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# THE CONSERVATION OF OUR BUILT HERITAGE, IN PARTICULAR STATUES IN ABERDEEN, EVALUATED THROUGH A SOCIAL AND HISTORICAL CONTEXT AND THEIR IMPACT, THROUGH THE USE OF 3D SCANNING

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**Abstract:** Cultural heritage sites all over the world are at risk due to aggressive urban expansion, development, wars and general obsolescence. Not all objects are recorded in detail although they may have social and historical significance. For example more emphasis is placed on the recording of castles and palaces than on crofters' cottages or tenement blocks, although their history can be just as rich.

This paper will investigate the historic fabric of Aberdeen through the use of digital scanning, supported by a range of media including old photographs and paintings. Dissemination of social heritage through visualisations will be explored and how this can aid the understanding of space within the city or specific area. Focus will be given to the major statues/monuments within the context of the city centre, exploring their importance in their environment. In addition studying why many have been re-located away from their original site, the reasons why, and how we have perhaps lost some of the social and historical importance of why that monument was first located there.

It will be argued that Digital Media could be utilised for much more than re-creation and re-presentation of physical entities. Digital

scanning, in association with visualisation tools, is used to capture the essence of both the cultural heritage and the society that created or used the sites in association with visualisation tools and in some way re-enacting the original importance placed upon the monument in its original location, through adoption of BIM Heritage.

**Keywords:** *Conservation, Built Heritage, Visualisation, BIM Modelling, Digital Scanning*

## 1. Introduction

Society over the past 200 years has become increasingly more sympathetic towards our built heritage. We have overall, become more engaged, taking an interest in what we think defines us as individuals and what makes us unique as a culture, whether that is through architectural style, constructional processes or intricate details. We have, in a way, become more respectful as a society in how we view our buildings and monuments, the people who shaped them and what they symbolise and stand for. Over the centuries there has been a shift in society's thinking as to what we do with these structures and how best to preserve them for future generations.

It is fair to draw numerous arguments to the way in which we, as a society, view our temporal heritage objects. In recent years a greater importance has been placed upon how we view our built environment and our heritage. In a generation where we seem to be more interested in our past, where we came from, who our ancestors were and what perhaps they have achieved it is only natural to view the wider picture. Our built environment speaks as much in volume about ourselves as a society as the great men and women that we feel represent us as a culture, a society, and a country. We build lofty monuments and buildings of stone so that we can remember people that our society has deemed of worthy note. Arguably our buildings are just as important and tell just as vivid a story as these characters, and in most cases, even outlasting them. It is with this view that much greater care and attention should be placed upon conserving what we already have. Society and history are so interlinked that one usually feeds from the other. Our social history determines what we construct. Monuments and our history determines, in many ways who we are socially. Our built environment is a living reminder of this construct, therefore it is argued that eliminating or tampering with our built heritage also sows the

seeds to eliminating and tampering with our social history and culture. Although not all buildings of note can be conserved there still needs to be a greater emphasis placed on the recording and documentation of them; city planning and expansion, wars, finance, nature and the elements all play their own roles in how we come to lose important sociocultural aspects of our temporal heritage.

### 1.1 BUILT HERITAGE CONSERVATION: REASONS TO CONSERVE THROUGH DIGITAL FABRICATION

“Primarily, buildings are conserved and preserved because they are useful & have value for their users, or because they testify to the identity of a national, ethnic or social group.” (Orbasli, A. 2008) Essentially conserving our heritage helps to give us a sense of place, an idea of who we are, who the men and women who came before us were and to an extent help to define ourselves as individuals. “Built Heritage continues to exist because it satisfies a need of society” (Laing, R. 2011) Built Heritage helps to define a city or landscape, an area that differs from others around it, in essence makes it unique no more so than in Aberdeen “The Granite City”. “There is the concept of heritage as a radical and subversive entity, defining a people’s sense of cultural alienation, particularly in liberation struggles within colonial societies.” (Turnbridge 1984; Western 1985; Hardy 1988) Socially this gives people a tremendous sense of place and in many ways pride as to what previous generations of the same society have created. “In part, Heritage can evoke a sense of nostalgia for a past period and is one of the reasons why people choose to visit historic towns and places of historic interest.” (Orbasli, A. 2008) “It is a link to the past.” (Orbasli, 1995) This is significant because heritage value extends across both its social history and its architectural design. “These old buildings do not belong to us only...they have belonged to our forefathers and they will belong to our descendants unless we play them false. They are not...our property, to do as we like with. We are only trustees for those that come after us.” (Morris, W. 1889) It could be argued therefore that monuments and buildings are viewed as being ‘symbolic’ and that their preservation and maintenance is viewed as almost being an obligation, something that all generations should aim to treasure and keep for the generations to follow.

