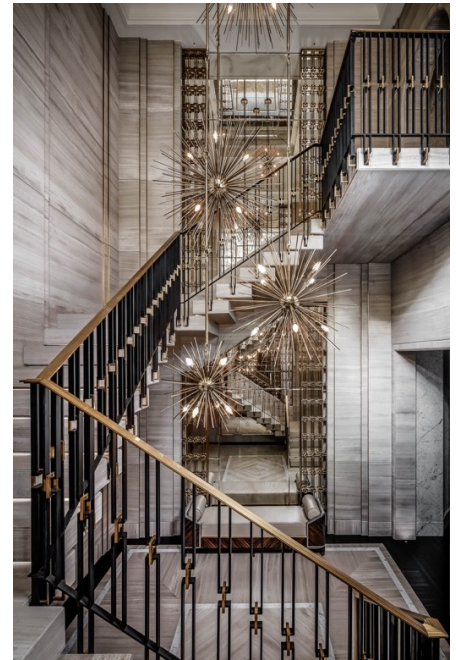
I also worked part-time on renovations and project management. These roles include working with clients to design renovations, overseeing projects and managing contractors to maintain the standards. This valuable experience has ranged from small residential renovations to more significant and extensive extensions working with structural engineers.

One influential figure who impacted my passion for spatial design and residential property is Ferris Rafauli.

Ferris Rafauli is an Architectural Designer and Artist. He conceives designs and creates the ultra-luxury for the top percentile of wealthy people. As he designs for the ultra-luxury, he is obsessed with the last detail, from the house to the doorknob. I admire his minimalistic designs and the utilisation of high-quality materials to create his vision and the client's specifications into reality. He is a designer for celebrities and people with generational wealth; he has worked with high-profile brands to utilise their industries to complement his designs. Brands he has worked with are Hästens, Rolls Royce, La Cornue and J & L Lobmeyr. These companies lead in their fields from beds, car production, kitchen stoves, and lighting.



Ferris Rafauli, Kitchen design for client: Aubrey Graham Fig 6.



Examples of properties created/remodelled by Ferris Rafauli. Fig 7.



Bösendorfer collaboration with Ferris Rafauli + Takashi Murakami. Fig 8.

An example is when he worked with artist Takashi Murakami and piano specialist Bösendorfer Fig 8 to create a Grand Piano for one of his house designs. He inspires me because he shows that Architecture can be interdisciplinary and there is not one solid path to take. However, he does not focus on sustainability or anyone below who can afford the ultra-luxury. I would differentiate from these values.

During this assignment, I interviewed Spatia Ltd, Attila Toth, and Akos Kedvek. This helped me understand the potential implications of my work and appraise my work compared to others.

Who is Spatia and what are their aims?

Spatia, was founded in 2021 by Gavin Bridge. He has 20+ years' experience in property development and started the business to promote sustainability by creating low to zero carbon homes.

Our collective ambition is to create a healthy future.

We focus on workspaces, and zero carbon homes.

Have you won any awards for your sustainable approach?

Gavin has won an award for the transformation of Finzels reach, a 1M sqm neighbourhood on Bristol's floating Harbour.

Why did you decide to create Spatia and challenge the status quo?

I created Spatia exactly to challenge the status quo. Someone needed to reality check the world we live in. If someone doesn't kickstart the change we expect to see, then it'll never happen.

What do you expect to do in the future?

We would like to work with more companies that share our value with sustainability and creating an inclusive economy for our clients. We would also like to work on larger developments providing the younger generation more options than the standard rent or house purchase to hopefully create lasting economic value. I value housing that brings different generations together.

What services does Spatia offer to their clients:

Spatia range from residential regeneration to workspace creation. Our core values put the environment at the heart of what we do. Its interchangeable. We have worked on many projects, that we don't cater for the specific. We even offer specialist consultancy for any development firms that think about joining the zero net future, as well as the schemes they can look at joining too.

Spatia U.K.



Spatia U.K. Zero Net Sustainable Homes Fig 9.

Why Bristol?

I grew up in Liverpool, I've worked on many different development projects. I want to create an open discussion about redeveloping Bristol's industrial sites. I see a potential in the city, It has a lot of potential. The River Frome travels through, creating huge potential for travel links to the city centre. We would be able to build 500 to 600 homes in the site alone. Think about how many people could utilise them. In Bristol, 15 stories tall is seem as high, however in Manchester or back home in Liverpool, we go as tall as 25 to 40. Imagine all the space that could be used, all the people that we could house by utilising space that only the birds would be able to fly through until now.

