I declare that I am not guilty of the charge of falsehood, fraud, and wilful imposition preferred against me, of having falsified the books of the City of Glasgow Bank, and prepared and issued false and fabricated balance sheets during the years from 1873 to 1878 inclusive, while the Bank was in a state of insolvency, and well known to me to be so, so as to conceal the true state of the affairs of the Bank from the shareholders and creditors, and of declaring false dividends in order to deceive said shareholders, creditors and the public. I have nothing further to say in the meantime, and I decline to answer any questions that may be put to me. All of which I declare to be truth.[xxi]

W.A. Brown *Lewis Potter*
Geo. Brander *Witnesses* *F. W. Clark*
B McLauchlin

Lewis Potter, now aged 71, lodged in Duke Street prison, appears as a tired old man in the portraits and sketches of him that were published at that time. The prisoners were on remand from the sheriff and under new rules that had come into force, were allowed to look after their food and linen at their own expense, which somewhat alleviated their confinement.

Lewis Potter would remember that when he and William MacKinnon came into the Bank as directors, 1857-1858 they had found that Robert Salmond, then the manager of the Bank, had already made substantial advances for the construction of railways in the United States of America.[xxii] MacKinnon took it upon himself to oversee this American business and was later pursued by the liquidators of the Bank with regard to the American railway shares. It is reported that at the time of the closure of the City Bank that these shares had started to pay dividends. After William MacKinnon's resignation James Nicol Fleming, looked after the American rail accounts that in 1878 had been sorted out to some degree. Later MacKinnon recommended to the liquidators to keep the American rail shares, but in the rush to raise ready money these were sold and only fire-sale prices were obtained. William MacKinnon is one of the success stories of the City of Glasgow Bank saga. He is indeed the proverbial Scottish 'Lad o' pairts'. He had come from the West Highland town of

Mr Lewis Potter (*The Bailie* 23 October 1878)

Campbeltown to Glasgow, then to India and back to Glasgow and he had made himself one of the world's largest ship owners through his British-India Line.[xxiii]

A prominent Scottish judge when he heard of the connection of the City Bank with the American railways remarked: - *'It strikes me that a Scotch Bank buying and working a railroad in America is about as startling a thing as one can well conceive.'* The learned judge surely did not know or remember his countrymen or their history. Scotsmen had been working and investing in many things in America. It was the working of the Scots in Virginia from 1707 to 1775, that outstripped London and Bristol and had made the wealthy Tobacco Lords of Glasgow, their *'Toom pockets jingling with golden Geordies'*, and it was the work and management of Scotsmen, including an Earl that managed cattle ranches in Texas and Colorado in 1870-1880, creating the great cattle drives, so beloved of the 'westerns' of John Wayne and Hollywood. Fortunes were made in Edinburgh and Dundee. The Earl of Airlie went in person with his younger son Lyulph to check on their properties. The Earl died in Denver. His son Lyulph is looked upon as one of the legends and founding fathers of the State of Colorado. One other success story is that of the Scottish-American Investment Co, in which an original investment of £1,000 had appreciated to £70,000 to 1928. Scotsmen were among the speculators in land, livestock and railways overseas and in the colonies.[xxiv]

In *Blackwoods Magazine* of October 1884 it was noted: - *'Three fourths of the colonial investment companies are of Scottish origin. If not actually located in Scotland, they have been hatched by Scotsmen and work on Scottish models.'* Nineteen overseas investment companies founded between 1860 and 1884 were listed as obtaining the bulk of their funds from Scotland. The oldest and most conservative of the Scottish banks, the Bank of Scotland was by 1875 acting as agent for the Bank of South Australia and the Australia & New Zealand Mortgage Co, and was engaged in large purchases of the New South Wales Government Debentures, the first departure from its policy of investment only in the United Kingdom.

New Zealand had become a Crown colony in 1840, with the signing of the Treaty of Waitangi by most of the Maori chiefs. Alienation of the Crown 'wastelands' was strictly controlled. By 1856 the Provincial system of Government was firmly established and the superintendents with their councils were able to allow *'the sale, letting, disposal and occupation of the waste lands of the Crown.'*

This was intended to allow men of limited means to obtain land. In effect it did nothing to limit the number of purchases any one person could make, or have someone else purchase for him, by agreement.

In the list of the fourteen properties that went to the making of the New Zealand & Australian Land Co, there were two associations in which the name Fleming occurs.[xxv] James Nicol Fleming was one of those, who were heavily indebted to the City Bank. His indebtedness was in the order of £1,800,000 to £1,900,000, nearly two million pounds sterling. J N Fleming had been a director of the City Bank for 12 years, from 1863 to 1875. He was not on the Board at the stoppage, but it is reported that the authorities were 'looking for him'. It was said he had been seen in London, but a search proved fruitless. A 'hue and cry' was raised for him, and police at seaports were asked to watch for him. By November 1878 it was said he had got to Spain, but this was not confirmed.

James Nicol Fleming was a man of great personal vigour. Still a comparatively young man of between 45 and 50 years of age, he had already spent part of his life in India where he made his first fortune. He was in Bombay at the outbreak of the American Civil war in 1861. He speculated heavily in cotton. His associates in Bombay and his own firm would have nothing to do with this, so he begged or borrowed the money for his purchases. In the event he cleared a fortune of £300,000. Returning to Scotland he married, a Kintyre girl, whose father was Provost of Campbeltown. He purchased the estate of Kiel, near Southend, Kintyre and built a very fine mansion on his beautiful estate, and settled into a country gentleman's style of life. He also adopted several partners and he and his companions speculated in

shipping, telegraphs, cotton and much else besides. One of P Henderson & Co's ships was named after him. The *James Nicol Fleming* was an iron-framed vessel, wood planked, of 993 tons. Built at Duncan's yard at Port Glasgow in 1869 it made regular sailings to Port Chalmers, the harbour for Dunedin, Otago in the south island of New Zealand.

