

## **Creating A Bar/ Restaurant for the Future 'Sustainability in the Service Industry'**

### ***The Design and Re-model for 'BARCODE' Bar and Restaurant Nevada, Las Vegas, USA***

**Katharine A. Foley**

Before I even start, let me explain that this whole project was carried out remotely from beginning to end. All correspondence between the clients, architect and myself was carried out using electronic formatting. With the use of email for simple conversation and direction, to Skype for the ongoing screen sharing in regards to the presentation of designs and to clarify and quantify any changes. Therefore, even before we look into what a sustainably built bar looks like, consider there was no paper use or, paper waste from either that of myself as the designer or of the architect assigned to work with me.

I am based in the UK, whilst the architect was based in Columbia, whilst the clients were located in Las Vegas, Nevada, meaning the project work that was carried out existed between three different time zones, Pacific, South America and the UK. There were times throughout the project when the clients were travelling to different states and then beyond to outside the USA, as far as the Indian Ocean. However, at all times open communications between all the parties concerned were honored and respected no matter what part of the world they resided.

For the project brief, the message was simple, just not the solution. I was to create and develop a design concept for four partner clients to include a fully functional space offering excellent balance and form whilst providing a good flow and synergy for traffic for both the interior space and exterior patio area.

Sounds simple right, well add to that the re-design draft of an electrical plan, the provision of a color concept throughout that works in conjunction with the selected materials. Further, I was to advise and assist the clients in sourcing and procuring elements for the space, whilst also being available to them for the installation process. The final part of the brief was to assist with developing a name for their new venue along with a visual graphic design.

Here I had an immediate advantage, as my son is a fantastic artist; therefore I passed this part of the project directly to him. He came up with the name 'BARCODE', which the clients loved and immediately agreed upon. This allowed him to create and develop the design graphic which would become the focal point for their project. Approval was given to demolish any interior walls that I felt might cause an obstruction or prevent the design vision reaching the desired end goal.

The original budget for this project was \$100,000, however it is worth noting that a further \$100,000 funding was awarded to the clients from Budweiser when they (the clients) presented my 3D Design Concept Renders for their new business venue, 'BARCODE'.

The project timeline was tight, as I was given three months to complete the design concept and hand over all the technical and construction documentation for the project. I began working on the project on the 18<sup>th</sup> December 2015, just before the Christmas break. With a great deal of good will over the festive period, the design concept was approved and signed off by all four partner clients before we had reached the end of December. This enabled them to make the necessary applications to pull permits required to proceed with other site work such as the electrical scope of works and demolition. Once we had this first milestone in place, we set into the technical documentation and construction files which were successfully completed and then signed off and handed over to the clients on the 27<sup>th</sup> February 2016. Having reached this phase end successfully and earlier than planned, a contractor was hired and we were ready to begin the process of clearing the site for demolition.

When we started, the clients had no vision whatsoever for a design concept, neither did they have any blue prints for the available working space. One of the first tasks was to arrange someone to go on-site as soon as possible to take the measurements of the entire area; once received, I proceeded to develop and create a brand new floor plan for the existing space.

My first scheduled Skype call with the clients provided me with an opportunity to offer a solution based interior design concept consisting of an industrial/urban theme, whilst introducing sustainable products wherever possible into the design concept. On approval, a full lifecycle analysis was carried out for the purpose of establishing the cradle-to-grave impact of purchasing and installing such fixtures, fittings and equipment. Based on the design concept I convinced the clients that the approach of installing sustainable materials where possible throughout the project would not only benefit them financially but would also add to the aesthetic appeal of the completed design.

During this time, to ensure that we could truly call the project sustainable, consideration was given to relevant socio-economic factors with regards to manufacturing products such as poor working conditions and child labor. The decisions were made once all of these factors had been put into place that all the products and manufacturing would be done locally to also enhance the financial sustainability factor for the region.

Now the focus changed in the project to the entire reconfiguration of the space. Walls had to be demolished in order to open up the space which initially was extremely dark and dismal, with virtually no light source accessible throughout. This initial work would allow more natural light to flood into certain areas within the bar/restaurant space. In addition, I drew the client's attention to the location of the HVAC; I felt it was important to establish the best relocation and reposition of the HVAC, which was originally located on the roof top of the building. The

HVAC location was constantly exposed to the evaporation by the sun, heat exposure and all the other weather elements 24/7. This clearly would result in extremely high electricity bills long term; when addressing this issue with the client's they quickly understood not only the energy waste but also the high financial costs to them if they continued to run the HVAC from the present location and were keen to avoid both at all costs. Therefore, one of the first tasks was to remove the HVAC from its roof top location and relocate it to a ground floor level position internal to the building. This action enabled them to immediately reduce maintenance costs of the HVAC, reduce energy output and lower they're electrical overhead costs.

