ISLAMIC CERAMIC ORNAMENTATION AND PROCESS: PROPOSALS FOR A NEW AESTHETIC VOCABULARY IN CONTEMPORARY ARCHITECTURAL EMBELLISHMENT WITHIN KUWAIT.

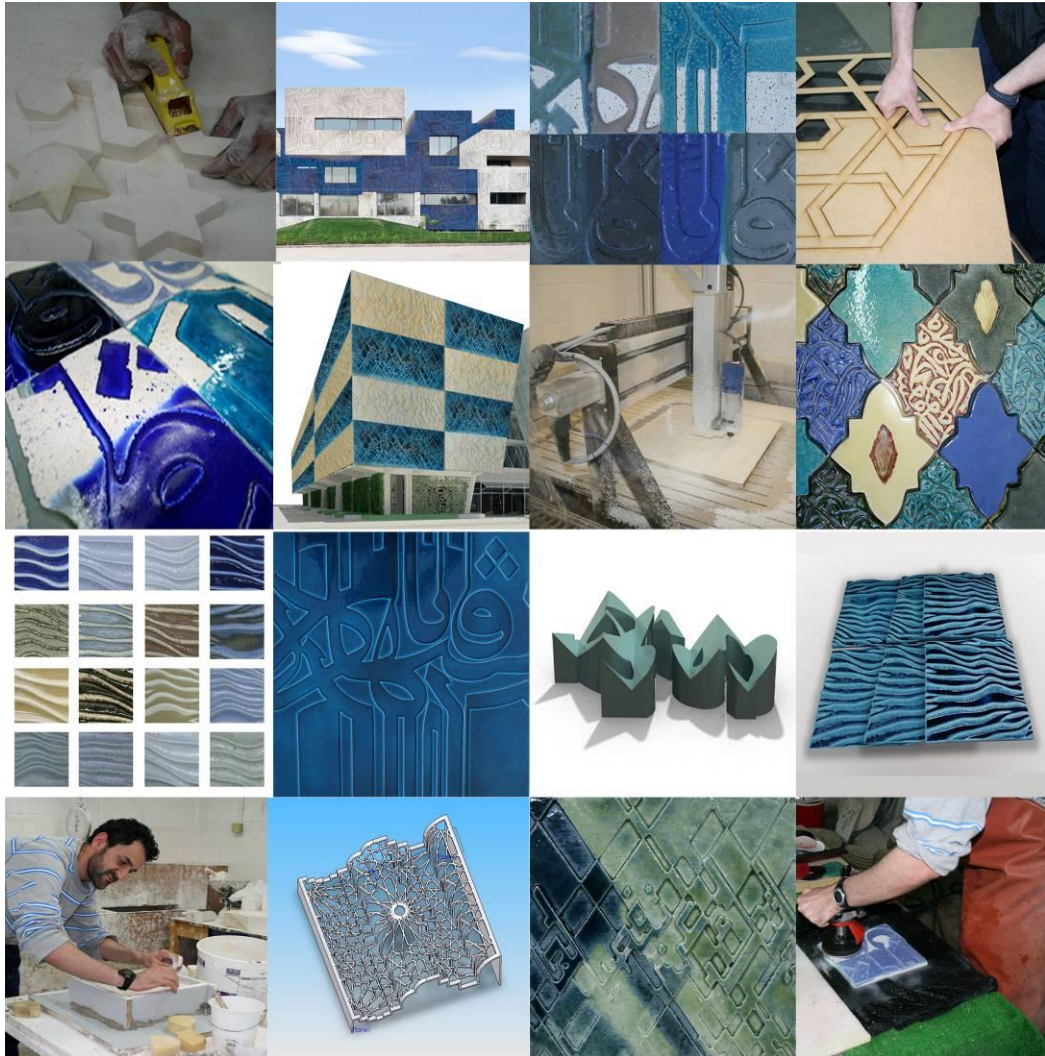**Submitted By: FAHAD ALKANDARI**

Submitted in part fulfilment for the award of Doctor of Philosophy

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I

ABSTRACT.

Islamic architecture is arguably one of the greatest manifestations of Islamic visual culture. One of the defining aspects of the unique, aesthetic richness of traditional Islamic architecture has been the application of ceramic ornamentation or embellishment. There is a growing concern, however, that this legacy is being eroded. The diminishing identity of Islamic visual culture is particularly evident through current architectural developments occurring in the Arab states. The building revolution in the Gulf countries has dramatically increased momentum since the onset of the 'oil economy', echoing the phenomena of globalization.

This research project explores these concerns, discussing the erosion of Islamic 'identity' within contemporary architecture in the Gulf States and in particularly Kuwait, as well as the ensuing decline in the use of ceramics as a defining embellishment material. The research compares the aesthetics of traditional and contemporary Islamic architectural design, whilst also examining the reasons behind this erosion in traditional design style. The diminishing identity of Islamic visual culture is investigated by combining studies in the fields of art, aesthetics, design, architecture, and the social sciences, in order to understand the nature of the research problem.

A series of case-studies demonstrates how ceramics may be used to re-introduce a sense of Islamic identity within contemporary architecture. This offers design proposals, new materials and technical processes that acknowledge the rich traditions of Islamic Ceramics while also being appropriate for application within the context of contemporary Islamic architecture detailing; blending contemporary aesthetics and technical thinking with traditional Islamic design.

The aim of the case-studies is to offer proposals for a new aesthetic vocabulary of architectural embellishment that is both appropriate to and innovative within, the context of contemporary Islamic architecture. This new aesthetic vocabulary

specifically blends contemporary design principals, new materials and technical processes, whilst acknowledging the rich traditions of Islamic ceramics.

The PhD project, applies two types of research methodology: theoretical research and practice-based research. The former focused on social sciences and applied quantitative and qualitative research approaches, including surveys and interviews undertaken within Kuwait. The findings obtained from these surveys verified the emergence of a new cultural style of contemporary architecture and shaped the practice-based element of the project; proposals for ceramic embellishment that are contemporary, while still reflecting many recognizable aspects of traditional Islamic design. The new architectural style can be attributed to factors such as globalization, the adoption of international building styles, and a seeming unwillingness to incorporate traditional styles into new building design, all of which contribute to the currently weak identity of Arabic / Islamic ceramics within Kuwait. Despite of this, the survey revealed that Kuwaiti society maintains a strong relationship and affiliation with Islamic culture, although many seemed unaware of their own rich culture and its past legacy.

The practice-based research involved two distinct phases. The first phase involved the development of a large number (172) of new glazes. The glazes were intended to reflect the palette of colours used over generations of Islamic Ceramic culture, while still being appropriate for integration within the contemporary Islamic architectural environment. The second phase of practice involved a series of case studies, embracing a wide range of contemporary architectural ceramic design processes (including 2 and 3 Dimensional geometrical patterns and interpretations of contemporary calligraphic design). The case studies utilised a number of modern technologies, such as 3D Solid modelling, CNC Rapid Prototyping and Laser-cutting, to prove that modern design and manufacturing technologies can be integrated within traditional ceramic processes. The aim being to both provide ceramic products that architects and designers can use to enhance the modern

architectural environment of Kuwait and re-establish the creative status of ceramics.

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Publication

Alkandari F (2010) "Practice-based Research in Islamic Ceramics and its Impact on Contemporary Architectural Design in Kuwait": Published by Traditional Kutahyaware and 1st Eurasia Ceramics Congress Turkey (forthcoming).

Bremner A and Alkandari F (2011) "Could refractory concrete help to sustain local architectural identity in the face of globalization?". International Ceramics Symposium, Ceramic Arts and design for a sustainable Society, Gothenburg, Sweden.

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II. **List of artworks and 3-Dimensional objects submitted in partial fulfilment of the degree of Doctor of Philosophy.**

1. 'Low-relief Calligraphy panels (240 x 60cm).
2. '3D Geometric tiles (Zeilij Structure) (100 x 100cm).
3. 'Kofic Calligraphy Wave (Live project - Muneerah Al-Saeed Mosque in Kuwait) (500 x 320cm).
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V.   Glossary of Terms.

Aesthetic Vocabulary   The philosophy of visual patterns and beauty (colour, texture and shape), that gives meaning and value to any field of humanity such as Art, design and architecture.

Albascahl   A thin plank made from bamboo that is used on the ceiling of Kuwaiti houses in the past.

Alchandal   Taken from the branches of trees to provide pillars used on the ceiling of traditional Kuwaiti houses in the past.

Al-Fustat   This is an old Islamic city in Egypt, popular for Ceramic production.

Alkaline glaze   This is a glaze material that includes a high percentage of Alkaline oxides (usually as a Frit). Alkaline is an active flux that often gives a fluid, translucent glaze surface. It is a common material within the history of Islamic ceramics – typically giving vivid turquoise colours when combined with copper pigment.

Al-Sabah collection   A collection of 1200 pieces of Islamic art works and antiques from the Islamic world. This collection belongs to a popular member of the Kuwaiti Royal family, Sheik Ahmed al-Sabah and his wife, Sheikha Hussah Salim al-Sabah.

Amol   A colourful rich ceramic applied in the sgraffiato technique on wares painted in green and red. This style is also known as "Bamiyan bowls" in the Seljuqs Ceramic period.

Arabic Calligraphy   A style of text that represents the language of Arabic societies. This art form is often used for inscription purposes to express Islamic culture and civilization. The many types of Arabic calligraphy include kufic, square kufic, eastern kufic, thuith, naskhi, rnuhoqqoq, rihani, and taliq. Each style has involves different character

shapes that extend, overlap or rotate, creating the style's aesthetic value.

Architectural Ceramics   A ceramic product made for application within an architecture context, applied to a building's floor or walls, often in the form of tiles or bricks. Used as both decorative embellishment and protection against the elements.

Barium (Carbonate)   This is a compound used within glaze recipes. It tends to give dry surfaces - particularly interesting when combined with copper pigment.

Bentonite   This is a clay material, often added to glazes to aid suspension. Also used to increase clay body plasticity.

Caliphate   This is leader and historic figure within the Islamic dynasty.

Capitalism   An economic and political system in which a country's trade and industry are controlled by private owners for profit, rather than by the state.

Curtain wall   A modern building technique – a non structural external covering a building. Usually made from metal, stone ceramic or plastic.

Ceramic   The state of clay, once heated above 600'C. A hard brittle heat-resistant material that increases in strength the higher the temperature it is fired.

China clay   Mineral primary clay, white in colour, with a high melting temperature. Used in clay bodies and as a glaze constituent. Also called Kaolinite
($Al_2O_3. 2SiO_2. 2H_2O$).

Clay   This is known as Aluminium Silicate or hydrated silicate of aluminium. It is a heavy, damp, plastic material that 'sets' upon drying and can be changed by heat into a permanent, hard waterproof material.

Cobalt oxide   A naturally occurring metal ore known as CO_2O_3 Used as a colouring pigment in ceramics. It

usually gives a strong blue colour when mixed with glaze.

Copper oxide	A naturally occurring metal ore known as CuO. Used as a colouring pigment in ceramics. It usually gives green or turquoise colours when mixed with glaze. Very commonly used pigment in traditional Islamic Ceramics.
Crank clay	A high firing (refactory) stoneware clay which, is course in texture, due to additions of sand or grog.
Dome	A hollow upper half of a structural element typifying Islamic architecture. In Mosques, the Dome often sits above the place of prayer, representing the vaults of heaven.
Earthenware clay	A clay body that matures at low fire temperature (1000-1080°C). Terracotta is an Earthenware clay body.
Earthenware glaze	A low temperature ceramic glaze that is fired to around 1000-1080°C.
Embellishment	Applied decoration, adornment, trimming, ornamentation, embroidery, beautification, embossing and exaggeration that can provide a beautiful decorative finish. Within the context of this research, it refers to the decorative detailing on architectural structures.
Ethnography	Research within the field of social science that studies the nature of society in a culture and the ethnicity and life style of the people.
Firing	The process of applying heat to clay within an electric or gas kiln in order to develop ceramic bonds – to create a ceramic and melt glazes.
Flint	Primary mineral source of Silica (SiO_2) used in clay body and glaze recipes. Increases 'glassiness' and hardness.
Geometry	A branch of mathematics concerned with the properties and relations of points, lines, surfaces,

	solids, and higher dimensional analogues e.g. Pythagoras' theorem.
Glaze	A layer of glass which is fused to the surface of ceramics to seal and increase the strength of the ceramic. It also has a decorative function.
Globalization	This is a global phenomenon that impacts on people and societies throughout the world, connecting them to each other in terms of economy, trade, capitalism, media, politics, sociology, education and workforce.
Gombroon ware	This is a technique of producing Islamic ceramics from the Safavids period, by applying a very thin (hard faience body) and bright white clay to surfaces made from porcelain. It is sometimes decorated with motifs or flowers of lustre, and a clear glaze, to create a blue and black coloured decoration.
Sgraffito	This is a technique that involves covering the surface of the clay with a pigment or liquid clay, then scratching part of an overlaid colour to create an contrasting design. The technique can be applied to the surface of ceramic tiles or plates.
Hobbel	In Islam this literally means the famous 'idol' worshipped by the pre-Islamic people of Arabia.
Hybridity	Anything that is made by combining two different elements, and can refer to the influx of cultures and ideas that change the nature of a society.
Imperialism	Policy of extending a country's power and influence through colonization, or by the use of military force, or other means.
Iron Oxide	A metallic compound with the formula Fe_2O_3. The most common colouring pigment in ceramic glazes, slips and clays – generally giving red/brown colours. Found in terracotta clay earthenware clay.

Izniks

This is a style of Islamic ceramic originating from Iznik city. The ceramic design is used in green and red decorations on carnations and roses. Iznik is located in the far north-west in Marmara region – near Anadol, in Turkey.

Kashan

This is a city located in the Isfahan region in the middle of Iran. In Iranian the word 'Kashi' means 'floor tile'. Kashan was known to be a popular centre for ceramic production in Persia.

Kirman

This is a technique for producing Islamic ceramics from the Safavids period. It involves architectural tile work by applying black outlines with green, red and yellowish green glazes on to blue and white polychrome ware.

Kubachi

This is a glaze colour technique of producing Islamic ceramics from the Safavids period, involving two separate techniques. The first is applied to black wares under a blue or green glaze and decorated with floral patterns on the ceramic surface; in the second technique, brown, yellow, green, red, white and black glazes are applied and are then covered with a transparent glaze.

Kufic script

This is a form of ancient Arabic calligraphy. Kufa is a city in Iraq. This calligraphic art style is made up of precise geometrically designed letters that fit in with the geometry of the architectural space and wall design. This style of calligraphy included 30 types of writing style, such as Italics, flourishing, complex, leafy, round, squares, Dingle, interoperability, Moroccan, Levantine and Kufic.

Kutahya

This is a city in western Turkey known for its Islamic ceramic production design style. This style involves the use of a polychrome technique and decoration with blue, green, and yellow colours outlined in black, embellished with a design of flowers and leaves.

Lajvardina

This is a ceramic ornamentation technique that was well known in the great Mongols period. The

technique applied rich and deep cobalt blue or turquoise glaze and was then ornamented in black, white and red colours, with the gold glued to the top of the ceramic design form.

Laqabi

This refers to a style known from the Islamic Seljuqs Ceramic period, and is based on applying colours such as white, blue, turquoise, green, yellow, and bright brown on to colourful wares. This style is also a part of the Kashan ware style of ceramic design and is related to Kashan pottery.

Lead Bisilicate

This is a chemical compound / glaze material with the formula $PbO.2SiO_2$. Used as a major ingredient in low temperature (earthenware) glazes.

Lithium Carbonate

Glaze material with the formula Li_2CO_3. Ussed in small amounts, in intensifies the colour of copper.

Liwan'

This is an architectural style of design applied on to old Kuwaiti buildings by covering the area which lies between the courtyard and the rooms of the house to create an area of cool shade.

Localization

This refers to the economic production that a local society creates and is involved in, whereby the responsibility for production and profit making depends on those living within that particular locality.

Lustreware

Ceramic wares with an iridescent metallic glaze - fired at a temperature of between 700 – 800 degrees C.

Madrasas

This is an Arabic term meaning an Educational School building used for teaching pupils how to read and write. It is open to students of any age or gender.

Manganese Oxide

A naturally occurring metal ore with a formula (MnO). It produces a variation of purple–brown colour when added to glazes.

Mihrab	A niche in the wall of a mosque indicating the direction of Mecca, towards which Muslim worshippers must face in prayer (Oxford English Dictionary, Draft Revision Mar, 2002).
Minaey	A style of ceramic from the Islamic Seljuqs Ceramic period. It is based on applying colour to clay, after which the clay is covered and later painted with tin oxide, to produce surfaces of blue, green, black, red, brown, and, occasionally, a metallic surface.
Minaret	A slender tower, especially common in mosques, with a balcony, from which Muslims are called to prayer.
Minbar	The pulpit in a mosque, from one of the steps of which the Friday sermon is delivered.
Modern imperialism	Colonial expansion that occurred after the First World War. The impact of such a policy on the culture, language and economy of the colonised states was long-lasting and restrictive in nature.
Muqarnas	One of the major elements of traditional architectural decoration, sometimes called "stalactites", which are often used for friezes, corbels, arches or domes.
PEST framework	This refers to a framework of terms connecting a net of political, economic, social and technological features.
Refractory concrete	An industrial material used most commonly in high temperature applications (furnace linings), in the steel, chemical and glass industries.
Rutile	Glaze material and colouring agent, composed of Titania dioxide, TiO_2. Used to give biuff colours in glazes.
Said's orientalism	Refers to the theories of the Palestinian/American literary theorist, Edward Said, who was a Professor at Colombia University. His concerns lay in the issues surrounding Palestinian and Arabic identity. He

also clarified the hegemony of western culture in the east and explained how the power of the media influenced the world's view of the Middle East.

Silk city

A new city located in the Subiya area of Kuwait. It contains a large number of modern developments and architectural projects within an area of 250 square kilometres beside the Gulf Sea. It has space for an Olympic Stadia, hotels, shopping, residences and houses. A tower, 1,001 metres in height, which has the Arabic name, "Madinat Alhareer", is also located there. This project is expected to be completed in 2016, and the Kuwaiti government has already spent 25 billion Kuwaiti Dinars on the building costs.

Slip

Clay in liquid form, used as either a decorating material or for casting shapes in plaster moulds. Often contrasting in colour to the underlying clay body.

Slipware

A style of earthenware pottery that uses slip as a form of decoration.

Socio-cultural development

Changes in the social culture that have appeared over a period of years, due largely to issues connected with the economy, population, education, and life style.

Socio-economic state

This relates to or is concerned with the interaction of social and economic factors within a state.

Splashes wares

Technique of decorating the ceramic surface that is well-known throughout the history of Islamic ceramics – splashing pigments across the surface.

Stain

A powdered ceramic colouring pigment used in clay bodies, slips and glazes.

Stoneware

A classification of ceramic ware - describing high temperature firing (> 1240'C). Strong, durable and non-porous.

Stoneware Clay	A type of clay body that can withstand high temperatures - above 1200°C.
Talc	Hydrated magnesium silicate ($3MgO.4SiO_2$). Used as a glaze and clay body constituent.
Tareq Rajeb Museum	One of the most famous museums in Kuwait. It houses a collection of Islamic Art and antiques that has survived from ancient times.
Terracotta	A brownish-red earthenware clay body. Commonly used within many areas of traditional ceramics. It is fired at a low temperature of between 1000-1080°C.
Tin glaze	Refers to a type of glaze that includes tin oxide, where the glaze is creamy white in colour.
Tin oxide	Ceramic glaze pigment, with the chemical formula (SnO). Used to opacifiy a glaze and give white colouration.
Titanium oxide	Naturally occurring ore containing - chemical formula ($TiO2$). Used in glazes to give opaque white qualities. Also helps crystallization.
Westernization	This refers to the cultural issue of a state, country or society coming under the influence of the cultural, economic, or political systems of the West - meaning specifically, Europe and North America.
Zillij	Multi-colored cut tiles - is a glazed ceramic tile-making tradition that originated in Fez, Morocco. Zillij artisans (*zlayiyyahs*) specialize in cutting and arranging ceramic tiles into detailed mosaics such as the colourful geometric patterns and tessellations found on the walls of mosques and *madrasas* (Koranic schools).
Zirconium silicate	Naturally occurring ore - chemical formula ($ZrSiO_4$).. Used in glazes to give opaque white qualities. Also helps crystallization.

VI.   List of abbreviations.

3-D	Three dimensional.
CAD	Computer Aided Design.
CNC	Computerized Numerically Controlled.
EU	European Union.
EW	Earthenware.
MDF	Medium Density Fibreboard.
PBUH	Peace be Upon Him.
PEST	Political, Economic, Social and Technological analysis.
RC	Refractory Concrete.
SPSS	Statistical Package for the Social Science.
SW	Stoneware.
UAE	United Arab Emirates.
UCLAN	University of Central Lancashire.
UNESCO	United Nations Educational, Scientific & Cultural Orgnization.
V & A	Victorial and Albert Museum.

CHAPTER 1: BACKGROUND OF THE RESEARCH

1.1 Introduction

Traditional Islamic architecture and the application of beautiful and intricate ceramic embellishment are considered to be one of the greatest manifestations of Islamic visual culture. Together they are recognised as one of the world's most celebrated ceramic traditions, reflecting the rich cultural heritage and social history of Islamic and Arabic civilization. Piotrovsky (1999) declares that "The characteristics of Islamic art are abstract designs and a wealth of rich decoration" (Piotrovsky, 1999, p13). Degeorge and Porter (2002) add that "Islamic ceramic tile-work is surely one of the most magnificent forms of decorative art in the world" (Degeorge and Porter, 2002, p6).

There is growing concern that this rich heritage is being eroded, however. There is clear evidence that during the last fifty years the Islamic world has been increasingly influenced by Western culture. The diminishing identity of Islamic visual culture is particularly evident through current architectural developments in the Gulf States. It can be clearly observed that there is rapid change taking place in the ideology and nature of the architecture in Kuwait and the Gulf countries. Many of the new cities have comparatively little national identity and seem alien to the traditional Kuwaiti environment. The building revolution in the Gulf countries has dramatically increased momentum since the onset of the 'oil economy' and this has been reinforced by the current process of globalization. This process seems likely to have an ongoing erosive effect on the vernacular architecture in the Middle East. As ceramics has played an integral part in defining the landscape of traditional Islamic architecture, it also believed that the ongoing adherence to 'global building styles' will diminish the historical identity of traditional Islamic ceramic culture.

Kuwait is intrinsically connected to Islamic culture, as it is located geographically in the north-eastern corner of the Arabian Gulf Sea, bordering Saudi Arabia in the south, and Iraq in the north and west. It is also located beside the two grand historical Islamic cities of Makah and Madinah. From a historical perspective,

Kuwait enjoys a legacy alongside the great Islamic dynasties and civilizations of Abbasied Caliphate, the Mamluks, and of the Ottoman age, which are heralded as the pillars of ancient Islamic civilization. The nature of the Kuwaiti lifestyle stems from its Islamic cultural heritage with regard to its religion, language and traditions. Kuwait covers an area of approximately 16,000 sq km, a large part of which is desert and sand, enjoying a very dry climate.

The research examines the traditions of Islamic architecture and associated ceramic ornamentation, with the aim being to develop a new aesthetic vocabulary in contemporary architectural embellishment within Kuwait. This proposal was developed through both field observations by the researcher and the review of a broad range of scholarly works of literature on the Middle East and Kuwait. As discussed later in detail, there is a significant lack of the application of traditional designs and heritage of the Arabic and Islamic civilization within the contemporary architecture of Kuwait.

This phenomenon has contributed to the continuing growth and transformation in the appearance of the architectural aesthetic that reflects global architectural styles found in virtually every city in the world. The rich history of Islamic ceramic art has played an intrinsic role in defining traditional Islamic architecture, but little evidence of this is available within the culture of contemporary architecture. It is in fact a reflection of a broader issue related to many disciplines such as art, craft, design, culture, heritage, history, economics or sociology. This perspective also relates to the nature of people's taste, ideological orientation and understanding. These current trends can be clearly seen in the rapid transformation and changes that have occurred in Kuwaiti society. This study critically explores the importance and uniqueness of Islamic art and examines the changes in building styles that reflect the broader erosion of an Islamic legacy in the arts, seen to echo the current trend of globalization in Kuwait. This research offers an in-depth analysis into

contemporary Islamic ceramic, art and also explores the impact that globalization has on Islamic culture and civilization[1].

Having identified this problem, the research methodology utilizes a practice-based strategy, supplemented with a theoretical approach; the outcomes being achieved through this combined method. The objective is to propose a series of solutions that may support a revival of the rich cultural heritage within contemporary Islamic architecture through the development of prototypes of ceramic designs that are both identifiably Arabic and of the 21st century.

1.2 Aims of the research

- The primary aim of the project is to examine how aesthetic qualities, materials and technical processes found within traditional Islamic ceramics may be manipulated in order to offer new creative and aesthetic solutions for architectural decorative detailing for use within contemporary Kuwaiti architecture; that is, both identifiably Arabic and of the 21st century.

- A secondary aim is to help perpetuate the legacy of Islamic Ceramics and demonstrate their relevance within contemporary culture, as well as their value as a source of creative inspiration for architects and designers, through a series of practice-based case studies.

1.3 Research questions

This project is defined by the following research questions:

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[1]The researcher is of Kuwaiti nationality, brought up to appreciate the cultural heritage of Kuwait. Training to be a ceramic art teacher in Kuwaiti schools provided a deeper insight into the current cultural development in the

- How might aesthetic properties and processes found within traditional Islamic ceramics be applied to the development of new architectural materials and products for use by architects and designers?

- How might the re-introduction of traditional Islamic ceramic design within an architectural context encourage renewed awareness and interest in the identity of ceramics as a creative medium and more broadly, within Islamic visual culture?

1.4 Significance and Scope of the research

This research focuses on the decline of traditional Islamic architecture and, in particular, the unique ceramic ornamentation that defines this particular style of architecture. Having identified and discussed the erosion of such an important artistic and cultural heritage, the aim is to propose a series of solutions that may help re-establish the use and status of ceramics as an architectural embellishment material which in turn, may encourage architects and their clients to consider introducing elements of embellishment that help define the architecture as clearly Islamic.

The research will focus on the architectural environment of Kuwait, as the researcher is a Kuwati citizen, having grown up witnessing the decline in the architectural identity of the country. Much of the discussion may be applicable to circumstances repeated across the majority of the Gulf State countries. Whilst the practice-based phase of the research should develop contemporary interpretations of traditional Islamic ceramic architectural embellishment, however it will not attempt to exactly replicate traditional process or materials. Instead, wherever appropriate it will attempt to integrate traditional processes with new technologies, making the projects relevant to 21st century manufacturing, either within a small ceramic studio environment or applied to industrial production.

The academic research will contribute to the general body of knowledge in the field of Islamic ceramics, art, design, architecture and culture. This may be beneficial for the entire Islamic civilization, increasing the awareness of the balance between contemporary need and preserving the rich heritage of Islamic ceramic art and traditional architecture.

The study is likely to be of particular interest to academic practitioners, artists, architects, designers and craft-makers, who may be involved in related projects, working within Islamic countries, attempting to reinvigorate declining cultural identity. Given that globalization and loss of cultural identity is now an almost universal phenomenon, the research could also have real relevance to practitioners in other countries throughout the world, especially where there has been a recognised decline in cultural identity. The same basic principles should be broadly applicable: developing contemporary work that draws on the heritage of local / traditional practices.

This study may also serve to guide policy makers in Kuwait and elsewhere around the globe, to understand the changing values and behaviours in society, as well as the movement towards broader cultural issues. The findings of this investigation may help academic researchers in fields as diverse as the social sciences and humanities, supporting examinations of the changing dynamics of cultural identity. It is also hoped that the project might also encourage private individuals to re-examine their cultural heritage and explore how it might be retained within the context of contemporary living spaces in order to create a continuum between the older traditions and the contemporary architectural environment.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

This literature review examines the core research issue and discusses the research problems from a variety of global academic perspectives:

Throughout human history, the Islamic art of Ceramics has been recognised as among the most celebrated and original artistic traditions, reflecting the cultural and social history of Arab civilization. This rich cultural heritage dates back to the beginning of Islam in Arabia. However, in recent decades, the identity embedded in modern Islamic art and culture in the Middle East has begun to change rapidly due to the process and impacts of globalization. Thus, this part of the research will critically examine relevant literature in the following areas:

- Contemporary Islamic art: A General Overview.
- Islamic ceramic literature review.
- Decline in Islamic Decoration.
- Architectural and Globalization trends in Kuwait.
- How Globalization impacts on Islamic arts and civilization.
- Relevance of globalization to contemporary Islamic arts and civilization.
- Comparative study of relevant contemporary ceramic art.

2.2 Contemporary Islamic Art: A General Overview

There are numerous scholarly views on contemporary Islamic art and civilization. This research attempts to examine a selection of these views from a range of perspectives, with the aim of highlighting material particularly relevant to the project aims.

The concept of Islamic art and civilization covers many countries in the Arab and Islamic world, including Iraq, States of the Persian Gulf, Turkey, Iran, Malaysia and some North African countries. Historically, all of these great Islamic empires have

contributed to a rich and diverse range of artistic artefacts, including architecture, ceramics, calligraphy, textiles, wood, glass and metal craft. Al-Salimi et al (2008) explain that the Universalist approach to Islamic art reflects a certain cultural entity belonging to the richest fields in the world of art history. In other words, Islamic art and civilisation became the central norm, exemplifying the values entrenched in Muslim societies around the world.

The demise of the great empires and the subsequent emergence of colonial rule, which lasted for centuries, led to what Wijdan Ali (1989) describes as a period of artistic lethargy and cultural stagnation. Since the beginning of the twentieth century, before and after gaining independence, most Islamic countries went through an intellectual and political rebirth that affected their artistic development and created a cultural resurrection among their intellectuals. This viewpoint is shared by Blair and Bloom (2003) who argue that the major shift in wealth from Europe to oil producing countries of the Middle East in the 1970s refocused the regions study, and cultural adoration of Islamic art to one concerning money and oil. Burkhardt (2009) examined the impact of modernity in Islamic art, and concludes that the human heritage of skill and wisdom exhibited through craftsmanship has been forsaken through modernity. This development was accentuated in the 19th century by the deep-seated socio-political changes within the Islamic world which led to a rupture with older artistic traditions in all spheres of art (Hattstein and Delius, 2000). This was particularly affected by the intensified contact of artists working in the East with the culture and art of Europe. As a consequence, there was both a greater openness of Islamic artists to European styles.

Islamic art achieved a huge renaissance in the past, however according to Ali (1989) the renaissance seen in modern Islamic art and craft adhere predominantly to Western aesthetics and norms. Ali explains that this approach has created a conscious guilt in the minds of many modern Islamic artists who feel that they may

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be contributing to the declining cultural identity traditionally attributed to the Islamic art.

Another opinion that supports this is from the Islamic Arts and Architecture Organization, who state that "the Islamic world -- and the Middle East in particular, is undergoing a transformation today that is unprecedented in its history" (Martin, 2010). Martin (2010) continues that, "Oil wealth, along with social and political change, has threatened Islamic culture and traditions. This identity crisis is readily apparent in architectural design" Martin, (2010) *The Future of Islamic Architecture.* Available from: http://islamicart.com/main/architecture/future.html, (accessed 20th March 2010).

However, the rapid change in the identity of modern Islamic art is apparent: training of contemporary Islamic artists and architects both at home and abroad who often adopt and exposed are Western oriented patterns and forms of aesthetics and rules of designs. By adopting Western styles and ideas of design, this generation of artists in Islamic societies is cut off from the society and they become alienated from the process of cultural revival. Naturally, Islamic arts emphasize the need for spiritual representation that symbolizes the Islamic culture and negates copying any non-Islamic dimensions of design. Ali (1989) observes that:

> *The art of abstraction in Islamic art was not born from any lack of skill on the artist's part, but from its rejection of materialism and its ephemeral qualities. Its quest was one for the eternal representation of the spirit. Nature, humans and objects, in Islamic painting, are represented by their spiritual, not their physical and material qualities. The spiritual rejection of the material gave birth to the stylized and abstract ornamentation of the arabesque* (Ali, 1989, Ppxi-xii).

2.3 An Overview of Islamic Ceramics

The rich artistic heritage of the Islamic world is perhaps best evidenced through the medium of ceramics, which has a unique aesthetic identity that is characterized by geometric pattern and calligraphic design. It is one of the world's most celebrated

ceramic traditions, reflecting the cultural and social history of Islamic and Arabic civilization, distinguished within history for its creativity and originality.

> *"Islamic architecture is more than just a spectacle of domes and minarets, perfumed pleasure palaces and exquisite turquoise tiles; it is a true expression of a rich culture that has unified countries….Islamic buildings express the religious beliefs, social and economic structure, political motivation and visual sensibility of pervasive and unified tradition"* (Michell, 2002, p7).

This art is exhibited within many world museums (for example, the British V & A, the Ashmolean Museum Oxford or Le Louvre in Paris), where the importance of this art can be seen through the history of art and design in innovation and the invention of products. According to Kuiper (2010) historical developments have lead to the emergence of Islamic visual arts, each with varying and identifiable forms of artistic features, and the uniqueness of some techniques of artistic creativity over others. Behrens-Abouseif and Vernoit (2006) observe "that the arts of that era were vibrant and diverse, making ingenious use of native traditions and materials or adopting imported conventions" (Behrens-Abouseif and Vernoit, 2006, p446).

Generally speaking, Islamic art is defined as the art developed by those artisans whose religious orientation is Islam, for the indigenous people who lived in predominantly Muslim societies, for purposes that are unique and peculiar to Muslim culture and values (Blair and Bloom, 2003). Grabar defines Islamic art as:

> *"…a historical phenomenon that was formed in the third decade of the seventh century and that grew and developed particularly in spectacular fashion. It refers, to a culture or civilization in which the majority of the population or at least the ruling element profess the faith of Islam"* (Grabar, 1987, p2 & 4).

Piotrovsky providers a broader definition of this concept, describing it as:

> *"…the art made by people who profess the faith of Islam. The characteristics of Islamic art are: abstract designs, a wealth of rich decoration, and a tendency to*

avoid human or animal shape. This may be summarized in one single and all-embracing expression: the language of Islamic art" (Piotrovsky, 1999, p13).

The Islamic ceramic wares have historically been characterized though the application of red earthenware clay; the predominance of blue and turquoise colour; green wares; yellow staining; black ware; tin glaze; lusterware and Zillij. Muslim artists and craftsmen have excelled in a range of forms, including mosque and palace architecture, calligraphy, painting and the decorative arts, including metalwork, carvings, mosaics, pottery, textiles, and carpets (Brend, 1991).

The importance of Islamic world art and ceramics has been clearly elucidated by different contemporary research. By way of illustration, the Museum of Islamic Ceramics (1998) in Egypt states that Islamic pottery and ceramics attained an advanced level of development that surpassed their contemporary counterparts. The King Faisal Center for Research and Islamic Studies (1985) also comments on the uniqueness of its components and its original contributions to modern science, culture and the arts. Farzanyar is of the opinion that:

> *"…the essence of Islamic architecture is spirituality. The spirituality of Islamic architecture concerns the expression of the doctrine of divine unity and its metaphysical and cosmological corollaries. These truths determine the intellectual content of spatial and plastic forms in Islamic architecture"* (Farzanyar, 2005, p12).

In addition, Watson (2004) states that the entire 'Islamic pottery' collection presented in museums and within historical writing clearly reflects much about transformative processes, as well as simultaneously informing about the real production of fine pottery in the Islamic world in the past 1200 years.

2.4 The Decline in Islamic Decoration

Despite such a rich and vital cultural heritage, there is growing concern that this legacy is being eroded through the increasing influence of Western culture. Recent academic research shows that the Islamic aesthetic has been declining with the overall decline of Islamic art forms. Ali Bin Naye (1993) argues that "since the

sixteenth century, the political, economic and social factors that had caused the decline simultaneously led to the penetration of Western cultural trends in the Islamic world" (Ali Bin Naye, 1993, pII). This, in turn, led to the development of Western art styles in each of the Islamic countries in the Middle East and North Africa, including Turkey, Lebanon, Syria, Egypt, Tunis, Iraq, Morocco, Jordan, Palestine, the Arabian Peninsula and Iran. Kuiper (2010) states that the changing dynamics of Islamic visual arts have influenced and been influenced by Western forms of artistry. Cooper (2000) illustrates that, when compared with the Islamic art and ceramic during the nineteenth century, the general standards of most crafts has fallen.

Regarding this gradual erosion of Islamic history as well as arts and culture Joody (2007) states that:

> *"We feel painful about the actual transformation of the contemporary Arabic, and Islamic art, influenced by the Western oriented arts and styles. This is because of the changing nature of civilization and ideology. However, this will reflect in the future in our society where the decay in the Arabic art, history and knowledge are replaced by Western values"* (Joody, 2007, p10).

Albagdadi (2004) believes that the use of Arabic calligraphy has become very weak when compared to other art forms. Gareib (2001) states that we inherited a huge revolution from the Arabic calligraphy arts and that we did not take enough care in the field of its study and preservation. Rogers (2007) believes that the richness and diversity of Islamic art has long been poorly understood by the public at large, leading many to believe that the history of Islamic art somehow 'ends' in the early 19th century, and assumed an era of decline.

In recent years, the environment has influenced the attitudes of artists to ceramics, although this is not necessarily reflected through the culture of Islamic Art in Kuwait and the Middle East. For example, in Kuwait, the local artist Eisah Mohammed presented his ceramic art works about Red Indians in America and used Indian tents and symbols of animals to describe the unfamiliar style of an environment

different to his own (Kazeal, 2003). The pottery works of the artist Ali Alawad presented Greek writing and stamps and stones that had been found in Hellenic Pagan places of worship. In addition, in the 6th Cairo International Biennale for ceramics (2003), only three artists used the calligraphy that traditionally distinguishes ceramic works originating from the Arab world. Regarding contemporary attitudes in Arabic Art, Abo Rashid (2002) suggests that the range of Arabic arts is now on a par with contemporary European Art, as many contemporary Arabic artists have been influenced by the culture of European artists such as Leonardo de Vinci, Anglo or Van Dyke. Ghebor (2006) agrees with Abo Rashid, stating that the majority of Arab artists lack an awareness of any Islamic artistic legacy, tending instead to follow the European styles from where they studied.

2.5 Architectural and Globalization Trends in Kuwait

The rapid economic development of many Arab states has resulted in increasing imports of goods and services from the West and as a result is creating a material culture that is predominantly global. According to Chaker (2003), international trade in cultural goods increased five-fold between 1980 and 1998. This illustrates that the global cultural industries, particularly those in the West, have been successful in exporting their products to other parts of the world. While such affluence is welcomed by much of Islamic society, there is an awareness that Arab identity is under threat from a material culture that symbolizes foreign values.

The diminishing identity of Islamic visual culture is particularly evident through the recent architectural development occurring in the Arab states. The building construction revolution in the Gulf countries has dramatically increased momentum in recent years, with ever-increasing demand for spaces for living, working, health, education and entertainment. This may be related to the significant population growth experienced by Kuwait since the 1950s. For example, in 1950 the population was 152,000; in 2002 it had risen to 2,023,000, with a predicted

increase to 3,219,000 by 2025 (UNESCO, 2002). This growth has created a massive demand for the building of both private housing and related infrastructure, like schools, hospitals, and commercial premises. The Minister of State for Housing, Abdullwahed Al Awadi, states the completion of the housing plan includes the implementation of about 60 thousand housing units for Kuwaitis (Aldosery and Alhumsey, 2007). The public authority for housing welfare in Kuwait is currently implementing a plan to create five complete new cities and new urban areas. Whilst such enormous projects will clearly demand the use of huge amounts of building material, there is little current evidence that they will incorporate traditional Islamic ceramic decorative detailing within their design and construction.

Despite this massive growth, the majority of new building projects seem to pay regard to the rich heritage of Islamic art or culture, thus potentially harming the cultural identity of Islamic society. The adoption of a European building style was viewed in many Islamic countries as an opportunity to progress in a more "modern" direction. The whole of Islamic secular architecture from the middle of the 19th century was therefore strongly influenced by models from Western colonial states, including Kuwait (Hattstein and Delius, 2000; Petersen, 1999).

It has been argued that the contemporary architecture of the Arab world has been exposed to outside influences that have caused its alienation from its particular sense of identity and, thus, to lose its character (Omar, 2000). Khattab (2001) adds that:

> *"The Arab city has lost, whether intentionally or unintentionally, its local image, with architectural development mainly following the prevailing international trends without addressing the Arab tradition. This has resulted in a loss of identity and a separation between the Arab city's past and present, as well as a concern for its future"* (Khattab, 2001, p1).

Alrashed (1993) believes that in modern oil countries, money is used to attract and import the ideas of foreign architects, which creates a diminishment in the value of the Arabic cultural heritage. The KOF 2007 index of globalization has ranked

Kuwait 3rd in the Arab world (Foaad, 2007). The UAE was ranked first followed by Jordan, Kuwait, and then Bahrain. Almutawa (1994) states that Kuwaiti architecture is an integral part of Islamic architecture and almost all the Western-styled buildings in Kuwait in the last decades were triggered by the rapid influx of oil money. In addition, Anderson and Al-Bader (2006) believe that if it remains unchecked, the negative effect of globalization will lead to total debilitation or eventual disappearance of the pre-oil patterns of architectural designs in the Gulf States, including in Kuwait.

Many international architectural practices have won design competitions for major buildings in Kuwait, including Kenzo Tange (Japan); Jorn Utzon and Arne Jacobsen (Denmark); Sune Lindstrom and Malene Bjoen (Sweden). One of the first major commissions was for the terminal building at Kuwait's International Airport, awarded to Kenzo Tange. The Japanese architect aimed for the structure to serve as both a grand symbol for Kuwait and its primary entry point, and in order to accomplish this, he shaped the plan in the form of the Boeing 747, a global symbol of world transportation (Anderson and Al-Bader, 2006). This did not include an acknowledgement of traditional Islamic style, however. Abderezak and Tahar (2004) explain that in Kuwait city diverse forms of traditional buildings were replaced by modern ones. Buildings that portray Western ideas and style are visibly erected across Kuwait without regards to cultural identity, resulting in mixed expression of cultural values that erodes the traditional pattern of building. He stated that this development led to a remark by the daughter of the Emir of Kuwait Sheikha Hussa, that Arabs and Muslims should have indigenous architecture that should be a projection of our spiritual beliefs and way of life.

Mahgoub (2007) illustrates the nature of such erosion of architectural identity in Kuwait through a study of Kuwaiti architects expressing cultural identity in their projects. The research methodology employed by Mahgoub included a survey using a standardised questionnaire; focused interviews; and the analysis of

examples of contemporary Kuwaiti architecture that represents the expression of cultural identity. The finding of the study showed that:

- 88% of the respondents agreed that there is currently no identity in Kuwaiti architecture.
- 94% believed that there should be an identity in Kuwaiti architecture.
- 94% of the respondents believed that there is a need to develop building regulations to impose Kuwaiti identity on architecture.
- 87% of the respondents believed that traditional Kuwaiti architecture should be the source Islamic architecture.
- While 73% believed that Kuwait Municipality was contributing negatively.

These results seem to suggest that there is little special architectural identity in Kuwait, because many buildings follow the international style.

There is a general opinion among Kuwaiti architects that buildings are insufficient to convey cultural identity by themselves. Traditional city spaces provide an important dimension to experience a meaningful reading of the indigenous architecture. When located amongst modern streets and buildings, traditional elements and vocabularies are more like Disney World than authentic architecture. They suggested that the factors that affect the Kuwaiti architectural identity are diverse: natural, cultural, behavioural, economical, material, technical, religious and social. They believe that obligatory guidance and restrictions should maintain a special architectural identity, with some incentives for retaining identity.

Bahnassi (2003) argues that Islamic architecture transformed over a period of time from large tents in the countryside to huts in villages, then to buildings and long-standing monuments in cities. However, in this period, the architecture conveyed its original form and characteristics which were compatible with human needs, traditions and environment. Modern architecture can be argued to have broken the link with this steady development due to the need for an easy and simple architectural style ushered into Islamic countries following the modernisation of the Western city through deeply penetrative Western influence. Undoubtedly, the

acceptance of Western architecture found its justification in the development of construction techniques, with materials such as iron, steel, concrete and glass have become the materials of construction and ornamentation. It has therefore become apparent that these technical innovations have inherent implications to both professional architects and the Kuwaiti people in terms of losing cultural values and techniques of buildings attributed to their societies for centuries. Bahnassi further asserts that the modernist oriented architects deformed the language of architecture, which was considered as the historical language used to express human traditional human values. Critics argue that modern architecture has little identity and does not help man live in his social and historical environment, whereas in the past architecture was a symbol of national pride and norms. The call for authenticity starts by awakening our historical awareness of Islamic architecture. It is regretted that our architectural culture relies on studying Western architectural history more than it relies on Islamic architectural history. This manifests in our educational curricula which give importance to theories of international architecture without delving into Islamic architecture. This is ascribed to the great number of references about classical architecture (Greek and Roman), Christian architecture (Gothic, Romanesque and Byzantine), Renaissance architecture and after.

While the free movement of ideas and influences is healthy within art and design, in an increasingly global environment it is evident that the Arab world feels the pressure of Western values as a potential threat to traditional Arab and Islamic cultural values and craft processes.

2.6 How Globalization Impacts on Islamic Arts and Civilization

Globalization is a worldwide phenomenon that affects global culture and values. Hence, the penetration of Western values through the process of globalization has made a tremendous impact on Islamic art and civilization.

Cultural identity is a symbol of civilization reflecting its history and life, its custom, its social life, social behaviour, attitudes, beliefs and traditional values. Examples of such culture can be found in museums, galleries and historical buildings; some of these can be highly specialised, and may represent a nationalistic definition of culture. The importance of culture and tradition is illustrated by Veltman (1998) who defines it as "the importance of cultural objects which have a symbolic value in creating a collective memory for a nation or a civilisation…. to impose simplistic evolutionary laws on culture which undermine its enduring aspects" (Veltman, 1998, p2). Prince Sultan Al Sa'ud states that traditions of human societies should be considered as dynamic and reflect the collective experience of the past social beliefs, and technology that are important toward societal development (Facey, 1999).

Globalization harms cultural identity, having negative repercussions on the socio-cultural, economic and political, technological and religious well-being of the people (Sotshangane, 2002). This has prompted worldwide protest movements to challenge how this phenomenon affects the lives of the people. The dangers of globalization are therefore evident in contemporary society, affecting people's values, behaviour and actions, (their "representation of identity") whether in the field of architecture, art or ceramics (King, 1991).

The importance of understanding the nature of any product should be recognized and suitable within the nature of people's environment and culture that represent their identity. Bode (2008) states that understanding the diversity of cultures is vital for successful export of goods and service. This is based on the fact that people differ globally in terms of cultural orientation and this allows culture to strongly influence the ability to meet consumer needs. To overcome the challenges of globalization on cultures, companies should discard their profit focused orientations and avoid the temptation of ethnocentrism by adapting their business strategies to meet domestic requirements. They should conduct a research that will focus on

cultural needs and orientations of the people through the use of the PEST framework in business methods.

2.7 Relevance of Globalization to contemporary Islamic Arts and Civilization

Having understood the impact of globalization on culture, its impact on the Islamic arts and civilization can be seen to have significant consequences. New modern Kuwaiti cities nowadays appear like Houston or Los Angeles in many regards (Almohanah, 2000). The oilfields changed cities by creating highways, new shopping centres and revolutionary architectural design. Martin (2010) lists two directions contemporary Islamic architecture has taken.

1. One approach is to completely ignore the past and produce Western-oriented architecture that ignores the Islamic spirit and undermines traditional culture.
2. The opposite approach involves a retreat, at least superficially, to the Islamic architectural past. This can result in hybrid buildings where traditional facades of arches and domes are grafted onto modern high-rises" Martin, (2010) *The Future of Islamic Architecture.* Available from: http://islamicart.com/main/architecture/future.html, (accessed 20th March 2010).

Safar (1989) comments that modern society emulates Western culture. For example, today we build, furnish and equip our houses in the Western style and sometimes the tools or machines spread throughout our environment before the West has them. He adds that such changes could become harmful because the excessiveness and extravagance of the West may eventually blunt the creative energies of the indigenous society by inhibiting memories of the traditions of their past civilization.

Thus, Islamic arts and architectural design now face challenges that threaten their very existence. The literature review above indicates that the penetration of Western values through the increased process of globalization has led to a decline in Islamic arts and decoration. This cultural erosion is precipitated by many factors including the emergence of oil in the Arab world and the subsequent impact of Western architectural products and life style, as well as other processes of cultural change that have affected the Islamic cultural heritage. Therefore, the aim of this research is to re-develop and create a new framework that will help preserve Islamic ceramic arts and design, thus reversing its decline.

2.8 Comparative study of relevant contemporary Ceramic Art

In recent times several research studies have emerged on contemporary ceramics that are useful to the understanding of this research work. Examples are drawn from the Paiwanese in Taiwan, from the ceramic culture in Vietnam and from the role of architectural ceramics in contemporary Britain. In this research, the comparative analysis stems from different cultures and backgrounds helping to understand how modern civilization impacts on local cultures and values, not least in art, ceramics and design. The findings of these comparative studies illustrate that contemporary art and architectural ceramic is vanishing due to the effects of globalization.

2.8.1 'Learning from the past, providing for the future' – an exploration of traditional Paiwanese Craft as inspiration for Contemporary Ceramics (Wang, 2006)

This document reports on research which used design as a means of reclaiming the material culture of Taiwan's aboriginal people: the Paiwanese. The material culture is seen as a set of living ceramic craft practices for both present and future needs. The customs and traditions of many Taiwanese aboriginal tribes have almost vanished because of the impact of modern civilisation. This thesis identified

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what the Paiwanese knew about their culture and why they were unable to produce traditional products. The success of this research suggests a model that can be used in design by using new technologies and materials through the re-establishment of traditional products. The understanding generated for regaining traditional craft knowledge is extended with the design of a tea set that draws on this traditional knowledge, narrative and culture. The tea set represents knowledge of a global market. It is argued that the design process used can guide a design that transforms the cultural message and delivers it to a wide audience. The researcher placed himself in the Paiwan tribe's community in order to understand their needs and listen to their stories. This study suggests that to industrialise cultural products can be of benefit, not only in a commercial sense, but also in terms of retaining elements of their original culture. The study has found that the research process and results can be used as educational materials to pass on the knowledge of Paiwanese culture to Paiwanese descendants and to the rest of society (Wang, 2006).

2.8.2 Out of the Mould: Contemporary Sculptural Ceramics in Vietnam (Proctor, 2006)

This research illustrated the dilemma of how to engage with contemporary art issues in what is an increasingly globalized world, without losing a sense of national identity. This is an important issue for the Vietnamese who have struggled for centuries to maintain their independence at great cost. The notion of tradition is certainly problematic, being loaded with ambiguities and, in Vietnam especially, with political connotations. It is not inherently an antonym for the modern. Tradition can evoke the authentic, and is in one sense desirable, while on the other hand, it can convey a sense of limitation and deficiency. However, the groups of ceramic artists that have emerged in Vietnam during the last decades of the twentieth century have responded to a different set of imperatives, some of which are essentially common to those which saw the emergence of a generation of artist potters in the West. These common conditions are a reaction to a perceived loss in

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cultural knowledge, due to the following: the industrialization of many of the processes involved in ceramics; a wider knowledge of the history, processes and design principles related to ceramics; through the introduction of formal education in the field; and an engagement by studio potters and ceramic sculptors in the art market. Driven initially by political expediency, this has been heightened by contemporary artists' desire to not to appear to be derivative of Western forms of artistic expression. The more recent changes in the political system have allowed the development of an art world and art market in which the ceramic sculptors are participating. One of the most striking features of the work of the ceramic sculptors and, indeed, all artists in contemporary Vietnam, is the tendency to hybridity. Such hybridity, quoting freely from the past and including personal as well as symbolic meanings, was not possible previously (Proctor, 2006).

Both accounts, Wang (2006) and Proctor (2006) show that globalization is posing a series of challenges to culture and identity of countries other than Kuwait, and that this is specifically occurring the field of the arts and ceramic design. These authors argue that the only way of withstanding the challenge of globalization is to portray and preserve cultural identity in ceramic form and re-develop it within the contemporary lifestyle by using modern technology.

2.9 Conclusion

This literature reviewed has shown that the main reasons for the decline in Islamic arts and ceramics can be attributed to the impact of Western values and cultures, as manifested in the contemporary form of globalization. Many scholars (Kuiper, 2010; Rogers, 2007; Ali Wijdan, 1989; Ali Bin Naye, 1993; Blair and Bloom, 2003) concur with the view that Islamic arts and civilization have been transformed dramatically due to rapidly changing unprecedented global events. For this reason, the subsequent chapters will extensively examine the conceptual ways of preserving contemporary Islamic ceramic and arts from these challenges. Many scholars (Alkhalldi, 2004; Redwan, 1990) have since spoken of empirical means of

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preserving Islamic arts and ceramic. Alkhaldi (2004) describes such ways of as follows: (a) awakening contemporary and future generations by continuity, and confirming the importance of the Arabic civilization legacy that was inherited from history; (b) Facing the challenge of globalization in the Arabic civilization by utilising all aspects of modern technology, and through the distribution of information via different media channels; (c) To activate the role of major Arab organizations in order to promote, support and develop ways of preserving the Arabic civilization; (d) To develop and enhance ways of documenting vital information on Arabic civilization with a view to preserving them for posterity (Alkhaldi, 2004). Redwan (1990) indicates that building materials are an Arabic necessity, as there will be a rapid growth in demand for building materials in the future. He recommends that Arabic governments should: (a) Increase business through production, investment and exploration in building materials, and to encourage the private sector to invest in this project. (b) Involve new technology to increase production. (c) Enhance research and development centres in order to find suitable substitute building materials.

Finally, the pertinent questions arising from this literature review are: how can this research critically engage with the issue of eroding cultural identity in contemporary Islamic ceramic in Kuwait? Can contemporary Islamic ceramics, ornamentation and arts endeavour to preserve their identity amidst the increased challenges posed by globalization in Kuwait? How can this research help in re-developing Islamic ceramic culture and architectural embellishment in Kuwait? Drawing from the Kuwaiti experience, can this research help deliver the educational message to support the identity of Islamic art in the Arab world?

CHAPTER 3: RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents a detailed description of the research methodology: the methods of gathering data and how they were applied within the research. The conceptual underpinning of this research methodology is to develop a new aesthetic vocabulary in contemporary architectural embellishment in Kuwait. The research methodology is therefore broadly split into two sections: a theoretical approach involving a review of literature and a practice-based approach. This holistic, mixed methodological approach has been devised to obtain data that addresses and underpins the aims of the research. The methodological approach is based on research methodology guidelines commonly applied within the social sciences and art and design research. Ethical issues, access to data, methods of survey design, data collection, issue reliability and validity of the information obtained will be discuss in detail in Chapter Seven.

The synthesization of the data collected gathered from the literature enriches the content of the research, ensuring that the practice component has a thorough, theoretical underpinning. The study examines the loss and impact of the changes to the traditional architectural landscape in Kuwait and explores the re-awakening awareness and interest in the identity of traditional Islamic visual culture. This may help in the development of new ceramic architectural products for possible use by architects and designers in Kuwait.

Ethnographic (cultural, Social and economic) surveys were undertaken in three key areas:
- Ceramic markets and distribution networks survey.
- Architects survey.
- General public survey.

Each of these surveys adheres to the stated research strategy, exploring issues such as sampling; access to information; ethical checks; design of survey; analysis

of data and validity of the information translated into English from its Arabic version.

The second part of this chapter deals with the nature and approach of the practice-based research. This approach focuses on eight different case studies in architectural ceramic research and development, the outcomes of which are listed within this chapter.

3.2 Ethnography Research

This phase of the research focuses on conducting an exploration of the sociological and cultural identity of Kuwait, discussing the methodological approach adopted in this study within the context of ethnography. According to Ten Have (2004) ethnography is concerned with the issue of how qualitative researchers observe 'natural' situations in which people live their lives. For this reason, it is a commonly used style of research within social and cultural anthropology.

This research aims to examine the relevance of cultural attitudes and towards of contemporary ceramic and architecture in Kuwait in the 21st century. Attempts will be made to apply appropriate research methodology to integrate the nature, cultural characteristics of the people of Kuwait, their attitude towards current architectural designs and ceramics found in the Kuwaiti market. The ethnographic basis of this study will analyse different segments of the Kuwaiti society, focussing on cultural background, social orientation and beliefs of the people.

3.3 Theoretical Research

The review and use of theories constitutes one of the core elements of the adopted research methodology. Through secondary research the study engages with the

review of relevant secondary sources of data where theories of social change and globalization were reviewed from a sociological perspective. This theoretical framework is designed to facilitate the process of investigating the main factors leading to the current changes and transformation in the nature and pattern of architectural design and ornamentation in Kuwait. Understanding theories of globalization will help to explain the theoretical rationale behind the loss of the cultural identity.

3.3.1 Ceramic Markets and Distribution Networks Survey

An important element of the research process has been the use of surveys to elicit information from targeted groups within Kuwaiti society. The sample survey approach that has been adopted seeks to obtain general information about the knowledge and attitudes relating to the application of ceramic materials within architecture. The adopted research strategy consists of sample surveys of targeted groups, including stakeholders in Kuwaiti ceramic markets. The survey method was chosen because of time constraints and the cost of undertaking a population survey.

3.3.2 Architects' Survey

This section focuses on explaining the research methodology applied to the survey of professional architects that have worked in Kuwait. An in-depth analysis on interview methodology is discussed in order to assist in obtaining qualitative narratives. A qualitative method was used through semi-structured interviews, which were then contextually analysed. Interviews are an interactional communication process between two parties, at least one of whom has a predetermined and serious purpose that involves the asking and answering of questions (Stewart and Chash, 2003). The interviews covered a wide range of respondents who have professional links with the building industry and architectural / engineering projects in Kuwait.

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Regarding the invaluable nature of the interview method of data collection, Denscombe (1998) argues that semi structured or unstructured interviews are most commonly one to one, held in a meeting between one researcher and one informant. These are relatively easy to arrange and enable the opinions and views expressed to stem from one source, making it fairly straightforward for the researcher to locate specific ideas with specific people. A third advantage is that the one to one interview is relatively easy to control. The researcher only has one person's idea to grasp and interrogate, and one person to guide through the interview's agenda. Therefore, this study applies a qualitative research approach as a method or tool aimed at capturing the following:

- The unique nature of contemporary architecture in Kuwait.
- The relationship between daily contemporary life and architecture in Kuwait.
- Identifying the stakeholders and their responsibility for modern architectural design.
- Discovering the quality and individual opinion and clarifying the common aesthetic materials stereotype in contemporary building in Kuwait.
- Opinions and attitudes relating to the use of ceramic materials in contemporary building in Kuwait.
- The views of architects on traditional Islamic ceramics and the extent of their awareness and use of ceramic materials within the context of contemporary Kuwaiti architecture.

This process has necessitated a critical look at contemporary architectural attitudes in Kuwait, by inquiring/interrogating (through a questionnaire) the fundamental factors behind the nature and dynamics of the current state of architectural design in Kuwait. Seeking first hand information from professionals and experts on the building industry in Kuwait served as a useful tool for conceptual underpinning of the research aims.

3.3.3 General Public Survey

This section explains the survey conducted in Kuwait in order to gain the opinions of the general public. The survey adhered to the guidelines underpinning social sciences research, dealing with issues such as sampling and population, ethics and access, design of the survey, validity and reliability, reporting and analysis.
The survey aimed to:

- Examine whether there is growing concern and interest in the erosion of Islamic cultural heritage and identity in Kuwait.
- Measure peoples' attitudes towards the architectural environment and their awareness and concerns on the dwindling cultural identity in Kuwait.
- Examine public preference of identity in new buildings (private, public and corporate).
- Examine the awareness of society in Kuwait towards traditional Islamic ceramics.

3.3.4 Translation Tools used for the Research

The surveys and interviews were conducted in either English/Arabic according to the native language of respondents or their respective preferences. According to Keats (2000), a research interview should be conducted in the respondent's preferred language. However, if the respondent prefers to use a second language such as English, but is not proficient in that language, a written version should also be made available. More often cross-cultural researchers tend to use a 'back-translation' method to translate and compare versions from the original language in order to resolve the problem of inaccurate translations. In this paper, the translation was conducted by the researcher, and then checked by fellow postgraduate students at the University of Central Lancashire, who are fluent in both Arabic and English. This was done in order to check the clarity of the information obtained

(see translation of surveys, interview including the permission in Arabic see appendix page 398-408).

3.4   Practice-Based Research

The practice-based element of the research is used to developed proposals for a new aesthetic vocabulary within contemporary architectural embellishment, whilst simultaneously aiming to help preserve the aesthetic heritage of Islamic Ceramic Art.

3.4.1   The Range of the Practice-Based Research

The method of practice-based research in Arts and Design depends on the unique/creativity outcomes desired through research. The methodology should be responsive, driven by the requirement of practice and the creative dynamic of the art/design work (Gray and Malins, 2004). It is essentially qualitative, naturalistic and reflective. Wheeler (1996) states that practice-based research involves determining the researcher's art and design work is applied through practice as the primary means of 'testing the assumption', and is itself evidence by which conclusions can be found by reflecting on this practice, deduction analysis and assessment.

This research seeks to relate the various strategies and techniques of practice-based research to architectural ceramics. Architectural ceramics denotes products made from clay which constitute part of a building or are of such a scale that they may be regarded as existing within an architectural environment and making a substantial contribution to it. This term can also describe methods of making tiles, bricks, and large-scale sculpture, faience and terracotta, as well as roofing tiles and other decorative designs (Van Lemmen, 2008). Rather than a purely theoretical approach, the development of ceramic ware is dependent on a

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combination of tacit knowledge, learned skills and practical experimentation; the simultaneous development and control of clay body, glaze, and firing, within a given design.

The researcher believes that it is imperative to develop personal experience of materials and processes relevant to Arabic ceramics, as a means of understanding the cultural significance of their unique aesthetic characteristics. Thus, as part of the programme, an early phase of the research involved a series of experiments focusing on the development of appropriate skills, processes and knowledge, leading to a deeper understanding of the field.

The research began by examining the primary materials and technical process specifically related to Islamic ceramic ornamentation

3.4.1.1 The First Phase: This involved a preliminary investigation and analysis of the materials and processes of Islamic art through the application of workshop based activity. This approach allows an individual to practice by using initiatives to influence and improve learning (McNiff and Whitehead, 2009).

A. An Investigation of Ceramic Technology; the characterisation of Islamic Ceramic Wares.

Colour plays an important role in all Islamic ceramics through the application of glazes, slips and applied pigments, characterized by turquoise, blue, green, metallic, white, black and yellow (for more details see chapter 6). This preliminary investigation within practice-based research was followed by a broader investigation of the major characteristics of Islamic glazes. Tests were conducted to replicate the visual properties of traditional Islamic glazes. Whilst it was important within the context of this project that the visual appearance of glazes closely resemble the aesthetic of traditional glazes, it was not necessary to attempt to replicate the exact material or chemical formulation of traditional glazes.

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B. An Investigation of the Ornamentation Design Process.

A visual investigation of ceramic ornamentation design was undertaken, using digital technologies to analyse the structure of geometric ornamentation and calligraphic styles. Abas and Salman (1992) state that "Islamic patterns provide a rich source for artists, designers as well as scientists" (Abas and Salman, 1992, p52). Initial research covered the following areas:

- Arabic calligraphy.
- Geometrical patterns.
- Flowers and plants leaves.

C. An Investigation of Architectural Elements.

This section of the research focused on an investigation and characterisation of architectural elements that typify traditional Islamic architecture. This is important to develop an understanding of Islamic architectural theories (Itewi, 2007). This research therefore examined the nature and dynamics of ornamentation within the landscape of Islamic architecture. Within the context of this research, Islamic architectural ceramics includes tiling and other forms of embellishment applied within mosques, Minbar and Mihrab; Arches, Minarets, Domes and Muqarnas. These are important defining features are what specifically defines Islamic architecture.

The true characteristics of Islamic ceramics come from the inter-relationship of repetition, symmetry, pattern, colour and calligraphy, with rarely any figurative representation. (For more details about Islamic ceramic analysis and historical views see chapter 6)

3.4.1.2 The Second Phase: This phase formed the major body of research, involving eight practical case studies concerned with the development of prototype schemes of architectural embellishment. Each case study aimed to simultaneously

reflect aesthetic properties found within traditional Islamic ceramics, offering new creative opportunities for architects and designers seeking to introduce an Islamic aesthetic within their work.

Case studies allow a researcher to collect and present information in a way that provides context, making them useful for demonstrating how something happens or works in real life situation. Naumes (2006) states that research case studies are designed to both explore and present analytical results. Case studies therefore allow researchers to place the study in the context of the environment in which it occurs, potentially enabling researchers to study complex processes in their entirety.

The case studies examined how traditional techniques could be combined with new technologies, as well as how they could be applied and adapted to modern methods of craft and industrial ceramic manufacturing production. As the majority of products used within the context of architectural embellishment (tiles, bricks, façade materials) are used in repetition, the investigation dwelt on the modularised elements of geometric ornamentation and calligraphy as the primary reference.

1. Low-relief Calligraphy panels;
2. 3D Geometric tiles (Zeilij Structure);
3. Kofic Calligraphy Wave (Live project - Muneerah Al-Saeed Mosque in Kuwait);
4. Geometric Fretwork / Latticework Screen;
5. 3D deep-relief Calligraphy;
6. Low–relief poetry calligraphy tiles;
7. Contemporary Calligraphy Brushwork panels;
8. 3D Muqarnas: 2 designs - 'Arrow' Muqarnas & 'Dome' Muqarnas

In all cases, each project attempted to reference traditional Islamic style, adapted through various design processes, to suit a more contemporary combined environment. New embellishment design proposals and the new knowledge emerged from this; a fusion of traditional aesthetic style, contemporary design,

traditional hand forming ceramic processes and new, digital technologies. Wherever appropriate, digital technologies were employed: 3D Solid Modelling (Solid Works software), CNC Rapid Prototyping; Laser Cutting technologies.

The importance of applying new technology within the research, development and realisation of the case studies is illustrated by Bahnassi (2003), who states that the Islamic architectural features are the invariable that which should be retained in modern architecture. Change and development should be confined to the requirements of modernity, which are as follows: (1) taking advantage of new techniques (electronic and electrical); (2) adapting to planning styles influenced by technology; and (3) take advantage of these elements to infuse Islamic architecture with new elements more suitable to the spirit of the age.

3.4.1.3 The Final Phase: following the completion of the case studies, visual presentations of each project were prepared and disseminated to architectural practices that undertook the initial architect survey. The aim of this stage was to establish whether the architects perceived any merit or value in the proposals and whether they might consider incorporating such detailing in future projects. This requires an outward-looking attitude and an awareness of other research cultures and paradigms (Gray and Malins, 2004). The survey acknowledged a correct ethical practice, through sending each architect a formal letter requesting permission to publish their responses (see the letter in the appendix page 396).

The design of the survey was based on a semi-structured method which involved asking the respondents opinion on the design proposals. The survey itself was divided into a series of qualitative questions related to the Islamic ceramic project on the following areas:

A. Open question seeking the opinions of the architects on the results of the case studies by asking: *What are your thoughts on the proposed design ideas for Architectural ceramic embellishment*

B. Seeking the opinions of the architects on whether they felt the projects undertaken within the case studies conveyed a sense of Islamic style by asking: *Do you think they reflect traditional Islamic design in a contemporary way? This divided into multiple choice which is A) Yes. or B) No. Plus a request for any comments.*

C. Closed question asking the architects if they felt the proposed designs were applicable to contemporary architectural design in Kuwait by asking: *Do you think they would be appropriate for application on contemporary architectural design in Kuwait? This divided into multiple choice which is* A) Yes or B) No.

D. Seeking permission to publish the reviewers name and comments by asking: *Would you be happy if I published your name and opinion with my PhD thesis? This divided into multiple choice:* A) Yes or B) No (See the appendix for the design of the survey page 397).

Following receipt of responses from the architects, the answers were then analysed and discussed, drawing conclusions from findings to support and validate the research project.

The case studies forming the practice based phase of the research will be presented in an exhibition within the School of Art, Design & Performance at the University of Central Lancashire. This should be seen as part of the final PhD submission, accompanying this thesis.

3.4.2 Validity of the Practice

As practice-based research is still in its relative infancy in terms of an appropriate and validated methodology, it largely depends on adopting robust criteria for verifying the reliability / validity of the research results is devised as appropriate to

the form of the enquiry (Malins and Gray, 1995). The nature of the research aims have required a significant proportion of the research to be based on practice, as the final phase of the project in particular, required an evaluation and response to actual prototype artefacts. The presentation of 'real' objects to architects, designers or potential markets, offers a more convincing argument for potential future use.

3.5 Conclusion

The methodology of this project aimed to combine both data rich theoretical research and practical-based research. Both methods adopted for the purpose of the research were synthesized in order to achieve the outcome and fulfil the aims of the research. Despite the steps taken in terms of research methodology, this study discovered that there are still limited examples of academic research in the field of Art and Design. Until such a time a specific methodology is defined for art and design research, it has been deemed appropriate to apply a 'mixed methods' approach, employing a combination of practice-based research with theory to serve as suitable framework for constructing a valid piece of investigation.

CHAPTER 4: GENERAL BACKGROUND OF KUWAIT

4.1 Introduction

Fundamental to this research is the background and the social environment of Kuwait, including studies on its social, cultural, political, economical and environmental circumstances. These analyses will help illustrate the changes that have occurred within Kuwati culture and society and more specifically, those changes that have influenced the aesthetic vocabulary of contemporary architecture in Kuwait.

This chapter will examine the general background of Kuwait; its history, demography, religion, topography and climate. The research will also examine the changes in the economy, labour force, population growth, construction and land expansion.

4.2 General Background of Kuwait: its History, Geography, Economy and some Socio-Cultural Perspectives

Kuwait is an important member of the Islamic world, geographically located in the north-eastern corner of the Arabian Peninsula, bordering Iraq in the north and West, Saudi Arabia in the south, and the Persian Gulf in the east. It is located beside the two great historical Islamic cities of Makah and Madinah, where the holy message of Islam came down to the prophet Mohammad. It has an important historical connection with the great Islamic empires and civilizations of Abbasied Caliphate in Baghdad, the Mamluks in Persia and the Ottoman Empire in Turkey, which are held as the historical the roots of Islamic civilization.

Kuwait covers an area of approximately 6,177 sq mi (16,000 sq km). Geographically, the country has a low and sandy terrain that is barren and sparsely populated. Kuwait has a continental desert climate, dry inland and humid along the coast (The New Columbia Encyclopaedia); Summers are intensely hot and dry with

average highs ranging from (42 - 50C) (108-122 F), the dry season being between April and September; winters are short (December and February) and cool, averaging (10-30C) (50-80F), with limited rain (The Ministry of Planning in Kuwait, 2007). Annual rainfall averages only from 1 to 7 inches (25 to180 mm), chiefly between October and April, though cloudbursts can bring more than 2 inches (50 mm) of rain in a single day (see figure 4.1) (Encyclopædia Britannica, 2008).
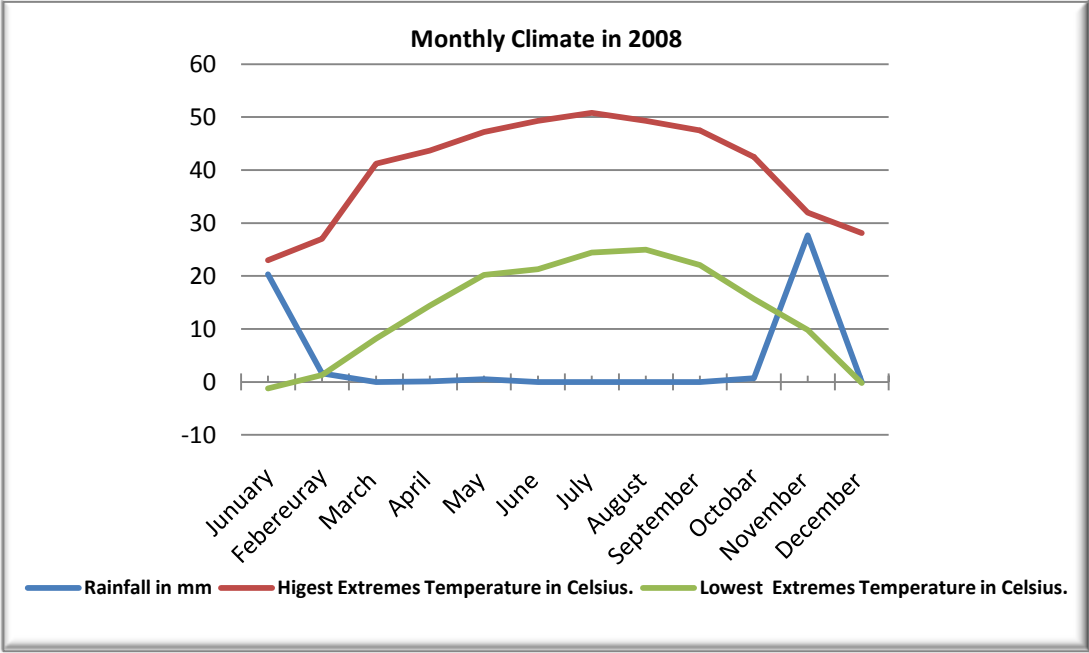
Figure 4.1: shows the climate in Kuwait during 2008 (edited from Annual Statistical Abstract, 2008).

As a result of the climate in Kuwait, the construction industry has to use suitable building materials that are both able withstand extreme temperatures and wherever possible insulate the interior against high temperatures. Durability is also important, as sandstorms are relatively frequent.

4.3 The History of Kuwait

Kuwait as an independent political entity dates from 1613. In the 17th century, the Bani Khalid were the overlords of eastern Arabia and their domain stretched from Kuwait to Qatar. In about 1672 Barrak Bin Ghuraif, the Amir of the Bani Khalid, built his Kout (a small house in the shape of a fortress situated near water) in

Qurain (Alhaji, 2004; Kuwait Information Office, 2007). The first building, a store building for food, was built beside the beach, after which they started building the first mosque, then the first house and the first shop (Alhatem, 1980). The first Muslim town was located in the island of Failika and the coastal area of Kathima nearby the town of Jahra (Petersen, 1999). These developments later metamorphosed into present-day Kuwait. In 1897 Kuwait was made a British protectorate, ending in 1961, when Kuwait became an independent sheikhdom, with Sheikh Abdullah Al-Salim Al-Sabah as its ruler (Centre for Research and Studies on Kuwait, 2007; The Columbia Encyclopaedia, 2007). Following independence in June 1961, Kuwait faced its first major foreign policy crisis arising from Iraqi claims to its territory. A threatened invasion by Iraq was quelled due to the U.K.'s positive response to the Amir's request for assistance. Kuwait presented its case before the United Nations and preserved its sovereignty. U.K. forces were later withdrawn and replaced by troops from Arab League nations, which were withdrawn in 1963 at Kuwait's request. On August 2, 1990, Iraq invaded and occupied Kuwait, but later U.S. efforts through a multinational coalition under UN auspices, initiated military action against Iraq to liberate Kuwait. Arab states, especially the other five members of the Gulf Cooperation Council (Saudi Arabia, Bahrain, Qatar, Oman, and the United Arab Emirates), Egypt, and Syria, supported Kuwait by sending troops to fight with the coalition. Many European and East Asian states sent troops, equipment, and/or financial support. After liberation, Kuwait concentrated its foreign policy efforts on development of ties to states that had participated in the multinational coalition. Notably, these states were given the lead role in Kuwait's post-war reconstruction (Alkatras et al, 1995; Background note: Kuwait, 2007).

4.4 The Population of Kuwait

The population of Kuwait has been increasing significantly since 1965. The ministry of planning in Kuwait produced population data in the Annual Statistical Abstract 2007 comparing the changes for every 10 years from 1965-2005. In 1965 the total

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population was at 467,339 equating to a population density of 26.2 residents per kilometre square. In 1975, the population density rose up to double at 55.8 residents per kilometre square with the total population increasing to 994,837. The ratio of Kuwaiti to non-Kuwaiti was almost 1:1 in this period. In 1985 the population density reached 95.3 residents per kilometre square with the total population climbing to 1,697,301 million, including 470,473 Kuwaitis and 1,226,828 non-Kuwaitis; showing an increase in the ratio of non-Kuwaiti's to Kuwaiti nationals of 2:1.