Conservation goes beyond the Palaces and Castles we are familiar with and advocate for conservation nationally through bodies such as Historic Scotland and National Trust. Although these bodies also conserve much smaller abodes they are recognised for their signature properties, “We shape our buildings, therefore they shape us.” (Churchill, W. 1948) this paper argues that smaller, less significant buildings are just as important

## **2. City Planning – Conservation Development**

Over time towns and cities develop, they expand as the populace increases, they may change as industry and commerce expand or they may simply develop as technology progresses and the original layout of a city simply becomes no longer fit for purpose. They are organic entities, which evolve over time. In other words cities are almost living organisms; they adapt to suit life and are always changing shape and size as they develop. “The city is an ecosystem, in form a compilation of past and present layers providing a framework for the contemporary mechanisms of urban economy and life.” (Orbasli, A. 2000)

From the 19th Century on, many western cities were revolutionised with the introduction of heavy industry, mass production and the greater requirement for mass transportation to carry these goods. The increase in transport links also allowed the evolving middle-classes to move out of the city centre and further afield, into the suburbs and outskirts of the city which was rapidly becoming choked with a blanket of coal dust, industrial fumes and the smells of industry. Naturally, these areas saw a greater influx of migrant populations, brought to the large cities through hope of work. Soon the cities themselves would be inundated with crude and often unsafe slum housing, where disease, overcrowding and death were all too common. In the post-industrialisation period, entire neighbourhoods were demolished, often along with the historically important buildings, which occupied them in slum clearances and new housing initiatives. “Many cities demolished historic downtown buildings as part of urban renewal projects, destroying valuable pieces of the community’s history.” (Ghosh, S. 1993)

These areas soon developed into prime real estate and were much sought after; therefore high monetary value could be placed upon them. “Heavy handed renewal schemes paid very little respect to the original

scale, layout and city-scape, and many of the developments were real-estate driven.” (Maudlin. 2000)

There has been in some cities (especially those on the European continent) a desire to preserve an area or district of the city to enable social and historical reflection, perhaps even a golden age in the cities development. The ‘Gothic Quarter’ in Barcelona for example has stunning areas of Baroque and Gothic Architecture. This area is strictly off limits to modern development and many of the city’s inhabitants are fiercely protective to keep it so. “The old city exemplifies the human scale, individuality, care and craftsmanship, richness and diversity that are lacking in the modern plastic, machine made city with its repetitive components and large scale projects.” (Appleyard, 1979)

Historic areas remain familiar in a changing environment and help to provide a sense of comfort and place for the city’s residents. “It can be contended that familiarity and stability form important elements in the perception of buildings, and this in turn suggests that conservation of the wider built environment may have positive social implications.” (Nasar 1984, Imamoglu 2000: Nasar et al. 2005)

Smaller developments and structures such as Doocots (also known as Dovecotes) for example can quickly and easily be erased as they become redundant and arguably require more attention. Doocots are historic buildings located all over Aberdeenshire and the United Kingdom. They were built traditionally to house pigeons or doves for their meat, eggs and dung as well as their feathers. “Thus Doocots have considerable significance, not only in terms of their architecture, but also in the wider context of agriculture, economic and social history.” (Scott, J. 2009) As demand for the commodities that the birds provided declined the buildings themselves began to fall into disrepair. A Doocot once located in what is now Union Terrace Gardens in the centre of Aberdeen has now disappeared, although was obviously of importance to the area as it appeared on many early maps of the city.

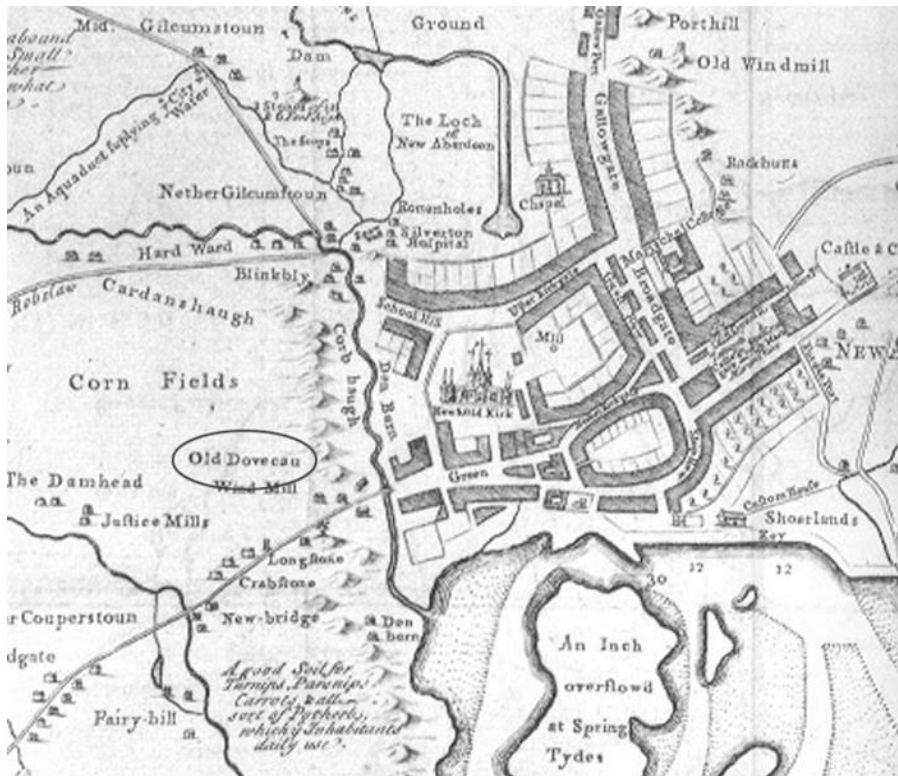


Figure 1. Paterson's map of 1746 shows the location of the Union Terrace Dooct.