A fitted flexi pipe was advised which would be connected to the HVAC and run throughout the bar/restaurant space to further help make a huge reduction in energy usage and costs. The repositioning of the HVAC would also ensure a longer lifespan of the unit as it would be protected by its new position at ground floor level in a contained environment. The design was developed and generated into 3D renders for the first client design presentation, which were approved and signed off first time without amendments. This allowed me to move the project forward and create a 3D Model of a virtual walk through which was uploaded to BIMX for client preview. This allowed them to not only view the design but to walk though it and get a feel for the space, the functionality and solutions included within, it provides the client with a full vision of how the installation will look on completion. This virtual visualization included colour coordination, all FF&E, furnishings, fixtures and equipment along with a newly adapted electrical plan.

The demolished red brick walls were salvaged and the bricks were re-used throughout the space of the bar/restaurant, reducing the material costs and adding to the continuity of the design concept. The walls that did not have a red brick facing or, were not treated with the re-used salvaged red brick where given a grey 'eco-paint' color that captured more natural daylight and worked beautifully with the industrial/urban theme. The 'eco-paint' was chosen because of its make-up as it contained no harmful petrochemicals.

A lighting control system was incorporated into the design which not only reduced electricity usage by 40% but also enhanced the overall customer experience, providing a certain 'wow factor' that every bar/restaurant longs to achieve. This was an eco-conscious product that may have cost more up front but it was a sustainable investment that almost always pays off. Low energy LED bulbs were installed throughout the space, requiring 12W power outage to produce the same illumination as the standard 35W halogen equivalent the clients had been using previously. The result was a more dramatic lighting experience supported with energy savings of 66% and a 463kg/year reduction in CO2 emissions. With an average lifetime of 50,000 hours, the lighting system requires little to no maintenance.

The clients intended to present karaoke evenings as well as live music events. Therefore, the key matter of solution developed acoustics had to be addressed specifically for around the stage area and ceiling directly above. This was achieved by using 3D wall panels, made from

natural sugarcane bagasse in a beautifully curved wave design with a silver metallic polyurethane finish. The finish contained shiny specs that reflected the light, so that, together with the 3D effect of the panels, added a further facet, even a slightly holographic effect to the area. The panels were an environmentally friendly and sustainable product that worked to enhance the acoustic environment where speech intelligibility and social interaction were important. The 3D wall panels served another purpose as they were used as doors so that essential utilities such as power boards, switches and fire hose reels could be easily accessed, while being hidden behind a stylish façade. The wall panels were moisture resistant, durable, waterproof, stain resistant and impact resistant. In addition, they met with all the hygiene and fire regulations, whilst also being easy to maintain.

Liquidation auctions were sourced as were salvage yards throughout the Nevada area; procurement was made for wall lighting elements and table accessories. These consisted of old street lantern style lamps created out of salvaged timber and plumbing pipes used for electrical fixtures with LED bulbs fitted. Everything that could be salvaged was, right down to tin cans, large and small which were cut into so that they could be used as candle holders.

Sourcing the local scrap metal yards turned up some great metal grid findings which were perfect for use in the metal grid ceiling design sporadically featured in the 3D Model. These were cleaned, prepared, located and fixed. Two above the bar islands, one rectangular grid located in front of the bar and two more grid features located to the right side of the bar. The metal grids fitted well into the industrial concept, creating uniqueness while also serving a second purpose to offer a secure placement and height for extra lighting in the form of clamped spotlights which could then be used as needed. I changed the design of the bar façade and replaced the stone design with light weight diamond patterned stainless steel sheets. I made this decision for two reasons, firstly the stainless steel sheet fitted extremely well with the design concept and secondly and more practicably, they were also low maintenance. One other concern that led me to change the material was the fact that quite a few people tend to rest their feet on a bar wall. This can create or cause scuff marks and staining on the surface area. With the selection of the stainless steel sheets these concerns were totally eradicated. The material was also resistant to corrosion, rust and had an anti-slip resistance.

Re-claimed Helm lock wood boards were sourced and procured from the local wood yards to produce all the tables throughout the entire space. The helm lock wood was used for the high bar shelves in the interior and exterior patio tables.