In 1995, the population density reduced slightly for the first time to 88.4 residents per kilometre square. This is thought to be explained by the occurrence of the Iraq war. There were 1,575,570 residents - 653,616 Kuwaitis and 587,101 non-Kuwaitis. The non-Kuwaiti populations were reduced to more than half in 1995 compared to 1985. By 2007, the population of Kuwait increased to 2,410,829 made up of 944,758 Kuwaiti and 1,446,071 non-Kuwaitis. At the time of writing, the current population has again expanded to over 2.5 million citizens.
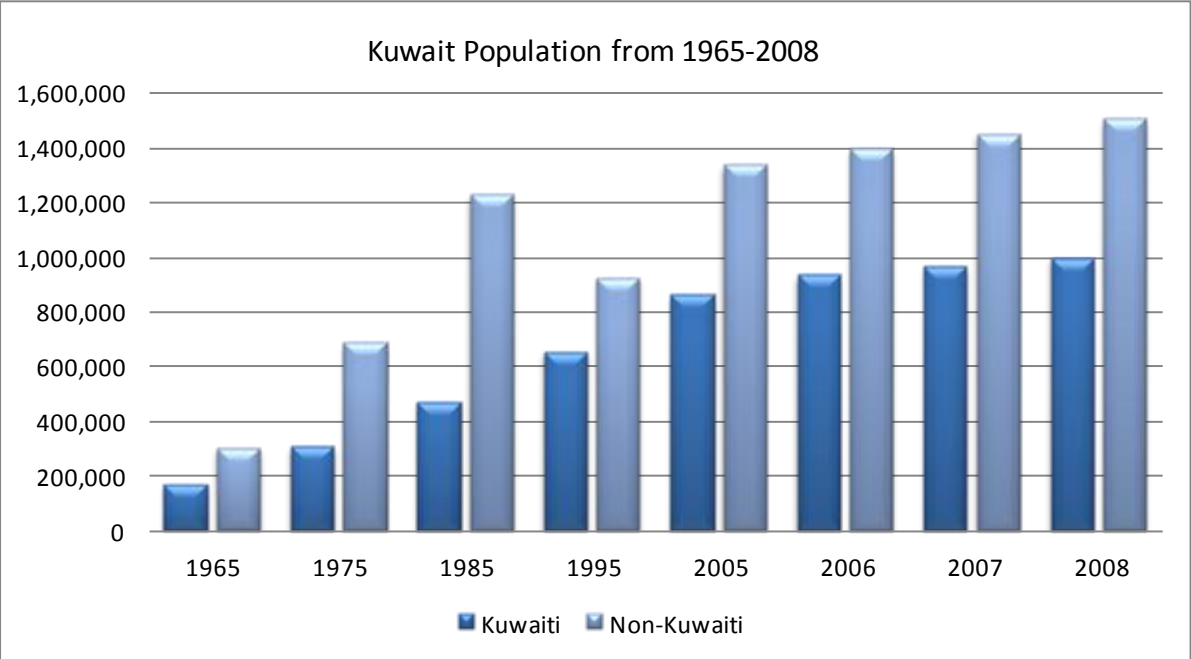
Figure 4.2: The table shows the population of Kuwaitis and non-Kuwaitis between 1965-2008 (adapted from Annual Statistical Abstract, 2008).

The labour force in Kuwait shows that non-Kuwaitis dominate the percentage of work and jobs; in 2001 the total labour force is reported as being 1.214 million, of which 80% were expatriates. Most of the Kuwaiti labour force works in the government sector (almost 93%), while most of the non-Kuwaiti labour force (90%), work in the non-government sector (inclusive of 28% working in the household sector) (United Nations, 2003). In December 2006 the population was estimated at 3,182,960, of which approximately 1 million were Kuwaiti citizens and 2 million non-Kuwaiti citizens. In addition, the statistics in the labour force between 2004-2008 show that in terms of numbers, the Asian countries comes first, followed by the Arabic countries, North America, the European countries, the African countries, Australia and New Zealand, and then the South American countries (see table 4.1) (Ministry of Planning in Kuwait, 2007 and 2008).

Group Nationality	Year				
	2004	2005	2006	2007	2008
Arab Countries	302,227	326,578	366,631	405,450	428,102
Asian Countries	513,210	572,259	625,486	691,884	700,614
North American Countries	5,057	5,902	9,489	11,081	11,064
European Countries	4,686	4,919	5,715	6,228	5,963
African Countries	1,323	1,557	1,843	2,214	2,470
Australia and New Zealand	467	514	795	871	797
South American Countries	225	249	277	334	322
Total	**827,195**	**911,978**	**1,010,236**	**1,118,062**	**1,149,332**

Table 4.1: Expatriate labour force in private sector by group nationality.

Over 90% of the population live within a 500-square kilometre area surrounding Kuwait City and its harbour. The first language for Kuwaitis is Arabic (official) and English is also widely spoken (Kuwait, 2007). The population of Kuwait is thus increasing dramatically, putting a lot of pressure on the diminutive nature of its

land. As of 2006, the number of foreigners in Kuwait was double that of the indigenous population i.e. the Kuwaitis; such a mix of people from different cultural backgrounds has gradually re-shaped the country.

4.5 Religion

> *"The impact of religion on culture is very significant, and essential for understanding the needs of the individual for privacy, family interaction, and space configuration and orientation. These needs are currently being modified under the influence of higher economic standards and global consumerist trends. Religion is also viewed as a unifying force that integrates the individual with nature and society, a notion opposite to the current trend towards individualism and the display of wealth"*(Mahgoub,2007,p178).

In the pre-Islamic era, people in the Arabian Peninsula essentially consisted of pagans. In the early part of the seventh century A.D Islam spread out from Makah city in the Arabian Peninsula (Bamyeh, 1999). The spread of Islam brought a huge social and cultural transformation in the lives of the people of Arabia. Islam links culture, society, family relationships, financial and social behaviour, and has thus changed the socio-cultural orientation of the people of the region. Omar (2000) states that

> *"…this community has special architectural needs related to their religious teachings, traditions and culture, because Islam is not only a religion, it is a complete way of life, which covers all social, political, economic, educational, cultural, hygienic, and behavioural aspects"* (Omar,2000,piv).

In Kuwait, Islam is the state religion; although the Constitution provides freedom of religion, the Government places some limits on this right. The Constitution also provides that the state has to protect the freedom to practice religion in accordance with established customs, provided that it does not conflict with public policy or morals. Under the Constitution, Shari 'a (Islamic law) is "a main source of legislation" (Executive Report on Strategies in Kuwait, 2000, p100).

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In some societies there are clear-cut differences between culture and religion. However, in Kuwait it is practically impossible to disentangle religion from its culture. That is why there is such a reflection of the identity of the Islamic religion in Kuwait's traditional architectural and throughout the rest of the Islamic world.

4.6 Changing Socio-Economic State

Kuwait was originally a poor, simple society, but since 1946 has become a major petroleum producer, with oil dominating the economy (Alazmey, 2000; The Columbia Encyclopaedia, 2007). After the Second World War the economy was transformed by the discovery of oil (it had actually been discovered before the war) and since then the country has seen unprecedented economic growth (Petersen, 1999). The finding of large oil fields caused a huge influx of foreign investment into Kuwait, which rapidly changed Kuwait into one of the wealthiest countries in the Arabian Peninsula, and brought with it an influx of foreign workers.

When oil was discovered on February 22, 1938 (Kuwait Oil Company, 2009), life changed dramatically. Almost immediately, traditional trades such as pearl diving and shipbuilding were neglected; Alhajy (2004) states that in old Kuwait, the society was "conservative". Although life became easier because of the more prosperous economy, with people being more concerned with materialism and are influenced by science and cultures in all areas of life (Alazmy, 2000; Ayoub Husan, 1984). In addition, the new civilization has demolished many of the Kuwaiti costumes, traditions and old customs.

The economy of Kuwait is now so prosperous that it has become the sixth richest country in the world. Kuwait imports a wide range of products ranging from food products and textiles to machinery, construction materials, vehicles and clothing, its most important trading partners being Japan, South Korea, United States, China, the European Union, the UK, Saudi Arabia and India (The World Factbook, 2008). This has affected the way people work and the jobs they formerly had.

Many of the traditional jobs have disappeared, as society abandoned them in order to adapt to a new way of living. Life became more comfortable as people had more money, and there have been many new architectural projects to accommodate the growing population and business community.

4.7 Kuwaiti Foreign Relations

Strategic cooperation between the United States and Kuwait increased in 1987 with the implementation of a maritime protection regime that ensured the freedom of navigation through the Gulf for 11 Kuwaiti tankers that were reflagged with U.S. markings. This cordial U.S.-Kuwait diplomatic relationship increased Kuwaiti Western re-orientation. The U.S.-Kuwaiti strategic partnership intensified dramatically again after Iraq's invasion of Kuwait. The U.S.-Kuwaiti relationship has remained strong in the post-Gulf War period. Kuwaiti attitudes toward American products have been favourable since the Gulf War. In 1993, Kuwait publicly announced abandonment of the secondary and tertiary aspects of the Arab boycott of Israel (those aspects affecting U.S. firms). The United States is currently Kuwait's largest supplier of goods and services, and Kuwait is the fifth-largest market in the Middle East. U.S. exports to Kuwait totalled $2.14 billion million in 2006 (Background note: Kuwait, 2007).

4.8 Economic Factors Affecting Architectural Development

There is a profound difference in aesthetic style between traditional and modern Kuwaiti buildings, particularly in the huge new construction developments. According to Khattab (2001), the oil boom led to a proliferation of building industries which lured numerous expatriates to provide the needed skills towards the development of modern style of buildings that remarkably differs with buildings developed in the 1970s and 1980s. Regarding this, Hattstein and Delius (2000) observe that:

"Because of international economic and political uniformity, 20th century Islamic architecture can no longer be conclusively viewed in isolation" (Hattstein and Delius, 2000, p592).

The speed of architectural development has also changed dramatically, as the new city has replaced the old buildings. Al-Gunaim (2001) notes that it is expected that the growth in the number of new buildings and architecture projects in Kuwait would double during 2000-2100. This explains the need for buildings and facilities that have capacity for more people, which would still be within the constraints of the available space. The table below illustrates the predicted increase in population of Kuwait until 2100 (see figure 4.3).
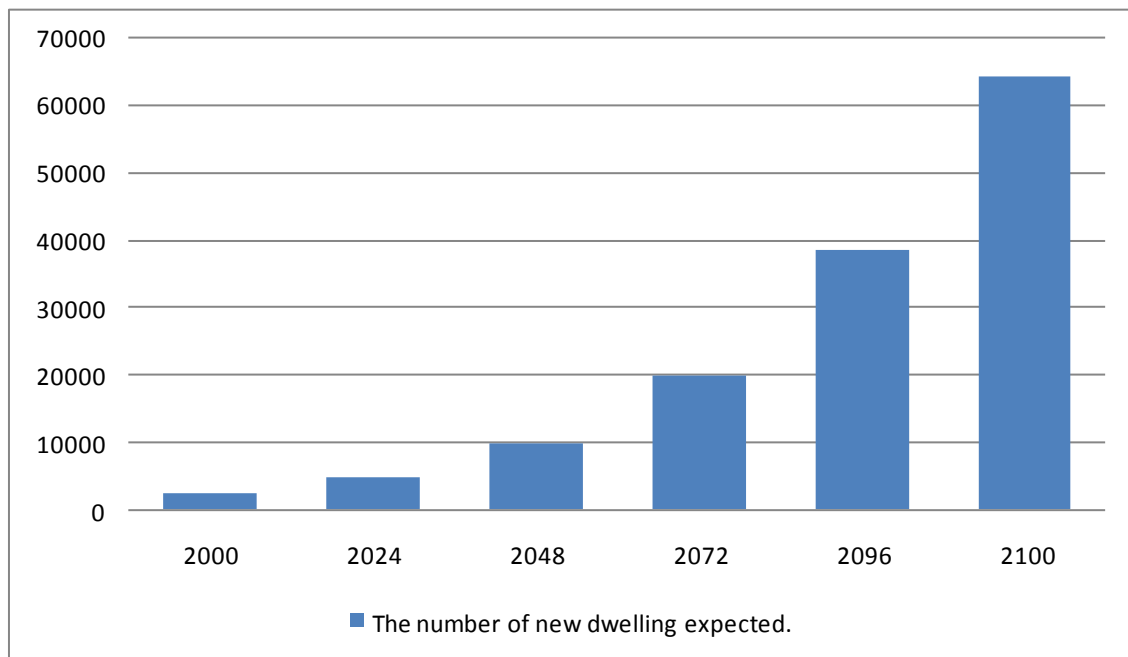
Figure 4.3: Prediction of residential growth from the average of population growth in Kuwait in 21st century (Al-Gunaim, 2001).

The lifestyle of the people of Kuwait has changed dramatically since oil was discovered, with oil bringing a change to the country's economy and to the way people lived their lives in a more modern, prosperous society. Al-Sitri (2004) argues that cities are trapped between foreign and local forms of cultural identities, however, as a result of resurgence and the influence of globalization. The implications of this is continued loss of urban heritage and local identities.

Old Kuwaiti houses have a uniquely simple design. They are mainly single storey buildings with a courtyard located in the centre that is surrounded by a number of rooms. A colonnaded passage or covered area called a 'Liwan' typically lies in between the courtyard and the rooms. It stands halfway between the public domain and the private domain of the houses, which are the courtyard, and the rooms, respectively. This courtyard represents the centre of the inner world of domesticity (Khattab, 2002). This classical design was very well known in the architectural history of both the Arabic and Islamic world (See figure 4.4 and 4.5 for samples of the traditional styles of buildings).

Figure 4.4: Albader House is one of the old Arabic/Islamic house designs near the Arabian Gulf Sea.

Traditional building materials in Kuwait are all derived from the traditional Arabic house design. Alagrogh and Alkirs (2003) explain that there are specific materials that were used in the past to build the old house:

- Mud and rocks brought from the sea;
- Lime plaster applied on the walls inside the rooms;
- Ceilings made from Alchandal, which refers to the pillars made from tree branches; then over this, they put Albascahl, a thin plank made from bamboo rod. On top of this, a mat was placed made from palm tree leaves.

The materials that were used were sourced locally giving a distinct identity to the architecture and living conditions.

Figure 4.5: This is a photo of an old village in Kuwait with an Islamic/Arabic architectural design, lost to today's modern world (Almasery, 2007).

Much of the modern architecture in Kuwait is of a style that can be seen worldwide. Examples of this are the Kuwait Towers, the Liberation Tower and the National Assembly building designed by Jorn Utzon, the famous Danish architect who designed the Sydney Opera House (Kuwait Information Office, 2007).

Alazmy (2000) describes the new architectural designs of buildings in Kuwait as follows:

-They are based on modern Western style and design.

-The structures are made of concrete, cement, metal and other imported materials.

-They are designed so that air conditioning is required to make them comfortable.

-Their windows are made of glass and aluminium.

-There is a huge diversity of designs.

The arrival of this new attitude in design has significantly shaped the appearance of Kuwait cities, leading to a loss of Kuwaiti identity through the concealment of the local cultural and traditional heritage. Nevertheless, there is a clear need for Kuwait to build new cities in the future to accommodate demands from the government, as well as society (such as Alsubah City, Silk City, Alnahdah, Fahad Alsalem City). Most of these adopt the use of modern, international materials and style of design, with extensive use of glass, curtain wall construction and concrete (see Contemporary Architectural Style: figures 4.6 and 4.7 and future dream of Kuwait Silk City in Kuwait in figure 4.8).

Figure 4.6: Contemporary building in Kuwait designed by architect Mohamad Khamal. (Khamal, 2005).

Figure 4.7: Government and commercial contemporary architecture constructed, and under construction, recently in Kuwait City (Al-Jazera Consultants and Soor Engineering Bureau, 2011).

Figure 4.8: Kuwait unveils plans for massive Silk City development "Madinat Alhareer". This investment came from the increase in oil prices. £66 billion was invested in this project (BD Online, 2009)

4.9 Islamic Art and Ceramic Collections in Kuwait

Kuwait holds some rare and historical Islamic ceramic collections that portray the richness of Islamic civilization. In addition, Kuwait also owns two important Islamic art museums that serve to preserve the historical identity of the Islamic and Kuwati culture. The National Council for Culture, Arts and Letters states that in the early stage of Islamic civilization, Kuwait was a trading route for most Islamic merchants who trade to Mesopotamia and its neighbouring countries.

Archaeologists have discovered many Islamic sites in Kuwait, such as Rawadtin, Umm Al-Aish, As-Sabbiyah, Kazama, Wadi AL-Batin, Akkaz Island and Failaka Island, where many fragments of glazed and unglazed earthenware Islamic pottery have been found (see map and example of Islamic potteries found in Kuwait in figures 4.9, 4.10 and 4.11). The glazes included blue and green glazes that date back to the 9th-12th centuries, belonging to the Abbasid period (Hijjawi, 1996; Garebaat, 1989).
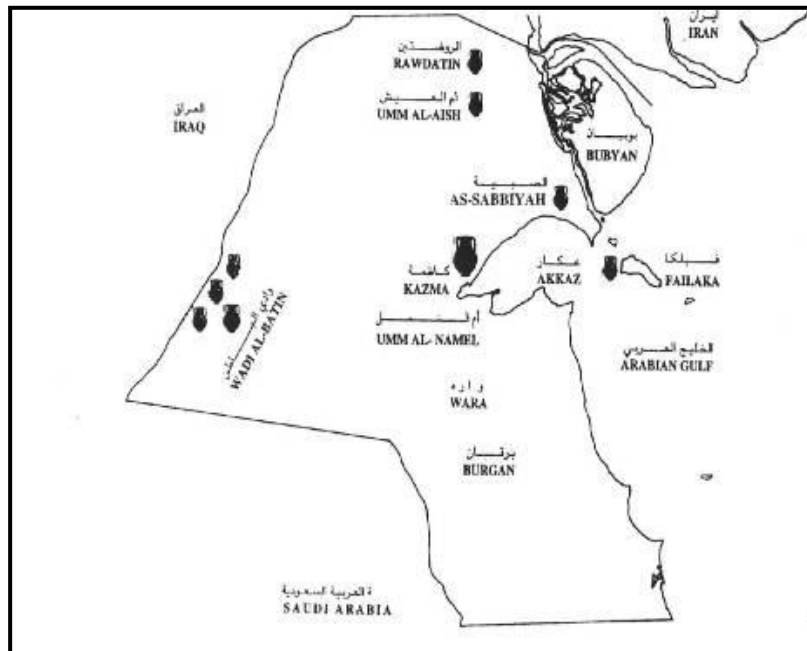
Figure 4.9: Islamic potteries found in Kuwait (Garebaat, 1989).
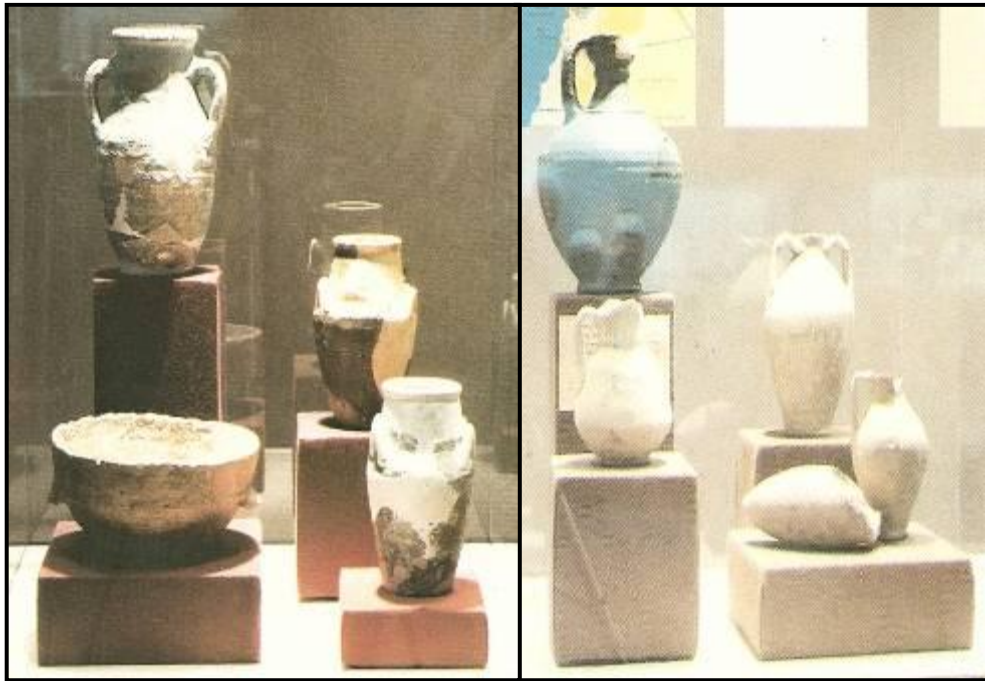
Figure 4.10: Islamic Archaeological Sites in the State of Kuwait (Hijjawi, 1996).
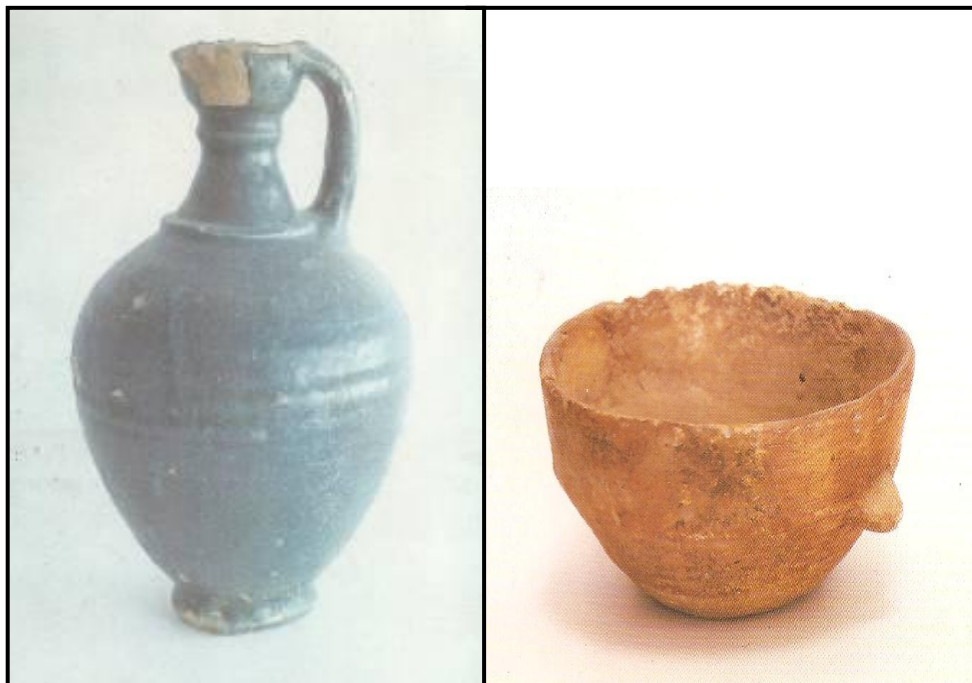
Figure 4.11: A jar, blue- green glazed earthenware, of the early Islamic Period 9th-10th A.D., Alsabbiyyah Peninsula, Kuwait mainland. A bowl, reddish earthenware, Islamic period, Failaka Island (Hijjawi, 1996).

A. Nefedova (2004) states that "the Tareq Rajeb Museum in Kuwait has one of the finest collections of Islamic art in the world" (Nefedova, 2004, p58). Fehervari (1998) adds that the Tareq Rajeb Museum contains the history of Islamic pottery in a collection of ninety vessels and tiles. Some are extremely rare items, such as a Samarqand bowl, as well as Persian, early Islamic and Fatimid period lustrewares, Timrod vessels and Syrian pottery. The Ilkhanid, Ayyubid, Mamluk, Ottoman (Turkey), Safavidand and Qajar periods are represented by a number of unusual pottery tiles and vessels from the 10th, 11th, 12th, 13th and 14th centuries.

B. The Kuwait National Museum: The Al-Sabah Collection in the Kuwait National Museum consists of manuscripts, pottery, coins, metalwork, carpets and pieces of architecture which are laid out chronologically to give the visitor a clear picture of each period of Islamic history, from the Umayyads to Mughals. This collection comprises 1,000 out of a collection of 20,000 objects contained in this museum from every part of the Islamic world. Sheikh Nasser, the founder of the collection, (which is on permanent loan to the Museum), has written that the collection's emphasis is first of all on the spiritual bonds which unite the Muslim peoples and artefacts which express them – manuscripts of the Quran, inscriptions in mosques, Mihrabs and Qiblas – and second, the common factors which form their culture'. Sheikh Nasser hopes that the collection "will enable people in the region to see and appreciate their Islamic heritage and study it further". Such a vision is particularly important in a period when modern technology dominates an increasing proportion of Arab daily life. In the Middle East, collections of Islamic art have recently been very rare, except in Lebanon, and in Egypt before the time of Nasser (Mansel, 1983).

4.10 Conclusion

The findings in this chapter indicate the degree to which Kuwait is tied to Islamic history (i.e. in religion, culture, language and history) and historically immersed in Islamic art. However, there have emerged enormous challenges to this rich cultural

heritage manifested through the current trend of globalisation, which is gradually eroding the Kuwait culture and Islamic civilisation. This phenomenon has been greatly facilitated by the 'petro-state' status of Kuwait: a country now depending mainly on oil exports and oil revenue as the mainstay of her economy. This oil-export dependency is generating huge oil revenue for the country, rapidly stimulating economic development and infrastructural development. In addition, the oil economy has necessitated the employment of many foreign workers to Kuwait, causing a significant increase in population. The consequences of this oil-export dependent economy and rapidly growing importation and increased emigration into Kuwait, is the cultural re-orientation and increased Westernisation of cultures and values, due to deepening US-Kuwait diplomatic ties, particularly since the Gulf War.

The ensuing socio-economic changes have affected the nature of architectural development. The culture and economic lifestyle of the people changed considerably after oil brought in a new era of economic development. A consequence of this however, has been the dramatic transformation of the nature of the Kuwait architectural environment, from earlier traditional styles to the current globalized form. This issue will be discussed in detail in the following chapter.

CHAPTER 5: SOCIOLOGICAL FRAMEWORK OF THE RESEARCH

5.1 Introduction

This chapter focuses on examining the main theoretical framework of the research, within the context of a sociological perspective. An analysis of globalization and its relevance with the Islamic culture will be reviewed. This analysis begins with an exploration of the historical overview and the various scholarly definitions of the term globalization, in conjunction with vital analytical issues relevant to the understanding of globalization. The following issues are fully discussed: cultural transformation and globalization; culture and globalization; analytical consideration; 'localization' versus 'globalization'; economic globalization; politics and globalization; globalization and media; the disadvantages to Islamic Culture; Said's Orientalism and its impact on the Middle East; and, in particular, Islamic Art and Design.

5.2 Historical Background and Definitions of Globalization

Many sociological scholars have discussed extensively the historical nature and trends of globalization. According to Robertson (1992) the concept of globalization has grown in recent years among scholars. It gradually emerged right from the mid-1980s to reflect the patterns of its contemporary diffusion across a large number of areas of contemporary life in different parts of the world. Midgley (2007) argues that there is a growing consensus among researchers that the end of the 20th century was marked by greater global economic integration. The spurring nature of the globalization process thus created a huge debate among scholars on how to evolve a workable definition of the concept. This term has become one of the most highly debated topic in social science, with arguments that the decisive increase in economic, social, technological and cultural interaction across borders marked a turning point the transformation of the world (Guill´en, 2001). The historical view indicates that this rapid spread of globalization is a universal phenomenon beyond its current manifestation in Kuwait and elsewhere in the Arabian Gulf. It has greatly impacted on the socio-cultural patterns of peoples

around the world, and especially on the Islamic civilization. At this juncture, the term globalization in this research will be contextualized within the sociological viewpoints. Therefore, analysis will focus and be limited to the definition of the concept within the nature and impact of globalization on cultural orientations, and, more particularly, on the Middle East.

5.3 Defining Globalization

"Conventionally, the word "globalization" has been associated with flows of capital, labour, products and ideas that have crossed, challenged and blurred established national boundaries. It often evokes images of a shrinking world, in which accelerating flows of information and travel technology compress time and space in the relationships between world cultures, political economies and the built environment" (Walker, 2001, p70).

According to Baylis and Smith (2001), globalization[2] describes increased interaction between human societies around the world, which has diffused the pattern of social relations. As a result of globalization the political, economic, cultural, and social events among people have become more and more interconnected and have more impact. Linguistically, globalization means "making things global, that is making the world into a single and integrated system" (Altwaijri, 2002, p10). Meanwhile, Giddens (1990, as cited in Baylis and Smith, 2001) conceptualized it as "the increased global interaction by closing existing barriers and distance in such a way an event occurring in one regions of the world has a direct effect on the others". Midgley (2007) argues that the term globalization refers to the processes of social change that influences the pattern of human interaction across the globe, while Albrow (1997, as cited in Guill´en, 2001) defines it as the "diffusion of practices, values and technology that have an influence on people's lives worldwide".

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2 The term globalization in Arabic means "Al-Oulama".

This chapter attempts to situate these contemporary social trends within a sociological perspective in order to apply a theoretical basis of the modern architectural transformations in relation with the nature of globalizational trends in Kuwait, as already discussed in the previous chapters. An examination of the attendant effects of this phenomenon on the socio-cultural, economic, trade, and politics of Kuwait provides a useful analytical framework for understanding the pattern of cultural re-orientation in the Middle East, and by extension, the Kuwaiti state.

5.4 Globalization: A Conceptual Framework

It is important to acknowledge that offering a holistic theoretical perspective on this research predates the current trend of globalization. Indeed, existing classical sociological theories on imperialism, neo-imperialism, dependency and world system views are also crucial to the understanding of the nature of contemporary global transformation (Giddens, 1989). In this context, analysis is limited to examining globalization and the impacts that it has had on cultural change around the world.

Globalization is theoretically analyzed within the four main theories, as outlined by Baylis and Smith (2001): realism, liberalism, Marxism and Social Constructionist.

For Realists: globalization does not alter the most significant feature of world politics, namely the territorial division of the world into nation states. While the increased interconnectedness between economies and societies might make them more dependent on one another, the same cannot be said about the state system.

To the liberals: the picture looks very different. They tend to see globalization as the end product of a long-running transformation of world politics. For them, globalization fundamentally undermines the Realist account of world politics since it shows that states are no longer the central actors they once were.

For Marxist theorists: globalization is a bit of a sham. It is nothing particularly new, and is really only the latest stage in the development of international capitalism. It does not mark a qualitative shift in world politics, nor does it render all our existing theories and concepts redundant.

For Constructivist theorists: globalization tends to be presented as an external force acting on states, which leaders often argue is a reality that they cannot challenge. This, constructivists argue, is a very political act, since it underestimates the ability of leaders to challenge and shape globalization, and instead allows them to duck responsibility by blaming it on 'the way the world is'.

5.5 Cultural Transformation and Globalization

The rising wave of globalization is accompanied by a rapid transformation in global cultural identities. Held (2000) hypothesizes that "the growth of global culture signals the demise of national cultures" (Held, 2000, p55). The current nature of globalization brought different cultures into closer contact and represented a challenge to traditional patterns of culture and social order. For all peoples, late-twentieth-century globalization has meant finding ways of mixing their cultural values with the imperatives of the global economic system and its ideological software: Western liberalism (Baylis and Smith, 2001). The division between great and little traditions, which in some pre-modern civilizations survived for thousands of years, has today almost completely disappeared (Beck et al., 1994).

> *"In the present day, the destruction of the local community, in the developing societies, has reached its apogee. Little traditions which either survived, or were actively created, during earlier phases of modern social development have increasingly succumbed to forces of cultural evacuation"* (Beck et al., 1994, p101).

The reason for this argument is because the recent importation of, and enthusiasm for, ideas concerning post-modernity have enhanced this view, but this time as part of a worldwide 'cultural turn' in the social sciences. The idea of post-modernity

confirms the view that the question of modernity can be transcended. Postmodernism is seen as legitimizing mixtures of the traditional and the modern (Robertson, 1992). It has also been argued that in any society that is not totalitarian, certain cultural forms predominate over others, just as certain ideas are more influential than others; the form of this cultural leadership is what Gramsci identified as *"hegemony"*, or rather, the result of cultural hegemony at work that gives "orientalism" the conceptual durability and strength to understand the cultural friction between the West and the Middle East. Orientalism is never far from what Denys Hay has called the idea of Europe, a collective notion identifying "us" Europeans as against all "those" non-Europeans. Indeed, it can be argued that the major component in European culture is precisely what made that culture hegemonic, both in and outside Europe: the idea of European identity as superior in comparison with all the other European peoples and cultures. Furthermore, there is in addition the hegemony of the European idea about orient, themselves reiterating European superiority over Oriental background (Said, 1978).

Modernizers in the Muslim world argued that Islam was the cause of backwardness and decline, and that modernization required the imitation of Western forms of culture and organization. The impact of the West has been the principal issue facing Islamic civilization since the 18th century. "Muslim modernizers sought to imitate the West, but the secular state went on to fail in much of the Middle East" (Baylis and Smith, 2001, p547). Similarly, Altwaijri (2002) refers to how cultural globalization is forced upon the Islamic world under difficult conditions and circumstances. This development requires determined efforts towards understanding the structural causes and factors that led to the failure of the Islamic world to withstand the challenges pose to it by the raising trend of globalization.

5.6 Culture and Globalization: Analytical Consideration

The attempt to critically analyse the nature of cultural diffusion in an increasingly globalizing world is offered by Robertson (1992), who argues that 'Culture' appears

in cultural studies in two major, intersecting forms. On the one hand, cultural studies focus on symbolic expression, text, rhetoric, discourse, and so on. On the other hand, it is cultural in its tendency to use the idea of culture to embrace virtually every facet of human life, as when Hall (1986) speaks of culture as the actual, grounded terrain of practices, languages and customs of any specific historical society. The second tendency has much of its origin in the crisis within Marxism.

Robertson's (Global Field) model examined the issues and processes which bring about globalization in terms of 'causal mechanism', or in other words, the driven forces based on the dynamics of capitalism and the forces of imperialism which are decisive in the present increasingly compressed nature of the world (see figure 5.1). In a purely sociological perspective, this view is also further explained by Held who argues that:

> *"…cultural imperialism is rooted in a common-sense notion many of us understand: that the reduction in cultural differences around the world - for example, that France does not seem as distinctive as it did 30 years ago - is because of the distribution by global corporations of commoditised Western culture, a process which has worked to the advantage of the USA and Western nations"* (Held, 2000, p60).

In this context, Barker argues that the social culture of production has greatly transformed the traditional basis of culture through increased globalization of production and trade that is dominated by the West. For Barker (2006),

> *"the foundations of culture' are a mode of production that is constituted by the organization of the means of production (factories, machinery, etc.) together with specific social relations of reproduction (e.g. class) which arise from the organization of those productive forces. It is noteworthy that this mode of production is held to be 'social, political and spiritual"* (Barker, 2006, p70).

Thus, the economic mode of production shapes the cultural and superstructure, as explained by the diagram below (see figure 5.2).
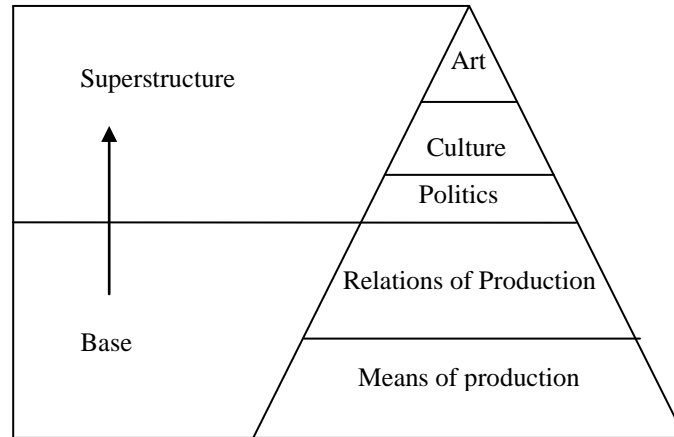
Figure 5.2: Superstructure and base of the society's culture (3)
(Barker, 2006).

Furthermore, the accepted nature of capitalist social relations in the sphere of the market obscures its exploitative base in the realm of production i.e. the use of 'free' labour covers any economic exploitation. Furthermore, an apparent market sovereignty and equality (we are all consumers) obscures the 'real' foundations of inequality on the level of production. What is a historically specific set of social relations between people appears as a natural, universal set of relations between things. That is, contingent social relations are reified (naturalized as fixed things).

5.7 'Localization' Versus 'Globalization'

The main argument on the idea of 'localization' in relation to globalization stems out of the need to analyze how the contemporary pattern of globalization affects the environment in which human beings live, and their traditions, which include societal norms like education, religion, culture, and customs. Local culture today is thus confronted by the challenges of changing or preserving the heritage of society. Arnett observes that in the 21st century people have developed

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[3] Here culture, the consequence of an historically specific mode of production, is not understood to be a neutral terrain. This is because 'the existing relations of production between individuals must necessarily express themselves also as political and legal relations of power. Thus 'the idea of the ruling class are, in every age, the ruling idea i.e. the class which is the dominant material force in society is at the same time its dominant intellectual force.

multicultural identity by combining their own cultures with the global cultures linked to globalization (Arnett, as cited in Burkle, 2006). This tension between the 'local' versus the 'global' can be said to be:

> *"…traditionally perceived to be of local concerns "that have become connected forces which are global in nature" in order to "reveal the energies and tensions, the interrelationships and polarization, that are evolving between local and global forces within the tangible arena of local city space and city place", and to "raise questions about the future roles" of architects, planners and design professionals who act predominantly on local space"* (C and Dandekar, 2000, p343).

5.8 Economic Globalization

Economic globalization is the driving force behind the cultural transformations taking place around the world, especially in the Middle East. The forces of economic globalization allowed the penetration of a liberal market economy into different parts of the world, manifesting itself in the contemporary Middle East through massive importations of Western products, with profound implications for the traditional patterns and nature of their economy. The contemporary world is dominated by globalization and global economic governance which takes control of the global economy via technological transfer, increased production into the world market, and regulations regarding trade in goods and services (Held, 2000).

Moreover, it has been argued that the United States consolidated its hold over the International Monetary Fund and World Bank and used these organizations to promote the interests of powerful commercial financial institutions, as well as spreading American liberal democracy and free-market capitalism throughout the world (Midgley, 2007). Knox and Taylor (2005) also claim that the process of globalization has caused two issues that are central in global economy. On the one hand, it allowed firms mostly in the developed region of the world to take the advantage of international outsourcing. On the other hand, it stimulated the growth of a global clientele networks that serve complex emerging markets. Therefore, the power of Western imperialism in the global economy has in the last few decades

altered the cultural identities of many societies and also reduced their economic capacity and positioned their economy into an increasingly dependent one.

5.9 Politics and Globalization

However, globalization is also a political force that is intrinsically linked to economic and cultural transformation through the Western ideology of political liberalism. Lamer and Walters (2004) stated that globalization is also a political site. For example, commitment to and preparedness for the global economy is sometimes regarded as a measure of a state's fitness— its citizenship within the world community in terms of who speaks in the name of globalization? They further argue that the major international relations and international political economy theories are linked by a certain sociological and political realism which raises the fundamental issue of global governmentality. In this context, for instance, the United States preaches polyarchy to Middle East countries as part of its global hegemonic policy—via its Greater Middle East Project—while the Egyptian situation exemplified how American political pressure is bringing changes in the political structure. The supposed change that the United States wants is the ability of different groups to be able to take part in elections and be able to get selected into government (Sandhu, 2006).

5.10 Globalization in the Media

The rapid development of information technology and the communication revolution is one of the salient features of globalization. Therefore, it has had a tremendous effect on cultures around the world. According to Robertson (1992) the term "shrinking" emerged to demonstrate how globalization has filled the gaps created by distance, borders and lack of information flows across borders. This development reflects McLuhan's idea concept of the "global village" which exposes the way the media attempts to consolidate the idea of global community. As observed by Altwaijri (2002) the impact of the media globalization in the Arab

world, especially through the resurgence of information and communication via satellitism, computer and internet systems, have resulted in:

- deep effects on cultures, social behaviours and ways of life
- diversity of economic opportunities through the dynamic of international investment and open markets, as well as a shortage in political alternatives, given the decreasing viability of economic self – sufficiency models and the increasing economic interdependency
- the advent of the so-called "electronic herd" constituted by multinational institutions and individuals who run after profit, and who have influence on decisions of the states and the destinies of their peoples
- The utilization of globalization's tools in a way that enables their producers to control consumers and audiences, and to work towards superseding their local languages and obliterating their national identities.

In addition, Whiteley (1993) states that the internationalization of culture through television, radio and other media, the increasing growth of world business and the development of new untapped markets, linked with economies of scale in production, have given rise to companies whose products are consumed in most countries on the planet.

Moreover, through the universalization of the media, language is a part of the cultural transformation, and that is accentuated by the current trend of globalization, especially so in the Persian Gulf. Because the media plays such a powerful role in the spread of information to the world, it has also allowed the English language to become the most common language of such a revolution, so much so that Guill´en (2001) claims that English "is becoming a sort of lingua franca" (Guill´en, 2001, p254).

5.11 Disadvantages of Globalization

There is an extensive body of academic research on the negative consequences of globalization. Many have highlighted the negative effects of globalization on fundamental issues, such as the following: employment and wages in the Western countries; the heightening of inequalities; increased gender and ethnic oppression and discrimination against immigrants; retrenchments in social globalization, expenditures and programs; the enfeebling of governments and their inability to protect the domestic economy; the spread of managerialism; and a new workfare ethic in social policy that abrogates the universalism of earlier collectivist social welfare ideals (Midgley, 2007). Guill'en regards globalization as leading to "convergence, albeit predicting harmful rather than beneficial consequences" (Guill´en, 2001, p236). Meanwhile, Gills (2000) claims that the main historical thrust of neoliberal economic globalization is to bring about a situation in which private capital and 'the market' alone determine the restructuring of economic, political and cultural life, making alternative values or institutions subordinate. This criticism of globalization is analytically universalistic in nature (Gills, as cited in Lamer and Walters, 2004).

Regarding the negative effects of globalization on Islamic culture and by extension the civilization of the Middle East scholars from the region observed that without doubt globalization has had a negative impact on the economic, social, cultural, educational orientation of the Islamic world. It exerts pressure on their existing identity and socio-cultural relations with the rest of the world (Altwaijri, 2002). In addition, Hoogvelt (2006) argued that the contemporary nature of globalization systemically leads to social, political, and economic exclusion for the following four reasons: a) globalization is deeply connected to a contemporaneous shift from an industrial-based to a knowledge-based economy. b) The emergence of the so-called New Economy is already delivering such a huge explosion of information-based products as to ensure that capitalism, at least for the foreseeable future, is able to overcome the limits of the market without having to upgrade the masses,

which are excluded from the process. c) A key feature of globalization is its concentration and oligopoly on a global scale. Again, the trend statistics are illuminating. d) Finally, there are grave and serious environmental limits to global wealth creation. Even while the present 'miracle' growth of both China and India is accompanied by appalling Globalization and Post-modern Imperialism, social inequality and exclusion, it still leaves a combined aspiring middle class of an estimated 600 million people eager to embrace Western consumer habits with all the environmental degradation that this entails. Such impacts of globalization also have an influential effect on the way modern buildings are built and resourced, which in turn, have significant consequences for the architecture and contemporary culture within Kuwait and the wider Middle East area.

5.12 Islamic Culture: A Sociological Perspective.

Islamic civilization became prevalent in all the vital domains - politically, economically, scientifically, and technologically - throughout Islamic societies like Kuwait (ISESCO, 2001). Theorizing culture relates directly with the need to understand people's ideology, history and, indeed, the environment they inhibit. In Kuwait, as elsewhere in the Islamic world, the culture emanated from the Islamic doctrine. As a result, it is important to note that the notion of culture in the Arab world, and more particularly Kuwait, is directly linked with Islam through its ideological framework. Therefore, the Islamic culture has a deep relationship that was built throughout past generations and carries on within the present generation to the future. This background helps to form and direct human behaviour and actions within his surroundings and community.

Abd-Allah (2006) describes such a feature in the culture that Islamic society weaves together; he describes it as the main fabric of the society and clearly reflects the beliefs, values, morality and educational dispositions of the society which provides people with functional expression by integrating them into effectual customary patterns. Culture is rooted in the world of expression, language, and

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symbol. But it relates also to the most routine facets of our activities—like dress and cooking—and extends far beyond the mundane into religion, spirituality, and the deepest dimensions of our psyches. In other words, Islamic culture in Kuwait or in other Arabic and Muslim states has a deep relationship with people's way of life; where it is integrated into their sociological, economic, and general pattern of livelihood. Abd-Allah comments that:

> *"Culture includes societal fundamentals like the production of food and distribution of goods and services, the manner which we manage business, banking, and commerce; the cultivation of science and technology; and all branches of learning, knowledge, and thought. Family life and customs surrounding birth, marriage, and death immediately come to mind as obvious cultural elements, but so too are gender relations, social habits, skills for coping with life's circumstances, toleration and cooperation or the lack of them, and even societal superstructures like political organization"* (Abd-Allah,2006,p360).

In a similar argument, Mujtaba (1974) describes Islamic culture as a pattern of life which shapes the society, its culture and education. For Olimova, Islam is considered as the essential elements of people's culture, norms and values as well as a means for self-identity (Olimova, as cited in Gunn and Jeremy 2003). Therefore, Islamic identity can be said to have three elements: firstly, environment, with all its natural and human ingredients, materialized in social systems and conditions that evolve into mental and psychological attitudes, and constitute the notion of the home country along with its connotations and values. Secondly, Religion, on account that it enshrines one's perception and vision of the world, a specific code of conduct, a particular way of worship, and a legislature governing all aspects of life; an ethical system specifying behaviour and standards of relations (ISESCO, 2001). Third is the Arabic language, which has a strong influence on the identity and culture of the Islamic world, which it presents as the core of its civilization. For this reason, Suleiman (2003) speaks about the close association between Arabic and Islam in the capacity of Arabic as the language of the Qur'an. However, the Arabic language is a part of the Islamic cultural civilization.

5.13 Said's Orientalism Thesis

One of the most powerful theoretical explanations of Western influence on the Islamic culture and civilization was offered by Said (1978). Said describes 'Orientalism' as the rationalization of colonial rule to ignore the extent to which colonial rule was justified in advanced orientalism, through European-Atlantic power over the colonised countries (Said, 1978). Said's thesis fundamentally focused on his unbowed opposition "to US presence and dominance of the Middle East, the Gulf in particular" (Said, 1997, p307). He argues that the expansion and increased America's political and economic influence in the Near East (the Middle East) makes great claims on our understanding of the Orient (Said, 1978).

Orientalism is a style of thought based upon an ontological and epistemological distinction made between "the Orient" and "the occident." Thus a very large mass of writers, among whom are poets, novelists, philosophers, political theorists, economists, and imperial administrators, have accepted the basic distinction between East and West as the starting point for elaborate theories, epics, novels, social descriptions, and political accounts concerning the Orient, its people, customs, "mind," destiny, and so on (Said,1978). Thus, in any society that is not totalitarian, certain cultural forms predominate over others, just as certain ideas are more influential than others; the form of this cultural leadership is what Gramsci has identified as hegemony, or rather the result of cultural hegemony at work, that gives Orientalism the durability and the strength referred to earlier in this chapter.

5.14 Westernization and its Impact on the Middle East

The conceptual understanding of the term 'West' denotes an economic, social and ideological structure that emerged by dint of long-standing conflicts and interactions. Its cradle was Europe, from which it spread to other continents. The concept of the West does not necessarily refer to the geographic meaning of the term, but rather to its geo-strategic content, resulting from a historical continuity

that started four centuries ago and culminated with the era of economic globalization. The general features of Western societies identified in other parts of the world could be summarized as follows: first, values and criteria have passed through a rapid process of transformation in these societies; second, they are the origin of scientific knowledge as well as technological development; and third, they are the originators of knowledge, communication and informatics (ISESCO, 2001).

Many academics agree that Western ideology has a powerful influence over the economy, policies, and culture of the Middle East. For example, Midgley (2007) comments that the developed Western countries have become attractive centres for many people in the Global South more specifically the Persian Gulf. Therefore, the Western idea of liberalism in this millennium has become the dominant civilization, and all other civilizations have had to absorb its influence, whether this was welcome or not. The end of the cold war heightened the significance of cultural identity. The hegemony of the West and of its liberal capitalism challenged the culture and social order of most societies. Globalization also fostered multicultural landscapes across the world (Baylis and Smith, 2001).

However, from the sociological perspective of Hattstein and Delius (2000), it was clear that as a result of this policy, the unusual features of individual Islamic regions temporarily disappeared almost completely. Two reasons were given for this:

> *"1-The number of students of architecture also increased with state support, but they were sent to Europe to learn practical skills. Universities that carried out this training were: Rome, Milan, London, Glasgow, Berlin, and Nuremberg and, particularly, Paris. 2-In addition, over and above that, European artists were working in many Islamic countries, some of whom became teachers, transmitting European architectural theories at universities and newly founded art schools"* (Hattstein and Delius, 2000, p592).

This allowed the absolute control of Arabic culture and business by the West and, subsequently, impacted greatly on its traditional pattern of art and design. For example, in Kuwait the traditional Islamic culture has witnessed a strong American and generally Western influence. Kuwait is one of the richest countries of the world

with one of the highest annual per capita income. Its government offers free education to its citizens and sponsors its nationals to study in America and European countries. The national television in Kuwait covers American programmes such as sports

> *"…although broadcasts are regularly interrupted for the traditional Muslim calls to prayer. Half of Kuwait's approximately 2 million people are under the age of 25, and, like their counterparts in Europe and North America, many surf the Internet for new ideas, information and consumer products"* (Giddens, 2006, p65).

Wheeler (1998) examined the impact of the Internet on Kuwaiti culture and found that Internet use is increasingly popular, with Kuwait having half of all Internet users in Middle Eastern Arab countries (Wheeler, 1998 as cited in Giddens, 2006). Wheeler reports that Kuwaiti teenagers flock to Internet cafes, where they spend most of their time in chat rooms or visiting pornographic sites, both of which are strongly frowned upon by traditional Islamic culture. According to Wheeler, the new communications technologies are clearly enabling men and women to talk with one another in a society where such communications outside marriage are extremely limited. Wheeler also notes that men and women are segregated in the Internet cafés. Furthermore, she finds that Kuwaitis are extremely reluctant to voice strong opinions or political views online. With the exception of discussing conservative Islamic religious beliefs, which are freely disseminated over the Internet, Kuwaitis are remarkably inhibited online. Wheeler attributes this to the cultural belief that giving out too much information about oneself is dangerous.

5.15 Islamic Views on Art and Design.

> *"The Islamic faith not only directed the way of life of its followers, it also shaped the art that embodied Islamic teaching. Largely brought about by strictures against figural representation within Islam, in the field of pottery there was a fashion for geometric designs and arabesque patterns, typically consisting of a continuous stem with spilt palmette leaves or variations of this motif"* (Cooper, 2000, p83).

The Islamic version of views on Art, Design and Architecture provides limitations that fall within the framework of Islamic culture and doctrine that is found in almost all Islamic states, as discussed earlier in the literature review of this research (see Chapter Two). For instance, under the Islamic doctrine, as illustrated by Islamic scholars such as Bin Baz Al-'Thiamine, and Al-Jibreen, it is not allowed to depict pictures of creatures, be they of humans or animals, whether they are in the form of a sculpture, or in the form of drawings on paper, or in the process of design, or in any architectural work (Bin Baz et al., 2002). This idea stems from the historical perspective of Islam. However, in the pre-Islamic era this was not the case, simply because in almost all the Arabian states people used to worship idols (*Hobbel*)[4]. This practice is now frowned upon by the Islamic tradition as it is deemed disrespectful to worship such idols, rather than to follow the true tenets of the Islamic faith. Once Islam forbids their use, the people reflect this by looking at the moral implications of such thing to the community at large (Albotie and Alzehailli, 1996). Indeed, there are still some Asian countries today where people still worship idols such as *Krishna*, the God of sexuality, *Laxmi,* the God of money, Hanuman, the God of strength, as well as other idols like *Ganesh*, *Kali* and *Gurunak*.

In the twelfth volume of the Kuwaiti Juristic Encyclopaedia, it is stated that the artistic representation of any such idols is seen as an insult to God. Instead, artists are encouraged to depict and represent the true creations of God in all their glory, namely the drawing of mountains, valleys and seas; the sun, moon, sky and stars; and the herbs, trees, fruits, and vegetation, as all of these display God's creations in all their true majesty. It is also the case, for example, that statues can be seen as idols, if only because they reflect a period of the past when other solid shapes or objects were worshipped as idols too. More recent problems have emerged through the work of artists who have sought to create innovative art styles that differ greatly from historical Islamic art e.g. in artistic works of Calligraphy and Ornamentation where artists have attempted to "solve problems" through the use

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[4] Hobbel: In Islam this literally means the famous 'idol' worshipped by the pre-Islamic people of Arabia.

of metal, silver, wood processing and ceramics. Again, such constructions often bear a passing resemblance to idols and thus to idol worship (The Ministry of Religion - Kuwait, 2008).

Regarding this issue, some peoples' ideological misunderstanding of the background to traditional Islamic art may be clarified by a comment made by the Prophet Mohammed. Islam encourages the people of the community to work and especially so if work can be completed by hand. Referring to this, Abu Hurairah stated: 'the Prophet Mohammed said, "No food is better to man than that which he earns through his manual work. Dawud (David) the prophet of Allah ate only out of his earnings from his manual work" [narrated by Al Bukari] (Yahya and Ad-Dimashqi, 1999, p482).

5.16 Conclusion

The investigation of socio-culture identified that globalization consists of a wide range of issues that impact on countries' economies and trade, politics, media, cultural exchange, customs and traditions, and even on the way that countries plan and design their buildings and architecture. There is no doubt that this phenomenon has had a negative impact on the culture and identity of the Middle East. Indeed, globalization as a social force has homogenized the world by gradually erasing the cultural traditions of the other non-Western regions of the world, and especially that of the Islamic civilization and its culture. This is more visible, particularly given the fading nature of the traditional Islamic arts, design and architecture. Today, as a result of the burgeoning impact of globalization, and through the transfer of visual images and architectural designs from the West, most Arab states like Kuwait have been transformed to almost be satellites cities of the West, with Western-style buildings and designs prevalent everywhere.

CHAPTER 6: ISLAMIC CERAMIC, DECORATION AND MATERIAL: A HISTORICAL ANALYSIS.

6.1 Introduction

This chapter aims to investigate the rich history of the legacy of Islamic art and Islamic ceramic periods and to identify the source of the materials, design forms, styles, and techniques that have been used in the current theoretical views of Islamic art, architecture and ceramics. This is an important reference point for the practical basis of this research strategy and development within this research process. The chapter will also identify the empirical and hypothetical issues involved in Islamic ceramic periods found in the available literature of Islamic ceramics around the world, with particular reference to the Kuwaiti collection. Therefore, this chapter offers an in-depth background of Islamic history, which constitutes a core part of understanding the nature and basis of the contemporary form of Islamic materials and design styles. For instance, Islamic Ceramic tiles design has a strong relationship with ceramic vessel design techniques, as Porter (1995) explains:

> *"The history of Islamic tile work is inextricably linked to the production of ceramic vessels and table…whose designs techniques for vessels often mirror those used for tiles, and the same potters were clearly working on both"* (Porter, 1995, p8).

6.2 Pre-Islamic Era

There is extensive literature available on the origin and history of Islamic ceramic, art and design (Alturky, 2008; Watson, 2004; Copper, 1972; Fehervari, 1998, Hijjawi, 1996; Nigosian, 2004; Lane, 1957). Prior to the advent of Islam, pottery was one of the main resources of hand-made production in the Middle East and glazes have been also widely used. Pottery production reached a very high standard, both in technique and decorative style. For example, Faience, which played such an important role in the history of Islamic pottery, was first invented and introduced in Egypt as early as the 4th millennium BC. This "Egyptian faience" had a yellowish paste and was covered with a brilliant glaze. Subsequently, it appeared in Syria, Mesopotamia and Persia during the Parthian (2nd century BC-

early 3rd century AD) and Sasanian periods (226-651AD) and continued to be produced all through to the early part of the Islamic age (Caiger-Smith, 1973; Fehervari, 1998).

Archaeologists have discovered many fine examples of earthenware pottery and ceramic in the Arabian Peninsula and Iraq. These were related to the civilization of pre-Islamic period e.g. in areas such as Dilmun, Babylon, Sasanian, the Assyrian civilizations in Failaka (Kuwait), Tarut Island in Qatif (Saudi Arabia); in Bahrain, Um Al Nar Island in Abu Dhabi (UAE) and some parts of Iraq (Alturky, 2008; Hijjawi, 1996). In addition, Cooper argues that the common style of ceramic found in the pre-Islamic period until AD 632 (i.e. prior to the spread of Islam) had been from a long tradition of the use of painted pottery, such as goblets. These were normally painted with zigzag patterns and had been excavated at Susa, dating back over a period of some 3700 years. The use of glaze had been developed in Mesopotamia around 1500 B.C. and had come into fairly widespread use around 500 B.C. Later, some glaze colours were used in Babylon during the time of the Kassites (1750 - 1170 B.C.) and this technique was eventually brought to Persia (Cooper, 1972). This already advanced ceramic movement within the area initiated the rich heritage of Islamic ceramics prior to the emergence of Islam.

6.3 The Early Islamic Period

The history of the discovery of Islamic ceramic dates back to the early part of Islamic civilization, at around 610 BC, in the Arabian Peninsula. The Islamic religion came to dominate and profoundly influence the people's lifestyles, even affecting societal tradition. After the death of the Prophet Muhammad (PBUH) in 632, a series of successors (*Caliphates*) were established by the Islamic community. The beginning of the Islamic legacy in the Arab world began with the learning of the Arabic language and through writing which paved the way and marked the beginning of a gradual spread of the Islamic culture and lifestyle to other parts of the world. The period witnessed a gradual evolution of certain artistic

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forms that were linked to the Islamic culture, beginning with simple art work such as hand craft that could be basically attributed to the pattern and nature of the people's lifestyle.

This changing pattern of lifestyle also affected ceramics, although initial development was slow and the products of the early Islamic periods in the 7th century were not as distinguished as those of pre-Islam (Watson, 2004). However, with the established production of rich and sophisticated types of pottery across the Islamic world by the 9th Century, it was clear that an industrial revolution of considerable magnitude had taken place. Watson has illustrated that this development has the following essential characteristics:

- Glazed pottery was found in larger quantities than ever before.
- It was found in a far greater variety than ever before.
- It was found over a far greater area than ever before.

Prior to the rise of Islam, the only glazed ceramics of any importance were not fine wares, but practical, functional jars and bowls, for storage and transport in the preparation of materials, and other industrial and domestic uses. These were thought to be made primarily in Iraq, and were later widely traded (Watson, 2004). From these perspectives it can be understood that in this period the Islamic ceramic art use was historically inherited from the same areas that used to practice ceramic and art crafts, following the resurgence of Islam in these areas that came to reflect the societal norms and way of life of people in the area.

6.4 The History of Islamic Art and Ceramic

The history of Islamic art and ceramic was classified as the period of a group of specific dynasty rules that was extended throughout the Islamic world.

6.4.1 Umayyad Period (661-749)

A historical background of the Umayyad dynasty can be traced to the grandfather and relatives of the Prophet Mohammed (PBUH), the founder of the Mu'aawiyah ibn Abi Sufyan tribe (661-680), who chose Damascus to be the capital city of Umayyad[5] (Hawting, 2000; Alam, 1989). In that period it was widely argued that there was a dramatic revolution and advancement in scientific knowledge, art and architecture. Piotrovsky (1999) states the following on the Islamic art of the Umayyads:

> *"They created highly impressive objects which became imbedded in the ancient artistic traditions of Syria, Egypt, Iraq and Persia. As a result, local artists made use of their indigenous traditions for the benefit and indeed the glorious reputation of their new society. The old forms of decoration and luxuries were turned into ways of glorifying Islam and its followers"* (Piotrovsky, 1999, pp17-18).

Caliphate Abdul Malik bin Marwan (685–705) endeavoured to develop the architectural design and style of palaces and mosques. In 691 he established the Dome of the Rock mosque in present day Jerusalem, and it became an important religious centre for Muslims around the world. The design of the Jerusalem mosque included octagonal shapes on the outer wall of the building, four doors around the mosque, and a large dome, while mosaic tiles were used on the inside walls. According to Creswell, this was the first time that the art of Arabic calligraphy had appeared (Creswell, cited in Aljiosy, 1998).

Many famous palaces and mosques were built during this period, such as the palaces at *Almaishy*, *Omaiarah*, *Karap, and al-Hayr,* and the mosques of

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[5] Umayyad state extended its lands and territories under the Umayyad rule. It stretched from south Aden and Sanaa in Yemen, all the way through to the Arabian Peninsula, including Mecca, Medina, Taief and Muscat, as well as Basara, Kufa and Karbala in Iraq. From the east it included Heart, Balkh and Merv in Khorasan, Bukhara and Samarqand in Tarnsoxiana, Siraf, Isfahan, Nishapur in Iran. In the north, it encompassed Qasr al-Hyr East and Halab in Syria. In the West it included Khirbat al-Mafjar in Jordan, Jerusalem in Palestine, Fustat and Aswan in Egypt, Fes and Tangier in Maghreb, Kairouan in Tunisia and Tlemcen and Touggourt in Algeria, and extended to Cordoba, Valencia, and Toledo in Spain.

Damascus in Levant, and the *Sidi Aqaba* mosque in Tunisia. In addition, they rebuilt the prophet's mosque in Medina, Basra, while mosques were also built in *Kufa* in Iraq and *Umro Ebn Alas* in Egypt (Alam, 1989; Hillenbrand, 1999). The revolution in the architectural movement led to the enhancement of the methods utilised in decoration and design. This accelerated the development of the ceramic architecture in the Umayyad era. The emergence of the ceramic mosaic decoration was therefore the oldest example of wall mosaics in Islamic architecture. This mosaic, decorated in the Dome of the Rock in Jerusalem, is dated by an inscription to 691 CE. Other early Islamic wall mosaics are those of the Great Mosque in Damascus. Although mosaic was primarily a technique employed in the Mediterranean area it was occasionally used further east in Iraq and Iran. Some of the best examples have been also found at the palace of al-Quwair in Samarra (Petersen, 1999).

The Tareq Rajab Museum in Kuwait displays some of the Umayyad Ceramic collections that contained the following features and techniques in their designs structures and formations:

(A) A turquoise-blue, highly iridescent glaze on a large jar. It is decorated with a serpent and small round discs in appliqué that date back to the 7th and early 8th centuries.

(B) A dark green lead glaze coated on a pilgrim's flask. It is applied on red or white earthenware of two halves in identical moulds and fixed together. The moulded decoration frequently depicts a solar pattern in the centre, from which rays radiate (Fehervari, 1998; Porter, 1995).

It can be argued that while the level of the ceramic movement was slow, the Umayyad period marked the turning point and the beginning of the development process in Islamic art, architecture and ceramic style, as manifested through the use various decorative styles such as mosaic, geometrical, Arabic calligraphy, planet, and in the new innovation of building design. The Umayyad dynasty lasted

for almost 90 years until it was replaced by the Abbasids in 749-50 (Hawting, 2000).

6.4.2 Abbasid Period (750-1258)

The Umayyad Caliphate was defeated by the Abbasids, a dynasty named after Abbasid Ibn Abdul-Muttalib, the uncle of the Prophet Mohammad (PBUH). The Abbasids caliphate, Abu Jufar Almansour (754-775) established Baghdad, the present day capital of Iraq. This city later became an important centre for the Islamic civilization in many aspects of human life, including scientific knowledge, education, the arts and architecture. This cultural re-orientation and new pattern of Islamic architecture was exemplified through the process of change in design in Baghdad, a huge city, with many palaces, mosques and bazaars (Piotrovsky, 1999; Bloom and Blair, 1998). Eventually, the caliphs grew tired of it, and Caliph al-Mutasim (870-892) built a new capital city about 80 kilometres north of Baghdad, famously referred to as Suamarra or Samarra. It became a centre for study and scholarship for bureaucrats, and was filled with astonishing palaces, hippodromes, gardens and enormous mosques. Its famous mosque was decorated with a spectacular minaret, which had a spiral pathway leading upwards to its summit. The palaces were beautified with striking wood carvings and stucco. Indeed, the style of this carving determined to a large extent the characteristics of the plant ornamentation from the Abbasid dynasty.

Unlike the Umayyad period, the arts and architecture movement during the Abbasid dynasty was an active movement that reached a monumental peak. Many of the new art and decoration styles were created based on Islamic building design structures that included hand crafts in sculpture, drawing, ceramic, art calligraphy, the development of the Arabic calligraphy font style, including early *Kufic*, square *Kufic,* eastern *Kufic*, *thuith*, *naskhi*, *rnuhoqqoq*, *rihani*, and *taliq* (see figure 6.1). As a result of this dramatic change in architecture, the period later came to be referred

to as the "the golden age" of revolution in Islamic civilization (Gregorian, 2003; Hillenbrand, 1999).
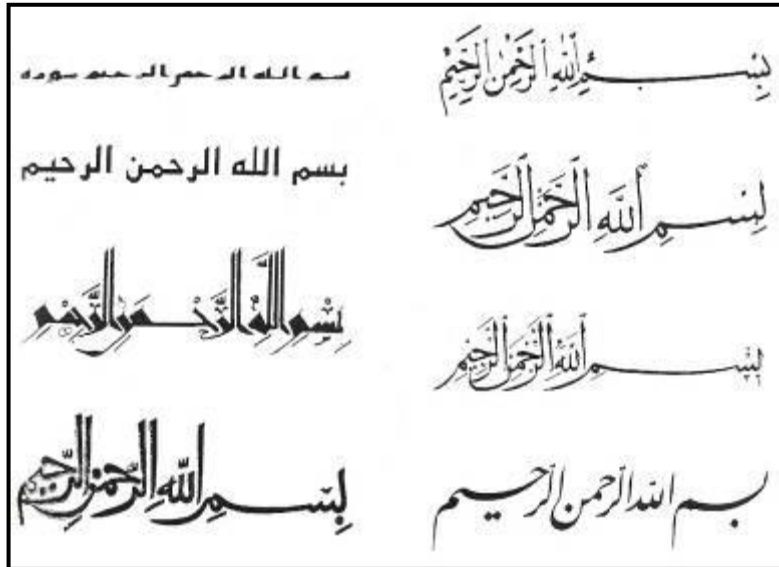
Figure 6.1: Abbasids period, 'In the name of God, the Merciful, the Compassionate'. Here it is executed in some major Quranic hands: early Kufic, square Kufic, eastern Kufic, thuith; naskhi, rnuhoqqoq, rihani, taliq right from top (Hillenbrand, 1999).

Islamic ceramics during the Abbasid period

In this period Islamic ceramics applied a unique technique of materials and decoration that was divided into the following two main parts:

1: Techniques using different materials

The pottery techniques identified five major sections of pottery of the period: lead-glazed ware, alkaline glaze, tin-glazed, painted ware, lustreware and white slip unglazed ware.

A. Lead-Glazed.

Lead oxide (PbO) was used in glazes as a flux. It is the most useful and dependable melting flux in the lower and middle ranges of temperature, being easy to control, colourful, and durable enough for most purposes, as well as being able to flow on to a smooth, even, glassy surface. One of the distinguishing characteristics of lead glazed ware is a bright shiny surface made of earthenware, with moulded decoration (Rhodes, 1973; Fehervari, 1998). Major categories of lead-glazed wares were also developed in places like Egypt (Lane, 1947; Cooper, 1972).

B. Alkaline glaze.

The glaze used in the 12th century Abbasid ceramic applied an alkaline glaze, a glaze fluxed with soda or potash, and was developed in conjunction with a stone paste body. Opaque turquoise, a popular colour for both vessels and tiles, was produced through a combination of the alkaline glaze, tin and copper. The materials used with some larger pots were covered with alkaline glaze which enabled bright blue and turquoise to be achieved (Porter, 1995; Cooper, 1972).

C. White Tin-Glazed Wares.

Painted tin-glaze pottery was also an Islamic invention of the Middle-East, which was perfected towards the 9th-century (Caiger-Smith, 1973; The Columbia Encyclopaedia, 2007). Tin oxide is used in turning transparent glaze opaque-white; it has also been used with great success on bricks and tiles, though, as far as is known, not on pots. This technique was discovered in Mesopotamia. The aim of Islamic potters was to achieve a good, reliable, even white surface, like porcelain, for which they used tin opaque glaze. Arabic craftsmen recognized the possibilities presented by the white surface and decorated the unfired glaze. Various colouring pigments were used but the most popular was cobalt oxide, deposits of which are

found in Arabia. This oxide gives off a blue colour when used on or in a glaze. Tin oxide can also be mixed with a modified form of lead glaze (Lane, 1947).

D. Lustreware.

The earliest documented lustre decoration was found on glass, with epigraphic evidence that it may have been made in both Egypt and Syria in the 8th century; and later in Iraq in the 9th century (Watson, 2004). The first occurrence of the technique on pottery was seen in Iraq during the 9th century. This transfer of the technique from one industry to another occurred at the time of the development of the great Islamic cities of Iraq under the Abbasids, including the building of the palace city of Samarra. Craftsmen came from all over the Islamic empire to supply these new markets, and cross-fertilization was one of its main results.

Lustre tiles were first made in about the 9th century and are found at Samarra in Iraq, and at the great mosque at Qairouan in Tunisia. The most brilliant period of lustre tile production was between the 12th and the 14th centuries at the potteries of Kashan. Its development was achieved through the application of a mixture of silver and copper oxides to the cold surface of a glazed vessel or tile. The decoration on lustre work was characterized by an absence of the human figure; floral and geometric motifs were used instead, though other lustre work centres included representations of humans and animals in their designs. However, the 9th and 10th centuries saw what was one of the highest and purest interpretations of Islamic ideas in pottery (see example of Abbasids lustre in Figure 6.2). Being unable to make lustre-ware, the potters of east Persia turned their attention to other ways of decorating the white ground of the pots. They discovered that pigments could be prevented from running under a transparent glaze if first mixed with fine white clay (Lane, 1947; Cooper, 1972; Fehervari, 1998; Cooper, 2000). These techniques spread across Iraq and then into Iran, Egypt, North Africa, Andalusia and Levant. One of the most significant and popular Islamic ceramic

workshop products known during this history was found in the city of *Fustat* in Egypt (Alam, 1989).

Figure 6.2: A portrait during Abbasids era of Poetry on pottery Glazed luster relief dish from Hira, in Iraq, during the mid 9th century. The Kufic inscription is says: 'Do not abandon the hope, long though the quest may endure, that you will find case of heart, if but to patience you cling' (Hillenbrand,1999).

E. White slip

During these periods, slip material, used over a red body, was decorated with a black or purplish under glaze pigment. Dark brown, dark red and aubergine colours were also used. Using the basic colours of the calligrapher, simple bands of designs in Kufic script were painted on to the white pot, often round the rim (see figure 6.3). Large areas of the bowls were left white which gave them their most striking characteristic, in contrast to the later decorative techniques developed in Persia, where most of the surface was covered with patterns (Cooper, 1972; Watson, 2004).
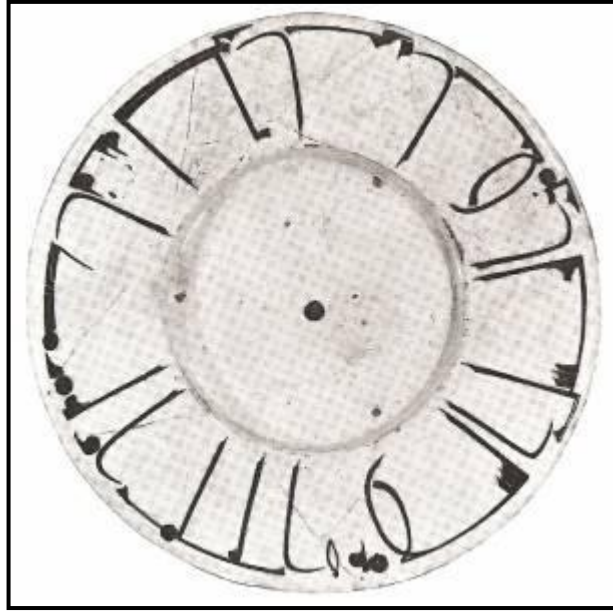
Figure 6.3: An Abbasids period, Restraint Dish covered with white slip and painted with brown Kufic inscription; Samarqand, 9th—10th century. In the centre, The text is in Arabic, '(the language of daily life) and reads: Knowledge: its taste is bitter at first, but in the end sweeter than honey. Good health (the owner- (Hillenbrand, 1999).

F. Under glaze and over glaze

Peterson (1998) defines over glaze as a technique used in the opposite direction to under glaze decoration. The metallic oxides or stains mixed with water to watercolour consistency are applied over a dry glazed piece before being fired. When the decoration is fired in the kiln it melts into the underneath of the glaze.

Both under glaze and overglaze paintings as one of the most successful attempts at under glaze painting were achieved after the discovery of the frit body in the 12th century. In this case, the colours were either painted directly onto the body or onto a thin quartzy surface, after which they were glazed with a transparent colourless or copper blue alkaline glaze. At Kashan the technique was more generally used on pots, although some relief moulded tiles and turquoise and cobalt splashes have been discovered, often combined with lustre on tiles. At

Kashan the potters also developed the technique of painting in coloured pigments that went over, as well as under, the glaze techniques (Porter, 1995).

2: Technical Process involved in the Decoration

In this period, the techniques used for decoration were comprised of some types of Arabic calligraphy, including geometrical, plant patterns, splashed wares and graffito applied on to the surface of the ceramic tile or plates.

A. Geometrical, plants patterns and Arabic calligraphy

The ceramic decoration was based on the techniques of engraving and raised details embossing on the ceramic surface, in the form of geometrical and plant decoration (Alam, 1989). This occurred around the 9th century when the Egyptian potters brought their skills to Mesopotamia, where the use of kufic script became more popular. For this reason, phrases such as "generosity is (one) of the qualities of the blessed", "peace and blessing", "good fortune", "blessing" or "good fortune and perpetuity" were used. Simple patterns were developed from the Kufic script, while decorative dots were used, as were very stylized animals and birds (Fehervari, 1998; Cooper, 2000).

B. Splashed-Wares

This technique is one of the most widespread in the Islamic world. They tend to be similar wherever they are found e.g. a clay body with a white slip coating; yellow and green colours are applied to a lead glaze, which then run when fired to create the ware's characteristic streaked and blurred design. In the past, the white slip ground, with or without incised decoration, was sometimes used to display monochrome coloured glazes, or transparent glazes "splashed" with pigment or coloured glazes that ran during the firing to provide a largely random flow of colour (Watson, 2004). Furthermore, Porter (1995) stresses that the 'Abbasid' period was

famous and synonymous with 'splashed wares'. At that time they developed a thick opaque white glaze which served to hide the clay ground that they used in painting their designs, and was referred to as a tin glaze. Tableware, which was often richly painted in 'splashes' of green and brown, or in delicate cobalt blue or lustre, was made in large quantities. In addition, red clay was used for body decoration, which was then covered with a white slip over which a transparent lead glaze was poured. Various colouring oxides were splashed onto this. The fluidity of the glaze caused the iron-yellow and brown colours to run down the pot, yielding an attractive mottled effect (Cooper, 2000; Watson, 2004).

C. Sgraffito Wares

During the Abbasid period the richest period of innovation for ceramic techniques, materials and decoration in the field of Islamic art (see the Abbasid ceramic period found in Kuwait in chapter four). These innovations generated unique and creative methods of ceramic application. The period proved to be one of the longest dynasties of Islam, running to 1258 until the destruction of Baghdad by Hulagu Khan the Mongol (Sanders, 1978).

6.4.3 Spanish Umayyad Period (756-1236)

The Umayyad dynasty was ruled by Abdul Rahman bin Mu'awiya in the period 708-756. He established the Caliphate of Umayyad Andalusia. Having survived the Abbasid Caliphate and on ascension to the Umayyad dynasty, he chose Cordova as its capital city. He was a great supporter of arts and architecture, as well as of his dynasty successors. During the time of Abdul Rahaman Alawsat (822-852), the Andalusian state became particularly advanced in the fields of literature, science, architecture and the arts. In this period, the Andalusian people enjoyed the refined cultural attributes of their civilization. Later, it was to become an important centre for the Western Islamic world (Beshtaawy, 2001; Alam, 1989).

During that period, a great number of luxurious arts, decorations and architectural styles were found. One of the best examples of Islamic architecture at that time was the mosque of Cordova, whose construction began in the year 785 and added to during various periods until the 15th century. In its earliest form, this building was a courtyard mosque of rectangular plan and design with a sanctuary of eleven aisles, akin to that of the original al-Aqsa mosque in present day Jerusalem. It had horseshoe arches like those in Damascus topping the arcades, such as the mosque in Medina, and Umro Ebn Alas mosque in Egypt. However, these edifices were expressed through their design effects of Levant, Egyptian, Arabian Peninsula and Moorish areas. It was enlarged in 833 by Abder Rahman II and again in 965 by al-Hakam II (961-76), when the great dome in front of the mihrab was completed. It was a remarkable structure and represents something quite new, for the dome was supported on a series of intersecting ribs. The system actually evolved in Persia. The Cordova mosque was also composed of mosaics supposedly carried out by craftsmen brought from Constantinople for that purpose (see figure 6.4). The horseshoe mihrab and the tiers of hexafoil arches that bound the mihrab chamber show a degree of elaboration not reached elsewhere in the Arab world (Aljiosy, 1998; Beshtaawy, 2001; Rise, 1975).

Figure 6. 4: Sanctuary of the Great Mosque at Cordova. The mosque was begun in the eighth century but was frequently added to, especially during the tenth century. The hexafoil arches in two tiers represent a new and original departure in Islamic architecture (Rise, 1975).