## 2.1 CONSERVATION RISKS

Although not new, conservation movements in the 18<sup>th</sup> and 19<sup>th</sup> Centuries saw a tremendous rise in society's desire to preserve and protect what it believed to be buildings and monuments that were of historic or social importance. By in large before this time, greater emphasis was placed on restoring old buildings than actually conserving them. Writing in 1877, William Morris stated in his manifesto for the protection of ancient buildings that "It is for all these buildings, therefore, of all times and styles, that we plead, and call upon those who have to deal with them, to put protection in the place of restoration, to stave off decay by daily care, to prop a perilous wall or mend a leaky roof by such means as are obviously

meant for support or covering, and otherwise to resist all tampering with either the fabric or ornament of the building as it stands .” (William Morris, 1877)

There were however, varying views on the argument between conservation and restoration. Pickard has an opposing view to Morris suggesting that when a historic building is damaged by unforeseen events it should not just be repaired but completely restored to how it was before the incident. He believes that by doing this certain elements of “grandeur” (Pickard, 1996) may be added once the building is restored, thus in turn giving the public a view as to how the building looked in its first instance. However there is argument to suggest that this method reduces the ability to determine the changes that occurred and when they occurred as well as being increasingly detrimental to the character and history of the building, in essence, blurring the lines between old and new. There is also an argument to suggest that once something has been damaged by unforeseen events, for example by fire or flood, it should be left as is.



*Figure 2.* Charles Rennie Mackintosh library destruction

It would be difficult to restore monuments in such a manner when they are damaged beyond repair, unless there is a plan or record of what the monument looked like before it was destroyed it is hard to create an exact



replica. Due to the nature of monuments being carved as pieces of art by a highly skilled sculptor in many instances it would be almost impossible to replicate that expert's hand exactly as the original, especially when it comes to monuments of the ancient era, where no records of their design or tools used may exist. It is therefore important that perhaps we look to modern ways of recording these monuments for the future through means such as digital scanning and photogrammetry, which would allow us to have a digital record of monuments and statues down to millimetre detail, even to the point of recognising how hard a chisel was hit to create the exact etch into the material.

It is important that society does not take our built heritage for granted, "It is a finite material and cultural resource which, once destroyed, cannot be retrieved." (Orbasli, A. 2008)

There are numerous reasons why our built heritage can be lost; decay is one of the most common reasons for loss or deterioration of a building or monument. This occurs naturally in many cases, the constant shift in weather patterns can batter and erode the natural finishes and weather proofing of the built environment, therefore repair and tender maintenance is required. However, humans have accelerated and exacerbated this problem considerably. Acid Rain, pollution and human physical contact all contribute to the disappearance of our built heritage. The vibrations inflicted by traffic, over time, can impact on a building's structure and even carrying out pile driving for new construction next to a historic structure can literally threaten to shake its very foundations. Great care must be taken when planning a new road or new structure next to a building or monument of historical importance. Greyfriars Bobby statue in Edinburgh is a perfect example; the actual metal finish has deteriorated so much on the dog's nose due to human interaction that it is now a completely different colour to the rest of the statue and needs regular maintenance to repaint it.

War, while inflicting great human and personal loss, also jeopardises and threatens the very fabric of our built environment. A 1995 report into the Bosnian War calculated that 3,226 buildings officially listed on the national historic register of Bosnia's Islamic, Catholic, Serb Orthodox and secular architectural heritage had been destroyed or seriously damaged. (Bevin, R. 2006) The destruction of a society's cultural artefacts run deeper than simply destroying them because they pose a block to military advance, it is a deliberate attempt to eradicate the very existence of a culture. In these

situations architecture takes on a totemic quality. “A mosque, for example, is not simply a mosque; it represents to its enemies the presence of community marked for erasure. In these circumstances structures and places with certain meanings are selected for oblivion with deliberate intent.” (Bevan, R. 2006)



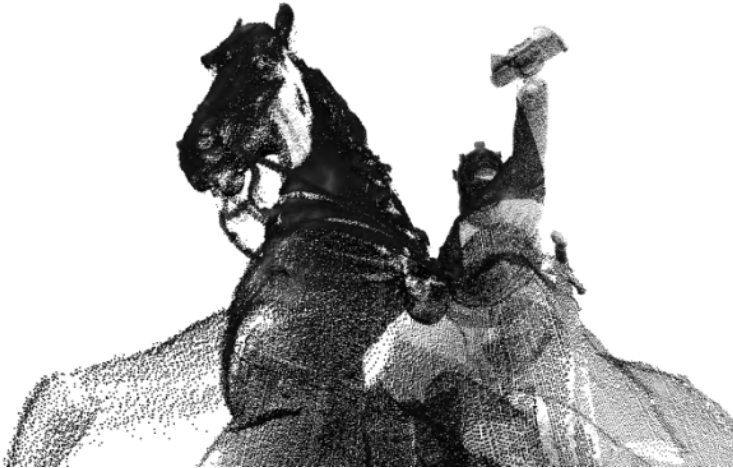
*Figure 3.* Greyniars Bobby Statue: Clearly showing deterioration on the nose

The destruction of important regional or religious buildings is a deliberate attempt to erase the very fabric and history of a society's culture. The emergence of ISIS is another example of extreme destruction of our built heritage. The Ancient city of Palmyra and the temple of Bel located there, as well as many statues and artefacts held in museums across Iraq and Syria have become victims to ISIS. These are two very extreme examples of the woven, interlinked patterns that exist between society and its built environment, an unmistakable chain that when threatened can aid the downfall of the very core of human culture.