We have been consulting with the people of Bristol so that they get what they deserve, and we find out the demand so that we can supply. I never understood why people try to push high end apartments in industrial areas. It's all a money grab. I created Spatia to set a new example, to continue to challenge society.



Akos Kedvek Fig 10.



Kenway BP Fig 11.

What is your educational background?

I studied Architecture in Budapest, Hungary for several years until I qualified as an Architect

What made you want to launch a business?

I created a property development business back in 2007. Budapest had the opportunity as not many developers had been developing apartments at the time. My father gave me some funding to start the business and buy my first property, which I designed and managed the contractors to create my plans to reality.

How did you develop over the last 10 years?

Over the years from the first ever property I renovated, I used the profits to buy my second property which I developed and then eventually the second and third. Once I was established and had enough money from all the renovations, I employed someone to do the admin tasks like estate management which we used as a secondary business. We decided it could bring in more income to offer our estate management services to the investors that bought the houses from us.

A couple years later, I marketed the company globally and drew in international investors which brought in a huge influx to renovate larger projects.

In 2012, we created projects such as the construction of apartments in a loft conversion. This was the largest project we had done at the time as we had to employ structural engineers to determine how we could safely change the construction of the loft itself. In addition, we had to go through a lot of planning permissions as well as additional requests due to a bank on the ground floor. We had to ask for special permission from the government to place a crane in the courtyard and had several checks by government officials to ensure we weren't doing anything illegal.

How do you feel your culture has affected your business?

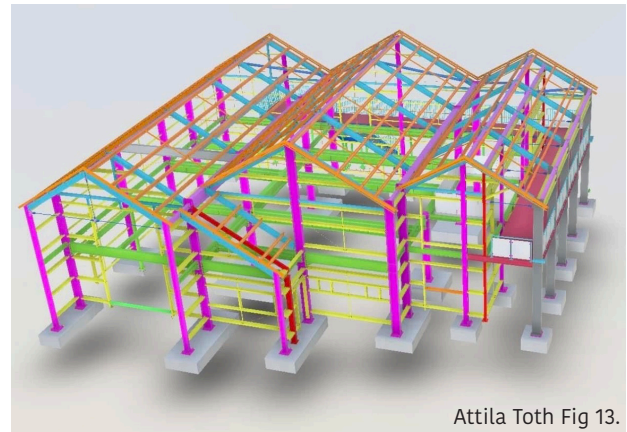
I believe my culture had affected my business, in that we only operate in Hungary. I have always lived in Budapest so I had a huge connection and cultural influence within the city. I saw an opportunity and I took it. Budapest is a city with lots of residential buildings, like Paris. Most of them, quite old however they just needed the right people to see the potential and a stronger economy, which becoming part of the European Union, brought in for us. They are relatively well priced for property, especially for foreign investors. This is brilliant as it brings a huge demand for what I am doing. I preserve our culture and keep the peace between neighbours, when we are in the processes of the projects by renovating hallways, entrances and adding new lifts etc. of the buildings so all the people in the building don't get as annoyed with the noise etc.

Currently I have been expanding into creating and designing houses on the outskirts. Creating apartments first gave me the experience to realise where I could design better and realise the historical implications that put a strain on my design. For example original plumbing in the apartments, when creating houses from scratch we don't have to deal with that obviously.



Attila Toth Fig 12.

Attila Toth



Attila Toth Fig 13.

Structural Engineer - Draughtsman

What is your educational background?

I liked math, physics, and geometry in school so I went to university in an industry where I could use all the subjects. I graduated as a surveyor in high school in Hungary. I then did my BSc and a master's degree in Civil Engineering, specialising in Structural Engineering

What experience have you had in the industry you work in?

I used to work in Hungary as a structural engineer for 7 years and I have been a draughtsman, detailing steel structures at a construction company in England for 8 years.

Where do you see yourself in 5/10 years' time?

I see myself working in the construction industry as a steel detailer or as an Engineer. My goal is to follow the newest methods and technology in designing and I would like to manage a team sometime.