It appeared to many people that many of his speculations came to grief. He had been building up a large herd of prize cattle, while his credit was still good. Then came the failure of the City Bank, and with it the failure of James Nicol Fleming.[xxvi] It became clear that many of his speculative schemes had been financed with City Bank money. J N Fleming always bore himself well. He was a son of Fleming of Claremont. He was always well dressed, he enjoyed the good life, and he was not a churchman. He was a gambler, not on horses, but on speculative business deals. He gambled away his personal fortune and a further great fortune financed by the City Bank, and he brought ruin and suffering to many of the ordinary shareholders of the City Bank who had to meet the calls of the liquidators and were often forced into bankruptcy.

The trial of the directors took place in Edinburgh from 20th January to 1st February 1879, under Lord Moncrieff. Some of the ways Fleming had managed to extract so much money from the City Bank without proper securities, was brought out at the trial of the directors, when his brother John Fleming was cited as a Crown prosecution witness. His examination by the Lord Advocate and by the defence lawyers tells us how some of that that business was done.

John Fleming, brother of James Nicol Fleming, was closely examined and stated that he was a member of Smith Fleming & Co, Leadenhall St, London, and that this firm was now in liquidation. The firm had been in existence since 1860. He said that he was a partner in the firm of William Nicol & Co of Bombay, and of Fleming & Co of Kurrachee. He said that since 1870 he had business relations with Potter Wilson & Co and with James Morton & Co and that he had frequent dealings with the City of Glasgow Bank of which his brother James Nicol Fleming was a Director (1863 to 1875). John Fleming

confirmed that at the stoppage of the City Bank their indebtedness to the Bank was in the order of £1,900,000 pounds and that about half of this had been in cash advances. He explained how Bill credits were advanced, that these bills were then paid off by the Bank and converted into cash advances.

He said that as regards securities, that there were very little in the absolute control of the bank and that the nominal value of the securities was about £900,000 about half of the debt figure. He said that in July 1870 he had a meeting with Mr Alexander Stronach and Mr Potter about the state of his affairs. His brother was also present, and that he had had two meetings at that time, about a week apart. He said he had told the meeting that his firm was involved in heavy losses and that it was necessary they should stop. He was told that was unnecessary, that the Bank would provide assistance. He said there was a great deal of discussion, in which all took part, as a means of rendering assistance. Various plans were proposed, and he said that the plan adopted came from others, not from him. It was proposed that a new firm would be created in Liverpool. This firm would accept their bills, discount them, and to be used for their relief. John Fleming said he told the meeting that such a plan would bring discredit upon them. He said he spoke very strongly about this and at one stage left the meeting. He was brought back by Mr Potter. He could not say if anything was said about what effect their stoppage might have on the Bank.

He stated that by the end of 1870 the City Bank had advanced to them about half a million of money, but he could not say how much the Bank was covered for such a sum.

John Fleming told the court that in March 1875, an arrangement was made with the Bank in which Mr James Morton came to visit him in London, as the confidant of Mr Alex. Stronach, the City Bank manager. That they discussed his firm's affairs and apparently Morton was to provide some of the stock, that Morton proposed this as a means of facing a difficult struggle. He stated that at this time their indebtedness to the Bank was more than £1,300,000 pounds credit £562,000 and cash advance £773,000 pounds. He also told the court, in

answer to a question from Mr Trayner, a defence Counsel, about a *gold find* in India on one of their properties. That they were hoping to realise 'something great' from it and that Messrs Rothschilds might even render assistance. He said that he told the Bank of this gold find in July 1878. He also said that he thought his firm could still be put to right, and quoted some of the large profits in 1862-1863 in the hundreds of thousands of pounds. He said his brother was fully aware of the situation. In the end the *gold find* faded away to nothing. As regards the manager of the City Bank, Mr Alexander Stronach, he was not an intimate friend of his. He did know that Mr Stronach had made some advances to them without the knowledge of the Directors, prior to 1875, and that he was suffering from great mental anxiety because of this. He also said that Mr Stronach had come up to London in Sept. 1870, and had reproached him for wavering about his intention of going on. But he said he knew that the Directors did know what was going on.[xxvii]

James Morton, General Manager of the New Zealand & Australian Land Company was also suggested to be the 'de facto' manager of the City of Glasgow Bank. At the trial of the Directors, on its eleventh day, the Lord Justice Clerk (Lord Moncrieff) in his charge to the Jury continued *'the third debtor was James Morton. We have heard very little about him, and I have it not in my power, because there was no evidence to enable me to do it to explain to you the fluctuations and vicissitudes of that account; but it was one of the largest, and it ended with balance of £2,170,000. What the operations upon it had previously been, we have no evidence to show; for my own part, I should certainly have preferred that we had seen Mr Morton or someone connected with the firm, because it is plain from the correspondence which I don't weary you by going over, that all these firms were intimately connected and that Potter Wilson & Co, and Morton and Innes Wright and the Flemings, had more or less business concerns together, and were in fact, to a certain extent, in the same interest.* [xxviii]

Morton was never an official or a director of the City Bank. He was never on trial. He did appear at his bankruptcy hearing in the Glasgow Sheriff court, and was examined by Dr A B McGreigor for the liquidators of the Bank, and

also by David Murray of Maclay, Murray & Spens, for the trustees of Morton's estate. This was in July 1879. Morton was far from being a subdued bankrupt, and turned the hearings into a kind of comedy farce at times, making out that he was the injured party in a circus performance of fools. Dr McGrigor, at the end of the bankruptcy hearing said he would never be able to convince the public and the liquidators that Morton was not the manager of the City Bank.