BIM Heritage for example is an accurate way for us to record our past and hold an accurate documentation of such. “Recording is a dynamic process that is a key element in successful conservation management.” (Counsell, J. 1999) Using BIM (Building Information Modelling) techniques would allow us to document our structures effectively. BIM largely focuses on new builds due to it being a recognised new form of construction programming, usually through software such as Autodesk Revit. The advantages with BIM are that at every stage of a project, all trades and professionals, with varying levels of interest, can easily view the

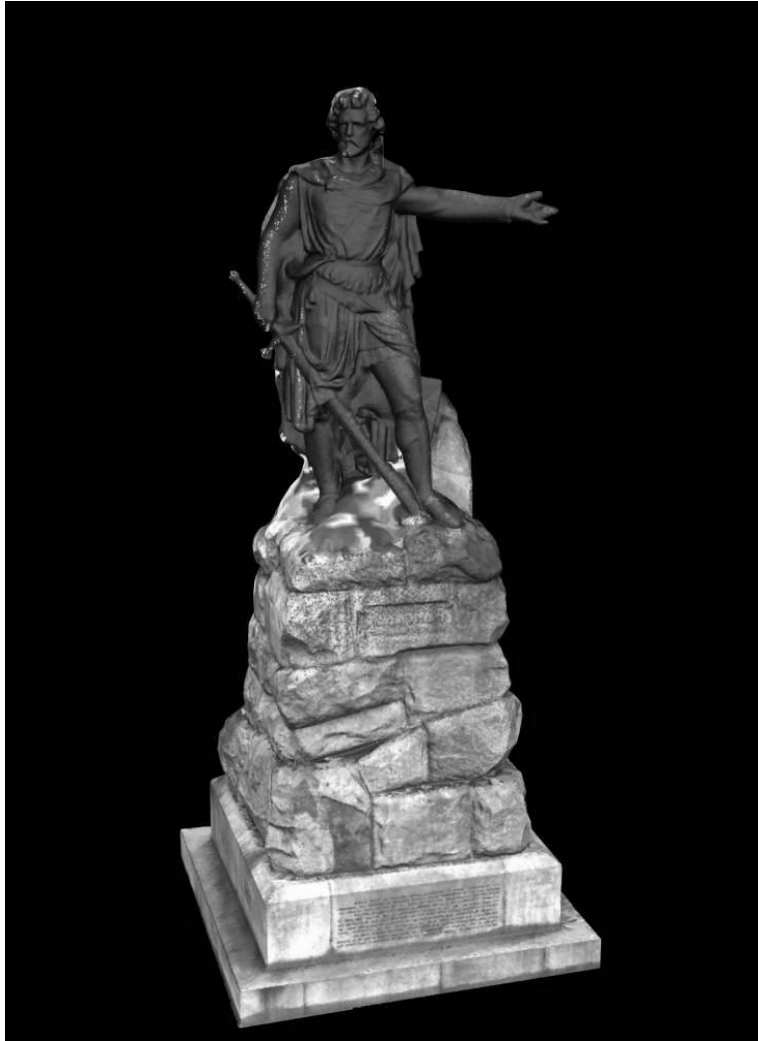
document. As well as having the costing, materials, specification tools present on BIM drawings it would also be supportive to include information on the heritage aspects of the building, allowing us to build up an accurate database for all the buildings in a particular street or square. Having these models and their respective information present would allow for a large area to be completely generated on screen, allowing town planners or heritage conservationists the ability to take greater care in understanding our built environment. "Recording so far as possible not only illustrates and describes a building but also demonstrates significance." (Counsell, J. 1999) Not only this, it could, in theory allow software modellers to completely re-create entire towns and cities by connecting these various streets and squares together. Keeping perhaps the most accurate and effective method of visually demonstrating how a city has evolved or is evolving. This opens up huge advantages to helping engage the public with how their city once looked. Incorporating photogrammetry, 3D digitisation, BIM modelling, geographical and topographical surveys it would be possible, in time to create an entire city dating back as long as there is a visual record from which to go by. Work undertaken to piece together Parson Gordons' map of Aberdeen from 1661 as well as various sketches and paintings of the city would allow Medieval Aberdeen to become an interactive showpiece. This would be an excellent way to help reinforce ideas about the old city. Although modest in the beginning photo overlays can help to set foot to path onto greater possibilities of how powerful a tool visualisation and software modelling can be in allowing us to view our built heritage in a completely different view, thus allowing us to further our knowledge of our sociocultural past and help us to protect what is deemed collectively as important.

This paper does not argue that all things should be conserved, but that all conservation, particularly less significant "smaller" aspects of our built heritage, are at risk due to multiple reasons. This paper does argue for their importance and significance and therefore a strategy for their conservation should be considered. One of these strategies is through the use of digitisation and visualisation.



*Figure 4.* 3D scanned and meshed Bruce statue, Aberdeen.

Various 3D scans were taken around the city centre of Aberdeen of numerous statues and monuments, these were then incorporated into software programmes that allowed the scans to be digitised and through the use of advanced point cloud manipulation then meshed together to create a finalised, 3D digital model. This then allows for an accurate record of the monument to be digitally stored and archived, greatly aiding in the preservation of the monument. Having this record helps to plan for its care, maintenance and potential repair as well as preserving the socially important structure to be appreciated by all generations, even after the original piece may have long disappeared.