Currently I provide fabrication drawings to the workshop and erection drawings to the site from the Engineer's, Architect's, and all other relevant drawings.

Have you worked on any famous/ large projects? If so what ones?

Old Session House, Clerkenwell Green in London. Corvin Atrium diamond facade in Budapest.

If you could go back in time, what would you change?

It would be useful if the engineer's had more knowledge of architecture and architects had more knowledge of engineering to have a closer standardisation of technical things.

What key skills do you have that you find essential in your job role/industry?

Attention to details, liaising with Architect's, Engineer's and clients, quick problem solving, drawing readings, knowing fabrication methods, geometry

What do you think will happen to your job role in the future? Will it be made obsolete by tech?

I do not think it will be made by tech completely because the communication with the clients and understanding their requirements are essential. There needs to be close attention to details, liaising with architect's, engineer's and clients, quick problem solving, knowing different fabrication methods.



Sustainable House Design by Faulkner Architects - Work that I would like to pursue in the future.

In the future, I would like to become a property developer and work with residential properties. My long-term goal is to develop properties as a Limited Company, as it will function as its own entity. I am interested in counter conventional practices. Therefore, I would like to work with existing buildings, renovate, expand, and tweak to the end user's functions. As a trading company, other than buying, remodelling, and reselling properties, I would like to have a branch in the company for estate management. Like Akos Kedvek, I will promote this to my investors who purchase the renovated properties from my company. I want to challenge the society we live in by targeting first-time buyers and families rather than profiting off wealthy individuals looking to expand their portfolio of investments. Targeting this audience would create an influx into the economy by injecting more funding into a different generation who otherwise would struggle to buy property.



Whilst studying for my Undergraduate degree, I worked on a project where I designed and managed the removal of a load-bearing wall. From the design, I liaised with different structural engineers to determine the technicalities of the removal and the new forces that would be playing on the rest of the house. We decided it was safe to remove and insert a steel beam in its place. Attila Toth works with clients to determine what type/size steel beam is needed and then communicates with his company's fabricators to manufacture the beam. I asked him in the interview whether he thinks tech can make his job obsolete in the future, to which I agreed with his reply that it is essential for physical human interaction when speaking with clients. In addition to this, his role is specialist in that computers may make critical errors when calculating the technicalities of the beam type and size and therefore end up with severe risks to public health. I believe the role of an Architect is also safe from being made obsolete by future tech as it faces the same argument that it is best to meet clients face-to-face to understand their requirements and minimise error. In addition, I believe it is best for humans to design spaces as computers do not inhabit the area, therefore not understanding spatial design as well as a person. Thanks to his answers in my interview, I will seek to further my knowledge in engineering and potentially look for a course to bring together engineer-to-architect standardisation.

My first step to achieving this goal is working on my skillset and learning critical knowledge of Real Estate. An MSc in Real Estate is the option I want to pursue as the course content and optional modules align with the skills I need to reach my career aspirations. These include property law and planning, asset management, valuation, and investment. These skills will push me towards my future practice by adding on top of my foundations with specialist skills and knowledge. I could also benefit from work experience at JLL, Real Estate Advisors, learning global investment opportunities and real-world experience in property and asset management.

In the future, I will also intern with the Selfridges Property team. This will give me critical insight into a billion-pound company and how they operate on a design level. I would work with designer brands and create spaces for new boutiques, events, and exhibitions. I would additionally manage the project from plan to execution. Without this internship, I would have to wait until another opportunity arose, either in a summer internship or after a master's degree, which would significantly undercut me compared to other candidates in my field.



A bathroom redesign with fake column removal to fit larger shower unit. By Author.

Without saving money throughout my education and work experience, I would not be able to launch a business within the next five years, as I would have to work in the industry to fund the business launch and mortgage of my first property. Ideally, I would like to launch within the next two years to establish my business and network and identify market gaps.

To reach my business aspirations, I understand that academic qualifications are not enough to develop my leadership, business, and entrepreneurial skills. To expand on these skills and experience, I plan on learning from a mentor, watching Ted talks and attending business skill classes. Organisations such as Beepurple offer classes and 1:1 support even after graduation. This will be essential to use this service I have accessible and other services my Postgraduate will offer. Akos Kedvek, one of my people of interest, created his business from scratch in Hungary. He was fortunate to have an investment from his parents; however, his only experience was his architecture degree and business knowledge from school. He learnt as much as possible from the internet and books in his spare time. I will additionally do this on the side of my education as it will benefit my future business. However, I will start in London, branch out over the United Kingdom, and, in the future, utilise my postgraduate degree to expand to North America with my global investment knowledge. Akos Kedvek referred to in his interview that it was important to portray your culture in your design and use it to make positive impact to the world, I will do this by helping society and by caring for the environment.