Cork materials were used for the bench bases of the seating area which were fixed in place and extend along the wall to one side of the bar. Reclaimed bamboo was also used for framing the blackboards that were used to mark-up menus and drinks for order and also for the door frames. A light grey coloured concrete floor was laid over a two day period and when cured it was polished giving it a very smooth sleek look and feel that worked in tangent with the other elements included in the overall design. Concrete was chosen because it is extremely

durable and appropriate for high traffic areas, whilst also being very low in maintenance or repair.

The predominant raw material for the cement in concrete is limestone, the most abundant mineral on earth. Concrete can also be made with fly ash, slag cement and silica fume. The life span for the concrete can also be double or triple those of other common building materials. Concrete floors are highly energy efficient because they take advantage of the concrete's inherent thermal mass or ability to absorb and retain heat. This meant the clients could significantly cut their heating and cooling bills which worked perfectly in their favour considering they already had HVAC equipment installed. In regard to reflectivity, concrete minimizes the effects that produce urban heat islands. Light-coloured concrete flooring absorbs less heat and reflects more solar radiation than dark-coloured materials, such as asphalt, reducing air conditioning demands in the summer, making this the ideal and most sustainable solution for the flooring.

Finally, after everything was in place and all the work completed, all that needed to be wrapped up was the essential constructional documentation, technical documentation, plans, schematics, 3D models, sections and elevations; if you remember from the opening of my document, these were all produced remotely and without the use of any paper waste and delivered within all the set time frames.

Some before and after photos can be seen on the following pages.

[Here is a short video.](#)

## BEFORE IMAGES

Exterior view of the bar – The patio roof frame outside had buckled underneath the weight of the matted dried tikki grass material and needed to be demolished not only for aesthetic reasons but also safety. The exterior lighting did not work and the entire outside of the building had to be repainted.



Interior view - The front of the bar (carcass sound) + white pony bar (to be demolished)



## BEFORE IMAGES

Interior – View behind the bar – The arch wall to the right was demolished – the blue painted room with white wainscoting is the entrance and where the game room is now located. The wall to the left of the arch was also demolished, behind it was the lounge pictured below and those trees had to go!!



Behind the facing wall with the EXIT sign - was this space they called a lounge....



## BEFORE IMAGES

Close up of the front of the bar and floor depicts visibly tired, worn out old materials, however, the bar carcass was solid and in good shape; it was a keeper.



The picture below shows the entrance door – This remains the entrance door which now leads directly into the gaming room with the BARCODE Graphic in aluminum is now fixed to the facing red brick wall and also shown on the graphic on the entrance floor. (see video)



**Design Renders – Below shows new design for the outside patio area – Sun canopy shade, plus water spray system, seating and exterior lighting**



**Render – View of exterior patio area - Twilight hours**



**Design Renders – View of the bar front – Suspended ceiling grids – flexi pipe. The Red brick barrel vault wall leads out to the patio area**



The render below is taken from the entrance door leading directly into the game room with the BARCODE graphic depicting the Las Vegas skyline fixed to the red brick facing wall – Suspended ceiling grids and flexi pipe can be seen in these renders.



**Design Renders - The render below shows the entrance door on the left, leading into the game room – to the right of the entrance door is where the old lounge used to be before the wall was demolished. The red brick barrel vault arch is located in the middle of the render directly in front of the bar and leads out to the patio area.**



**The render below is an overview of the bar from the opposite side of the space looking towards the red brick barrel vault arch which leads to the patio area. A pool room is located next to it on the right side.**



**Design Render – Pool Room – For the sake of retaining clarity with the visuals I left the walls white but only for the purpose of presentation. They were painted grey on completion. This location of the space was very dismal, an extremely dead space. Considering there is only one window allowing light through, I demolished the walls that initially ran juxtaposition from the brick wall on the left side over towards the right and from the right wall over towards the left, achieving the purpose of opening up the space, creating better balance and flow, whilst generating more light into this particular area.**



