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YAAGNI PATEL

REFELECTIVE REPORT
31.07.2017

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In this report, I present information about my 9 month student placement period with Firefly Lighting Design. My overall progression and achievments towards the placement aims and objectives are described in relation to the various projects that I worked on. My skills development throughout the process are displayed through images. Additional information about the company along with references from my line manager at the company are also disclosed.

CONTENTS

ABSTRACT

In this report, I introduce my placement company Firefly Lighting Design, their market and management structures and my role within the company. My achievement towards the overall aims and objectives for both soft and hard skills development are charted through three stages: pre, mid and post placement.

Before the start of the placement, 14 skill categories were aligned with an achievement target, to reach by the end of my time at Firefly Lighting Design. After each stage, using a quantitative percentage scale, I was able to chart my progress. I supported this further through a qualitative reflection on what I could do to more to reach my achievement target or what were the key limitations (external and internal). This included reaching out to senior colleagues for more advice or help in order to obtain the fullest experience at the company.

For this report, I selected 3 hard skills to demonstrate my reflective appraisal through SMART objectives (Specific, Measureable, Achievable, Realistic and Timed), and within the context of the projects I had worked on. Reflection on the details of each selected hard skills allowed me to consider, what factors had enabled or limited my development and select the specific areas that I needed to improve.

Analysis of my soft skills was undertaken through a SWOT evaluation (Strengths, Weaknesses, Opportunities and Threats). This allowed me to critically evaluate my behaviour and performance within the company and how my personal characteristics or circumstances may have influenced the way I work.

Over the 9 months placement, I worked on a variety of projects ranging from small-scale hotels and temporary structures to large-scale lighting for villas and cinema complexes. With each individual project there were various influences, obstacles and challenges that we needed to resolve and overcome such as client requirements, time management, work distribution, problem solving, **mock-ups** and project management. I undertook additional company marketing projects to enhance my skills in **Adobe Photoshop**. Throughout the year, I kept project linked notes and a personal log of events which supported my reflection.

For my future as a designer, the placement process has equipped me to embrace new skills and settings, adapt to the needs to employers and clients, work closely within teams but also develop myself to lead when the opportunities present themselves within the context of projects. I gained confidence to apply the knowledge learnt within the modules at university into real world problems. It has also helped me discover my strengths as a designer and envisage what would like to pursue in the future.

ABOUT FIREFLY

Firefly Lighting Design is a lighting consultancy firm based in Gunnersbury, West London and an office in Hong Kong. The two directors John Lau and Peter Veale began their own business in 2003 in the humble setting of Peters' sisters' bedroom. However, based on a strong sense of collaboration they have since developed into a team of 5 members in London and another additional 3 designers in Hong Kong. Although the company is small, they take on creative and challenging projects from around the world, some even winning lighting design awards. The growth of Firefly in the last 14 years has been exponential and their projects have included, lighting design for:

- Kingsgate and Zig Zag building,
- Hakkasan restaurant and Busaba bars
- Cathay pacific business lounge in Hong Kong airport.

The business mission is to deliver an energy efficient, sustainable aesthetic that compliments the environment and surroundings.