*Figure 5.* William Wallace statue, Aberdeen. 3D scanned and Point Cloud rendered.

## 2.2 ABERDEEN – A CITY IN CHANGE



Figure 6. Aberdeen Town & Harbour, painted 1775.

*“Betwixt Dee and Don a goodly cytee a marchaunt toune and universytee”.*  
(John Harding, c. 1420)

Aberdeen is a city with a rich history of trade and commerce, before the industrial revolution it was a large exporter of fish and granite and had a respectable shipbuilding industry. The streets and roads were therefore suited to this way of life, small carts and horses and people largely walking to their destinations. Aberdeen was beginning to enjoy a period of affluence in the late 18<sup>th</sup> Century as the shipping, commerce and manufacturing industries had increased and the population itself was also on a steady incline. One visitor from Edinburgh once described that the roads upon entrance to the city were “crooked, narrow, torturous and hilly” and were noted to be some of the worst in the country. The renowned Glasgow surveyor Charles Abercrombie himself even stated that: “It is with great difficulty that a stranger can find his way in or out of Aberdeen” The issues were soon too much for the townsfolk to bear and the town councillors

brought forward a plan to resolve the issues, with Mr Abercrombie being commissioned to carry out the work.

He approached the idea of a direct, elevated street linking the Castlegate with the 'extensive plain to the west.' This was his most innovative, difficult and audacious plan but one that he very much favoured. The plan, in spite of its difficulties, was adopted because unlike the other proposals put forward it would open up vast areas for settlement and development and transform Aberdeen from a medieval burgh to 'a gleaming modern metropolis.' Union Street would develop as a magnificent boulevard, but it was also intended as a vital thoroughfare, allowing the easy flow of vehicles through town, county and beyond. The construction of Union Street was arguably the turning point in the urban regeneration and modernisation of the city, although almost bankrupting the city at the time it was the foundation stone for other areas of the city to grow with it. The great Archibald Simpson known as 'the architect in granite' is the man credited for "shaping the modern face of the city" (Fladmark, J.M, 1993). Simpson used granite to bring out wide, smooth masses contrasted with delicately cut mouldings and is responsible for many of the decorative features along Albert Street, Bon Accord Crescent and of course Union Street, With the quarry at Rubislaw the supply of granite was constant providing a cheap, local source of building material for the city. "In Scotland at the time, it would have been unusual to find domestic buildings constructed using non-local materials." (Scott, J. 2011.)



*Figure 7.* Layout of Union Street, clearly cutting through the original, medieval make-up of the city

The city, although modernising itself, was ruthlessly demolishing and taking down much of the existing city, meaning that large areas of the medieval centre were being lost. No real care or consideration was given to people's houses (especially if it affected Union Street and its tributary streets) "The Castlegate itself was closed off at its west end by a big block of common looking houses which had to come down." (Morgan, D. 2008) This helps to highlight the lack of care given to surrounding buildings or indeed the welfare of the people inhabiting them; this is a continuing cycle that keeps occurring throughout the many changes in the city.

Arguably one of the oldest buildings of social and historical importance in the city is that of Provost Skene's house, located in the Guest Row area of the city. Built in 1545, it is one of the few surviving medieval buildings. Home to the city's various wealthy merchants and traders it has had an interesting life both historically and socially. By the end of the 19<sup>th</sup> century, however, the medieval thoroughfare at the Guestrow had degenerated into a tough, overcrowded ghetto with all the dangers of such included. "The greater part of the Guestrow was demolished in 1930-32 intended to not just clear away the slums but also to make new access openings for new municipal buildings and the widening of Broad Street." (Morgan, D. 2004)

In 1932 a debate raged as to what was to become of the mansion located at the end of this row of slums, Skene's House. If not for the persistence of Aberdeen's political men of power who wished to conserve the property, arguably only because it was the home of one of their own, it may have also suffered the same fate as its less illustrious neighbours. As a result it exists to this day, although it has been in the shadow of the Council Headquarters since the mid 1960's.



Figure 8. Provost Skene's house.



With the demolition of the Council's Headquarters in recent years the beauty of Skene's building has once again been brought to light, standing as a solitary, proud figure in its surroundings. Unfortunately the building is still the centre of attention as a new development of offices and retail buildings are set to obstruct this medieval landmark, which has survived through so much. Aberdeen centre would far greater benefit from a green space for people to enjoy rather than another hotel, office and shopping complex." (Garrow, F. 2015) This continues the cycle of thoughtless construction around our sites of historical and social importance with no real concern given to how a new centre may affect Skene's House either structurally or aesthetically. "It is clear that these buildings, even with a significant change of use, have not been physically altered to the extent that we must regard them as being anything other than still intact remnants of the past, and as such are important to society." (Laing, R 2011)

In close proximity to the Castlegate lay St. Catherine's Hill; this had been heavily populated on its lower slopes since medieval times. The hill, round which the Shiprow wound, was a natural path down to the harbour and the fishing boats. People's houses and much of the hill itself had to go to further the continuation of Union Street. It could be argued that a part of the city's social history was lost in this demolition. An area rich with life, housing and many people, was simply obliterated without any real concern as to what was being lost in the process of creating something new.