The distinguished Umayyad building process used stones, plasters and mosaics. Their decoration process included building palaces and architectures, but they preferred to use decoration that contained portraits of leaves, planets and Arabic calligraphy. After the decorations were completed, no space was left on the decorated walls (Alam, 1989).

The Umayyad dynasty ended in Andulsia during the era of Hisham II (976-1013), when overthrown by the Berbers dynasty. This paved the way for the spread of the Amoravid (1060-1147) rule from the Sahara region, and then, subsequently, the north-Western part of Africa (Robinson, 2004; Petersen, 1999; Penny, 2001; Hattstein, 2000).

The main building materials of Islamic architecture and style at that time were used in the cities of Marrakesh, like Tlemcen, Nedroma and Fez and in other cities in Spain. The buildings were basically constructed by using building materials such as baked bricks and mud bricks (toub), decorative brickwork panels, roofing tiles made of baked clay, stone, using wood as a roofing material (Petersen, 1999). In addition, the process of the building decoration also used forming areas filled with open work stucco decorations, whose vegetal ornamentation clearly demonstrated Andalusian influence. The fine leaf and flower paintings were reminiscent of comparable motifs on the stucco panels of the famous palace which was an exceptional example of Spanish Islamic art. In the course of the excavation, a considerable number of stucco fragments with geometric, vegetal, and calligraphic motifs were found. The finding of some painted stucco fragments, which evidently belonged to a *Muqarnas* dome that had not survived, caused a particular sensation.

One of the most beautiful examples of Islamic architecture was the Alhambra Palace. This palace was a complex of the Nasrid dynasty (1238-1492) in Granada, which perhaps came to be considered as one of the most famous examples of Islamic art in human history. It became the culmination and grand finale of

medieval Islamic culture on the Iberian Peninsula (Bermudez Lopez, 2000; Petersen, 1999).

Ceramic:

The Islamic Andalusia ceramic came under strong influence from the styles that emanated from the other Islamic parts of the world imported to Spain. Therefore, some of the ceramics appeared with white backgrounds and had some decorations and ornamentations on the front surface. In addition, some of the ceramics used lustre with added cooper oxide that gave off a green colour, although when used with manganese oxide it normally gives a brown colour. The *Kashan* and other ceramic tiles were also imported from Iraq and Iran to Spain (Aljiosy, 1998; Colan, 1980).

The local Spanish Umayyad ceramic was produced at the city of *Medinet az-Zahra.* The pottery was limited to barbotine wares (a technique of decoration applied by using slip on the pottery), mostly jugs and vessels with painted decorations in green and brown on a yellow ground. Both types owed their basic inspiration to Mesopotamia, but were developed locally and very rapidly. The results were very provincial, and it was not until several centuries later that any really high-class pottery, characteristic of the Spanish Umayyad, began to be made. These came in the form of a particularly rich and accomplished lusterware, the first of its kind occurring in 1006, when reference was made to the 'golden pottery' (Mohamad, 2005; Rise, 1975).

According to Fehervari (1998), the lustre painted pottery was produced in Spain towards the end of the Muslim rule, more particularly during the late 14th century. All known vessels were painted in brownish yellow lustre and cobalt blue. In Morocco, the most important pottery ceramic known was in Fes, while others were at Meknes and Safi. The Moroccan pottery is one of the most interesting and best of its kind. It is inked in the shape of four petal led flowers and completely covered

with dark cobalt - blue glaze. Polychrome painted wares were common in Morocco, most of which were made by the craftsmen of Fes. The majority of vessels were coated with yellow or white ground slip, onto which the designs were painted in blue, green and black. The decorations combined floral and geometrical patterns in a style that was typical of the types of Fes.

Again the mosaic tiles and cuerd seca used in Morocco illustrated another type of Mosaic tile referred to as the Zillij (see figure 6.5). Tile makers tend to assess all types of tiles in terms of their size and number, and the specifications required for covering a given surface (Porter, 1995). The Almohands era ended in Spain after the surrender by Ferdinand III at Cordova in June 1236. Subsequently, in August 1245, the Nasrids period also came to an end in Seville (Hattstein, 2000).

Figure 6. 5: Some of the examples of the colored tiled panel decorations, which was also used to adorn other courts and palace halls. The sultan of the 14th century (Bermudez Lopez, 2000).

6.4.4 Fatimid Period (969-1171)

The Fatimid rule extended up to North Africa, including Egypt, Tunisia, Algeria, and Syria. However, there existed serious disagreement and debate as to where the lineage of the Fatimid emanated from i.e. whether they were descendants of Prophet Muhammad's (PBUH) daughter, Fatima, and her husband Ali, who was also the cousin of the prophet (Mozot, 2000; Hawting,2000). In this period, the art revolution, as described by Nasser Rabbat (2009) had:

> ….Commissioned many of the luxury arts favoured by their Abbasid rivals in Iraq, such as lustre ceramics and carved rock crystals. But Abbasid power had now faded, so it was easy for the Fatimid to outdo them. Their art shows a well-integrated, more clearly 'Islamic' style art (Rabbat, 2009).

The opulence of the Fatimid court fuelled a renaissance in the decorative arts, which made Cairo the most important cultural centre in the Islamic world. Nearby, old Cairo, a city known as Al-Fustat, became a major centre for the production of pottery, glass, metalwork, rock-crystal, ivory, wood carving and textile factories. A novel, more refined style developed in pottery with small animals and inscriptions now forming the major decoration in textiles; and rock-crystal carvers demonstrated great skills in works created for and treasured by the caliphs themselves. In architecture, the Fatimid borrowed the Tulunid techniques and used similar materials, but also developed those of their own. For example, in Cairo, their first congregational mosque was Al-Azhar (the splendid), founded along with the city (969–73).

The most popularly practiced Islamic Fatimid ceramic production was at *Fustate* in Egypt, where the ceramic reached its highest quality of design and decoration. Plates of the highest quality were designed with outlining colours running around the edge, while planets and figurative drawing adorned the plates' surface. There is evidence that the technique of lustreware was also applied on ceramic surfaces during the Islamic period prior to the Fatimid era (Alam, 1989; Porter, 1995).

Based on the analysis above it can be observed that there were three types of pottery production during the Fatimid period. These are vessels covered with coloured monochrome glaze, lustre painted wares and the North Africa polychrome painted in glaze wares.

(a) *The Monochrome glazed wares* were coated with a coloured monochrome glaze and decorated with incised or moulded decoration underneath. They were first made of yellowish-buff or red earthenware and later of faience, or the so called "composite white frit ware" which appeared in Egypt towards the end of the 12th century, with a cobalt blue glazed bowl with incised floral decoration.

(b) *The Lustre* went through significant development during the late 10th and the early part of the 11th century. The Fatimid period had further progressed in the decoration of vessels.

(c) In the *North African provinces* i.e. Morocco, Algeria, Tunisia, Libya, and also in Spain, a special type of pottery was produced which was in a way a further development of the near Eastern splashed ware. The vessels were painted in green, with a yellow background. The manganese was mainly used for outlining the designs. In addition, ground slip lead glaze was painted on to the ceramic decoration (Fehervari, 1998). However, in the year 1171, the Fatimid rule ended and was succeeded by the Ayyoby dynasty, thus opening another historical chapter in Islamic civilization (Gregorian, 2003).

6.4.5 Seljuqs Period (1055 -1220 Century)

Historically, the Seljuqs was a Turkish dynasty that was based and ruled in Iran, Mesopotamia, Anatolia, Syria and Iraq. In 1055 Toghril Beg seized power in Baghdad. He was recognized by the Caliph al-Qa'im as 'Sultan of East and West', and he quickly ended the principality of the Buyids. The sultanate of the 'Great Seljuqs' in Iran and Iraq took over control of the Caliphate (Endress and

Hillenbrand, 2002; Bloom and Blair, 1998). The Seljuk excelled in the field of art, crafts, architectural styles and decoration. Petersen (1999) argues that during this period many of the characteristic forms of Islamic architecture became common and widespread. Thus Madrassas (schools) and khans were built from Central Asia to Western Anatolia. The *Iwans* became one of the principal architectural units in the dynasty. In Iran and the eastern areas, decorative brickwork and elaborate stucco ornamentation were common, whilst in Anatolia these decorative themes were translated into stone.

The architecture of this period was also characterized by memorial buildings which were usually octagonal structures with domed roofs. The madrassas, such as the Mustansiriya in Baghdad or the Muristan in Damascus, were built to a four-iwan plan, while the building designs were characterized by conical muqarnas domes (Petersen, 1999). Piotrovsky (1999) observes of that period:

> *"Classical Islamic art gained its shape in particular in the 11th century. At that time in many ways all kinds of artistic customs were being circulated which for many centuries were to characterize Islamic art…. The cupolas and minarets became more regular, while new standard designs came into vogue for decoration"* (Piotrovsky, 1999, p19).

The Islamic Seljuqs Ceramic

Based on historical accounts, there were two main popular Seljuqs ceramic production centres, namely Al-Ray and Kashan. The Seljuqs ceramic was brilliant in design and reached an advanced level in the process of designing and technique involved in its production. The producers used lustreware over glaze and under glaze ware techniques that contained one colour or variety of colours. They also used the ornamentation of carving, screen and outcrop forms. The most common Seljuqs colour style applied in ceramic were white, blue, turquoise, green, yellow, and bright brown, and these colours almost invariably appeared in ceramic types of Lakabi. Moreover, the decoration styles most popularly known at that time were the geometrical patterns, Arabasic, planets and figurative design styles (see

figure 6.6). There was also another style of decoration referred to as the "Minaey" ceramic. This involved using coloured clay, which was later painted with tin oxide, after which seven different types of colour were added to ensure an attractive finish.

Figure 6. 6: Hexagon Tile assemblage, first half of 13th century; Seljuk, Anatolia. Composite body, of over glaze-painted (The Metropolitan Museum of Art, New York, October 2006).

Many writers have also mentioned the significance of the Seljuk's pottery in the history of Islamic arts and civilization. At that period, numerous mosques, Madrasas, and palaces were built and decorated with richly carved stucco panels, and brickwork with glazed tiles. Two major types of glazed wares were used at that time. The first of these was a style made of earthenware and vessels, modified by using composite white fritware; while the second was a decoration technique that used Sgraffiato wares with colourless transparent lead glaze. A more colourful version was known under the name of "Amol" ware. The "Amol" ware was painted in green, and occasionally in red, under the colourless lead glaze. The typical "simple" sgraffiato vessels were deep pedestal bowls, also known as "Bamiyan bowls" since they were excavated at Bamiyan. What made these "Bamiyan bowls" so attractive was the extensive use of manganese and green splashes. They also produced thinly potted vessels made of this new composite white fritware and coated them with vessels, and a colourless glaze popularly known as the "Seljuk

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white". Some of these were covered with cobalt blue or manganese. The surfaces of others were covered with a colourless or coloured alkaline glaze, after which they were painted in a black and cobalt underglaze (Mohamad, 2005; Fehervari, 1998). The Seljuqs dynasty was eventually ended by the invasion of the Mongols in the year 1220, who virtually destroyed the cities of Kashan and Al-Ray, both of which were highly regarded as strategic centres of Islamic art in that period (Alam, 1989).

6.4.6 Ayyoby and Mumluks Periods (1171-1517)

The Ayyoby period can be traced back to (1171-1250) as a medieval dynasty that ruled Syria (1180s), Palestine, Iraq, Egypt and Yemen during the 12th and the 13th centuries. The founder of the dynasty was Shirukh, a Kurdish retainer of the Zengid prince, Nur al-Din, who secured the governorship of Aleppo and was later appointed vizier to the Fatimid ruler of Egypt.

The Ayyubids were especially famous for their works in inlaid metalwork and ceramics, particularly lustre and underglaze painted wares. Their architecture was generous and its immense patronage led to tremendous architectural activity in Egypt and especially in Syria, while their local courts revived the cities of Damascus and Aleppo. Meanwhile, the establishment of Madrasas, higher institutions for religious learning, such as the Zahiriya (1219) in Aleppo and that of Salih Najm al-Din Ayyub (1243) in Cairo, exemplify the Ayyubid interest in education. In addition, the Madrasa al-Sahiba in Damascus (1233), was built by Salah al-Din's sister, Rabia Khatun. In the Mumluks period dated (1250 – 1517) a number of remarkable architectural monuments from the period were recorded in Cairo: these included beautiful brass objects with an intricate overall design, and manuscripts of the Qur'an, rich in stunningly vivid decoration (Yalman, 2001).

During this historical epoch, the pottery centres were re-established at Damascus and Cairo (Cooper, 1972). The Islamic ceramics in this period were basically

classified into Laqabi wares, Monochrome glazed, Underglaze painted, Lustre painted, Sgraffiato, and blue and white wares[6] (see figures 6.7 and 6.8). However, in 1517 the Ottoman defeated the Mumluks and brought their period to an end (Piotrovsky, 1999; Mohamad, 2005; Hillenbrand, 1999; Fehervari, 1998).

Figure 6.7: Ayyubid period late 12th–first half of 13th century Syria (Raqqa). Under glaze-painted composite ceramic body and over glaze luster-painted Yalman (2009) The Art of the Ayyubid Period. New York: The Metropolitan Museum of Art. Available from: http://www.metmuseum.org/toah/hd/ayyu/hd_ayyu.htm (accessed 9th December 2009).

Figure 6.8: Tile, first half of 15th century; Mamluk, Syria, Composite body with under-glaze paint; The background of tightly coiled spirals and the use of black, blue, and turquoise underglaze pigments betray the Syrian provenance of this tile Yalman (2009) The Art of the Ayyubid Period. New York: The Metropolitan Museum of Art. Available from: http://www.metmuseum.org/toah/hd/maml/hd_maml.htm (accessed 9th December 2009).

6.4.7 The Great Mongols Period (1218- 1502)

The rise of Genghis Khan's Mongol empire is dated back to the second part of the 13th century (Olson, 1998) when its ruler Genghis Khan defeated the Seljuk

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[6] Laqabi wares - most of these Syrian vessels have a layer of iridescence, which appears like lustrous patches, decorated and coated with a cobalt-blue glaze which in places is highly iridescent. The earlier examples were made at Raqqa, but the town was invaded and destroyed by the Mongols in 656AH/AD1258. After that, most of the potters moved to Damascus which became a major pottery centre in Mamluk times. Syrian lustre vessels were distinguished with a chocolate brown lustre for decoration and sometimes they werepainted in cobalt blue. During the Ayyubid period a polychrome painted version was popular and widespread in Syria which reveals some relationship to contemporary Persian Aghkand wares. Painted in yellow, green and manganese, the decoration showed floral patterns.

dynasty in 1220. The Mongols created the largest territorial empire in history, which culminated in a fascinating culture (Souck, 2000; Alam, 1989; Komaroff, 2006). In 1258, the armies of Genghis' grandson, Ogedei Khan, invaded Baghdad after a bitter and bloody struggle in which the majority of the architectural palaces, mosques and libraries were completely destroyed[7]. There were many schools and styles in Islamic art that bear their names from the dynasties of Islamic rulers whose roots lay in Mongolia.

The Timur Lane who claimed descent from Genghis Khan, ruled in Central Asia in the 14th century. He was a great warlord and captured Iran, Afghanistan, Iraq including Baghdad, Syria and Asia Minor. He moved his capital to Samarkand (now in Uzbekistan) which he transformed into one of the most splendid cities of the world (Piotrovsky, 1999).

Figure 6.9: Registan, Samarkand, Uzbekistan – 15th C.

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7 However, gradually, the aggressors were converted to Islam, and became assimilated into the already centuries-old culture, and indeed became its guardians.

This period witnessed brilliant displays in architecture, characterised by tall, elegant minarets, decorated with tiles or brickwork (See Figs 6.9 & 6.10). It portrays a great beauty and fine proportion and this era boasts some of the most attractive stalactite work in its interior. Its glazed tiles were highly impressive and were perhaps made locally.

Figure 6.10: Ornate Islamic tile decoration, Samarkand,
Uzbekistan – 15th C.

The application of ceramic techniques and style of decorations fall into the following systems of design and materials:

A. Lustre and Sgraffito wares were massively used and produced at that time. Moreover, lustre was often applied with cobalt blue paint and had round flaring

sides, but rested on a widely splayed foot ring. The colour of the lustre was darker, more brownish in colour, and less shiny than earlier objects, while the decoration was overcrowded.

B**. "*Sultanabad*" pottery style: In the 14th century, Sultanabad to some extent supplanted Kashan as the main centre, its products being characterized by rather thick white bodies, with flat, inturned rims and thick glazes forming tear-drops outside, and thick pools at the base inside. The decorations were painted under the glaze, either directly on to the body or over a grey slip, which was sometimes so thick that it produced a design in relief. Modelling in low-relief was often associated with the painted decoration. As a result of the discovery of pottery wasters at Sultanabad, the important group which was designed in black on a blue ground, above a friable white body, can be associated with Sultaniya as well. This ceramic was produced in three main types of wares:

- The first type was coated with a grey ground slip; the designs were moulded and reserved in white with a black outline;
- The second type was painted in two colours, black and cobalt blue, although occasionally a third one, namely turquoise, may have been added. Some of the "*Sultanabad*" bowls had an entirely new shape. The rounded sides terminated on top in an exerted and flat rim;
- The third type were bowls with round flaring sides painted in two or three colours under a clear glaze, the majority of which were decorated with wedge shaped panels.

C. Mina'i decoration: This was a method of underglaze or overglaze decoration in which pigment was painted directly into the biscuit-fired pot which was then dipped into a clear glaze. Unlike enamels, under glaze colours only developed their brilliance during the subsequent firing. Pale blue, purple and green under glaze colours were used and acted as a background to the enamel decoration which was added later. At least three firings were needed to produce the Minai decoration: first the biscuit, then the glaze which would usually be white but sometimes blue,

followed by the much lower temperature enamel firing. Enamels are low-temperature glazes prepared in frit form by melting the ingredients in a crucible and grinding them before applying them to the pot. Mixed with a suitable oil medium, they can be made to stick to the shiny glaze surface. Rich and varied colours can be obtained at a low temperature and the enamel technique allows detailed designs to be painted as the colours do not run and lose definition.

D. *Lajvardina* technique, which was developed at the end of the 13th century. The term derives from the Persian word *lajvard,* meaning "cobalt blue", or a rich turquoise glaze, because of its deep blue glaze. The vessels and tiles were coated with a cobalt blue glaze and the decoration painted in black, white and red, while the gold was cut out from thin gold leaves and glued to the top of the designs (Porter, 1995; Cooper, 1972; Rice, 1975).

6.4.8 The Safavids Period (1501-1722)

The Safavids dynasty was based at Ardabil in Azerbaijan, where it was initiated by Shaikh Safi ad-Din (1252 - 1334). In contrast with other Sufi orders, it took on a dynastic character from the very beginning, thereby developing within it the potential for an easy transition into a political movement. In 1501, the Safavids came to power under the leadership of Shah Ismail (Sicker, 2000; Ahmed, 1999).

The artistic and architectural achievements of this era are most clearly visible, even today, by a brief visit to the memorials and mosques in Iran. The tiles, the calligraphy, the colours of the paintings and the symmetry of the buildings have stood the test of the centuries. Isfahan became the capital city for the Safavids in 1598 and was ruled by Shah Abbas. The artistic achievements and the prosperity of its dynasty is best represented at Isfahan. Indeed, it became the Paris or Washington of its time. At the top of this jewel of arts and architecture were the Shah Mosque and the shops in Isfahan (Ahmed, 1999). According to Robert Hillenbrand (1999), the principal achievement of the Safavids was its expansion of

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Isfahan, masterminded by Shah Abbas I from 1598 onwards. It was one of the most ambitious and novel schemes of town planning in Islamic history.

The Islamic Ceramic Safavids

The Islamic ceramic Safavids saw a vigorous revival of the pottery industry in Iran, which was not flourishing despite occasional fine pieces. Safavid potters were distinguished in the following areas of arts and architectural expertise:

A. Developing blue and white wares with their distinctive form and white translucent body, onto which celadon slip may be added.

B. The Lustre style enjoyed a revival. It had a rather brassy sheen and sometimes used the range of colours from chocolate brown to copper red, combined with an emphasis on underglaze blue, resulting in pieces inferior to earlier lustre in aesthetic quality. The decoration was restricted to vegetal and flower motifs.

C. Kirman - Polychrome ware was produced in great quantity and the majority of the ceramics produced were in blue and white ware with black outlines, some of which was used in decoration of architectural tile work.

D. "Kubachi" wares were from a small town in Daghestan in the Caucus in northern Persia. This type of pottery was discovered during the last century, and was used to decorate the walls of peasants' houses. There were several types of these "Kubachi" potteries. One was painted in black under a blue or green glaze, decorated with floral designs, like a large dish. Others, using techniques of under-glaze were painted in brown, green, yellow, dull red, black and white under a clear colourless crackled glaze.

E. "Gombroon" ware was a body of ceramic made of hard, thin white faience with elaborate pierced decoration, showing a series of floral motifs. (Hillenbrand, 1999; Fehervari, 1998; Lane, 1957; Cooper, 1972; Mohamad, 2005).

6.4.9 The Ottoman Period (1300-1918)

The Ottoman dynasty was part of the dynasty that governed the empire founded by Osman I (1300-1326) in northern Anatolia at the end of the 13th century. The empire was later expanded by Osman's successors until its collapse after the First World War (1914-18) and its citizens prior to its expansion were generally Turk (Simpson, 2008; Hattstein, 2000). In 1650, the Ottoman Empire extended its lands in Europe, Asia and Africa (Imber, 2004; Piotrovsky, 1999).

The Ottoman Empire inherited a great historical geopolitical map in the Islamic world. This phenomenon was attributed to common religious identity. Thus, rather than delineate the current political boundary between the Ottoman and Safavid empires in his Djihannuma, Hadji Khalifah opted instead to portray the Muslim world as a unit, indicating only the regional names inherited from the Arab geographical literature of the early medieval period, which reflected the political realities of a bygone era when the Abbasid caliphate ruled over the four corners of the Muslim world (Imber, 2005). Piotrovsky (1999) comments that:

> *"These ideas concerning Islamic culture and the daily life of Muslims stem largely from impressions gained about the Ottoman Empire. The characteristic social patterns of this community, with their luxury and ceremony, find expression in the exuberance of its art: the delicately decorated ceramic tiles and pottery with their blues and reds, not to forget the cult of the tulip in the Ottoman Empire"* (Piotrovsky, 1999, p20).

The Ottoman kingdom also marked a significant milestone in the history of great Islamic art and architecture. One of the best-known buildings of Jerusalem is the Damascus Gate with its monumental bent entrance, crenulated parapet, machicolations, arrow slits and inscriptions. In addition, the Ottomans covered the outside of the Dome of the Rock with Iznik tiles. These techniques included cut tile work, cuerda seca, polychrome under-glaze, and blue and white under-glaze. Further outstanding Ottoman landmarks include the water system of the city (later

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overhauled with repairs carried out by the Birket AlSultan), Solomon's pools, and several drinking fountains (Petersen, 1999; Porter, 1995). In this period, Islamic architecture increased because of the appearance of the genius architect, Sinan (1539 -1588), with the most outstanding achievements of this period being the mosques and religious complexes built by Sinan (1539–1588), who became one of the most celebrated Islamic architects in history. Hundreds of public buildings were designed and constructed throughout the Ottoman Empire, contributing to the dissemination of its vast culture (Yalman, 2002).

As in all Sinan's mosques, the central dome was the essential point around which the structure was developed. The majority of the works of his predecessors had been on a smaller scale and their domes did not dominate the structure in quite the same way. Therefore, it is said that Ottoman approach to architecture was essentially the invention of the architect Sinan, whom the Turks laud as their greatest genius. The most famous and probably the most beautiful was the mosque of Sultan Suleiman in Istanbul (1550-7), which stands in a superb position dominating the Golden Horn. Its great dome is supported on four square piers, and it has four minarets, two flanking the entrance and two at the extremity of the atrium-like forecourt. The architect himself, however, was said to have regarded the mosque of Sultan Selim at Edirne as his most perfect and mature work. Today it is referred to as **'***The Blue Mosque***'** (see Figure 6.11).
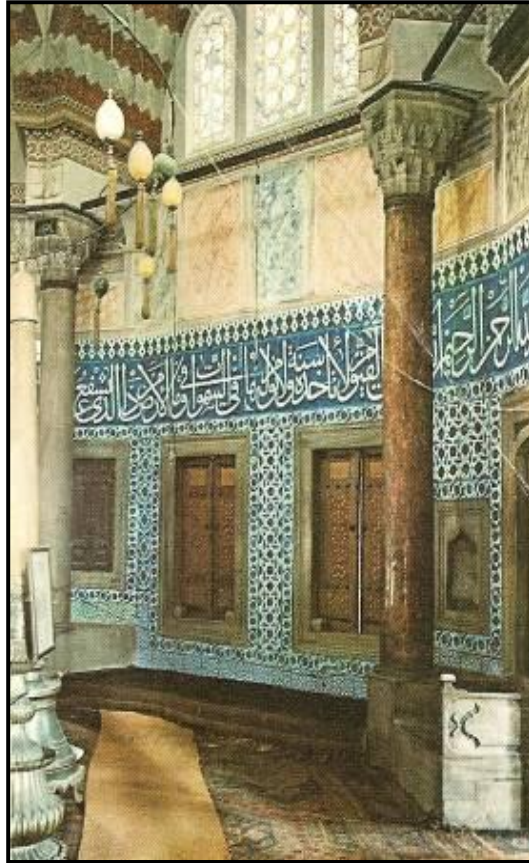
Figure 6.11: The Blue Mosque in the Ottoman Period.

However, a purist would regard them as descendent and attractive, although the details of the tile-work, perhaps lacks something of the quality of the earlier work that can be seen in the Suleiman mosque (see figures 6.12 and 6.13), or in certain smaller mosques like Sinan's Sokollu Mehmet Pasha (1571) or Rflstem Pasha, both of which are veritable tile museums (Rice, 1975).

Figure 6.12: Detail of the tile-work in Sultan Suleyman's building. These tiles are typical of the work of the Iznik potters at their best and are among the famous in Istanbul. The designs were painted on the tiles and glaze added above, a technique quite distinct from that which prevailed in Seljuk (Rice, 1975).

Figure 6.13: Detail of the tile-work in the mosque of Rustem Pasha, Istanbul. C. 1550. The mosque was built for one of Sultan Ssuleyman's grand viziers by Sinan, and its tile decorations were both very extensive and of outstanding quality. Virtually all the walls space iside the mosque and within the porch were tiled (Rice, 1975).

Ceramic Styles during the Ottoman period

Islamic ceramic during the Ottomans era reached its highest peak. The golden age of Ottoman pottery coincided with the apex of the Ottoman Empire. The major pottery centre was at *Iznik* and *Kutahya*. These tiles are decorated in polychrome with extensive floral decoration (Fehervari, 1998; Lane, 1957).

A. Iznik tile work

Izniks was a technique that used under-glaze painted in blue, emerald green and red, decorated by tulips, carnations and roses that lay on the white ground in the centre, preserved against the brilliant red ground of the borders (Porter, 1995). In the mid-16th century the town of Iznik in north-West Anatolia produced massive tile works, and was famous for its pottery production throughout the Ottoman period. The tiles in the Dome of the Rock in Jerusalem, in the Süleymaniye Mosque in

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Damascus, and in the Süleymaniye complex in Istanbul were all produced by Iznik. Before 1550, Ottoman tiles were hexagonal with bold *cuerda sec* designs; however, the new Iznik tiles were square and carried underglaze designs. The new shape and use of underglaze painting enabled large multi-tile compositions to be made. Another innovation of this period was the use of thick red slip as an underglaze colour which gave Iznik pottery its distinctive appearance (Petersen, 1999).

The characteristics of the Iznik style

A.   A range of literature and numerous studies have pinpointed the evolution and the characteristics of the Iznik motifs and compositions, and have developed a basic chronology on how some pieces of the style came to bear double or triple decker Quranic inscriptions of geometric designs (Rice, 1975; Cooper, 1972; Fehervari, 1998; Hillenbrand, 1999). The favoured subject-matter for Iznik wares, especially tiles, was floral motifs and the distinctive feathery saz scrolls, while carnations, hyacinths, tulips and other flowers recur in endless combinations. Set in apses in a qibla wall, they turn a mihrab into a paradise garden.

B.   Blue and white decorations were restricted; the glazes were thin and fine, the shapes of the vessels followed metal prototypes, and the tiles were comparatively restricted in scope.

C.   Square or rectangular surfaces fitted together in fours or even greater numbers to form elaborate large-scale panels, bearing an adornment in various colours (polychrome). The body was usually of a fine white paste, the designs done in deep cobalt blue, green, lilac, aubergine, turquoise and a characteristic upstanding tomato red, usually against a white, or sometimes an azure background. The colours were themselves verifiable pastes, but were covered by a transparent glaze of uniform colour. The introduction of the technique has sometimes been

attributed to Persian craftsmen brought back by Selim I when he captured Tabriz in 1514. Sometimes also used was the 'Damascus style', which was characterized by a more varied palette, several shades of blue and a lovely sage green predominating, while manganese brown was also often added. Flowers like bluebells or carnations formed the main motifs of decoration (See figures 6.14 and 6.15). However, the style of Iznik deteriorated and finally ceased towards the end of the 17th century (Carwell, 1998; Cooper, 1972).

Figure 6.14: Plate, ca. 1580, Iznik, Turkey, Frit ware, polychrome painted under a transparent glaze. This dynamically decorated sixteenth-century dish in cobalt blue was produced at the famous kilns at Iznik, in Western Anatolia. Stylized variations of lotus petals, geometrically patterned into a radiating sunburst of powerful Islamic design Yalman (2009) The Art of the Ayyubid Period. New York: The Metropolitan Museum of Art. Available from: www.metmuseum.org/toah/works-of-art/1991.172 (accessed 9th December 2009).

Figure 6.15: Mosque lamp, first quarter of 16th century; Ottoman, Anatolia (Iznik) Composite body, opaque white glaze and underglaze painted Yalman (2009) The Art of the Ayyubid Period. New York: The Metropolitan Museum of Art. Available from: http://www.metmuseum.org/toah/works-of-art/59.69.3 (accessed 9th December 2009).

B. Kutahya.

After the demise of Iznik, ceramic making continued to be produced in Turkey at Kutahya. Kutahya is a town on the south east of Istanbul that came into existence in the early part of the 18th century.The main characteristics of its ceramic products were polychrome and decoration painted in blue, green, yellow, and outlined in black. There were three large oval shaped sealing wax red painted medallions, each with Arabic inscriptions in blue, written in cursive style (Porter, 1995; Fehervari, 1998). However, one developed later in the 18th and 19th centuries in the form of spirited designs of boats, trees, and mosques which were painted on to bowls and dishes, thick and coarse perhaps, but nonetheless pleasant and attractive. These later designs represented peasant rather than fine art, and can hardly be classed alongside the best work of Iznik. Many of the same floral motifs that were found on the Iznik pottery were also used on the silk textiles, another luxury product which was developed along the same distinctive lines as the pottery (Carwell, 1998; Rice, 1975).

6.4.10 Mughal Period (1526-1857).

The Mughal were an Indian Islamic dynasty that ruled in India. Mughal rule was begun in 1526 by Babur, a descendant of Timur and Genghis Khan, who occupied Delhi and defeated the Lodi ruler. By the time of his death at Agra in the year 1530, his position was still insecure, as Humayun, his son and successor, realized that Babur's body had been taken to Kabul for burial. The Indian subcontinent (i.e. the area that covered the present-day states of Pakistan, India, and Bangladesh, some parts of Afghanistan, Ladakh, Assam and Kashmir) produced some of the finest expressions of Islamic art and architecture. One of the most famous pieces of architecture was the Taj Mahal 1631(Vaughan, 2000; Petersen, 1999; McLeod, 2002).

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The main characteristic of Mughal's ceramics were manifested through the application of brilliant yellow ground, with red flowers outlined in white and with a green leaf that bears some resemblance to the Ottoman leaf (Porter, 1995). Finally, in 1857 the last Mughal, Bahadur Shah II, was stripped of even this title and was removed from Delhi for his part in the Sepoy mutiny (Petersen, 1999).

6.5 Colonial and Postcolonial Period 1900–1970 and up until the 21st Century.

Following the decline and departure of the last Islamic art period, there was a fast growing trend and transformation in art and crafts in the Middle East. At the beginning of the century, the Western-style easel was seen as a liberating form of individual expression unrestricted by the rigid rules of traditional art. Early work was also influenced by nineteenth - and twentieth - century Oriental arts. This art and design attitude dominated Western views of the region for most of the 19th century and well into the 20th, especially in the period of French rule over some of the Arab states. French language and culture dominated the educational system and cultural environment of Beirut. Yet artists returning from their studies abroad were determined to uphold their national identity and individual styles. The generation of artists that experimented with Cubism, Dadaism, Fauvism, Surrealism, and abstraction laid the new foundation for Arab and Middle East art with distinctive and prevalent styles until the end of the 20th century. However, Islam's discouragement of the depiction of human figures in art was intended to prevent idolatry and was restricted to religious images. This did not inhibit painting, which is also attributed to the fact that naturalistic figuration had not been part of the local artistic traditions since the pre-Islamic period (Aljamossy, 2008; Hagedorn, 2000; Mikdadi, 2004).

At the beginning of the 21st century, traditional Kuwaiti ceramics have experienced a rapid transformation as a result of modernity and the influence of the Western world. The Kuwait ceramists and artists come to present their works as replicas of

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other cultures e.g. American Indian figurative, and Surrealism (Kazal and Alowad, 2003). This dramatic change resulted in a shift in the analytical literature on Kuwaiti arts and ceramic. A detailed analysis on the 21st century transformation in the nature of Islamic arts and ceramic is offered in Chapters 2 and 4.

6.6 Conclusion

This chapter has demonstrated that the historical origin of the Islamic forms and tradition of architecture and ceramic is rooted in the particular historical phases of Islamic civilization, as found in the various Islamic dynasties of the past. This historical transition can be traced from the Umayyad period (661-749) through to the Colonial and Postcolonial Period of 1900–1970, which marked a turning point in the history of invention and revolution in the Islamic civilization with particular reference to Islamic arts and architecture.

There was a strong relationship between the political rulers of the period and the artistic and architectural styles of the time. Often these rulers encouraged their successors to support similar styles of design decoration and development of the art motifs. This was noted, both with the successor to Abu Jufar Almansour of the Abbasid period, as well as at the time of Sultan Suleiman of the Ottoman period. However, the relationships, ideas and innovations of those involved throughout history in the fields of art, design and architecture still require nurturing and encouragement among the artists of today: firstly, to learn from the history, culture and traditions of Islamic art; and secondly, to meet the needs of the 21st century Islamic world, and the artistic and environmental challenges it faces in the modern global world.

Thus, at the beginning of this century, the Islamic world witnessed dramatic transformations in the nature and patterns of its traditional culture and architectural orientation. The rising trend of globalization and the sweeping effects of Western

values and culture that accompanied it have gradually led to the erosion of the traditional Islamic arts and design. Today, most traditional buildings and designs across the Arab world have been replaced by Western styles of architecture and design.

CHAPTER 7: RESULTS AND ANALYSIS OF SURVEYS OF CURRENT STATE OF CERAMIC DISTRIBUTORS, ARCHITECTS INTERVIEW AND ANALYSIS OF GENERAL PUBLIC SURVEY IN KUWAIT.

7.1 SUBSECTION 1: RESULTS AND ANALYSIS OF THE CERAMIC MARKETS AND DISTRIBUTION SURVEY.

7.1.1 Introduction.

This section describes a summary and findings of a questionnaire put to ceramic markets and distributors in Kuwait. The survey included 35 samples of distributors of ceramics based in the main trade areas in Kuwait, including: those in the cities of Shuwaikh and Hawally, during the period between 11-15/4/2007. The questionnaire provided valuable evidence concerning the value placed on architectural ceramic ware, its production and consumer consumption in Kuwait.

The analysis was informed by the research methodology in Chapter three and the aims of the research. The responses received from the questionnaires concerned the three core areas:

1. General opinions on ceramics architectural materials in Kuwaiti.
2. The characteristics of these ceramic products in Kuwait.
3. The current state and future of Islamic ceramics in Kuwait.

These findings were analysed mainly through the use of quantitative analysis, ending with a qualitative result.

The process of data analysis was aided by using the statistical programme "SPSS software", which helped elicit general statistics by displaying the frequency and percentage of the responses in each multiple choice question in the survey. Regarding the nature of participants, the statistics in this survey sample indicated that:

- 40% were sales managers, while 37.14% were salesmen (the others preferred not to reveal what they did).
- 40% of the workers had more than 11 years' experience of working in ceramic distribution in Kuwait, while 22.86% had 6-11 years experience, and

20% had 1-5 years (the others made no comment).

The ceramic distributors' responses to the statements in the questionnaires were analysed as follows:

7.1.2 Methods of Survey.

A. Sampling.

According to Hague (2006) "*a sample: a selection of people who can be seen as representative of all of the different groups of people who might be affected by, or have an interest in, the subject being researched*" (Hague, 2006, p47).

There are two types of sampling method, namely random and non-random sampling. According to Johnson (2002), random samples are sometimes referred to as probability samples as they are based on probability theory. Non-random samples are thus referred to as non-probability samples because random chance is not taken into consideration. On random sampling, he illustrated that researchers establish a sample size and then randomly select the number of subject matters being studied e.g. the number of people, files, roads etc. On the other hand, non-random sampling is used when random sampling is not possible or desirable.

The research adopted a random sampling approach, as it was difficult to predict in advance the number of people who would be willing to participate in the survey and the number of distributors operating within Kuwait. In addition, the survey targeting the ceramic product market - the sampling technique referred to as the snowballing technique - was applied in order to identify the various ceramic markets in Kuwait.

The questionnaire sampling was selected randomly before the commencement of the survey as it was unclear how many of the ceramic distributors were operating within the targeted areas.

The survey focused on 35 retail outlets in two different regions of Kuwaiti namely: *Hawally* and *Alshwak* markets, prominent in the production and sale of ceramic products for building materials. Hawally region is located in the centre of the Hawally Governorate, which is one of the vital trade centres in Kuwait. It comprises a commercial area, malls and shops like "Al-Muhallab", "Rihab", "CPC North and South", and "Beirut malls complexes". The ceramic distributors were located on Tunis Street where there are about 15 ceramic markets. This is one of the main areas where consumers purchase ceramic tiles, bricks and wall designs for the buildings.

Alshwak industrial region is located in the Alasmah Governorate and it is the main centre for a number of factories and warehouses. It also has a main commercial area made up of malls and shops that sell many different kinds of equipment and materials. There were approximately 20 markets which sold various ceramic materials, including tiles, bricks, ground floor and wall decorations, and all types of ceramic accessories for use within the architectural environment.

B. Access.

In compliance the with UCLAN ethical code in working with respondents, potential respondents were written to in order to seek their consent. The use of letters of permission in conducting field research is aptly explained by Larossi (2006) who stated that:

"Introductory letters should be used only to provide advance notice and build the legitimacy of the study" (Larossi, 2006, p149).

For the copy of the letter used in this study see the Appendix, page 388. Besides the letter, phone calls were made to ceramic distributors in order to obtain permission to conduct the survey. The aim of this approach was to ensure informed consent.

C. Ethical Stance.

Prior to the beginning of the surveys and questionnaire design it was also important to analyze the ethical part of the research. The importance of ethical consideration in any form of research is explained by Robson (2003):

"It is vital that, at a very early stage of your preparations to carry out an enquiry, you give serious thought to these ethical aspects of what you are proposing" (Robson, 2003, p65).

The ethical position taken within this research was designed to protect the privacy of the respondents, ensuring that they were well informed about the research before deciding to respond. To achieve this they were informed about the nature of the work, what was sought from them, and to establish a mutually convenient time to undertake the interview. Informants were informed that they could withdraw from the interviewing process at any time, should they so wish.

D. Questionnaire Design.

The design of the survey was based on Dawn Burton's concept regarding design of survey questionnaires, in particular the dilemma in relation to open-ended or closed questions. Burton (2000), argues that closed questionnaires consist of questions which generate a dichotomous response, and that this includes multiple-choice questions, as well as those that required respondents to choose a response from a scale. The types of questions you want to ask also have implications for the format of the response, which in turn has implications for the way in which the data can be analysed.

By contrast, open-ended questions provide a format of response that gives respondents the freedom of choice in answering any questions posed, as well as elaborating on his/her responses. The researcher then has to make sense of the responses given, contrast appropriate categories, and then code the categories so that the data can be statistically analysed. Dealing with open-ended questions on the

survey by offering important and unpredictable insights into human behaviour is very important in the process of the survey (Burton, 2000).

The research deployed both open-ended and closed questionnaire methods. This was because of the need to elicit quantifiable information as well as to allow the respondents to elaborate in order to gain some in-depth non-quantifiable information of the ceramic markets. The main advantage of a survey questionnaire is that it provides a relatively simple, straightforward, and inexpensive method of collecting generalized information from the targeted group of respondents (Robson, 2003; Timm, 1994). The reason for the choice of quantitative survey methods is because there is no difficulty in assessing the validity of the observation and interview techniques.

The survey's emphasis was focused on the triangulation technique by jointly applying quantitative and qualitative methods, which included collecting and integrating statistical data and narrative. According to Bryman (2002) triangulation refers to the use of more than one approach to the investigation of a research question in order to enhance confidence in the ensuing findings....Triangulation is one of the several rationales for multimethod research. The strength of triangulation is that one investigative approach may supplement the weakness of another.

Thus, this research adopted a multiple choice approach and followed the existing criteria for writing multiple-choice questions. Black (2005) outlined the following as a guide for multiple choice questionnaires:
- The main part of the question should be in the stem.
- Avoid repeating the same words or phrases in the choices.
- Keep the choices short.
- If the choice is to complete a statement, the gap should be at the end of the statement.
- Arrange the choices below the stem.
- Avoid jargon as distracters.

- Choices should be plausible and homogeneous.
- All choices should be about the same length.
- Use three to five choices.

This study adhered to this guide in drafting the questionnaire. However, the format for designing the questionnaire is composed of three main parts and 14 questions on the ceramic consumer markets in Kuwait (see Appendix, page 389-390 for details).

E. Data Analysis Requirements.

The strategy for data analysis adopted for this research is composed of four main stages:

1. Recording the data: this depended largely on ticking the option box provided in the questionnaire.

2. Collecting the data: the questionnaires distributed to the respondents were retrieved after three days of submission.

3. Analysis and structuring of the data: The questionnaire survey is a statistic-based data analysis. Hence, this study will utilize the SPSS software for easy analysis of the results. Muijs explained the importance of using SPSS in this way:

> *"Rather than having to calculate the mathematical equations for our data analysis ourselves, we will usually get software packages to do this…SPSS is probably the most common statistical data analysis software package*" (Muijs, 2004, p85).

The methods of reporting the structure of the survey are based on the observation made by Hague (2004) who asserts that "there are two starting points for getting a structure in a report. The first is the proposal that lays out which subjects should be covered and the second is the questionnaire. The data analysis arising from the desk research, the qualitative research, and the quantitative research is an obvious place to start. Tables and charts are assembled for each part of the study. The main headings and the sub-headings emanate from the knowledge that has been built up on the subject. A report structure must have a beginning, middle and an end.

4. Validity and reliability of the survey: In modern research, there exist numerous potential problems that tend to affect the outcome of any research. As observed by Black, problems are accentuated by the fact that it is usually not possible to know the true score, since we cannot make a perfect measuring instrument, and therefore the true score variance can never be known (Black, 2005). These, problems may include: reliability and validity of data collected, as well as ethical issues. Therefore, in this part of the study, the research explains what reliability, validity and ethical consideration mean.

a) Concerning research and data validity, Hague began by asking the question: Can the results from the research be generalized to the population as a whole? This is an important question, particularly in quantitative research projects. If samples and questionnaires are well devised, the researcher can be confident that the results are representative of the whole population of interest, or, in other words, that the data has validity, i.e. in short, this is a random sample. With regard to data reliability research he further asked: Will I get the same results if I ask different people or if different interviewers deliver the questionnaire?

The aim of quantitative research is to ensure that the data is as reliable as possible. This results in achieving similar results if one repeats the data collection, as long as the conditions of the data collection are the same. If we interview similar groups of people, we should expect to find similar results (Hague, 2006).

b) Reliability: Black defined reliability as this:

"Reliability = $\dfrac{\text{Variance in true scores}}{\text{Variance in observed scores}}$ " (Black, 2005, p273).

The researcher followed Hague and other writers on validity and reliability by following the ethics and guidelines of the British Sociological Association and those of the University Of Central Lancashire (UCLAN).

7.1.3 Section One: General Views and Perspectives on Kuwaiti Ceramics.

Analysis in this section is composed of five broad areas of investigation.

A. Identifying the range of types of people who usually buy ceramic products in Kuwait.

Ceramic distributers were asked: *Who usually decides what is purchased?* : *1) Private individuals 2) Builders 3) Interior Designers 4) Architects and 5) others.*
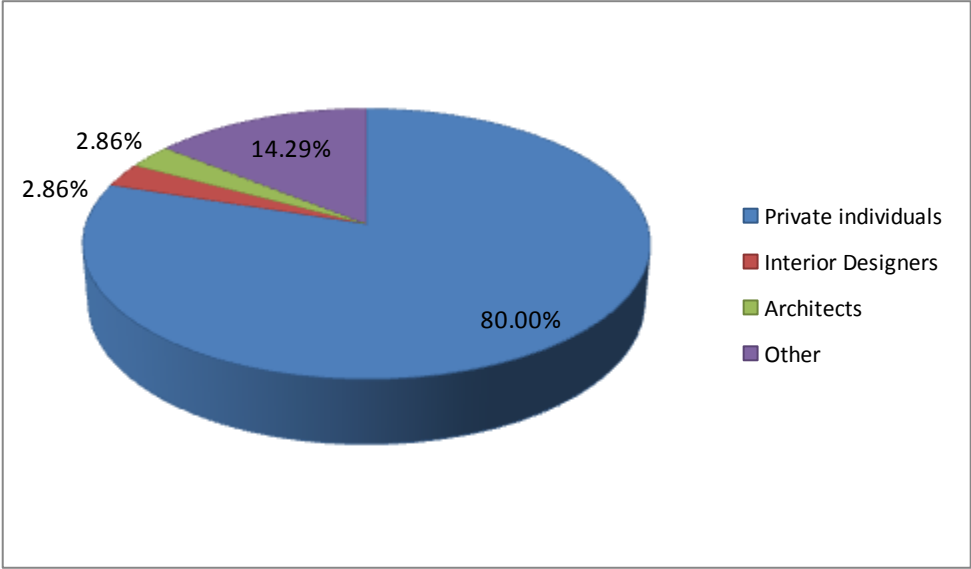
Figure 7. 1: Those who usually choose to purchase ceramic products in Kuwait.

The findings described in chart (7.1) suggest a majority of 80.0% - private individuals - decided to purchase ceramic products in Kuwait for themselves. Of the remainder, 2.86% were interior designers, 2.86% architects and 14.29% others.

It can be inferred that most ceramic consumers chose to buy ceramic products from the market on their own without consulting specialists in the field. Consequently, product choice will reflect the home design style, building forms, decoration, and interior design.

B. Examining the attitude of people towards the aesthetic appearance of buildings within Kuwait.

Ceramic distributors were asked: *Do you feel that Kuwaiti people are becoming more interested in the style and aesthetic appearance of their homes, workplace and public buildings?* : *1) Yes 2) A little and 3) No.*
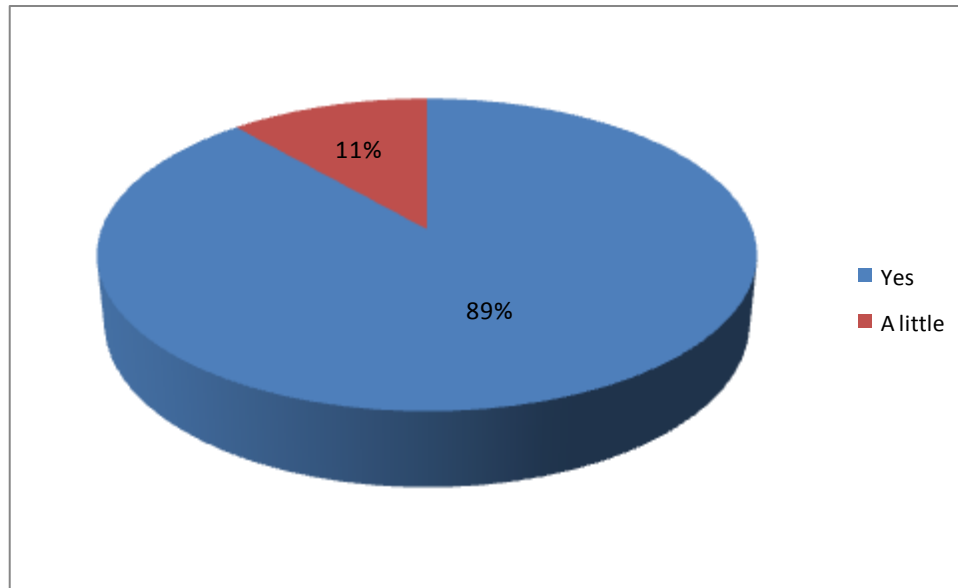
Figure 7. 2: The views of Kuwaiti people regarding the extent to which they are interested in the style and aesthetic appearance of their home.

The findings illustrated in chart (7.2) indicate that nearly all (88.57%) of ceramic distributors agreed that Kuwaiti people look carefully and give close attention to the aesthetic and decorative aspects of their home, and public buildings. The remainder (11.43%) have little interest in style or aesthetic aspects.

This result shows that Kuwaiti people have the desire to express their aesthetic and ornamentation taste. It may be that the affluent nature of Kuwaiti society is one of the reasons why Kuwaitis tend to take great care of their home environment.

C. Identifying common aesthetic styles to which Kuwaiti people are attracted.

Ceramic distributors were asked: *If so, what contemporary aesthetic styles are they more interested in? 1) Arabic / Islamic style and 2) Western style*
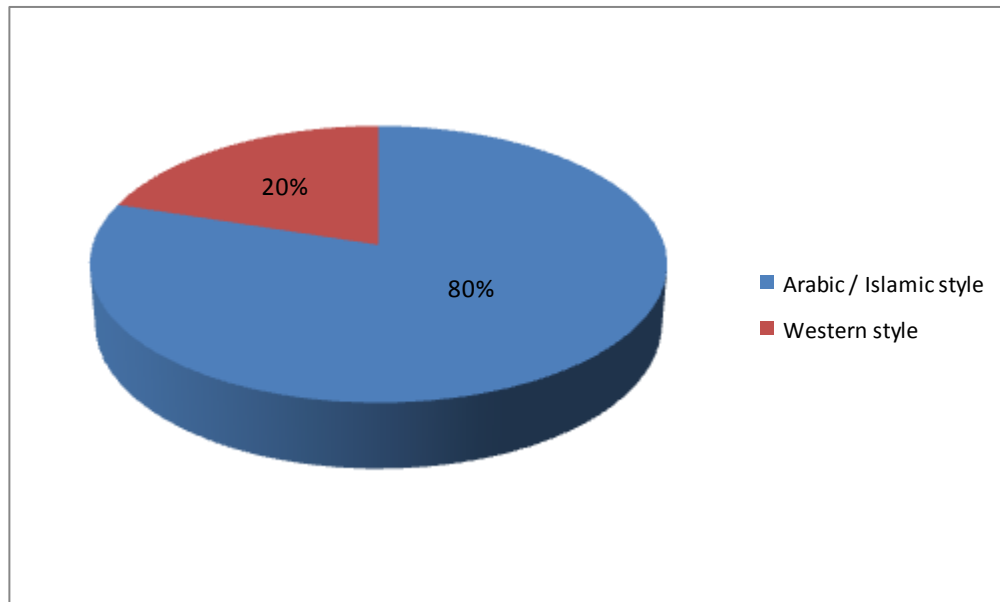
Figure 7. 3: The most common contemporary aesthetic styles in Kuwait.

The findings described in chart (7.3) indicates that the majority of ceramic distributors (80%) believe that Kuwaiti people would prefer a contemporary western style, whilst only 20% believed they would choose a new contemporary Arabic / Islamic style. This result showed that there is a definite change in cultural identity due to the effect of foreign culture and imported styles. This can be linked to a number of factors such as: the contemporary aesthetic Western style is becoming more well known; it is more technologically advanced in terms of shape, decoration, ornamentation and the quality of its product design. It may also be due to the global impact of capitalism or globalization.

D. Examining the awareness of heritage and culture in Islamic ceramics amongst the people of Kuwait.

Ceramic distributors were asked: *Do you believe that Kuwaiti people are aware of and interested in the rich heritage of traditional Islamic ceramics? The choices were: 1) = Yes, a lot 2) = A little and 3) = Not very much.*
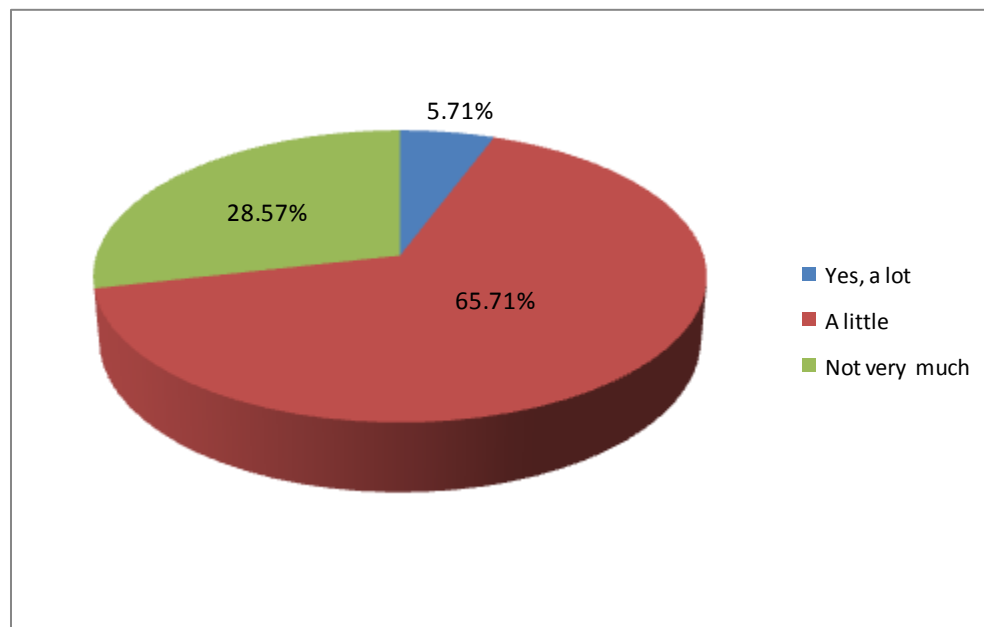
Figure 7. 4: The extent of awareness and interest in the rich heritage of traditional Islamic ceramics amongst Kuwaiti people.

The findings expressed in pie chart 7.4 discovered that nearly 2/3 (65.71%) of Kuwaiti people have little awareness and interest in the rich heritage of traditional Islamic ceramics, while 28.57% have not very much, and only a small percentage (5.71%) showed a lot awareness and interest.

The statistics indicated that not many people were aware of the Islamic ceramic heritage which could be due to a number of factors:

- Lack of support for the heritage of Islamic ceramics from the cultural social authorities.

- The limited role of media in effectively promoting this heritage among local Kuwaiti people.

- The increasing impact of global market production and global media / advertising which may have hastened the loss of heritage.

- The effects of multiculturalism and changing interests may have created new preferences for global and international markets, rather than traditional ones.

E. Discovering the main source of influence on people who prefer the Western style.

Ceramic distributors were asked: f*or customers who wish to adopt a Western style, where do you feel this influence comes from? 1) Television 2) Lifestyle magazines 3) Films or 4) Internet.*
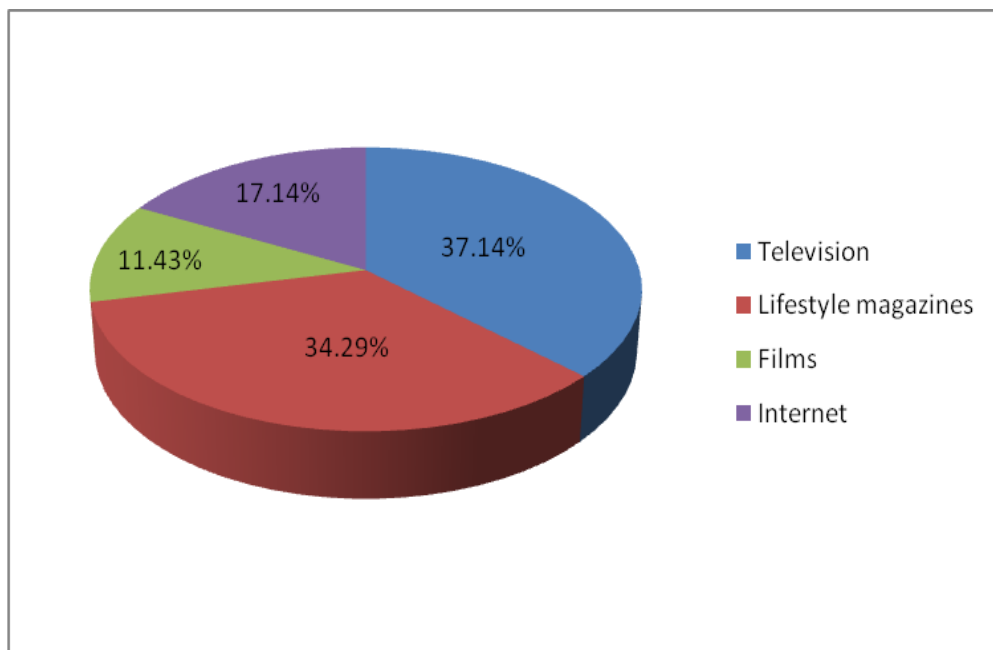
Figure 7. 5: The adoption of Western styles and the influence of the media.

The findings described in chart (7.5) suggest that 37.14% of customers who prefer or who adopt a western style were influenced by television, 34.29% by lifestyle magazines, 17.14% by Internet and 11.43% by films. The results highlighted the crucial impact of the media on cultural identity in Kuwaiti society. This shows that TV is a common denominator which helps to transfer external knowledge and culture to local people. Therefore, it can be argued that the role of TV channels in displaying global/international lifestyles is the main factor affecting the Kuwaiti community with regard to its social behaviour.

7.1.4 Section Two: The Characteristics of Ceramic Products in Kuwait.

Analysis on this issue has also paved the way for five important areas of investigation:

F. Identifying the common aesthetic ceramic products people like to buy.

The ceramic distributors were asked: *What is the most popular aesthetic style of ceramic products you sell?* 1) *Plain, unglazed clay tiles 2) Plain coloured glazed tiles 3) Decorated / patterned tiles or 4) Shaped tiles.*
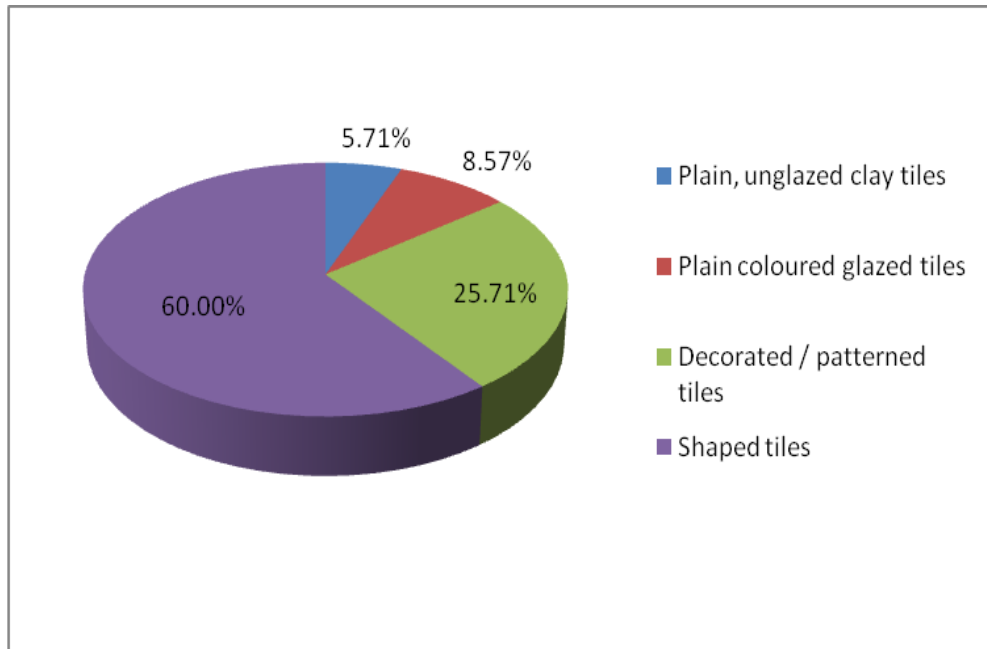
Figure 7. 6: The most popular aesthetic styles of ceramic products sold in Kuwait.

The findings described in pie chart 7.6 suggest that shaped tiles (60%) were the most sought after ceramic product in the market, while 25.71% preferred decorated patterned tiles, 8.57% plain coloured glazed tiles, and 5.71% plain unglazed clay tiles. It can be argued then that contemporary demand for shaped tiles decoration is the most attractive style for customers in the current ceramics market.

G. Investigating the culture of ceramics by styles of stock in the market place.

The ceramic distributors were asked: *What are the particular cultural styles of ceramics you stock?*: *1) mainly Islamic style 2) mainly Western style and 3) A mix of different cultural styles.*
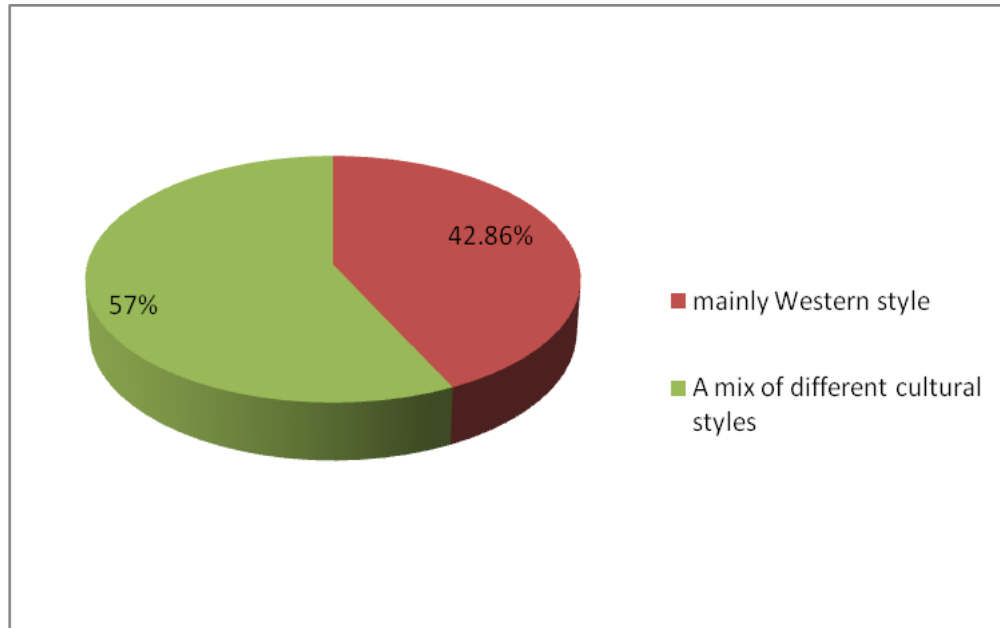
Figure 7. 7: The style of ceramic products stocked in Kuwait market places.

The findings described in chart 7.7 suggest that more than half the respondents (57.14%) stated that a mixture of different cultures and style were stocked; 42.86% of respondents selected stock of a Western culture and style, whilst none of the respondents stocked a style that was more Islamic than Western. It can therefore be inferred that the majority of ceramic markets in Kuwait import and introduce designs and forms that include different cultures and styles. This increases the popularity of the global / international/ Western design, which at the same time diminishes the popularity of the Islamic style within the Kuwait society.

H. Examining the percentage of Islamic ceramic stocked in Kuwaiti ceramic markets.

The ceramic distributors were asked: *If you do stock products influenced by Islamic style, can you estimate what percentage these make up of your entire stock?*: 1) *Over 80% 2) 60 – 80% 3) Approx 50% 4) 20 – 50% and 5) Less than 20%.*
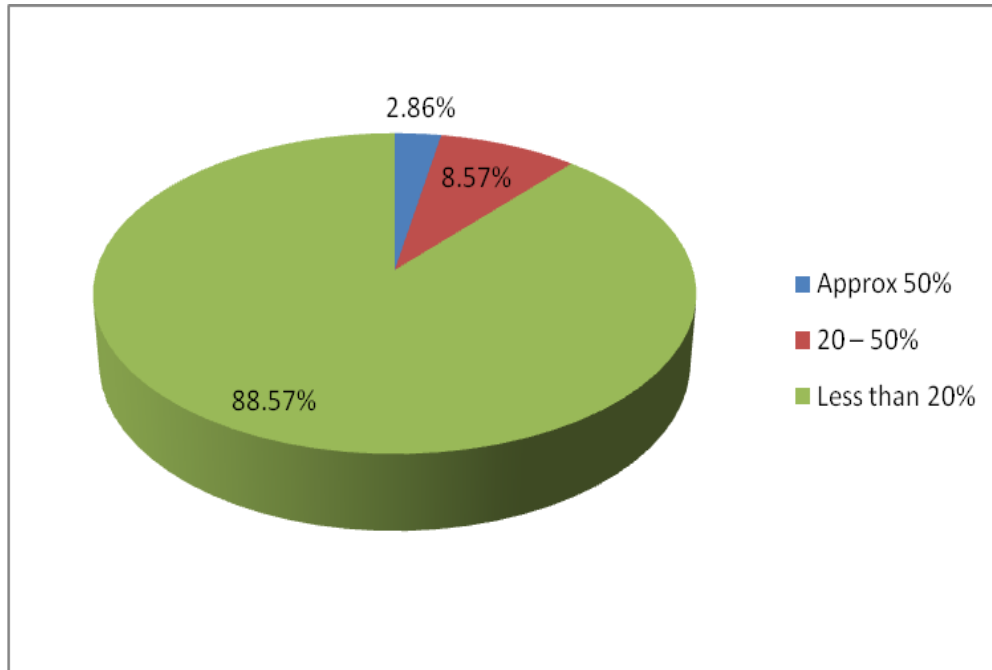
Figure 7. 8: The percentage that Islamic style ceramics make up of the entire stock within ceramic markets in Kuwait.

The findings described in chart 7.8 suggest that there is a decline in the stock of Islamic style ceramic in the Kuwaiti ceramic markets. The majority (88.57%) stock less than 20% of products influenced by Islamic style while 8.57% stocked 20 to 50%, and only 2.86% stocked approximately 50% Islamic style products.

This outcome indicates that the reason for this is that there are insufficient options within the contemporary and new Islamic ceramic industry. This has a relationship with the importation process, global capitalism, the quality of products, and people's ideology and desires. However, this question has a strong connection with questions C, D and G within this survey.

I. **Identifying the percentage of imports/ exports of ceramics in Kuwait.**

The ceramic distributors were asked: *Does Kuwait import more ceramics than it exports?* 1) *It imports more ceramics or 2) It exports more ceramics.*
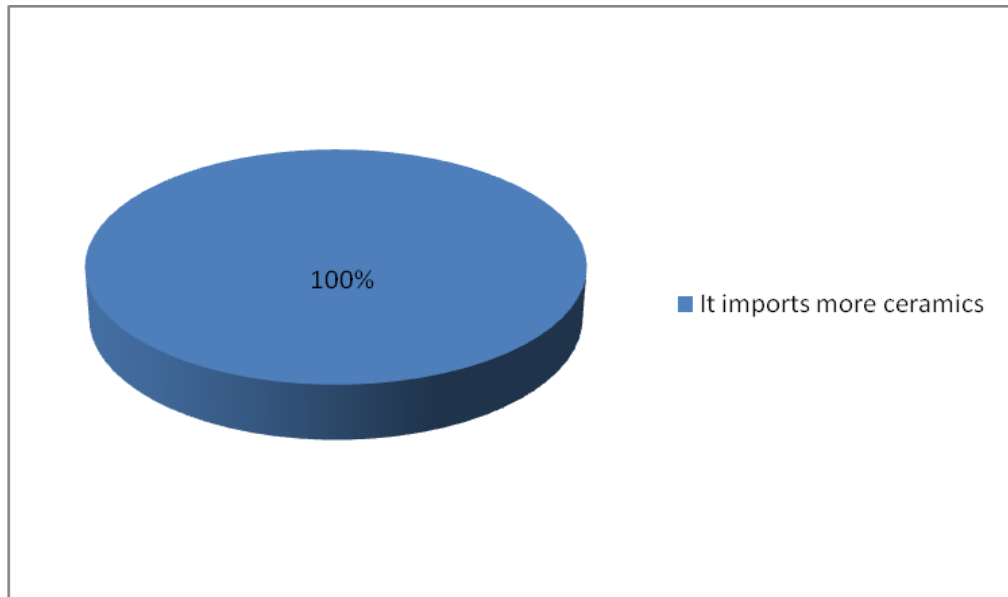
Figure 7. 9: The percentage of importation or exportation of ceramic in Kuwait.

The findings described in chart 7.9 indicate that there is only importation of ceramic tile products in Kuwait (100%).

It can be elicited from this statistic that there is no ceramic industry in Kuwait at all. Thus, the continuous dependence on one-way economic movement will definitely help to stimulate a change in culture. It will shift the identity of the ceramic industry in the state of Kuwait towards a new horizon derived from the differences in world cultural styles. Conversely, this also shows that there is inadequate nurturing of local products that have a rich legacy, in a wealthy country like Kuwait. However, if there were a balance of 50% importation and exportation, there would be a wider range of product choice available, and the local ceramic manufacturers could continue to promote products that represent the cultural identity and heritage and Kuwait's history.

J. Investigating the originality of the ceramic products.

The ceramic distributors were asked: *Where are the majority of your products made?*: 1) *Kuwait 2) Another Arabic country 3) Europe 4) East Asia 5) Europe and*

East Asia. Respondents were also given the opportunity to name the specific country in which the ceramic was made.
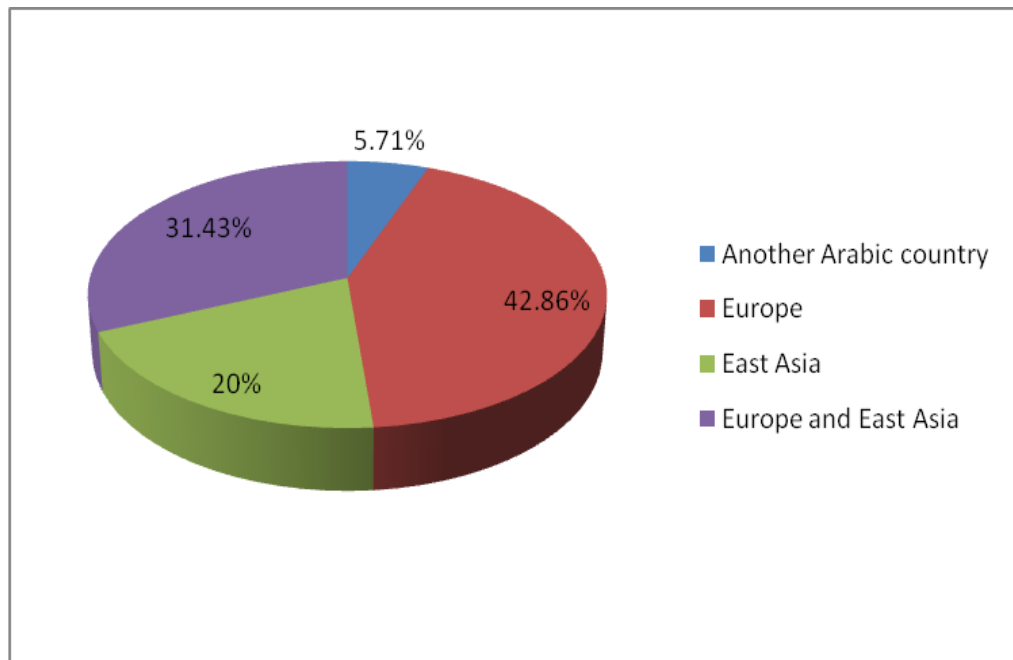
Figure 7. 10: Where the ceramic products are made.

The findings described in chart 7.10 suggest that a vast majority of 94.29% of production originates in other countries, while there is manufacture of 42.86% in Europe, 31.43% in Europe and Asia, 20% in East Asia, and 5.71% in other Arabic countries.

The result shows that local production is poor. At the same time, the increase of capitalist control over ceramic production enhances the popularity of new/global identity and brings unfamiliar culture into the ceramic markets of Kuwait. Nevertheless, being a wealthy country, it should be easy for Kuwait to promote the manufacture of local ceramic products as this could help to galvanise the country's economy. Certainly, a wide-ranging ceramic industry infused with local forms and identity would provide a better way forward.

7.1.5 Section Three: The Current State and the Future of Islamic Ceramics in Kuwait.

This section focuses on addressing the following important issues.

Assessing the quality of traditional Islamic ceramics today.

The ceramic distributors were asked: *What do you think about the value of traditional Islamic ceramics? 1) It has a rich value 2) It has average value or 3) It has little value.*
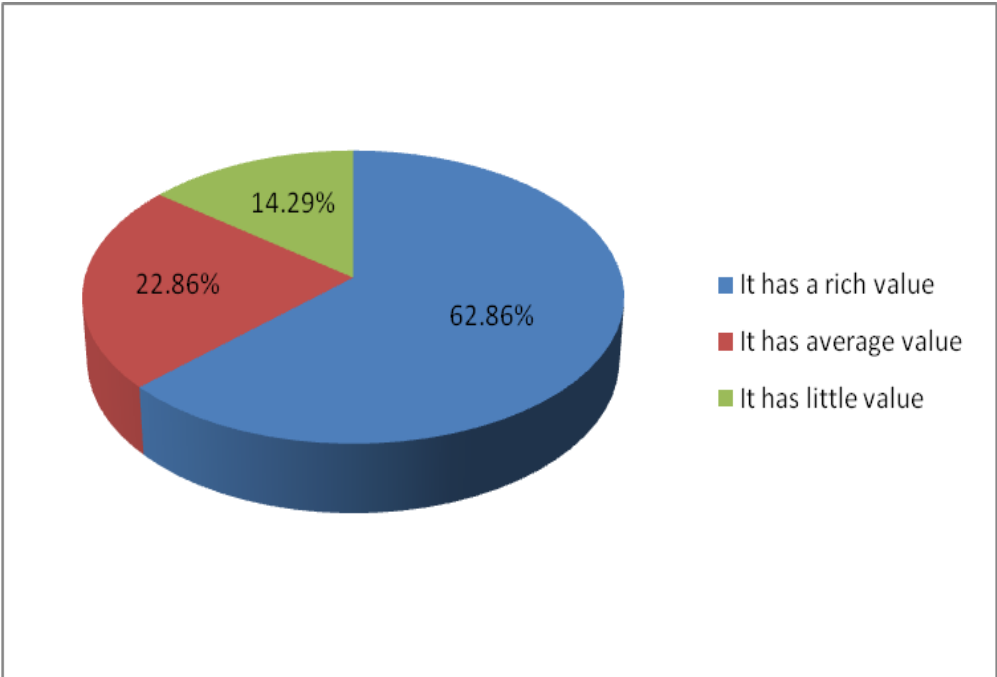
Figure 7. 11: The value of traditional Islamic ceramics in Kuwait.

The findings described in chart 7.11 suggest that nearly 2/3 (62.86%) of the ceramic distributors think that traditional Islamic ceramics are rich in value; 22.86% think they are average in value, and 14.29% think they have little value.

From this it can be inferred that Islamic ceramic tiles still have a rich and significant meaning in the current ceramic distributers' views. They definitely believe that

ceramics can be a form of expressing heritage and understanding history. However, a high degree of availability and product quality are needed to ensure market success. Moreover, the reality of the situation doesn't show that to be the case, as question H showed that a majority of 88.57% of distributors stocked less than 20% of products that were of Islamic style. All contributions to solve this state of affairs will definitely help to preserve and enhance the Islamic ceramic production within the market in Kuwait.