It emerged that one of Morton's ways of raising credit was to have bills on the City of Glasgow Bank from the New Zealand or Australian agents, all signed but not dated, and these were filled in to Morton's instructions. These bills, complete with New Zealand revenue stamps as required, were taken by Morton to London, and negotiated in Lombard Street. Morton received letters of credit, which he returned to the Bank - he had converted City of Glasgow Bank paper into 'London Money'. In these excursions to London, Morton drew sums of money from the Bank on IOU's, as much as £50,000 and commonly £20,000. He was able to redeem these IOU's on his return from London. These transactions of Morton were not recorded in the books of the Bank. The sum involved amounted to £8,020,000. Dr McGrigor asked Morton why the transactions were not recorded anywhere, to be told that it was *'Generally done for the convenience of the Bank.'* This is when James Morton told Dr McGrigor that he had expected the amount of £8,020,000 to be *'a great deal more.'*[xxix]

Morton's negotiations and bills might have been upheld, to the extent that the Bank held securities against the advances made. But the raising of credit went far beyond the value of lodged securities, as these were often already inflated to false values, and as these bills fell due they had either to be liquidated or renewed. As time went on the overseas Agents were required to send whole books of bills, signed but not dated, to be used by Morton and the Bank. When Morton's hearing in the bankruptcy court was over, the Editor of *The Scotsman* of July 19th 1879 wrote, as regards Morton and his financing: - *'If his statements were in any way intended to lift the veil which, even after the trial of the directors, still covers the mystery of the iniquity in the City of*

Mr James Morton (*The Bailie* 30 October 1878)

Glasgow Bank, as to when it began, why and how it was carried on, and whom it profited, it is tolerably certain that Morton has not succeeded in his explanations. Sixty-six thousand or some other enormous number of bills in Mr Morton's hands, for or in connection with the Bank at one time; credit transfer, this alternating with or sinking into credit something else; Bank securities which are, and those which are not assigned to the Bank; bills which are for trade and others which are merely for raising the wind; transactions in which Mr Morton is acting for himself or his firm, others in which he is apparently the friend and gratuitous agent of the Bank or of other firms, some named as they arise and others unnamed; things done in London and others done in New Zealand or Glasgow - all produce on the general reader a baffled sense of complete and helpless bewilderment. The general effect is that of one of those post-prandial visions of chaos in which everything is something else, and nothing is anything at all.'

At the High Court in Edinburgh, on the eleventh day of the trial, the Lord Justice Clerk completed his charge to the jury. The jury retired at 3.50pm. and returned at 5.45pm. Thus they agreed their verdict in under two hours of deliberations. They found the directors and manager guilty of falsifying and fabricating the balance sheets of the Bank, and not guilty of theft, which charge had been withdrawn. On Saturday 1st February 1879, Lewis Potter and Robert Stronach were sentenced to eighteen months in prison,[xxx] and the other directors were sentenced to eight months imprisonment.

With the directors of the City Bank in prison and Morton in the bankruptcy court, the Liquidators had to seek ways to realise securities to pay off the creditors of the Bank. The American railroad shares were realised.[xxxi] One asset, which the Bank still held was the shares of the NZ&A Land Co, the Bank had about one half of that company's shares. The Liquidators agreed to sell this asset of the Bank, *'for a sum sufficient to enable the Liquidators to discharge the whole liability of the Bank'*. This agreement received court sanction in May 1882. In November 1882 the Liquidators, at the final meeting of shareholders for the City of Glasgow Bank in liquidation, were able to

report that earlier in the same year, an Act of Parliament had been passed and had received Royal Assent on 24th July 1882. This Act was *'An Act to facilitate the winding up of the City of Glasgow Bank, to transfer from the Liquidators to a company, the remaining assets of the Bank and for other purposes'*. The new company was formally brought into being as the Asset Company.[xxxii]

It is important to make clear that the NZ&A Land Co, was entirely separate from the City of Glasgow Bank. Many people in the 1870s and 1880s regarded them as one entity. Thus it is worth while to quote the letter from James Ellis, secretary of the Land Company which appeared in the Glasgow *Evening Citizen* of October 4th 1878: -

To the Editor of the 'Evening Citizen'. Sir, with reference to the statements that have appeared in various quarters that the New Zealand and Australian Land company is indebted to the City of Glasgow Bank in a large amount of money, I beg to state that this is not the case. On the contrary, the Bank is a debtor to the Company.