I also value circular economy and sustainability due to my upbringing; values and would like to push for change by reusing materials already on site for the expansion/renovation and using eco-friendly insulation. Due to the Ukrainian war, the cost of living shot upward, and gas heating rose “80% on 1 October 2022”², which was capped by the government to prevent further price increases temporarily. I would like to impact the properties I develop by harvesting energy from the environment, whether solar or heat from the outside air, to create a lower-cost, efficient home. Meeting the terms and requirements for utilising government grants or schemes.

Being sustainable will affect profit. Newecology reported on several green projects and analysed their costs, which “ranged between 18% below to 9% above the costs of conventional affordable housing projects”³. Therefore, I need to analyse and identify where I can help society and be sustainable whilst finding a middle ground in the first five years of getting established as a business. Insulation and energy-efficient heating systems are where I want my focus whilst looking for low-cost sustainable building materials like timber; it will not breach my values if I overlook them due to cost restraints.

Compared to my people of interest, I would like a career in an environment where I can design and work in multiple industries. Like Ferris Rafauli, I value the importance of interdisciplinary practice, working with different brands to bring my vision to the client in numerous functions. However, I do not want to devote a career to designing for the ultra-wealthy.



Faulkner Architects Fig 14



Site Plan Fig 15

2. “Domestic Energy Prices.” Paul Bolton. 2022. <https://commonslibrary.parliament.uk/research-briefings/cbp-9491/>.

3. “THE COSTS & BENEFITS OF GREEN AFFORDABLE HOUSING.” New Ecology Inc. 2005. <https://www.newecology.org/wp-content/uploads/2017/08/The-Costs-Benefits-of-Green-Affordable-Housing.pdf>.

With an entrepreneurial mindset comes challenging the status quo, challenging counter conventional practices, as well as challenging the government and delving into politics to provide for the people I want to help. My experiences and values shape my vision to have a passion for fighting for the working-class person. I believe that every person's time on the planet is short and must enjoy it as best as possible, working alongside living rather than living to work. What I want to see from society is more of an interest in opportunities for the younger generation to invest in properties.

Throughout my career, I will take multiple opportunities to develop the fight for the working class and people without generational wealth. This might consist of organised protests and attending and speaking at conferences within the property and financial industries. One day I would like to put in motion a financing system that isn't designed for mass profit, potentially later in my life, creating a not-for-profit organisation. With proper implementation and funding, this type of organisation would create opportunities for the people I want to help. There is currently access to a help-to-buy scheme available to residents in England from the government, providing an equity loan of 20 to 40% of the purchase price; however, it has strict rules to qualify and is only available to use on newly built homes.

Developers currently create mass communities as “volume house builders answer to shareholders who want an instant return on investment; they are, therefore, motivated to build, sell and move on to the next project”⁴. This creates large newly built communities, often on flood plains, to utilise space in the U.K. As developers serve their shareholders, they use similar plans repeatedly, creating a copy-and-paste generic effect, therefore needing to employ architects less frequently and not needing to work sustainably. One way I want to work against this is to utilise and expand existing buildings. Each building will be unique and have limitations; however, I believe this is an excellent opportunity to explore as government sustainability schemes can create more efficient homes, costing less.



Fig 16

4. “Why is most new-build housing in Britain is awful – and why it doesn't have to be this way.” Clive Aslet. 2021. <https://www.countrylife.co.uk/property/why-is-most-new-build-housing-in-britain-is-awful-and-why-it-doesnt-have-to-be-this-way-230843>.

Spatia is an excellent example of a company I aspire to be like as they push society to change their habits and views into taking accountability for their carbon footprint. They are leading the change by creating zero-net workplaces and sustainable households. I would like to work on projects like theirs by making these types of buildings, and they reduce the costs shown in Fig. 17.