K. Examining the availability of contemporary Islamic ceramic products in ceramic markets in Kuwait.

The ceramic distributors were asked: *Do you think that there is a contemporary Islamic ceramics style? 1) I don't think so 2) A contemporary style is beginning to develop and 3) Very much so.*
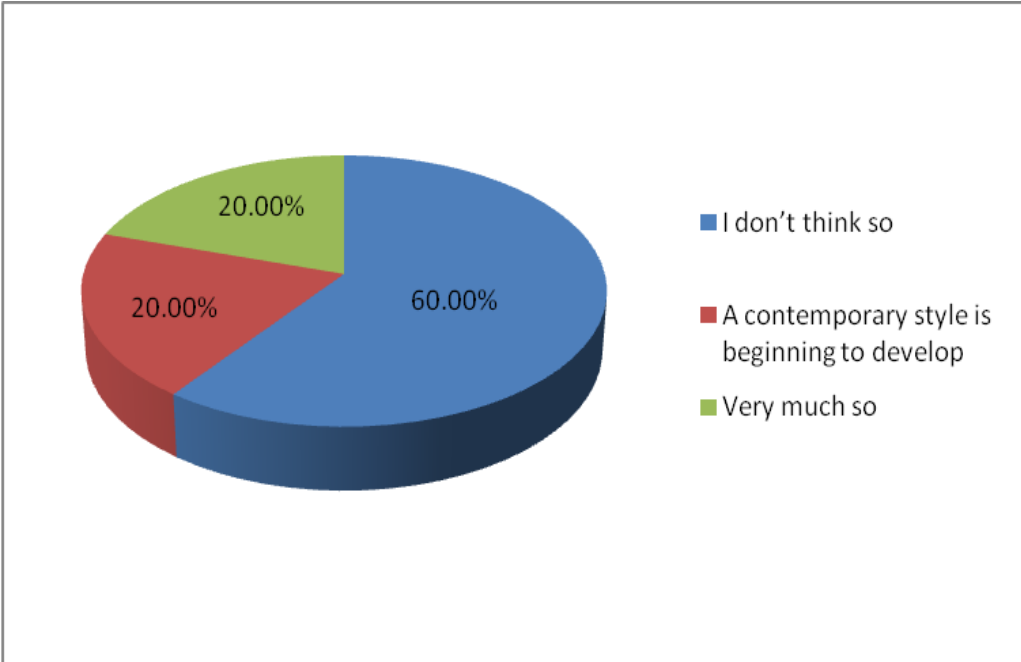
Figure 7. 12: The percentages of different opinions about contemporary Islamic ceramic styles in Kuwait.

The findings described in chart 7.12 suggest that nearly 2/3 (60%) think there is no contemporary Islamic ceramic style. 20% said a contemporary style is beginning to develop, while another 20% believed a contemporary Islamic ceramic style already exists.

This statistic illustrated that there are disadvantages and a lack of development in contemporary Islamic ceramics in this century. These deficiencies contribute to the loss of the rich heritage of the Islamic ceramic style. This might create unawareness among the society in Kuwait, and hinder the future development of Islamic ceramic design.

L. Investigating future interest regarding Islamic ceramic products in Kuwait.

The ceramic distributors were asked: *Do you believe many of your customers would be interested in purchasing more Islamic style products, if they were more widely available?* 1) *Yes 2) possibly or 3) No* were the multiple choice answers to choose from.
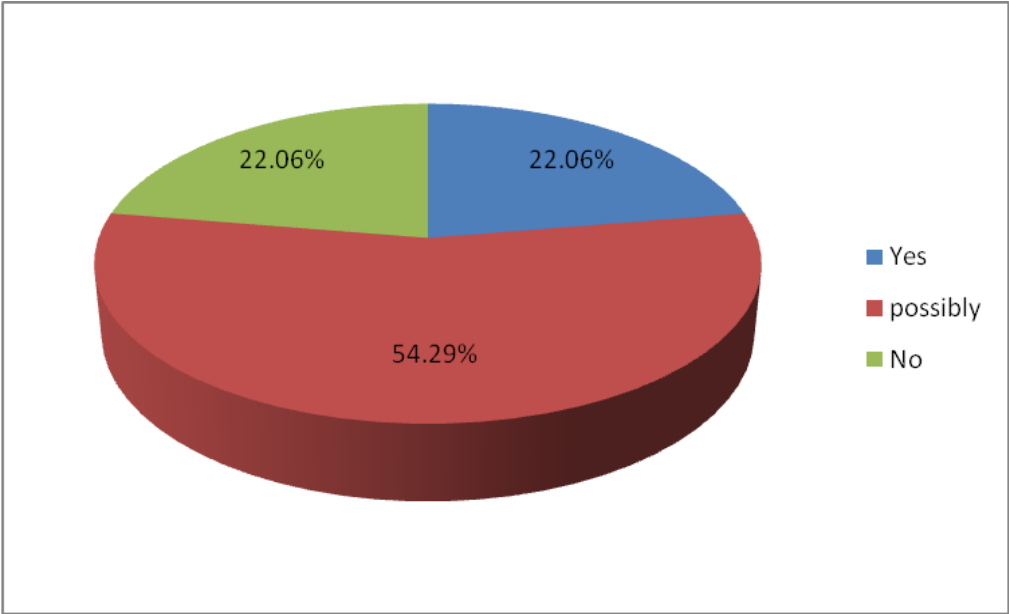
Figure 7. 13: The expectation of future Islamic ceramic products if they were more widely available in Kuwait.

The findings described in chart 7.13 suggest that over half of the ceramic distributors (54.29%) thought that their customers would be interested in purchasing Islamic style products if they were more widely available, although 22.86% said they wouldn't be interested.

It is clear from this result that customers could possibly be attracted to the Islamic fashion products if they were more widely available.

N. On improving future design in Islamic ceramics.

The ceramic distributors were asked: *In your opinion, how do you feel we might improve the level of interest and new development of Islamic ceramic design?* The findings among ceramic distributers (CD) are described in table 7.1:

Table 7. 1: opinions on improving future design in Islamic ceramics

Ceramic distributor	Opinions	The outcomes interpretation
CD1	*"Islamic ceramics need intensive propaganda and advertising to inform the general public about the beauty and magnificence of Islamic motifs and patterns. This requires a joint effort of competent government bodies and individuals who work in this area".*	Increasing awareness among the public and delivering the required educational policy.
CD2	*"New ideas and new forms could be developed by changing the old shapes and styles to new ones".*	Develop and invent new Islamic ceramic products.
CD3	*"Pay more attention to improving the quality of Islamic Ceramics by using a variety of colours".*	Improve the variety of Islamic ceramic product design.

CD4	*"Using advanced science and technology can improve quality".*	Use technology to develop the product design style.
CD5	*"In my opinion, this can be achieved by increasing the quantity of supply by ceramic designers in the Islamic ceramic heritage. This will offer a greater quantity in terms of supply and raise interest by displaying these products in magazines, catalogues, Internet and television".*	Developing the product by specialists in ceramic design, while utilizing the media.
CD6	*"There must be local factories interested in Islamic decorative forms and widely spread enough to entice the customer or resident to this Islamic style".*	Making and depending on local factories to produce suitable Islamic products.
CD7	*"Improve the design of Islamic ceramics by using different types and colours".*	Invent and be creative in the forms of Islamic ceramic design.
CD8	*"Develop the ceramics in technical schools and institutes; professional training will help artists to be innovative in making Islamic ceramics".*	Train the right people in the right places to be able to develop the design forms.
CD9	*"Through my experience and work in the field of ceramics and my understanding of the market, the media should pay attention to Islamic ceramics by showing the people this great heritage with great creative Islamic ornamentation design located in Arabic countries. We must care about it and not just*	Media role to present this wonderful heritage which relies on local industry and activity.

	take from the West, because what we have in the form of Islamic ceramics is the most important to our environment".	
CD10	*"Raising awareness of the Islamic ceramic among people through cultural magazines that show images of Islamic architecture, such as Turkish cities and towns, like the old Umayyad Mosque in Syria, and the Khalid bin Waleed Mosque in the Syrian city of Homs".*	Increase media role in raising awareness about the history and legacy of Islamic architecture as a source of inspiration for the people.
CD11	*"Interested people should study the rich heritage of Islamic art, and establish a good industry by making products available within the market in accordance with contemporary taste".*	Creation of a professional manufacturing industry by researching contemporary Islamic art.
CD12	*"Presenting and supporting the Islamic culture in the best form, supporting the national industry as much as possible, encouraging and developing production, importing Arabic industries and placing more of them on the market".*	Enhance the cultural identity by enhancing the local industry.
CD13	*"I suggest that there be more than one model of Islamic ceramic products, especially from factories that deliver the ceramic to the Kuwait market".*	Inventing a variety of Islamic ceramic designs within the marketplace.
CD14	*"The role of media in support of the works of Islamic decoration; the role of businessmen and industrialists in achieving these designs;*	The responsibility of the media, industrialists and

	the state's role in supporting crafts to provide materials for the tools, machines and facilities for raw materials".	business to support this culture.
CD15	*"Begin to introduce the Islamic forms and motifs gradually into the current market and then increase the product range with time until the customer gets used to and accepts the products that contain Islamic decoration".*	Introducing the contemporary Islamic ceramic product within the business market in Kuwait.
CD16	*"Expansion of the production of Islamic ceramics, by developing the industry so as to get new innovations in forms. This also needs good marketing, showing interest in this industry in media, film, documentaries and television. There needs to be support from the Islamic countries for this product".*	Initiating Islamic ceramic production by focusing on three areas: research and development, marketing, and media support.
CD17	*"The attraction of Arab and Islamic countries that rely on industries by portraying the meaning of the Islamic heritage and development of their ceramic industry; Also, the role of the buyer to understand the meaning of the Islamic heritage and its culture aspects".*	Raising social awareness about the meaning of local identity among industries in the Arab states and society.
CD18	*"The development goes back to school, and the media. This helps to consolidate this heritage among our children and community and to be able to develop it into the future".*	Education and media create the image and energy to encourage the future cultural identity.

CD19	*"Support for the Islamic cultural aspect of Islamic art; increasing interest in the Islamic art and teaching in the curriculum, thus contributing to innovation and design".*	Teaching the Islamic identity in the school system will motivate the development of the future of Islamic cultural design.

The findings indicate five important steps that can help the future development in Islamic ceramic design:

- Islamic ceramic design should be developed by using elements of creativity and innovation, technology, advanced science, as well as ensuring that ceramic designers create vital characteristics that are suitable for contemporary life in Kuwait.

- The ceramic industry must establish good local manufacturing and revive the legacy of Islamic ceramic design. This depends on the role of the policy makers and businessmen to preserve culture through projects, while at the same time reducing the percentage of international output.

- The mass media can create a positive image for the culture of Islamic ceramics through visual education, and by encouraging the society in Kuwait to move closer to their heritage and environment. This requires input from magazines, TV, catalogues, Internet, and lectures to raise awareness of the Islamic ceramic identity.

- The educational curriculum and cultural authorities need to raise awareness about this legacy, reflecting Arabic/Islamic identity for the benefit of future generations.

- Marketing authorities have to encourage local products and reduce the importation of ceramic products. This depends on the trade movement displaying a good percentage of Islamic ceramic products in the markets. This would then give the public a choice - creating awareness amongst the society and buyers about their Islamic ceramic culture through understanding the

meaning of their environment and identity. Hopefully, this might then provide the motivation to develop and enhance the appeal and popularity of the Islamic ceramic legacy in Kuwait.

7.1.6 Conclusion.

The findings obtained from this research offer some significant outcomes. The survey suggests an increasing influence in Western-style ceramics, with the Islamic/Arabic style's influence decreasing and possibly, in time, fading away or even becoming extinct. The influence of the Western-influenced media i.e. television and magazines, has contributed to a diminishment in the Kuwaiti Islamic/Arabic culture. This has partly been caused by the total lack of production of Islamic/Arabic style ceramics in Kuwait, with 100% importation, mainly from non-Arab, Western and East Asian countries. In fact, the majority of ceramic distributors do not even believe that there is a recognisable contemporary Islamic ceramic style.

All of this shows that most Kuwaiti people have little awareness of, or have no interest in the rich heritage of traditional Islamic ceramics, which partly explains the popularity of the contemporary Western style in comparison to the contemporary Arabic / Islamic style.

However, there are positive signs for the future of Islamic ceramic design as the experts in the Kuwait ceramic markets confirmed the rich value and high status that traditional Islamic ceramics continue to have. In addition, they also suggested that if Islamic style products become more widely available, customers would be very interested in purchasing them. Moreover, the society in Kuwait still continues to pay attention to aesthetics and people decorate their buildings through their own choice of ceramic products. This suggests that there still is a desire amongst the local population for a fresh outlook that includes a future for traditional aesthetic design and decoration in Kuwait.

There are clearly many challenges to overcome, not least the currently weak identity of Islamic ceramics in Kuwait, combined with lack of availability. This suggests the need for the application of creativity and technology and for professional designers and artists to consider developing Islamic styled contemporary architectural ceramic products. This requires support from the key players and businessmen in establishing the infrastructure to establish a strong local manufacturing industry in order to create a realistic future for Kuwaiti ceramic products.

The media and education could also play important roles encouraging the appreciation and use of Islamic ceramics and the importance of their cultural identity through TV exposure, magazines, and lectures etc…

The market could, though appropriate policies and economic incentives, support and increase native industry and reduce foreign imports. This would prevent market forces from being one of the primary factors that define local identity and cultural choice.

To sum up, Islamic ceramic design undoubtedly faces many challenges in modern-day Kuwait. It is important to endeavour to solve these problems through strategic planning and persistence in preserving the great legacy that Kuwait and its Middle East neighbours inherited from the past; it must attempt to retain its unique traditional ceramic heritage through education, the media, industry, business and regional and national cultural and economic policies.

7.2 SUB-SECTION 2: ANALYSIS OF THE QUALITITATIVE DATA (ARCHITECTS VIEWS' AND RESULTS).

7.2.1 Introduction.

This section of the research focuses on analyzing the data collected during a field study in Kuwait. This qualitative research methodology involved face-to-face interviewing. The interviews were conducted subject to gaining access from the respondents, based on the ethical regulations of the University, as discussed earlier in this chapter. The interviews were conducted between 10/10/2008 – 16/11/2008. The interviewer targeted architects in Kuwait in a random sampling of 10 professional architects; identifying their nationality, educational background, ethnic background and stated personal opinion (aesthetic preference, traditionalist or modernist).

This chapter is divided into three main sections:
1. Methods of interview.
2. A brief profile of the architects interviewed.
3. Narrative extracted from interviews, outlining general opinion and attitudes towards contemporary architecture in Kuwait.
4. Opinions / attitudes relating to the use of ceramic materials in contemporary building in Kuwait.

7.2.2 Methods of Interview.

A. Sampling.

Interviews are conducted with a representative sample of a population, drawn randomly in order to generalize the findings of the group targeted. The framework of

this research addressed the needs of architects who work in Kuwait, by using a sampling technique based on the "snowball" process.

The first step taken was to send a letter of invitation to approximately 30 architects, anticipating a positive response to the interview of between 20% and 30%; i.e. between 6 and 10 responses. The architects were identified from various sources, mostly from the Kuwaiti Ministry of Housing Department, Yellow pages and through internet search engines. The sampling approach used imitated Mahgoub's (2007, p165) approach, who carried out a survey of the views of eighteen Kuwaiti architects using focused interviews and a standardised questionnaire technique.

C. Access.

Prior to the commencement of the interview the researcher requested permission from the Kuwaiti Ministry of Housing and selected architects before undertaking this research. The researcher sent letters and telephoned the architects' offices to identify a mutually convenient time to undertake each interview. The letter explained the aims of the research, the scope of the interview, and the other participants involved. In addition, the researcher visited the architects to introduce himself, before starting to use the research tools (see Appendix, page 391: the letter design). Ethical issues were also considered by the researcher.

D. Ethical Stance.

Ethical issues were considered in order to create an interview process that protected the validity and reliability of the data collection, whilst also creating a comfortable environment for the interviewee by respecting and avoiding any harmful or problematic circumstances. It is important to grasp the ethical knowledge prior to conducting the interview in order to avoid potential ethical dilemmas or issues that may threaten the research. Creswell argued that "As researchers anticipate data collection, they need to respect the participants and the sites for research. Many

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ethical issues arise during this stage of the research" (Creswell, 2009, p89). Cohen et al also stated that "One can identify three main areas of ethical issues which include: informed consent, confidentiality, and the consequences of interviews; each is problematic" (Cohen et al., 2003, p292).

The ethical considerations taken into account in carrying out the interviews with the architects involved avoiding any circumstances, including the questions asked, and the manner and timing of the interview, that would expose the interviewees to compromise their job, their productivity; or cause them frustration, or any other serious consequence. The questions that the researcher asks should be uncomplicated and easy to understand and will be made easier by adopting a positive attitude towards each interviewee. In addition, the interviewee should be informed of the time of the appointment, the time to be spent on the interview, and the number of questions to be asked. Their permission is also to be sought in relation to the procedure e.g. the use of the audio recording, or the written record of the interview, whether face to face, or via the telephone. Respecting the interviewee's autonomy is crucial. When planning the questions, the researcher should choose to begin with a positive subject to engage the interviewee in order make the interview more interesting and stimulating.

There is much advice on applying ethics within the interview process, as further illustrated by Oppenheim (2004), who advises that the setting for the actual interview should be private, quiet, comfortable and not intimidating. Thought should also be given to the positioning of easy chairs, table, and recording equipment. Everything should be done to create an unhurried and relaxed setting for a private, confidential talk; anything that might upset or disturb respondents or make them feel pressed or intimidated should be avoided. The interviewer should be able to maintain control of the interview, to probe gently but incisively and to present a measure of authority and an assurance of confidentiality. In addition, tone of voice, a pleasant and polite manner, deportment, choice of dress, the management of personal space, an accepting and non-judgemental attitude, and a willingness to listen should be among

the interviewer's interpersonal skills; these will encourage respondents to talk freely on personal matters, while not giving the impression that they can get away with trivial insincerities or waste the interviewer's time. Thus, high ethical standards should prevail; no respondent should be afraid to produce self-incriminating or embarrassing feelings or information.

E. Designing the Interview.

The researcher designed a variety of questions to elicit responses on the contemporary architectural style in Kuwait. The interview was divided into three sections:

1. Introductions.
2. Discussing questions relating to architecture.
3. Considering the culture of ceramics in Kuwait.

Each section had a number of questions to investigate, based on the aims outlined above (for further details see Instrument in the Appendix, page 392).

F. Data Analysis Requirement:

1. Recording the Data.

In this research the method of data analysis applied involved the use of transcripts or sound recordings, dependent on the interviewee's approval. According to Gubrium and Holstein:

> *"The interview often begins as the interviewer's tape recorder is set up amid friendly greetings, creating a particular social context for the interview conversation…Armed with a list of questions, a fact sheet for demographic information, the informed consent letter, and the requisite tape recorder and backup pencil and paper, the interviewer meets the respondent at the agreed-upon location. The location itself may have been negotiated"* (Gubrium and Holstein, 2002, p90).

The reason for giving the interviewee the option of recording is to avoid nerves – in some cases it may cause the interviewee to be uneasy.

2. Collecting the Data.

At the end of the recording exercise, the researcher then analyzed the data gathered. Cohen, et, al. identified several stages involved in analyzing the collected data, of which the following are some of the most important: "generating natural units of meaning, classifying, categorizing and ordering these units of meaning, structuring narratives to describe the interview contents, and interpreting the interview data. Having performed the first round of coding, the researcher is able to detect patterns and themes and begin to make generalizations (e.g. by counting the frequencies of codes). The researcher can also group codes into more general clusters, each with a code i.e. begin the move towards factoring the data" (Cohen et.al, 2003, p282).

In addition, Flick (2005) distinguished two basic strategies in handling texts, on the one hand the coding of the material with the aim of categorizing and/or developing particular theories; and on the other, a strictly sequential analysis of the text.

3. Analysis and Reporting the Data.

A contextual and descriptive analysis of the responses of the interviewees constitutes the main part of the research investigation.

Approaching the Interview analysis, as Kvale (1996) observed, is carried out through listening to repeated replaying of the tapes, or by cutting and pasting selections from the transcribed pages. In addition, Kvale suggests that a guideline for reporting interview quotes should be related to the general text and frames in order to be compatible with the researcher's theoretical models. The quotes should be: contextualized and include the question that prompted an answer; the quotes should be interpreted; there should be a balance between quotes and text; the quotes should

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be short; use only the best quotes; interview quotes should be rendered in a written style; and there should be a simple signature system for the editing of the quotes.

Therefore, coding data is the pivotal first analytic step that moves the researcher from description towards conceptualization of that description. Coding requires the researcher to attend closely to the data.

4. Structuring and Meaning Through Narratives.

The analysis of this research involved a narrative approach, based on the sub-heading of every question. Using the narrative approach, the aim was to explore the historical antecedents that led to the erosion of the past architectural experience and heritage of the Arab/Islamic world.

5. Validity of the Interview.

Assessing the validity of the information obtained involved seeking to understand the reliability and validity of the data collected through the interview. Gillham asserts that ascertaining the validity of information depends firstly on identifying simple descriptive, categories, or the occurrence of particular words or phrases. It involves some kind of interpretive construction of what the interviewee says precisely. This can be achieved through system, rigour and reflection, and with careful attention to representative selection from the interview transcript, to specifying the evidence and making sure that the facts are not altered through a subjective construction.

In addition, Cohen et.al (2003) observed that perhaps the most practical way of achieving greater validity is to minimize the amount of bias. The sources of bias include the characteristics of the interviewer, the characteristics of the respondent, and the substantive content of the questions. In addition, Twist (1992) observed that you can aquire an accurate record of what was said by offering to send a copy of the notes to the client as a record of what was discussed and agreed.

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The validity of the information gathered was verified by sending letters to all of the interviewees in Kuwait (see the letter and their replies in the Appendix page 393, and pages 409-413).

7.2.3 Background of the architects.

The interviewer requested that each architect should provide a brief personal profile and outline of professional experience. The sample of interview is comprised of ten architects who have worked on variety of architectural projects in Kuwait:

1. Futooh Alasfoor (FA): Futooh Alasfoor, Engineering Consultant
   - Kuwaiti nationality.
   - Education: graduated from Brigham Young University – Idaho, USA with a BA in architectural engineering in 1977.
   - Previous experience: worked with the Kuwaiti Municipality for years. Later, ventured into private consultancy.
   - Current experience: founder and manager of Futooh Alasfoor Consultant Engineering in Kuwait; thirty years experience working in the Middle East.
   - Preferred style: began in 1977 by using the typical Arabic/ Islamic design, later transformed into a modern day architectural design with complex, commercial, educational, residential and private house projects in Kuwait.

2. Rajendra Tyagi (ART): Gulf Consultant.
   - Indian nationality.
   - Education: BA in Architecture. Graduated from School of Planning and Architecture in Delhi.
   - Previous and current experience: Working with Gulf Consultant in Kuwait for over 30 years in the Middle East. Current expertise in design relating to modern style in design industry, involving a wide range of projects including: airport, hospitals, offices buildings, commercial buildings, and university.

- Preferred style: mixed nature of architecture, in terms of the traditional and the modern; because of the many of jobs available in Kuwait, most architects join American consultants and follow the modern style of architecture.

3. Nezar AL-Anjari (NA): Nezar Al-Anjari Consultants.
- Kuwaiti nationality.
- Education: graduated in 1985 from Iowa State University in USA with a BA in architectural engineering.
- Previous experience: 11 years work experience in the Kuwaiti Department of Urban Design.
- Current experience: since 1996: General Manager in Nezar Al-Anjari Consultants; prior to that he had worked in a private firm for 11years.
- Preferred style: houses, offices, universities and commercial buildings. Design preference is for a more traditional style.

4. Faris Bader Al-Salem (FBA): Aljazera Consultants.
- Kuwaiti nationality.
- Education: USC – University of Southern California in USA : BA and Masters Degree in architectural engineering.
- Previous experience: Consulting office in Kuwait and then, during study abroad, he worked with an architectural consultant in USA.
- Current experience: Has been working now for three and a half years with one of the biggest architectural consultants in Kuwait called Aljazera Consult.
- Preferred style: modern buildings, but still involved in designing residential buildings, small villas, space planning.

5. Saher Alqaisy (SA): PAN (Arab Consulting Engineers).
- Iraqi nationality.

- Education: Masters and doctorate degrees in Architectural Engineering from Manchester and Sheffield Universities in the United Kingdom in 1984.
- Previous experience: Head of Department of Architecture at the University of Alnahrain in Baghdad. Subsequently, he moved to the University of Amman in Jordan as Senior Lecturer in Architecture.
- Current experience: Manager in PAN (Arab Consulting Engineers). Work experience in the Middle East is put at approximately 33 years.
- Preferred style: Focus on Arabic and Islamic architectural styles and designs. In the last few years he has developed modern design projects such as houses, universities, offices and other commercial buildings.

6. Bader Alakawand (BA): Private architectural work.
- Kuwaiti nationality.
- Education: University of UAE in Al-Aian city, degree in architectural engineering.
- Previous experience: began working career with the Kuwaiti Ministry of Defence ; later transferred to the Kuwaiti Cultural Organization for a further three years.
- Current experience: Own private architectural firm with numerous projects within Kuwait; working experience of 12 years.
- Preferred style: Depicts modern and contemporary style by applying the modern methods of building techniques that suit the Kuwaiti weather and climate.

7. Usamma Hasan (UH): Ministry of Religious Affairs in Kuwait.
- Egyptian nationality.
- Education: Cairo University, Egypt, with BA in architectural engineering in 1996.
- Previous and current experience: 12 years working experience, mostly in the Middle East, and now works with the Ministry of Religious Affairs in Kuwait.

- Preferred style: Designing private residential buildings, commercial buildings and tourist centres. He is interested in the Meissen architecture style, which is a modern school of design.

8. Mohamed Guezmirmed (MG): Aljazera Consultants.
- Tunisian nationality.
- Education: BA degree in Architectural Engineering from the University of Tunis.
- Previous experience: worked in Tunisia for a while.
- Current experience: now working in Aljazera Consults which is a private firm in Kuwait; he spent 16 years working in the Middle East.
- Preferred style: His work projects normally reflect the international and modern style on projects such as commercial and residential buildings.

9. Mohamed Ayyad (MA): Architecture management and administration engineering office.
- Egyptian nationality.
- Education: a 1996 graduate of BA in Architectural Engineering from the University of Alexandria in Egypt.
- Previous experience: he first worked for two years in Egypt, then later moved and worked for another ten years in Kuwait with different architectural firms.
- Current experience: working within architecture management and administration engineering in one of the consultant offices in Kuwait.
- Preferred style: Schools, hospitals, multi-storey buildings, trade centres, which encompass both the traditional and the modern types of design. He incorporates some elements of the Arabic heritage and Islamic culture into designs with modern state-of-the-art technology and is involved in a unique architectural design that reflects both tradition and modernity.

10. Nasser Abdurrahman Alseed (NAA): Public Authority for Housing Welfare.
   - Kuwaiti nationality.
   - Education: University of UAE in Al-Aian city, degree in Architectural Engineering.
   - Previous and current experience: 10 years work experience in the building industry in Kuwait. Currently, he is the head of architecture and design in the Public Authority for Housing Welfare in Kuwait.
   - Preferred style: His speciality is mainly in planning and designing schools and residential units under the Kuwaiti Housing Scheme. He prefers the Islamic style referred to as the Andalusia, and is involved in project planning and design.

Summary of Status of Architects' Interviews.

The general findings from the interviews are summarised below:

A. Ethnicity and cultural background:
   - 50% of the architects are of Kuwaiti nationality.
   - 40% are from other Arabic states.
   - 10% are from an Asian background.

B. Education level in Architectural Engineering:
   - 80% of architects have Bachelor degrees.
   - 10% of architects have Masters degrees.
   - 10% of architects have a PhD.

C. Country where degree was gained:
   - 50% graduated from Arabic Universities.
   - 50% graduated from abroad (which includes 30% from American Universities; 10% from Europe and 10% from Asian Universities).

D. Years of experience working in the Middle East:

- 20% of the architects have 0-10 years' experience.

- 40% have between 11-20 years' experience.

- 30% have 21-30 years' experience.

- 10% have more than 30 years' experience.

E. Preferred style:

- 50% of the architects prefer to reflect traditional styles in their projects.

- 50% prefer to work on modern development projects.

7.2.4 Findings and Descriptions of the Data Resources obtained from the Interviews.

The data was collected through the use of questions and answers (i.e. face-to-face) technique in the form of an interview. The researcher used appropriate methods to take the data during the interview, based on the consent of the respondents to the use of note taking or tape recording. Nine of the architects agreed to be taped, while one opted for note taking. The interview responses were thematically narrative, based on revealing the differences in the opinions and views of the architects in Kuwait.

7.2.4.1 Description of the attitude towards contemporary architecture in Kuwait.

This section discusses a range of topics that are related to the state of architecture in Kuwait, examining the extent to which changes or preservations of the cultural identity in the building industry are manifested.

1. Current trends in contemporary architecture.

The selected architects were asked: *Can you describe in your view the current trends in the contemporary architectural style in Kuwait?*

FA responded, 'In my opinion, the reality about this subject is that there is no cultural identity in Kuwait at the moment. Recently, the nature and pattern of architecture in Kuwait has become mixed with different aspects. It is like a box of chocolates: each, by contradiction, has different colour, shapes and taste. There is heterogeneity within the residential and commercial buildings. The houses are totally different in form, shape and design across neighbourhoods.'

RT stated, 'I think most of the current buildings in Kuwait highlight a typical example of the modern-style of building with glass buildings spread almost all over, with traditional solid wall building gradually disappearing. Kuwait, in terms of building, is now increasingly becoming more like the US and Europe, not like the traditional style as we know.'

NA responded, 'Today, the world has become a small village and Kuwait is a part of this village. The global transformation of the building industry is in its full modernity stage, in which Kuwaiti and most parts of the Gulf building projects and trends reflect the world trend and style, as well'.

FBA stated, 'The contemporary dramatic changes in the buildings that are manifested through skyscrapers and towers in Kuwait are designed without thinking about their comparative advantage in form of preservation of the traditional pattern of building etc. The current shape and model of the houses are just like the White House or houses in the Carribean. Generally, the new people's attitude to building, in my own opinion, is not befitting; simply because it is contradictory to the environment, economy and the climate. On a final note I can say that the contemporary architectural design methods are not suitable for a country like Kuwait and has a negative effect on the people's lives as well'.

SA replied, 'In the beginning, I did a research in the past about one of the Arab countries (Iraq), which has shared the same pattern of building with Kuwait. In the course of my research, I discovered that the current building styles in Iraq are imported from the European style. The nature of the urban planning, streets and locations are all classic example of those found in Europe. Therefore, based on my findings and opinion, I can say that the earlier architectural design of the old Arab and Islamic States built in the 1950s and 1960's are the best, designed to embody the social aspects of human life. Moreover, the current design in modern buildings in Kuwait are hybrid by nature and do have any identity, and the people today do not have any knowledge of how Islamic and Arabic cities of the past looked like, because of the penetration of the Western style of building'. He continued: 'These ancient Islamic and Arabic cities built on the history of the past civilization emerged as a result of the interaction between the nature of culture and humans, which by nature did not emanate in a vacuum. In contrast, the contemporary changes towards the modernization of the West came as result of the interaction between the human and the environment, which came gradually from the increased ties with Europe and America, resulting in the erosion of the traditional form of building'.

BA responded that 'now in Kuwait there are varieties of designs, which in my own personal opinion, I don't see any negative side of this trend. In that, the current mixed nature of architectural designs basically reflects the different perceptions, ideas and preferences of the people; therefore it should be regarded as part of societal characteristics since the differential nature of these buildings were not imposed as mandatory to the people. Thus, the call and agitation for the preservation of the cultural identity is a transgression against the personal rights and opinions of the ordinary people who desired change'.

UH responded, "The current architectural pattern of design is, literally, assembled architectural identities with no specific categorization because of its mixed nature. Most of the building elements or materials and styles are imported from America: for instance, the Curtain Wall style of building. These modern styles like the Curtain

Wall are not suitable to the Kuwaiti environment because it is adaptable and meant for Europe and the American environment only. For example, glass used in building is a source of solar heat; its absorption makes the place warmer and therefore more suitable and appropriate to be used in countries or environments that are cold in temperature, such as Europe, where the temperature at times reaches up to zero degrees. Therefore, in my opinion, these styles are imported ideas and do not have any particular relevance to Kuwait.'

MG stated, 'In my opinion the current trend in modernized building structure is not compatible with the environment, location, climate, and the social life of the ordinary people. The contemporary architectural style is only suitable for countries like the United States and China, rather than Kuwait'.

MA stated, 'One can only describe the people's attitude towards modern building designs in Kuwait, and generally to the Gulf states, symbolizes the raising of a broad formation in the building industry, and these high building edifices all over the country have no any roots with the Kuwaiti heritage'.

NAA explained, 'At the moment there is no specific building style, rather people choose any style randomly; and the Kuwaiti Municipality, which is the main authority in the regulation of town planning and building specification, has now lost control of its traditional role of determining the style, building structure and type in Kuwait. This is why most of our buildings today look like the ones in New York'.

Thus, it can be observed, from the general opinions and views of these professionals that the control and planning of the building style has lost its identity. There is a dramatic change and transformation in the current nature and pattern of the architectural culture in Kuwait that encompasses a mixed, hybrid background, in terms of the interaction with imported ideas and Western forms of building design. The use of construction techniques such as the 'curtain wall' and vast expanses of glass in modern building is not wholly appropriate for the Kuwaiti

environment, requiring continual interior climat control. Unfortunately, as a result of the current attitude that applauds modernity but eschews tradition, public awareness in Kuwait of the traditional style and pattern of building has disappeared.

2. Acknowledgement of traditional Islamic styles in contemporary architecture.

The selected architects were asked: *Do you feel there are contemporary buildings in Kuwait that acknowledge the traditional Islamic style? If not, why do you believe this is the case?*

FA replied, 'Currently, we don't see any buildings in Kuwait that represent or reflect the traditional Islamic pattern and forms of design. For example, even the Kuwaiti National Museum cannot be considered Islamic-oriented in terms of style. In fact, the people need to give some suggestions on reviewing the current mixed architectural style to the Kuwaiti authorities in order to stress the importance of the traditional identity of the country by at least preserving some of traditional monuments like the National Museum which is a symbol of national heritage. Lack of clear rules and guidelines from the authorities on buildings contributed greatly to the present loss of cultural identity (in building). It goes with the traditional Kuwaiti saying that: *'he who owns the people has the solution to the problem'*. But, with regards to current Kuwaiti authorities' attitudes towards cultural orientation, the reverse is the case. Today, cities like Alqorain, Jeleeb Alshyook and other cities, are noticeably different cities than they were decades ago; they have a new outlook and the traditional Islamic pattern and style has virtually disappeared'.

RT said, 'Apparently, there is no single building that represents the true Kuwaiti traditional style of building. This is largely attributed to Western influence, more especially America. For example, most of the big building firms and consultancies in Kuwait are owned by the Americans and the prominent native Kuwaiti architects also have joined these companies as consultants. They have to therefore work

along the preferences and design specification of their employers, which are the (American companies) which have no Islamic architectural background. And there is no way Kuwait architects would refuse such huge projects from the big consultants, since they want to also compete with their counterparts in Dubai and elsewhere in the Middle East who have adopted the modern style of building. Currently, even the architects in Kuwait no longer design to the Islamic style, only a few, as most of them prefer the modern one. This factor contributed in no small way to the gradual recession of the traditional building styles in the country'.

NA responded, 'It is very rare today to see the traditional style of building anywhere in this country. I can personally interpret this problem to the government's policy and attitude, more particularly the Ministry of Works and Housing and the Kuwaiti Municipality, who failed to encourage the promotion and preservation of the legacy of the old Islamic styles of designs and buildings'.

FBA responded, 'One can say that only one percent of the current buildings retained the traditional Islamic style in Kuwait. In my opinion, the Islamic style was part of the religion which contained all aspects of human life (such as privacy of the family, shelter to the people against the weather, or climatic condition of the environment etc), but the present structures contradict this cultural orientation. Based on this development, I further argue that this phenomenon is partly caused by the enormous wealth of the Kuwaiti state that gave its people the financial ability to travel around the world, more especially Europe and America, and imbibed the new Western ideas of building styles and designs and taste, and directly imported them to Kuwait. These modernized styles, for instance in countries like Germany, are purposely designed to suit the climatic condition of the environment where the weather is around 20 degrees maximum, which is sharply different from the one in Kuwait where it reaches up to 50 degrees. As a consequence, people spend a lot on air conditioning bills, in which the government also supports them in what is ordinarily their personal cost'.

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SA asserted, 'Apparently there is no any discernible old type of Arabic and Islamic buildings, even in our colleges. I personally think that to some extent our study abroad, mostly in Western Europe, has also contributed to this change in values and preferences for building. In that, we borrowed the Western educational curriculum (at both our undergraduate and postgraduate levels of education) and applied them directly to our system of architecture. Therefore, to preserve our identity we have to stick to the traditional Arabic style of design and building which is absolutely different from the Western type'.

BA responded, 'Despite the modernization of the building styles, there exist the Islamic type of designs but it is manifest only in form of copy and paste, without re-developing the shapes and styles, or offering something new and fashionable within the Islamic culture and identity '.

For UH, 'At the moment, people's attitude towards the old type of design has declined, simply because Kuwait over the last few years has increasingly become dependent primarily on imports of, particularly, building and architectural material and styles around the world. Today, we are witnessing a speedy era of changes in lifestyle. For example, the current use of Curtain Wall material where all buildings are covered with shiny flat glass does not represent our cultural identity'.

MG replied, 'Today there are few traditional Islamic buildings and styles in Kuwait, and this is based, in my opinion, to people's attitudinal changes that shows a desire towards a modern style. Most building owners or clients are not aware of the possible implications of this attitude in terms of the erosion of our culture, rather they are influenced by the contemporary type of architectural designs, basically saturated from other cultures that become appealing to them because of their exposure to the West'.

MA stated, 'Recently there are no Islamic-oriented forms of building design in this country - even in the mosques the basis of Islamic architectural formation has become weak. This phenomenon is associated to many reasons:

(a) Most of the present building and architectural consultants in Kuwait or in the Gulf States are Western consultants or professionals, who come alongside their Western knowledge and idea of building styles. This entirely represents Western culture instead of our identity and Islamic heritage.

(b) These Western styles prefer using building materials like glass, aluminium, iron and metallic than the Islamic materials.

(c) In the entire Gulf region, there is an increased change in cultural orientation, where the majority of the people prefer the lifestyle of the advanced parts of the world. This is an important driving force towards this transformation in the building industry'.

NAA responded, 'There are some buildings that represent the Islamic style but modified in terms of formation and style that makes it lose the traditional pattern of Islamic building'.

In conclusion, this part reviewed the different opinions of the professional architects interviewed in Kuwait. Overriding opinions concluded that traditional Islamic style has been replaced by contemporary building styles, the evaluation The respondents' opinions also agreed that Western aesthetics played a major role in the design of new buildings, determined by major stakeholders in the design and overall concept of the building, namely combined opininions of the client and architect. It is also important to recognize that the Western educational backgrounds of the majority Kuwaiti architects has had a profound effect on the buildings they are designing. Interestingly however, most of the respondents admitted these imported styles and ideas as being incompatible with the Kuwaiti culture and environment. In addition, the Kuwaiti authorities seem to have lost their traditional function of mapping out clear rules and guidelines on architectural designs which were originally based on the traditional Islamic style

of building. Therefore, the government's loss of control over building has allowed people the freedom of choice that is widely manifested today in the erection of numerous Western-style buildings all over Kuwait.

3. Examining the nature of stakeholders in the Building Industry in Kuwait.

The selected architects were asked: *In your own view, who or what is the driving force (i.e. Stakeholder / Key player) in determining the design/ style of contemporary architectural projects in Kuwait?*

FA responded, 'In my personal opinion the Kuwait Public authority for housing welfare should be responsible for choosing the type of design and style for building. It is supposed to conduct a study regarding the style required by the majority in the society. Their functions include satisfying the people's desire, in designing, colour, the materials and shape preferences suitable to the environment. Under this, there should also be a committee that is composed of specialists on the Islamic format of design and ensure it obligates the people in following the criteria and building specification. This may likely ensure that there is homogeneity in the pattern and nature of building throughout the country. Therefore, today we are responsible for what I can describe as the 'visual pollution' in the building industry, which raises the question as to who is responsible'.

RT pointed out, 'Obviously the owners of the buildings, not the designers, are supposedly responsible for these changes from the traditional way of building to the modern style. Individuals' desires for certain type of buildings are forwarded to the consultants who basically operate for their company's interests; as such, the consultants should not be blamed. In fact, even government's project plans mostly go to these private consultants who ascribe modernized type of building styles to such projects'.

FBA asserted, 'In my opinion, two issues are involved in this pattern of changes from the old to the modern system of building. On the one hand, normally the clients choose the design and style they want, in which the architectural consultants give advice and work based on their client's requirements. On the other hand, the majority of the current architectural professionals are not native Kuwaitis. These two main points are responsible for the loss in cultural identity in the building sector. For example, these expatriates operating in Kuwait have little experience, if any, regarding the traditional pattern and forms of building in the country, and their professional engagement with their clients is based on service delivery in return for profit making. Thus, the new style and format of building is being carried out without thinking about its future societal implications in the next say, 20 years to come'.

SA stated, 'In this situation we as a people are responsible for this sudden change in values and identity. Simply because, we take decisions, and the problem is that our decisions are inclined towards the European model system, and even to the educational curriculum that basically oriented us towards adopting the Western styles of building and lifestyle. As a result of this development, one can say since the responsibility of deciding and planning or designing our houses and other important buildings rest with the architects as professionals in this sector, they have to design our building plans in line with their Western orientation, which is absolutely different from our traditional values'.

BA respunded, 'In my own view, all this debate and controversy about changes in the traditional pattern of building plans depends on the expertise and experience of the architect consulted. In that, if he wants to adhere strictly to the rules of professionalism, he will be a key player in the process of designing and building of any project. Whereas, if he is not keen about the selection and designing guidelines he may only instill, like, say 5 % of expertise in the project and allow about 95% of the input to the project based on the owner's wishes'.

UH replied, 'From my own point of view, in Kuwait, the professionals in the building industry have little say in terms of advice on how to go about a particular project. Predominantly, the owners determine about 90 % on how the project will be executed (i.e. in forms of the design and master plan)".

MG stated that 'Both the owners and the architects have a role and a responsibility for essential decisions on building design which have resulted in the gradual disappearance of the culturally oriented pattern of design in Kuwait'.

MA posited, 'I feel there is lack of enforcement of building standards by the Kuwaiti Municipal Authorities. This problem is responsible for the proliferation of many forms of styles in designs; these widespread changes are more visible in the Kuwaiti city centre and also in places like the Shareq area, as well. Thus, in this context one can say that there is no guideline from the government that will help in preserving the traditional ways of building, not only in Kuwait but in most Gulf states. Secondly, the stakeholders in the building sector (i.e. the owners and the professional consultants) are all responsible in the current trend for the loss of cultural identity and values in Kuwait'.

NAA stated, 'Two segments of the Kuwaiti society are responsible for the erection of the present expensive skyscrapers: the country's or the state's housing and planning policy, and the committee responsible for projects'.

Thus, it can be deduced from the opinions of these architects that the architectural consultants, the clients, the policy makers and the government authorities are the main key players in determining the pattern and style of design in the contemporary building system in Kuwait. In addition, the summary findings show that the owners' responsibility in this process was mentioned (5 times), whereas the professionals/consultants were mentioned (six times) and the government's role in this regard was mentioned 4 times. It can be argued that the role of these stakeholders in the building sector is the main issue underlying the change in

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attitude regarding modern forms of design and the subsequent decline of Kuwait's cultural traditional orientation.

4. Architectural materials within contemporary buildings in Kuwait.

The architects were asked: *What do you think are the most commonly used architectural materials within contemporary buildings in Kuwait? ------ And where do these materials/ ideas and styles emanate from?*

FA remarked, 'In most commercial buildings the most widely used building materials are the Curtain Wall, glass and aluminium. These building materials are very popular, not only in Kuwait, but globally. For the residential buildings, the use of stone (rocks) is also common. However, there is also the possibility that these may change in the next 20 years towards what is popularly called the High Tech form of material products. This change in the attitude toward building is a global trend, rather than in Kuwait alone'.

RT said, 'The main contemporary building materials used in Kuwait are: stone, glass, and aluminium composite, all of which are largely imported from the West'.
NA replied, 'In my opinion, the Curtain Wall, glass and aluminum marked a significant period in modern building. We are now in the new age of information technology and easy means of transportation around the world. This has enabled massive transportation of building and other materials into the Gulf States. For instance, Dubai has become the capital city of architecture in the Middle East. Thus, Dubai is just like Hong Kong or New York today'.

FBA responded, 'Most contemporary stakeholders in the building trade use materials like Curtain Walls, Aluminum, glass and bricks. These materials came from abroad, mostly from the West, which are not suitable'.

SA said, 'All the current fashionable building materials come from Europe. These materials are more specifically found in Dubai'.

BA stated, 'Most of the building materials found in Kuwait today are concrete and iron materials, rock, wood and ceramic, and the greater proportion comes from Italy, Spain and America'.

UH replied, 'The Curtain Wall is the most commonly used material among the liberally-oriented citizens of Kuwait. The materials and the design are basically imported from outside, largely from the EU. This situation has weakened the domestic building product in relation to the one imported'.

MG stated, 'The Curtain Wall, glass and Aluminum, which are all regarded as modern (state-of-the-art) building materials in Kuwait. Concrete and cladding materials are also widely used. Most of these materials are imposed on them (the professional building consultants) by the clients who are mostly coming from abroad in countries like Japan and America. The massive importations of these materials have been a great loss to the Arabic and Islamic heritage building styles in Kuwait'.

MA responded, 'The most widely use materials in contemporary building in Kuwait are the: steel structure and metallic construction, as well as the Curtain Wall, Aluminum, and composed panels, mostly used for tall buildings. They are also imported from outside, and their use is causing a loss in terms of air conditioning, electricity bills, and other extra costs that would not have incurred if the traditional style of building was used. That shows that there is fault in the functioning of the contemporary building, which gives no cognizance to the nature of the Kuwaiti environment and the Gulf States in general'.

NAA also stated, 'The most common building materials used for numerous skyscrapers are: the Curtain Wall, glass and bricks, whereas, in the residential

areas, Sajama (texture of paintings) and Mosaic are also commonly used. However, the preference of choosing these materials comes directly from the orientation of the architects who are, in the majority, educated in the West'.

The summary of these respondents' views illustrates that there is pervasive use of new and modern building materials in Kuwait, and these materials are largely imported from the West (Europe and America). The universalization of modern building materials as a fashionable way and pattern of building has also influenced the professionals/architects in Kuwait towards designing and building new and modernized forms of buildings. The media i.e. (the internet and magazines) have also had influenced these changes. In addition, the most contemporary materials used in the current building in Kuwait are mostly Curtain Walls, glass, metallic, aluminium, and steel. These materials classically depict the modern form of building and design in the country. However, regarding the functional aspect of contemporary buildings, the majority view of the interviewees is that these materials are not compatible with the Kuwaiti environment and cultural orientation; and that their use has greatly contributed to the loss in cultural heritage of the legacy of the past Islamic/Arabic style of buildings.

5. Identifying the state of Islamic architecture within contemporary life.

The architects were asked: *Do you personally consider it might be relevant to acknowledge elements of Islamic style when designing new buildings in the Middle East?*

FA replied, 'The traditional Islamic elements are supposed to remain in our current buildings because Kuwait is an Islamic state, and the culture embedded in it is our way of life. Thus, our building characteristics should for all intents and purposes represent such cultural values. The new generation must learn to instil and express their works based on the elements of the Islamic style, if not, the direct emulation

of the European system of building and design will over time erase the features of our culture. Therefore, there should be an awareness strategy on the need to protect the Islamic prototype of building design and design throughout Kuwait'.

RT answered, 'Not at all. The building going on today does not represent the Islamic type of architecture. As such at least some, if not all, of the architects and the buildings should represent the cultural orientation of the state'.

NA stated, 'Some of the contemporary building projects in Kuwait should establish the Islamic element in their styles and designs, but not in all engineering projects. This will help preserve some legacy of the past Islamic pattern of building style'.

FA answered, 'There is no way we can force people towards building the Islamic type of building. However, in my own personal opinion, the Islamic style is better; that is not to say it is the best because it only suits the environment and the cultural orientation of the people'.

SA answered, 'Yes, we are supposed to subscribe to the Islamic elements and stereotype of designs in order for the new generation of Kuwait to benefit and learn about their culture, since the Islamic tradition has taught us how to apply the functional and the aesthetic sides within our building formats'.

BA remarked, 'There is no point acknowledging the Islamic element in all building since building by nature is transitional from one phase to another, reflecting on particular style and form in periods of time. Since the past system is for the past generation, each generation should be allowed to offer something new and different from the past. Although we are proud of our history and societal values, this is the truth of the matter regarding this question'.

UH responded, 'The Islamic style is very important for the Arabic and the Kuwaiti architecture, because it is part of its identity and environment. Furthermore, the

Islamic architectural format has rich elements that are unique and easy in terms of configuration and adaptation to the Kuwaiti environment'.

MG stated, 'A human being without identity has lost his personality and roots. Therefore, the contemporary modernization of building in Kuwait should insert some particular elements of the Islamic form of building design'.

MA stated, 'In my personal opinion we have to apply some Islamic vocabulary into the contemporary architecture to give it the aura of the Islamic culture and identity. But I'm not suggesting that all buildings in Kuwait should apply the Islamic-oriented pattern of design, but at least some elements should be incorporated'.

NAA replied, 'We must acknowledge that Islamic ideas need to be addressed in the design and architecture, in the right atmosphere and in appropriate circumstances, and that give a kind of psychological comfort, and to be fit for the functionality of the architecture'.

In conclusion, from these answers we can summarise interviewees' views into three main categories:

A- Most of the architects' views illustrate support for the preservation of the Islamic identity of culture in the architecture (see views of FA, SA, UH, MG and NAA). They see this rich Islamic style as an important element because it is preserving the identity, culture, and social environment of people in Kuwait. Thus, functional aesthetics is part of the Arabic originality and legacy that is meant to be manifested in people's lives. As such, the gains of modernity have generated a loss of culture.

B- Some interviewees took the middle course and suggested that some projects should apply the Islamic style (see the views of NA, FA and MA), although not necessarily all. Their view was that the inclusion of some traditional Islamic buildings would bring a necessary balance to the

contemporary Kuwaiti building environment, which at the moment is heavily biased to the Western side.

C- A small group supported the freedom of expression to build in the modern style (see views of TR and BA). These architects recommended that the current building structure should be modern since building style is transitional by nature, and that the current changes in the Kuwaiti form of architectural design is a reflection of society's natural transformation towards modernity.

7.2.5 Description and Analysis of attitudes relating to the use of Ceramic Materials in Contemporary Building in Kuwait.

This section discusses a range of topics that are related to the use of Ceramic materials within contemporary architecture in Kuwait.

1. Use of Ceramic products within contemporary building in Kuwait.

The architects were asked: *What is your personal opinion / attitude towards the use of Ceramic products within contemporary building in Kuwait?*
FA responded, 'The use of ceramic has many advantages for building; in that, it is easy to assemble, withstand the humid climatic conditions, and technically does not absorb water. In general, the shape of ceramic has a universal form and is widely available and has a mix of varieties'.

RT replied, 'I think the ceramic product is very limited in contemporary buildings and is mostly used in areas like kitchens, toilets, walls and flooring materials. The styles are many and of different shapes and designs, and can be used for many types of building but is rarely used in Islamic patterns of design'.

NA stated, "The availability of the ceramic product in the market is as a result of its universal use in modern design, which is not commonly used within the Islamic style of ornamentation. For instance, when I was working in the Kuwaiti Municipality in an inspection around building projects, I saw one old building (referred to as the *court* buildings) which was built with a beautiful floor ceramic in the forties. It was great and indeed brilliant'.

FBA asserted, 'The current ceramic use in the contemporary building style in Kuwait is poor in expression and in creativity and thinking, because the ceramic in general is supposed to give an impression and shape that fits in with the environment'.

SA stated, 'Historically, the ceramic was popularly used by the Babylonians in Iraq. But today it is widely used in Kuwait in different forms and sizes and is used universally'.

BA replied, 'The building industry would not work without ceramic materials in Kuwait, especially in the wet water areas where architects strongly recommend the use of the product there. However, they are mostly imported from Italy, Spain, Germany, China and other countries with different choices and styles'.

UH stated, 'The ceramic is commonly used in Kuwait due to the climatic condition, where the temperature rises to 40 degrees, but their designs are different to the Islamic style'.

MG responded, 'the ceramics used in Kuwait are flexible and modern but do not represent any identity'.

MA posited, 'Based on my experience and dealings with designs, there is no real identity reflected in the shape and design of ceramic use, nor in its application to building in general. In Kuwait it is widely used in villas and other buildings'.

NAA responded, 'Ceramic materials are excellent for construction, and were used in the past to construct some famous Islamic buildings, but today there is not the same need for ceramics'.

The general views of the architects interviewed showed that the majority acknowledged the functional value of ceramics, but they clearly indicated that the current ceramic used in contemporary buildings and architectural design in Kuwait does not represents the Islamic identity. The ceramics used today are universal in form and shape and do not relate to any particular identity. However, the views also suggest that almost all the ceramic products used in construction in Kuwait are made and imported from around the world, from countries like Italy, Spain, Germany, and China. This is disappointing, particularly as the Islamic ceramic heritage was so strong in the past.

2. Manifestation of the Islamic ceramic heritage in Kuwait.

The architects were asked: *How aware are you personally of the heritage of traditional Islamic Ceramics?*

FA responded, 'The Islamic ceramic was part of Islamic architecture, highly regarded in the construction of mosques and other buildings. This was because the design in such ceramics is made in such a way that it symbolizes the spirit of human worshipping which has a relation with Islam'.

RT stated, 'Honestly, I do not know much about this heritage'.

NA argued, 'It is very important to conduct a research on how to carefully study this heritage and develop a framework that relates to the origin of the Islamic design, and also offer a recommendation on how to revalidate this legacy of the use of Islamic ceramic'.

FBA responded, "The Islamic ceramic occupies an important place in the Arabic States because it is regarded as one of the ways of preserving the culture. Therefore, the (decline in the) use of contemporary ceramic has aided in the loss of our identity and even with difficulties in preserving the history of the past'.

SA remarked, 'The heritage of the traditional ceramics has great importance from the philosophical and intellectual point of view. As such, it is significant to redevelop the Islamic ceramic, as it were, under a rigorous research in order to restore the beautiful architectural projects of the past'.

BA answered, 'I would prefer to use the Islamic ceramic for contemporary buildings than the modern type'.

UH stated, "The Islamic ceramic was embedded in Islamic architecture in the past and historically associated with the Mosaic. As such, its use and preservation in current buildings is very important'.

MG responded, 'It is absolutely important to use it, but depending on the style of the building; but some of the contemporary architectural designs don't require the application of ceramic at all. However, I believe we can contribute to that, even within the modern framework'.

MA opined, 'It is important to use the Islamic ceramic in Islamic architecture and it is historically widely known to have been used in countries like Egypt, Syria and Iran. These countries use it in forms of what is called the *Fosifsa*, which means Mosaic. In addition, it is very significant to recognize the Islamic ceramic because it contains the vocabulary of Islamic architecture'.

NAA stated, 'As far as I'm concerned it is not essential to use it in residential areas, but it is essential for government projects and mosques'.

This summary of findings suggests that the majority of the architects interviewed acknowledged the importance of the Islamic ceramic style within the history of architectural development in Kuwait. As demonstrated, it is clear that the heritage of the Islamic ceramic is seen to hold many important values that represent the values, identity and legacy of the Arabic and the Islamic civilization and environment. It also points to the great philosophical and intellectual value found in the curriculum of art, design and architecture in Kuwait and the Arab states, in general. However, the majority view of the respondents also recommended that the Islamic ceramic should be applied within the framework of redeveloping new concepts and ideas from the original pattern and style of the past into the contemporary modern style. They further suggested that there was a place for the use of ceramics within governmental and private projects, rather than in residential areas. Therefore, the central theme of respondents' argument is that modernity in building has impacted greatly on cultural identity (in the form of design and style of building) in Kuwait.

3. Awareness of tradition.

The architects were asked: *Do you believe your clients have an awareness of the Islamic ceramic heritage and tradition?*

FA replied, 'I don't think most of the clients are aware of the Islamic heritage because the media are not enlightening the public regarding the heritage'.

RT stated, 'In my opinion, I think the clients have limited knowledge'.

NA stated, 'I there is small percentage of clients who care about the style of ceramic, simply because the modern materials and designs are difficult and very expensive to obtain. In addition, the trend towards modernity today has affected people's choices, which reflects on their preferences for the contemporary style of ceramic'.

FBA observed, 'It depends on the nature of the client himself, in that most of these clients do not care about the Islamic ceramic'.

SA replied, 'Up to now I have never met any client who is interested about this heritage, and to me the most knowledgeable and educated in our society are those who cherish their heritage'.

BA stated, 'In my opinion, most people like taking the contemporary ceramic, which has a flat surface (that is not representing any decoration), and very few people require the use of the Islamic ornamentation'.

UH responded, 'Apparently, 80 per cent of the customers are not aware of this heritage, meaning 20 percent do'.

MG said, 'No, I don't think they are aware about this heritage because they don't execute them in their building projects'.

MA replied, 'In my own opinion, people are not fully aware of the Islamic ceramic because there are only a few found in some private houses'.

NAA stated, "People don't care about the legacy of the Islamic ceramic, if at all. Only about 2 percent may be said to have some idea about it'.

All the architects stressed, therefore, that there is a lack of awareness and understanding of the values of the Islamic tradition and cultural identity throughout Kuwait. As stated earlier, the reasons for this are basically attributed to the role of the media, and to the global trend and shift towards modernity which has helped to influence the taste and choice of clients towards a modernized version of design and building.

4. Discovering the views on the use of the traditional Islamic style.

The architects were asked: *Do you believe your clients would be interested in seeing a greater acknowledgment of traditional Islamic style within their buildings?*

A. *Yes.*

B. *If No, can you suggest why?*

FA responded, 'No, but the clients will only take care of this heritage if there is enhanced awareness on the importance of this style'.

RT replied, 'No, I think the private clients would not be interested as they are more interested with its commercial aspects, because they are looking for the modern commercial aspects of it and not the Islamic style; which in my view, the modern architecture gives more space with high rise buildings, an idea that emerged from the West; and (this is different to) Islamic architecture, which doesn't erect high buildings'.

NA remarked, 'Yes, if the Islamic style was available, but the greatest problem is that most clients put a lot of pressure for quick execution of their projects, which makes it difficult to get the Islamic style'.

FBA responded, 'No, the reason is that the client wants to reduce the costing for the ceramic materials, thus he always opts for the cheapest material in the market, although it also depends on the client's taste and choice'.

SA stated, 'No, the traditional style and design should be modified in order to suit the modern style, based on the cultural orientation of the Kuwaiti environment. If the architect and designer develop this, it may likely attract the clients. If this is done, it will also show the importance of this legacy in contemporary social life.'

BA responded, 'No, I don't think so; they will take care of it, because they understand it in a wide range of ways, because some of them don't have a preference for the Islamic ceramic'.

UH replied, 'No, we wish the people were aware of it. The reason for this lack of awareness is that the current style and patterns are imported from Europe and other parts of the world, a phenomenon that has helped in changing our cultural identity'.

MG observed, 'No, because they see and copy from the Western civilization and it does not represent their identity, and neither is it suitable for the environment'.

MA replied, 'No, in that people in the Middle East are completely out of touch with the Islamic style, simply because there are numerous political crises that delay the pace of economic development, and the consequence is it disrupts the Islamic pattern of production and is replaced by the modernized form that comes from outside. However, in general, there is no organizational care for evolving the Islamic architectural aesthetic that would be more suitable for the environment. The Kuwaiti Municipality are supposed to enact law that would restrict the private expression of building choices and ideas. That would help restore the traditional way of Islamic architecture'.

NAA stated, 'There isn't at all, simply because there is a general lack of awareness that would encourage people (to recognise) the need and significance of their identity.'

Most of the views outlined above pointed out that most clients wouldn't be interested in seeing a greater acknowledgment of traditional Islamic style in buildings, for the following reasons:

   A. Usually clients selected the modern style because it is regarded as fashionable, which again is largely down to Western influence, because the

Western style is seen as being of a more advanced level in style and production. This, in turn, encourages massive foreign ceramic importation and production and, on the other hand, reduces the value of selecting a building that features aspects of the original Islamic culture.

B. Furthermore, travelling around and exposing themselves to different cultures throughout the world gives these clients a new perspective on the buildings that they see, and as these buildings are of a different cultural orientation from those found in the Kuwaiti environment, there are obvious consequences - the move to modernity, mainly under the influence of Western design and style.

C. There is also a lack of adequate organizational research, and study, about the centrality of Islamic architecture, which is largely attributed to lack of specialists in this field. This problem is compounded by the lack of reflection on how best on the Islamic traditional ceramic style.

D. There is also the issue of political and economic crises that can delay and disrupt the development and production of the Islamic ceramic style.

E. The lack of law enactment by the Kuwaiti Municipal authorities whose job it is to set standards and limits; and, in particular, to protect and preserve, even at minimal level, the style and design of building in the Islamic tradition.

These problems need to be looked into in order to find a solution to the increasing erosion of the Islamic style of architectural design. Ideas and solutions should be sought in order to encourage clients' participation in the restoration of their lost identity.

5. Understanding attitudes towards traditional Islamic ceramics.

The architects were asked: *Do you consider it is important or relevant to preserve the Islamic ceramic heritage within contemporary architecture?*

FA replied, 'Yes of course - he who forgets his past obviously stands to lose his heritage and history'.

RT responded, 'I think there is the need to preserve every single heritage in this country. For example, a country like Cyprus has preserved its traditional ceramic'.
NA remarked, 'It is really important to preserve it'.
FBA stated, 'of course, it is absolutely important to preserve this heritage'.

SA responded, 'Ceramic is a part of architecture which is also part of the Arab and Islamic architecture which needs to be preserved. We have to develop ways of protecting the legacy of the past'.

BA stated, 'Yes, it is important to preserve the Islamic heritage, more importantly in the museums. I will also encourage any of my clients to preserve this identity as well'.
UH responded, 'It is important'.

MG stated, 'It is important because it is part and parcel of our cultural identity'.

MA replied, 'Yes it is important'.

NAA stated, 'Sure we have to preserve it but the problem is that we basically produce it by ourselves'.

It can be seen from these architects that the Islamic ceramic heritage is of significant value to Kuwaiti society; hence, the need to preserve it within contemporary and modern architecture is essential. However, they also pointed out that it is important that ceramics be preserved in the context of re-developing and creating new patterns of design and building that would incorporate the elements of the original traditional style but be built to suit peoples' preference for the modernized form of building style.

6. The use of traditional Islamic ceramics within recent design projects.

The architects were asked: *Do you believe many architects acknowledge the traditional Islamic ceramics with recent or current projects?* The answer was divided into:

         a. If yes, can you suggest particular examples of their application in current or recent projects?

         b. If not, why?

FA responded, 'No, as consultant our role is to offer what the clients want, something they prefer. Therefore, in this case, the people, and the government take the decision on what style and design they want for their buildings'.

RT also stated, 'No, because of the fact that I did not study the Islamic form of architecture, I don't have the experience and the background of using the Islamic ceramic for any building; and most importantly, the clients choose the type of design they desire'.

NAA responded, 'No, it is really much less, because of the following reasons:

  (a) Clients lack general knowledge on the legacy of the past

  (b) There is also the problem of a lack of Islamic pottery and specialists in that kind of Islamic ceramic.

  (c) The existing ceramics in Kuwait are mostly imported from Europe, China and Japan at exorbitant prices.

  (d) The non-proliferation of Islamic ceramic, and carvings, has caused a general lack of awareness among the owners and clients.

FBA replied, 'In my opinion, the Islamic ceramic needs to be redeveloped to suit the modern style of building. It should retain the Islamic elements but in a modified way. The fact that we design and execute projects in a country like Dubai does not means that we can copy the idea to the entire world. This idea of model copying has led to the Islamic heritage being forgotten'.

SA said, 'I applied the Islamic ceramic even in modern buildings when I was in Iraq, but in Kuwait I have not done so because I'm still new here'.

BA responded, 'No, I have never used it in my projects, because I haven't seen enough varieties of the Islamic ceramic to be able to choose it; even if it is available it is of poor quality. However, we don't have the kind of good quality ceramic that will satisfy people's desires and preferences. If there were any good quality and beautiful Islamic ceramic available, I would definitely use it in my project'.

UH replied, 'Yes, I used a type of Mosaic ceramic style, applied within the wet places'.

MG stated, 'No, because of two main reasons: the clients/owners didn't want to apply it in their buildings and designs; and also, in Kuwait there is no ceramic manufacturing company of that kind'.

MA stated, 'Yes there is, but it is mostly found in some mosques; there is also some referred to as the Fosifa, which means 'mosaic', basically applied because of the owner's wish'.

NAA replied, 'No I haven't applied any, simply because:
    A. The presence of general ceramics style and types prevalent in the market.
    B. It could be there is lack of desire for the Islamic type of ceramic by the people themselves, due to lack of awareness.
    C. Lack of skilled labour to produce the appropriate Islamic style of architecture.
    D. Non-availability in the markets, and anything that is not available in the market will be significantly costly. As such, the Islamic ceramics need to be made available more widely, to give a wide range of choices in order to meet the new and modern system and style'.

Based on the foregoing analysis, there are two main points to be made regarding this question. In the first place, most architects don't apply Islamic ceramics in their projects. Second, five architects interviewed didn't apply the Islamic ceramic in their projects due to a number of reasons:

- The owner's taste and choice went against the use of the Islamic ceramic in the design of the building.
- Lack of available Islamic ceramic materials resources in the Kuwaiti markets meant that the architect or clients chose to use the modern type in their project design
- There is a lack of specialists to develop the Islamic ceramic and promote these products in Kuwait
- There is high importation of ceramic products from other parts of the world (e.g. from Europe, China etc)
- There is a lack of skilled labour to produce Islamic ceramic products
- The proliferation of modern Western style buildings discourages the use of the Islamic traditional style

In addition, findings also reveal that only a few architects applied the Islamic ceramic; and this was mostly only applied in the form of the Mosaic style (Fosifsa) in some parts of buildings or in water spaces in Kuwait.

7.2.6 Validity of the Interview Results and Report.

The researcher sent via email copies of all the details of the responses from the architects interviewed in order to seek their consent about whether to use their names in this chapter or not (see Appendix for details, pages 410-414).

7.2.7 Conclusion.

The architects were consistent in acknowledging the recent changes in the entire pattern of architectural identity in Kuwait. Based on their observations, and their working experience in different architectural projects in Kuwait, they agree that most contemporary building projects in Kuwait imitate the European and American model and style of building. Most companies nowadays tend to import building materials and processes (curtain walls, glass, aluminium, and steel). This phenomenon is reflected in loss of identity in Kuwait that is manifesting itself in the need to preserve and develop the country's native traditional architectural designs and styles in the future. The Islamic style of Kuwait's heritage has become largely redundant through the popularity of contemporary western-style buildings.

▪ This survey identified three main factors responsible for this transformation in contemporary architectural styles and designs in Kuwait. The first concerns the owners/clients' role in selecting the style of building. Based on the interviews, it is clear the majority of clients prefer a 'global' style of building rather than the traditional Islamic style. Secondly the majority of architects today appear to have little real knowledge on the Islamic style of design. Thirdly, the Kuwait Municipal Authority and the Kuwaiti Public Housing Welfare Authority both lack the powers to enforce building plans and style standards that would include the traditional Islamic style of building design.

▪ In spite of this, most of the architects confirmed the importance of encouraging and supporting the survival of the Islamic ceramic heritage. Therefore, ways have to be found to develop and use a new creative framework that will revitalise the originality of the Islamic ceramic style.

- Islamic ceramics should not to be confused with the contemporary products imported into the country. As stated by most of the interviewees, this modern form of ceramic rarely represents any of Kuwait's cultural identity as it has been mostly imported from the Europe or the Far East. As a result, any original Islamic style of ceramic has tended to be forgotten.

- The architects also illustrated that the clients/owners rarely aware of the Islamic ceramic style and its importance in the preservation of our cultural identity. Such cultural reorientation is brought about by people's preferences for modernity due to Western influences.

- Most of the Architects pointed out that they haven't used Islamic ceramics in their recent projects. However, they linked this to owners' preferences and the problem of the unavailability of Islamic ceramic products in the market. In addition, there was a lack of Islamic ceramic specialists in Kuwait who could develop and promote such ceramic products.

Based on the experts' opinions reviewed above, we can conclude that the current trend of modernization caused by the forces of globalization has strongly affected the traditional pattern of building in Kuwait. The massive importation of modern building materials from Europe and America has steadily erased the traditional Islamic styles of architectural design. Furthermore, the attitudinal change of the stakeholders in the building industry (i.e. architects, clients, construction companies etc) has also influenced the current change in the use of building materials, such as ceramics. Today, the traditional Islamic ceramics that have been used for hundreds of years to adorn buildings, has been replaced by European or Far Eastern manufactured ceramics. The implication of this trend for the future is that the entire cultural heritage of the Islamic style of building will disappear, bringing about the loss of a heritage that might never be replaced.

7.3 SUBSECTION 3: RESULTS AND ANALYSIS OF THE SURVEY WITH THE PUBLIC OF KUWAIT.

7.3.1 Introduction.

This section of the social science research involved a survey of the general public in Kuwait, identifying their attitudes towards the culture and identity in contemporary life on the perspective of the architecture and ceramics in Kuwait. This part of the data collection embraced statistical and narrative research. The statistical analysis depended on "SPSS statistical software" and Microsoft Office Excel. The narrative displays the varities of opinions that have been obtained through the statistic side.

This survey applied to 81 samples who are living in Kuwait; the survey was applied between dates 10/9/2009 to 4/10/2009. The selection of this sample was carried out in a random way by following the research strategy plan outlined in the methodology (section 3.3.3). The survey was conducted with people in public places, including libraries, divans (socialising areas), universities, and colleges. The nationalities of this sample population are as follows:

- 77.78% are of Kuwaiti nationality.
- 19.75% are residents of other nationalities.

In addition, the average age of the public is as follows:

- 39.51% aged between 20-30 years.
- 30.86% aged between 31-40 years.
- 20.99% aged between 41-50 years.
- 8.64% aged 50 years and more.

This section of the research analysed the results of the survey, both quantitatively and qualitatively. It included four main questions; each choice of question was described by a percentage in a clustered cone chart explaining the details of opinions selected.

7.3.2 Methods of Survey.

A. Sampling and Population.

The sampling of this survey focused on the culture, the state, and society in Kuwait. This involved the use of a simple random sample. The sampling involved 81 people residing in Kuwait and it was purposely limited to this number because of time and cost considerations. The sample was specifically drawn from Kuwaiti nationals because they are familiar with their environment and the culture of the society in which they live.

B. Ethics and Access.

Taking ethical issues into consideration can sometimes be problematic to any form of research.

According to Clive Seale (2006), the research ethics should be considered because poor ethical practices cause potential harms to those studied and also raises concerns over privacy and the confidentiality of data; invasion of privacy can be viewed both as harmful in its own right and also as a condition that subjects people to the possibility of harm by depriving them of the protection that privacy offers. So, the research duty is to protect people from any harm to them. (See letter of permission sent to the sample of public in Kuwait in the Appendix, page 394).

C. Design of the Survey.

The designing of the survey involves the survey of individuals. The rules for designing questions were based on the following lines of guidance:

- *"The researcher should ask questions that relate to the research questions*
- *What do you want to know?*
- *Specific rules when designing questions:*
  - *A void ambiguous term in questions.*
  - *Avoid long questions.*
  - *Avoid very general questions.*
  - *Avoid leading questions.*
  - *Avoid questions that are actually asking two questions.*
  - *Avoid questions that include negatives.*

– *Avoid technical terms"* (Bryman, 2008, pp239).

Hence, this study adopted a survey design based on two main strategies: The first was a personal introduction, in which each person provided general profile information. The second focused on exploring their general opinion/ attitude towards contemporary architecture in Kuwait. (For more details about the design of this survey see Appendix, page 395).

D. Validity and Reliability.

In any research it is difficult to measure the validity and reliability of the instrument used.

According to Muijs (2004) "most of the concepts we want to measure, self-concept or attitudes for example, can't be measured directly. We cannot plug directly into people's heads and know what they are thinking, feeling or experiencing. It is in that sense that a latent variable – a variable that can't be directly measured in creating the right measurement instrument with the right manifest measures of the latent concept is clearly of crucial importance and not necessarily easy to achieve" (Muijs, 2004, p65).

Ensuring reliability for this study was conceived based on the "Data Protection Act" of the UK that sets out eight principles that give individuals the right to know what information is held about them. It also provides a framework to ensure that personal information is handled properly. It states that anyone who processes personal information must comply with these eight principles, which make sure that personal information is:

- Fairly and lawfully processed.
- Processed for limited purposes.
- Adequate, relevant and not excessive.
- Accurate and up to date.
- Not kept for longer than is necessary.

- Processed in line with your rights.
- Secure (The ICO is the UK's, 2009).

Another method of establishing validity, as argued by Bryman (2008), is referred to as face validity. Face validity is the measure that apparently reflects the content of the concept in question. Face validity might be established by asking other people whether the measure seems to be getting at the concept that is the focus of attention. Face validity is, therefore, an essentially intuitive process.

E. Reporting and Analysis.

Statistical software (SPSS) was used for the quantitative part of the data analysis. In the qualitative part of this research analysis was composed of non-statistical analysis that explained the opinions of the targeted population on the open questions. The analysis of the survey was presented in the form of bar charts. The aim was to produce tables and chart information in a succinct manner, using visual impact to best effect. The skill of producing good tables and charts involves:

- Presenting enough information without 'drowning' the reader with information overload.
- Helping the reader to interpret the table or chart through visual clues and appropriate presentation.
- Using an appropriate type of table or chart for the purpose at hand.

Furthermore, the table or chart should include:

- A little information about the units being represented in the columns of the table or on the axes of the chart (this is sometimes placed by the axes, sometimes by the bars or lines.
- The source of the data, if they were originally produced elsewhere (Denscombe, 2007).

7.3.3 Results and Analysis of Survey.

A. Investigating the opinions regarding the importance of identity - between traditional Islamic identity and the global cultural identity in Kuwait.

The public of Kuwait were asked: *Which do you feel is more important? 1) Retaining the traditional Islamic cultural identity* Or *2) Embracing a global cultural identity.*
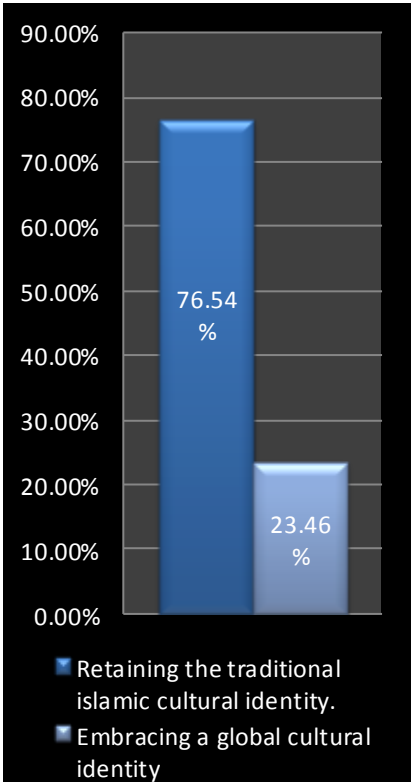

Figure 7. 14: The most important identity for
the public of Kuwait.

The findings described in the table (Figure 7.14) suggest that the majority of the society in Kuwait (76.54%) felt that it is vital to preserve and keep the traditional Islamic cultural identity. However, a minority of people (23.46%) expressed that it is important to embrace a global cultural identity.

Of the group or section of the public in Kuwait (PK) who opted for "Retaining the traditional Islamic cultural identity", one such respondent believed that 'The state of

Kuwait is an Islamic state, with the geographic location of Kuwait at the heart of the Islamic civilization, so it is appropriate to retain a clear definition of Islamic culture in Kuwait'.   Further comments made by members of this group (PK) were as follows: 'To preserve Islamic identity and values for the present and future generations in the state of Kuwait'.

'The Islamic culture is a distinguishing aspect for the Islamic state which is different from other cultures and identities'.

'We shouldn't forget the history of the Islamic civilization. Islamic culture is the basis of our heritage and costume'.

'Because the Islamic culture solves many problems of the community (economic, sociological, political, etc.), when people ignore their identity, problems will increase within the state'.

'To respect the constitution of Kuwait that refers to identity (in Item number two) in the Kuwait government'.

'It is the basis and origin of the civilization'.

'The traditional Islamic cultural identity comes from Islamic law".

'The Islamic cultural identity is suitable for all levels, ages and for the state of Kuwait".

'There are beautiful aspects in the characteristics of Islamic cultural identity'.

'The Islamic cultural identity expresses the nature, ideology and culture of our generation - we should teach and preserve it'.

However, one of the group who selected "Embracing a global cultural identity" maintained that "the global culture is more advanced, developed and is continuing to develop new forms". Further comments from this group included the following:

'We need to keep up with the age and look to an advanced future'.

'To continue development and take advantage of the new global culture'.

'To continue with global development and technology in all fields'

'Maybe there is better quality in modern culture because it's new'.

'It is more suitable for the requirements of life'.

"The Islamic cultural identity hasn't developed in comparison with global culture'.

From the statistical results, it can be said that it is essential to preserve the curriculum of the Islamic cultural identity in Kuwait as it is believed to provide a link with the geographical, civilizational, historical, political, economical, sociological, religious and cultural aspects of Islamic life. However, there is a small percentage of the public of Kuwait who have a new ideology, who welcome to new things and prefer a change of cultural identity, as being a necessity for development. This percentage could increase in the future and challenge Islamic identity and heritage.