Yours truly
James Ellis, Secretary

In New Zealand in the late 1870s and 1880s there was a depression. Prices had fallen for wool, and the effects of the failure of the City of Glasgow Bank had repercussions both in England and New Zealand. There was a financial crisis, and on the land the seasons of 1878 and 1879 were poor. Further, a great depredation due to rabbit infestation of the pastures added to the difficulties. The Land Company had to spend large sums of money to keep the rabbits down.[xxxiii]

The Asset Company had taken over all of the Bank's stock of the Land Company. The signing of the agreement between the liquidators of the Bank and the Asset Company took place on 12th May 1882, and three days later, the ship *Dunedin* arrived in London Docks with the first shipment of frozen meat from New Zealand. This shipment opened up new markets for New Zealand produce. It must have given the holders of the Land Company's stock a great

boost in morale. The reports from London on the quality of the *Dunedin* cargo of frozen sheep meat were all good, in praise of the product.[xxxiv]

The NZ&A Land Co was one of the survivors from the colossal wreck of the City of Glasgow Bank. From the meeting in Morton's office in Carlton Place, Glasgow in April 1866, to the amalgamation of 1877 and up to 1969 when Dalgetty & Co took it over, the Land Company flourished and was a profitable company. It also served in many ways in leading on pastoral and agricultural matters and was foremost in the rural development of large parts of the South Island of New Zealand. The Land Company had large capital available and used this to further develop its estates. That this also helped the New Zealand small farmer by working through some of the difficulties of New Zealand pastoralists, was a by-product.

New Zealand is credited as being a pioneer in state socialism and the New Zealand & Australian Land Company, a capitalist and private company played a part in this. New Zealand statesmen such as Ballance and McKenzie led in the closer settling of the land, and Vogel's Public Works Scheme, of the early 1870's had it been put fully into operation, would have made New Zealand a true pioneer of state socialism.[xxxv] The Closer Settlement Schemes of the late 1880's and 1890's were only possible because many of the experiments to find the best methods of working the land and of finding markets for the produce overseas, had already been carried out by private enterprise, often by the NZ&A Land Co. It is fitting to close with a compliment to the NZ&A Land Co, as contained in a leading article by the editor of the *Otago Witness* of 1st March 1879. The Land Company's estate of Edendale is the subject: - '*This is an example of farming on a large scale, 119,000 acres being comprised within one estate, which is enclosed and subdivided by 325 miles of fencing and is partly under cereal and root crops, but chiefly cultivated for grazing purposes. The time is coming when this estate will be subdivided and sold in suitable farms to numerous settlers and doubtless, many an envious eye has been cast upon the land by would-be settlers. But it must not be supposed that in the hands of the Company, it has not contributed to the support of many families. As a matter of fact, very many thousands of pounds have been spent on wages*

and on contract labour by the Company which owns this magnificent property; and we have no doubt many a man now possessed of land of his own, owes his start to the Company. In the early days of any Colony, the influx of capital through such channels is beneficial and not harmful. In the natural progress of events, companies such as these become trustees for the future colonists who will eventually in their turn become owners of the soil, and they hand over the land not exhausted, but in a highly improved condition. There is room therefore, for two or three such companies in every colony, and the improvements in stock and modes of working, which they introduce, will be advantageously felt long after they have disposed of their estates to smaller settlers. There is a very great distinction between a company like the New Zealand and Australian Land Company which spent hundreds of thousands of pounds on stock and improvements, and the selfish monopolist who leaves his thousands of acres in a state of nature, with only a few sheep or cattle feeding on the original pasture, until the 'unearned increment' reaches a point high enough, without exertion on his part, to satisfy his greedy desires.... [xxxvi]

Thus to a degree a happy ending for the NZ&A Land Co. By Legislation some of its estates were purchased by Government and subdivided into 'Hundreds', a New Zealand term for smallholdings. So closer settlement of the land took place, under the legislation of 1892 and 1894. The New Zealand & Australian Land Company was Glasgow founded and it survived the catastrophe of the failure of the City of Glasgow Bank. Lewis Potter is often held up as the arch criminal of that disaster, but it is well to remember the words of David Murray, who served the Land Company for many years as Chairman, (nearly 60 year). He said and believed that Lewis Potter, an old man, *'had been harshly treated for crimes that were more on a reflection on the management, than on the Directors of the Bank'.* [xxxvii]

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Nineteenth Century New Zealand; and to Stuart Strachan, Librarian, the Hocken Library, University Library, University of Otago, New Zealand.

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The Scottish Glass Industry

Diana Connell

The roots of glass making as an industry in Scotland stretches back over three hundred years, with a glass house at Leith in the late 1600's. This predates the industrial revolution, and allowed the manufacture of glass to be carried out on a large scale. Each glass house usually had a great cone, which resembled a giant kiln, like those in a pottery. Often these cones dominate the skyline of the towns in which they were located. These existed at Leith, Alloa, Dumbarton and Glasgow and were up to 150 feet in height. This equates to a ten or twelve storey building, in modern terms. The base of each cone had to have good solid foundations and the bricks used in the construction had to be of a superior quality to cope with the enormous changes in temperature inside, and the weather outside. The mortar used to set the bricks also had to be of sufficient quality to stand up to the job. The fact that some of these structures stood for up to 150 years confirms the quality of their construction and it should be remembered that they were demolished because of trouble in the glass making industry and not because of their need for replacement.

In Glasgow the earliest glass house was situated at the corner of Jamaica Street and Clyde Street, and was separated from the River Clyde by the 'Towns Green'. This was a large factory in its day and several contemporary sketches show the great cone of the works. This cone has in the past been confused with a kiln of the Glasgow 'Delph House'. The 'Delph House' or pottery was situated farther to the west of the old town of Glasgow. It had no need of such a large cone or kiln and its own structures would have been more bottle-shaped. The Glasgow Glass House was opened about 1720 and it produced in the main green glass bottles for the home and export market, which was principally the Americas. In the early 1800's this factory began producing crystal decanters, glasses and other tableware, which were either cut or engraved. According to the memoirs of Robert Lindsay, a former Burgess of Glasgow, who lived near the factory all of his life, *'The engravers could be seen through the windows of their workshops, using their lathes to engrave figures or flowers on the items'*. It was not normally the practice to use a

maker's mark on wares made at the Scottish glass houses and this makes it difficult to identify pieces from individual factories.