**Construction Images**

**Electrical and AV work around the bar**



**Ceiling painted black**



**The space below is where the pool room is located**



**Electrical installation**



### Construction Images

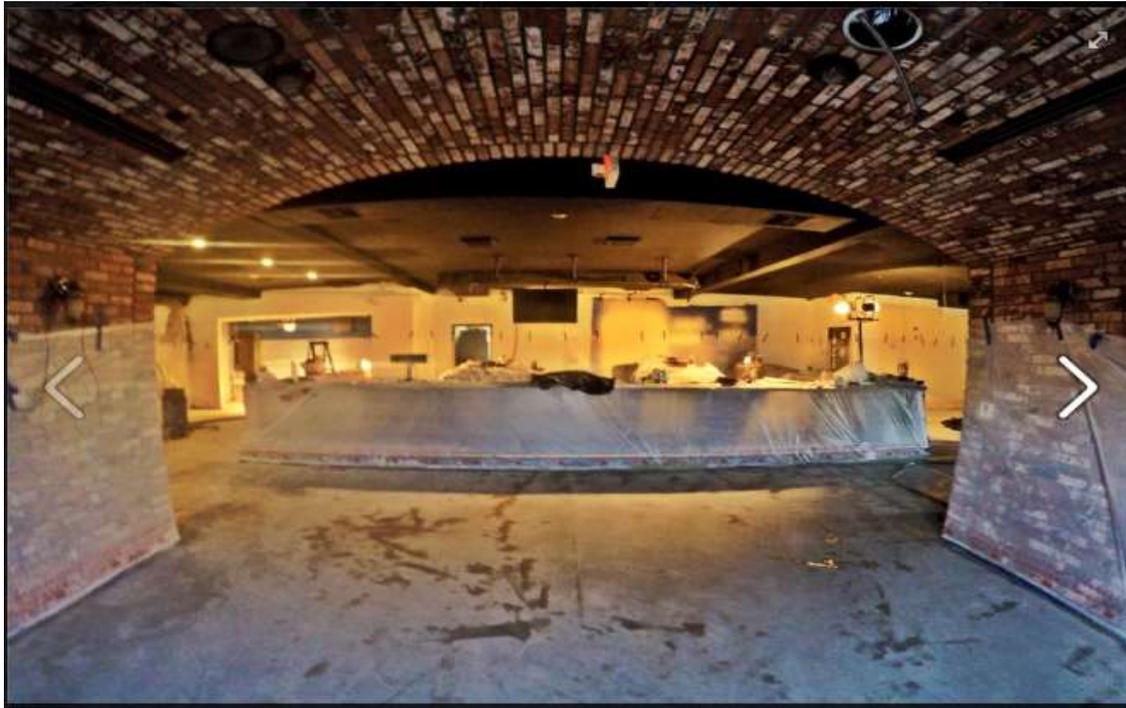
This corner used to be the lounge area with the old brown sofas and chairs – Now the walls have been demolished it is being prepped for a corner stage installation – electric wiring for installation of four flat screen T.Vs – painting and 3D wall panel installation – Above on the ceiling are AC Ducts.



This image shows the front of the bar with the pony bar removed – the red brick barrel vaulted archway in front of the bar leads directly out to the exterior patio area. The door in front with the sunlight coming through is the entrance door.



**Construction images – Here we can see an overview of the bar and surrounding space from inside the red brick barrel vault archway**



**Below - View looking onto the red brick barrel vaulted arch which faces the front of the bar**



**Construction Images**

**Electrical work barrel vault archway - Patio entrance door**



**Barrel vault archway in front – pool room location right side**



**Red brick barrel vault archway in front of bar – to the right is where the pool room will be located – with full length seating running along the length of the red brick wall to the right.**



**Construction images – Concrete floor installation**



Below image shows the entrance door to the top left – three walls were demolished in this area to open up the space (the lounge with sofa’s was in this area previously). The game room will be located at the top and next to it will be tables seating, and stage for evening entertainment events.