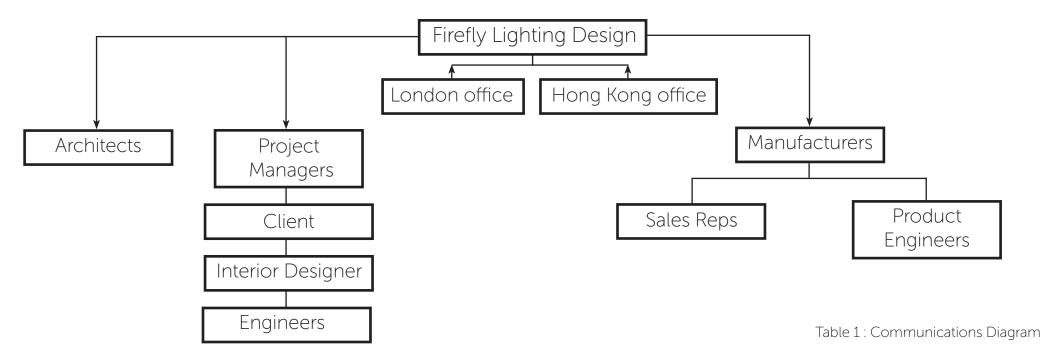


THE MARKET AND MANAGEMENT STRUCTURE

The company works on projects globally but their predominant market is in the Middle East and Dubai. This is due to the regions wealth, capacity and policies to build large infrastructures. Lighting designers are involved alongside architects and interior designers. Firefly secure projects about 20% are referrals from previous clients or architects, and 80% from writing fee proposals for the projects that they would like to be involved in. The fee that Firefly command depends on the scale of the project, the project time frame for design delivery, implementation timescale and the overall budget of the project. Lighting design is a very competitive field and for a small company this can be very challenging and project dependent to fund and sustain their team.

Reflection on the company:

The company has a strong team approach to projects. The directors are on a constant network to find good suitable projects or involved in submitting proposals. Most essential were regular meetings and communications with clients, manufacturers, **sales reps** and within the team to monitor and track project progress. I found the informal and formal communication very useful to tackle the big projects. Below (table 1) is a communications diagram of how the company is positioned within a project.



My Role

PROGRESSION THROUGH THE YEAR

When applying for this placement what most attracted me to the Firefly company was the diversity of projects on their website which highlighted a spirit of collaboration in their design approach. In my placement year, I was keen to be challenged and exposed to the consideration of design for a practical modern world. Following an interview with the two directors, I was introduced to the team and working environment. At the start of the placement I was naturally nervous but I was also excited to start a new experience and to learn more about the industry. To gain knowledge of the design process that takes place at Firefly, I was given various tasks to do at different design stages ranging from concept design, design development to installing light fittings on site. I worked predominantly with the senior and junior designers in the team, in the beginning.

Collaborating with multiples aspects that the team tackled, allowed me quickly engage with various process stages and take on significant responsibility to complete tasks on my own by the end. I often learnt most from mistakes I or the team made along the way. For example, I made a mistake when issuing a project drawing, which was identified by the senior designer. The problem detected was in the manner in which I had set up the **Auto CAD** drawing. Once this was highlighted I became more aware and observant and did not make this mistake again. I engaged in many meetings with several lighting manufacturers, on Skype with the team in Hong Kong and clients. I also visited showrooms to consider new fittings and function to provide the desired lighting effects.

Working closely with the directors on a daily basis gave me a unique insight into how they network and form relationships with clients and architects. This is something that interested me how business management works in the design world.

When reflecting on my role, I appreciated the various intensities of workload within project phases. In periods of high intensity designers commit to deliver on time frames and in the quieter periods they use this time for creativity and personal development.

My travel to Firefly was a long one and a half hour commute to Gunnersbury each way on public transport. This meant a very early 7 am start for me and a return by 6:30 pm. This forced me to appreciate my time management. Once there, I have found that my fulfilment came from completing tasks to my fullest ability, working with the team.

AIMS & OBJECTIVES Acheivement Target PRE-PLACEMENT Patience Excel SKILLS EVALUTION AutoCAD Leadership Verbal Dialux Communication Photoshop Teamwork Persistence & InDesign Perseverence Illustrator Critical Evaluation & 0% Analysis of Situations 50% Technical Adaptability Drawing 100%

AIMS & OBJECTIVES Acheivement Target MID PLACEMENT Patience Excel SKILLS EVALUTION Leadership AutoCAD Verbal Dialux Communication Photoshop Teamwork Persistence & InDesign Perseverence Critical Evaluation & Illustrator 0% Analysis of Situations 50% Technical Adaptability Drawing 100%

AIMS & OBJECTIVES Acheivement Target POST PLACEMENT Patience Excel SKILLS EVALUTION Leadership AutoCAD Verbal Dialux Communication Photoshop Teamwork Persistence & InDesign Perseverence Illustrator Critical Evaluation & 0% Analysis of Situations 50% Technical Adaptability Drawing 100%

AUTOCAD

SMART ANALYSIS



Having never used AutoCAD software prior to my placement I learned how to use this programme in various different ways such as how to use it within the company and creating lighting arrangements on CAD plans.