Given the fact that many of the workers came from glass houses in Newcastle or Ireland, the style of their work is often similar to that of the factory from which they came and this causes further confusion when attributing pieces. Old glass can easily be melted down and reconstituted and this did happen on a regular basis. In addition during the early twentieth century copies of old glassware were produced and they themselves now have some age. There are noted occasions when old glass factories were converted for the production of ceramic wares or old pottery kilns were converted for the production of fine crystal. This demonstrates the link between ceramic and glass manufacturing and several pottery owners were also glass manufacturers.

When the cone of the Glasgow Glass House was taken down about the 1840's, it was noted that not one of the bricks or the mortar showed any signs of ware. In 1745 the Glass Excise Act came into force and a charge was levied on the weight of the items. The result was that glassware became lighter and thinner to reduce the amount of tax which had to be paid. About 1780 'free trade', was granted to Ireland and their glass factories were not required to pay the duty. This resulted in the flowering of glass manufacture in Ireland but despite this they did not completely dominate the market. In 1825 a series of new taxation measures were introduced but the most important of these was the reintroduction of Ireland into the duty levied on glass. Just as the removal of this taxation allowed the Irish glass houses to flourish, its reintroduction brought about a level playing field throughout the British Isles and glass making throughout Ireland went into decline.

From the 13th Report of the Commissioners of Enquiry in 1835 we get some idea of who was paying duty on the manufacture of glass in Scotland. This was carried out in 1833 and published in 1835. Included are: William Geddes of Anderston, who paid nearly £5,000 in duty, that year. John Geddes of Finnieston paid just over £3,000 and the partnership Geddes Kidston & Co of Anderston just over £4,500. These were enormous sums of money at that time

and reflect the productivity of the respective concerns. The company owned by John Geddes refers to the Verreville Glass & Pottery Company. His son William Geddes was involved in the separate concern of Geddes Kidston & Co, who had a large warehouse in Buchanan Street. This partnership refers to the Anderston Pottery Company, in Lancefield Street, where they made ceramics as well as glassware. William Geddes has another separate listing and this tells us that he had another interest on his own account. He may have retained separate glass cones within the Anderston pottery or the adjoining Anderston glass works.

The glass factory which was called the Verreville, meaning glass town, stood at Finnieston near to the River Clyde, when this area was no more than a village and not at that time part of Glasgow. These works also had a great cone and it is recorded on billheads from the factory as well as sketches and later photographs taken during the construction of some of the docks. The site of the works, which were excavated in the 1970's, is now covered by a sports club in Finnieston Street. These works have an interesting history because they produced a large range of wares and were later converted to a pottery and china works. Established in the 1770's, the Verreville glass house was in competition to some extent with the Glasgow glass house and the Dumbarton glass house. These works were founded by Patrick Colqhuoun who came from Dumbarton, and they were then sold to John Geddes, in 1785 with the agreement that he did not manufacture glass bottles. Geddes concentrated instead upon making quality flint table glass and especially drinking glasses. He became very successful and soon opened a warehouse in Perth, to serve the north of Scotland. Geddes expanded these works and in time constructed a pottery on the southern boundary and commenced pottery production along with glass manufacture. Eventually the making of ceramics proved to be more profitable and the whole factory was altered to accommodate this. The glass kilns became earthenware kilns and glass production ceased by the mid-1830's. Peter Woodnorth became manager of the pottery side of the Verreville concern for one year only, under the leaseholder Robert Montgomery. Woodnorth had been managing partner at his own pottery in Cumbria before coming to

Glasgow. After his short time at Verreville he opened his own glass importing business with offices both in Glasgow and Liverpool.

Both the Verreville concern and the Anderston works were taken over by Robert Alexander Kidston. However, in 1841 he became bankrupt and his sequestrated estate came up for public auction. The *Glasgow Courier* advertised both glass houses for sale, and the details given about the works tells us much about the capacity and the extent of each factory. A cutting shop for forty glasscutters is mentioned as is the competence of the workforce. We also find out that there was a large variety of *'excellent moulds and presses'*, to make flint glass. By this period flint glass had superseded cut glass and we therefore know that these Scottish glass houses were up to date with trends as well as other British producers. Warehouses, packing shop pot lofts and other buildings are mentioned. A large stock of glass goods made at the Verreville were also for sale and these are described as of the best quality. The glass works in Lancefield Street are also detailed, and consisted of a cone about seventy feet high. Warehouses and a packing shed are again mentioned. Similarly weighing rooms and a pot loft are also listed. Offices and a fine dwelling house for a manager are listed too.

Many glass houses developed around Glasgow over the years. Amongst these were the short-lived Gallowgate Glass House. These works were also referred to as the Gallowgate Crystal Manufactory. They were built by William Gray, at the corner of Tureen Street and Gallowgate Street, in 1784. Gray had been the former manager at the Verreville works warehouse in Trongate. He took over and converted the old 'Delfe' works of Thomson and Robertson, which had been built anew for the manufacture of earthenware. Gray manufactured a variety of flint and crystal table glass, which was either cut or engraved, and several of the employees from these works as well as others are known by name and occupation. This further confirms the types of wares and the skills of the Scottish glass workers of the time. The products from this manufactory would have been sold at one of the many retail outlets or warehouse in the city at that time, especially at the 'crystal market' near by.