### 2.3 THE GREEN

The Green was chiefly famous for the weekly open-air market of fresh, local produce which has taken place there since the sixteenth century, when Aberdeen was simply a borough of around 7,000. The location was ideal, on the busy route between the Bow Brig and the commercial and social heart of the city. The Green was handy for the shore, it was also sheltered and the large church of St. Nicholas overhead acted as a deterrent to cheats and thieves in the market place below. From the modern Langstane Place (Old scots for 'Long Stone') you are brought into The Green, surrounded by high tenement blocks complete with all the hustle and bustle of day-to-day life. This area of the city was densely populated. Located near the base of St Catherine's Hill it catered for the everyday folk of the city. All of this was set to change however with the introduction of Union Street.

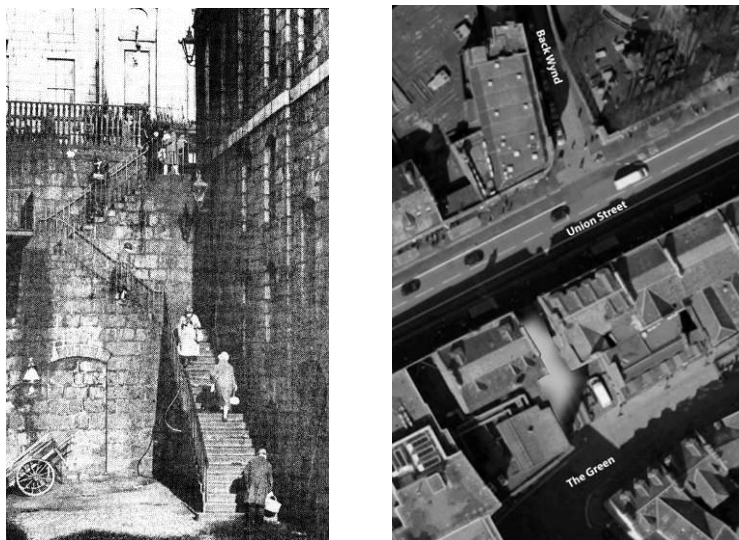


*Figure 9.* Artist's impression showing a bird's eye view of The Green in 1450.

“Though the open-air market was not affected by the building up of Union Street, the Green lost its importance as a major route into town when the Bow Brig was removed in 1851.” (Morgan, D. 2004)

With the look and feel of the old city centre changing, naturally the uses of the spaces around the centre would also be forced into change. The tenement blocks and original medieval housing which surrounded the Green would be torn down and replaced with new granite buildings that would rise high above ground level to reach the heights of the new Union Street; this also changed the character of the Green. Back Wynd, which ascended from The Green to Schoolhill via a small raise in the land which had to be sliced through, and although the upper part survives intact, the lower part was re-modelled as the notoriously steep Back Wynd stairs to gain access from the green to the newly elevated Union Street. The clearance of the people at The Green along with the residents of St. Catherine's Hill, helped to number the days of the markets at The Green. The change in social thought at the time (especially around the dinner tables of high society) was to “clean up” the centres of Britain's major

cities and try to eliminate the “squalor and slums” that were located there. This attitude however, also helped to eliminate the social hubs of cities forever arguably losing a community and a way of life. The Green, now without a local population became somewhat redundant, no longer was it the centre of market life in the city, or arguably more importantly the entrance to the city, it had now been left in the lower shadows of the lofty new elevated Union Street, quite literally pushed down.



*Figure 10.* Old Back Wynd Steps, clearly showing the large difference in height between The Green & Union Street.

In the 1980's and 90's encroaching retail space from Union Street was threatening the very existence of The Green, a joint proposal of Wimpey properties, Woolworths and Boots laid out plans to completely cover The Green. Without the intervention of a series of long established city traders who were angered that a truly historic area of the city would be lost the plan was pulled, and Boots and Woolworths chose to move to the new Bon Accord Centre instead. Once again this highlights the dangers affecting our urban areas and the cultural heritage intertwined with this, society's modern need for more retail space puts pressure on the desire to preserve our built

heritage and helps to reinforce and highlight the fragility of our historical and social sites within cities.

The grand plan with Union Street was to use the open area at the Castlegate as the 'New Green' to shift the original market up to this level, so that when you entered the city down Union Street you were once again greeted at the bottom with a large open square, trying to keep a similar layout to the old medieval Langstane Road. "The great market place is very beautiful and spacious, and the streets adjoining are very handsome and well built, the houses lofty and high. Built not so as to be inconvenient, as in Edinburgh, or low to be compatible as in most other places." (Defoe, D. 1725) However, the scale was too large, the housing blocks here had also been torn down and once again a busy social area had been destroyed. The construction of Union Street meant that many of the city's monuments were also forced to move from their original standings. One statue more than most has witnessed the changes of Aberdeen first hand and was itself in the firing line of being relocated, "The Mannie Well." (Aberdeen local dialect I.e. Doric, 'Mannie Well' translates as the 'Man on the Well'.)