I acheived this goal by using online programmes and tutorials to teach myself how to navigate around the programme. Having hadmore experience with using CAD in the work that I was given and also the skills that my fellow collegues gave me can also helped me acheive this goal.



Given the correct training and sufficient amount of experience using the software I feel that this goal was reached. I am able to pick up how to use programmes and software relatively quickly therefore I feel I reached my end goal.



This goal was relevant as AutoCAD and many other similar programmes are used widely in the design industry. It is also a useful tool to accurately show drawings to scale which can be useful for other projects.



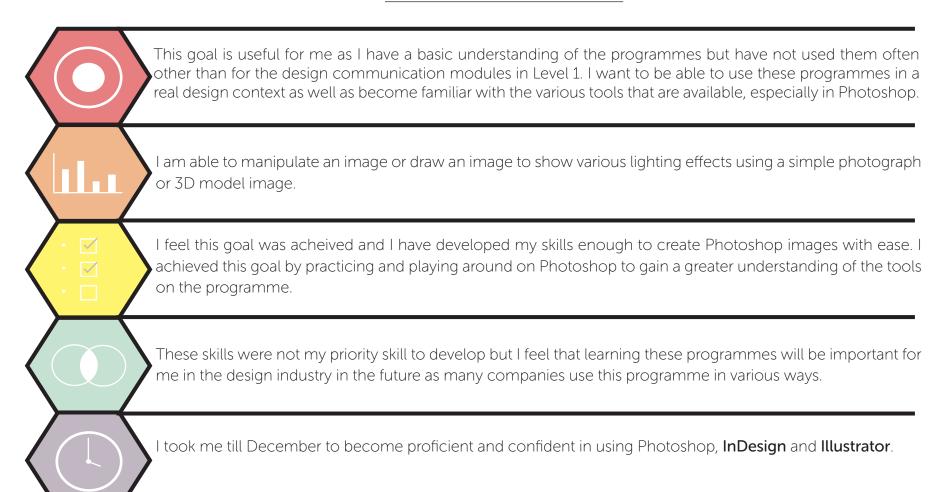
Training in this programme took a few months but I reached my goal half way through the placement year.

REFLECTION

After completing my training and worked on a range of projects using AutoCAD including the one I did on my own I can say that I have become proficient in using the programme in the schematic stage of the design process.

Рнотоѕнор

SMART ANALYSIS



REFLECTION

After working on a few projects during my placement I have become more confident in using Photoshop when creating glow diagrams to show clients what the lighting effects would look like in the environment. I did not use Illustrator as much but I am glad with my progress in Photoshop. I still have more to learn and more tools to explore with but I am able to improvise and find various ways of manipulating images to be able to show concepts.

SMART ANALYSIS

TECHNICAL DRAWING



I was able to decifer and understand a **technical drawing** and also be able to create my own technical drawings. This goal was important as when I get a graduate job, technical drawings whether it is of a product or an architectural structure will be used. Therefore understanding them is more of a priority for me to benefit from in the long term.



This goal was achieved when I was able to visualise what the technical drawing is showing and interpret it correctly. Using architectural plans and elevations throughout my placement will allow me to gain a better understanding.



I am not confident that this goal was achieved in such a short time period but hopefully I can develop this skill further in the future.



This goal is relevant to my skill set and many designers use technical drawings to show the details of their product/project. I have been previously exposed to technical drawings at university as part of our manufacturing module but I feel I didn't have enough time to master and fully understand the skill to my full potential.



Now that my placement has finished I feel that this skill was not developed as much as the others.

REFLECTION

I have not had sufficient training in this area but I have learned a lot through self-teaching and trying to carefully put images and technical drawings together to gain an understanding of what certain symbols or lines mean. Hopefully in the future I will be able to become more proficient in my technical drawing skills for my final year at university.

SWOT ANALYSIS

SOFT SKILLS

STRENGTHS

Teamwork:

I have developed this skill over time for many years through sport and extra-curricular activities. It is one of my strongest attributes. Working with other people in the company is not difficult for me to do.