Around “85% of homes are still heated by carbon-heavy natural gas”⁵. This is the perfect time to introduce more sustainable heating options in my future developments. Gas heating “contributes to 14% of carbon emissions, about the same as the cars we drive”⁶. Heat pumps are a more sustainable option to heat homes, “they can deliver several units of heat for each unit of electricity. For every 1kWh of electricity you put in, you might get 3.5kWh of heat out.”⁷ In addition, there are government schemes and grants with requirements to meet to supply your house with one of these systems. A circular economy, to me, is not only about reusing materials but also about sustainable processes. Valentino Atelier designed a circular economy village with “a diverse regenerative agricultural system, a sustainable water management system and renewable energy”⁸ sources Fig 18-19. I will use these schemes to create a sustainable circular economy household, adding to the development of net zero houses and pushing society to follow the trend and help the environment. These systems are what I will try to introduce further in society. However, I will not explore regenerative agricultural systems as land is too sparse in the U.K. to provide these systems to the typical home dweller.

In addition, the environment and climate aren't suitable for a home agricultural system, unlike the above precedent in Australia. Some may disagree with leading houses towards sustainability as it takes longer to build a net zero property than a traditional house. The housing crisis might increase faster than homes can be produced to combat it. Therefore, I feel it is essential to introduce these systems to existing places, converting them to sustainable methods and potentially supplying them with eco-friendly insulation.

Low-carbon technology	Average cost (3-bedroom house)	Typical lifespan	Break even point**	Average energy bill savings per year*	Savings over 20 years	CO2 emissions saved per year	CO2 emissions saved over 20 years
Solar panels	£4,800	25-30 years	9 years	£530	£10,600	0.65 tonnes	13 tonnes
Storage battery***	£4,500	15 years	Never	£422	£8,440	0.94 tonnes	18.8 tonnes
Double glazing	£7,500	25-30 years	Never	£145	£2,900	0.33 tonnes	6.6 tonnes
Cavity wall insulation	£1,200	25 years	4.2 years	£285	£5,700	0.66 tonnes	13.2 tonnes
Roof insulation	£530	40 years	2 years	£255	£5,100	0.58 tonnes	11.6 tonnes
Air source heat pump	£10,000	20 years	Never	£5	£100+	2.5 tonnes	50 tonnes
Electric vehicle charger	£950	5-10 years	5.3 years	£252****	£5,040	N/A	N/A****
Smart thermostat	£225	10 years	2.3 years	£100	£2,000	0.5 tonnes	10 tonnes
Total	£29,705	-	9 years	£1,863	£37,260	6.16 tonnes	123.2 tonnes

* Based on current electricity prices at 28p per kWh

**Break-even point is based on when savings exceed initial purchase cost

***When combined with solar panels

****When compared with charging your electric vehicle at a public charge point

*****In most cases, you use the same electricity whether you're using it at home or in a public place

* Based on the fact that you would usually have to buy a new gas boiler after 15 years

So by installing these appliances, homeowners in the UK could **save £1,863 each year** – or **£37,260 over 20 years**.

What's more, using these low-carbon appliances could **reduce your carbon footprint by 123.2 tonnes of CO2** over the next 20 years. To compare, **we worked out** that the average person emits 1.55 tonnes of CO2 each year from driving – which means that transforming your property into an eco-home is **the equivalent of staying off the roads for 79.4 years**.

Fig 17

5. “How much can you save with an eco-home?” Beth Howell. 2022. <https://www.theecoexperts.co.uk/blog/eco-home>.

6. “How much does it cost to run a heat pump?” Aimee Clark. 2021. <https://octopus.energy/blog/heat-pump-running-costs/>.

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Fig 18

Circular Economy Village In Australia By Valentino Gareri Atelier

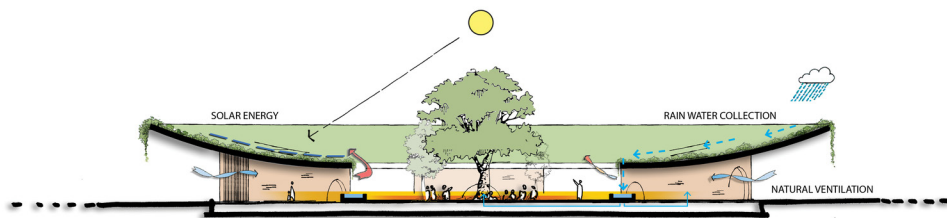


Fig 19



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