#### 2.4 THE MANNIE AT THE CASTLEGATE

The Mannie was originally simply a fountain/well. In 1706 work began on laying lead water pipes from outside the city to a new fountain located at the east end of Castle Street. This water cistern was the first to provide piped water to the city. The well was fed by springs from the Cardensheugh (now Carden Place) to the west of the city, the water being brought in by six lead pipes to the well. Previous to this, the people of Aberdeen relied on fresh water from local burns, lochs and ancient wells. "It is an important part of the city's engineering and social history and forms a significant part of the streetscape."(Brogden, W.A 1968)

The statue itself was added to the top of the fountain some time after 1710. Originally a number of gilt figures were commissioned however the cost of 1,571 pounds proved too much at the time and a single figure, locally known as the 'Mannie' was added. The well was placed where the Mercat Cross is located today and all through the 1700's was used as an important meeting point in the city's history. It was an important social beacon; people would agree to meet each other here for work or pleasure. It was an easy landmark in the city, the standout object in an open square.

Psychologically it also had an effect; it provided clean drinking water, something much of us take for granted today. In the 1700's water-borne diseases were rife, such as cholera and dysentery. The introduction of clean drinking water to a city helped to dramatically increase the standing of the object where this water flowed from, whether consciously or sub-consciously.

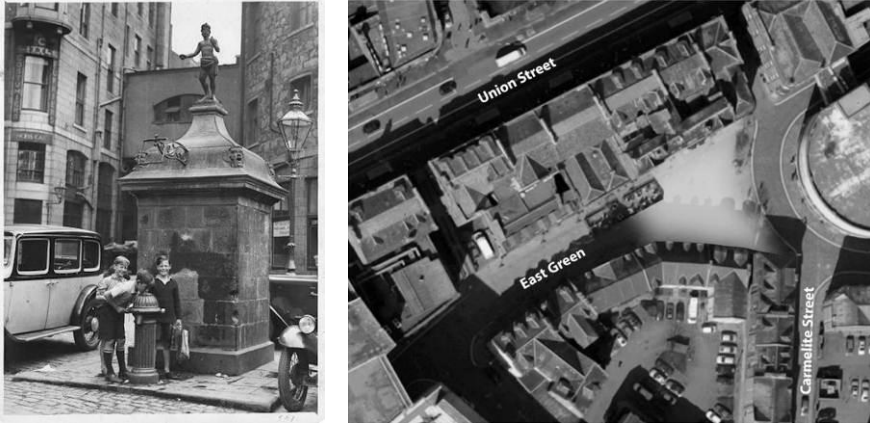


*Figure 11.* Mannie Well in the right of the image, Painted sometime around 1750.

## 2.5 THE MANNIE AT THE GREEN

The cistern was moved to The Green in 1852 as Union Street was beginning to gather in importance and further planning and regeneration of the Castlegate was taking place. It was decided that it should be moved to the Green, the other square in the city. It is easy to see why this decision was made. On the surface they are both squares and have weekly markets. In the case of The Green, there was an indoor market built by Archibald Simpson in 1842, which subsequently burned down in 1882, as well as the outdoor market. These were gathering areas for the local populace. Some forty years after the initial construction of Union Street had begun there

were still locals who had always sold and purchased items at the Green's markets and were not going to stop simply due to the fact that a new road system had been implemented, therefore the well still had some social importance of the city. A new handle was added to the side of the plinth, which could be turned to provide spring water, once again providing a use to the local residents. Mr Fraser, a town trader at the time commented, "The Well is one of the really artistic constructions to be found in the streets of Aberdeen, of the kind one expects to come across in a quant, old, continental town."



*Figure 12.* Photograph taken in 1934 showing the Mannie Well in The Green

It would sit at The Green for some 120 years before the well would once again need to be moved. The introduction of ever increasing volumes of traffic through the 20<sup>th</sup> century required the city to adapt again, introducing new road systems through the city, putting increasing pressure on where buildings and monuments were located. The regeneration of The Green took place in the late 1960's to try and bring life back to an area that had significantly lost its purpose. The Aberdeen Indoor Market was re-created, and tried to emulate the curved Archibald Simpson building originally located there, although arguably the execution was poor. New shop fronts and cafés were introduced on the square to try and re-engage people with The Green. However, this approach never really seemed to take off.

The Mannie Well was eventually moved back up to its original location in the Castlegate. It could be argued that this was a respectful move for the

statue, to try and preserve local history. If this move was not made the statue could have easily fallen into disrepair and fallen out of local memory. Unfortunately this is what appears to have happened, due to largely poor forward planning of where to actually place the statue once it was back up in the Castlegate. Rather sadly and un-intentionally it now sits in the centre of a triangle consisting of a pub, a casino and a bus shelter. A far cry from the important position that it once enjoyed at the Castlegate, The Mercat Cross has taken that position. The Mannie Well now sits a shadow of its former self, looking tired and dirty and with apparently little time dedicated to its maintenance. It could be argued that this important piece of social and historical value could be lost in the near future. Susceptible to the ravages of time and weather and potentially become the target of vandals and graffiti artists.



*Figure 13.* Mannie Well statue as it looks today in the Castlegate.

The people of Aberdeen have lost touch with the statue and many simply don't know that it exists or what the meaning behind it is. It no longer provides water as times have moved on, and more modern methods of fresh running water now exist meaning that its main reason for existing has gone. However it is still a piece that has survived through many of the city's urban changes and perhaps it is time to try and re-engage the public

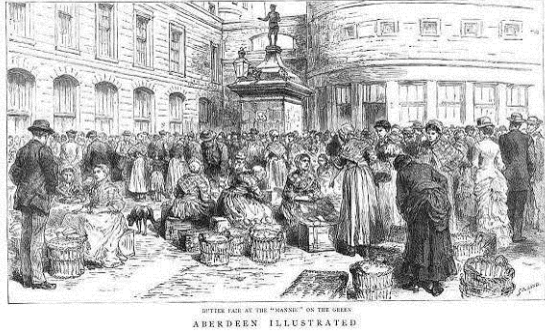
with this important piece of local history before it is lost. The arguments that the Mannie Well brings to light help once again to highlight the importance of preserving these pieces for future generations. The well acts as one of the strongest and most obvious examples in Aberdeen of the adversities faced by our built environment when planned expansions of cities take little time to methodically plan out how to deal with important sites of social and historical importance.