B. Understanding People's Perceptions/Behaviours towards contemporary architecture in Kuwait (emerging and conservative styles).

A section of the society in Kuwait was asked: *Do you feel that contemporary architecture in Kuwait reflects 1) Islamic culture*? Or 2*) a new emerging cultural identity*?
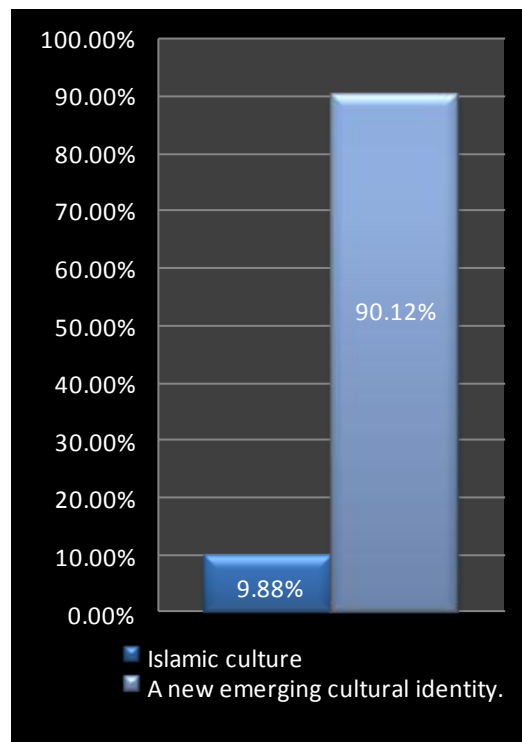

Figure 7. 15: The attitude towards contemporary architecture in Kuwait.

The findings described in the table (Figure 7.15) suggest that a large majority of the public in Kuwait (90.12%) thought that there is a change in the attitude towards contemporary architecture in Kuwait, which is reflecting a new emerging cultural

identity. However, 9.88% of the public in Kuwait thought that it does reflect Islamic culture.

Of those in the majority who selected "A new emerging cultural identity" one respondent stated that " *It is remarkable that the attitude towards contemporary architecture reflects the European design; it is far away from the Arabic, Islamic style. This happened because of globalization and rapid development in the country".* Others in this group responded as follows, often giving reasons for the change in culture:

"I can say that there is no clear line/advice for the architectural design in Kuwait and the preferred models should be the Arabic/Islamic building style".

"The new cultural movement in architectural design is used in the decoration and colour aspects, which are not suited to the Islamic culture".

"It is because of the phenomenon of globalization and the convergence of the world to one style of life".

"The architecture in Kuwait represents mixed cultures which happened because of globalisation".

"This is because of the Kuwaiti people's connection with global culture".

"I feel very sorry that the architecture reflects modern culture; it doesn't reflect the Islamic identity - it shows the characteristic skyscrapers and towers everywhere".

"This is because there are a huge amount of buildings built in a modern way".

"I think it's because the architecture in Kuwait is like the architecture in the West, which is not Kuwaiti style".

"It's because there are Islamic mosques designed and built, using modern materials in Kuwait".

"In the past few years, there has been an emerging new architectural identity in Kuwait, especially in Kuwait, Alsharq, and Bneaid Algart".

"As far as I can see there is a new architecture. It is represented in high buildings, with a new style of decoration, using new technology".

"The shopping mall design and public places look like global and European symbols".

"The architecture in Kuwait is modern with some houses built in a new way by using the triangular roof on the top".

"This is because the architecture in Kuwait used to be designed by foreign people from all around the world".

"Kuwait employed the modern art of architecture that spread in the west towards the end of the 1980s. This reduced the eastern/Islamic designs in Kuwait".

Further reasons for the change in style were also identified:

"….because the modern and contemporary architecture is a resource for the architects during their practice work".

"….because the Kuwaiti community doesn't preserve the Islamic cultural identity".

"….because new architecture doesn't represent the Islamic decoration and heritage - it is all taken from the Western and foreign designs".

"…because the Islamic design architecture is costly".

On the other hand, from the small percentage of the society in Kuwait who selected "Islamic culture'' one such respondent believed that "the contemporary architecture in Kuwait reflects an Islamic impression and preserves the Islamic /Kuwaiti heritage". Another member from this group thought that "the architecture in Kuwait preserved the Islamic identity".

It is clearly evident from these findings that there are real changes in the identity of the architectural culture in Kuwait. Respondents believe that the impact from abroad, the global culture in design and contemporary architectural attitudes, globalization and the speed of development are all responsible for the change in cultural identity. Furthermore, there does appear to be lack of interest in the identity, heritage and cultural architecture of Kuwait, which may add to the erosion of culture that is already evident in the country's architectural environment.

C. Examining the public attitude towards the future of contemporary architecture in Kuwait.

The public in Kuwait were asked: *Would you prefer to see within the contemporary architecture 1) Greater reference to traditional Islamic identity*? Or *2) Global / international styles of architecture?*
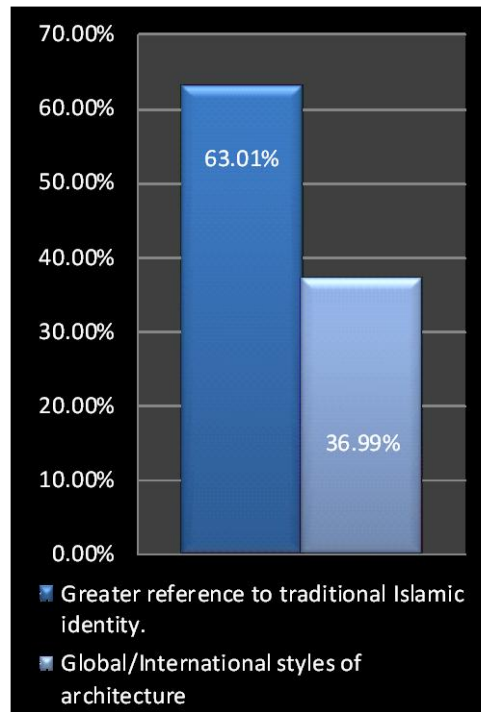

Figure 7. 16: The most desirable trends
in contemporary architecture in Kuwait.

The findings described in the table (Figure 7.16) suggest that the majority of the public in Kuwait (63.01%) have a preference and desire to see a greater reference to traditional Islamic identity in the contemporary architecture in Kuwait. However, 36.99% of the public in Kuwait preferred global/international styles of architecture.

Of the public in Kuwait (PK) who would like a "greater reference to traditional Islamic identity" one of the respondents gave as a reason "because of the beauty of the Islamic characteristic design and its originality".

Further reasons for such a preference were also given, as follows:

"….because the Islamic identity built our culture and our characteristic Kuwait identity".

"…….as we are a part of the Islamic world - there needs to be a distinguishing of the culture and its uniqueness".

"…..because we don't want to lose our identity".

"…..because our religion is Islam and we are a part of that culture".

"…..because the Islamic identity is connected to heritage, which reflects our origin and civilization".

"…..because it reflects the heritage and roots of this Arabic land".

"…..because the Islamic architecture has a distinguished characteristic culture, influenced by an Islamic law that is very well studied".

"…..because the Islamic identity is suited to all people's needs in the community".

"Because our heritage is Islamic we should be more concerned with it any than other heritage".

"…..because it represents our ideology, culture, and the nature of our generation, when we see this architecture we understand public thinking and their way of living".

"……to preserve the Islamic cultural identity".

"……to preserve the originality of Arabic/ Islamic identity".

"……because it is deeply related to our identity and we should preserve it".

"……because the Islamic design expresses beautiful forms of ornamentation".

On the other hand, of the group who preferred "Global/international styles of architecture", one respondent gave as a reason "because it is not limited to any specific forms and symbols".

Further reasons and comments from members of this group included the following:

"…….because international identity is more suitable for the next generation. This will give the opportunity for a more comfortable life for the people".

" ….because the world has been changing. There is a need to look for what is new and suitable for the contemporary life".

" ….. because we must take the benefit from the new approach".

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" …because it will present global and universal forms".

" …to catch up with the modern architectural revolution in the world".

"I would like to see Kuwait become a more advanced country".

"The new identity of architecture will represent the modern, new, fast and precise development".

"…….because the new identity utilises the technology and is suitable for modern life".

From these findings, we can draw the conclusion that many people in Kuwaiti society believe that the future of contemporary architecture should help preseve the traditional Islamic style and identity. The opinions considered four aspects: a) Originality of this identity b) Islamic law c) preserving the cultural identity and great civilization and heritage d) Visual decoration and aesthetic inspiration characteristics. However, there is a small section of society who hold opposing opinions. These can be said to be influenced by a global identity that is different from the Islamic culture identity. These sections of society prefer development that is modern and rapid, typical of international styles of architectural design.

D. Exploring the extent of public awareness regarding Islamic ceramics.

The public of Kuwait were asked: *How aware are you of Islamic ceramic culture? 1) Very much 2) A little 3) Not at all.*
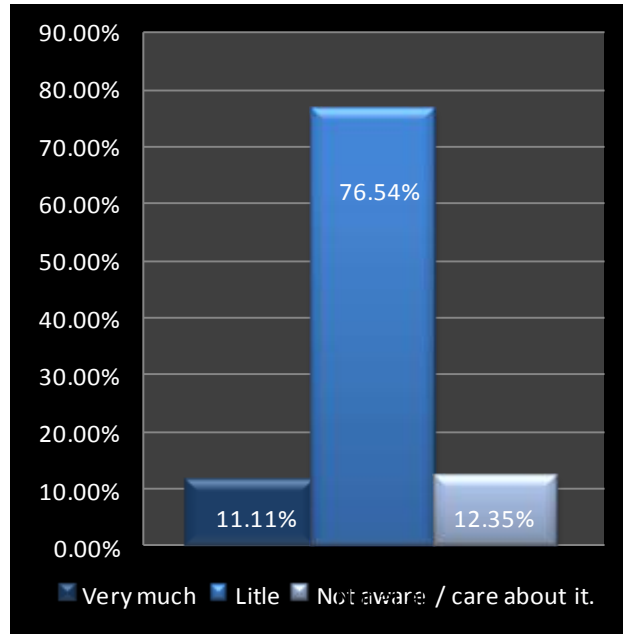
Figure 7. 17: The extent of public awareness
of Islamic ceramics.

The findings described in the table (Figure 7.17) suggest that the majority of the public in Kuwait (76.54%) have little awareness and understanding of Islamic ceramic culture. In addition, 12.35% did not care at all about it, and a minority of 11.11% were aware of this ceramic culture.

Of the group of the public in Kuwait (PK) who had "little awareness" of Islamic ceramic culture, one of the respondents gave as a reason for this "because they didn't have a lot of literacy and didn't attend ceramic exhibitions".

Other reasons and comments from those in the same group were also made, as follows:

"……because there are not enough resources on the art of Islamic ceramics".

"……because there is little information; daily newspapers rarely write about it".

"…….because it is not widespread or available in the general building space".

"……because the media doesn't present the Islamic ceramic culture in documentaries".

"…….because there is no private sector in Kuwait which cares about this culture and if there are, they are very few".

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"…….because Islamic ceramic is not available and difficult to find in Kuwait".

"…….because the new/ modern buildings that are supposed to represent our heritage in architectural design reduce our civilization".

"…….because the public in Kuwait don't care about improving this craft in order to apply it to their house decoration designs".

"…….because there is no attention from the country and media which leads to a general lack of interest".

"The media doesn't care about Islamic ceramic".

"…….because it is rare and it could not be made available nowadays".

"It is not available in Kuwait".

"In the Kuwaiti state there is no interest to raise awareness of the culture of Islamic ceramics among the people, and that's why many people don't know about it".

"……because information about the Islamic ceramic is very rare".

"……because there is no central market selling or displaying Islamic ceramics in Kuwait".

"…….maybe because the education in Kuwait doesn't teach students about the Islamic ceramic".

"…….because the media and Education Ministry don't care about spreading knowledge about the Islamic ceramics".

"…….because nowadays there are no new and creative ceramics that give the people the opportunity to be amazed at this art".

"…….because in the modern decoration design it is rare to see it in our community".

"……because there is no encouragement from the education system regarding this culture".

One of the interviwees from the Kuwaiti public who selected "I don't care" for Islamic ceramic culture, giving as reason "because I never look at it at all". Another respondent's reason was "because it is not part of my specialist subject", while another replied, "because it is not an important subject in the Islamic culture".

However, of the group who said they were aware of the culture of Islamic ceramics, the following comments were made. One said, "I got it from my reading and travelling'. Another gave as a reason, "because it reflects our Islamic civilization and its beautiful aspects", while another respondent's reason was "because it is my preferred culture and worldview".

It can be said, therefore, that the awareness of the public is a motivation towards encouraging and reviving Islamic ceramic culture. The percentages showed that there is only a little awareness from the public of the Islamic ceramic identity. This has definitely helped to bring about a lack of development of the Islamic ceramic culture within the environment of Kuwait, both now, and perhaps in the future. This, in turn, has led to global and international ceramic products monopolizing the ceramic market in Kuwait, causing people to consider changes to their ideology, identity, and cultural preferences. This can be attributed to three main reasons:

a) A lack of effective policy making by the media and educational authorities in Kuwait regarding their responsibility to enhance and encourage education and awareness, in order for people to understand their legacy and heritage of Islamic ceramics.

b) Little variety and creativity in the development of Islamic ceramics within markets, as well as in architectural design in Kuwait.

c) The challenge of modernity and society's changing culture within the context of contemporary architecture in Kuwait. It is the role of the Kuwaiti community and private authorities to reaffirm its cultural identity by means of ceramic decoration.

7.3.4 Conclusion.

A sample of society in Kuwait expressed their opinions through surveys about the nature of cultural identity in Kuwait. This research can be summarised and divided into four main outcomes:

- Kuwaiti society has a strong relationship and affiliation with Islamic culture, seeing it is a major factor in Kuwaiti life. This bond encompasses geography, civilization, history, uniqueness, politics, economics, sociology and heritage. Therefore, the public in Kuwait feel that it is important to preserve and protect Islamic cultural identity.

- The general public acknowledge a new emerging cultural style appearing in the contemporary architecture in Kuwait. They state this can be attributed to many factors e.g. globalization, borrowing from international building styles, and an inability to incorporate traditional styles in new building design.

-There is a desire from the society in Kuwait to develop and preserve the identity of Islamic style. The interviewees agreed it would be beneficial to see a greater reflection of traditional Islamic heritage within new architectural projects. This heritage is considered to define the uniqueness of this culture, reaffirmed in the constitution of Kuwait, and manifested in the creation of beautiful decoration designs that preserve the heritage.

- Kuwaiti society generally needs to be more aware of the richness of Islamic ceramic heritage, in particular, those policy makers in the media, education, and heritage, so that a positive understanding of the Islamic ceramic legacy within the community in Kuwait is established. In addition, there is a need to support and supply new creative resources for Islamic ceramics in the face of modernity and the challenge of a changing culture. Hopefully, such means will provide suitable motivation for reaffirming the Islamic ceramic legacy.

In conclusion, this survey found evidence of two types of social groups in Kuwaiit. The major group (majority percentage) expressed the importance of Arabic / Islamic identity and wanted it to be preserved. This section of Kuwaiti society can be called conservative. On the other hand, the minor group (minority percentage) were welcoming of the new identity, and preferred the changes in identity and culture that prevail currently in Kuwait. This section of Kuwaiti society had different ideas and different desires. In social science terms they can be called modern/ open/ liberal. Both groups have a significant role to play regarding the future identity of Islamic culture and legacy in Kuwait.

CHAPTER 8: PRACTICE BASED RESEARCH: TECHNICAL PREPARATION.

8.1 Introduction.

This chapter introduces the practice-based element of the research and outlines technologies that have been applied within the Case Studies (outlined in Chapter 9) The research applies an empirical methodology detailed in Chapter 5 (Methodology) involving systematic testing and recording of results.

The primary focus of this chapter is on the exploration of glaze – surface colour and texture. The aim has been to consider traditional Islamic ceramic colour and texture – previously examined in Chapter 6. Having established the principal 'rules' that characterise traditional Islamic ceramics, the research has involved testing a range of clay bodies and numerous glaze mixtures – fired at different conditions and under different kiln atmospheres. The palette of colour used within traditional Islamic ceramics served as the framework for colour development. Every formulation attempted to replicate or extend this palette of colours – offering a wide range of visual qualities that are both contemporary, yet provide a continuum of traditional Islamic ceramics. A number of the glazes have then been applied to the Case Studies in chapter 9.

A range of further tests involved using 'Slip' – liquid clay stained with metal colouring oxides. Slips were used in certain instances under the glaze coating, as a means of either 'neutralising' the underlying clay body colour, or providing colour under an application of transparent or translucent glaze.

Significant previous analytical research has been undertaken that has scientifically examined and determined historical Islamic clay body and glaze technology (Pradell et al, 2008). Whilst it is important within the context of this project, that the visual appearance of glazes closely resemble the aesthetic of traditional glazes, within the scope of this project, it has not been possible to attempt to replicate the exact material or chemical formulation of traditional glazes or clay bodies. This is for 3 reasons:

1. Many of the original raw materials used within traditional Islamic ceramics are not commercially available as they were often sourced locally – close to the point of ceramic production.

2. Many traditional glazes have been found to not age or wear well – being low fired and/or poorly formulated. The intention of this part of the research has been to develop glazes 'fit for purpose' - for application on products that may be potentially applied to contemporary architectural structures, possibly involving mass-producuction. Poor quality, albeit historically exact glazes would not be appropriate.

3. The scope of this research project limits the significant amount of research that would be necessary to develop historically accurate clay body and glaze formula.

Clay Bodies used in glaze tests (and Case Studies)

Traditional Islamic Ceramic wares and tiles were produced in many different centres across the Islamic World – from communities capable of large-scale production, to small one-person village workshops. Unlike today, no infrastructure of centralised, large-scale clay processors or suppliers existed. Clay would have been dug close to sites of production – probably the very reason that determined the location of workshops. As such, every type of ceramic ware would have a different clay body. It has therefore been inappropriate to even attempt to replicate traditional clay bodies for all the reasons outlined above.

8.2 Clay Bodies used within glaze tests and Case Studies (Chapter 9).

Terracotta Clay:
Traditional, common red clay (Red in colour due to high iron content).
Matures in temperature range: 1000 – 1080'C.

Advantages:
Commercially available clay body that most closely replicates clay used in most. historical / traditional Islamic ceramic ware.

Potential disadvantages:

Red colour effects overlying glaze colour – requires application of slip to neutralize red colour.

Remains porous due to low firing temperature.

Less durable than higher temperature maturing clay bodies.

Generally more susceptible to warping and cracking during drying and firing.

For these reasons Terracotta was eliminated as a potential clay body after early trails. It was only used in experiments involving the use of slips.

Stoneware Clay:

Plastic, pale buff coloured, high temperature clay body.

Matures in temperature range: 1200 – 1280'C.

Advantages:

Commercially available - consistent quality.

Versatile for a range of making processes.

Pale colour gives good colour response from translucent.

Durable and non-porous when high-fired.

Disadvantages:

Fine texture means clay is susceptible to warping and cracking during drying and firing – particularly when making flat tile forms.

Crank:

Course textured, pale buff, high temperature clay body.

Matures in temperature range: 1240 – 1320'C.

Advantages:

Commercially available - consistent quality.

Versatile for a range of making processes.

Pale colour gives good colour response from translucent.

Very durable and non-porous when high-fired.

Less likely to warp, distort or crack during drying and firing.

Disadvantages:

Course texture means body is inappropriate for fine detailed work.

Refractory Concrete (RC).

Refractory Concrete is not a clay body and as it has no plastic properties, cannot be formed like clay.

It involves a casting process, similar to traditional cement-based concrete.

RC's are traditionally used within high temperature chemical and metal smelting. industries, as furnace linings.

Research undertaken by Dr Alasdair Bremner (2008) explored how RC may be applied to more creative contexts.

There are numerous RC's, formulated to suit a wide range of industrial applications. The RC used in this research was Jonflow 91, supplied by Sheffield Refractories. This particular formulation was chosen on the basis of research undertaken by Bremner.

Advantages:

Extremely durable – can be fired up to 1400"C.

Is structurally very stable - has almost zero shrinkage and very low levels of distortion.

Can be cast into a variety of complex forms.

Cast in moulds, so excellent for applications requiring exact repetition of multiple units.

Can be glazed.

White coloured – does not effect overlying glaze colour.

Disadvantages:

Can only be formed using a casting process, involving manufacture of models and moulds – limiting shapes and application.

Experiments are grouped in the following categories:

Earthenware Glaze tests (Fired 1060-1080°C).

Stoneware glaze test (Fired 1280°C).

Refractory Concrete (Fired to 1280°C).

Slip tests (applied under Earthenware glazes).

8.3 Section One: Glaze Tests and Colour Experiments.

8.3.1 Earthenware Glaze Test 1060-1080°C.

This section of the research attempts to build on ceramic materials and technology found within traditions of Islamic ceramic cultural. All historical Islamic ceramics were fired at relatively low temperatures – within the 1000-1080°C range, under the broad classification of Earthenware. According to Watson "all ceramics made in the Islamic world are Earthenwares" (Watson, 2004, p24).

A. Glaze based in Lead Bisiicate Frit:

The research tested four different glazes based in Lead Bislicate on 3 bodies:

(A) Stoneware.

(B) Crank clay.

(C) Terracotta clay.

Glaze test 1:

Table 8. 1: Glaze Test 1 – Earthenware.

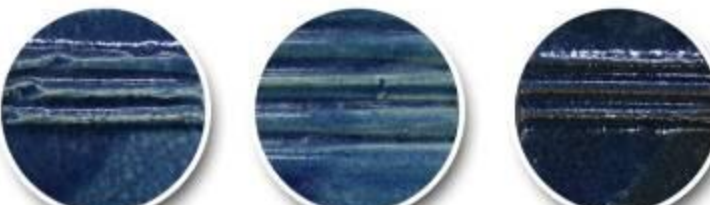| Ceramic Materials	Percentage	Glaze test results fired to 1080°C
Lead Bisilicate Frit Ball clay. Flint. Copper Oxide.	80%. 10%. 10%. 2%.	
Description: Shiny pale apple green colour – deeper colour where glaze is thicker in texture. Red body colour evident on terracotta clay, due to glaze translucency.		

Glaze test 2:

Table 8. 2: Glaze Test 2 - Earthenware.

Ceramic Materials	Percentage	Glaze test results fired to 1080°C
Lead Bisilicate Frit Ball clay. Flint. Copper Oxide.	80%. 10%. 10%. 4%.	
Description: Shiny apple green colour – deeper colour response than Test 1.		

Glaze test 3:

Table 8. 3: Glaze Test 3- Earthenware.

Ceramic Materials	Percentage	Glaze test results fired to 1080°C
Lead Bisilicate Frit Ball clay. Flint. Cobalt Carbonate.	80%. 10%. 10%. 1%.	
Description: Rich shiny dark blue, deeper in colour where glaze is thicker in the texture.		

Glaze test 4:

Table 8. 4: Glaze Test 4 - Earthenware.

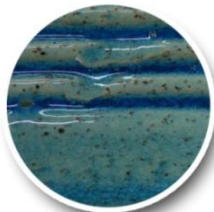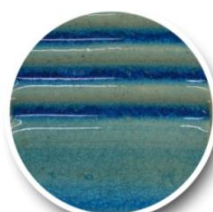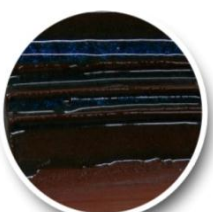| Ceramic Materials	Percentage	Glaze test results fired to 1080°C
Lead Bisilicate Frit Ball clay. Flint. Red Iron Oxide.	80%. 10%. 10%. 6%.	
Description: Rich, shiny honey/brown glaze - very dark glaze colour on terracotta body.		

B. Glaze based in Alkaline Frit:

The research tested four different glazes based in High Alkaline Frit on 3 bodies:
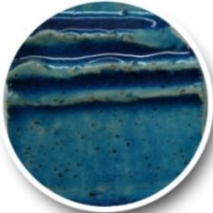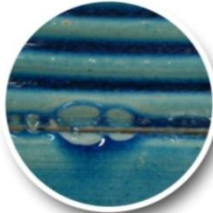
(A) Stoneware.

(B) Crank clay.

(C) Terracotta clay.
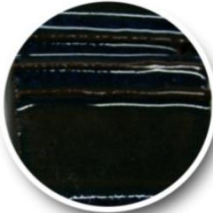
Glaze test 5:

Table 8. 5: Glaze Test 5 - Earthenware.

Ceramic Materials	Percentage	Glaze test results fired to 1080°C
Alkaline Frit. Ball clay. Flint. Copper Oxide.	80%. 10%. 10%. 2%.	
Description: tests 5A&B showed very pale and shiny Turquoise glaze Red coloured terracotta body very evident on test 5C due to glaze being very translucent.		

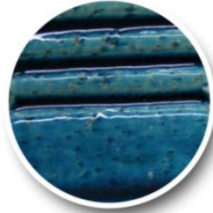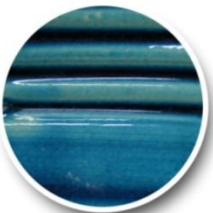**Glaze test 6:**

Table 8. 6: Glaze Test 6 - Earthenware.

Ceramic Materials	Percentage	Glaze test results fired to 1080°C
Alkaline Frit. Ball clay. Flint. Copper Oxide.	80%. 10%. 10%. 4%.	6A 6B 6C
Description: Rich Turquoise colour – very typical of many traditional Islamic ceramic ware - gives impression of the rich water effect.		
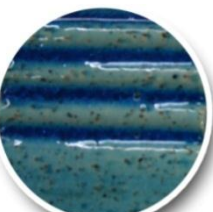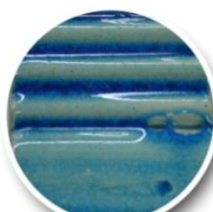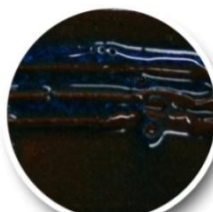
Glaze test 7:

Table 8. 7: Glaze Test 7 - Earthenware.

Ceramic Materials	Percentage	Glaze test results fired to 1080°C
Alkaline Frit. Ball clay. Flint. Copper Oxide. Bentonite.	80%. 10%. 10%. 6%. 2%.	7A 7B 7C
Description: Small percentage of Bentonite was added to avoid the frit from settling down in the bucket. The result showed deep Turquoise colour.		
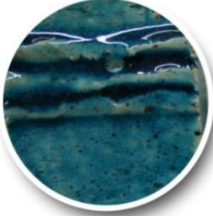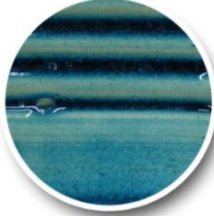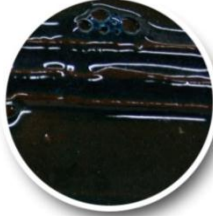
Glaze test 8:

Table 8. 8: Glaze Test 8 - Earthenware.

Ceramic Materials	Percentage	Glaze test results fired to 1080°C
Alkaline Frit. Ball clay. Flint. Copper Oxide. Lithium Carbonate.	80%. 10%. 10%. 2%. 5%	8A 8B 8C
Description: Pale glassy Turquoise glaze. Lithium Carbonate was added to help intensify colour response from copper oxide.		

Glaze test 9:

Table 8. 9: Glaze Test 9 - Earthenware.
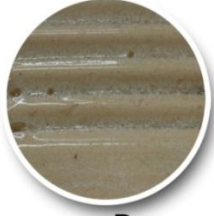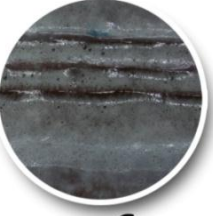
Ceramic Materials	Percentage	Glaze test results fired to 1080°C
Alkaline Frit. Ball clay. Flint. Copper Oxide. Rutile.	80%. 10%. 10%. 4%. 6%	 9A 9B 9C
Description: Glassy Turquoise glaze, which is almost same as Glaze test 6 although addition of Rutile toned down intensity of Turquoise colour slightly.		

C. White or Pale coloured Glazes - using Tin, Titanium and Zirconium oxides.

These tests aim to explore white coloured glazes – common within traditional Islamic ceramics. White glazes commonly occur, serving as either a background to painted pattern, or to offset the broader palette of colours found in many geometric tile sequences. This series of tests are formulated to fire at Earthenware temperatures, using Alkaline Frit as the glaze base.

Glaze test 10:

Table 8. 10: Glaze Test 10 - Earthenware.

Ceramic Materials	Percentage	Glaze test results fired to 1080°C
Alkaline Frit. Ball clay. Flint. Tin Oxide.	80%. 10%. 10%. 5%.	 10A 10B 10C
Description: Pale, off white, semi transparent glassy surface. Evidence of underlying clay body indicating glaze is not completely opaque.		
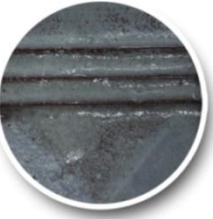
Glaze test 11:

Table 8. 11: Glaze Test 11 - Earthenware.

Ceramic Materials	Percentage	Glaze test results fired to 1080°C
Alkaline Frit.	80%.	
Ball clay.	10%.	
Flint.	10%.	
Titanium Oxide.	5%.	
Description: Pale, off white, semi-translucent glaze. Evidence of white speckles. Strong evidence of clay body when used over Terracotta clay.		
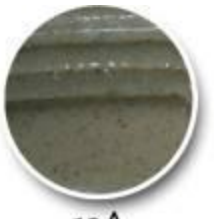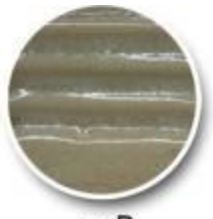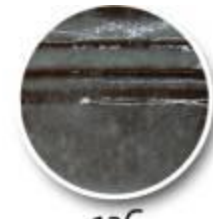
Glaze test 12:

Table 8. 12: Glaze Test 12 - Earthenware.

Ceramic Materials	Percentage	Glaze test results fired to 1080°C
Alkaline Frit.	80%.	
Ball clay.	10%.	
Flint.	10%.	
Titanium Oxide.	5%.	
Tin Oxide.	5%	
Description: Strong White to off-white due to increased % of Opacifier.		

Glaze test 13:

Table 8. 13: Glaze Test 13 - Earthenware.

Ceramic Materials	Percentage	Glaze test results fired to 1080°C
Alkaline Frit.	80%.	
Ball clay.	10%.	
Flint.	10%.	
Zirconium silicate.	5%.	
Description: Off-white, but still quite translucent – body speckling evident in Stoneware clay body test (13A).		

Glaze test 14:

Table 8. 14: Glaze Test 14 - Earthenware.

Ceramic Materials	Percentage	Glaze test results fired to 1080°C
Alkaline Frit.	80%.	
Ball clay.	10%.	
Flint.	10%.	
Tine Oxide.	5%.	
Zirconium silicate.	5%.	

14A   14B   14C

Description: Strong white glaze – very opaque. Excellent potential white base glaze for in-glaze decoration.

D. Glaze based blending Alkaline Frit and Lead Bislicate Frit.

This series of tests explores a base glaze that is a blend of Alkaline Frit and Lead Bisilicate Frit. From previous tests series A & B, it was seen that Lead Bisilicate Frit gives a clear 'apple green' colour response combined with copper oxide and Alkaline Frit gives varying intensities of Turquoise. By formulating the base glaze from a combination of Alkaline Frit and Lead, the intention was to develop a broader palette of colours that still have a strong visual association with traditional Islamic ceramics.

'Frit-based' glazes have a tendency to settle very quickly within the bucket, causing problems with homogenisation of glaze slop. In order to help alleviate this problem, a small (2%) amount of Bentonite was added to the base glaze recipe. Bentonite is known to aid glaze material suspension.
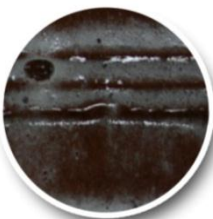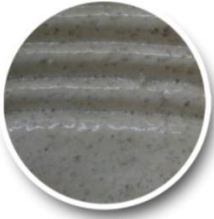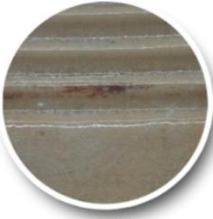
Glaze test 15:

Table 8. 15: Glaze Test 15 - Earthenware.

Ceramic Materials	Percentage	Glaze test results fired to 1080°C
Base Glaze Alkaline Frit. Lead Bisilicate Frit Ball clay. Flint. Bentonite.	39%. 39%. 10%. 10%. 2%.	
15A - Copper Oxide	6%.	
15B- Copper Oxide + Cobalt carbonate.	5% 1%.	
15C - Cobalt carbonate.	2%.	
15D - Copper Oxide + Tin oxide.	5% 5%.	
15E- Copper Oxide + Cobalt carbonate + Titanium.	4% 1% 1%.	

Description: Through using a 50/50 blend of AF & LB frits, when combined with copper and cobalt oxide, a broader range of green/blue colours has been achieved. In test 15D 5% addition of Tin Oxide with copper has made for a paler turquoise.

Glaze test 16:

Table 8. 16: Glaze Test 16 - Earthenware.

Ceramic Materials	Percentage	Glaze test results fired to 1080°C
Base Glaze: Alkaline Frit. Lead Bisilicate Frit Ball clay. Flint. Bentonite.	50%. 28%. 10%. 10%. 2%.	
16A - Copper Oxide.	6%.	
16B- Copper Oxide + Cobalt carbonate + Titanium.	4% 1%. 1%.	
16C - Copper Oxide + Titanium.	5%. 1%.	
16D - Cobalt carbonate.	2%	
16E- Copper Oxide + Cobalt carbonate.	4% 1%.	
Description: Increasing the ratio of Alkaline Frit increases the depth and richness of colour response.		

Glaze test 17:

Table 8. 17: Glaze Test 17 - Earthenware.

Ceramic Materials	Percentage	Glaze test results fired to 1080°C
Base Glaze Alkaline Frit. Lead Bisilicate Frit Ball clay. Flint. Bentonite.	39%. 39%. 10%. 10%. 2%.	
17A - Manganese Oxide.	2%.	
17B- Cobalt carbonate + Manganese Oxide.	1% 2%.	
17C - Cobalt carbonate + Tin oxide.	2%. 4%.	
17D - Copper carbonate + Iron Oxide.	3% 3%	
17E- Copper Carbonate + Cobalt carbonate + Tin oxide.	7% 1% 4%.	
Description: Broadening out the palette of colours using iron & manganese oxides – attempting to capture other yellowy colours often seen in Islamic geometric patterns.		

Glaze test 18:

Table 8. 18: Glaze Test 18 - Earthenware.

Ceramic Materials	Percentage	Glaze test results fired to 1080°C
Base Glaze: Alkaline Frit. Lead Bisilicate Frit Ball clay. Flint. Bentonite.	68%. 10%. 10%. 10%. 2%.	
18A - Copper carbonate.	8%.	
18B- Copper oxide + Tin Oxide.	8% 5%.	
18C - Cobalt oxide + Copper oxide + Tin oxide.	1%. 4%. 4%.	
18D - Cobalt oxide + Iron Oxide.	2%. 3%.	
18E- Manganese Oxide + Copper Carbonate.	1% 5%.	
Description: High % of AF & lower % LB meant glazes with copper are similar to earlier AF only tests. Glaze application on tests 19A & E rather thin – hence watery colour response. Test 18B with 8% copper gives rich metallic black colour.		

8.3.2 Stoneware glaze tests (Fired to 1280°C).

As mentioned previously, most traditional Islamic ceramic wares fired at Earthenware temperatures (1060 – 1080'C), were 'soft', crazed easily, had a tendency to poor glaze fit. Islamic ceramics were fired at relatively low temperatures, due to availability of raw materials only suitable for lower temperatures and development of kiln technologies - all shaping the traditions and aesthetic vocabulary of Islamic Ceramics. Bearing in mind the specific intentions of the project, it is crucial that any glaze used must be very durable – able to last the lifetime of any building the ceramic wares would be applied to – able to withstand extremes of heat and wind/sand abrasion.

Considering these issues of durability, it was decided to explore stoneware glazes. Stoneware is known to be considerably more durable as a ceramic surface for a number of reasons:

- Stoneware clay matures at considerably higher temperatures than traditional Earthenware clays. As a consequence, the clay body is vitrified and therefore much stronger due to increased ceramic bonds within the fired ceramic and complete vitrification.

- Glaze surface is much harder and therefore more durable. The interface layer between glaze and body is much more established, furthering the overall strength of the ceramic and significantly deceasing the likelihood of glaze 'peel'.

Consequently, whilst Stoneware has no tradition or precedent within Islamic Ceramic ware or tiling, it is in fact a more appropriate method of firing ceramic than Earthenware, within the context of this research.

A significant number of tests were undertaken, using variations on an established glaze recipe. Once it was established that the base glaze was appropriate, the research focussed on glaze colour and texture development – again relating these as close as possible to the colour palette of traditional Islamic Ceramics.

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(A) Reduction and Oxidation: 1280°C degree.

In this series, glazes were tested under two different types of kiln firing atmospheres: Gas fired kiln (Reduction) and Electric fired kiln (Oxidation).
Oxidation firing means the ware is fired in a kiln atmosphere with a plentiful supply of oxygen.
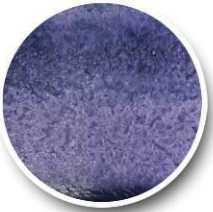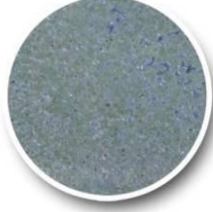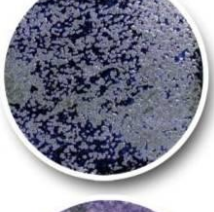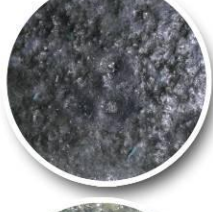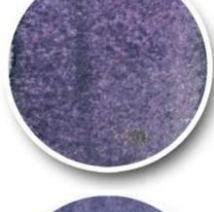
Reduction firing involves firing ware in a fossil fuel burning environment. The firing cycle involves a period where the oxygen (air) supply is cut back, causing inefficient combustion. As the flame is starved of oxygen, it seeks to draw oxygen from the ware itself. This generally causes the clay body and glaze to have a closer interaction and gives a different colour response of colouring pigments than in oxidation firing.

Glaze test 19:

Table 8. 19: Glaze test 19 - Stone ware.

Glaze ceramic Materials	Percentage	Oxide added to the base glaze.	Percentage.
Base Glaze 100%: Flint. China Clay. Nepheline Syenite. Whiting. Talc.	24%. 20.8%. 24%. 11.2%. 20%	19A - Cobalt oxide.	3%.
		19B- Cobalt oxide + Copper oxide.	3% 1%.
		19C - Cobalt oxide + Rutile	3%. 3%.
		19D - Cobalt oxide + Copper Carbonate.	3%. 2%.
		19E - Cobalt oxide.	1%.
		19F- Cobalt oxide + Copper oxide.	1% 1%.
		19G - Cobalt oxide + Copper Carbonate.	1%. 2%.
		19H - Cobalt oxide + Rutile.	2%. 5%.
		19I - Copper oxide.	1%.
		19J- Copper oxide + Cobalt oxide + Copper Carbonate.	1%. 1%. 1%.
		19K - Copper oxide + Copper Carbonate + Rutile.	1%. 1%. 2%.

Glaze test 19 under 1280°C degree.

Gas Kiln (Reduction).	Electric Kiln (Oxidation).
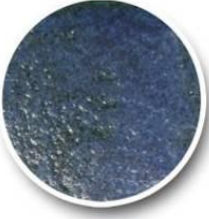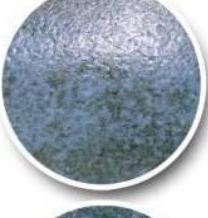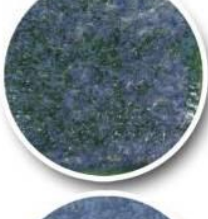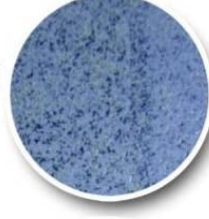
Description: The reduction fired tests generally gave a better quality of glaze colour - richer in quality than in oxidation. In addition, the glaze colour showed more variation of colour – marbelling. Test 19l shows how the colour can dramatically change in differeing kiln atmospheres: copper oxide giving pale pink in reduction test compared with pale green in oxidation.

Glaze test 20 - Table 8.20:

Table 8. 20: Glaze test 20 - Stone ware.

Glaze ceramic Materials	Percentage.	Oxide added to the base glaze.	Percentage.
Base Glaze 100%: Flint. China Clay Nepheline Syenite Whiting. Titanium Dioxide	 27%. 12.6%. 27%. 23.4%. 10%	20A - Cobalt oxide.	3%.
		20B- Cobalt oxide + Copper oxide.	3% 1%.
		20C - Cobalt oxide + Rutile	3%. 3%.
		20D - Cobalt oxide + Copper Carbonate.	3%. 2%.
		20E - Cobalt oxide.	1%.
		20F- Cobalt oxide + Copper oxide.	1% 1%.
		20G - Cobalt oxide + Copper Carbonate.	1%. 2%.
		20H - Cobalt oxide + Rutile	2%. 5%.
		20I – Copper oxide.	1%.
		20J- Copper oxide + Cobalt oxide + Copper Carbonate.	1%. 1%. 1%.
		20K - Copper oxide + Copper Carbonate + Rutile.	1%. 1%. 2%.

Glaze test 20 under 1280°C degree.	
Gas Kiln (Reduction).	**Electric Kiln (Oxidation).**

20A 20G 20A 20G

20B 20H 20B 20H

20C 20I 20C 20I

20D 20J 20D 20J

20E 20K 20E 20K

20F 20F
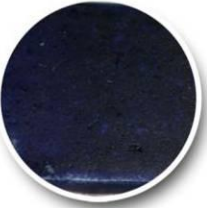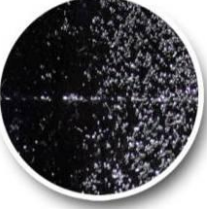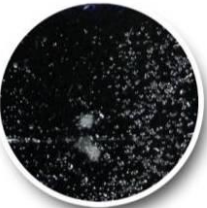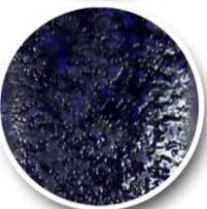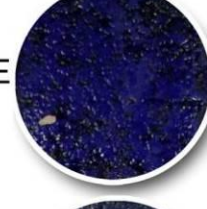
Description: Introducing Titanium Dioxide (10%) into the base glaze recipe creates a rich yet glaze colour, with crystalline surface. Again, the results in the gas Kiln confirmed better quality glaze colour in comparison with the electric Kiln.

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Glaze test 21:

Table 8. 21: Glaze test 21 - Stone ware.

Glaze ceramic Materials	Percentage	Oxide added to the base glaze.	Percentage
Base Glaze 100%: Flint. China Clay Nepheline Syenite Whiting. Barium carbonate	24%. 20.8%. 24%. 11.2%. 20%	21A - Cobalt oxide.	3%.
		21B- Cobalt oxide + Copper oxide.	3% 1%.
		21C - Cobalt oxide + Rutile	3%. 3%.
		21D - Cobalt oxide + Copper Carbonate.	3%. 2%.
		21E - Cobalt oxide.	1%.
		21F- Cobalt oxide + Copper oxide.	1% 1%.
		21G - Cobalt oxide + Copper Carbonate.	1%. 2%.
		21H - Cobalt oxide + Rutile	2%. 5%.
		21I – Copper oxide.	1%.
		21J- Copper oxide + Cobalt oxide + Copper Carbonate.	1%. 1%. 1%.
		21K - Copper oxide + Copper Carbonate + Rutile.	1%. 1%. 2%.

Glaze test 21 under 1280°C degree.

Gas Kiln (Reduction).	Electric Kiln (Oxidation).

Description: Adding 20% of Barium Carbonate to the base glaze appeared to dramatically darken the glaze colour. Again, the reduction can be observed in comparison with oxidation results gives a richer and vital colour glaze. There colour variation between reduction and oxidation is again very evident in Tests 21I & 21K, where copper oxide is used: blood red colour in gas reduction firing and in blue/green glaze colour electric oxidation firing.

(B) Reduced mixed glazes test in stoneware:

Using the above stoneware glazes tests (Glaze tests 20, 21 & 22), a further range
tests were undertaken, mixing different glazes in order to further increase the
palette of colours and surface textures. The method involved mixing two different
glazes on the surface of the tile by adding random pours and splashes of glazes on
top of each other (see figure 8.1).
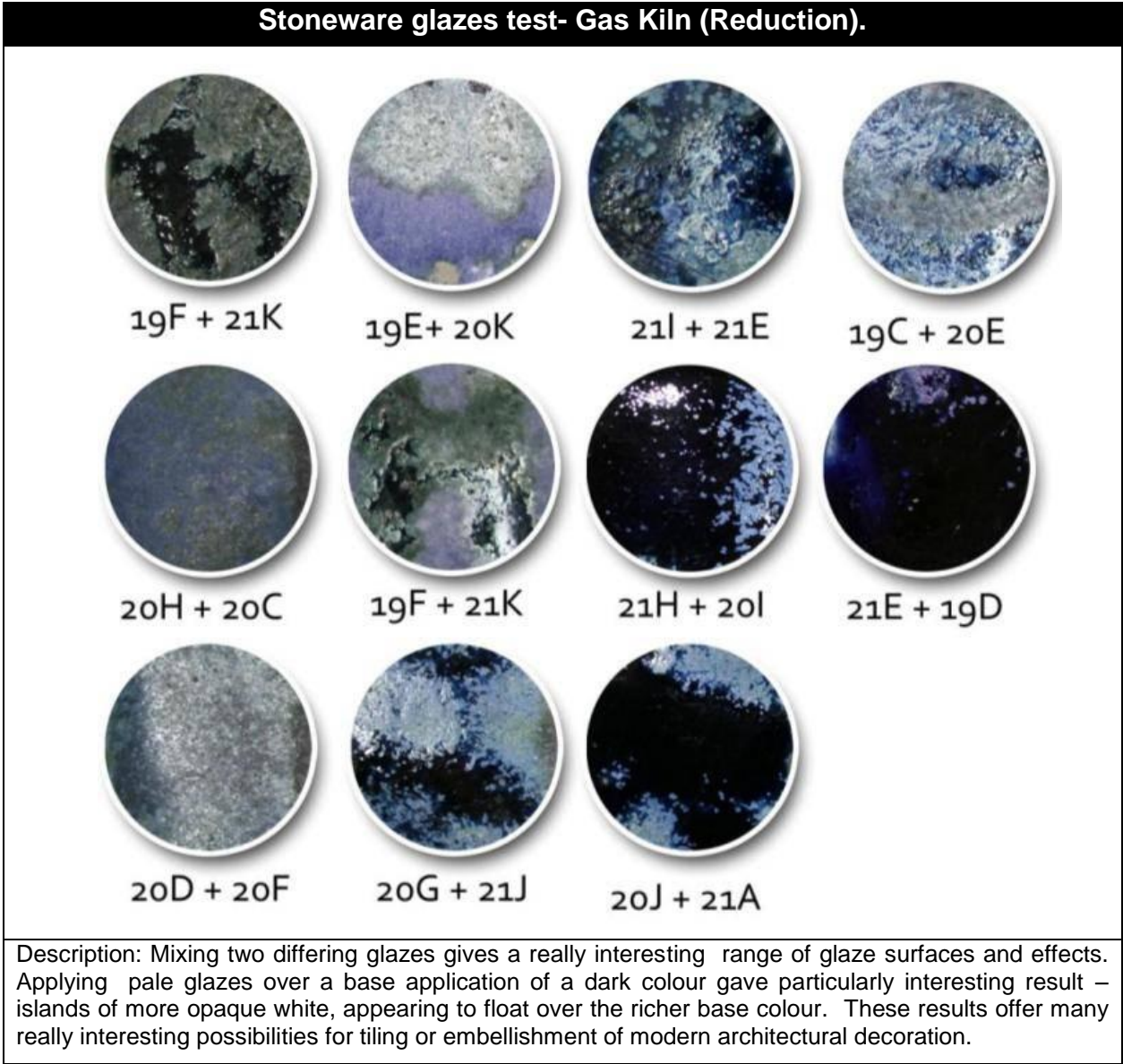
Figure 8.1: Reduced mixed glazes test.

Description: Mixing two differing glazes gives a really interesting range of glaze surfaces and effects. Applying pale glazes over a base application of a dark colour gave particularly interesting result – islands of more opaque white, appearing to float over the richer base colour. These results offer many really interesting possibilities for tiling or embellishment of modern architectural decoration.

(C) Stoneware Glaze tests on Refractory Concrete.

The physical properties of Refractory Concrete (RC) were outlined earlier in this chapter.

It was decided to test this material in addition to conventional clay, as it would allow the manufacture of items not possible in clay – see later Case studies. It is particularly useful in the production of large flat panels and complex open fretwork forms – where zero shrinkage is a significant advantage.

The glaze tests build on previous research undertaken in RC's by Dr Alasdair Bremner (2008), at the University of Central Lancashire.

As the physical properties of RC are different than clay and the type chose (Jonflow 51) is very white firing, it was decided to undertake a series of tests to monitor colour and glaze fit.

Glaze test 22:

Table 8. 22: Glazes tests 22 – Stoneware on Refractory Concrete.

Glaze ceramic Materials	Percentage	Oxide added to the base glaze:	Percentage
Base Glaze 100%: Flint. China Clay Nepheline Syenite. Whiting.	30%. 14%. 30%. 26%.	22A - Cobalt Carbonate + Talc.	1% 25%
		22B - Cobalt Carbonate + Copper Carbonate + Talc.	1%. 1%. 25%.
		22C - Cobalt Carbonate + Rutile + Talc.	2%. 5%. 25%
		22D - Cobalt Carbonate + Manganese + Talc.	0.5%. 1%. 25%.
		22E - Cobalt Carbonate.	0.5%.
		22F - Cobalt Carbonate + Titanium.	1%. 10%.
		22G - Cobalt Carbonate + Titanium.	0.5%. 10%.
		22H - Cobalt Carbonate + Iron Oxide.	1%. 0.5%.
		22I - Copper Carbonate + Rutile + Titanium.	2% 5% 10%.
		22J - Copper Carbonate + Cobalt Carbonate + Titanium.	1%. 0.5%. 10%.
		22k - Cobalt Carbonate + Talc.	0.25%. 20%.
		22L - Cobalt Carbonate + Rutile.	2%. 8%.
		22M - Cobalt Carbonate + Titanium + Talc.	3%. 3%. 20%
		22N - Copper Carbonate + Alkaline frit + Bentonite + Talc.	4% 5% 1% 20%.
		22O - Cobalt Carbonate + Copper Carbonate + Talc.	0.25%. 0.25%. 20%.

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Result Glaze 22 under 1280°C degree
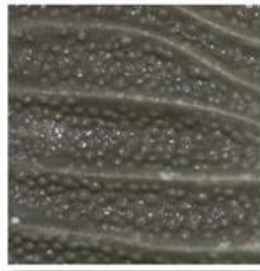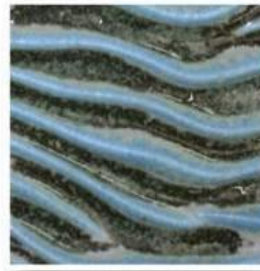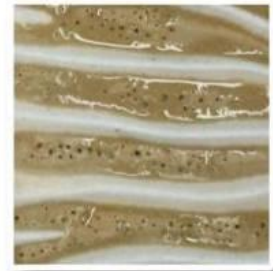
22A   22B   22C   22D

22E   22F   22G   22H
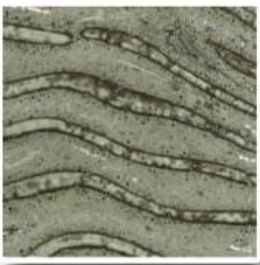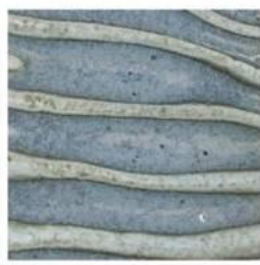
22I   22J   22K   22L

22M   22N   22O

Description: Examples of various stoneware glazes applied to Refractory Concrete, fired in an electric kiln under oxidizing atmosphere. The tests show an excellent colour response to glaze pigments – due to the purity of the body. The textured surface exploits the colour variation of the glazes – giving a more intense colour in the 'valley' areas where the glaze pools to a greater thickness. Paler on the raised areas as the glaze pulls away, revealing more of the body colour. This effect can be capitalised on to increase the decorative properties. Glazed refractory concrete and stoneware clay both give a highly durable body, suitable for extreme climatic conditions.

Glaze test 23 - Table 8.23:

Table 8. 23: Glazes tests 23 – Stoneware on Refractory Concrete.

Glaze ceramic Materials	Percentage	Oxide added to the base glaze:	Percentage
Base Glaze 100%: Flint. China Clay Nepheline Syenite. Whiting.	 30%. 14%. 30%. 26%.	24A - Cobalt Carbonate + Manganese + Titanium.	2% 1% 10%
		24B - Cobalt Carbonate + Rutile + Titanium.	3%. 8%. 10%.
		24C - Cobalt Carbonate + Manganese + Titanium.	2%. 0.5%. 10%
		24D - Cobalt Carbonate + Copper carbonate + Titanium.	0.25%. 0.25%. 10%.
		24E - Cobalt Carbonate + Copper Carbonate + Rutile + Titanium.	1%. 1% 6% 10%
		24F - Copper Carbonate + Iron Oxide.	0.75%. 0.5%.
		24G - Cobalt Carbonate + Cooper carbonate + Titanium.	1%. 0.75%. 5%.
		24H – Cooper carbonate + Manganese + Titanium.	3%. 1%. 10%
		24I - Cobalt Carbonate + Copper Carbonate + Titanium.	3% 0.5% 5%.
		24J - Cooper Carbonate + Rutile + Talc.	3%. 5% 20%
		24k - Cobalt Carbonate + Iron oxide	0.75%. 0.5%
		24L - Cooper Carbonate + Cobalt Carbonate + Titanium.	1%. 0.75%. 5%.
		24M - Cobalt Carbonate + Manganese + Titanium.	3%. 1%. 10%
		24N - Copper Carbonate + Cobalt Carbonate + Titanium.	3% 0.5% 5%.
		24O - Cobalt Carbonate + Rutile + Talc.	3%. 5%. 20%.

Result Glaze 23 under 1280°C degree.

23A
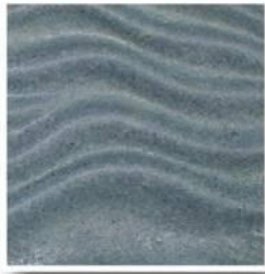
23B

23C
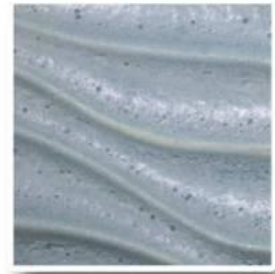
23D

23E
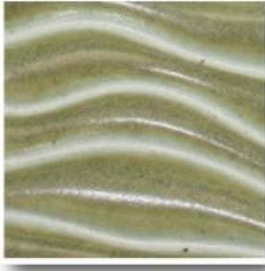
23F

23G

23H

23I

23J
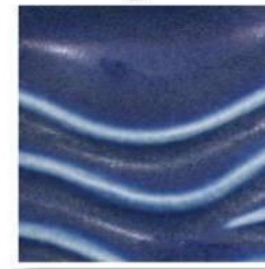
23K
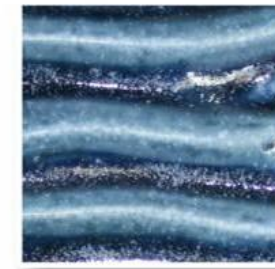
23L

23M
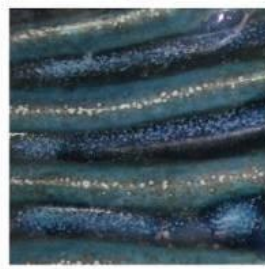
23N
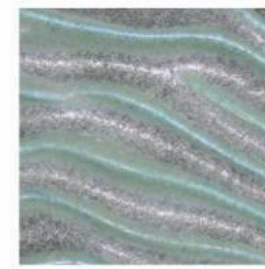
23O

Description: further tests using stoneware glaze on refractory concrete. Expanding the palette of colours for possible application within the later Case Studies.

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8.3.3 Slip test:

Slip is a liquid clay, applied to a 'leather-hard clay surface. It can play an important role in ceramic decoration, because it can be used to in effect alter the colour of the clay body, over which a glaze is applied. This is particularly useful if the clay is high in iron, neutralising the iron colour from affecting a translucent glaze.

The slip can also be used to decorative effect – drawing or carving through the slip layer to reveal a contrasting body colour underneath. This was used to develop Arabic calligraphy and geometrical pattern designs on experimental tiles. The experiments involved three types of slip colours and percentages of added stain colours.

Table 8. 24: Glazes tests 24 – Slip test.

Ceramic Materials	Percentage	Slip result with transparent glaze test.
White base Slip (A): China Clay. Ball Clay. Flint.	50%. 50%. 5%.	A
Black Slip(B): China Clay. Ball Clay. Flint. Black Stain.	50%. 50%. 5%. 10%.	B
Red Slip (C): China Clay. Ball Clay. Flint. Iron oxide.	50%. 50%. 5%. 10%.	C
Description: The 3 different slips – white, black and brown (iron) were applied to a buff coloured body. After biscuit firing an, earthenware transparent glaze was applied and fired. Under the transparent glaze the slip colour became much to darker in comparison with un-glazed colour. The contrasting colour of slip and clay body, give opportunities to introduce decorative detail through cutting back through the slip – scraffitto.		

8.4 Analysis of the glazes tests.

This chapter outlines technical preparation for the practice-based Case studies discussed in the following chapter – in particular the development of a library of glazes of varying colour and surface texture. Throughout the glaze development process, the researcher has continually attempted to acknowledge the palette of colours used within traditional Islamic glazes.

In total 172 individual glaze tests were carried out and recorded; each having the potential to be used within the later case studies.

The tests are broken down into the following categories:

- 62 Earthenware glaze tests - on the Crank, Stoneware and Earthenware clay bodies.

- 107 Stoneware tests, which included reduction: 44 Reduction (gas kiln) tests and 63 Oxidation (electric kiln) tests – 33 of which were on a stoneware body and 30 on refractory concrete.

- 3 Slip tests.

The range of colours achieved was quite wide, although predominantly tonal variations of blue, turquoise, green, beige and purple glazes, plus white and transparent. Occasional red or pink colour was due to reduction firing of copper bearing glazes.

Some glazes were of a single uniform colour, whilst others offered a variation of colour within the test. The variation can be attributed to a number of factors:

- The thickness of the glaze applied to the test tile - increasing thickness generally resulted in a more intense, darker colour, with less thickness giving a paler colour.

- The type of the clay body used can affect the glaze colour - crank and stoneware clay bodies (pale buff colour) generally do not alter the colour of the overlying glaze, whereas and red terracotta clay can dramatically affect glaze colour – particularly glassy translucent glazes.

- The temperature of the firing affects glaze colour and texture – higher temperatures (stoneware), generally mean greater interaction between clay body and glaze. In reduction stoneware in particular, this can cause an interesting speckling affect. If a glaze is fired higher than its recommended temperature, it can either become glassier, or bubble, giving a 'cratered' texture.
- The percentage of colouring pigment (oxide) added on the glaze can dramatically affect the glaze colour - lower percentages giving paler colours, increased percentages giving deeper, more intense colours. In certain instances, a percentage of oxide was used beyond the normal parameters – this can result in very interesting metallic affects eg Test 19B, where 8% copper oxide was added (normal range is < 5%).

As the aim of this first section of the practice-based research was provide a basic palette of glaze colours that in some way relate to, or are suggestive of, traditional Islamic glaze colours, the turquoise coloured glazes most closely replicate this palette of colour.

In most cases the tests closest resembling the traditional turquoise glaze colour were the Alkaline Frit based earthenware glazes, including varying percentages of copper oxide: test No's 5, 6 & 7.

Alkaline Frit bearing glazes do however have there own intrinsic problems:
- The liquid glaze settles out very quickly in the bucket. This can be partly resolved by small additions of Bentonite - a highly plastic clay, that encourages glaze particle suspension.
- Alkaline Frit based glazes have a tendency to become very fluid as soon as reaching maturity – temperatures > 1070° melt. Without accurate temperature control, an over-fired glaze often runs off the ware, damaging both the ware and kiln furniture.

- Alkaline Frit based glazes often appear to give a crazed surface. This is due to bad 'glaze fit' – where the glaze layer contracts slightly more than the underlying clay body, resulting in a cracked or crazed glaze surface. This phenomena is typical of alkaline based glazes and can be seen on many examples of traditional Islamic ceramic ware and tiles. It is crazing that is in part responsible for the deterioration of glaze surface over time.
- A way to help resolve this problem is to increase the firing temperature of the first (Biscuit) firing to a higher temperature (> 1100°C). This can dramatically help prevent crazing, therefore increasing the durability of alkaline-based glazes.

Other results observed include:

Lead Bisilicate based glazes give a rich a glassy translucent surface, that allow the underlying colour of the clay body to show. There appears to be far less crazing than in Alkaline Frit based glazes.
Combined with copper oxide, Lead-based glazes give a rich apple greens, rather than turquoise.

Tin Oxide, Titanium and Zirconium are useful oxides in promoting white or opaque colours. Titanium in particular is very interesting, as it promotes rich crystalline qualities when around 5% is added to most glaze recipes.

The tests using slips offer some interesting decorative possibilities – carving through a layer of applied slip before biscuit firing, to reveal a contrasting underlying clay body colour. This could be used where geometric patterning or Arabic calligraphy is required as a design feature or detail on ceramic tiles.

The stoneware glaze tests can be seen to generally give a richer range of surface textures than earthenware glazes. A further significant advantage of stoneware fired work is that it is considerably stronger and more durable, due to greater interaction between glaze and body therefore making it generally more appropriate for outdoor, architectural applications.

It is here that compromises may be required, as the stoneware tests, whilst giving colours similar to traditional Islamic ware, are not as close as the less durable Alkaline Frit and Lead based Earthenware glazes.

The Refractory Concrete (RC) tests were particularly successful and interesting to the next (case study) phase of the research. Building on research undertaken by Bremner 2008 into glazing RC, a number of glazes were trailed on the material. In most cases there were found to be successful. More fluid, glassy formulations were found to be best, whereas glazes with a more matt finish were found to occasionally pin hole or bubble.

The palette of colours was very similar to those tested on stoneware clay, although slightly paler in colour due to the white tone of the body – not impacting on the glaze colour.

In final summary of this section, it has been important to the next phase of the research, to have in place a range of clay bodies, glaze colours and textures that can be applied to the case-studies.

The Earthenware temperature glaze tests have been found to closest replicate traditional Islamic glazes, in colour and glaze quality. However, as outlined above, they are less durable and more susceptible to long-term deterioration, therefore making them less appropriate for outdoor architectural applications, where extreme weather conditions; - heat and sand abrasion in particular, may cause the glazed surface to break down.

In contrast, the stoneware glaze tests whilst giving an interesting range of colours, do not exactly replicate the colour and textural properties of traditional Islamic glazes – mainly because historically traditional potters and tile makers in Islamic countries did not have the materials or technology to fire at higher temperatures. The stoneware glazes are however much more durable and appropriate for application on architectural detailing, where durability is an important issue.

The Refractory Concrete tests are particularly significant as they have the all the advantages of durability found in the stoneware tests, but with the added advantage of using a material that can be formed to give complex shapes not easily achievable with plastic clay.

The practice-based case studies will apply much of the research undertaken in this section; the selection of glaze being determined by the individual nature of the project. As it will be important to convey a very strong Islamic identity, turquoise earthenware glazes may be used if the form is less Islamic – reinforcing identity through colour association. If the form is however clearly Islamic, then a more durable, less traditional stoneware glaze may be used.

CHAPTER 9: PRE CASE STUDY TEST AND CASE STUDIES RESULTS.

9.1 Introduction.

This chapter discusses a series of case-studies (and associated technical process) that aim to demonstrate how a recognisable Islamic aesthetic might be re-introduced within contemporary architecture, through embellishment detailing. This chapter outlines 'new knowledge' within the research and forms the practice-based element of the research project.

The analytical approach used was based on the methodology outlined in chapter five. The chapter discusses the technical processes and skills that were developed to realise the individual case studies, together with appropriate and safety procedures.

The range of case studies (projects) covered in this chapter attempts to cover a wide range of approaches and differing typers of architectural embellishment found within traditional Islamic ceramics, offering a contemporary interpretation of traditional architectural embellishment. As has been discussed in previous chapters, Islamic ceramic ornamenatation is typified by designs based on geometric pattern and calligraphy. As figurative representation rarely plays any part in Islamic art, none of the projects make any reference to representational imagery.

Each case study starts by outlining the design process – how the ideas were developed – through traditional methods such as drawing, or through the application of various technologies. The making process is then discussed, showing the various stages of production, through images and diagrams. Many of the projects have employed computer-aided technologies – Computer Aided Design (CAD) and Computer Aided Prototyping or Manufacturing (CAM).
In all cases, actual prototypes were produced. This has been important as it allows the viewer to get a much clearer understanding and appreciation of the proposed artefacts.

The final section of each case study shows how the ceramic units might be applied within an simulated architectural context – using computer renderings to aid this. In one case, the project was a 'live project', where the manufacture tiles have been actually shipped back to Kuwait and installed in a newly constructed Mosque.

An exhibition will be presented of all the finished (practice-based) works, to be viewed alongside the theoretical aspects of the project, presented in this thesis.

Prior to outlining the individual case studies, Section 9.2 outlines a pilot project, where the researcher undertook a complete project – from design development, through to full realisation of a series of experimental tiles. The aim of this project was not so much to produce an innovative design proposal, rather to test the process, familarize the researcher with new technical process and apply some of the glazes developed in Chapter 8.

Sections 9.3.1 to 9.3.8 outline in detail the main case studies.
As explained above the aim of thses individual projects has been to present a series of different proposals for architectural embellishment that make clear reference to traditional Islamic design, yet are contemporary in nature.
The aim is that if applied to any contemporary building, they would change the perception of the building from being of an 'international style' with no real cultural association, to a building that has a clear Islamic identity.

As discussed at length in previous chapters of this thesis, much of the contemporary architecture of Kuwait is now designed by architects from many parts of the globe, for clients that aspire to a global identity. Therefore the fundamental design of most new buildings in Kuwait has little or no aesthetic or cultural association with the region. Through applying one or more of the the proposed embellishment projects to contemporary buikldings, it is the researchers hypothesis that the building will gain a clearer cultural identity – providing a

stronger sense of 'place', whilst simultaneously encouraging a pride in the aesthetic legacy of Islamic design.

The case study projects are:

1- Large square low-relief Calligraphic panels;

2- 3D Geometrical pattern tiles (Structural of Zeilij);

3- Wave tiles set in *Kofic* calligraphy font style (Live project - Muneerah Al-Saeed Mosque in Kuwait);

4- Geometric design Fretwork Screen;

5- 3D deep-relief Calligraphy ;

6- Low –relief geometrical tile panels – using Arabic calligraphy poetry design ;

7- Contemporary Calligraphy Brushwork panels;

8- 3D Muqarnas - two types of design: 'Drum' style Muqarnas and 'Arrow' Muqarnas.

The last section of this chapter (Section 9.4), discusses the survey undertaken of architects responses to the case-study design proposals, outlining their thoughts on how the projects may be used to re-invigorate a sense of Islamic identity within contemporary Kuwati architecture.

9.2 Pre Case Study Pilot Project: Experimental design and making project.

The aim of this introductory project was to test basic processes and develop fundamental ceramic making skills. It also involved employing a basic range of materials – clay bodies, slip and glazes.

Stage 1: Design Process Development

Whilst the emphasis of this project was not to produce a completed case-study design proposal, it was decided to loosly base the design around an existing traditional Islamic tile design, applying a certain amount of design development –

establishing a basic set of design processes that could be applied later to more complex projects.

The process involved:

1. Researching traditional Islamic tile designs – designs that typified Islamic ceramic tiling.

2. Making sketch drawings of the chosen original design, attempting to understand the principle aspects of the design – how the shape interlocks and repeats.

3. Transcribing the design from hand-drawn into a digital format, using Adobe Illustrator software. Illustrator is invaluable as it allows the user to develop dimensionally accurate drawings that can be easily adapted or re-scaled. It was felt important that the researcher should becomes very familiar with this software, as it was anticipated that it would become an important design tool in later projects.

4. Using Illustrator, explore the repetition qualities (rhythm) of the design. Illustrator allows a single design to be easily copied and repeated, (tessellation) and possible applied surface motifs (see Fig 9.1).
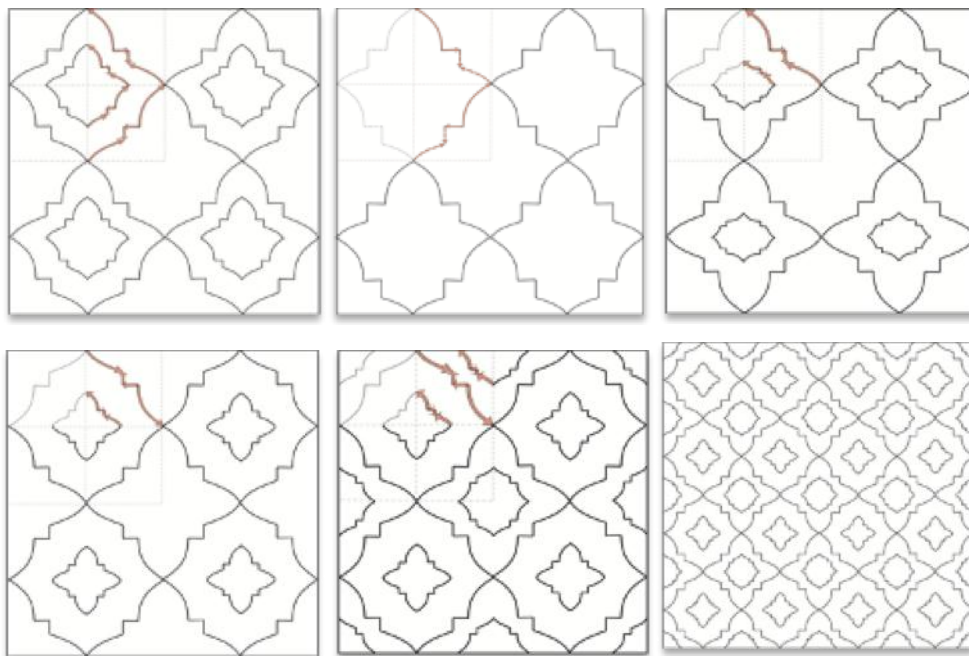
Figure 9.1: Design preparation and development.

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In the above test, the design process was deeply developed through the following criteria:

1. Adding or changing the lines by using surface like double arches, waves and zigzags using Adobe Photoshop and illustrator software.

2. Reapeating forms and adding testing visually the inclusion of calligraphic designs as a surface treatment (see Fig 9.2).
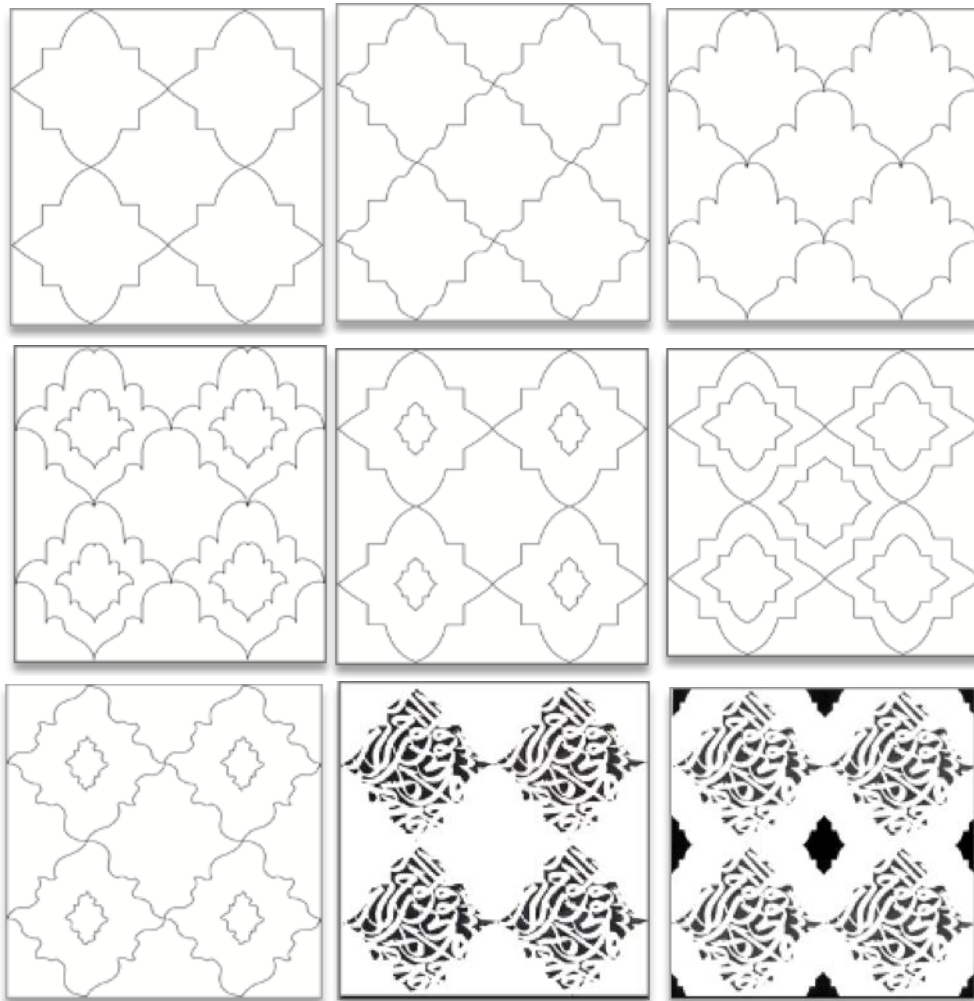
Figure 9.2: Further design development.

Stage 2: Mould making process

At the initial 2 dimensional design development, a final design was selected. It was then necessary to start translating the design to a 3 dimensional form. This included the following stages:

1. Casting of a plaster sheet (thickness 2 cm) from which the tile model will be cut (cast onto glass to aid flatness).

2. Drawing the design onto the dry plaster sheet, then cutting out the basic shape using a bandsaw – leaving 3mm around edges to allow for fine carving and slightly tapered edges.

3. Final refinement of plaster tile model and carving low-relief calligraphy design into tile surface – ensuring no undercuts that will hinder mould-making (see Fig 9. 3).

Figure 9. 3 Mould making and producing the design.

4. Constructing wood frame around the finished plaster model and retaining wall around half of model.
5. Mixing plaster and pouring into void – creating first half of mould.
6. Casting second half of mould and base – giving a three part press-mould.
7. Remove model and allow mould to thoroughly dry.
8. Start pressing clay into the mould to manufacture tiles (see Fig 9.4).

Figure 9.4: Mould making process and pressing the clay into the mould to get the test design.

Stage3: Slip testing and glaze experimenting

Following pressing a number of tiles, the next stage was to apply a range of decorative surfaces – coloured slips before biscuit firing and glazes following biscuit firing:

1. Preparing three slip colours, white, black and red - as explained in Chapter 8.
2. Applying the slip to the unfired clay surface using a brush. Carefully brushing the slip across the raised textured surface, emphasised the impressed pattern (see Fig 9.5).
3. Slow drying, followed biscuit firing to 1000c in an electric kiln.

Figure 9.5: Pressings of the tile design and testing the coloured slips.

Following biscuit firing two different glazes were tested on the tiles:

Transparent glaze - allowing the slip decoration to clearly show, emphasising the impressed decoration highlighted by the contrasting coloured slips (see (A) below in Fig 9.6).

Copper bearing, alkaline frit based glaze – resulting in a fluid turquoise glaze (metallic where thickly applied). Being translucent, the slip decoration still showed, again emphasising the relief texture (see (B) below).