Leadership:

I have always naturally tended to adopt the leadership role in any situation that I am given. I have shown this when doing the Channels project when I took the more pro-active leadership role.

Adaptability:

Being exposed to different people and experiences I have always been able to work with a number of different people and personalities. Working with different personalities in the office does not bother me and a lot of people tend to get on well with me.

• Patience:

I don't like to rush things and therefore being patient is something that I have always been. I take my time and tend to plan and organise myself before jumping into a task. Being organised in the office helped keep larger projects flowing faster and I completed the work systematically and to a high quality.

WEAKNESSES

Verbal Communication:

Expressing and articulating sentences with what I want to say is difficult for me. I find drawing what I want to say is much easier than saying it. I am not always able to draw my thought especially if I am on the phone. Therefore I feel extending my vocabulary and talking to people more will help me enhance this skill. Attending networking events will also help me develop my communication skills.

Persistence and Perseverance:

When doing a monotonous task I previously found myself getting distracted and unfocussed on the task. This is something that I have learned to control and am now used to working on projects and tasks for long periods of time. Sitting at a desk for long periods of time can make me restless and therefore unproductive.

• Critical observation & analysis of situations:

When creating and developing a design concept I have observed from other experienced designers that they foresee problems that may occur with certain designs. Being able to critically observe and evaluate designs of your own or others is a skill that I need have improved on.

SWOT ANALYSIS

SOFT SKILLS

OPPORTUNITIES

- Conversing with clients and manufacturers to describe projects and situations with.
- Networking events allowed me to interact with likeminded individuals and see how they perceive different designs and their work in the design industry.
- Carrying out presentations in the office.
- Deadlines for projects motivated me to keep working and not get distracted so easily. If the work is intense I tend not to get as side-tracked.
- Working within a small team allowed me to get involved with all aspects of the design stages.
- The team at my placement are very experienced and I took advantage of them to improve my design skills and deign thinking.

THREATS

- As my placement was unpaid there were no rewards for the work that I did for the company. Therefore the motivation to do the work and to learn came purely from my willingness to work and learn from the experiences and opportunities that were given to me.
- Being the only intern in such a small team required me to multi-task and work on different stages on a variety of projects at any given time.

REFLECTION

Overall my progress at Firefly has exceeded expectations from my colleagues and from myself. I have learned a lot about myself and what I am capable of doing in a working environment. I have also been able to challenge myself when it comes to tasks that I am unfamiliar with or feel out of my comfort zone. I was involved in many diverse projects which allowed me to develop various aspects of myself and apply different skills to the tasks I was given.

OVERALL SKILLS DEVELOPMENT EVALUATION

Skills	Target Reached by Mid-Term	Target Reached by End	
Adaptability	1	**	X
Critical Evaluation & Analysis of Situations	×	*	
Persistence & Perseverence	×		
Teamwork	1	*	1
Verbal Communication		*	
Leadership	1		
Patience	1		
Excel	1	×	*
AutoCAD	1	**	
Dialux	1	**	
Photoshop	1	*	*>
InDesign	1	*	
Illustrator	1	*	
Technical Drawing	1	X	

Reflection

- The target set was not reached and therefore more work and attantion is needed to develop those skills. In Excel and technical drawing, more experience is needed to complete the skill and reach my target.
- Progress within the skill was being made through the process. Due to the senior designer leaving the company after the mid-term assessment, more work was given to me during the second half of the placement. This allowed me to develop more of my skills and allowed me to reach my target.
- Target was acheived by the end of the placement period. As I worked on more projects towards the end of my palcement I was able to develop almost all of the essential soft and hard skills. I was very pleased that I reached most of my targets as I felt a sense of achievement gaining more skills.
 - The skill was achieved and the target exceeded the goal that was set. This was a great accomplishment as I had not expected myself to surpass the target.