Other later glass houses in Glasgow included some well known and some lesser known concerns. These included; The Victoria Glassworks situated alongside the Forth & Clyde canal, north of the Woodside area of the city. Further along this same canal, were the Forth Glassworks, followed by the Firhill Flint Glassworks, the Firhill Glass Bottle Works, and the Caledonian Glassworks. A contemporary etching from an advertising bill, in the *Pottery & Glass Gazette* gives a view of the Forth Glassworks. They are large and comprehensive premises, which were owned by A M Allan & Co. They had their own canal bank from which to unload raw materials, and to dispatch finished goods. They produced a range of pressed glass which were sold throughout Britain and across the world. The factory employed 230 people and Alexander Allan was in charge of the operation, his son was involved in the business and William Allan another relative was clerk at the works. The family who resided at various smart addresses in the West End of Glasgow all came from the town of Forfar.

Other glass works existed in the East End of Glasgow, at Camlachie and at Vinegarhill, where an annual fair was held at Vinegarhill for many years. Another factory known as the Crownpoint Glassworks, were located at Mile End, and the North British Works were located at Old Shettleston Road. There were other factories at Possil, and other parts of the city. Many of these other factories were producing glass bottles in vast quantities and did not produce any decorative items, however there were other factories in the city that excelled in art and decorative glass forms.

The British Bottle Works, of Shettleston, was one of the last surviving glassmakers in Glasgow. It was founded in 1900, and continued in production until the 1980's. The early bottles were made by glass blowers, and then by press moulds. Most of these were made to supply the whisky, milk and soft drinks industries, however the advent of plastic bottles spelled the end of this factory. The owners of this concern bought land on which they built a bowling green and clubhouse for its workers; this still survives and thrives today.

One of the best known of all the glass factories in Scotland was the City Glass Works. This manufactory was founded in 1850 by the Couper family, who had already been successful in the pottery trade. The works stood in Kyle Street near Port Dundas, just north of Glasgow City centre. These glass works, which operated until 1921, employed 130 persons including the famous Glasgow designer, Dr Christopher Dresser. Dresser was hired by James Couper to design the range of glassware known as 'Clutha'. The fluid designs of the 'Clutha' range are reminiscent of ancient glass forms. Liberty's of London was one of the factories best customers, and much of this range was also retailed in places like New York. The factory also produced a range of stained glass known as 'St Mungo'. St Mungo being Glasgow's patron saint.

Couper also hired the designer and architect George Walton, an exponent of the renowned 'Glasgow Style'; to continue designs for the 'Clutha' range. He was a contemporary of Charles Rennie Mackintosh, who himself provided ceramics designs for the Britannia pottery in Glasgow. The designs produced by the City Glass Works were so popular that the leading English factory of Thomas Webb were inspired to produce a range that was so similar, that Couper threatened to sue over breach of copyright. The 'Clutha' range was discontinued in 1905, and free blown glass ended in 1910. Some years later an American firm began to produce copies, which were called 'cluthra'. These may have been made from the original moulds of the Glasgow factory. Another speciality of these works were glass globes, which came in every shape and design with over 20,000 different patterns available.

The factory employed many workers from England and even Bohemian engravers, from Europe. There were also many Irish workers as well as French and German. The factory itself was spacious and fitted out with the most up to date machinery and other lines of glass ware, such as ships lenses were made. This factory closed in the 1920's, largely due to newly imposed American import tariffs, effectively cutting off its main market. Many other glass houses went to the wall at this time and old glass moulds were bought up as job lots by American producers.

Additional glassworks were located at Hydepark Street, Glasgow which were run by the McAdam family, who were also involved in the pottery trade. The Cochrane family who were also successful potters had a flint glass house in Kennedy Street, adjoining their Britannia pottery. These works were known as the St Rollox Glass Works, and were founded about 1830, some twenty-five years before the pottery. Alexander Cochrane was the main partner in the firm. He had inherited the business from his father Robert Cochrane, whilst his brother inherited the pottery. Over two hundred people were employed here making fine cut glass tableware, and ornamental glass products.

They had an impressive showroom within the factory, where the entire range of goods, which they manufactured could be seen on display. They also had another showroom at Holborn in London, which at that time was the retailing centre for glass and ceramic makers. Whilst a large export trade was enjoyed by the firm, they also had a good trade with the home market. Alexander Cochrane had a smart town house in Blythswood Square, as well as a second home in Stewarton.

Outwith Glasgow as has already been mentioned were the glass works at Dumbarton. They were founded in late 1600's by Antoine Ammat, a French Huguenot. About 1760 the factory became two separate concerns and the Dumbarton Glass Works Company was formed. They were to become the largest works of their kind in Scotland and employed over 300 people in the late eighteenth century, rising to about six hundred by 1806. John Dixon was one of the principal players in this company. His family was from the Dixon Austin & Co, potters and glassmakers of Sunderland. Crown glass was made at these works during this time and it was the only factory in Scotland to do so for a number of years. Crown glass was spun into a disk shape on the pontil, by the glass blower. When it was removed from the pontil, a type of rod used by a glass blower, the mark which was left was always called the pontil mark. This factory continued in production until about 1850, although it had been gradually run down by that time. The great cones of the works, which were likened to volcanoes belching out smoke, were eventually demolished in 1851, and glass making in this town was ended.