Test sample (C) below shows how a visually interesting tiling effect may be greated by intermixing tiles with varying impressed texture, slip colour and glaze.
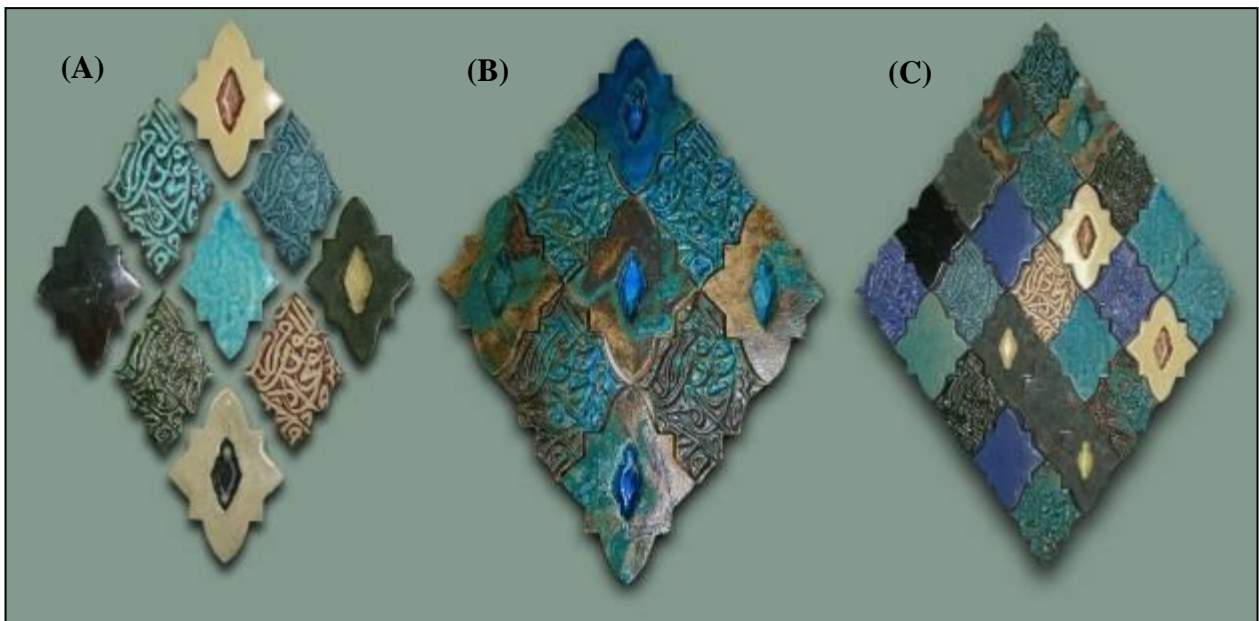
Figure 9.6: Glaze tests construction.

Conclusions drawn from the testing process

This basic excercise was based on an existing traditional Islamic tile design. It was not intended to offer an innovative new design solution; rather a series of tests establish a basic set of procedures to be applied to further practice-based case studies.

The scope of the project included:

- Exploring the basic design process and expanding the scope of the design in order to advance the creative language of form of architectural ceramics.
- Exploring basic principals of the mould-making processes.
- Establishing how glazes and slip decoration can affect the design and style of tile forms.

This experiment was important in demonstrating how it is possible to combine both traditional hand drawn design and CAD technology. Using CAD drawing software allows a basic traditional geometric design to be manipulated and repeated, giving an unlimited range of creative design solutions. It also allows highly accurate, measured design drawings to be produced of the design. In this case, the model for the design was cut by hand, but in future projects, using CAD within the design process, means that it should be possible to use the computer generated file for digital prototyping and manufacturing.

9.3 Section Two: Case Studies.

This section outlines a series of case studies, forming the practice-based component of the research. As outlined earlier, these will form the bulk of the new knowledge presented in this research project – design proposals for contemporary Islamic architectural ornimentation.

All the case studies have been undertaken within workshops in the School of Art, Design & Performance at the University of Central Lancashire (UK).

The projects have been designed to demonstrate a range of design approaches, deploying both taditional skills and processes and advanced technologies.

The primary aim of each project has been develop work that conveys a contemporary interpretation of traditional Islamic design, that could be applied to a contemporary architectural context. The development of each project is documented, from design phase through to images of the completed prototypes,

plus a computer generated visual of showing how each case study might be integrated into a building.

9.3.1: Case study 1: 'Low-relief Calligraphy panels.

Stage1: Calligraphy design development process

The aim of this particular case study was to develop large format tiles that are both contemporary whilst having a strong Islamic visual flavour, using calligraphy as the primary motif. It was never intended however that the calligraphy should actually be read – rather using it as a decorative element.

Within Islamic culture, calligraphy is seen as a visible expression of spiritual concepts. It is arguably become the most revered form of Islamic art because it provides a link between language and religion. Being universally recognised as symbolic of Islamic culture, it is a very appropriate motif for conveying Islamic identity.

The design focused on the Arabic calligraphy form of design referred to as the *''Thulth font''*. The design is a typical expression of letterforms found in Arabic culture.

It was decided to enhance the design using a low-relief format. This would allow glaze to pool in the varying depths of the tile, enhancing the visual qualities of the work. It was also decided to use Refractory Concrete to make the final tiles, rather than clay. From experience, it was understood that conventional flat clay tiles of the size desired (60 x 60 cms), would very likely warp and crack.

Production involved a number of stages:
- Developing the basic design.
- Translating the 2D digital design to 3D – creating a 3D model.
- Creating a working mould off the model
- Casting tiles in Refractory Concrete.

- Glazing.

The design process, (see Figs 9.7 & 9.8) involved selecting a basic range of letter-forms and exploring different formats of pattern design using Adobe Illustrator. The software facilitated adapting the calligraphic lines in all directions in order to form an ever-repeating pattern.

Figure 9.7: Design development.
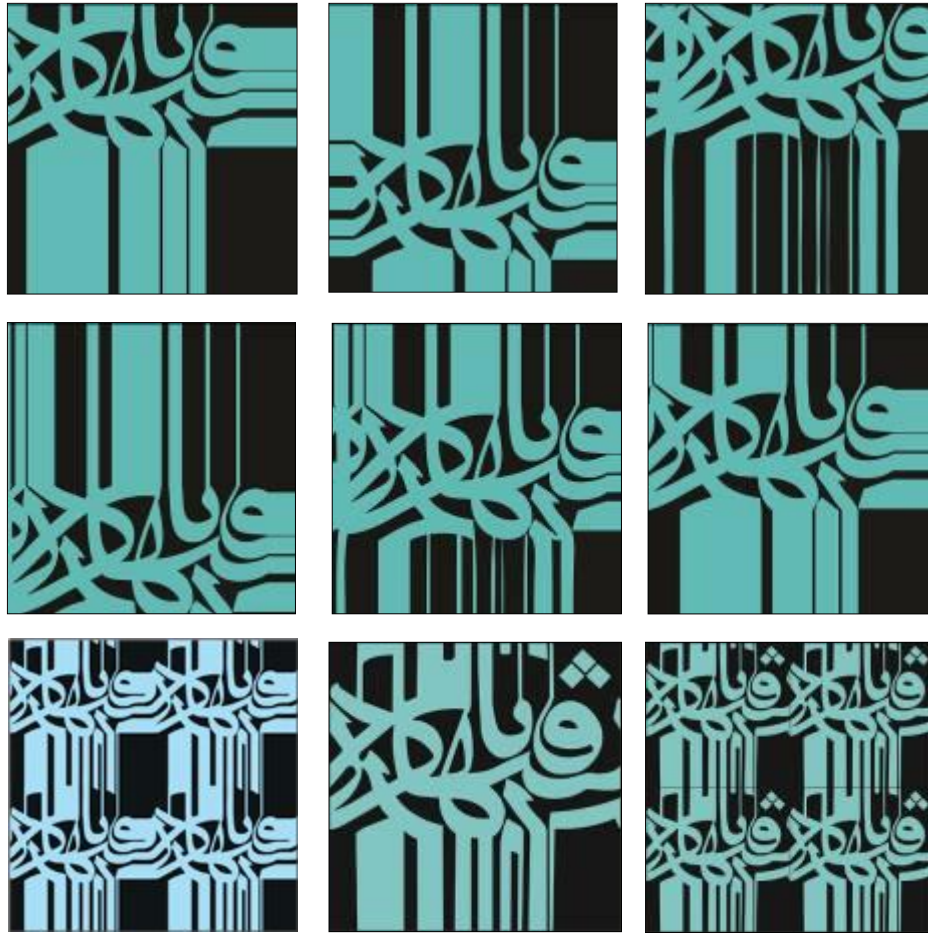
Figure 9.8: Searching for new design development.

Many variations on the basic format were tested, until an interesting, repeating pattern emerged.

Stage 2: Design development applying CNC Rapid Prototyping Machine

Having decided that the panel should be produced in low relief, to allow the pattern to be enhanced by an application of a fluid glaze, a number of stages of production were required to translate the 2D digital pattern into low relief 3D:

- Saving the final design in a format that can be read by the CNC Rapid Prototyping machine - STL or VRML format.

- Fixing 6mm acrylic sheet of the desired size (60 x 60 cms) to the bed of the CNC machine (using double-sided tape).
- Setting up machine with bullnose cutter (head size 8).
- Calibrate cutting depth of 3mm and set running (see Fig 9.9).
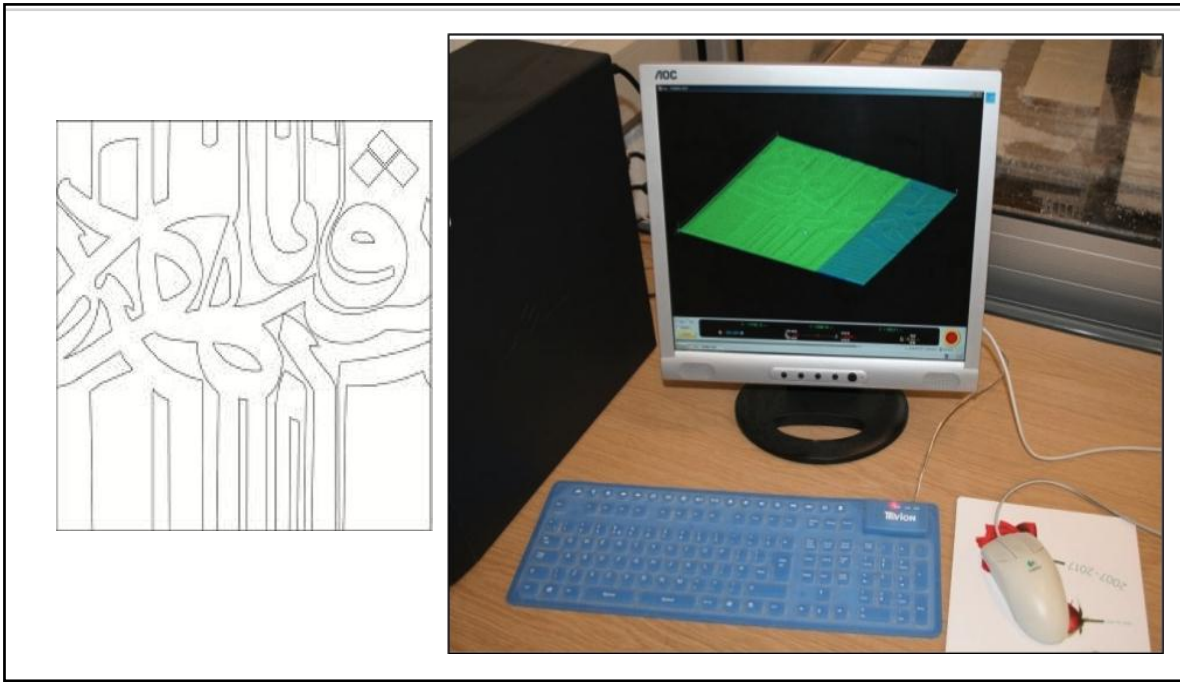
Figure 9.9: CNC Rapid Prototyping machine processing and cutting the low-relief tile design.

Figure 9.10: CNC Rapid Prototyping machine cutting the acrylic square.

The CNC machine works into two stages; the first stage involves cutting from left to right, followed by front to back cutting paths (see Fig 9.10).

Figure 9. 11: Finished milled acrylic sheets set in wooden frames ready for casting.

Once the panel was cut, fine cutting burs were removed using fine sandpaper, prior to casting in preparation for the moulding stage.

In order to allow the Refractory concrete to be cast onto the acrylic mould it was necessary to construct frame wood around the mould. The depth of the frame (1.5 cm) determining the final cast tile thickness (see Fig 9.11).

Stage 3: Mixing Refractory concrete and glazing process
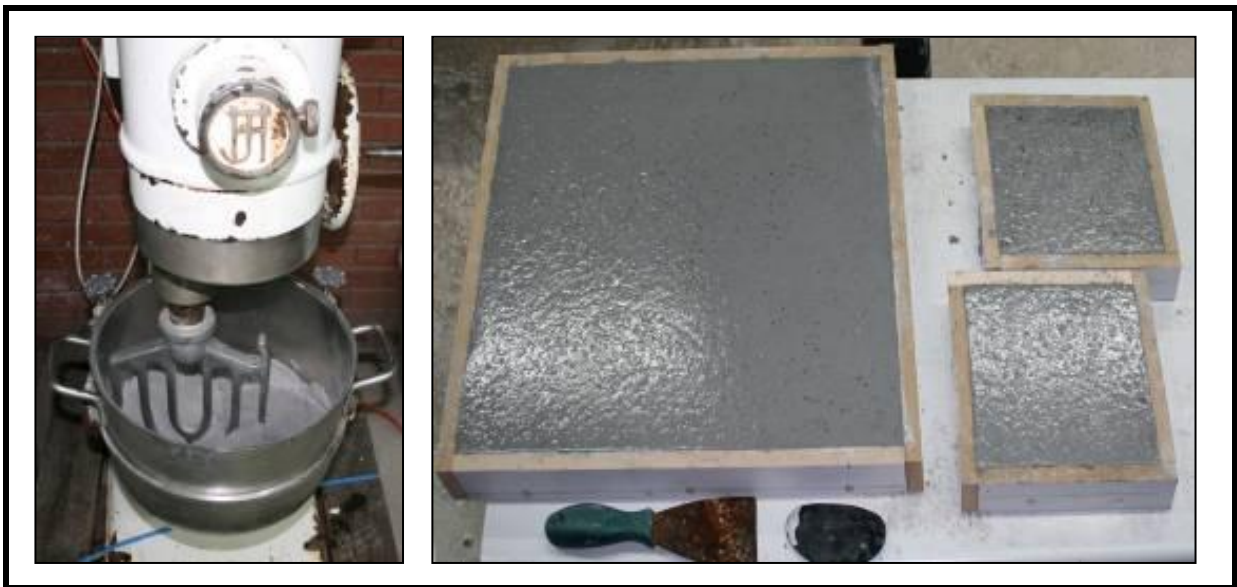
Figure 9.12: Mixing refractory concrete and casting it into moulds.

The refractory concrete (Jonflow 91) was prepared using a planetary mixer. Each panel required 14 Kg of concret mixed with 630 ml water. Following casting, each panel was allowed to set for 24hrs before removing from the mould (see Fig 9.12).

Figure 9.13: Firing the Concrete and glaze testing result.

The cast panels were then alloed to dry for a further 48 hrs before biscuit firing in an electric kiln to a temperature of 1200°C.

A number of smaller 15cm sq tiles were cast to serve as tiles for testing glazes.

A number of glazes were tested (for recipes see chapter 8):

- Stoneware: 20B, E, G & I.
- Earthenware: 2A, 7A, 15B, 15C, 15E and 17E.
  (Results - Fig 9.13).

Figure 9.14: Grinding test.

Following glazing and firing the test tiles, each test was evaluated for colour and glaze quality. As some of the glazes tended to mask the relief calligraphy, it was decided to explore revealing the raised areas through grinding back the top surface. The process of grinding removed the layer of glaze, exposing the white, fired concrete body – serving as a contrast to the areas of glaze remaining in the deeper sections of the calligraphy pattern (see Figs 9.14, 9.15 and 9.16).

Figure 9.15: Test tiles showing fully glazed and partly ground back surfaces.

Figure 9.16: Detail of sample casts, showing ground back areas – revealing contrasting white concrete body.

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Whilst this process produced some very effective results, it was decided however that the earthenware test glaze 7A gave the most interesting, rich surface. The rich, deep translucent turquoise is a classic Islamic ceramic colour (see Figs 9.17 and 9.18). The translucent qualities of the glaze also help enhanc the low relief calligraphy pattern.
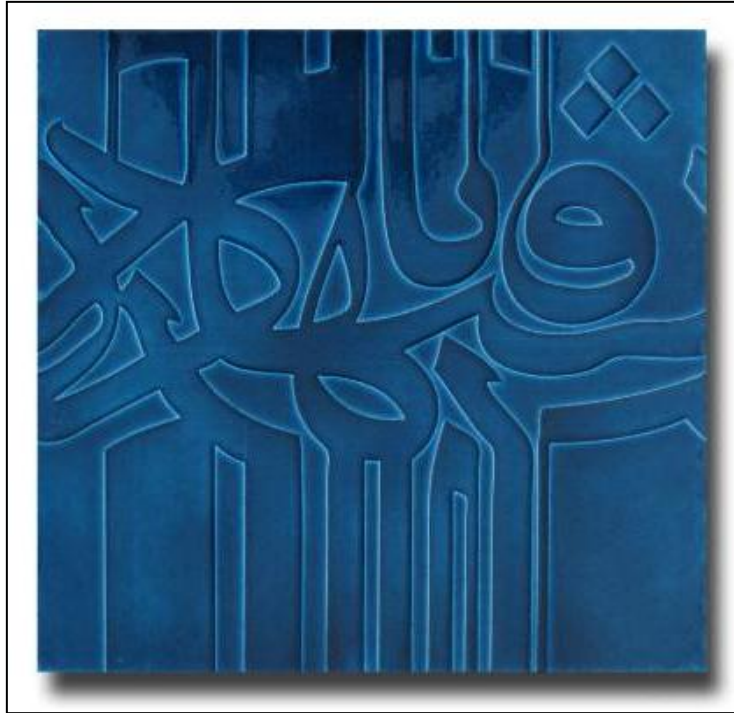
Figure 9.17: Calligraphy tile panel, size 60 x 60cm shows turquoise on the panel, in a pale colour at the top edge lines of the design.
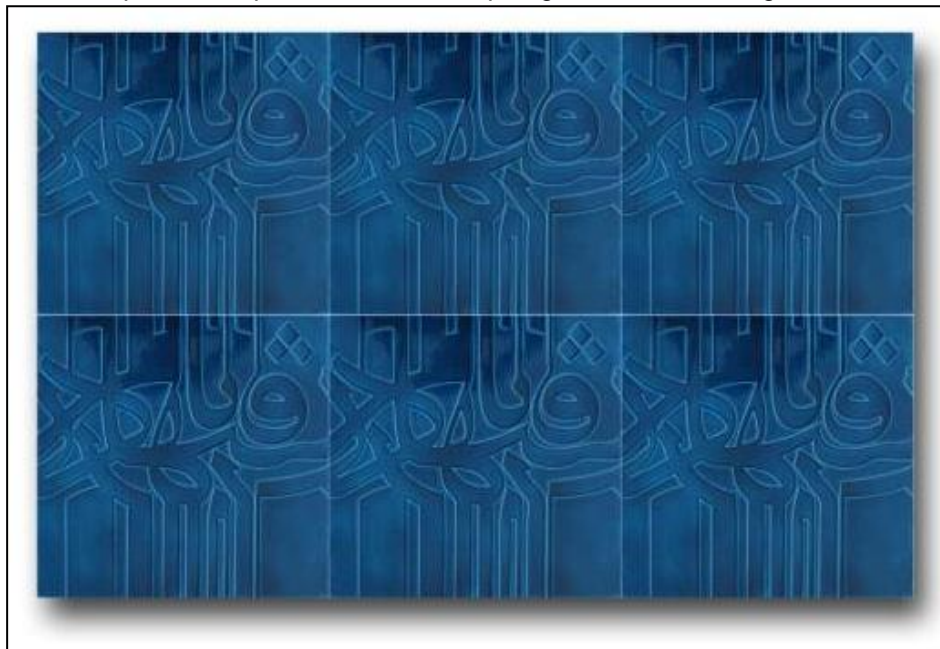
Figure 9.18: Calligraphy panel, showing how design repeats.

The image below Fig 9.19 shows how the panels might be used within an architectural context, as either glazed surfaces or natural textural cast concrete.

Figure 9.19: Example of calligraphy panels applied to contemporary architecture.

Conclusion

Using a Calligraphic motif creates a very recognisable sense of Islamic identity, with the turquoise glaze colour further emphasising this. The repeating design means that the design could be used to cover large expanses of a building, either using glazed tile panels, or cast directly into the concrete structure through the use of textured shuttering.

Digitization of the design, has given it contemporary quality that would be appropriate for embellishing an otherwise unadorned contemporary building – dramatically altering the geographical and cultural identity of the building.

Applying CNC Rapid Prototyping technology has allowed the accurate reproduction of a complex repeating pattern,that would otherwise be very difficult and time-consuming to achieve by hand.

Using Refractory Concrete (RC) in the project offered a number of advantages over conventional clay tiles:

- Almost zero shrinkage – allowing dimensionally accurate panels.
- Minimal distortion – conventional clay tiles size 60 x 60 cms would warp and distort during drying and firing.
- Speed of production – clay tiles would require very controlled, slow drying and firing conditions. Using RC however meant tiles could be fired soon after casting and fired on much faster firing cycle – using less fuel.
- If grinding back was required, the white body colour has an intrinsic beauty that requires no further treatment.
- Durability – RC is extremely durable, even under the most extreme climatic conditions.

In summary, the glazed calligraphic design panels offer a very simple solution for embellishing contemporary architecture – creating a very distinctive, yet contemporary Islamic identity.

This technology and process used within the case study could be very easily applied to any number of other designs, offering both a wide range of creative possibilities and efficiency and accuracy of production.

9.3.2 Case study 2: '3D Geometric tiles (Zeilij Structure).

Stage 1: Design development process

This stage began with a process of identifying and drawing a number of typical Islamic geometric pattern designs, developing different arrangements by gradually altering, removing, adding, increasing or decreasing the size in order to arrive at a final design solution. This process again involed using Adobe Illustrator and Photoshop software (see Fig 9.20).
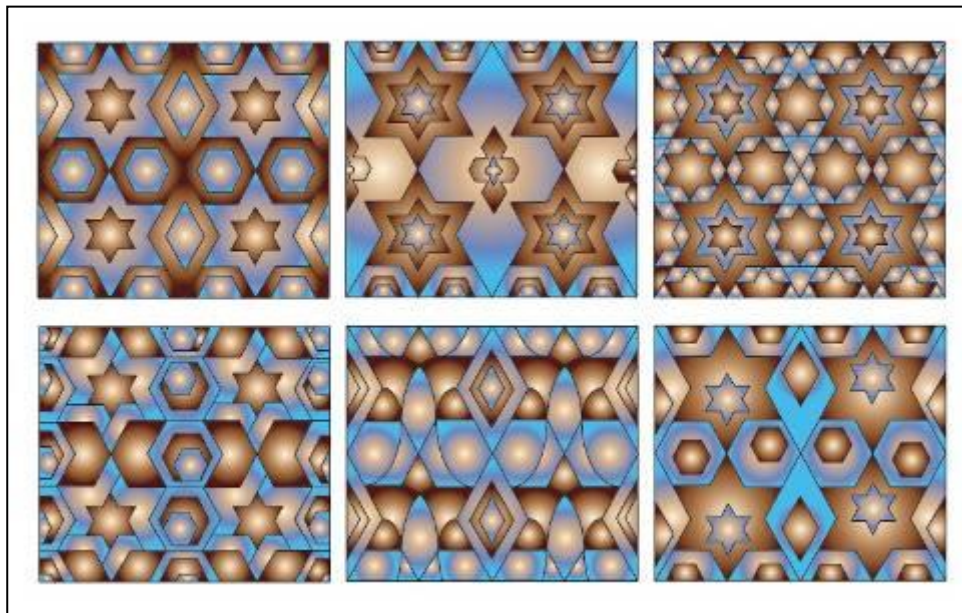
Figure 9.20: Variations of traditional Islamic geometric pattern design, developed using Adobe Illustrator Photoshop software.

Hand drawing was used to develop the 3 dimensional potential of the designs. The aim being to create a design that not only had 2 dimensional interest, but had varying levels of relief. The intention was to develop a surface that 'wove' 3 dimensionally, creating a visually interesting surface and with shadow and highlit areas (see Fig 9.21).
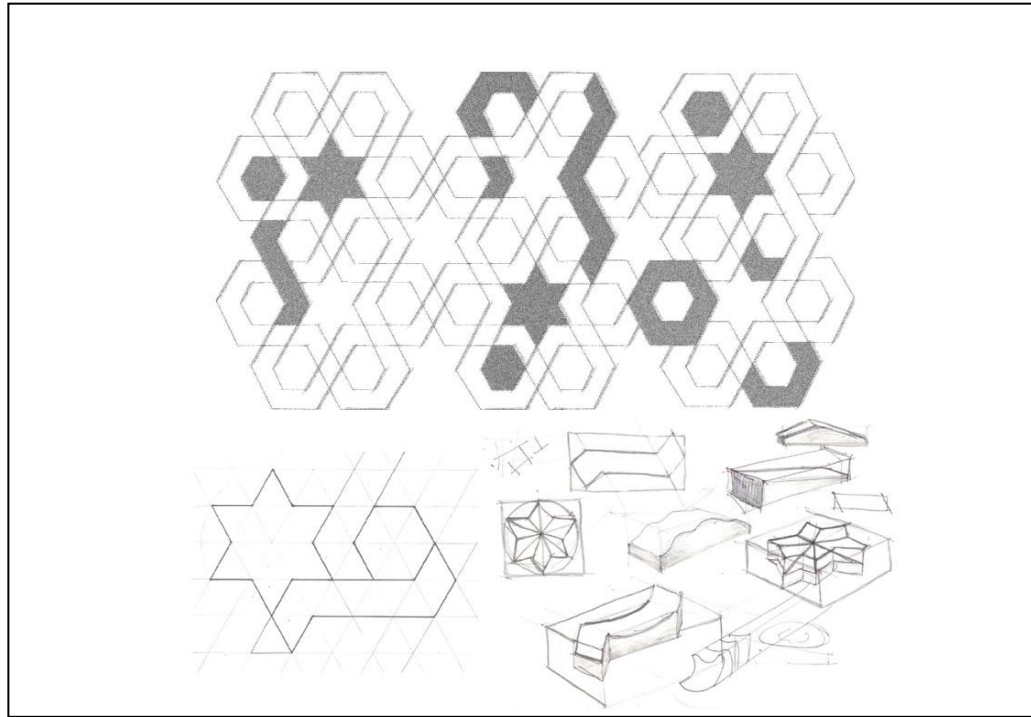
Figure 9.21: Hand drawn development of 3D properties of the tile pattern.

Stage 2: Mould making & pressing clay

The final design was made up of 3 distinct tile components, creating an infinite, space filling design.

Each component tile was accurately drwn up full size. A block of plaster (gypsum), was cast for each tile. The shape was translated onto each plaster block, then they were accurately cut and shaped – creating a 3 dimensional plaster model of each component of the design. Once each tile component was cut out of the block, the top face was slopped from one end to the other. The tiles varied from 1 to 3 cm deep, creating the undulating surface (see Fig 9.22 & 9.23).

Figure 9.22: Casting a plaster block, from which the 3D tiles will be cut.

Figure 9.23: Cutting and shaping the surface of 3D plaster models.

Once the 3 moulds were made, they were allowed to dry. Once dry, the pressing process began. Each mould was repeatedly filled with a course textured clay (crank), ensuring the clay was firmly pressed into the mould to ensure accurate definition. The pressing was then allowed to dry a little until it had shrunk enough to remove. Each pressed tile was then allowed to slowly dry. This process was repeated with the three tile units, until enough components had been produced to filll an area of approximately 1mtr square (see Fig 9.24).
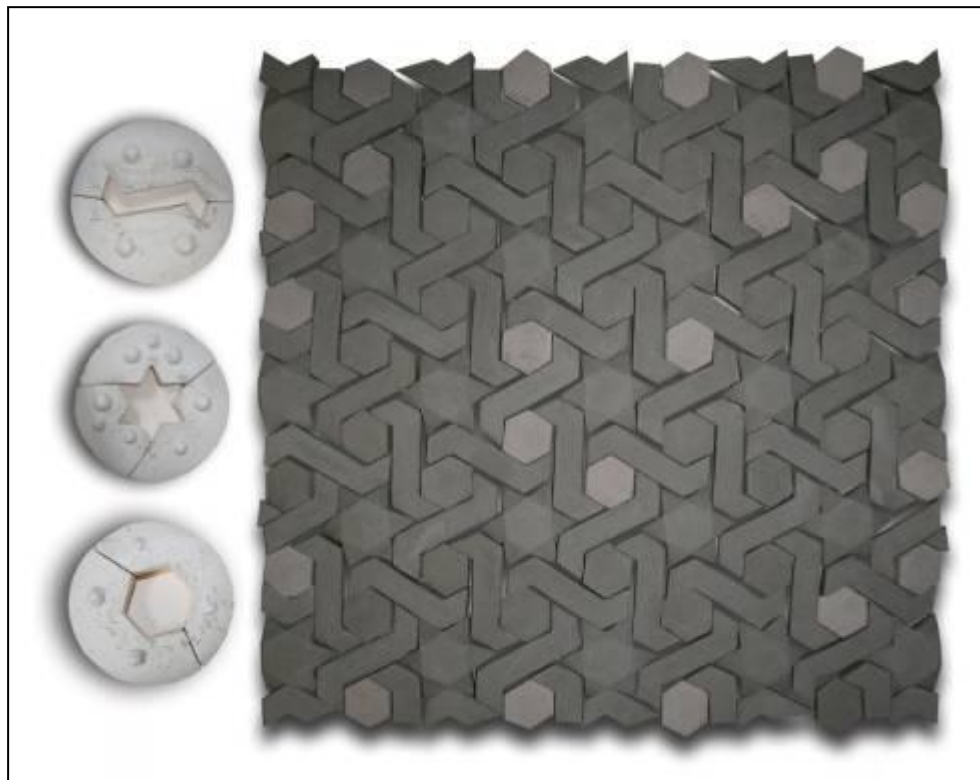
Figure 9.24: Plaster moulds and completed tile panel made from pressed clay tiles.

Stage 3: Glazing the geometrical 3D forms

A niumber of glazes were tested on spare tiles, in order to explore the most approprite glaze colour and texture. It was again decided that a turquoise (copper) coloured glaze was most effective in further reinforcing the "Islamicness" of the design. Once a large batch of glaze had been made, each tile unit was hand

dipped in the glaze. The water conten of the glaze slop was altered in order to vary the glaze thickness, subtley varying the intensity of colour of each component. Following glazing all the tiles were fired to 1070º C - Earthenware temperature (see Fig 9.25).

Figure 9.25: Images of glazed and fired tiles, showing variation in tone and colour, due to variation in glaze slop thickness.

The design that was developed offers multiple ways of being arranged – either as a space filling panel, or more open designs. The different components can be used in combination (as the original design idea), or individually in repeat, creating quite different patterns and rhythms (see figures 9.26, 9.27, 9.28 and 9.29).

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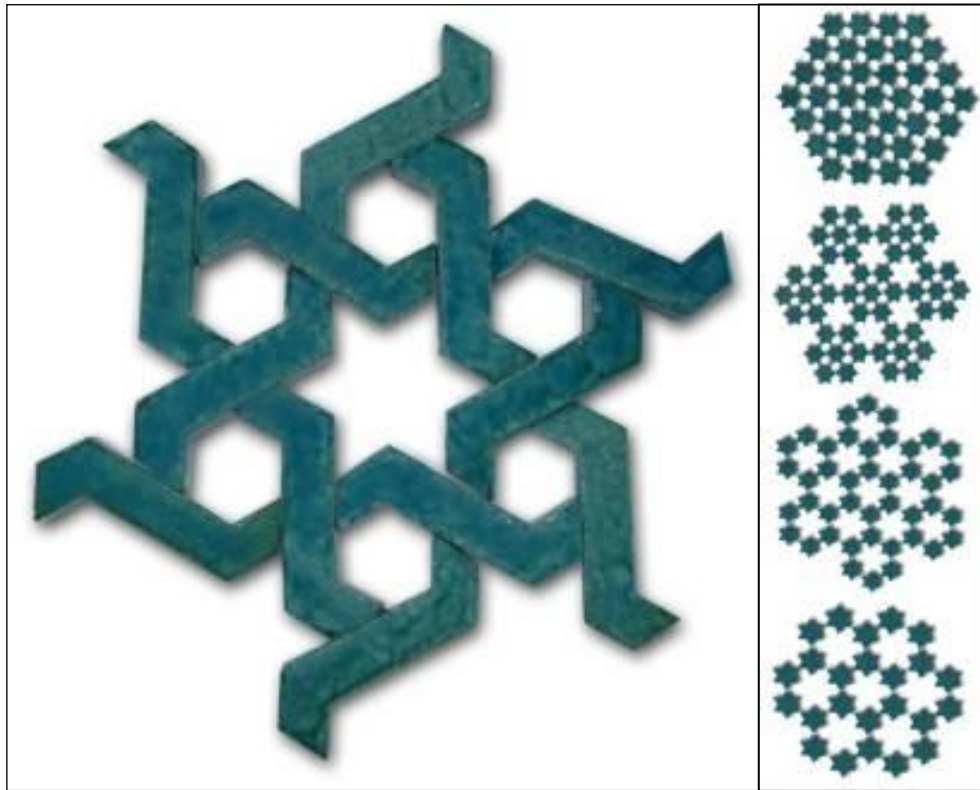
Figure 9.26: Alternative design ideas, using a single repeating
component.
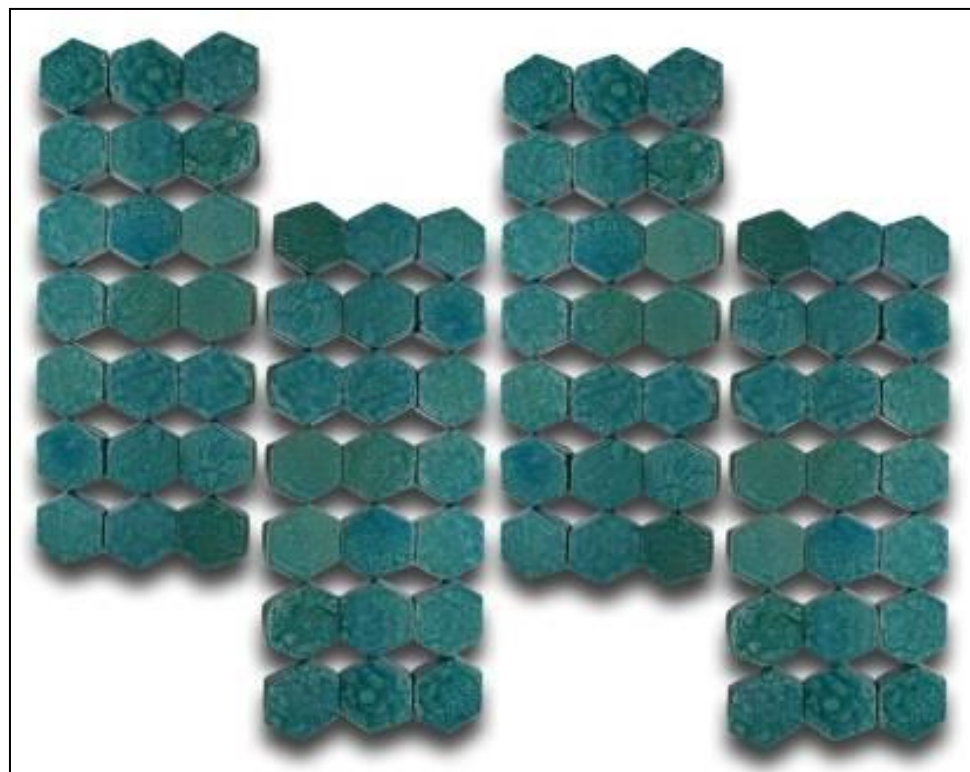
Figure 9.27: 3D Hexegon component used in repeat, to give a
contemporary pattern design.
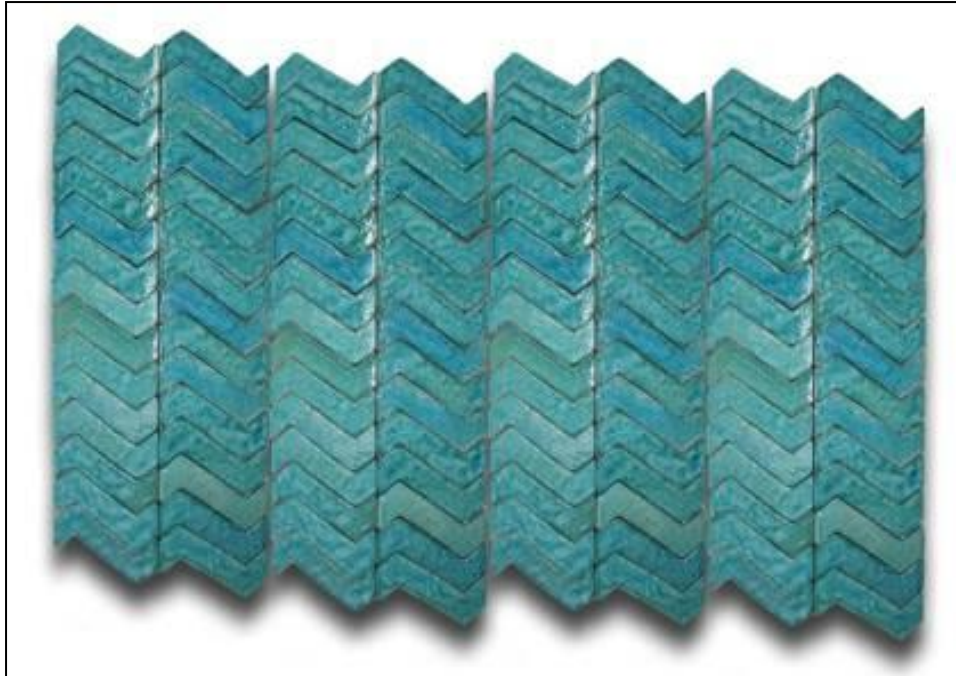
Figure 9.28: Single repeated unit, giving a space filling design, whikst conveying a sense of wave movement.

Figure 9.29: Digital rendering, indicating how the 3D geometric design might be used to embellish a modern building, creating a clearly Islamic, yet contemporary quality.

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Case Study 2 Conclusions

The intention of this case-study was to draw inspiration from repeating geometic pattern – a very commonly used design principal in Islamic culture.

It was decided to enhance the visual impact of the design by making it more 3 dimensional – changing the depth of the individual tile components across the design. This appears to have significantly enhanced the visual appearance of the piece, particularly when viewed at an angle, where the varying depths become more apparent, creating interesting shadows and 3 dimensional rhythms.

Varying the intensity of colour also helped enhance the overall aesthetic appearance of the design – avoiding the possibility of a repeating design becoming monotonous over a large area. It was found that the colour variation also helped alleviate monotony and gave the design an 'aged' quality, contrasting with the contemporary quality of the design and the style of buildings it is intended for – referencing and introducing a sense of history and tradition.

Hand pressing the tile units meant they had small imperfections, which enhanced the sense of age and tradition. Using a textured (Crank) clay helped create a sense of originality, providing a 'rustic' quality, further enhancing the visual richness of the finished design.

It was interesting to discover how a simple modular unit could create so many other possible design ideas, not anticipated initially. The three components can be arranged in a number of ways together, or used individually in repeat. This concept would be economical if mass manufactured, allowing many complex variations of design, from a small number of simple components.

In summary, it is felt that this case study conveys a very strong Islamic identity, whilst having clearly contemporary qualities – an expression of heritage and strong cultural identity, that could contrast and complement the geometric lines found in contemporary architecture.

9.3.3 Case study 3: 'Kofic Calligraphy Wave (Live project - Muneerah Al-Saeed Mosque in Kuwait).

In this case study, the researcher identified a potential 'live' project in Kuwait. The aim of the case-study was to work directly with a client, collaborating on a project that would introduce a contemporary design within a newly designed and constructed Mosque.

Recently there has emerged in Kuwait, a new organisation named *"Tarsheed"*. Its aim has been to guide people towards understanding the value of water and electricity and importance of conservation and efficiently of use. The project client was interested in work that communicated the important message about water conservation, whilst enhancing a new architectural project and offered a clear Islamic design style. The client wished the design to be positioned above water taps used to wash at prior to entering the Mosque – connecting themes of water conservation and Islamic religion.

The study began by focusing on how the theme of water could be incorporated into the ceramic design. The researcher sought the assistance of the Kuwaiti Ministry of Islam as a partner, in order to help realize this objective. Through collaboration it was decided to design a wall of 5 x 3.2 metres in size with each tile 20 x 20 cm in size.

Stage 1: searching for a contemporary design project

Initial research involved collecting imagery of waves, movement of water, beach patterns and rain, in order to create new design that would communicate efficient public use of water resources, whilst preserving the identity of Islamic ceramic design (see Fig 9.30). Using the reference material, a number of preliminary designs were proposed, from which the client decided on the final design idea.

Figure 9.30: Collected visual imagery of waves, sand, beach, rain
as a source of design research.

Initial ideas were then translated to clay in three different designs (rough surface,
large and small waves), attempting to depict water movement (see Fig 9. 31).
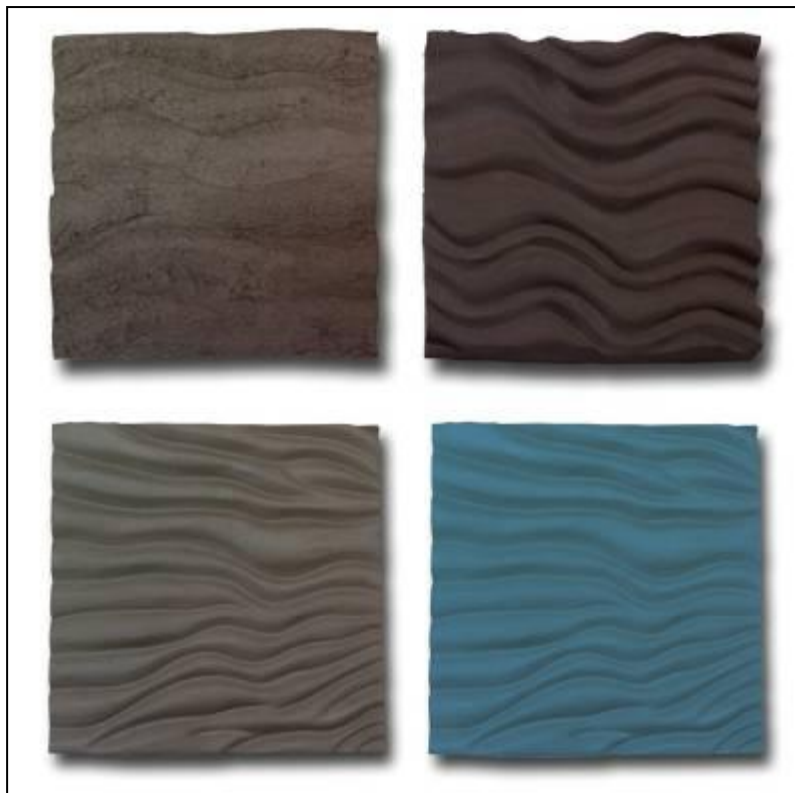
Figure 9.31: Test clay designs - size 20 x 20 cm.

After The single wave tile was then used to create the complete design, positioning them in the form of Arabic Calligraphy in *Kofic* font style. The calligraphy reads: "The water is blessing", creating the association between water, traditional Islamic design and religion (see Fig 9. 32).
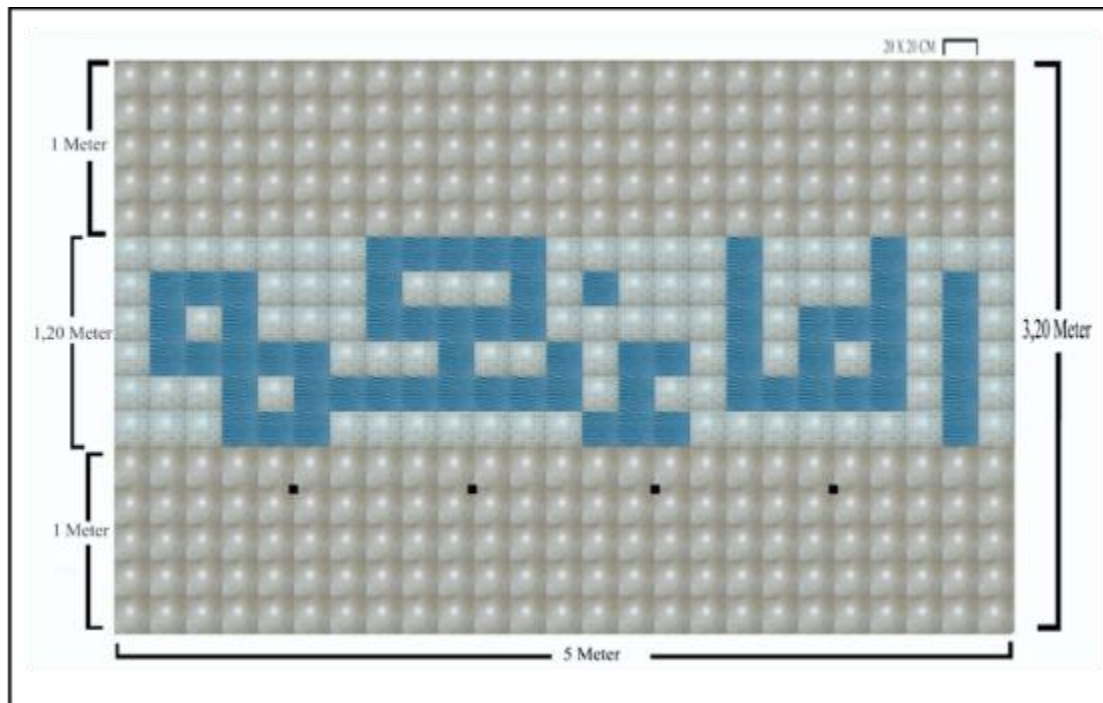
Figure 9.32: Final design project size 5 x 3.20 Metres.

Stage 2: Mould making

As the tiles were required to be dimensionally very accurate it was decided to use Refractory Concrete rather than clay. As 64 identical tiles were required in the final design, it was necessary to make a mould from which the tiles could be cast. Casting in concrete can not be done using a conventional plaster mould, as the concrete very quickly corrodes the plaster. After deciding on the final design, a single 20 x 20 cm size clay tile was made, to serve as the working model. The next stage was to build a wood frame around the clay tile and make a plaster cast of the clay model – creating a plaster version of the tile. This was done to reverse the texture, enhancing the 3 dimensional element of the wave design. A silicon rubber

casting mould was then cast over the plaster tile model. Four silicon moulds were made to speed up production (see Fig 9. 33).

Figure 9.33: Process of mould making for the casting the tiles – creating a silicon rubber mould from a plaster cast.

Stage 3: Casting and Glazing

Once the rubber moulds had been made and allowed to cure for 24 hours they were then ready for casting. A 5kg batch of concrete was required to fill four moulds at a time. As with previous case studies, the Refractory Concrete was mixed in a planetary rotary mixer (5kg concrete requiring 225ml water).

Following casting, the casts were left in the rubber moulds for 24 hours in order to set.

Following release from the mould, each cast was found to have small imperfections in the surface, due to small pockets of air being trapped in the deeper areas of the mould. These were repaired using a watery slurry mix of concrete (see Fig 9.34).

This process had been repeated a number of times, until enough tiles were produced to fill a kiln for biscuit firing - firing in an electric kiln to 1200'C.

Figure 9.34: Casting Refractory concrete in the Rubber mould.

Following biscuit firing the tiles were ready for an application of glaze.

As the tiles were to be set in a moist environment, it was decided to use a more durable stoneware glaze.

A series of glaze tests were undertaken (using glazes developed in chapter 8), in order to determine the most appropriate colour. The client intended setting the wave/calligraphy tiles within a wall of flat, industrially produced tiles. It was important for the colour of wave tiles to compliment yet contrast with the background tiles. Following firing the glaze tests, images of the results were sent to the client for a final decision on colour. The glaze that was chosen, had fluid properties, causing it when molten, to pool in the tile recesses, causing a contrasting lighter tone on the wave ridges, where the thinner layerof glaze revealed the whiteness of the cast concrete. This tonal variation, increased the visual richness of the tiles, emphasising the wave texture.

The entire batch of 64 tiles were then sprayed with the desired glaze and fired to 1280°C in an electric kiln (see Figs 9.35, 9.36 and 9.37 for examples of glazed tiles).

Figure 9.35: Examples of glazed tiles after firing to 1280'C. Note the tonal variation of colour caused by the fluidity of the glaze.

Figure 9.36: Tiles installed in 'Kofic' calligraphy design on the wall of the washing area in the newly constructed Muneerah Al-Saeed mosque (located in Duha City, Kuwait).

Figure 9.37: Installed tiles in Mosque.

Conclusion

The client was delighted with the outcome of the project, stating that they felt the tile panel was successful on a number of levels, conveying important cultural, social and educational messages:

- It aesthetically enhances the washing area of the new Mosque, creating a space that people may enjoy gathering in before entering the Mosque itself.
- The panel is contemporary in design, yet through using Kofic calligraphy as the primary symbolic theme for design, is rooted in Islamic tradition.
- The tile panel successful conveys important an education/environmental message about the value of water and the need to conserve this precious resource.

Using silicon rubber moulds was found to have a number of advantages. It aids rapid production of tiles, allows a very accurate reproduction of a detailed surface,

allows quick release of each cast, due to the flexibility of the rubber mould and lasts far longer than alternative mould compounds such as plaster.

In summary, the case study encapsulates many of the objectives of the overall PhD research project:

- A fusion of contemporary design and traditional Islamic culture, through the medium of ceramics.
- Being situated in a public place, the tile panel communicates to a wide audience how traditional Islamic design has a place within contemporary society, reinforcing a sense of place and cultural identity.

9.3.4 Case study 4: 'Geometric Fretwork / Latticework Screen'.

Perforated latticework or fretwork screens, known as 'Jali' are a commonly used ornimentation detail in traditional Islamic architecture. As well as being decorative, they originally served as a means of ventilating a room or building, whilst providing privacy from outside.

This case study explores the idea of a lattice or fretwork screen, developed within a contemporary architectural context. The aim of the case study being to develop an open fretwork unit, that can either be used as a screen, or applied to an unadorned surface, on or within a building; changing the identity of the architecture from universal 'blandness', to an aesthetic that conveys a very clear sense of 'Islamicness'.

Stage 1: Design development process using CAD

The first stage of the project involved researching a wide range of traditional Islamic latticework screens. Having selected a number of designs, they were initially drawn up digitally using Adobe Illustrator. As mentioned in previous case-studies, this application is very appropriate for creating and adapting dimensionally accurate drawings.

Finished 2 dimensional designs were then imported into a 3D solid modelling software application – Solid Works. This application allows the creation of virtual 3D forms and manipulation of imported 2D imagery into 3 dimensional shapes.

A particularly useful tool was to extrude 2D line drawings imported from Illustrator, creating complex 3D forms. This technique was adopted as part of the design process within the case study, applying it to a number of geometric designs (see Figs 9. 38, 9. 39, 9. 40, and 9.41).
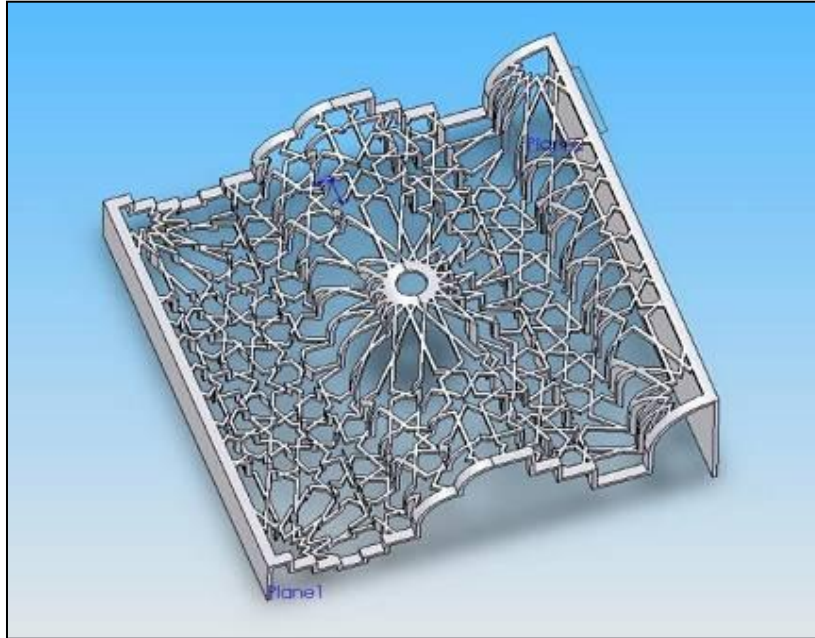
Figure 9.38: 3D Screen designed by Solid works software.

Part of the design process involved further manipulation of the extruded forms, creating complex 3 dimensional forms. As an important aspect of all the proposed case studies, is economy of production, it was felt that whilst interesting, these designs would be complex to make, and therefore be very expensive to produce.

Figure 9.39: 3D double carved fretwork unit.
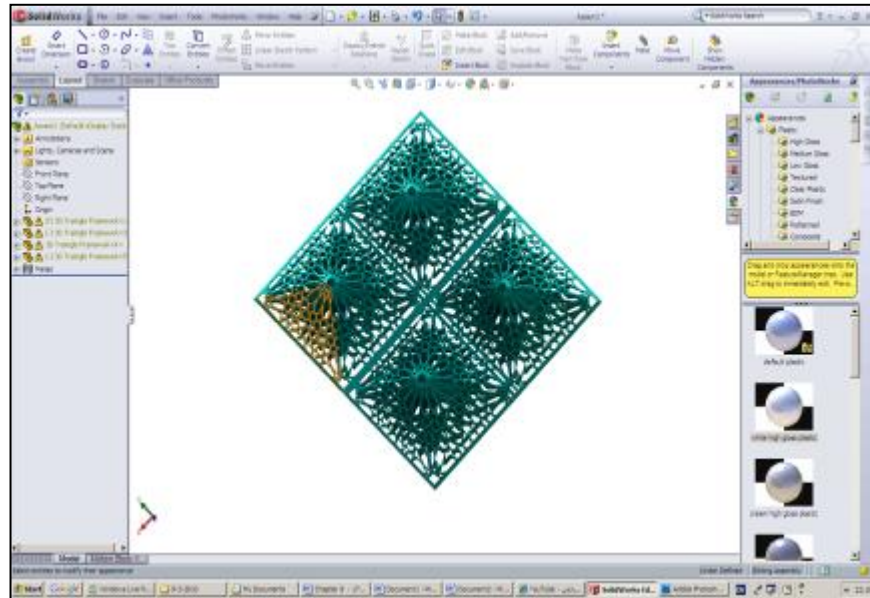
Figure 9.40: More 3D screen designed by CAD software.
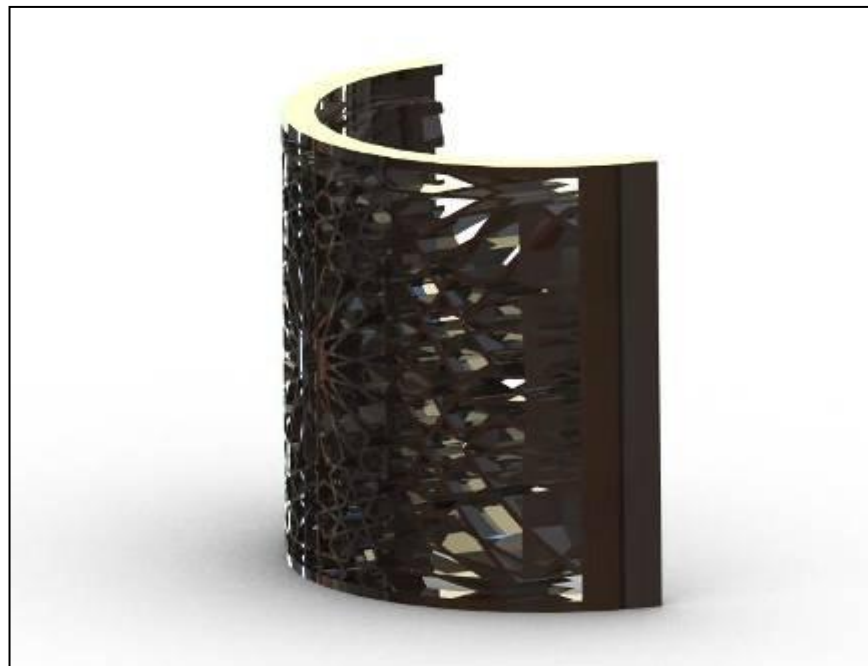
Figure 9.41: Geometrical design carves style.

It was then decided to simplify the design and return to a flat shape, that could serve as both a window screen or wall embellishment. Further designing was undertaken using Adobe illustrator (see Fig 9. 42).
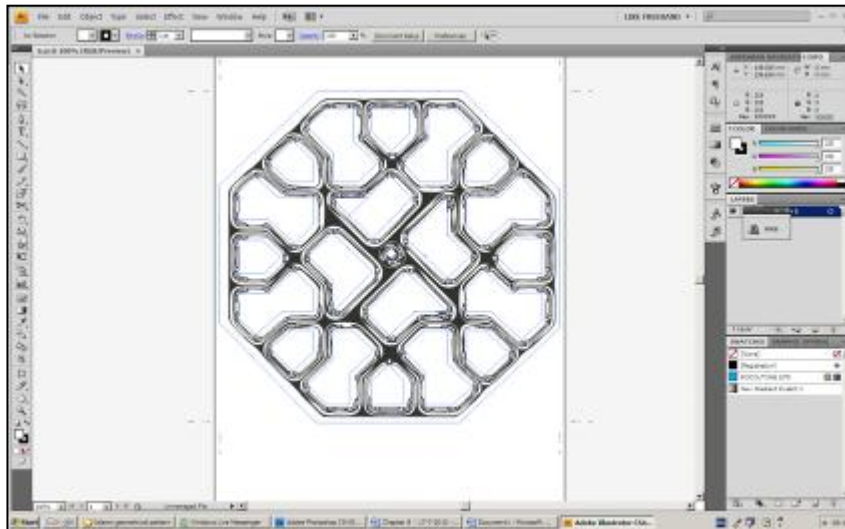
Figure 9.42: Testing a design by using adobe Photoshop illustrator.

It was finally decided to base the design on recognisable Islamic geometric patternwork, using the hexagon as the overriding shape. The hexagon is appropriate as it is a modulatr unit that forms an infinite tessellating surface, with no gaps, avoiding the monotony of square or rectangular patterns. The hezagon outline was then developed further, sub-divided into more complex lattice or fretwork designs (see Fig 9. 43).
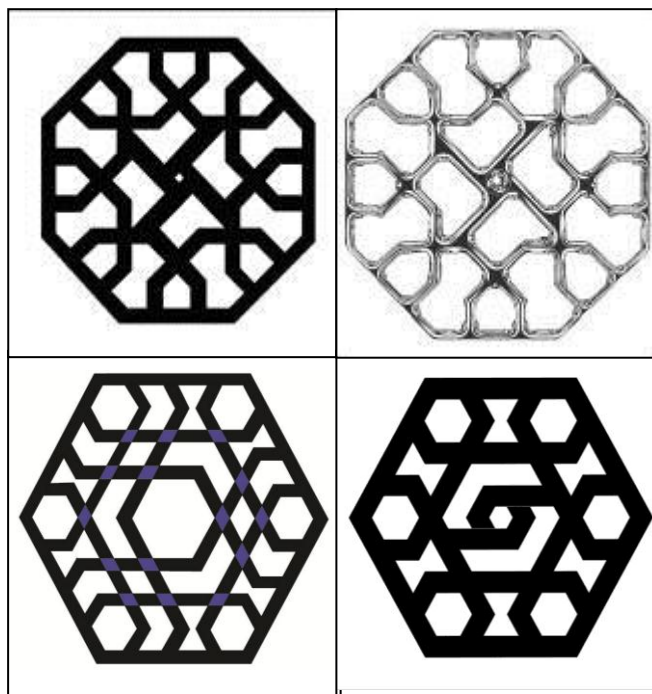
Figure 9.43: Lattice design development, based on Hexagon.

The final design was then accurately drawn up in Illustrator. Rather than simply extruding the 2D design in order to create thickness, it was decided to introduce a double step, increasing the visual complexity of the design (see Fig 9.44).

Figure 9.44: Final design, showing stepped thickness.

The design was then again imported into Solid Works, in order to define the panel thickness and provide a 3D rendering of the finished design (see Figs 9.45 & 9.46).

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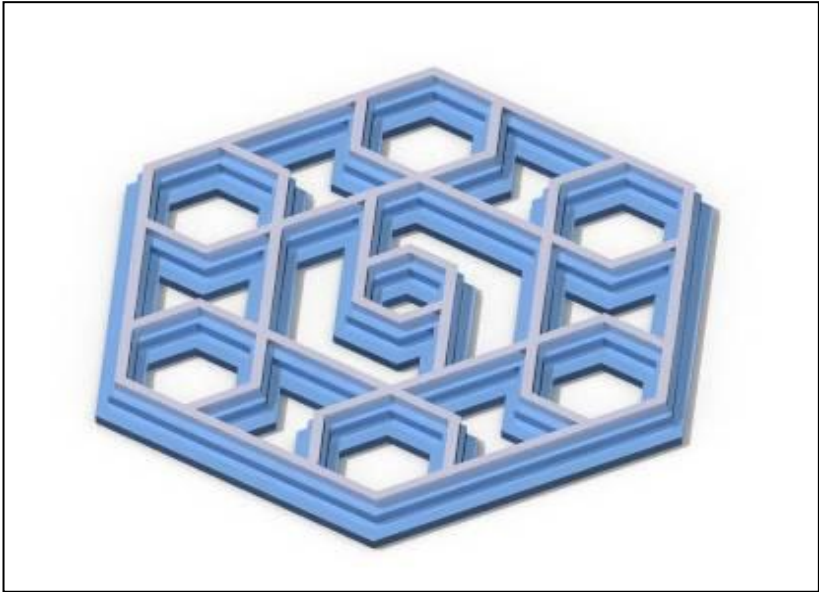
Figure 9.45 3D rendering of fretwork panel – showing stepped thickness.
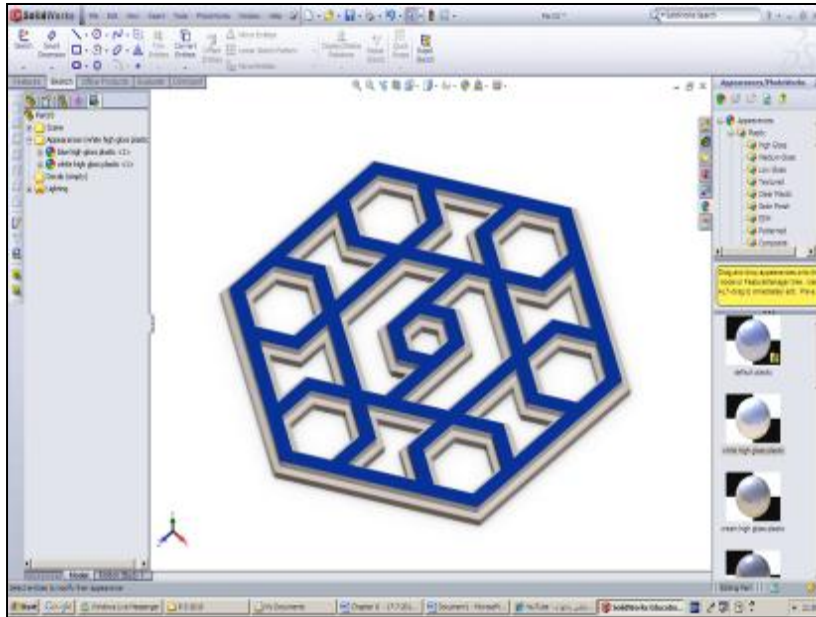
Figure 9.46: Screen grab from Solid Works.

Stage 2: Forming MDF model – using Laser cutting technology

After completing the design of the lattice/fretwork panel, the next phase was to translate the design into 3 dimensions. As each modular unit was required to be very accurately made and a number of units required in order to demonstrate the tessellation, it was decided to again use Refractory Concrete (RC), rather than clay. The design was too complex to make in plastic clay, as it would distort and not easily release from a mould.

As the final making process would again use RC, involving a casting process (similar to case study 3), it was decided to again use a silicon rubber mould – allowing accuracy of production and easy of release from the mould.

The first stage of translating to 3D involved making a model. Rather than making it from clay as in the previous case study, it was decided to employ laser cutting technology, in order to ensure the required dimensionally accurate model. This involved a series of stages:

- The design was transferred back from Solid Works to Illustrator.
- The illustrator file was then transferred to a computer attached to the Laser cutting machine.

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- The model was to be cut out of MDF sheet. As the laser cutter is only capable of cutting 6mm thick material and the desired thickness of the fretwork panel was approximately 24mm, it was necessary to cut 4 separate sheets of 6mm thickness and sandwich them together, making a full size MDF model. The bottom two layers of MDF were cut 6mm wider along each edge, creating the desired step effect. Each unit was to be 60cm in width.
- A 6mm sheet of MDF, slightly wider than 60cms was placed on the bed of the laser cutter and the machine was set to cut out the design. This was repeated four times to create the four layers of the model (see Fig 9.47).

Figure 9.47: Leaser cutting the Hexagonal design in MDF design.

- After cutting the four individual sheets, the material in the negative spaces was pressed out, revealing the lattice/fretwork design (see Fig 9.48).
- Each sheet was then carefully sanded to remove any imperfections along the cut edges. The four sheets were then carefully glued together, creating the completed MDF model of a single fretwork panel.
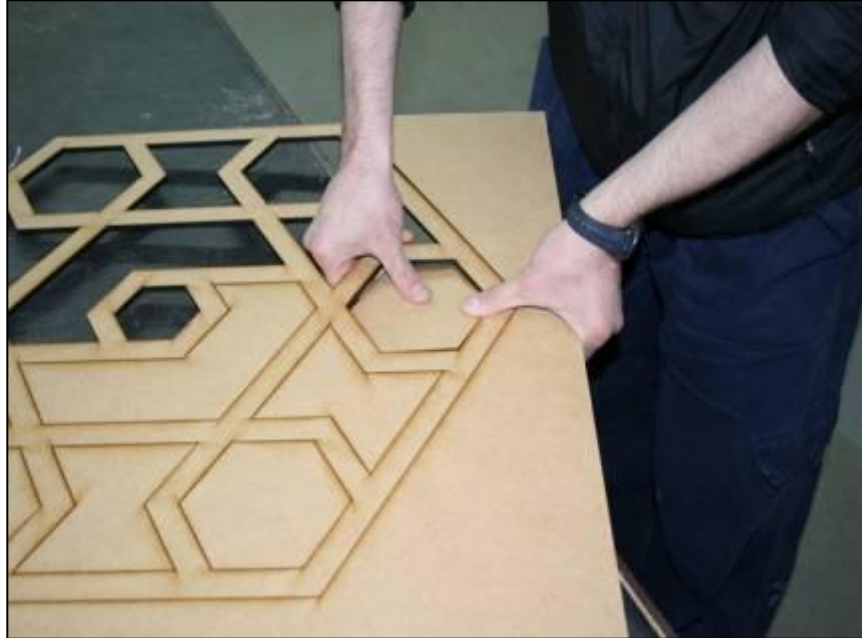
Figure 9.48: Removing the waste material, revealing the negative spaces in the MDF model.

Stage3: Making Silicone Rubber mould

Creating the rubber mould from the MDF model involved a number of further processes:

1. Creating a wooden casting box to hold the model and contain the liquid silicone rubber, whilst making the mould (Fig 9. 49).

Figure 9.49: Completed MDF model sitting in wooden box, ready for casting in silicone rubber.

The MDF model and box are painted with a liquid Vaseline sealant / release agent that prevents the rubber sticking on setting. The Silicone Rubber was then prepared, mixing the liquid rubber with a setting catalyst at a ratio 40:1 The silicone was then carefully poured over the model, avoiding creating any air pockets that might cause imperfections in the casting mould (Fig 9.50).

Figure 9.50: Pouring silicone rubber over MDF model.

The mould was then allowed to cure for 48 hours before releasing from the model (see Fig 9.51).

Figure 9.51: Completed Silicone Rubber mould.

Stage 4: Casting and Glazing Fretwork Panels

The mould was placed back into the wooden box, in order to support it during casting. As in case studies 1 & 3 the refractory concrete (Jonflow 91) was prepared using a planetary mixer - 13 kg concrete with water 585 ml water (Fig 9.52).

Figure 9.52: Mixing Refractory Concrete.

The mixed concrete was then poured into the rubber mould, tamping it down and vibrating the mould to ensure a good definition of cast (Fig 9. 53).

Figure 9.53: Casting Refractory Concrete front face down.

Following casting, each panel was allowed to set for 24hrs before removing from the mould (see Figs 9. 54 and 9.55).

Figure 9.54: Releasing concrete cast from rubber mould.

Figure 9.55: Completed hexagonal cast fretwork panel.

Following casting, the panels were left 24 hours to set, prior to biscuit firing to 1200°C. A series of glazes were then tested on 2 casts – 6 glazes per panel. It

was decided to use stoneware glazes to help durability and increase strength. The palette of glazes was chosen to reflect colours found in traditional Islamic ceramic wares. Following testing, 3 panels were glazed in differing glaze colours and a set of four were glazed in a rich vivid blue colour (figs 9.56, 9.57, 9.58 & 9.59).
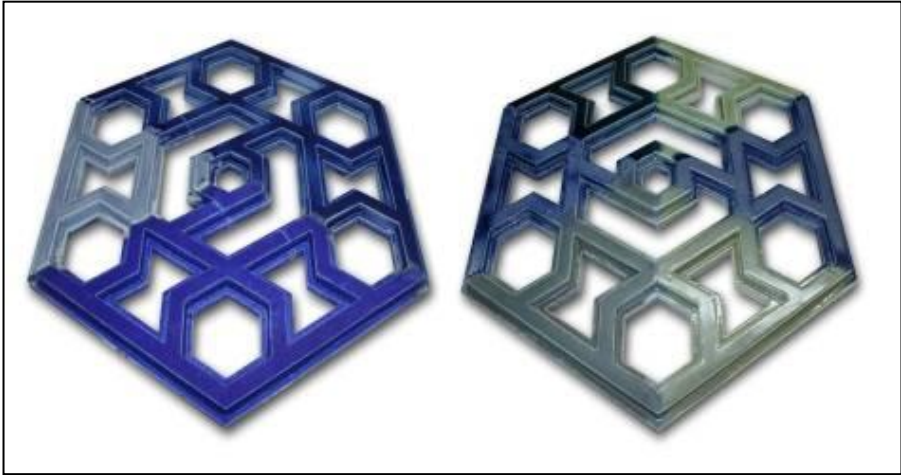
Figure 9.56: Panels showing 6 test glazes on each.
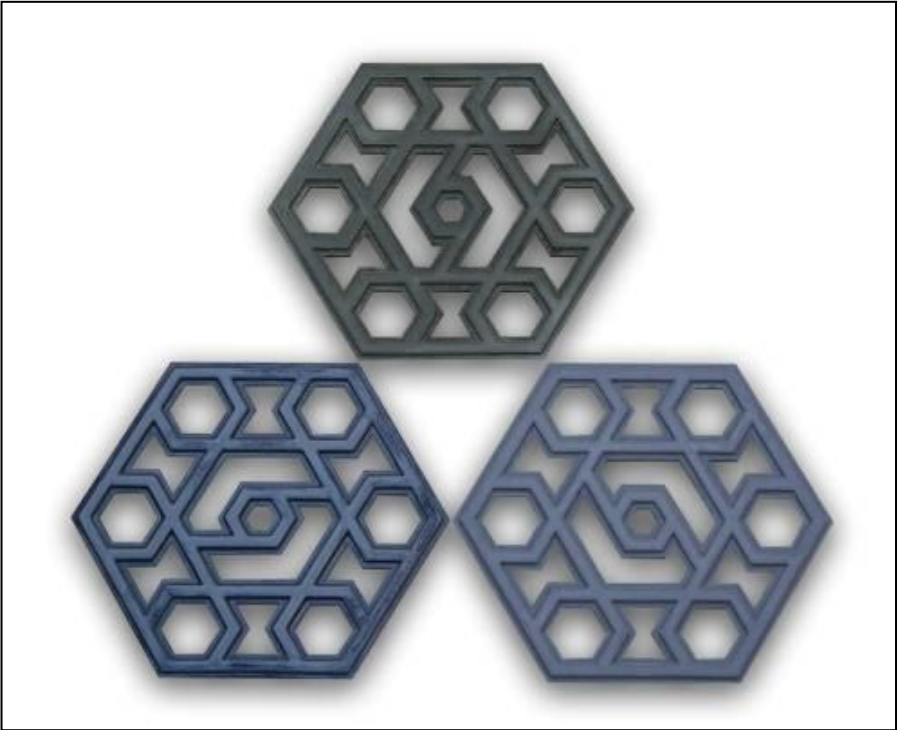
Figure 9.57: 3 Fretwork screens with differing glazes – applied through spraying.
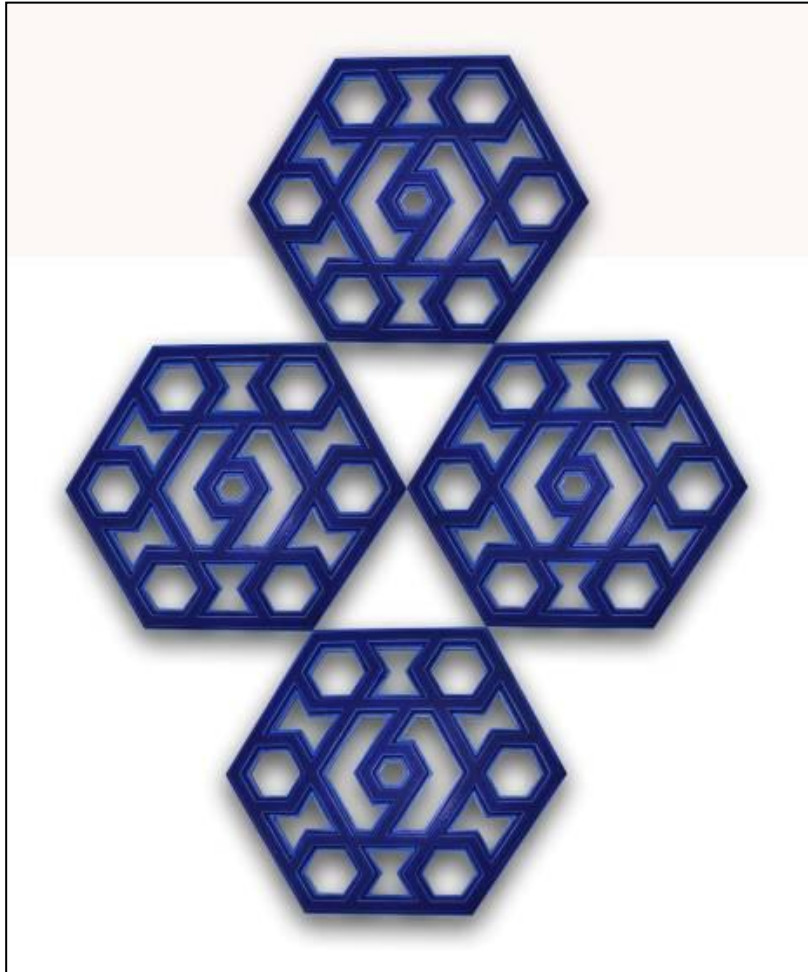
Figure 9.58: Set of 4 cast fretwork panels with vivid blue stoneware glaze.

Figure 9.59: Rendering of how fretwork panels may be used on a building -
Contemporary Kuwaiti house, Hilal Al Sayer in Qurtoba city.

Case Study Conclusion

As can be seen from the above text, designing and producing the Fretwork/Latticework screen panel involved a complex series of processes.

However, once the final rubber mould had been produced, it could be used for making many casts of the unit – justifying the time initially invested in the model and mouldmaking process. This process could be easily adopted for making fretwork panels in larger volumes. Historically fretwork or latticework panels were either carved from stone or wood. In both these cases, every screen would be a total one-off, making the process extremely time consuming. The researcher has not discovered any evidence of Islamic screen panels made as a single unit in ceramic. This is probably due to the complex nature of the process and the fact that it would be almost impossible using conventional plastic clay – due to shrinkage problems.

The use of Refractory Concrete appears very innovative particularly in this context, as it allows complex pierced screenpanels to be mass produced, that can then be glazed using conventional ceramic glazes. There is therefore huge potential to adopt this process for the making of almost any perforated screen design. Doing this would allow many different types of Islamic style ceramic fretwork screen to be included within contemporary architecture – applying a traditional architectural feature within any contemporary architectural context. This case study again demonstrates how a traditional Islamic architectural embellishment detail, could be re-introduced into a contemporary architectural environment, through the application of new technologies and materials.

The use of digital and laser technology and innovative materials were crucial in realising this project:

- Digital 2D design for initial design development – Adobe Illustrator.
- 3D solid modelling software for developing the form 3 dimensionally – Solid Works.
- Laser cutiing technology, for quick and highly accurate cutting of the model.
- Silicon Casting Rubber for mould making.

- Refractory Concrete – allowing the mass production of large, complex pierced panels that can be glazed using traditional ceramic glazes.

In summary, this case study demonstrates how an architectural detail commonly found within traditional Islamic architecture, can be re-interpreted in a contemporary way, through the use of new technologies and materials – as a means of potentially expressing Islamic identity in any contemporary architectural environment.

9.3.5: Case study 5: '3D deep-relief Calligraphy'.