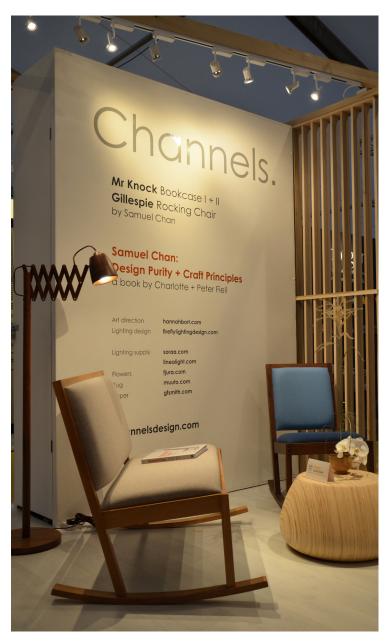
CONCLUSION

Overall, during my 9 month placement at Firefly I have gained valuable experiences, skills and a deeper understanding of a work place, its function and its challenges. On a personal level, I gained an understanding of what motivates me, and how to actively build on my strengths. I also acknowledge that Firefly as a company and the team were central to my positive placement experience. They were supportive of my goals and made the effort to guide me through the process.

I have learned a lot about myself as a designer and what I am capable of doing in a work environment. Being involved with multiple projects at varied stages, is the reality of a work environment. I was able to challenge myself to tackle this beyond my comfort zone by finding ways to get organised, asking questions when unfamiliar with the process and deliberately observing the senior designers approach. It became interesting and enjoyable for me as we progressed working on the variety of projects as each one was unique in their process and outcome. Multitasking across multiple projects and establishing clear management lines was an interesting process that I learnt is essential for success within the design business.

Reflecting on the whole period from where I started to where I am now, I began with little or no understanding of work done within the lighting design consultancy sector. I also only had a mostly theoretical skills set previously learned from my university modules. The placement put me into the "deep end" to apply the knowledge I had, to learn actively through "doing" and become a more confident designer. In the process of the overall placement, skills such as time management, discipline to ensure I was at the workplace each day and ready to do my best also has a had a positive impact on maturing to tackle responsibilities. I had limited incentives in this placement as only my travel was paid for, but in response I made a concerted effort to ensure I got a lot of experience from this placement, which was fully supported and appreciated by the Firefly team.

CHANNELS



PROJECT 1

For my first complete project for Firefly Lighting Design we were approached by Samuel Chan, a furniture designer who was presenting his work at London Design Junction during Design week. The process began with a brief and assessing the layout plan of the area we were lighting for the client. I spent a day or two coming up with various ideas to present to my director. After my presentation, feedback and evaluation of some of my designs, we started to develop the ideas in greater detail. The final design was track lighting along the zig-zag planks of wood across the top to maximise and illuminate the key features of all the pieces of furniture.

I then drew up the concept on AutoCAD to send out for the client's approval. She really liked the design and therefore I continued onto the next process, which was finding the fittings and sourcing the types of lamps and lighting required. Fortunately we were able negotiate with 2 sponsors for the event to provide lamps and linear fittings. I ordered the track lighting and was able to get a good deal for the client to order the fittings.

A few weeks later I was at London Design Junction placing the lamps into the fittings and putting them in to ensure that all pieces of furniture were correctly lit to show them off. The experience of seeing my work from a 2D sketch come to fruition was an amazing feeling as I was able to see what I was capable of and see my project come to a success. I also realised that I need to understand the wide (but specifically selected) network of people that you need to engage with for the success of the project.





ALSHAYA VILLA

PROJECT 2

This project is designing lighting for a large Villa (10,000 sq m) in Dubai, located on The Palm Jumierah (image 1), which is a man made island in the shape of a palm, and is a location that is sought after by many wealthy people. We were provided detailed architectural drawing of this large building and our component of the this project began with some developing concept images. One of starting tasks, was to put together a **concept report** including lighting ideas for different rooms of the villa and some renderings of the exterior landscaping and lighting design (Image 2). This was my first experience with using Photoshop to create renders of lighting effects for the client and architects to help them visualise our concepts.

Our next detailed phase was to create schematic drawings on Auto CAD and sending them to the architects and interior designers. This project proved to be very complicated as there were 2 different designers for the interior and the exterior therefore good communication was key for us to complete the job. To make it more manageable the floors were split between the junior designer, senior designer and myself and we had regular meetings to ensure we all knew what needed to be done. The detailed concept were then sent for approval to the clients, which took a very long time and only came through close to the end of my placement.