## 2.6 VISUALISING ABERDEEN

Visualisation methods can vary; photogrammetry and 3D scanning can be expensive and somewhat time-consuming methods. The use of Photo overlays is an effective method in which to capture the original streetscape and the modern within one image. Through Photoshop an interesting and exciting image can be understood across all ranks of society without any real understanding of the place required. Photo overlays can quickly and easily show the progression of an area over time and how the built environment in that area may have changed for better or worse. An image really does speak a thousand words.

Due to its long history Aberdeen has seen its fair share of changes to the built environment. Buildings and monuments have come and gone and new ones have replaced them, none more so than the Castlegate and The Green areas of the city. Two areas, which can trace their existence, back to the very foundation of the town of Aberdeen itself. A series of photo overlays were created in an attempt to highlight some of what has been lost in the city, with a heavy emphasis placed upon the two monuments that were discussed earlier, The Mannie Well and the Duke of Gordon Statue. With the intention of showing Aberdonians perhaps what has been lost, engaging them in areas of the city seldom used or trying to re-engage them with monuments and buildings perhaps forgotten, so that they can once again be used and enjoyed as they were initially intended



**Visualising The Green**

*Figure 12.* Photo overlay of The Green, one modern image & one sketch c.1885

**Visualising The Castlegate**



*Figure 13. Photo Overlay of Castlegate of modern day image & one c. 1910*

## 2.7 BIM HERITAGE

Overlaying the two initial images in Photoshop and simply erasing the areas of either the old or new that is not required created these two examples. This is a relatively simple process however the results are rather attractive, allowing the public to view the area in one image although it tells two stories. There are potential benefits leading forward, these are simply two trial examples of specific areas within the city. Over a larger period of time it would be possible to perhaps document vast areas of the city, if not the city itself as long as there is accurate visual documentation of how these areas appeared previously. This once again reinforces the need for adequate documentation and recording of our built heritage while it is still here so that techniques such as photo overlaying can be made possible. If done correctly there would be no reason why there could not be a digital timeline of the city, as long as future generations are prepared to add to this. This would create a remarkable chronological visual record of a city, allowing us to perhaps give more consideration to what is deemed valuable and therefore give us a better understanding of our built heritage and give greater argument as to what should be retained. Pictures help us to reinforce ideas; it is easier for us to process images and therefore understand our environment.

Image based communication is a clear, positive way to disseminate information to the general public. There is an argument to suggest that creating a BIM model is only the start to creating something more engaging and intriguing. It could be possible, on a larger scale to introduce video and sound clips as an example to further aid the experience that members of the public may have when viewing an exhibition of work done into the social and historical history of our built environment in the city. BIM Heritage is an accurate way for us to record our past and hold an accurate documentation of such. "Recording is a dynamic process that is a key element in successful conservation management." (Counsell, J. 1999) Using BIM (Building Information Modelling) techniques would allow us to document our structures effectively.

BIM largely focuses on new builds due to it being a recognised new form of construction programming, usually through software such as Autodesk Revit. The advantages with BIM are that at every stage of a project, all trades and professionals, with varying levels of interest, can

easily view the document. As well as having the costing, materials, specification tools present on BIM drawings it would also be supportive to include information on the heritage aspects of the building, allowing us to build up an accurate database for all the buildings in a particular street or square. Having these models and their respective information present would allow for a large area to be completely generated on screen, allowing town planners or heritage conservationists the ability to take greater care in understanding our built environment. "Recording so far as possible not only illustrates and describes a building but also demonstrates significance." (Counsell, J. 1999) Not only this, it could, in theory allow software modellers to completely re-create entire towns and cities by connecting these various streets and squares together. Keeping perhaps the most accurate and effective method of visually demonstrating how a city has evolved or is evolving. This opens up huge advantages to helping engage the public with how their city once looked.

Incorporating photogrammetry, 3D digitisation, BIM modelling, geographical and topographical surveys it would be possible, in time to create an entire city dating back as long as there is a visual record from which to go by. As an example, work undertaken to piece together Parson Gordons map of Aberdeen from 1661 as well as various sketches and paintings of the city would allow Medieval Aberdeen to become an interactive showpiece. Other European cities with similar visual documentation and archived data would also be able to benefit from this process. Perhaps given time, helping to build up an accurate modelling base of not just one or two cities, but all cities in Europe. Allowing us to perhaps use this tool in synchronisation with others to plot Architectural movements and styles throughout Europe through the ages. The possibilities really are endless.

This would be an excellent way to help reinforce ideas about old cities. Although modest in the beginning photo overlays can help to set foot to path onto greater possibilities of how powerful a tool visualisation and software modelling can be in allowing us to view our built heritage in a completely different way, thus allowing us to further our knowledge of our sociocultural past and help us to protect what is deemed collectively as important.

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