The aim of this project has been to again explore the design potential of Arabic calligraphy. Within this project however, the aim was to explore the 3 dimensional possibilities of calligraphy – taking a 2 dimensional motif and exploring how it might be used as a 3 dimensional architectural embellishment component.

Rather than using calligraphy to cover an entire wall as a space filling tile (as in case study 1), it was decided to develop a form of embellishment that could enhance an existing wall, retaining the appearance of the wall surface.

Stage1: Design Development

AS with previous case studies, the first phase of the project involved researching and identifying an appropriate Arabic calligraphy style that had a clear identity and was appropriate for this project. The *'Thulth'* font was chosen as it is a classic style of calligraphy, with each letter-form being clearly defined. Adobe Illustrator software was again used to accurately draw up the calligraphy, identifying a variety of complementary letter-forms. It was not the intention that the calligraphy should be read as such, rather using it as a means of conveying Islamic identity (Fig 9.60).

Figure 9.60: Range of clearly defined calligraphy letter forms – using Illustrator.

The selected 2D letter-forms were then imported into Solid Works 3D solid modelling software. Using the software, each 2D shape was then transformed into a 3 dimensional shape, through extrusion and lofting tools. The top surface was

also shaped, further enhancing the 3 dimensional properties of each letter (Fig 9.61).
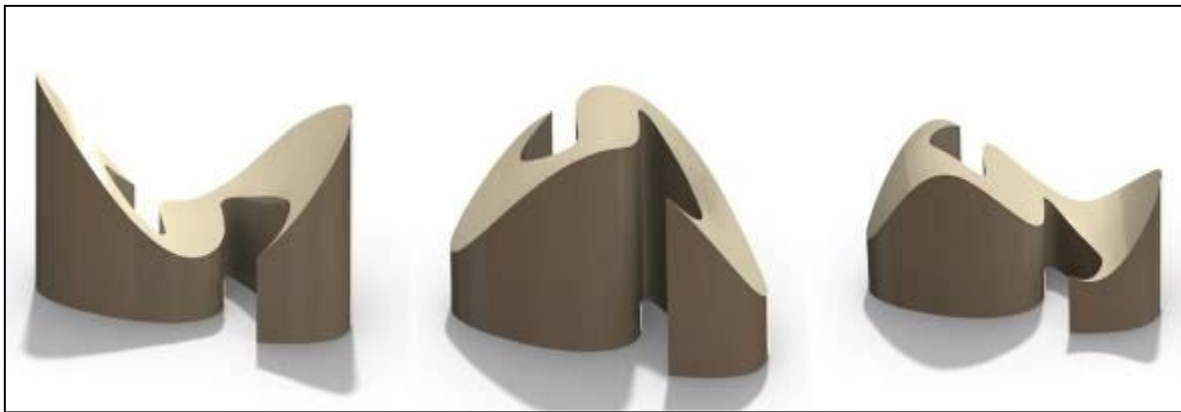
Figure 9.61: Initial 3D modelling of letter "la'a", using Solid Works.

This process was then applied to other calligraphy letters. They were then combined and repeated to explore their decorative potential – aiming to give a contemporary, yet clearly Islamic based design (Fig 9.62).
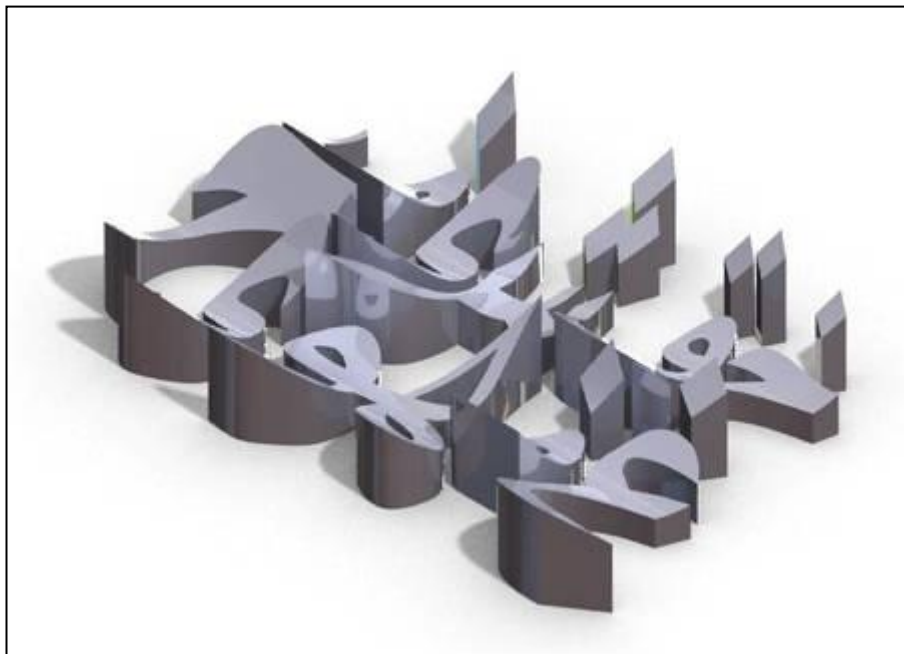
Figure 9.62: Combining and repeating 3D calligraphy letter-forms.

Further ideas were explored using the 3D solid modelling software – combining letter-forms and'sculpting the top face in various ways (Figs 9.63, 9.64 & 9.65).
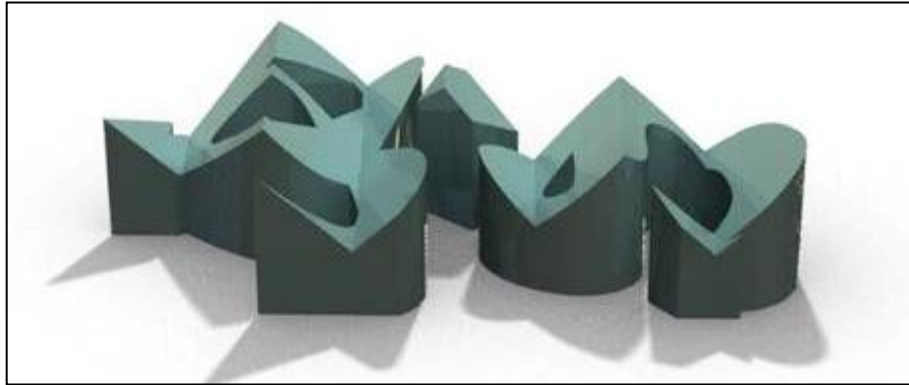
Figure 9.63: Further development of letter-forms.
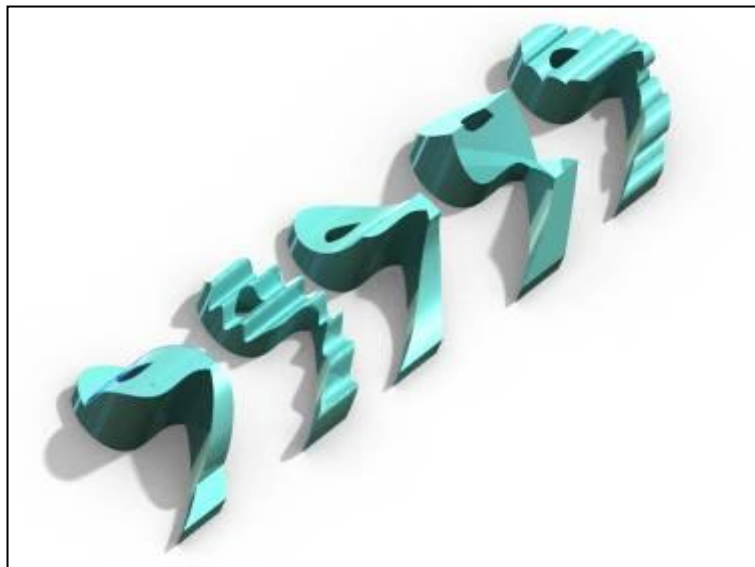
Figure 9.64: More research development with "Waw" Letter.
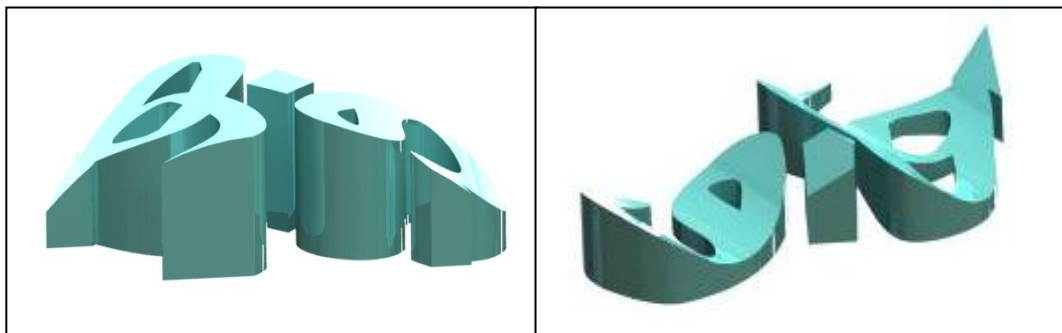
Figure 9.65: Appling CAD design can give unique forms in Arabic Calligraphy Design.

Following digital design development, 2 letter-forms were cut out of modelling foam, in order to get a clearer sense of the 3 dimensional forms and identify any potential production problems (Fig 9.66).
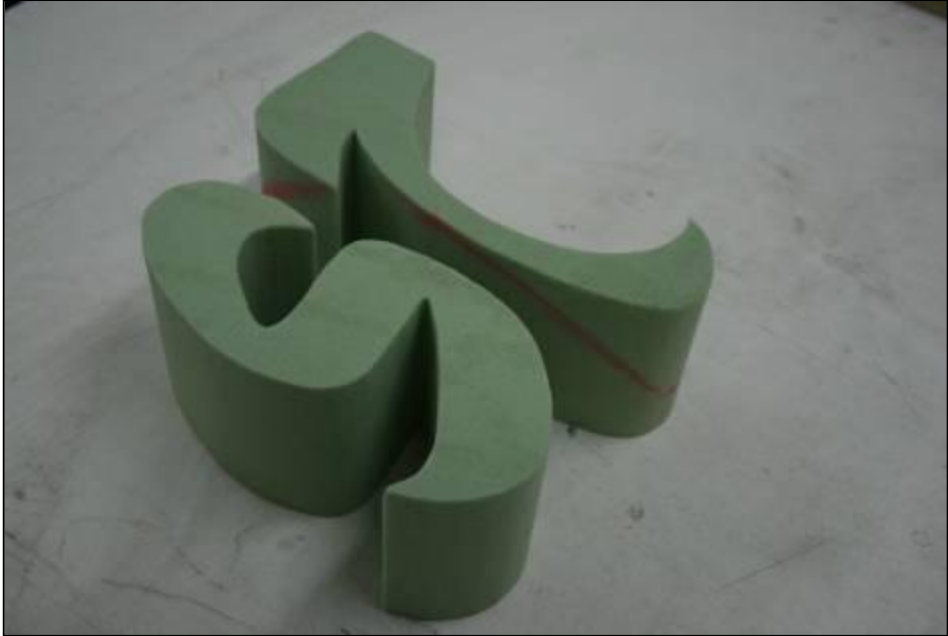
Figure 9.66: Calligraphy letter-forms created in modelling foam.

Having considered the 3D foam models, it was realised the depth and complexity of each letter-form would be problematic in making. As a result of this usful exercise, it was decided to select a range of simpler, yet classic calligraphiy letter-forms to use as the basis for the project (Fig 9.67).
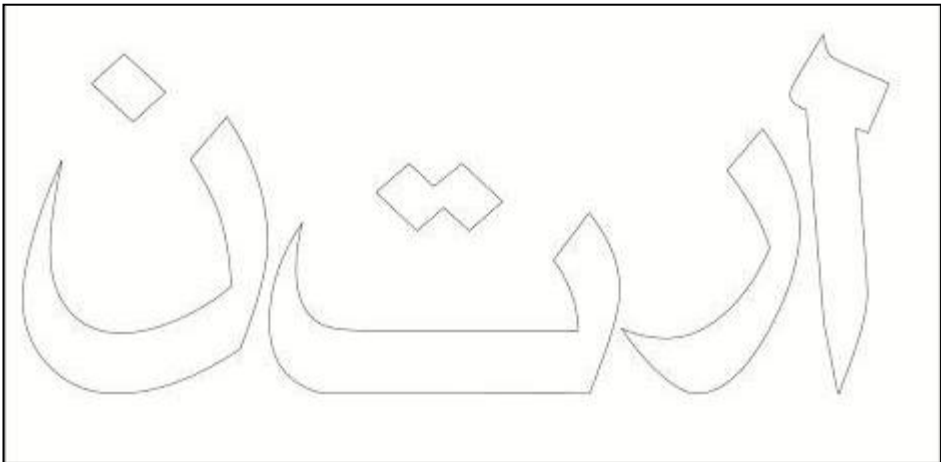
Figure 9.67: Finalised calligraphy letter-forms drawn in Illustrator.

Stage 2: Process of Letter-form production

It was decided to minimise the technology in this case study and apply as far as possible, traditional (low tech) making processes – similar to those that would have been employed in the making traditional pressed Islamic tiles.

The process of making the 3D calligraphy letter-forms involved the following steps :

For each letter, casting a block of plaster – slightly bigger than the overall intended size of the letter-form (maximum depth 4 cms)

Transferring the outline of each letter onto each corresponding plaster block.

Roughly cutting out each letter-form using a band-saw.

Refining each letter – tapering top face and refining edges of each letter (Fig 9.68)

Figure 9.68: Process of creating plaster models of calligraphy letter-forms and completed set of plaster models.

Once each letter-form had been completed in plaster, each model was coated in a soft soft releasing agent, cast in plaster, then removed, leaving a negative mould of each letter-form, ready for pressing plastic clay into (Fig 9.69).

Figure 9.69: Completed plaster moulds of each calligraphy letter-form.

Once dry, each mould was filled with plastic clay (crank – see chapter 8.), pressing it firmly into the mould to give clear definition. Once semi dry, the clay pressing could be removed from the mould (Fig 9.70).
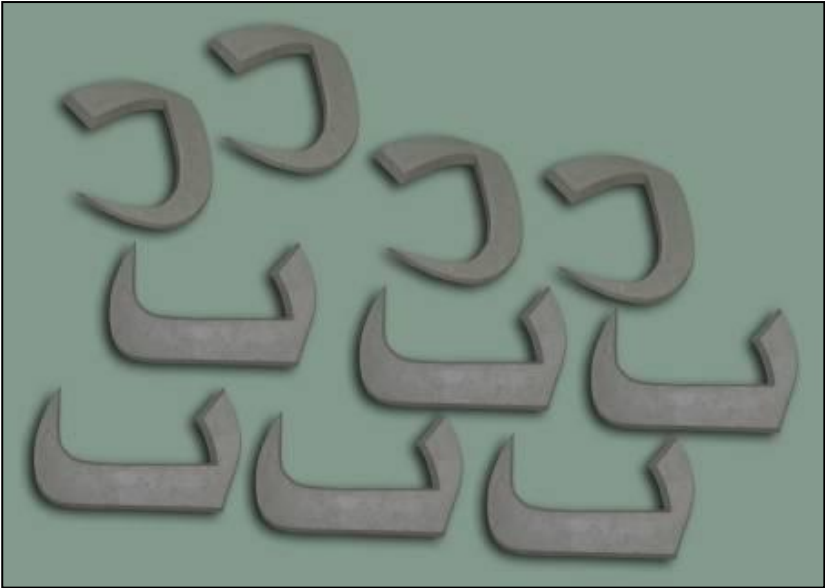
Figure 9.70: Series of pressed 3D clay tiles.

Stage 3: Firing and glazing

The pressing process was repeated, creating a number of each letter-form. The tiles were then coated in a white slip in order to neutralise any impuraties from the clay body. They were then allowed to dry before being fired to 1100°C (Fig 9.71).
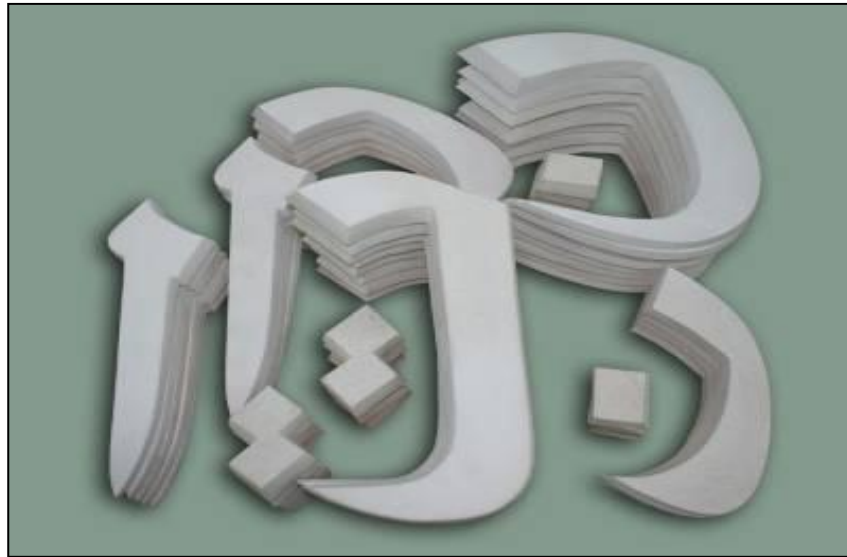
Figure 9.71: Biscuit fired calligraphy tiles awaiting glaze application.

Glaze was then applied by spray application. It was decided to use 3 different glaze colours (Turquoise, Green, and Gold), all of which are commonly associated with traditional Islamic ceramics. In all cases the glazes were Earthenware – giving a translucent quality and vibrancy of colour (Fig 9.72).

Figure 9.72: Spraying the glaze on the biscuit fired tiles.

Following glaze application, the tiles were fired to 1060° C (Fig 9.73).

Figure 9.73: Examples of fired letter-forms showing gold, green and turquoise colours calligraphy result.

The fired tiles can be arranged on a wall in many different ways, as either a repeating pattern or randomly. In all cases, the fabric of the wall will be seen surrounding the tile units (Fig 9.74)

Figure 9.74: Rendering of how the 3D calligraphy tiles might be applied to a wall.

Conclusions

Within contemporary architecture, there will be situations where the architect or designer is keen to retain the visual fabric or surface of the building, rather than masking it completely under tiling, or other such covering. It might be because a particularly interesting or valueable material has been used such as stone, or it might be because a particular tone or colour is desired.

The products developed in this case study demonstrate how this situation might still provide an opportunity for introducing an Islamic quality into the architectural environment. Rather than covering the entire wall, the 3D calligraphic letter forms can be arranged across a wall in such a way as to leave plenty of the wall visable. They can be arranged in regular repeating patterns, rows, as borders, or more randomly, either using a single letter or intermixing a number of different letters.

As the individual letters do not interlock or create any space filling pattern, even bunched up closely, they would still allow background to show – the negative spaces between the lettrs becoming an important part of the overall design.

Although the case study started out using advanced 3D software to develop shapes, it is interesting that using the software encouraged a complexity which was ultimately not necessary. In the end, the researcher decided to adopt a far more 'low-tech' approach – simply enlarging the selected letter forms and carving the shapes out of plaster by traditional habd forming processes – devoid of all technology.

The making process reflects closely very traditional, ancient techniques of making bricks or deep tiles. As such, similar tiles could be mass-produced very easily with little or no investment in complex manufacturing equipment.

Choosing to use clay rather than Refractory Concret again creates a stronger connection with tradition.

The glaze colours were chosen to further emphasise the connection with traditional Islamic ceramics, in particular using a gold glaze, which reflects the quite common use of gold lustre in traditionl Islamic work.

In summary, this case study demonstrates how a simple design motif can be used to embellish a wall without the need to cover it entirely, creating possibly a more subtle sense of Islamic identity.

Placing the tiles randomly may provide a particularly contemporary quality, creating an interesting series of contrasts and contradictions between, tradition Islamic motif's (calligraphy), applied in a contemporary way, made in a traditional way, and placed within a contemporary architectural setting.

This technique could easily be adapted to any number of other elements, not necessarily based on calligraphy.

9.3.6 Case study 6: 'Low–relief poetry calligraphy tiles'.

Stage1: Design and searching for development

As stated in the introduction to case study 1, calligraphy and the written word play a hugely important role in Arabic culture and daily life. This is more so than many other cultures, as unlike many other world religions, representational art is forbidden in Islamic religion. Calligraphy is the prime visual expression of life and spiritual thinking and therefore conveys a very strong Islamic identity.

None of the case studies so far have used calligraphy as a design element that conveys any particular message, apart from case study 3 that simply used square tiles to create a short message relating to the responsible use of water.

This case study aims to use calligraphy as both for it's aesthetic qualities, but also to be read.

The design is based around a famous piece of Arabic poetry, using a styalization of the Kufic calligraphy font.

The poem can be approximately interpreted as: "My brother you will not get the knowledge only by following six elements: intelligence, caring, diligence, company of the learned, time and experience".

It was decided that the poem would feature as the design motif on a flat tile that could be fixed to any appropriate wall in an architectural environment.

Stage 1 - The Design Process

Once the piece of poetry had been identified, the calligraphy was applied to a diagonal patterned design, using Adobe Illustrator (Fig 9.75).
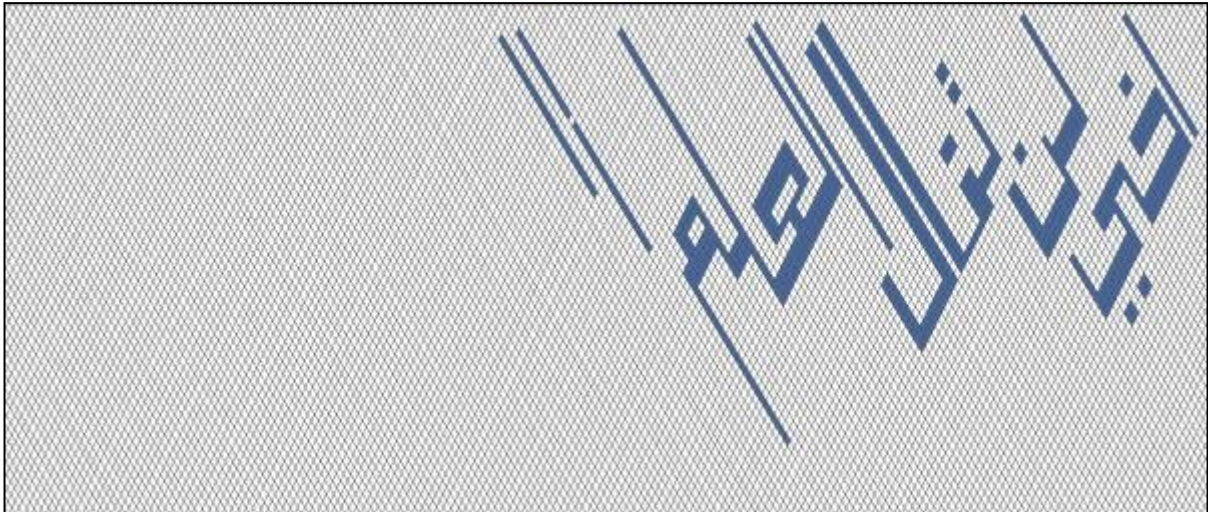
Figure 9.75: Incorporating the Arabic poem into a basic diagonal linear design.

The design was then developed into a more complex matrix of lines, in order increase the visual properties of the design, whilst retaining the possibility of reading the poem (Fig 9.76).
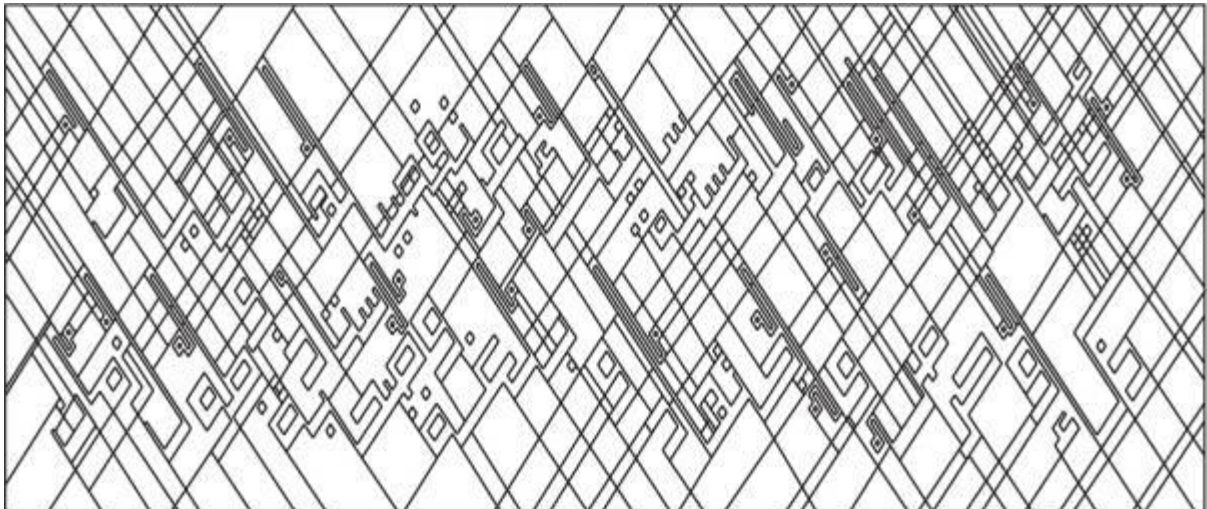
Figure 9.76: Completing the poem, enhancing the visual complexity of the design.

As the visual complexity of the design was increased, it was noticed that the actual calligraphy became increasingly difficult to read. It was therefore necessary to highlight the wording, within the overall design (Fig 9.77).
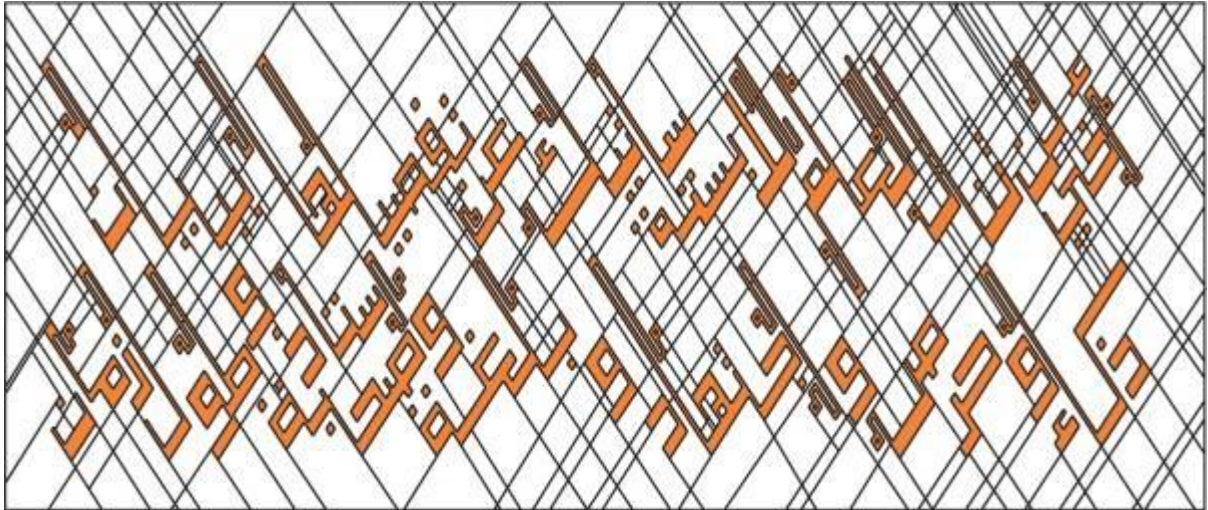
Figure 9.77: Highlighting the calligraphic text in order to allow reading of the poem.

A rectangular tile format size 60 x 30 cm was decided upon.

It was also decided to simplify the design further, by decreasing the amount of diagonal lines that made reading difficult (Fig 9.78).
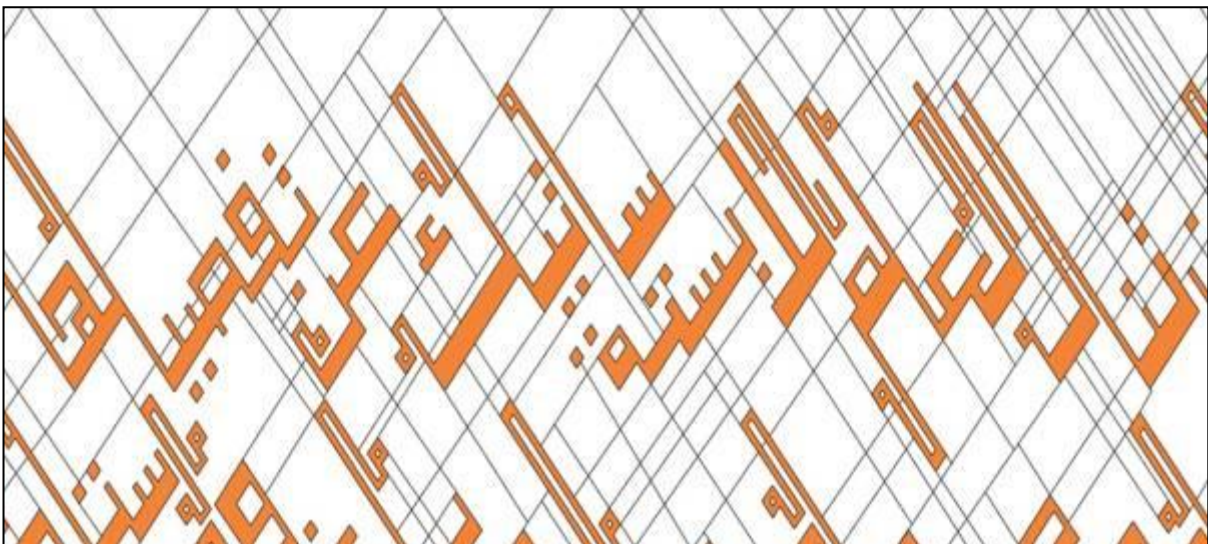
Figure 9.78: Further simplificationof the design.

Having established the overall design, the next consideration was to how the design should be interpreted on a ceramic tile. It was decided that a low relief format was increase the visual richness of the design whilst also allowing the text to be raised slightly – defining it from the background.

The design was transferred to 3D software (Solid Works), splitting it into 3 distinct layers (Fig 9. 79).
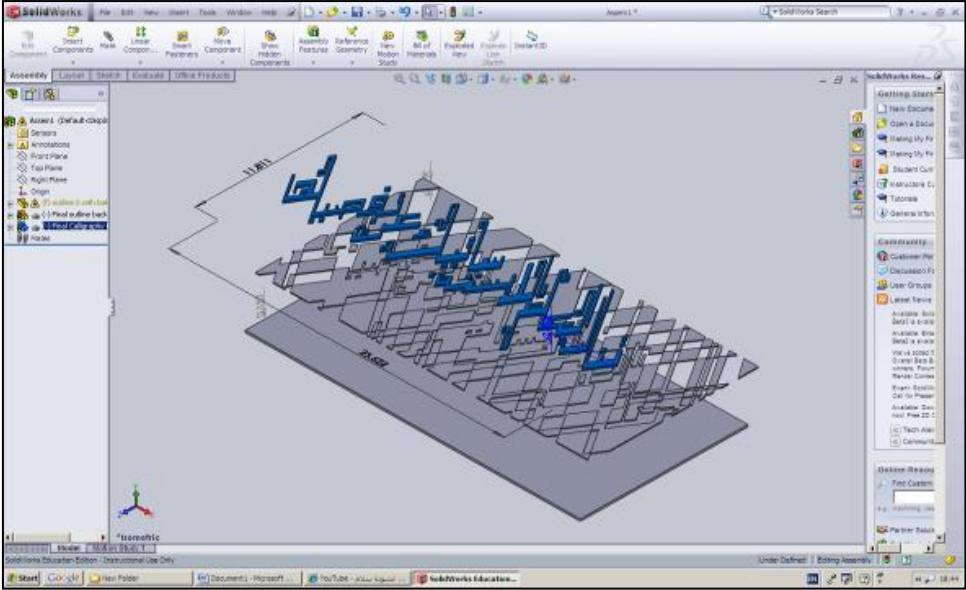
Figure 9.79: Using 3D software to create a low relief design and split the design into 3 layers.

The design was then re-assembled, creating a low relief design (Fig 9.80)
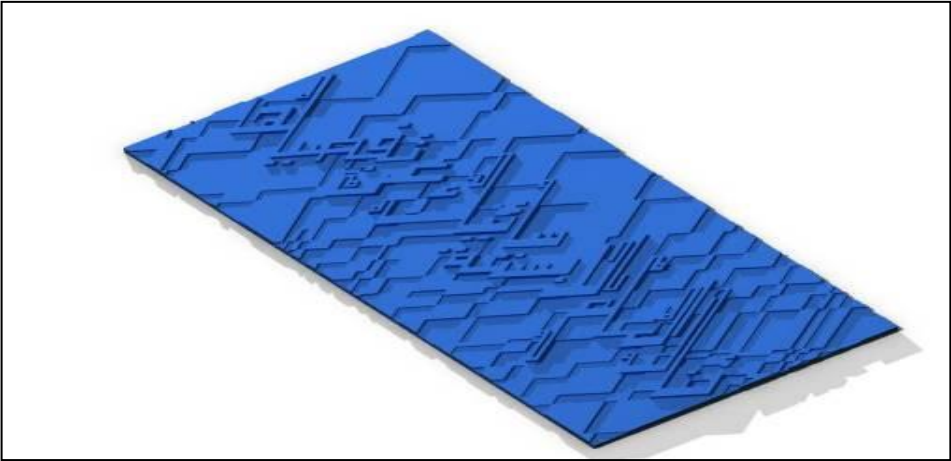
Figure 9.80: 3D rendering of rlow relief calligraphy panel.

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Stage 1 – Model & Mould Making

Due to the inticacy of the design, it was decided to adopt a similar production process to the tile panel in Case Study 1. The design transferred as an LST to a CNC Rapid Prototyping Machine in readiness for milling out of sheet MDF. The image below shows cutting details (Fig 9.81).
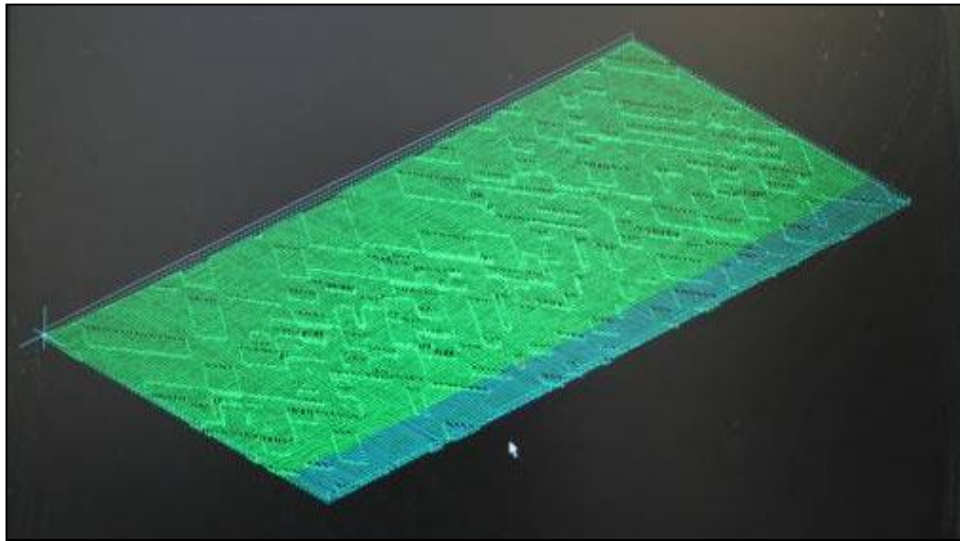
Figure 9.81: Image of cutting paths and depth on computer screen.

The CNC milling machine was then fitted with a 6mm bullnose cutting blade and set to run, cutting the design out of sheet MDF (Figs 9.82 & 9.83).

Figure 9.82: The CNC machine milling out the design in sheet MDF.
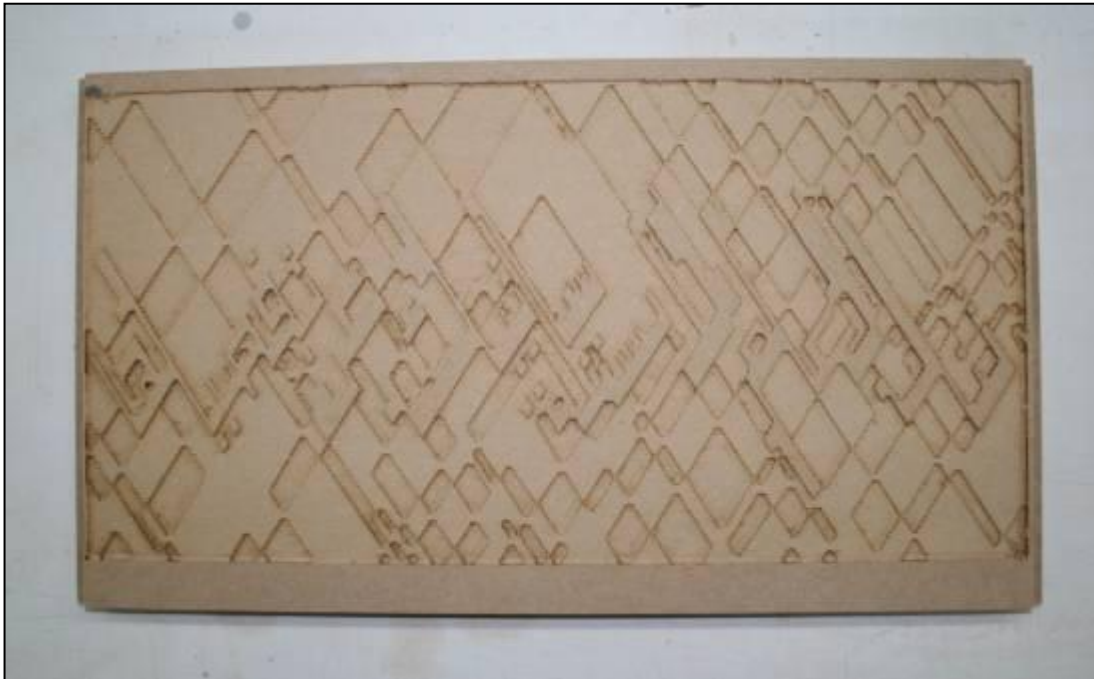
Figure 9.83: The completed model, milled out of MDF.

Again, as in previous case studies, a silicon rubber mould was made of the model, to serve as the casting mould (Fig 9.84).

Figure 9.84: Silicon rubber mould being peeled off MDF model.

Refractory Concrete was again chosen to create the tile, rather than plastic clay, because of it's ability to pick up fine detail and not distort or shrink. 7Kg of concrete was required for each tile, mixed with 315 ml of water (Fig 9.85).
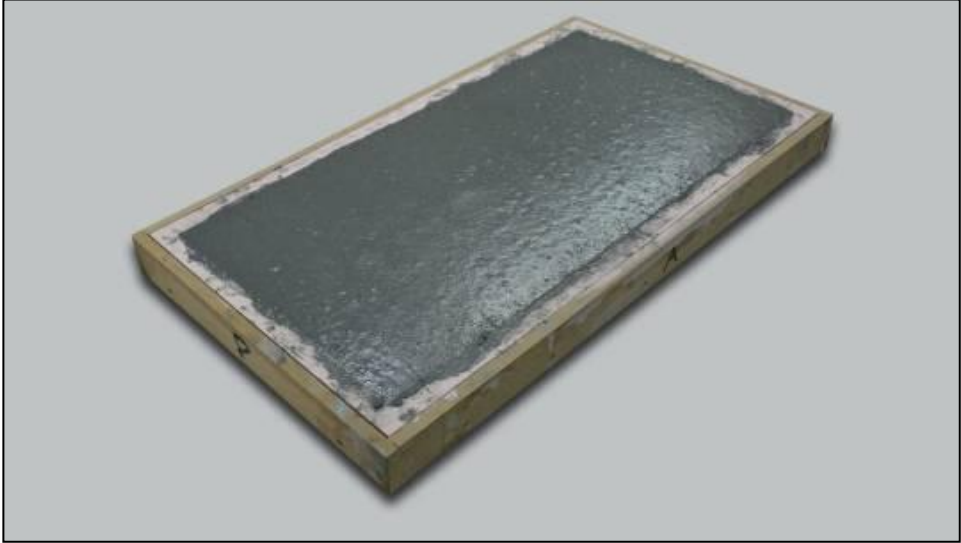
Figure 9.85: Casting the refractory concrete on the Rubber mould.

After casting, the mould was left to cure for 24 hours. The mould was then turned over and peeled from the concrete cast (Fig 9.86).

Figure 9.86: Mould being released from concrete cast.

Stage3: Colour testing and Glazing

As with other case studies, the dry tiles were then biscuit fired to 1200⁰C. A high biscuit firing was used to help prevent crazing of the glaze (Fig 9.87).
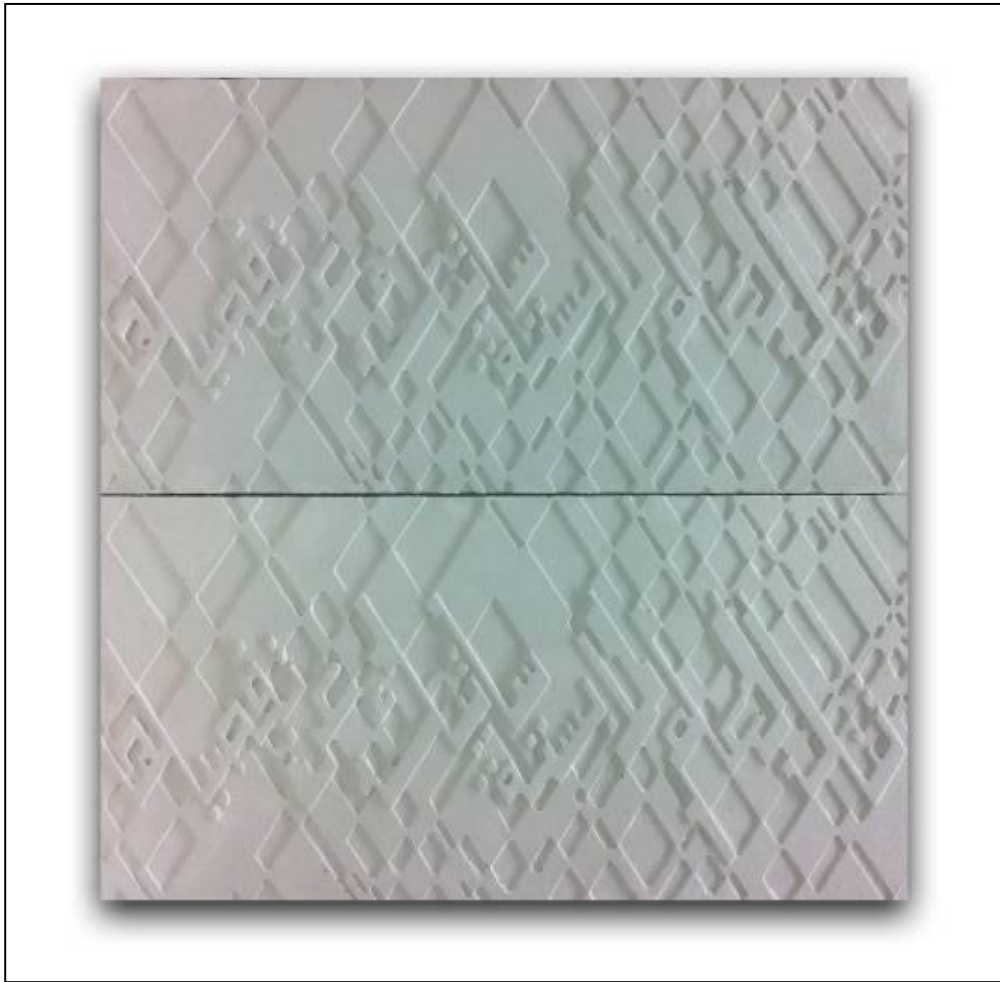
Figure 9.87: Biscuit fired concrete tiles.

A number of the glazes discussed within Chapter 8 were considered. It was decided to trail 2 distinctively different glazes – a translucent stoneware glaze that would show the relief design and a metallic copper earthenware glaze. Both were tested, by applying the glaze with a sponge in order to build up a variegated surface; applying multiple layers of glaze (Fig 9. 88).

Figure 9.88: Applying glaze with sponge – building up layers and overlaying differing colours.

The tests were then fired:

Earthenware glaze firing 1070°C.

Stoneware glaze firing 1280c (Fig 9.89).
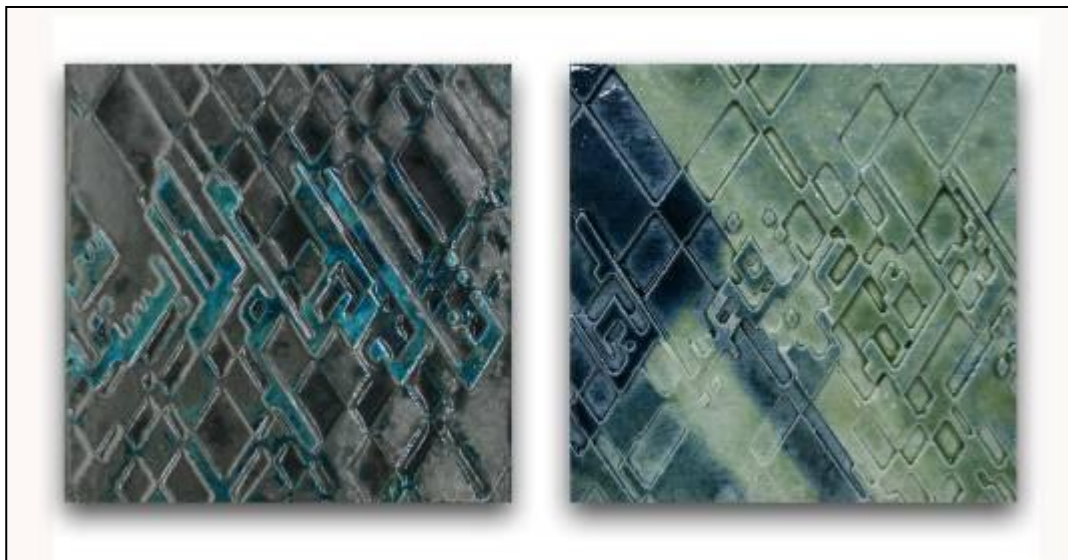
Figure 9.89: The tile on the left side is Earthenware glaze, showing the rich metallic copper effect. Using a songe to apply the glaze, allowed glaze to be flooded into the lower portions of the design, with a thinner application on the raised calligraphy – emphasising the lettering.
The tile in the right side has been applied with stoneware glazes. Applying the glazes with a sponge have allowed the two colours to be blended, whilst the translucent properties of the glaze allow the relief designto be revealed.

It was finally decided to use the turquoise Earthenware glaze, but avoid applying it too thick, thereby allowing the relief pattern to show more clearly. It was decided that the mottled/blended method of glaze application was over complicating an already intricate design (Fig 9.90).

Figure 9.90: Completed tiles size 120 x 30 cm.

Following final firing, the tiles were photographed and digitally rendered onto an image of a recently completed building in Kuwait City (Figs 9.91 and 9.92).

Figure 9.91: Digital rendering of 'Poetry' tiles applied on a contemporary building in Kuwait City.

Figure 9.92: Unglazed, relief 'Poetry' tile design applied to building. This effect could be achieved by using cast conrete panels.

Conclusions

This case study demonstrates how calligraphy may be used as an embellishment on contemporary architecture, both as a design motif, but also offering a readable message. Many examples of this exist in traditional, historical Islamic architecture, where Arabic calligraphy was been used to enhance the aesthetic of buildings, whilst also conveying a message – often passages from the Qur'an.

This case study offers a contemporary interpretation of this very traditional idea, allowing modern architecture to take on a very strong Islamic identity, even though the actual structure of the building may have little or no reference to Islamic style or design.

Whilst the tiles in the case study were relatively small in scale, one can see from the renderings, how they could be used to great effect if scaled up.

A particular advantage of casting the tiles in refractory concrete is that they could be produced to a very large size, and still be glazed; creating an impressive façade.

Again the application of various types of digital technology has been very important in realising this project - Adobe Illustrator, Solid Works 3D software and CNC Rapid Prototyping.

In summary, this case study demonstrates how it is possible within a contemporary Islamic architectural environment, to link language, education, culture, identity, society and heritage with contemporary design.

9.3.7 Case study 7: 'Contemporary Calligraphy Brushwork panels'.

This case study again makes use of calligraphy as the primary design element, although this project avoids any use of technology, capitalising on the beauty of hand drawn or painted calligraphy – using the bulding as a canvas for a calligraphic painting.

As permanence wthin an architectural context is important, ceramic materials offer the advantage over conventional painted calligraphy.

The aim was to attempt to capture the natural gesture and freedom of calligraphic brushwork – whether this could be done with ceramic materials, on a scale relevant to an architectural environment?

It was decided to use large scale tiles as a canvas for the brushwork. As Refractory Concrete had been found to be more appropriate than plastic clay for making large format tiles, it was decided to again use this material.

Stage 1: Tile making

A tile format of 60cm x 60cm was decided upon, producing them as thin as possible – for lighteness. As the intention was to hand paint or draw calligraphy directly onto the tiles, it was most important that the tiles had a very flat, untextured surface – the design beiong entirely about the qualities of calligraphy. In order to achieve this, a simple shallow box mould was made with an acrylic base (Fig 9.93).

Figure 9.93: Tile casting mould with acrylic sheet base.

12 kg of Refractory Concrete was mixed with 540ml of water in a planetary rotary mixer. For each tile, the prepared concrete was poured out into the shallow mould and trowelled out as flat as possible – front face of tile cast against the acrylic sheet to give a very smooth, blemish free surface (Figs 9.94 & 9.95).

Figure 9.94: Casting refractory concrete into acrylic faced mould.

Figure 9.95: Smoothing out reverse side of mould prior to setting.

Stage 2: Applying the calligraphy

Nine large-scale tiles were made and biscuit fired to a temperature of 1200°C, ensuring the tiles were fired flat surface in the kiln.

It was decided that the format of the final design would involve 8 of the large tiles in a 2 x 4 format, leaving one tile to use as test.

Rather than pre-design the calligraphy it was decided that the panel should convey a sense of spontaneity, with the calligraphic brushstrokes being the decorative element – not attempting to write anything, or even re-produce exact letter forms.

The first stage involved simply creating calligraphic strokes with paint on paper, using 10 and 15 cm wide emulsion brushes. Once the brushstrokes were practiced, copper oxide pigment was mixed with water and used on the test tile.

The initial experiments were done for 2 reasons:

To test the strength of pigment (oxide concentration)

To test the most appropriate firing temperature – tests were fired to 1080ºC and 1180°C (Fig 9.96).

Figure 9.96: Calligraphy brushwork tests: top row fired at 1180'C, bottom row at 1080'C.

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The results of the tests indicated the higher firing temperature gave a better quilty – not so muddy brown.

Following the tests, the 8 large tiles were arranged and the calligraphy painting began. Laying out the tiles together, allowed the whole panel to be decorated as a single canvas, with the brushstrokes crossing the tiles (Figs 9.97 and 9.98).

Figure 9.97: First copper pigment brushstrokes using 10cm brush.

Figure 9.98: Detail of calligraphic marks on refractory conrete tiles.

After the first of the initial copper brushstrokes, it was felt that visually the panel needed more interest, possibly as a background to break up the large areas of white tile still showing. The next stage therefore involved using a 25cm wide sponge – applying a very thin wash of copper pigment (Figs 9.99 & 9.100).

Figure 9.99 Drawing calligraphy using large sponge.

Figure 9.100: Fired results of brushwork and sponge calligraphy marks.

Having assessed the results using copper pigment, it was felt that the panel could be made richer through the application of a thin wash of glaze, applied over the pigment using further calligraphy style application. This was done using a thin wash of alkaline bearing transparent Earthenware glaze (Figs 9.101 & 9.102).

Figure 9.101 Applying thin wash of transparent Earthenware glaze with large sponge.

Figure 9.102: Completed, fired calligraphy panel, involving copper pigment & glaze application.

Conclusions

This case study demonstrates how free-hand calligraphic type marks might be used as a decorative design for embellishing an architectural space.

Although it was not intended to be read, or even accurately portray Arabic script letter-forms, the panel is unmistakably Islamic in style.

By creating large gestural marks, suggestive of calligraphy, it is hoped the panel conveys a contemporary aesthetic, with marks spilling of the edges of the panel. This is in stark contrast to the way calligraphic script was traditionally used on buildings – as formal bands or lines of lettering that were intended to be read, as well as being decorative.

The tiles can be produced and decorated very quickly, but relies on the maker having skills in calligraphy and a sensitivity towards composition. Each tile panel is a total one-off, adding a uniqueness to the overall design. The only drawback to the process for covering large areas is that that the scale of the panel relys on the reach of the artist.

In summary, the panel of free-hand calligraphic marks hopeful conveys a strong, contemporary interpretation of one of the most the most instantly recognisable forms of Islamic art and culture. It is hoped the project is seen as taking a very traditionally Islamic concept and realising it in a contemporary manner, that suits a contemporary architectural situation.

9.3.8 Case study 8: 3D Muqarnas.

Muqarnas is the term used for a form of architectural decorative device, commonly found in traditional Islamic or Persian architecture. Esentially they are a three dimensional form, often stacked in tiers or niche like arrangements, to decorate ceilings or the underside of magnificent Mosque domes.

Muqarnas are often very complex in shape, forming intricate stalactite arrangements.

This case study involves the development of 2 distinctily different shaped 3D forms, one a half barrel shaped form, the other a triangular shaped repeating form. The research attempts to simplify the complexity of traditional muqarnas, as time has not allowed the development of more complex, multi-unit forms.

9.3.8.1 Muqarnas No.1.

Stage 1: Design Process

The design process involved developing a 3 dimensional interlocking triangular form, using Solid Works 3D modelling software (Fig 9.103).
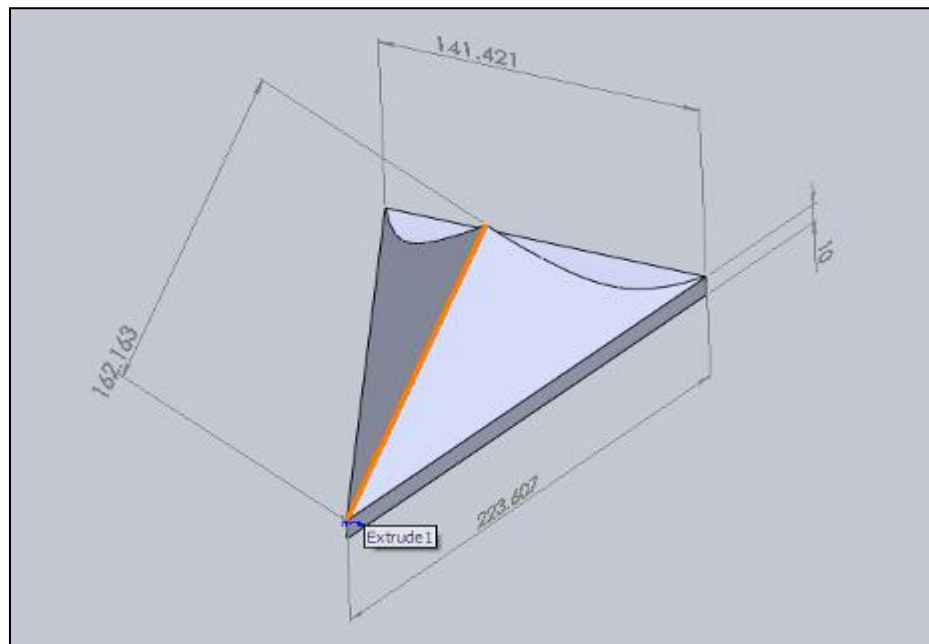
Figure 9.103: Muqarnas shape design, using Solid Works software.

Further refinements of the 3D form (Figs 9.104 and 9.105).
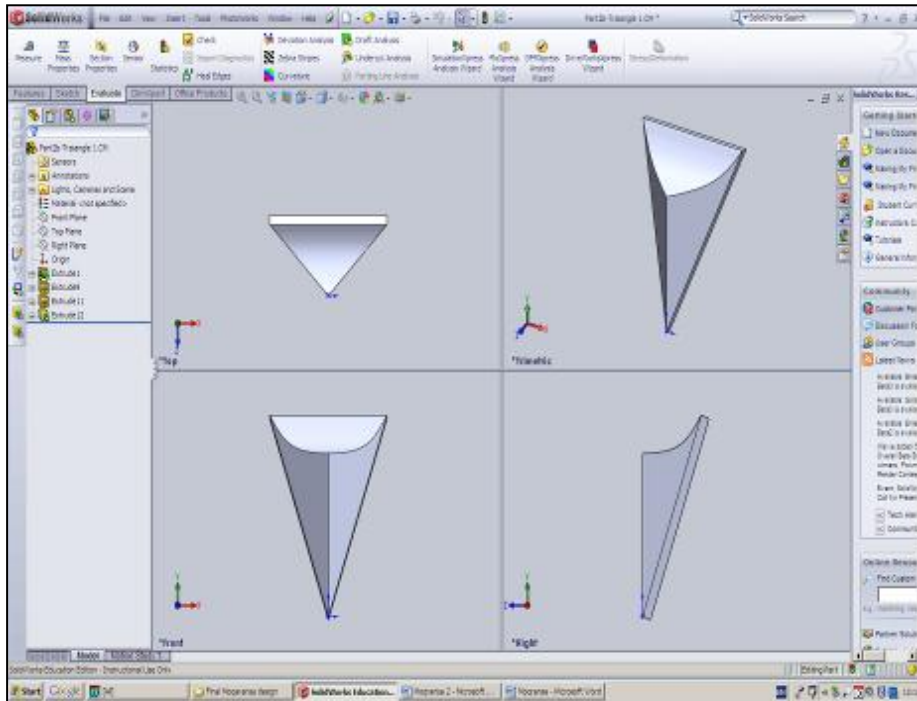
Figure 9.104: 4 angle view of form – Solid Works screen shot.
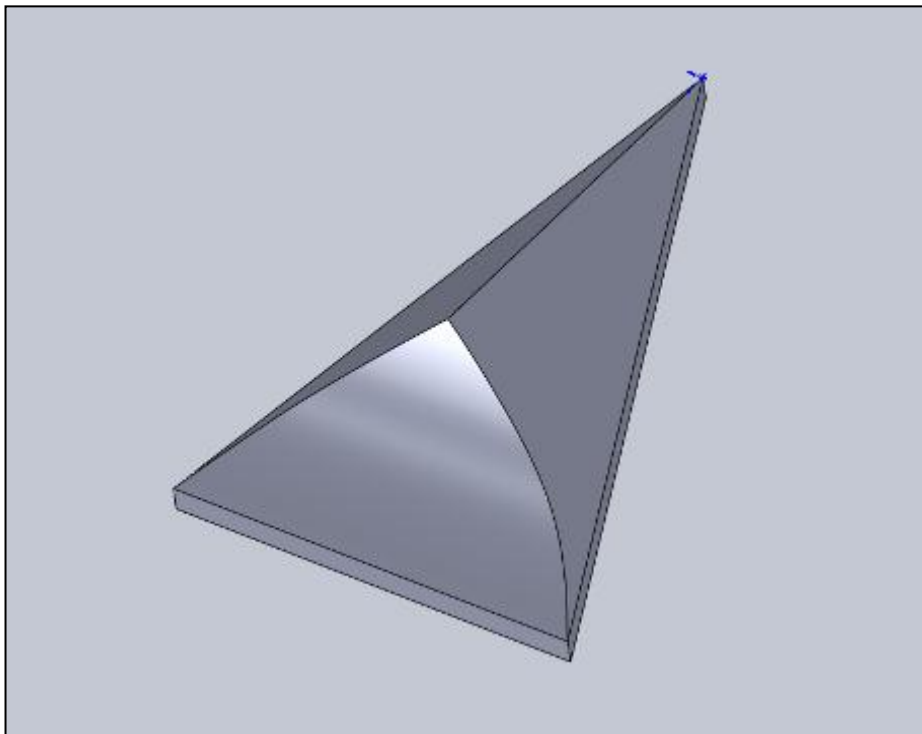
Figure 9. 105: 3D Muqrnas final design.

The individual shape was then repeated to gain an understanding how it would work as a multiple repeating unit (Fig 9.106).

Figure 9.106: Arrow shaped 3D Muqranas in repeat.

Stage 2: Production - Model & Mouldmaking

The making of the 3D form required a number of staged processes (not dissimilar to the process undertaken in case study 2.

Constructing a trianglular box to cast basic shape of plaster model.

Casting plaster into the wood box.

Transfering the final outline and dimensions onto plaster block.

Refining shape of plaster model – shaving and scraping plaster.

Creating plaster mould of model – casting plaster over model.

Following drying of plaster mould, production of Muqarnas forms by pressing clay into plaster mould (Figs 9.107 & 9.108).

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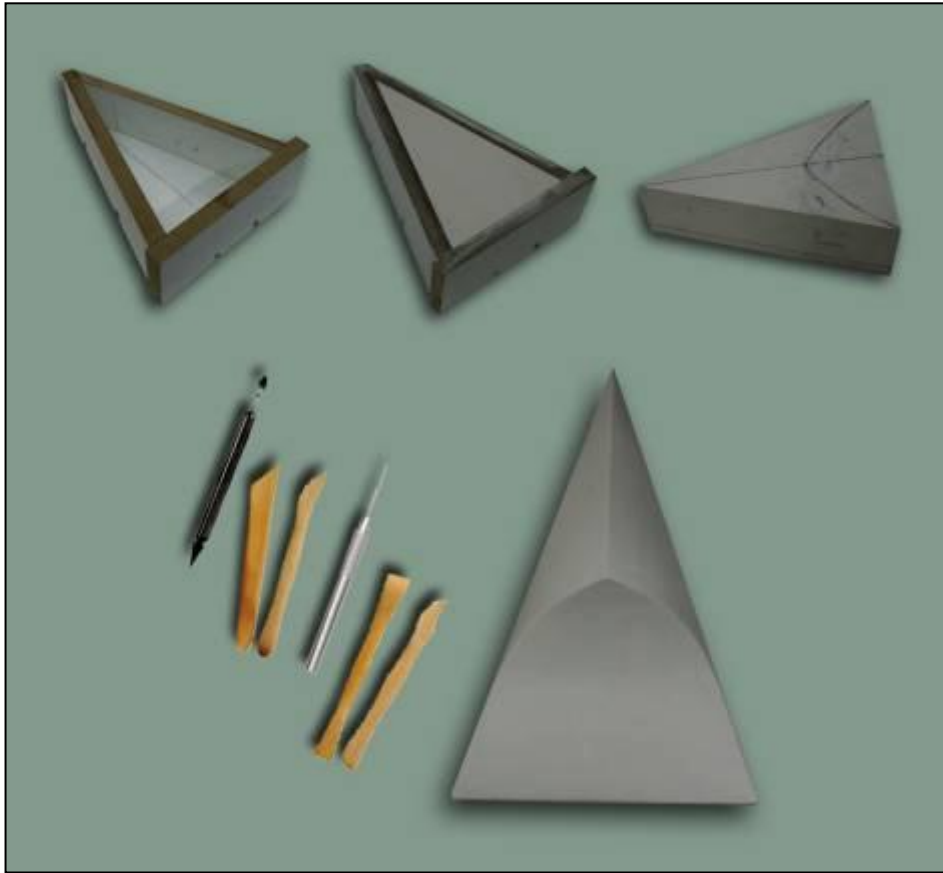
Figure 9.107: Stages in forming plaster model.

Figure 9.108: Plaster mould, clay pressed into mould and pressed Muqarnas.

Stage 3: Glazing the Muqarnas

Following biscuit firing a series of pieces were glazed in different glazes, in order to evaluate the most appropriate finish. Glazes 12, 8b, 23F & 23L were tested – see chapter 8. Glaze 23L was selected to use on the complete set of Muqanas units as it 'broke' on the sharp edges, ehancing the 3 dimensional properties of the unit (Fig 9.109).
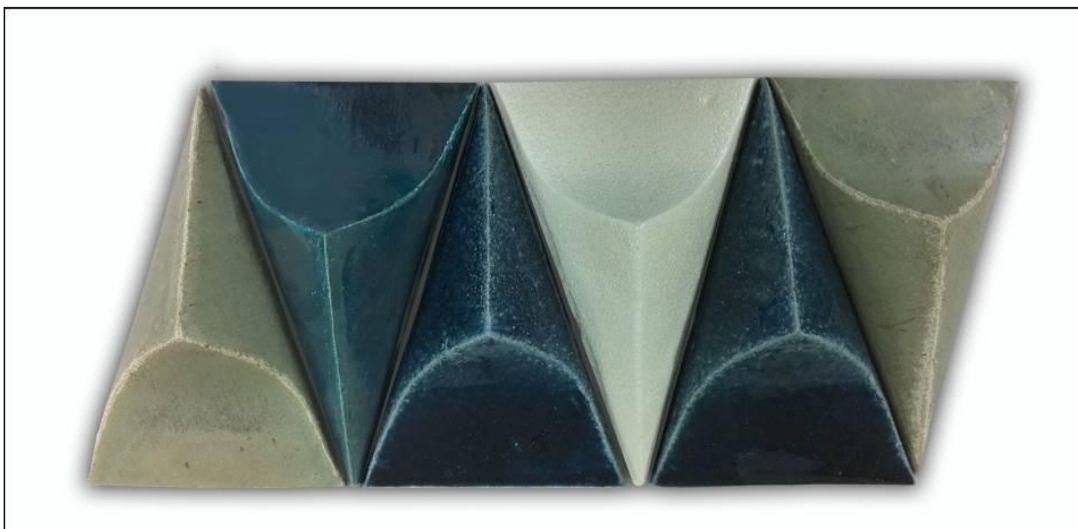
Figure 9.109: Test glazes on Muqarnas.

The entire panel of Muqanas units were then glazed by hand dipping.

The images below show how the unit can be used as a space filling embellishment device, or arranged in numerous different ways to create bands of deep relief decoration (Figs 9.110 & 9.111).
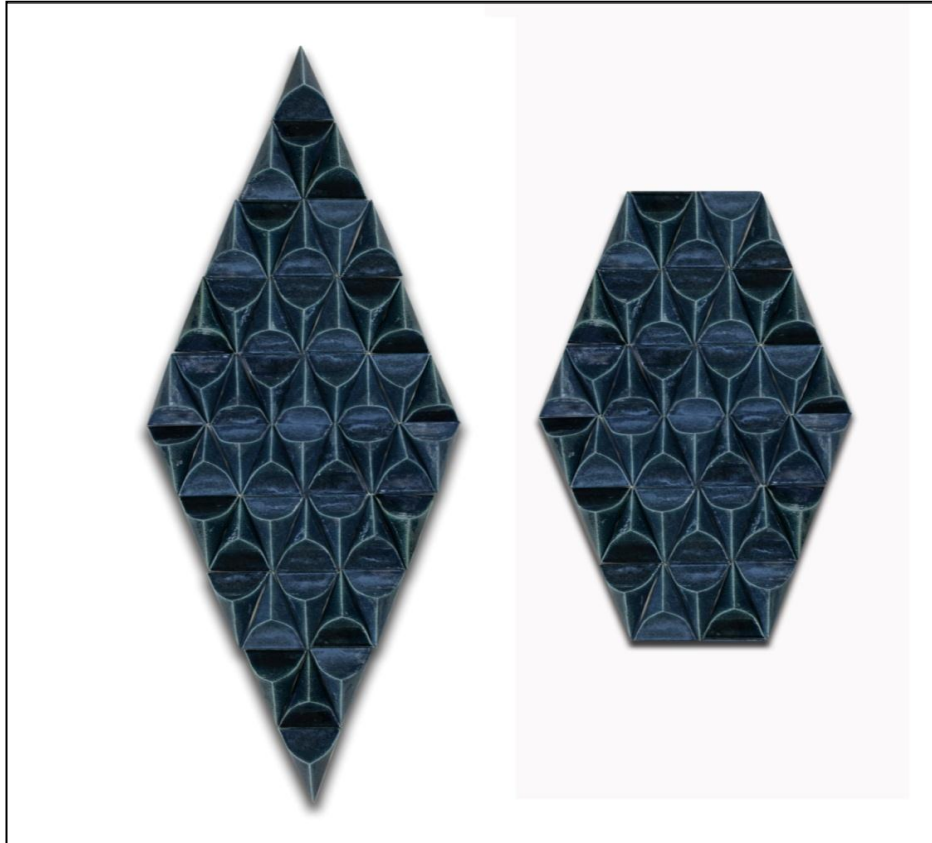
Figure 9.110 Muqarnas forms used as a space filling embellishment.
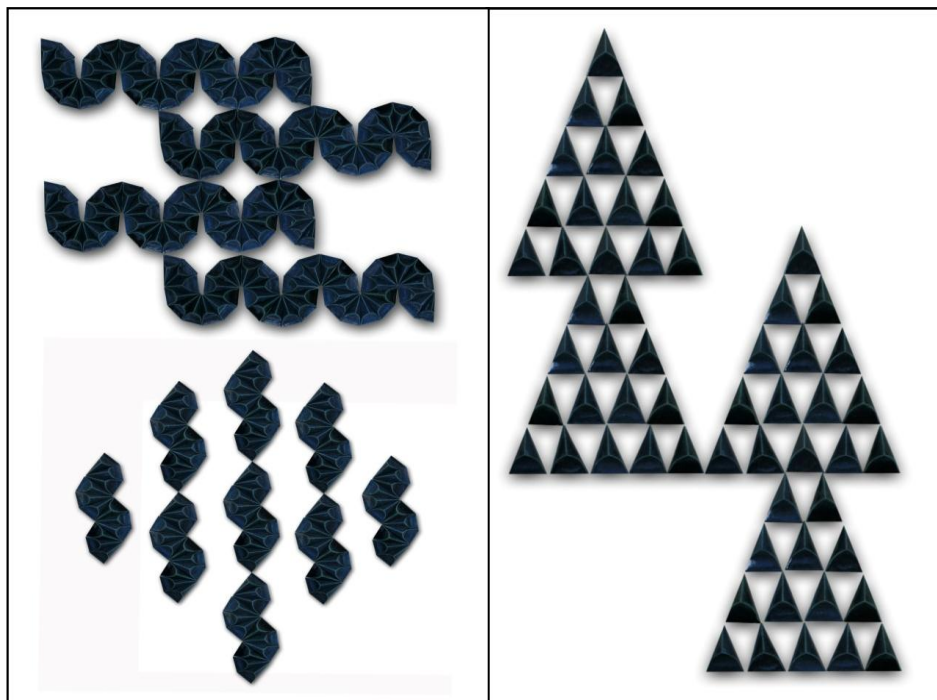
Figure 9.111: Further possible arrangements of Muqarnas forms.

The image below is a digital rendering, showing how the arrow shaped Muqarnas might be used on a contemporary building in Kuwait (Fig 9.112).
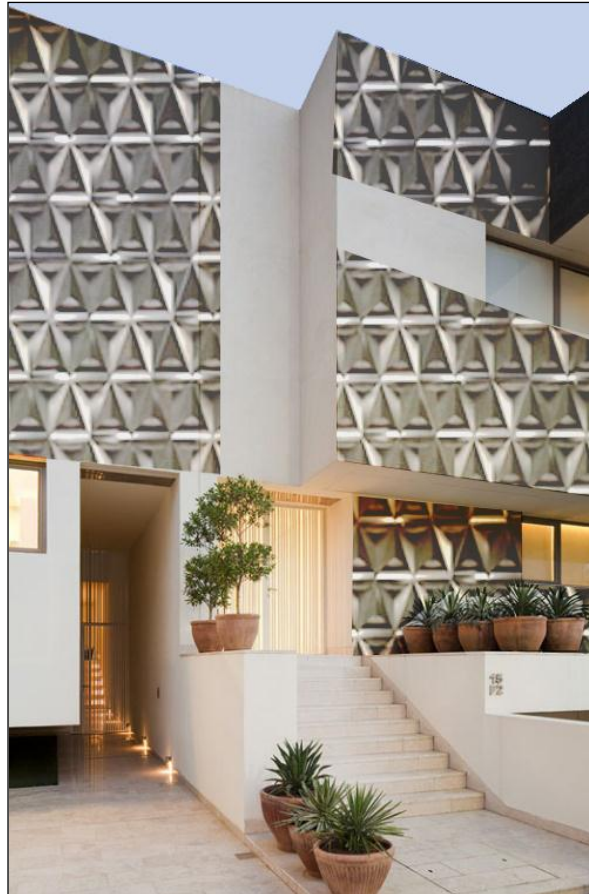
Figure 9.112 Rendering of how 3-D Muqarnas forms may be used on a modern building in Kuwait.

9.3.8.2 Muqarnas No.2.

Stage 1: Design process

It was decided to base the second Muqarnas design on the shape of the classic Islamic Mosque Dome. The dome is a hugely significant element of Mosque architecture, as it is usually situated above the main prayer hall, signifying the vaults of heaven.

Firstly, drawings were made of various Islamic domes.

A classic dome shape, found across the Islamic world was chosen as the shape for this study. It was then drawn up in Adobe Illustrator, in order to explore how it interconnects (Figs 9.113 and 9.114).
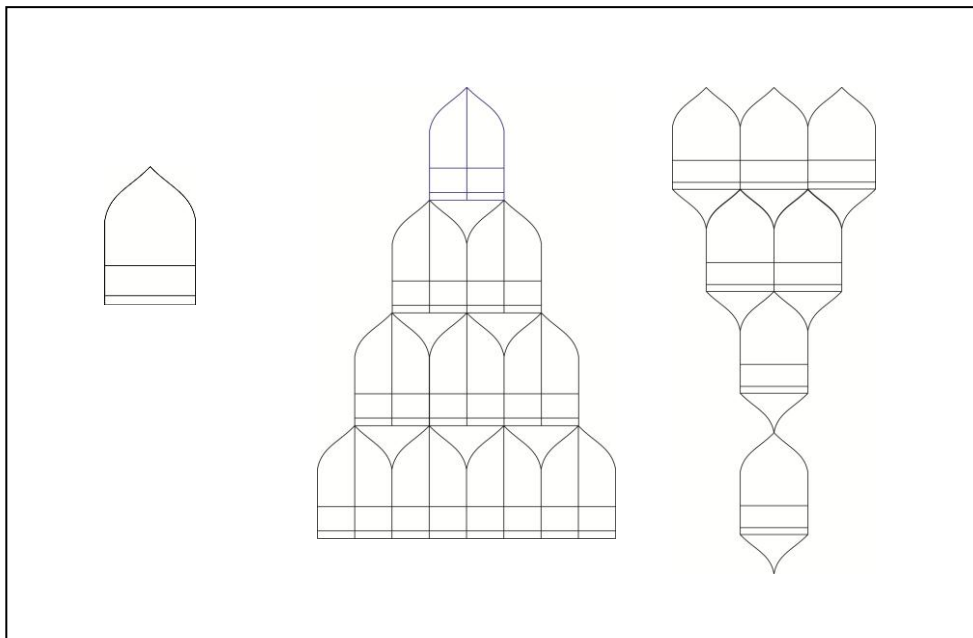
Figure 9.113: Design process development Muqarnas form.
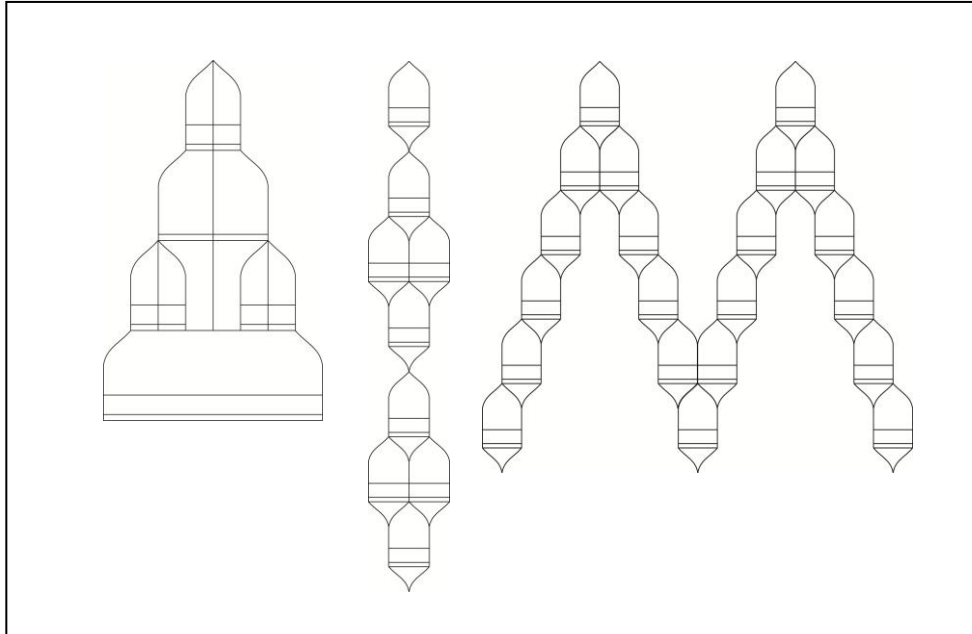
Figure 9.114: Demonstrating Muqarnas design form and given more development option can be applied within the architectural elements.