From this project, I learned that managing the time that we had to do the project was very important for us to meet the deadline, and allocating work to each designer allowed us to reach our goal. From a business perpective, having to wait over 6 months for approval of the design created many financial challenges and therefore highlighted the importance of managing multiple projects at the same time.



Image 1: Palm Jumierah



Image 2: Exterior Rendering of Alshaya Villa

REEL CINEMAS

PROJECT 3

Chapman Taylor, an architecture firm that are building 10 Reel Cinemas across different locations in Dubai, approached Firefly for their lighting design. This was a project that I worked on from the beginning with Firefly Director John. Throughout the process I was very involved in the design process. Our first cinema was called Marina Mall and I was involved in attending regular meetings with the architects and produced several concept design books to allow them to visualise our ideas. Marina Mall was previously an old cinema and therefore lighting was needed to create a more modern look and feel to the area. By using the **Dialux software** (see Image 1), we were able to calculate the light levels in the main entrance to ensure that users will be able to see the cinema entrances and steps. The model also allowed us to experiment with numerous fittings and outputs to ensure that there were even light levels in the various ceiling heights. We also experimented with some new Barrisol lighting called ELT 3D, which used LED strips and a film to create a 3D effect on a flat surface. The concepts were approved and construction had begun in April 2017.

The final cinema that I was involved with had the unique concept of dining whilst watching a movie (see Image 2). The dining experience was to be provided by Guy Fieri (an American celebrity Chef). The unique challenge for us was to design the lighting so that dining experience did not interfere with the movie viewing experience. This required myself and the senior designer to brainstorm to come up with various concepts that allow the light on the table to illuminate the food but not distract from the film. This was where I was able to use my problem solving skills and also make decisions such as whether we would use **fibre optics** or LED. Pending final architectural designs of the cinema our lighting concepts were put on back, I was therefore unable to see the outcome of our ideas (before the end of my placement) in the final mock up, which has since take place. Throughout this creative design project there were a lot of changes to the design and therefore time management and organisation were key features to ensure that we had all our drawings up to date and ready for construction. I was very involved in this process and often became the focal coordinating person for details within the team. This meant the team was still asking me questions after I left, which I happily engaged with.

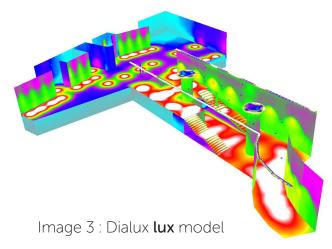




Image 4: Dining Cinema Concept

TOPGOLF

PROJECT 4

Top golf was an exciting projects on two levels. As a keen golfer I saw it relevance but also it allowed me to use the skills that I had learned throughout the first half of my placement such as Photoshop, developing concept reports and lighting specifications. There were two parts to this lighting project, to create a new exterior façade, the interior bars and restaurants. This project was run very efficiently as each week we had face to face meetings to collaborate with the interior designers and project managers to progressively improve designs and manage the process within the deadlines provided.

When discussing how to light the façade of the building there were varying factors we had to take into consideration, particularly in selecting the types light fittings we would use. Due to the small budget for the project we had to use our knowledge and creativity to create the desired effect for a lower cost. For example, for the front façade of the building we needed to create a blue wash of light from the bottom to the top (see Image 3). As this was a 70m-80m long building the number of light fittings needed would be over the budget, therefore our solution was to find a fitting with a wider beam angle on the LEDs, which allowed the light to spread more horizontally. This allowed us to space out the fittings along the bottom of the building and reducing the number of fittings used. I really enjoyed this project as I was given a lot of responsibility from the beginning. Towards the end I took over from the senior designer when she left, therefore when there were problems I was their first point of contact to help resolve them. When I began my placement networking was not one of my strengths. This experience allowed me to learn how to network better and create contacts in the industry. As this project is being implemented in London, I look forward to seeing the final results.