Glass making was not confined to the west coast of Scotland, but also thrived in the Edinburgh area, including Portobello. The town of Alloa was one of the countries earliest glass making centres. Most of the factories employed young lads of about thirteen years old as *'takers-in'*, or *'putters-in'*. Many of them were from migrant Irish families, and in the 1890's for example they would be paid about five shillings per week, working about sixty-five hours. They could earn extra by working overtime. The Edinburgh firm of John Ford & Co., operated the Holyrood Glass Works in Edinburgh. They produced a range of decorative glass items with satin finishes and sulphide decoration. They also made glass figures, paperweights jugs etc, all of excellent quality. This was in part due to the fact that John Humphrey Ford (born 1860) was a glass chemist. He and his father William Ford ran the business. They were both born in Edinburgh and resided at Fernieside Lodge, but they employed workers from Hungary, Bohemia and Italy. The Edinburgh Crystal factory was founded in 1870 and still continues to this day, as does the Caithness Glass works, but their history and products are well recorded and not relevant to this paper.

The Midlothian Glass Works were located at the west end of Portobello at Baileyfield and produced large quantities of glass bottles. In the 1840's the factory was run by Bailey & Co, but forty years later they were being run by Thomas Wood, who came from Worcestershire. The factory employed just over forty people at that time, and Wood was residing at Baileyfield House.

Along with other glass factories such as the bottle works in Greenock, and the firm of Bairds in Glasgow, which produced decorative decanters and such like, there was the Alloa Glass House. This was founded about 1750 by Lady Francis Erskine of Mar. Lady Mar had inherited much of her will and character from her father, and showed herself to be a competent and forceful businesswoman. This factory is still producing glass today, making it the oldest continuous glass works in Europe. The first workers were hired from Bohemia, long before the Victorians desired the Bohemian style. One of the two large cones built in 1825 still survives today, although it is not used for producing any wares.

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Social Effects of Industrial Closure in the West of Scotland 1950-1975: Health

Neil Earnshaw

Industrial closure means unemployment unless those affected are immediately found work elsewhere, as happened with the transference of miners from the Lanarkshire coal fields. Unemployment is not caused only by closure. Unemployment, however, whether brought about by closure, by short-time working or by any other means generally has dire results for those who are the victims of it. Failing living standards lead to declining health, poverty and deprivation.

Whilst industrial closure can affect several hundred workers, the effect on one man who is unemployed may be, to him, far greater than to a mass of workers. Unemployment in general, but unemployment caused by industrial closure in particular, brings a great sense of personal loss which may manifest itself in several ways. Community medicine specialists are agreed that far greater anxieties are suffered in the *period* awaiting the announcement of the inevitable date of closure or redundancy than afterwards. Actually knowing that the inevitable has happened and an irreversible decision has been taken can come almost as a relief to those made redundant, and encourage them to plan ahead, as best they can, with definite aims in mind.[i]

Unemployment caused by industrial closure has the immediate effect of cutting off an individual from friends and workmates at their workplace or meeting point - forever! No matter how untenable or unbearable the work to be done was, or how limited the skills required to do it, it did give the individual worker a self esteem as well as a feeling of belonging to an organisation which would not function without the efforts of all of the individual workers. Also, the worker's immediate friends, no matter how few, were always on hand to offer advice, sympathy or condolence. This aspect of closure of a factory is not always foreseen by the workforce. Academics familiar with the works of Durkheim will be aware, however, of his theories on the protectiveness of the work environment.[ii]

Another aspect of closure is the loss of social activity, as works' sports clubs, football teams and social evenings cease to exist. Several miners' welfare establishments closed as pits in Lanarkshire and Ayrshire were abandoned. For a while after closure, groups of friends arranged periodic meetings, but these were gradually discontinued. It was inevitable that such social ties would loosen, for their mere existence after closure could be a distressing reminder of the catastrophe that had engulfed the community, a memory which could not be erased until they were eradicated altogether.

Contemporary anxieties of the workforce affected by closure proved well founded. The single man was less affected than the married man, the younger married man less so than the older one, whether married or not. At the time which is the subject of this article, alternative work of some sort was usually available eventually, possibly with loss of status and lower wages. Women employed in the textile trades were especially vulnerable, but again there always appeared to be alternative work available to them. In later decades, however, jobs were at a premium.

The anxieties took various forms. The range of illnesses attributable to those affected by unemployment are often shrouded under the nomenclature of depression and stress, but medical practitioners have more precisely diagnosed ischaemic heart diseases, defined as different categories of acute and chronic cardiac disability more commonly known as high and low blood pressure.[iii] These were most evident in workers awaiting closure decisions, and also among shipyard workers on Clydeside, for the very nature of their jobs meant redundancy and re-employment in other yards as competing companies vied for depleting orders in the 1960s. The long-term unemployed suffered such physical illnesses as bronchitis, pneumonia and cancers brought on by dietary deficiency, lack of heating, too little clothing and poor sanitation, all a consequence of comparative poverty created by failing personal incomes.[iv]

A somewhat sketchy British Regional Heart Study survey carried out between 1978 and 1980 compared cardiovascular disease in employed and unemployed *middle*-aged men selected at random in twenty-four British towns including

Ayr, Falkirk and Dunfermline. Frequencies of bronchitis, obstructive lung disease and ischaemic heart disease were shown to be higher in unemployed men than amongst employed men, and highest of all in the ill unemployed. It was concluded that the unemployed had a greater tendency to increased cigarette smoking than had the employed. Likewise, the unemployed became more dependent on tranquillisers. No comparable difference could be found in their drinking habits. One significant factor to arise from this study was that it had been impossible to determine whether ill-health led to unemployment or unemployment caused ill-health.[v] This applied to all age groups. In instances where healthy workers had experienced ill-health after becoming unemployed, they had often found difficulty in readjusting to work when it became available, and eventually had found themselves not being taken on for work by prospective employers.[vi]