Stage 2: Model and mould making

Being a circular form, it was decided the best method of producing the dome shaped form was to make it on a lathe.

The process involve4d a number of stages:

Casting plaster onto a metal lathe cup, allowing it to be fitted to the lathe.

Rough turning the plaster block using metal chisels – in order to create a uniform, centred plaster block.

Turning the exact shape into the block, using callpiers to take measurements from the drawing and check the accuracy of the plaster model.

Cutting the completed model from the lathe cup.

Using a band-saw, carefully cutting the dome shaped form in half, in order to create a flat back, half round dome shape (Figs: 9.115, 9.116, 9.117 & 9.118).

Figure 9.115: 3D dome shaped Muqarnas model being turned on plaster.

Figure 9.116: Final shaping of plaster model before removing from lathe.

Figure 9.117: Completed plaster dome model before cutting.
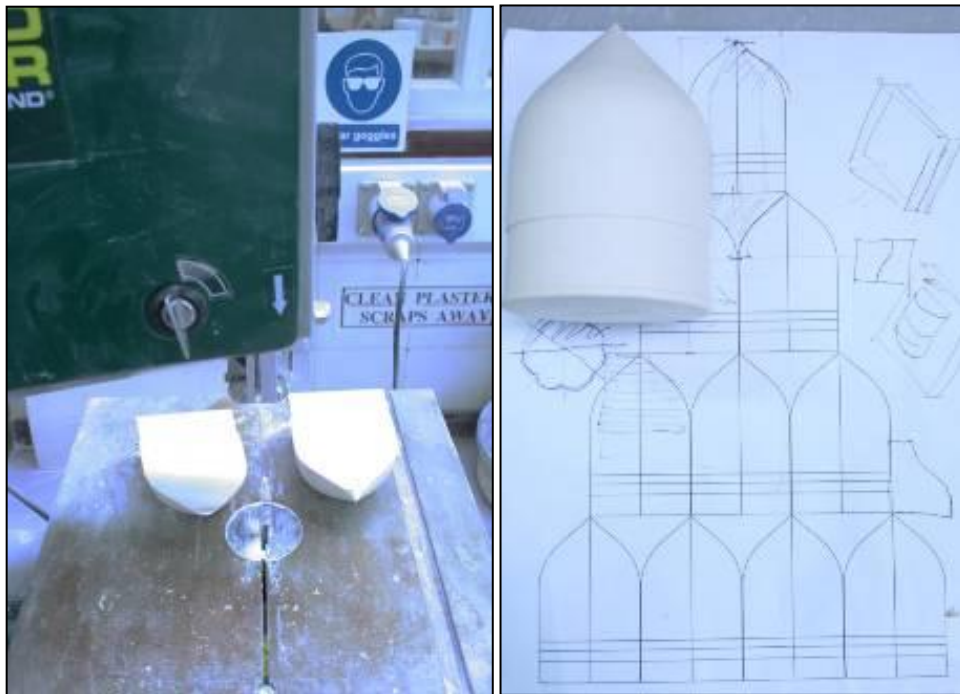
Figure 9.118: Cutting in half the plaster model using a band saw.

Having cut the model in half, it was decided that to create a fully space filling form, a further section was needed to be added to the model, getting rid of the flat base. This was done by creating a further half round shape and adding it to the bottom of the model.

A plaster press mould was then made of the model, using the same process as in the previous Muqarnas project.

Once the mould was allowed to dry, a number of clay form were made by firmly pressing crank clay into the mould (Fig: 9.119).

Figure 9.119: Stages of Muqarnas mould production.

Stage 3: Glazing

After biscuit firing the Muqarnas to 1000°C, a series of glaze tests were carried out. It was initially decided to test Earthenware and Stonware glazes - 7,23F & 23L (Fig 9.120).

Figure 9.120 Initial glaze tests – Earthenware & Stoneware.

Having evaluated the first tests, it was felt they repeated many of the glaze qualities of previous case studies.

As metallic lustre is a feature of traditional Islamic ceramics, it was decided to explore the possibility of using a lustre glaze on this set of Muqarnas forms. Traditional Islamic lusterware was created through a very complex process of firing, using metallic lustre pigments and a reducing atmosphere in the kiln.

It was decided to take a different approach, using a technique of firing commonly known as Raku. Raku firing was in fact originally developed in 16th century Japan. The process however can be controlled to give a stong lustre glaze effect, with

minimal technology. The basic process involves applying a conventional alkaline earthenware glaze that has 2-4% copper oxide added.

The ware is fired in a small kiln, usually outside. Once the kiln reaches top temperature and the glaze is molten (approx 1000°C), the ware is removed from the kiln using metal tongues. The red hot ware is then immediately placed in sawdust. The sawdust ignites and creates a lot of smoke – called 'post-firing reduction'. This process chemically alters the glaze from a turquoise glaze to a reduced metallic lustre – very similar to Islamic lustre.

The dome shaped Muqarnas were all fired in the Raku process, giving them a rich lustre surface (Figs: 9.121, 9.122, & 9.123).

Figure 9.121: Preparing tto lift the lid of the Raku kiln and remove the Muqarnas tiles).

Figure 9.122 Removing Muqarnas forms from Raku Kiln, for placing in sawdust.

Figure 9.123: Placing Muqarnas forms in dustbin containing sawdust in order to create lustre.

Following firing, placing in sawdust and cooling in water, the fired Muqarnas forms required cleaning before setting out in various arrangements (Figs: 9.124 & 9.125).

Figure 9.124: Grouped Dome Muqarnas.
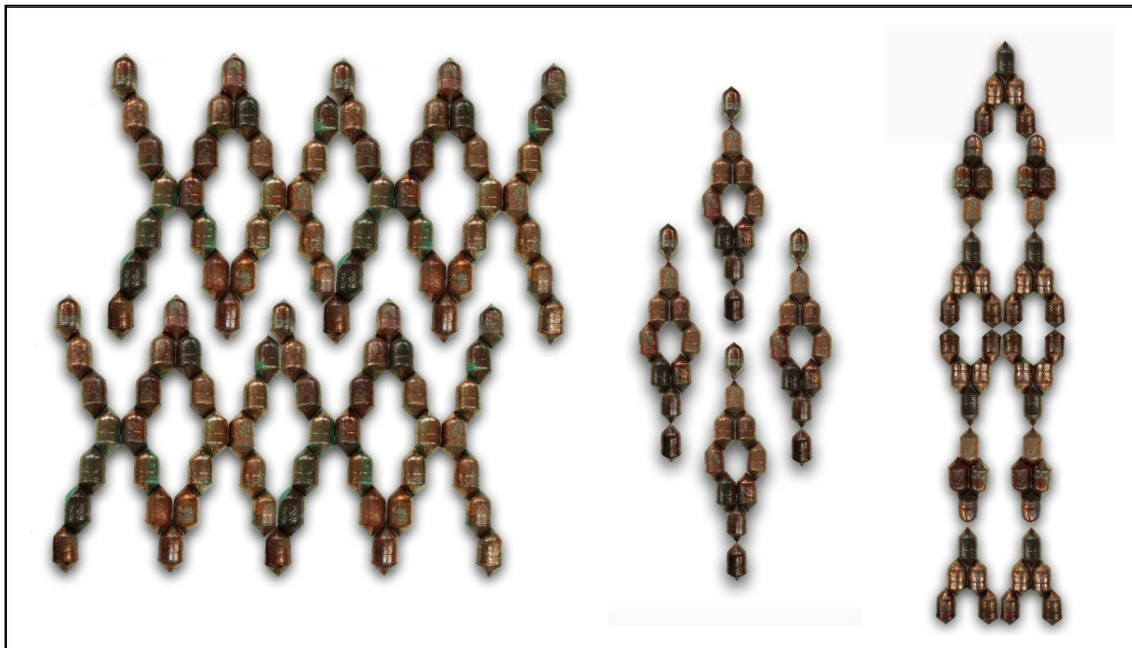
Figure 9.125: Arrangements of dome shaped Muqarnas Raku after the firing.

Conclusions

Whilst the above Muqarnas case studies do not attempt to replicate the complexity of the original Islamic forms, they complement other proposed case studies, which tend to be more surface orientated.

Both proposals could be apllied to buildings in a variety of ways depending on the situation – relief borders, embellishing small niches or covering entire sections of a wall.

As with other projects, the designing and making processes are a blend of traditional time-honoured techniques, combined with the application of new technologies. The process of making a mould for reproducing multiples of the same shape, goes back thousands of years.

The process developed here could easily be used on a small low-tech scale, or adapted to high volume production, if large numbers of units were required. It could also be applied to many variations on the designs proposed in this study.

Using the Raku process for firing one of the Muqarnas projects, was interesting. Combining a ceramic form that has its roots in traditional Islamic architecture, with a firing process originating from 16th Century Japan, is a reflection on contemporary ceramic practice, where ideas and processes are shared globally.

9.4 Results and analysis of the architects' survey of the practice-based research.

9.4.1 Introduction.

Having undertaken a series of case study projects, that propose a number of different solutions for introducing Islamic style ornamentation into the architectural environment in Kuwait, the next stage has been to obtain feedback on the proposed ideas.

In Chapter 7, a number of architects working on projects in Kuwait, were questioned on their opinions and thoughts about contemporary architecture in the country.

In order to obtain feedback on the proposed solutions, the same architects have been contacted again.

This section discusses and analyses the views, opinions and comments of architects in Kuwait, using a short survey on the proposals generated through the practice-based research.

After sending each architect an initial letter of permission (see Appendix pages 396-397) the research involved sending architects a short questionnaire and photographs of the results of the practice-based investigation. The survey was sent to architects who have been working in Kuwait in a number of different practices in Kuwait: Dar Futooh Al-Asfoor Consultant Engineers, Nezar Al-Anjari Consultants, Aljazeera Consultants, Arab Consulting Engineers, the Ministry of Religious Affairs in Kuwait, and the administration engineering office of the Public Authority for Housing Welfare in Kuwait. The survey took place between December 2010 & January 2011. Some architects replied by email, while others replied by letter. However, some architects in the sample failed to reply, either because they were too busy or were on holiday.

Eleven architects in total responded to the survey; their jobs lying mainly in the field of architectural design management and as consultants in building design in Kuwait.

The survey received responses from the following:

- Gulf Consultancies: Rojendra Tyogi (RT), Yasser Abdu-Monem (YA), and Nasreen Mursi (NM);
- Arab Consulting Engineers: Hisham Saliman (HS), Christopher Martinez (CM), Chris Sanan (CS), Nilo Laroya (NL), S. Sathesh Kumar (SK), Mohamad Ghaddar (MG) , and Abdulaziz AlRayes (AA);
- Ministry of Religious Affairs in Kuwait: Usama Farook (UF).

From an ethical perspective, all the architects agreed to have their names and views published within thi thesis.

9.4.2 Survey responses and data.

Architects' views and opinions on questions sent to them – requesting responses to the proposals for contemporary Islamic architectural embellishment.

Question1.

What are your thoughts on the proposed design ideas for Architectural ceramic embellishment? (Images attached: Figs: 9.17, 9.18, 9.19, 9.25, 9.29, 9.57, 9.58, 9.59, 9.89, 9.90, 9.91, 9.92, 9.100 and 9.112).

- RT: "The colour and patterns in the attachments are excellent and have been used in the proper place in the buildings".

- YA: "I think this project is a good idea that can develop and produce new ideas for the open and internal facades of the building".

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- NM: "After looking at the survey and the pictures in the attachment it can be said that combining Islamic art within contemporary architecture in Kuwait, and carrying out a survey of these ideas, has obvious advantages for architectural design".

- HS: "It's very good that we can have Islamic finishes. But they should have a bigger effect in architectural design on other buildings where we can use an Islamic finish".

- HS: "It could help as a design feature. However, if applied all over the building, it may be too much ornementation. If it could be applied sensitively, then for sure it would help enhance the uniqueness of a building design".

- CS: "Contemporary architecture with an Islamic pattern is one way of expressing a design that still identifies the modern and the traditional Islamic design, provided that the latter is not applied excessively".

- NL: "Finding the highest quality solution is the greatest goal of an architect, in order to generate efficient building principles or objectives by constant communication and research. By your proposal, the Islamic design of ceramic is excellent, but application on the building facade should be in limited areas, or as a focal point only".

- SSK: "It can be said that Calligraphy panels, 3-D geometry, and Arabic texts all reflect traditional Islamic ideas, whereas the three green screen designs seem more flexible. Personally, I feel Islamic art is more dynamic (in motion as continuous rotation). Again, different shapes like pentagons, octagons, and triangles may be limited together with a repetitive character. Hence, I feel the three green screen designs are static to a certain extent".

- MG: "Looks a interesting and worthwhile project. My only concern is that the blue colour of the ceramic might not always be suitable for external cladding on the suggested buildings".

- AA: "The use of letters and words could work well in some cases, like writing poems in a library, but it might not serve a purpose in other cases. In addition, the building itself should be the basis for creating the ornaments of the ceramic design".

- UFH: "I think it is good to use ideas of architectural ceramic in the design of the architecture because it gives a kind of psychological comfort for the inside and outside of the building; what is important is to employ this material well within the form of the architecture".

In summary, the feedback and views expressed by the architects were generally very positive, in many cases stating that the proposals for contemporary ceramic architectural embellishment were very interesting and valid. This was especially so in designs where elements of traditional Arabic architectural embellishment could be preserved through appropriate use of appropriate colour, form and pattern.

A number of the architects comments suggested it was important that introducing the detailing would create "visual comfort", ie would harmonize viusually and blend in with the existing architectural environment. Some architects did suggested that the embellishment should be applied sparingly so that the overall aesthetic impression of the building would not be lost, ie that the form and line of the building remains clearly visible. It was suggested that the blue / turquoise palette of colours traditionally associated with Islamic art, might not be appropriate on certain external façades – possibly creating disharmony with other contemporary architectural detailing. A number of the architects seemed to suggest that the basic design of the architecture must be taken into consideration when any ceramic embellishment is planned.

Overall however, the responses were very positive, suggesting the validity of the research and potential for real application in the future.

Question 2:

Do you think the proposed designs reflect traditional Islamic design in a contemporary way? A) Yes or B) No.

This question asks for an opinion on whether the projects developed within the case studies, successfully reflect traditional Islamic style in a contemporary manner.

Out of 11 architects in total, 8 responed 'Yes' (73%) and 3 responed 'No' (27%).

Comments from architects that responede 'Yes' stated:

RT: "If used properly, they really reflect traditional Islamic design. The colour and pattern of the tiles should go with the form of building".

YA "It needs careful planning to fit the size/scale of the decoration pattern to the building, like the screen ceramic".

NM: "The Islamic designs and patterns, and the Arabic calligraphy used in contemporary Kuwaiti architecture are great ideas; they could also be made with other materials that convey similar ideas as the ceramic materials".

HS: "Islamic architecture should not only be seen as successful in terms of effect and finesse, but it should be functional as well".

CS: "As time goes by, such materials as these may need to be upgraded for, but in order to preserve the sense of Islamic design, using Islamic patterns as an accent is still a good design idea".

NL: "Considering the design components in the developing world, globalization can be seen as an attack on traditional cultural values in Kuwait, in the design of new buildings, and in the architectural competition from neighbouring countries. By incorporating your proposed designs, I can see opportunities to retain a cultural identity".

SSK: "All of these designs reflect Islamic design in a contemporary way, especially the calligraphy panels, as long as they are done in a light colour when applying texture to the letters. The Arabic poetry is excellent but dark colours may not be suitable, as they will make the Arabic text difficult to read".

A minority of architects' views (27%) felt that proposed ideas did not necessarily represent Islamic design in a contemporary context. For example, UFH stated, "Within any architecture the application of architectural elements should firstly be serving the architectural space in terms of function and climate at the same time. In addition, there may be better uses of architectural ceramics rather coating the facades of the design".

MG; "No, it does not reflect an Islamic feeling".

AA: "No, what should be considered is the functional essence, and how these traditional elements were all responses to occupational needs; this could be implemented through the use of shaded sun screens that would provide a pattern of shade, maybe, or the use of arches, arcades and shaded walls as architectural elements".

To summarise, the majority of architects were encouraged by the proposal and thought that many aspects of the practice-based research could be successfully integrated into future architectural design projects in Kuwait. They were generally of the opinion that the proposal achieved and reflected Islamic design in form and colour and would help to preserve a strong sense of Arabic design.

Responses from architects that did not feel the propsed ideas demonstrated a contemporary interpretation of traditional Islamic design, appeared to focus on functionality of the building being the most important design consideration – which of course it is. The final comment from AA, seemed to suggest that the Islamic identity should be more fundamentally embedded in the design of the building, using arches and arcades. If architects in Kuwait did design building with the fundamental design making closer reference to Islamic design, then there might in fact be less need for embellishment detail. The fact is, (as proven in the literature review), most architects don't make any reference to traditional Islamic design in new building projects.

Certain other recommendations were made that might improve some facets of the proposed research. For example, one suggestion was that the size of the ceramic embellishment should be proportionate with the size and scale of the architectural space. Another suggested that the same ideas might be developed in other more appropriate, non-ceramic materials, that might harmonize better with the finished design.

Another comment suggested the importance of colour; how using paler colours might be more important than using dark blues or turquoise – just because they relate to a traditional Islamic palette of colour.

Question 3:

The selected architects were asked: "*Do you think the proposed designs would be appropriate for application on contemporary architectural designs in Kuwait?* A) Yes, or B) No.

It can be seen from the table above that the majority of the respondents (91%) believe that the results of the practice-based research proposal are appropriate for application on contemporary architectural designs in Kuwait.

Therefore, it can be argued, that architects working on projects in Kuwait acknowledge the value and worth of the proposed embellishment ideas and state they would be appropriate to be used within architectural projects, thus, hopefully increasing the sense of Islamic identity in contemporary Kuwaiti architecture.

9.4.3 Conclusion of Architects Survey.

The following draws conlusions from the final architects survey, aiming to summarize their views and responses to the design proposals outlined in the case studies (practice-based element of the research).

The majority of architects questioned thought that the design proposals offer interesting, new ideas for architectural ceramic embellishment. They generally felt they are appropriate in terms of design, colour and form; they could help introduce a new Islamic aesthetic within contemporary architecture, which in turn may help revitalise an interest in Arabic culture and the rich heritage of Islamic design. Furthermore the architects felt that the designs reflect traditional Islamic design in a contemporary way and would be appropriate for application on contemporary architectural design in Kuwait.

One architect acknowledged that globalization is eroding traditional cultural values in Kuwait and stated that the inclusion of detailing proposed in the case studies could help "enhance cultural identity".

It was suggested however that any embellishment should be sympathetic to the particular building it is to be used on, particularly in terms of scale and colour.

Scale is important as if too small, it may appear insignificant, lacking any impact. Too large and it may overpower the overall intention of the architects ideas – possibly creating aesthetic confusion. This suggests, quite naturally, that some of the architects are keen to ensure their functional and aesthetic intentions are not compromised.

In an ideal situation, the architect would make consideration for designing the embellishment into the overall design, rather than it be added as an afterthought or token of Islamic style.

It was also suggested that the basic concept of introducing Islamic style detailing might include other non-ceramic materials.

The overall responses were generally very positive, introducing architects prominent in the shaping of Kuwaits architectural future, to the idea of including elements of ceramic embellishment within contemporary building design. The feedback received from them was largely encouraging, vindicating the proposal's purpose. Their responses were also useful in terms of how the basic idea might be extended and refined beyond the scope of this research project.

Whilst the views of the architects varied from person to person, it is clear that the majority of architects acknowledged the importance of retaining a sense of cultural identity within the future architecture of Kuwait, and the ideas proposed in this research might help realise this aspiration.

CHAPTER 10: CONCLUSION, ORIGINALITY AND AREAS FOR FURTHER RESEARCH

10.1 Outcomes in relationship to the aims of the research

This chapter will analyse the outcomes of this research based on the following original stated aims:

Primary Aim

The primary aim of the project is to examine how aesthetic qualities, materials and technical processes found within traditional Islamic ceramics may be manipulated to offer new creative and aesthetic solutions for architectural decorative detailing for use within contemporary Kuwaiti architecture; that is, both identifiably Arabic and of the 21st *century.*

Secondary Aim

A secondary aim is to help perpetuate the legacy of Islamic Ceramics and demonstrate its relevance within contemporary culture, and its value as a source of creative inspiration for architects and designers, through a series of practice-based case studies.

As its title indicates, this paper proposes ways in which contemporary architecture in Kuwait might be embellished with the use of ceramic materials, in order to re-introduce a unique and rich cultural aesthetic that has seemingly disappeared. The first chapters endeavoured to contextualize the research, examining in detail the rich history of Islamic ceramics; the social, cultural, geographical and economic status of Kuwait; and examine through theories of globalization, how and why such a dramatic erosion in cultural identity has occurred, particularly within the architectural environment.

Whilst the origins of the research topic are based on observations made by the researcher of a rapid decline in the Islamic identity of the architecture of his country, these personal observations and assumptions have been supplemented by extensive reference to literature and scientific studies. Within a survey of the

Kuwaiti general public, over 75% of the interviewees felt that it was important to retain an Islamic identity, whilst over 90% agreed that the contemporary architecture of Kuwait has little or no Islamic identity. Comments supporting these views included:

- *"There are many beautiful aspects in the characteristics of Islamic cultural identity, so it must be retained"*;
- *"I feel very sorry that the architecture reflects modern culture; it does not reflect the Islamic identity"*;
- *"The shopping mall design and public places look like global and European symbols".*

The survey also confirmed the assumption that there is little public awareness about ceramics and its value in cultural terms, with over 70% of respondents admitting little understanding of its significance. This survey of the opinions of the general public survey verifies the researchers hypothesis, supporting the importance and timeliness of the research and validates the research questions.

As a means of concluding the project, it is important to briefly reconsider the issues that have contributed to the problem, before discussing how the practice-based component of the project has presented possible solutions.

Analysis of Islamic Ceramics

As discussed in Chapter 6 (6.3 – 6.49), the legacy of Islamic ceramic was established over a period of more than 1,200 years, from the Umayyad era (661) up to the end of the Colonial Period (1970). The literature demonstrates that this period of Islamic history provided magnificent and unique styles of both ceramics and architecture, with a strong identity in terms of aesthetics, creativity, design and technical processes. The impact of this period of intense creative activity has shaped Islamic culture and identity we know it today in many ways.

As discussed throughout both Chapters 6 and 9, geometric patterns combined with Arabic calligraphy have been the primary forms of artistic expression and ornamentation, dominating the traditional architectural styles of the Arab world, in addition to the use of stylised floral patterns, characterized in particular Ottoman and Iznik wares. There are many wonderful historical examples throughout the Islamic world, of how ceramics and architecture have been combined, using geometric patterned tiling, combined with calligraphic script: Dome of the Rock in Jerusalem, the Great Mosque in Damascus, the Qarawiyin Mosque in Fez in Morocco and the Alhambra Palace in Spain. The literature also identifies particular a palette of colours that further typified traditional Islamic ceramics. This included rich cobalt blues and alkaline turquoise, combined with tin glazed white. Lead-based greens and honey colours also occur and in certain instances the metallic lustres are utilized to further enhance the visual richness.

As outlined in Chapter 6, the history of Islamic ceramics has a number of styles and traditions that are quite distinctly different, often passed on from one Islamic civilization to another, through migration and trading. Whilst this research has been aware of these regional variations, the aim has been to apply the most typical and universally recognised characteristics of Islamic ceramic art, namely geometric pattern and calligraphy.

As discussed throughout the literature review (Chapter 2), the onset of globalization, and particularly the discovery of oil, has brought about a steady decline in many of these ceramic traditions throughout the Islamic world. This can be attributed to many things, but it appears that a primary cause has been the desire to adopt many aspects of Western, non-Islamic style. As a consequence of these changes in cultural values, huge amounts of Western-style goods are now imported from Europe, the USA and the Far East, which has dramatically lessened the demand for traditional products that have clear regional identity. This has resulted in the making of traditional products, often using traditional skills and processes, becoming economically less viable. Ceramics is a prime example of

this, as illustrated by the fact that Kuwait has no ceramic manufacturing, importing 100% of its ceramic wares, such as tiles and crockery (see section 7.16 - ceramic distributors survey, questions J and I). In turn, this has been a major factor in diminishing the cultural identity of the region, with little or no new work being made or available to consumers, designers or architects that references any of the rich Islamic artistic or creative traditions.

Analysis of the Socio-Economic perspective

A key area of this research has been the application of the sociological perspective in analyzing the erosion of Islamic identity in Kuwait. The paper discusses how the discovery of petroleum in Kuwait marked a turning point in the appreciation and application of traditional styled ceramics within the architectural environment (Section 4.10). The coming of the petro-dollar transformed the socio-economic development of the country leading to a rapid decline in the interest in traditional Islamic design and architecture, with these being replaced by modern building edifices. Post-colonial and neo-imperialism theories have been used to explain how the influence of Western culture and values has dramatically altered the socio-economic development of Kuwait. As a result of the huge growth in influence of Western culture through the process of globalization, the 1,200 year legacy of Arabic and Islamic identity has been rapidly eroded.

Some academics believe the cultural decline started happening well before mid 20th century, however, with the discovery of oil only accelerating the process. As outlined in Section 2.4, Ali Bin Naye (1993) states that:

> *"since the sixteenth century, the political, economic and social factors that had caused the decline simultaneously led to the penetration of Western cultural trends in the Islamic world"* (Ali Bin Naye, 1993, pII).

The decline in traditional Kuwati culture and values is extremely complex and can be attributed to many inter-related factors. However, the evidence suggests two broad overriding reasons – economics and communication.

Kuwait and the Gulf States generally have clearly seen a huge increase in their economic strength since the discovery of oil, which has both increased their spending power and ability to attract foreign (non Arab) investors and businesses. Over the last 30 years, dramatic increases in global communication and knowledge exchange, such as TV, the internet, trade, ease of international travel have, exposed the population of Kuwait to Western and far Eastern culture, lifestyle and values. It can therefore be argued that this increase in economic power and exposure to non-Arabic society and culture has created an aspiration towards adopting a more Western style of living, leading to changing states of behaviour that have seemingly destroyed any real understanding or appreciation of more local or regional traditions or values. Given this point, it is interesting that in the survey undertaken of the general public in Kuwait, over 75% of those interviewed stated it is vital to preserve and keep the traditional Islamic cultural identity.

Architectural perspective

Almost all cities and major towns in the Gulf States experienced dramatic changes during the second half of the 20th century. While these developments have occurred in the social, political, economic, and cultural arenas, they are especially evident in architecture. The oil boom has resulted in a flourishing building industry, attracting foreign investors, businesses and architects, who have all influenced the design of the majority of contemporary buildings built in Kuwait since the 1970s (Khattab, 2001). This view is supported by the majority of architects interviewed (section 7.2), with growing economic power, the increased awareness of Western culture and a desire to adopt many of its traits, have been the reasons that have dramatically shaped the design of contemporary architecture in Kuwait and the throughout the Gulf States.

The research has identified three factors responsible for this transformation in contemporary architectural styles and designs in Kuwait. The first relates to the role of owners / clients in the design process. It is clear that most businesses aspire to

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the new modern style of building rather than a traditional Islamic style. Secondly, architects now seem to have little knowledge or appreciation of the Islamic style of design. Thirdly, the Kuwait Municipal authority and the Kuwaiti Public Housing Welfare authority appear to lack the power to enforce building regulations that could encourage the traditional Islamic style of building design. With little or no traditional style architectural products being manufactured in Kuwait, the style of architecture now being developed in Kuwait has been profoundly affected by reliance on imported building materials from Europe and America.

It can been clearly seen therefore that for a number of reasons, mainly oil related, the cultural, social and economic face of Kuwait has changed dramatically over the last 40 years. Whilst this has brought many benefits and increased quality of life, it has also resulted in dramatic erosion of the cultural identity of the country, particularly in terms of the arts and the architectural environment. This has manifested in fewer buildings being constructed that have any clear regional identity; they could belong to any major city in the world.

As with more general issues relating to the retention of Islamic identity, the views of the general public in Kuwait seem to contradict what is actually taking place, with nearly 65% of those interviewed desiring a greater reference to traditional Islamic identity in the contemporary architecture in their country (Question C, Section 7.3.3). As ceramics and traditional architecture in many areas of the Islamic world, have been so closely linked, the demise in traditional buildings has meant a simultaneous erosion of ceramics as a material for creative expression.

Practice-based phase

The practice-based phase of the research has aimed to offer proposals for addressing this loss of cultural identity in these particular fields, suggesting a number of ceramic-based projects that might be applied within the architectural environment in Kuwait. However, it was decided not to strictly adhere to traditional

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materials or processes as the intention of the projects has not been to replicate historical examples, rather offer a contemporary approach to embellishment.

In all cases except one live project (case study 3), the projects are aimed at suggesting how products made from ceramic materials may be used to embellish contemporary architecture. Each project sought to offer a different style of embellishment for use in different situations. Each of these designs was originally inspired by either Islamic geometric pattern or calligraphy; re-occurring themes that typify Islamic art, ceramics and architecture. In every case the project was undertaken within the University of Central Lancashire design studios and workshops.

Despite every case study being approached as a one-off or short batch production project, the researcher was always mindful of the possibility of scaling up any given project for industrial mass production, or batch production in a smaller workshop environment. An ideal outcome would be for a local small scale production facility to be established, that had the capability to produce significant amounts of a given item, yet was small enough to respond to individual bespoke projects, unlike larger scale industrial manufacturers.

Evaluating the Practice-Based Research:

Glaze Tests and Colour Experiments

The preparatory phase of the practice-based research involved the development a range of glazes that could be used on later case study projects. The glaze tests and colour experiments were developed as a palette of colours and tones without the necessity of researching the exact chemistry of historical glazes. It was important that the glazes conveyed a visual association with traditional Islamic ceramics, whilst also being durable and stable, able to withstand the extreme heat

and the erosive nature of windblown sand that characterize the environmental conditions of Kuwait.

The earthenware series glazes (tests 1-18), fired between 1060 and 1080°C are most closely related to traditional Islamic glazes, as historically all Islamic glazes were fired within this temperature range. This approach was used where intense colour and a rich, translucent quality was particularly important in conveying a strong sense of Islamic identity. However, earthenware glazes are not the most functional glaze, as they have a tendency to craze and are relatively soft, making them less durable for harsher environmental situations. For this reason they tend to be better applied on embellishment detailing that is situated inside a building.

The stoneware glazes developed for the case studies (test series 19 – 23), fired between 1260 and 1280°C are not authentic Islamic glazes. They were developed because stoneware fired ceramics are far more durable, not only on the surface, but with increased overall strength of the ware. They also offer a more varied range of colours and textures than earthenware glazes, particularly when blended or applied in multiple layers.

Clay Bodies

As with the glazes, no attempt was made to exactly replicate clay bodies used in traditional Islamic ceramics. These would have varied dramatically, being sourced locally to the place of production. In most cases they matured at low temperatures, making the clay lack in durability.

Whilst preliminary tests of clay bodies included a terracotta earthenware clay and smooth and textured (Crank) stoneware clays, the majority of case studies used either the textured Crank clay or a non-clay based material, Refractory Concrete. As outlined in Section 8.2, the use of Refractory Concrete (RC) was based on earlier PhD research undertaken by Bremner (2008), which explored the use of

RC, a material traditionally associated with the high temperature chemical and metallurgy industries, as a substitute for clay in certain creative contexts. The advantages of using RC over conventional plastic clay are that it has little or no shrinkage and does not warp, plus it can be glazed just as clay. This makes it an ideal material for the production of flat and/or dimensionally accurate forms. Whilst technically a 'high-tech' material, RC requires no specialist technology or knowledge beyond that required for casting conventional concrete. For this reason, it was used in a number of the case studies for the desirable attributes outlined above. Textured Crank clay was used in those projects where the properties of Refractory Concrete were not necessary (case studies 2, 5 & 8).

Application of new technologies

Whilst all the case studies have their roots in traditional Islamic ceramics and associated age-old forming processes that have been passed down through many generations, the aim of this research was not to necessarily replicate historic processes. Instead, the objective of this research was to develop work that is appropriate for contemporary environments and which can be made using the most efficient means. Where the application of technology was appropriate, it was used to either aid the design process or actual production.

Adobe Illustrator software was used in the design phase of all the case studies. It allows dimensionally accurate drawings to be produced, in addition to allowing ease of changing shape, proportion and scale.

Solid Works 3D solid modelling software was used in a number of the projects as it allows the designer to create fully formed 3 dimensional, virtual models of shapes – enabling the designer (or client) to fully understand the form before committing to actual production. Solid Works is also use as the interface software for rapid prototyping (CAD – CAM).

CNC Rapid Protyping was used in two projects (1 & 6), where it was necessary to create a graphic, accurate and low relief texture. The machine allowed the digital creation of the texture, which could then be translated accurately into a mould, without the need for time-consuming hand carving.

Laser cutting technology was used in case study 4 as it allowed highly accurate cutting of MDF sheet, which was essential for the fretwork screen model. Again, without the application of the technology, the piece would have taken considerably longer to create and would not have been as dimensionally accurate.

The use of Silicon Rubber moulds was also useful, providing a mould material that is more durable and accurate than traditional plaster (gypsum) mould making material.

All of these more advanced technologies are now widely available and complement the traditional processes used throughout the case studies. The technologies could easily be applied even within a small production studio, as there is a lack of bureaus or specialist companies that offer digital prototyping services.

In contrast to the application of technology, where accuracy and control of shape are very important, case study 7 relied almost exclusively on the hand and eye of the artist calligrapher. The aesthetic properties of this proposal are entirely concerned with the hand brushstroke and gestural marks.

Blending new technologies with traditional hand processes creates an interesting connection with the overall intention of the research, where traditional ideas of embellishment are redefined within a contemporary context. The case studies themselves are not necessarily intended to be definitive solutions, but a series of proposals that demonstrate different ways in which ceramic materials may be used to embellish a contemporary building. The intent in every case has been to develop

design proposals that are clearly Islamic, conveying motifs or designs that are not culturally ambiguous. It was the intention to present a range of different types of ornamentation; offering architects multiple opportunities for introducing them within building projects.

Whilst only one of the case studies (3) was actually a live project, now installed in a Mosque in Kuwait, all the other proposals could easily be integrated into an architectural environment without requiring any major alterations to the fabric of the building. They were all designed specifically to be installed once major construction is complete. This supports the suggestion of the final architects survey, which found that it would be desirable if an embellishment scheme were considered earlier in the process of designing of a building, allowing it to be more integrated into the overall scheme. This seems likely to mean that embellishment could be more 'site specific', allowing the embellishment designer to work in close consultation with both the architect and the client, developing detailing to complement the local situation.

As suggested in a number of the architect's responses, scale and colour play an important role in the success of an embellishment project. A small tile or motif would clearly be lost if placed on a large expanse of wall, for example. Equally an over-large element could dominate a situation and confuse the line or feel of the building, possibly marring the overall intentions the architect had for the building. Colour is also likely to play an important role in the success or failure of an embellishment. Architects MG and SSK both mentioned the use of colour in their responses, suggesting that the tone of colours should be paler. Whilst the researcher had made assumptions that the rich, deeper tones of blue and turquoise found in traditional Islamic ceramics would be necessary to convey the 'Islamic message', it is interesting that both the architects suggested paler tones may be more suitable for a contemporary architectural environment. This suggests that if the shape or texture of the ornamentation is strong enough and has clear Islamic properties, then an applied colour may not be always necessary. The

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digital rendering of the completed Case Study 6 ('Calligraphic poetry') Fig 9.90, demonstrates this possibility. As discussed in the conclusion to that project, the rendering could have been realised in cast concrete. The calligraphy pattern could therefore allow the creation of a large scale mould for casting large pre-fabricated concrete panels.

This introduces the issue of appropriateness of materials raised by architect NM, responding to Question 2 in the final architects survey: *"…they could also be made with other materials that convey similar ideas as the ceramic materials".* This is a valid point, as there are now many other materials now available to the designer or architect, which could be used to embellish a building, such as glass, steel, concrete or plastic. Historically, the Islamic world had an extremely strong tradition of ceramics, so ceramic products were the obvious material for ornamenting a building. Whilst this particular body of research focuses on ceramic materials, the concept of applied Islamic architectural ornamentation could break from tradition and involve a wider range of materials. This would one of the fundamental aims of the research to be retained, namely the re-introduction of a clear identity in contemporary architecture.

Returning to the overall aims of the research project, the responses from the final architects survey clearly indicate that they believe the proposed embellishment ideas do provide *"…new creative and aesthetic solutions for architectural decorative detailing for use within contemporary Kuwaiti architecture".*
Quoting architect NM*: "After looking at the survey and the pictures in the attachment it can be said that combining Islamic art within contemporary architecture in Kuwait, and carrying out a survey of these ideas, has obvious advantages for architectural design".*
Architect NL goes further, stating that the proposed solutions may help re-address the acknowledged loss in Islamic identity*; "….by incorporating your proposed designs, I can see opportunities to retain a cultural identity".*

With regard to helping perpetuate the rich tradition of Islamic ceramics, the media and education could play an important role, encouraging the appreciation and use of Islamic ceramics and the importance of their cultural identity through media exposure in TV, magazines or lectures. It is also suggested that appropriate policies and economic incentives could help the market to support and increase native industry, reducing reliance on foreign imports. Encouraging the production of ceramic products made within Kuwait would offer exciting new creative opportunities for architects and designers to use materials that convey a sense of local or regional identity.

10.2 Originality of the Research

Rooting itself in practice, this research has aimed to propose solutions to a 'real' problem that has been identified by numerous commentators: namely, the erosion of a cultural heritage within a rapidly changing society and economy. More specifically, personal observation and reference to literature has identified the erosion of any regional or cultural identity within contemporary Kuwati architecture.

This study was based on the hypothesis that the transformation of the global economy has had a dramatic impact and influence on the cultures and societies of most regions of the world (Robertson, 1992). The research conducted a case study of Kuwait, examining the way in which the process of globalization has led to a sharp erosion of the country's traditional cultural heritage through, massive import of Western ideas and cultures. The main original contributions of the work are twofold. Firstly the study applied sociological theories to determine the nature and dynamics of cultural change in Islamic arts and ceramic design within the Gulf States and, more specifically, in Kuwait. Secondly, the study adopted a practice-based method that has involved developing proposals for reinvigorating traditional Islamic architectural ceramics, using empirical research methodology. Originality is also found through combining these research methods from different academic disciplines; combining theoretical social science research through the use of

surveys conducted within Kuwait, which in turn informed empirical, practice-based methodology that is more commonly associated with art and design research.

Within the practice-based phase of the project, a particularly original aspect of the research involved the use of Refractory Concrete as a material for creative expression, as first highlighted through the research of Bremner (2008). Refractory Concrete was used to provide novel ways of creating architectural embellishment, facilitating the development of products that would otherwise be difficult or almost impossible to produce using conventional clay. The potential of this material within the context of architectural ceramics raises numerous creative opportunities for other artists, designers and craft makers in the future.

10.3 Aesthetic Vocabulary.

The proposal for "New Aesthetic Vocabulary" of architectural embellishment that is stated as primary aims within the research, is addressed in a number of ways. Aesthetics while pertaining two ideas of beauty and visual appearance, also involve context - critical judgement and emotional connection with time and place.

As discussed throughout the project, the dominant aesthetics of contemporary architecture in Kuwait and other gulf states tend to lack decorative adornment, rather relying on "form" combined with large expanses of glass and concrete and steel – a similar aesthetics to that found in most developed cities throughout the world.

The "New Aesthetic" proposed within this project, involved combining this prevailing architectural style with decorative detailing that embodies the architecture with a sense of place.

The embellishment developed within the case studies, whilst not intended to be the dominant visual force, helps connect the architecture visually, emotionally and

philosophically with the culture and history of the country – creating an identity that is contemporary yet clearly referencing the known aesthetic tradition of the past.

This new aesthetic specifically applies contemporary design principals, new materials and technical processes, to the rich historical tradition of Islamic Ceramics – repeating geometric patterns, calligraphy, colour palette …etc. It is this blend of contemporary and traditional elements that aims to create the new aesthetic style or vocabulary.

10.4 Opportunity for further research

Given the depth of the decline in cultural identity in Kuwait, and more specifically the decline in Islamic style within the contemporary architectural environment, there is huge scope for further research within this area. There are numerous other examples of loss of cultural identity, particularly within areas of the creative arts, together with broader areas of cultural decline within Islamic countries. This project might therefore serve as a model for policy makers and future researchers to develop processes for arresting cultural decline within other disciplines. The government might also incentivise the media and other organizations in Kuwait to explore ways in which to encourage greater cultural appreciation and pride, especially in young people, through the use of TV and radio programmes or through projects and events. It is also suggested that educators in Kuwait could be sponsored to conduct a study on re-drafting the country's educational curriculum, creating opportunities for encouraging revival of Islamic cultural identity. The Kuwaiti Ministry of Education could play a crucial role in this area.

Furthermore the research may serve as a model for stemming the cultural decline in countries beyond the Islamic world. As globalization is now so endemic, there are undoubtedly many situations where cultural decline could be arrested by the re-introduction of traditional materials or processes in a creative, contemporary way. Given that enforcing stricter importation or planning regulations may help

stem the decline in cultural identity, this may also be a very valuable area for further research.

Creating incentives and opportunities for more localised production, that utilises local materials, skills and traditions, could also be an invaluable area of further investigation, exploring how policy may be shaped to encourage such activity. For example, as there is now no ceramic manufacturing within Kuwait, research could be undertaken to develop specific policies to facilitate this.

Finally, as the case studies themselves serve as proposals for re-introducing elements of architectural ceramic embellishment, there is vast scope for further creative research by artists and designers to build on these initial ceramic embellishment proposals whilst developing relationships with architects and clients commissioning new buildings.

10.5 Concluding comments

Despite it being clear from the literature that numerous academics and commentators have discussed the overall decline in cultural identity within the Islamic world and more specifically the loss of identity of architecture in the Gulf States, no previous research has discussed the effect that this has had on the decline in Islamic architectural ceramic embellishment.

This is a crucially important issue, as one of the defining aspects of the unique aesthetic riches of traditional Islamic architecture has been application of ceramic ornamentation. As referenced in the introduction to this research project "Islamic ceramic tile-work is surely one of the most magnificent forms of decorative art in the world" (Degeorge and Porter, 2002, p6). It would be an incalculable loss if this rich vein of artistic expression was lost forever.

It is the hope of the researcher that the publication of this thesis and bringing the research to the attention of the various architects surveyed within the PhD, architectural ceramic embellishment may regain a little of its former status. The case study projects offered in this research are only a sample of possible ideas intended to raise awareness of the decline of ceramics and demonstrate how they could be applied within the contemporary architectural environment of modern day Kuwait – '*proposals for a new aesthetic vocabulary in contemporary architectural embellishment within Kuwait*'; '*… that is, both identifiably Arabic and of the 21st century*'.

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APPENDIX

Invitation letter for interview with Ceramic Distributors.
-PERMISSION LETTER-

INVESTOR IN PEOPLE

30 March 2007

uclan

Mark Lamey BA(Hons)
Head of Department

Department of Design
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To whom it may concern,

FAHAD ALKANDARI

I would like to confirm Fahad Alkandari is a research student, studying for a PhD at the University of Central Lancashire.

He is researching trends in contemporary architectural style, in the Gulf States, and has authority to conduct research interviews, with the kind permission of the interviewee.

Yours faithfully

David Binns
Research Supervisor
Department of Design
University of Central Lancashire
Email: dsbinns@uclan.ac.uk
Tel: +44 (0) 1772 893384

PRESTON ▪ PENRITH ▪ CARLISLE

Survey for Ceramic Distributors in Kuwait

Name:_____
   Job: 1- owner of the company. ☐ 2- Sales manger. ☐ 3- Sales man. ☐ 4- I don't prefer to mention. ☐
 	
   Years experience: 1- 1-5 years. ☐ 2- 6 -11 years.☐ 3-more than 11 years. ☐ 4- Non-specific. ☐
   Name of the shop:_____
   Date: _____/_____/2007.

Tick (√) the relevant box according to your opinion:
First section: General perspective on Kuwaiti ceramic.

A- Who usually decides on what is purchased?
   1) Private individuals.
   2) Builders.
   3) Interior Designers.
   4) Architects.
   5) Other.

B- Do you feel that the Kuwaiti people are becoming more interested on the style and aesthetic appearance of their homes, workplace and public buildings?
   1) Yes.
   2) A little.
   3) No.

C-If so, what contemporary aesthetic styles are they more interested in?
   1) Arabic / Islamic impression.
   2) Western impression.

D- Do you believe that Kuwaiti people are aware and interested in the rich heritage of traditional Islamic ceramics?
   1) Yes, a lot .
   2) A little.
   3) Not very much.

E- For customers that wish to adopt a western style, where do you feel this influence comes from?
   1) Television.
   2) Lifestyle magazines.
   3) Films.
   4) Internet.

Second Section: the characteristics of ceramic products in Kuwait.

F- What is the most popular aesthetic style of the ceramic products you sell?
   1) Plain, unglazed clay tiles.
   2) Plain coloured glazed tile.
   3) Decorated / patterned tile.
   4) Shaped tile.

G-What are the particular cultural styles / influences of the ceramics you stock?
   1) Mainly Islamic in style.
   2) Mainly Western in style.
   3) A mix of different cultures and styles.

H-If you do stock products influenced by Islamic style, can you estimate what percentage these make up of your entire stock?
1) Over 80%.
2) 60 – 80%.
3) Approx 50%.
4) 20 – 50%.
5) Less than 20%.

I- Does Kuwait imports more ceramics than its exports?
1) It imports more ceramics.
2) It exports more ceramics.

J- Where are the majority of your products made?
1) Kuwait.
2) Another Arabic country.
3) Europe.
4) East Asia.
5) Europe and East Asia.

Third Section: Current state and future of Islamic ceramic in Kuwait.

K- What do you think about the value of traditional Islamic ceramics?
1) It has a rich value.
2) It has average value.
3) It has little value.

L- Do you think that there is a contemporary Islamic ceramics style at the moment?
1) I don't think so.
2) A contemporary style is beginning to develop.
3) Very much so.

M- Do you believe many of your customers would be interested in purchasing more Islamic style products, if they were more widely available?
1) Yes.
2) Possibly.
3) No.

N- In your opinion, how do you feel we might improve the level of interest and new development of Islamic ceramic design?
………
………
………
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Invitation letter for interview with architects.

To whom it my concern
-PERMISSION LETTER-

Dear Sir/Madam

I'm a Ph.D. student undertaking research in the school of Design at the University of Central Lancashire, under the supervision of David Binnes, Professor Tunde Zack – Williams and Dr Mahmood Chandia. The research, funded by the Public Authority for Applied Education and Training (PAAET) in Kuwait, involves an investigation of style and ornamentation within contemporary Kuwaiti architecture.

As part of this research, I propose to undertake a series of short interview with architects currently working on projects in Kuwait. The aim of the interviews is to examine factors that determine contemporary architectural style and its relationship with traditional Islamic style and culture.

I am writing to ask if you wish to contribute to my research by participating in a face - to – face interview (of approximately 30 minuets duration), comprising a small number of pre – structured questions. All responses will be used in accordance with the University ethical rules and regulations. Your opinions and viewpoints will be published in my PhD. Thesis subject to your agreement and permission prior to publication.

While I appreciate the a constraints of your professional practice, I would be delighted if we could arrange to conduct the interview at a date and time of your convenience during the period 27/10/2008 – 15/11/2008.

Thanking your advance for your valuable contribution to this PAAET funded research.

Your Faithfully

Fahad Alkandari
School of Design
University of Central Lancashire
Preston
PR1 2HE
United Kingdom
Email: FAlkandari@uclan.ac.uk
Mobil in Kuwait: 97115359

Architects interview in Kuwait

Name of the architects: ……………………………………………………………..Date: …./…../….
Ethnicity / Cultural background: a)   Kuwaiti. b)   Other Arabic state. c)   Asian. d)   Other Nationalities.
How long have you work on projects in Middle East? a)   0-10 years. b)   11-20 years. c)   21-30 years. d)   More than 30 years.
Can you describe the sort of projects your practice normally does?
General opinion / attitude towards Contemporary Architecture in Kuwait:
1.   Can you describe in your view the current trends in contemporary architectural style in Kuwait? 2.   Do you feel there are contemporary buildings in Kuwait acknowledge traditional Islamic style? If not, why do you believe this is the case? 3.   In your own view, who is the primary driving force (i.e. Stakeholder / Key player) in determining the design/ style of contemporary architectural projects in Kuwait? 4.   What do you think are the most commonly used architectural materials within contemporary buildings in Kuwait? ------ And where do these materials/ ideas and styles emanate from? 5.   Do you personally consider it might be relevant to acknowledge elements of Islamic style when designing new buildings in the Middle East?
Opinions / attitudes relating to the use of Ceramic materials in Contemporary building in Kuwait:

1.   What is your personal opinion / attitude towards the use of Ceramic products within contemporary building in Kuwait?
 	
2.   How aware are you personally of the heritage of traditional Islamic Ceramics?
 	
3.   Do you believe your clients have an awareness of this tradition?
 	
4.   Do you believe your clients would be interested in seeing a greater acknowledgment of traditional Islamic style within their buildings?
    a)   Yes.
    b)   If No, can you suggest why?
 	
5.   Do you consider it is important or relevant to preserve the Islamic ceramic heritage within contemporary architecture?
 	
6.   Do your projects ever acknowledge the traditional Islamic ceramics within recent or current projects?
    a) If yes, can you can you particular examples of their application with current or recent projects?
    b) If not, why?

Permission to publish the draft of the Information obtained Architects interview.

Dear Architect,

I would like to sincerely thank you for giving me the opportunity and your valuable time during your interview under my research topic of an investigation of style and ornamentation within contemporary Kuwaiti architecture.

I would be very delighted if you may check the interview report (see the attachment) for accuracy, corrections or any discrepancies that may arise in the process of drafting this information from your earlier opinion. I will be grateful if you may spare time again to go through this document prior to publication and kindly get back to me on the email address quoted below. You may also wish under the research ethics regulation respond to me based on your (agreement or disagreement) whether to mention your name or professional profile written in the draft of the interview document.

Looking forward to your much anticipated support and cooperation.

Yours Faithfully

Fahad Alkandari
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University of Central Lancashire
Preston
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United Kingdom
Email: FAlkandari@uclan.ac.uk

The Kuwaiti Public survey invitation Letter

To whom it my concern
-PERMISSION LETTER-

Dear Sir/Madam

I'm a research student undertaking research in the school of Design at the University of Central Lancashire, under the supervision of David Binnes, Professor Tunde Zack – Williams and Dr Mahmood Chandia. The research, funded by the Public Authority for Applied Education and Training (PAAET) in Kuwait, involves an investigation of style and ornamentation within contemporary Kuwaiti architecture.

As part of this research, I propose to undertake a series of short survey with you currently living in Kuwait. The aim of the survey is to examine current contemporary culture and identity within architecture in Kuwait.

I am writing to ask if you wish to contribute to my research by participating in a survey (of approximately 20 minuets duration), comprising a small number of pre – structured questions. All responses will be used in accordance with the University ethical rules and regulations. Your opinions and viewpoints will be published in my PhD. Thesis subject to your agreement and permission prior to publication.

Thanking your advance for your valuable contribution to this PAAET funded research.

Your Faithfully

Fahad Alkandari
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University of Central Lancashire
Preston
PR1 2HE
United Kingdom
Email: FAlkandari@uclan.ac.uk
Mobil in Kuwait: 97115359

Survey with Public in Kuwait
Name:……………………………………………………………………………
Age: 20-30 years☐ 31-40 years☐ 41-50 years☐ 51 and more☐
Nationality: Kuwaiti ☐ Resident ☐
Date : / /2009
Tick (√) the relevant box according to your opinion:

1. Which do you feel is more important?
   A. Retaining the traditional Islamic cultural identity.
   B. Embracing a global cultural identity.
   And why?
....
....
....
....

2. Do you feel that contemporary architecture in Kuwait reflects?
   A. Islamic culture.
   B. A new emerging cultural identity.
   And how?
....
....
....
....

3. Would you prefer to see within the contemporary architecture?
   A. Greater reference to traditional Islamic identity.
   B. Global/international styles of architecture.
   And why?
....
....
....
....

4. How aware are you about Islamic ceramic culture?
   A. Very much.
   B. Little.
   And why?
....
....
....

Thank you for participating.

Fahad Alkandari
PhD student
University of central Lancashire - UK.

**Invitation letter for applying survey with architects in Kuwait
Practice based research**

To whom it my concern
-PERMISSION LETTER-

Dear Sir/Madam

I'm a Ph.D. student undertaking research in the school of Design at the University of Central Lancashire, under the supervision of David Binnes, Professor Tunde Zack – Williams and Dr Mahmood Chandia. The research, funded by the Public Authority for Applied Education and Training (PAAET) in Kuwait, involves an investigation of style and ornamentation within contemporary Kuwaiti architecture.

As part of this research, I propose to undertake a short survey with architects currently working on projects in Kuwait. The aim of the survey is to examine the visual results of practice based research in Architectural Islamic ceramics in relationship to the contemporary architectural style in Kuwait.

I am writing to invite you to contribute to my research by participating in this short survey , comprising of a small number of pre – structured questions. All responses will be used in accordance with the University ethical rules and regulations. Your opinions and viewpoints will be published in my PhD. Thesis subject to your agreement and permission prior to publication.

While I appreciate the constraints of your professional practice, I would be delighted if you could respond to this survey via my email, at a convenient time for you. I kindly look forward to your feedback (find as **email attachment** survey questions please).

Thank you in advance for your valuable contribution to this PAAET funded research.

Yours Faithfully

Fahad Alkandari
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Email: artist02@hotmail.com
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Survey with architects in Kuwait
Practice based research
Architectural Islamic ceramic research project

Name:…………………………………………………………………...
Date:………/………/2010……………………………………….................................

Please see attachment of pictures of "Architectural Ceramic Designs file" and then answer the questions below with (Blue or Red colour):

A-What are your thoughts on the proposed design ideas for Architectural ceramic embellishment? (See attachment images)
……………………………………………………………………………………………………
……………………………………………………………………………………………………
……………………………………………………………………………………………………
……………………………………………………………………………………………………
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………………………………………………………………………………………………..........

B-Do you think they reflect traditional Islamic design in a contemporary way?
A) Yes.
B) No.
Comments………………………………………………………………………………………
……………………………………………………………………………………………………
……………………………………………………………………………………………………
……………………………………………………………………………………………………
……………………………………………………………………………………………………
………………………………………………………………………………………………..........

C- Do you think they would be appropriate for application on contemporary architectural design in Kuwait?
A) Yes.
B) No.

D- Would you be happy if i published your name and opinion with my PhD thesis?
A) Yes.
B) No.

Thanks for your participant.

Fahad Alkandari
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Translation the instruments (From English – Arabic)

الأسم: _____

المهنة: 1- صاحب الشركة. ☐   2- مدير المبيعات ☐   3- بائع ☐   4- لا أفضل ذكره ☐

سنوات خبرة العمل:1- من 1 إلى 5سنوات ☐   2- من 6 إلى 11 سنوات. ☐

3- أكثر من 11 سنة. ☐   4- لا أفضل ذكره ☐

أسم المحل: _____

تاريخ اليوم: _____ / _____ /2007.

ضع علامة (√) في المكان الذي يناسبك و يوافق رأيك الشخصي:

القسم الأول : المنظور العام للسيراميك في الكويت.

A- من يقرر عادة شراء منتجاتك الخزفية في الكويت؟
1. أفراد خاصة.
2. بنائين.
3. مصممين داخليين.
4. المهندسين المعماريين.
5. آخرين.

B- هل تشعر بأن الكويتيين أصبحوا أكثر رغبة في تزيين منازلهم وأماكن عملهم ومبانيهم العمومية؟
1. نعم.
2. قليل.
3. لا.

C- إذا كان هناك اهتمام الكويتيين في تزيين منازلهم وأماكن عملهم, فما هو الأسلوب الجمالي / الشكلي المعاصر الأكثر رغبة من الناس ؟
1. الطابع العربي والإسلامي .
2. الطابع الغربي.

D- هل ترى بأن الكويتيين يدركون ويهتمون بتراث الخزف الإسلامي وتقاليده؟
1. نعم بكثرة.
2. قليل.
3. غير كثير.

E- الزبائن الذين يفضلون الطابع الغربي, من خلال رأيك من أين أتى هذا التأثير؟
1. التلفزيون.
2. طابع الحياة في المجلات.
3. الأفلام.
4. الإنترنت.

القسم الثاني : خصائص المنتجات الخزفية في الكويت.

F- ما هو الطابع الجمالي للمنتجات الخزفيه التي تبيعها؟
1. وضوح السيراميك تحت الطلاء الخزفي.
2. وضوح السيراميك بألوان الطلاء الزجاجي.
3. الخزف و السيراميك المزخرف و المنقش.
4. السيراميك المشكل.

G- ما هو الطابع الثقافي الخاص المتأثرة فيها البضائع الخزفية التي لديك؟
1. غالبا الطابع الإسلامي.
2. غالبا الطابع الغربي.
3. مزيج من مختلف الثقافات و الأسلوب.

H- إذا كانت بضاعتك متأثرة بالأسلوب الإسلامي, هل يمكنك تقدير نسبة الطابع الإسلامي في بضاعتك؟
1. فوق 80%.
2. 60- 80%.
3. تقريبا 50% .

4. 20-50% .
5. أقل من 20% .
I- هل تعتقد بأن الكويت تستورد المنتجات الخزفيه أكثر من أن تصدر؟
1. المستورد في السيراميك أكثر.
2. التصدير في السيراميك أكثر.
J- أين صنعت أكثرية منتجاتك الخزفية؟
1. الكويت.
2. دول عربية أخرى.
3. أوربا.
4. شرق أسيا.
5. أمريكا.
6. أبعاد الشرق.
القسم الثالث : الحالة الراهنة والمستقبلية للخزف الإسلامي في الكويت.
K- ما هو رأيك بتراث الخزف الإسلامي؟
1. لها قيمة غنية.
2. لها قيمة معتدلة.
3. لها قيمة قليلة.
L- هل تعتقد بأن هناك خزف ذو طابع إسلامي معاصر في الوقت الحالي؟
1. لا أعتقد بشكل ما.
2. الطابع المعاصر بدأ في التطوير.
3. هناك الكثير.
M- هل ترى بأن الكثير من زبائنك سيهتمون في شراء المنتج ذات الطابع الإسلامي أكثر إذا كان متوفرا بشكل أكثر وأوسع؟
1. نعم.
2. محتمل.
3. لا.
N- من خلال رأيك, كيف نحسن مستوى الاهتمام والتطوير في تصميم الخزف الإسلامي؟
....
....
....
....

طلب موعد مقابلة شخصية

عزيزي المهندس المعماري/ المحترم

السلام عليكم ورحمة الله وبركاته

يسرني إجراء لقاء مع حضرتكم بخصوص موضوع العمارة المعاصرة في دولة الكويت وعلاقتها بأسلوب الثقافة الإسلامية, وذلك لإتمام متطلبات درجة الدكتوراه في جامعة سنترال لانكشير في المملكة المتحدة – بريطانيا. حيث إن هذه الدراسة تحت إشراف المشرف العلمي دايفيد بينس و البيرفيسور توندي زاك و الدكتور محمود جانديا, علما بأن هذا البحث مدعم من قبل الهيئة العامة للتعليم والتدريب التطبيقي.

ولما كان هذا الموضوع جزء من هذا البحث, آمل بإجراء مقابلة قصيرة مع حضرتكم في مجال تخصصكم فيما يدور حول المشاريع الهندسية و التي تقام في دولة الكويت.

ولهذا فإني أكتب لكم هذه الرسالة وآمل منكم الموافقة على تحديد موعد للأجراء مثل هذه المقابلة في حدود 30 دقيقة تقريبا من وقتكم الثمين. علما بأن جميع الإجابات سوف تستخدم لغرض البحث العلمي بالدرجة الأولى ولا يطلع عليها أحد سوى الباحث وهي خاضعة لموافقتك ورخصتك قبل النشر.

ويا حبذا إذا أمكن اختيار الوقت و التاريخ المناسب لأجراء هذه المقابلة أثناء الفترة 2008/10/27 - 2008/11/15 لظروف البحث.

مع خالص التحيات والشكر لكم.

الباحث
طالب دكتوراة
فهد الكندري
جامعة سنترال لانكاشير
البريد الإلكتروني: FAlkandari@uclan.ac.uk
تلفون: 97115359

<u>أسئلة المقابلة مع المهندسين المعماريين</u>

اسم المهندس المعماري: .... التاريخ: .... /.... / 2008.	

A - المستوى التعليمي:
1- دبلوم.
2- بكالوريوس.
3- ماجستير.
4- دكتوراه.
ومن أي جامعة؟
B - الجنسية / الخلفية الثقافية:
1- كويتي.
2- دولة عربية أخرى.
3- آسيوي.
4- جنسيات أخرى.
C - كم سنة تعمل في المشاريع الهندسية في الشرق الأوسط؟
1- من 0-10 سنوات.
2- من 11-20 سنوات.
3- من 21-30 سنوات
4- أكثر من 30 سنة.
D - هل بإمكانك أن تصف نوع المشاريع التي قمت بتصميمها؟
أولا: توجه العمارة الهندسية المعاصرة في الكويت:
1. من خلال رأيك كيف تصف التوجه العام والحالي لأسلوب العمارة المعاصرة في الكويت؟
2. هل تَشعر بأن هناك عمارة معاصرة في الكويت تصمم بالأسلوب الإسلامي التقليدي؟ إن لم يكن، فماذا تفسر هذه الحالة؟
3.من خلال وجهة نظرتك الخاصة، من هو صاحب القرار الأساسي وراء مثل هذه التصاميم والذي يقرر إختيار المشاريع المعمارية المعاصرة في الكويت؟
4. من خلال رأيك ما هي المواد المعمارية الأكثر شيوعا ورغبتا في فن العمارة المعاصرة في الكويت؟ ومن أين تأتي مثل هذه الأفكار المعمارية والأساليب الفنية في مثل هذا التصميم؟
5. هل تعتبر شخصيا أنه يجب أن نقر الأسلوب الإسلامي في تصميم العمارة الجديدة في الشرق الأوسط؟

ثانيا: توجه استخدام السيراميك أو المواد الخزفية على العمارة المعاصرة في الكويت:

1. ما هو رأيك الشخصي نحو استخدام المنتجات السيراميك /الخزفية ضمن العمارة المعاصرة في الكويت؟

2. من خلال رأيك, ما هي أهمية إدخال التراث الخزفي الإسلامي بالنسبة لك في فن العمارة؟

3. هل تعتقد بأن زبائنك لديهم الوعي الكافي لهذا التراث ؟

4. هل تَعتقد بأن الزبائن لديك سيهتمون برؤية الأسلوب الإسلامي التقليدي ضمن بناياتهم؟
a) نعم ولماذا؟
b) إذا لا، هل بالإمكان التفسير ذلك؟

5. هل تَعتقد أنه من المهم الحفاظ على التراث الخزفي الإسلامي ضمن الهندسة المعمارية المعاصرة؟

6. هل مشاريعك الهندسية الحالية تستعمل فيها فن التراث الإسلامي للسيراميك التقليدي ضمن مشاريعك؟
a) إذا نعم، هل بالإمكان أن تضرب أمثلةً معينةً ؟
b) إن لم يكن،فما هو السبب؟

طلب إذن لنشر المقابله

التي تمت معكم بخصوص

العمارة المعاصرة في الكويت.

عزيزي الدكتور والمهندس المعماري ساهر القيسي / المحترم

السلام عليكم ورحمة الله وبركاته

أود التوجه بخالص الشكر لإتاحة الفرصة لي من خلال المقابلة التي تمت في الفترة ما بين 2008/10/27 - 2008/11/15 تحت موضوع العمارة المعاصرة في دولة الكويت وعلاقتها بأسلوب الثقافة الإسلامية, وذلك لإتمام متطلبات درجة الدكتوراه في جامعة سنترال لانكشير في المملكةالمتحدةـبريطانيا.

ونظرا لأجراءات وأخلاقيات النشر في مجال البحث العلمي للمقابلة التي تمت معكم فإني أتوجه إليكم بقرائة ومراجعة ما تمت كتابته والتأكد من دقتها, سواء في عمليه الإضافه أو التصحيح أوالضبط أوالحذف المعلومات النصيه المراد منها **(في الملف المرفق)** وذلك قبل نشر الوثيقة العلميه في رسالة الدكتوراة .

لذا أتوجه بالشكرلكم إذا أمكن منكم التأكد منها ومن ثم مراسلتي على العنوان البريدي الخاص بي مع توضيح رأيكم نحو مراجعة الملف وبالإشارة سواء بالموافقة أوعدم الموافقة لنشر السيرة الذاتيه (كالأسم ومجال سنوات خبره العمل المعماري) والخاصة بكم.

مع خالص التحيات والشكر لكم.

الباحث

طالب دكتوراة

فهد الكندري

جامعة سنترال لانكاشير

البريد الإلكتروني:

FAlkandari@uclan.ac.uk

تلفون: 97115359

طلب إجراء إستبيان
مع المواطنين والمقيمين في الكويت

عزيزي المواطن والمقيم / المحترم

السلام عليكم ورحمة الله وبركاته

يسرني إجراء إستبيان مـع حضرتكم بخصوص موضوع **"العمـارة المعاصـرة وهويتها فـي الوقت الحـالي فـي دولـة الكويت"** وذلك لإتمـام متطلبات درجـة الدكتوراه في جامعـة سنترال لانكشير فـي المملكة المتحدة – بريطانيا. حيث إن هذه الدراسـة تحت إشراف المشرف العلمـي **دايفيد بينس و البيرفيسور توندي زاك و الدكتور محمود جانديا،** علما بأن هذا البحث مدعم من قبل الهيئة العامـة للتعليم والتدريب التطبيقي.

ولمـا كـان هـذا الموضوع جزءاً مـن هذا البحث، فإنـه يتطلب منـي القيـام بإجراء إستبيان قصير مـع المختصين من أمثال حضرتكم وآمل أن أجري الاستبيان معكم في مـدى خبرتكم لهذا الموضوع في دولة الكويت.

ولهذا فإني أكتب لكم هذه الرسالة وآمل منكم الموافقة على إجراء مثل هذا الاستبيان في حدود 20 دقيقة تقريبا من وقتكم الثمين. علما بأن جميع الإجابات سوف تستخدم لغرض البحث العلمـي بالدرجـة الأولى ولا يطلع عليها أحد سوى الباحث وهي خاضعة لموافقتكم قبل النشر.

ويـا حبـذا إذا أمكـن اختيـار الوقـت و التـاريخ المناسـب لكـم لإجـراء هـذا الأستبيان أثنـاء الفتـرة 2009/9/10 - 2009/9/25 لظروف البحث.

مع خالص التحيات والشكر لكم.

الباحث
طالب دكتوراة
فهد الكندري
جامعة سنترال لانكاشير
البريد الإلكتروني: FAlkandari@uclan.ac.uk
تلفون: 97115359

إستبيان مع المواطنين/المقيمين في الكويت
الإسم:... ......
العمر☐ 20 -30 سنة ☐ 40-31 سنة☐ 50-41 سنة ☐ 51 سنة فأكثر.
الجنسية: ☐ كويتي ☐ مقيم.
التاريخ: / /2009
إختر الأجابة المناسبة التي تعبر عن رأيك الخاص مع ذكر السبب الخاص بالإجابة.
1.من خلال رأيك أيهما تشعر بأنه الأكثر أهمية؟. ولماذا؟ a) الإبقاء على الهوية الثقافية الإسلامية التقليدية. b) الإقبال على الهوية الثقافية العالمية. ....
2.ما هو شعورك نحو العمارة المعاصرة والحالية في الكويت ,هل تشعر بأنها تعكس الآتي؟ وكيف؟ a) تعكس الثقافة الإسلامية. b) تعكس الثقافة والهوية الجديدة. ....
3.هل تفضل بأن ترى العمارة المعاصرة في الكويت ذات....؟ ولماذا؟ a) ذات هوية أفضل تمت بصلة للهوية الإسلامية التقليدية. b) ذات هوية تمت بصلة للأنماط الدولية والعالمية للهندسة المعمارية. ....
4. هل أنت مطلع على ثقافة الخزف الإسلامي؟ ولماذا؟ a) لا أبدا b) كثيرا جدا. c) قليلا. ....
مع خالص التحيات والشكر لكم على المشاركة

طلب لأجراء أستبيان مع المهندسين المعماريين في الكويت
حول نتائج الخزف الأسلامي ودراسته

عزيزي المهندس المعماري/ المحترم

السلام عليكم ورحمة الله وبركاته

يسرني إجراء أستبيان مع حضرتكم بخصوص نتائج الخزف الأسلامي المعماري المعاصرلدولة الكويت ومدى تناسبها لأسلوب الثقافة الإسلامية والعمارة المعاصرة في الكويت, وذلك لإتمام متطلبات درجة الدكتوراه في جامعة سنترال لانكشير في المملكة المتحدة – بريطانيا. حيث إن هذه الدراسة تحت إشراف المشرف العلمي دايفيد بينس و البيرفيسور توندي زاك و الدكتور محمود جانديا, علما بأن هذا البحث مدعم من قبل الهيئة العامة للتعليم والتدريب التطبيقي.

ولما كان هذا الموضوع جزء من هذا البحث, آمل بإجراء أستبيان قصير مع حضرتكم في مجال تخصصكم فيما يدور حول مستقبل المشاريع الهندسية لدولة الكويت.علما بأن الأستبيان وبعض نتائج البحث العلمي مرفق مع هذا الخطاب بحيث يمكن الإجابه على الإستبيان باللغة المناسبه لكم سواء باللغةالعربيه أم الإنجليزيه **(من فضلك أنظر إلى الملف المرفق مع البريد الألكتروني).**

ولهذا فإني أكتب لكم هذه الرسالة وآمل منكم الموافقة لأجراء مثل هذه الأستبيان البسيط من وقتكم الثمين ومن ثم إعادة إرسال إجابة الأستبيان عن طريق البريد الألكتروني الخاص بي. علما بأن جميع الإجابات سوف تستخدم لغرض البحث العلمي بالدرجة الأولى ولا يطلع عليها أحد سوى الباحث وهي خاضعة لموافقتك ورخصتك قبل النشر.

مع خالص التحيات والشكر لكم.

الباحث
طالب دكتوراة
فهد الكندري
جامعة سنترال لانكاشير
البريد الخاص:
البريد الإلكتروني الخاص: <u>artist02@hotmail.com</u>
تلفون : 00447598278660

أستبيان مع المهندسين المعماريين في دولة الكويت
نتائج البحث العلمي التطبيقي لمشروع للخزف الأسلامي

الأسم:
التاريخ: /12/2010

من فضلك أنظر إلى الصور المرفقه في الملف ومن ثم ظلل وأجب على الأجابه المناسبه لك بلون آخر (كالأزرق أو الأحمر) لم يلي:

A– ما هي نظرتك الشخصيه حول المقترح البحث العلمي لتصميم وفكرة الخزف المعماري المعاصر وزخرفته ؟
(من فضلك أنظر صور التصميم في المرفقات مع البريد الألكتروني)

....
....
....
....
....

B – من خلال الصور المشار إليها في المرفق هل تعتقد بأنها تعكس طبيعة التصميم الإسلامي التقليدي وبأسلوب معاصر؟
أ) نعم.
ب) لا.
التعليق:...
....
....
....

C – هل تعتقد أنها ستكون مناسبة لتطبيقها على التصميم المعماري المعاصر في الكويت؟
أ) نعم.
ب) لا.

D– هل توافق على نشر أسمك وتدوين رأيك الخاص ضمن أطروحتي لرسالة الدكتوراه؟
أ) نعم.
ب) لا.

ولكم جزيل الشكر والأمتنان.

فهد أحمد الكندري
طالب دراسات عليا
جامعة سنترال لانكاشير
المملكة المتحده البريطانيه

408

Letters and permission to publish the draft of the Information architects interview.

From: ▢ Raj Tyagi (rtyagi@gckuwait.com)
Sent: Tue 10/06/09 9:37 AM
To: Fahad Alkandari (artist02@hotmail.com)

Dear Fahad

I agree to publish my interview in your research study document.

Yours

Rajendra Tyagi
Associate

Gulf Consult, Kuwait
Phone : +965 24843565 ext 221
Fax   : +965 24849532
Mobile : +965 99870062
Web   : www.gckuwait.com

From: ▢ futooh asfoor (futooh@hotmail.com)
Sent: Sun 10/04/09 12:43 PM
To: artist02@hotmail.com
Dear Mr. Alkandari,

Reference to your email dated 25/09/09, please be informed that we checked the interview and we found out the following information to be revised :

- Education : Graduated from the University of Wyoming, USA with a B.Sc. in Architectural Engineering in 1977.
- Current Experience : Founder and Principal of DAR Futooh Al-Asfoor Consultant Engineers in Kuwait and has 32 years experience working in the Middle East.

After these revisions, we would like to express our acceptance with the emailed draft. We also agree to mention our name and professional profile.

In light of this, we hope for your success and luck.

Best Regards,

Futooh Al-Asfoor

Principal DAR Futooh Al-Asfoor Consultant Engineers
1st Floor, Al-Farres Bldg,
Sharq, Abdulla Al-Ahmad St.
P.O. Box 3600,
22036, Salmiya, Kuwait

Tel : (+965) 2245 3110; (+965) 2245 3220
Fax : (+965) 2242 3283
Futooh@gmail.com

From:⬚ تكتوئلز KUWAIT (kuwaitcity2000@hotmail.com) ⬚
Sent: Thu 10/01/09 6:55 AM
To: artist02@hotmail.com

فهد الكندرى /الاخ الكريم

وأود افادتك بانى قد اطلعت على الأسالة . اتوجه بكل الشكر على حرصك لتوثيق المادة العلمية من مصادرها
وليس لدى مانع من نشر .والاجابات التى كتبت وأود افادتك بأن الصياغ العام للتقرير لم يخرج عن ما تم أفادتك به
المادة المذكورة.

مع تمنياتى لك بالتوفيق فى الدراسة وحياتك العملية

بالمؤسسة العامة للرعاية السكنية -رئيس قسم الهندسة المعمارية

ناصر عبد الكريم السعيد .م /أخوك

From:⬚ Faris AlSalem (falsalem@gmail.com)
Sent: Wed 9/30/09 11:26 AM
To: Fahad Alkandari (artist02@hotmail.com)
   📎1 attachment
     Faris_Als...doc (52.0 KB)
Dear Fahad,
I have no objection to you publishing your interview with myself; Although i did
amend/edit some of the word file (attached). I highlighted my edits in red.
Best regards,
Faris Al Salem

From: ◻ اسامة خشوت (usama_tasoma@hotmail.com)
Sent: Tue 9/29/09 5:25 AM
 To: artist02@hotmail.com

الأخ العزيزالدكتور / فهد الكندري
السلام عليكم ورحمة الله وبركاته
جزاكم الله خيرا علي هذه الرسالة ووفقك الله في الدنيا والاخرة
مرفق الملف الخاص بعد المراجعة
وتفضلوا بقبول فائق الاحترام
اخوك / اسامة فاروق

From: ◻ Nezar Al Anjari (nezar@al-anjari.com)
Sent: Sun 9/27/09 12:29 PM
To: 'Fahad Alkandari' (artist02@hotmail.com)
   ◍2 attachments | Download all attachments (86.0 KB)
     Permissio...doc (33.0 KB), Nezar AL-...doc (53.0 KB)

Dear Fahad:

Yes, I agree. I made simple alterations to your review.

Best Regards,
Arch. Nezar Al-Anjari
General Manager
Mobile (+965) 67090900
Phone (+965) 25660120,25667612/3
Fax   (+965) 25668926
www.al-anjari.com

From: ◻ Mohammad Ayad (ayyad1973@yahoo.com)
Sent: Sat 9/26/09 6:36 PM
To: Fahad Alkandari (artist02@hotmail.com)
 Dear Fahad ,

 I do agree the contents of your attached interview, i wish you bright future in your
career

 Mohammad ayyad

Re: العمارة المعاصرة في الكويت-طلب إذن لنشر المقابله
From: Med El Arbi Guezmir (guezmirmed@yahoo.com)
Sent: Thu 10/08/09 7:38 PM
To: Fahad Alkandari (artist02@hotmail.com)

Salam, Dear Fahd Alkandari

 further to the review of your interview report, I reiterate that I have no objection
you proceed on publishing the mentioned interview wishing it contributes to your
succes.
I have only one comment,you should mention I Have been working for 17 years till
date,13 years in Tunisia and 4 years in Kuwait.

I hope to hear from you soon , Good luck.

Mohamed Al Arabi Guezmir

From: "Bader A ." bader4d@gmail.com
To: Alkandari, Fahad
Subject: Permission to publish.

Hi dear Fahad, I'm sorry for the delay,
as for the material to be published I only like to delete item number 7 in regard of
me prefer Islamic tiles to contemporary as I don't prefer that.
u have the permission to publish all the rest of the document. Thank u and i wish u
all the best.
yours,
Bader Al-Akhawand