Image 5: Concept lighting renders of buulding exterior

LINTHWAITE HOUSE HOTEL

PROJECT 5

This hotel is based in Lake District and is currently going through major refurbishment. I began working on this project in April with my Director Peter where I was asked to compose a concept book to allow us to collaborate on the lighting for the hotel and the landscaping with the client and interior designer. I had to take into consideration the location of the hotel, its environment and importance of balancing it with the beauty of the location. I gained considerable satisfaction with my work on receiving excellent feedback for my report from the client. I was then able to begin the specification and CAD drawings. As the senior designer had left the company, I was given responsibility for this project entirely with minimal supervision from my Director. This allowed me to apply all the skills and knowledge I had learned from my time at Firefly.

This was a challenging project as there was limited time to complete the task and there was irregular communication between the various parties, and particularly as the client was central to the project management. In comparison with other designer led projects that I had previously worked on, the overall client led project management was challenging. This meant we were often set back due to lack of organisation and had to respond to the regular change requirements to designs. The project has taken longer than anticipated and I was not able to see the final project come to fruition. The construction has begun in June 2017. As the project has not yet been finished there is limited material that I could take away with me to present.

This project highlighted to me the importance of management and the key steps that needed to be put in place. I was uniquely able to critically appraise this process and it provided me with a lot of learning.



Image 5: Site Map of the Hotel



Image 6: 3D Rendering of Hotel

COMPANY REFERENCE

APPENDIX A

To whom it may concern,

Yaagni joined us on internship from July 2016 to May 2017. From the outset she proved to be confident and capable with an intuitive sense for design.

During her time with Firefly she worked with various members of the senior team across a number of different size projects. In all instances she demonstrated an ability to quickly grasp what was required of her and the task at hand. She frequently displayed an intelligent approach to problem solving and managed her workload with pragmatic organisational skills. This approach often resulted in Yaagni playing a significant role in projects with input at many levels.

One quality that stood her in good stead was that she was unafraid to ask questions. This allowed senior members of the team to help her development and focus their assistance in the correct areas required. Throughout her time at Firefly Yaagni's easy going personality and demeanour meant she was easy to get along with. Her level of emotional intelligence meant her behaviour and conduct was always exemplary, and she came across as a mature individual.

She would be successful in whichever field she chose to pursue and would undoubtedly exceed the required qualities for any role.

John

John Lau Managing Director

APPENDIX B

ATRIUM SHOW ROOM

The objective of this training day was to provide an opportunity to learn about different lighting techniques and lighting companies. During this visit, I was accompanied by the senior designer to the Atrium showroom in Old Street. The day began by appraising lights that showed different CRI (Colour Rendering Index) and colour temperatures. This helped me to understand the process of selection by light type for different environments. For example, for a cooler setting a higher colour temperature is needed to bring out the blue cooler colours. If the colours and atmosphere of the room is warmer, a lower colour temperature is needed to bring out the red colours in a room. I realised the value of taking into account the breath of consideration for both visual and illumination impact.

The day went on to highlight the role of Atrium as a distributor company, the services they provide and the companies they represented.

The senior designer and I went through the showroom and interacted with the different light fittings to experiment and observe the different lighting effects that they created. Some lights were decorative, which we do not tend to specify, but it was still interesting to see what types of lights are available out there. This was a good learning experience for me, as I was able to relate to the practical and technical aspects of the lights and gain a better appreciation of what I am specifying on paper and why.