**After Images – Exterior view of the bar**



**Logo and Graphic Design**



**After Images**

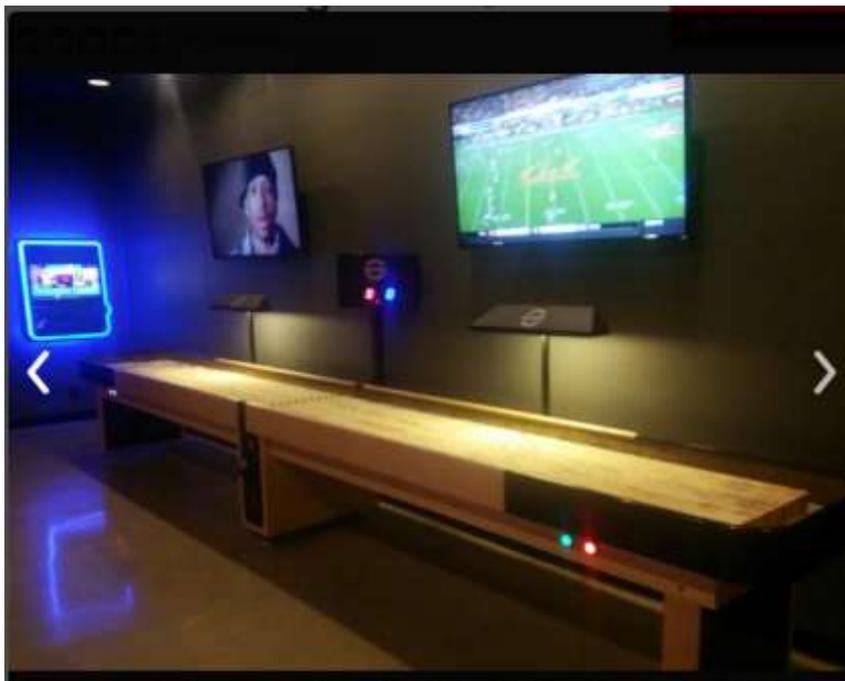
**Interior Graphic Logo - Las Vegas skyline**