APPENDIX C

LONDON TOUR

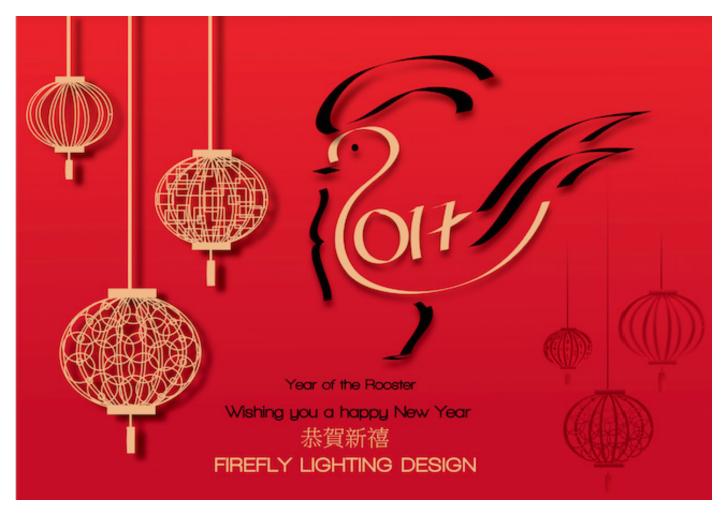
My next training day was an outing in London with Peter, one of the directors. This was to show me the different types of projects that Firefly has been involved with such as Hakkasan, Princi Bakery, Yauatcha and many more. As we walked through London I was exposed to critical appraisal of lighting and their environments. We looked at buildings such as the National Portrait Gallery, Corinthia Hotel, W Hotel and other retail shops to gain an understanding of lighting in different environments and settings. I learned a lot from this training session as I was able to see the lights that we specify in its actual setting which gave me a better visual understanding of the lighting effects in a room or how certain features of a restaurant of shop can be accentuated using lighting effects. For example, the signature blue in Hakkasan can be emphasised using certain types of lighting throughout the restaurant and create that luxurious beach feel that runs through the restaurant. This was an interesting session as it gave me an understanding of good and bad lighting and reasons as to why that particular lighting has been placed there. For example in the National Portrait Gallery to help preserve the paintings a low UV lamp musts be used and in other areas if the lights have not been placed in the correct place in the right way it can have a negative effect on the aesthetic of a room. Overall I thought this was very useful to me as I was able to appreciate the lights in their actual environment rather than looking at it through a computer screen.





APPENDIX D

CHINESE NEW YEAR CARD



As the newest member of the team I was asked to create the company's Chinese New Year card that is sent to all of their clients via email. This allowed me to be more creative and to develop my Adobe Photoshop, Illustrator and InDesign software skills.

GLOSSARY

Adobe Illustrator - A computer programme that allows designers to create vector images for graphics such as logos or artistic drawings.

Adobe InDesign - A computer publishing software that allows a designer to create documents or print projects.

Adobe Photoshop - A programme that allows designers to manipulate an image and edit it to their requirements.

AutoCAD - Computer Aided Design software used to create detailed drawings, blueprints, architecture plans and many more.

Colour Rendering Index - A quantitative measurement of the ability of a light source to show the colour of an object in comparison to natural light.

Colour Temperature - Colour characteristics of a light source. Measured in Kelvin (K) the light source can be from 2400K (Warm) - 4000K (Cold).

Concept Report - A report containing concept images for the desired project to allow the reader to visualise the lighting effects.

Dialux Software - A software used to identify light levels from various lamps. Used to simulate the room or building that is being illuminated.

Fibre Optics - uses optical fibre as a "light pipe," transmitting light from a source through the fibre to a remote location.

Lux - the measurement for the intensity of light that a lamp would produce on a surface.

Mock-ups - Prototyping a full-scale model of the lighting scenario.

Sales Rep - Representatives of lighting manufacturing companies. They help consultants with choice of lamps and any additional lamp requirements.

Technical Drawing - Detailed drawing of an object that visually communicate the objects function and parts.

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 - Image 2- from Firefly Lighting Design Alshaya Villa Project Folder (2017)
- Page 15: Image 3 Flirefly Lighting Design Reel Cinema Marina Mall Project Folder (2017) Image 4 - Chapman Taylor Cinema Concept Report (2017)
- Page 16: Firefly Lighting Design Topgolf Project Folder (2017)
- Page 18: Image 5 Firefly Lighting Design Linthwaite House Hotel Proejct Folder (2017) Image 6 - Gensler Architects Sketch-up Model (2017)
- Page A2: Images: http://www.bdp.com/en/projects/a-e/atrium-showroom/ (Site Accessed on 14/11/2016)
- Page A3: Firefly Lighting Design Images: http://www.fireflylightingdesign.com (Site Accessed on 11/11/2016)