**Entrance into game room**



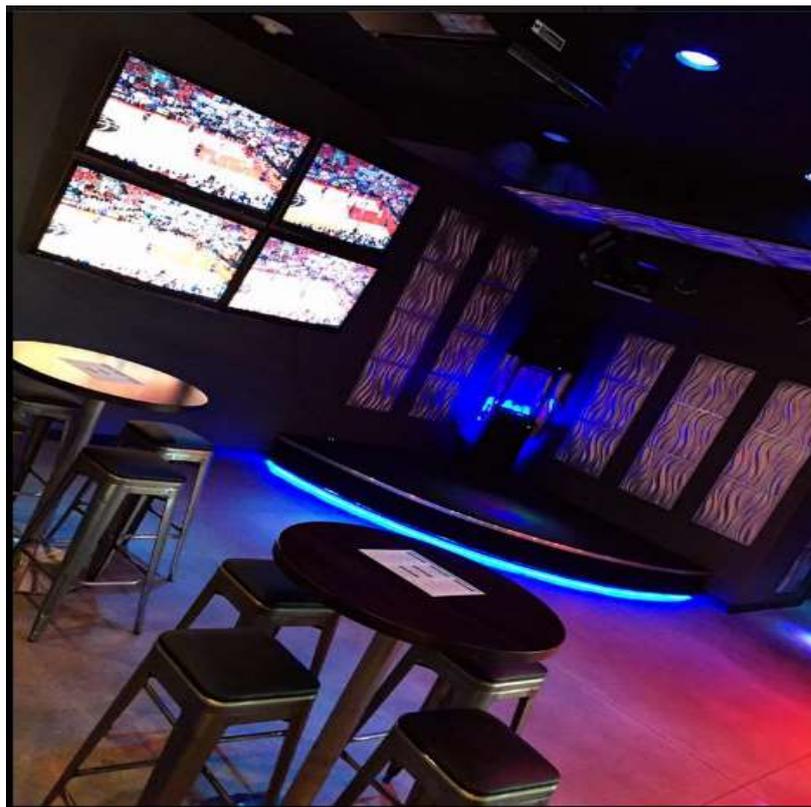
**Game Room**



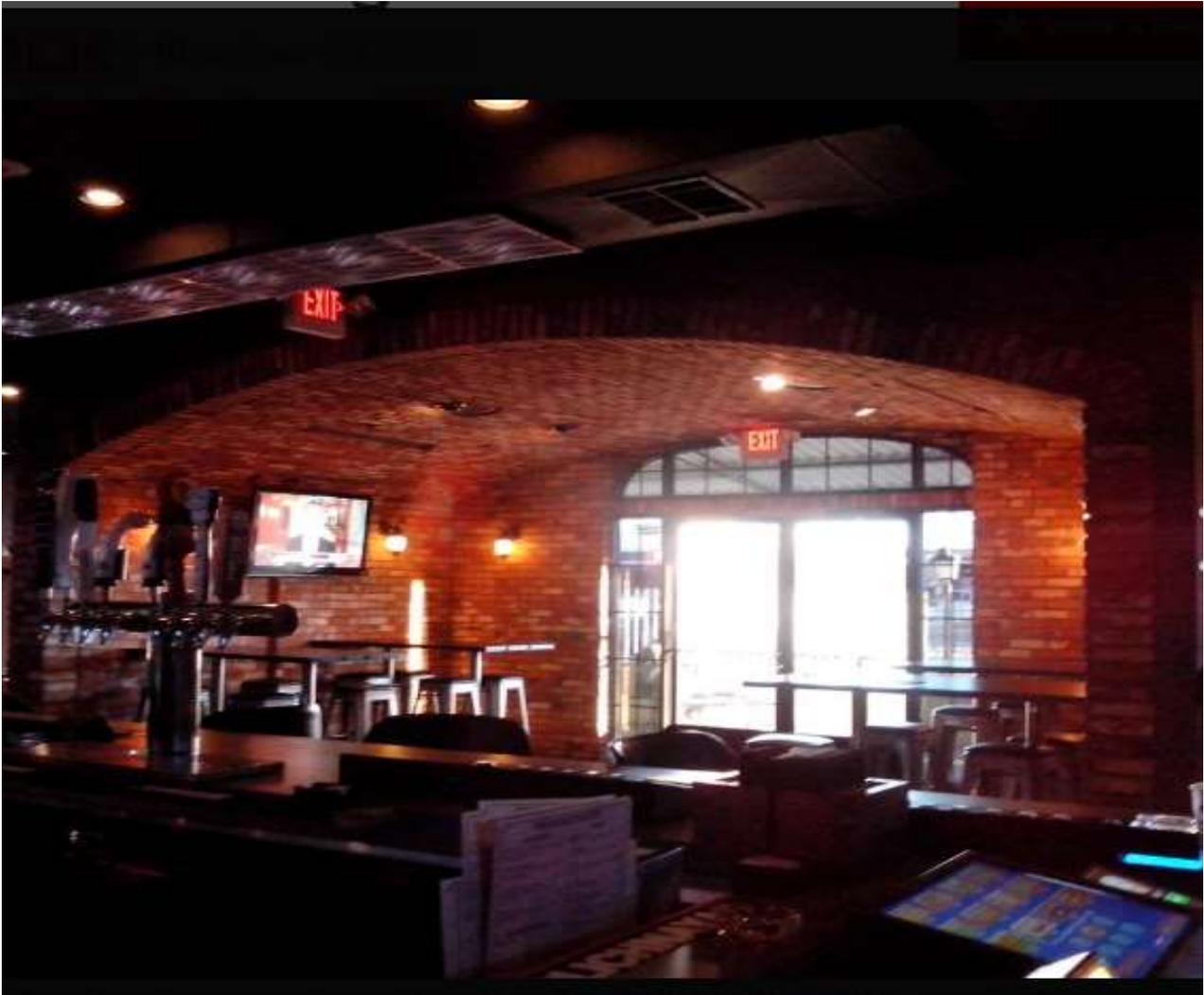
**After Images – The first image shows the bar before the gaming machines were installed in to bar top and the bar facade – The bottom image shows the gaming machines installed once the gambling license was issued.**



**After Images – First image is of the front of the bar – Second image shows the stage area and 3D wall panels**



**After Image – Below image shows a front view of the bar looking out at the red brick barrel vaulted archway and onto the exterior patio area.**



## ABOUT THE AUTHOR



### **Katharine A. Foley**

Belfast, UK



Katharine Foley is an Interior Designer and a Certified Project Manager with twenty years of industry experience delivering projects globally for both exclusive VIP and high end clients. Her great flexibility in delivering projects means that no budget is too large or too small as she delivers based on quality not simply on cost.

She has worked as a personal designer/stylist with VIP clientele and also budgeted clients and is extremely experienced in retail interior design & set design.

Katharine has a strong approach to leadership, managing large teams of designers, junior designers, merchandisers and graphic designers on major in-house project work. All her projects are solely client facing and always, from client brief through to hand-over. Whether there is a need for hand holding along the way, or for an eye for detail, Katharine's continuous approach towards successful delivery has allowed her to make a name for herself within her specialist field. With work experience in Dubai, Abu Dhabi, United Arab Emirates, Bahrain, Saudi Arabia, USA and Europe this has now helped her towards the early stages of setting up her own online interior design business, 'Imagine Interior Design Studio', offering design to a global audience.

To learn more about Katharine and her designs visit

[https://www.facebook.com/ImagineInteriorDesignStudio/?ref=aymt\\_homepage\\_panel](https://www.facebook.com/ImagineInteriorDesignStudio/?ref=aymt_homepage_panel)