Another aspect of unemployment was the tension that built up in the family home as the husband (or wife) was forced to stay at home instead of being out at work all day. The psychological effects of the loss of self esteem within the family unit, together with the fall in income and subsequent poverty, often created frustration for the former breadwinner, leading to internal family disruption, squabbling, abuse and even divorce. The lack of a settled or adequate family income often meant that, as families grew in size, they were forced to live in overcrowded households, the funds to purchase larger homes being unavailable. This was particularly true in the northern suburbs of Glasgow - the industrial workers' belt of Springburn, Blackhill and surrounding areas.[vii] However, although there was some indication that, in general terms, health workers and authorities were slow to recognise the implications of mass unemployment - even in 1971, when unemployment was rising[viii] - this may not have been the case in the west of Scotland, where plans were in hand to revitalise the area and replace dereliction with new industry and a healthier environment.[ix]

Notwithstanding these attempts by the authorities to remedy the situation, the individual worker was often not aware of what was being done, officially, to create employment opportunities and a better environment. Even where he

knew about such plans, they seemed not to affect him. Frustration and despair built up within some individuals, leading to the decline of both physical and mental health. Between 1949 and 1963, admissions to Scottish mental hospitals rose from 6426 to 18739,[x] including a 400% voluntary increase between 1941 and 1953.[xi] There is, however, no evidence that this was due to unemployment, rather the result of an improved health service, particularly after nationalisation. Unemployment was, though, considered to be suicidogenic, but only in instances where the victim already possessed such a tendency. That suicides fell during the period of this article was due entirely to the conversion of many households from gas to electricity.[xii] Tabulated evidence supports the foregoing, although a definition of the various cardiac diseases may assist a greater understanding of it. Arteriosclerotic and degenerative diseases indicate a weakening of the arteries and have been associated with old age. More recently, however, these conditions have also been attributed to stress brought about by other factors, including unemployment. Cerebrovascular diseases relate to illnesses in the arteries of the brain (often affected by heavy drinking and overindulgence), whilst hypertension is often related to high blood pressure within the arterial system. These are the more common aspects of ischaemic heart disease, a collective term which also includes cardiovascular diseases relating to both heart and blood vessel disorders, as well as coronary illnesses characterised by severe pain.[xiii]

By examining official medical statistics and extracting death totals for heart diseases, tuberculosis, bronchitis and suicides within the major towns and districts of the west of Scotland during the period 1950-1975, it has been possible to conclude the extent to which unemployment contributed to these totals. Although each year of the period has been meticulously examined, the information has been condensed by calculating average annual figures for each of the first two decades and then for the three-year period 1970-1972. (See Table 1).

From Table 1, it will be observed that death rates for heart illnesses were considerably lower in Lanarkshire than in Ayrshire. In all probability, this was

TABLE 1

	Population	Unemployed	Death Rate per 1000 pop.			
			HID (a) (A+D)	Other HID	TB (b)	Bronchitis
City of Glasgow						
1951-1959	1 083163	17359	3.05	0.79	0.43	0.70
1960-1969	1 021 196	20123	3.32	1.33	0.17	0.75
1970-1972	887786	31 967	3.36	3.28	0.10	0.79
County of Ayr						
1950-1959	242524	2418	3.58	0.94	0.14	N/A
1960-1969	253587	3180	3.84	1.53	0.03	0.41
1970-1972	262582	3993	3.70	3.35	0.03	0.46
Burgh of Motherwell and Wishaw						
1950-1959	70 323	1644	3.09	0.74	0.30	0.62
1960-1969	74 830	1827	3.41	0.73	0.06	0.60
1970-1972	74 017	2847	3.68	0.53	0.04	0.63

Sources: Unemployment figures: Ministry of Labour Monthly Returns (Unpublished); All other data: Annual Reports of Medical Officers of Health

Reference a) H/D A+D = Heart Diseases b) TB = Arteriosclerotic and Degenerative Tuberculosis

TABLE 2

	HID (A+D)	Other H/D	TB	Bronchitis	Suicides
City of Glasgow					
1951-1959	3308	859	469	697	-
1960-1969	3523	1 341	175	750	75 (1964-69)
1970-1972	3012	2911	98	702	59
County of Ayr					
1950-1959	874	230	35	68	13
1960-1969	963	401	10	105	15
1970-1972	972	880	8	122	18
Burgh of Motherwell and Wishaw					
1950-1959	217	52	21	36	3
1960-1969	251	50	5	45	3
1970-1972	267	39	3	47	3

due to the number of retired business people living in Ayrshire coastal towns. Traditionally, business people were expected to suffer greater stress than other workpeople. The pattern of death rates in Lanarkshire was also similar to that in Glasgow, suggesting compatible recording systems. The fall in death rates for tuberculosis observed in all three districts was remarkable, and is ample evidence that the disease had been all but eradicated by 1972. This was a result of improved living conditions, better medicines and mass radiography, although this latter was instrumental in highlighting forty-one new cases of tuberculosis in the burgh of Motherwell and Wishaw, as well as sixty new

cases of pneumoconiosis, to add to sixteen already known there. In 1960, there were 656 known cases of tuberculosis in that joint burgh; by 1965, this had reduced to 320, and five years later the figure was further reduced to 163.[xiv]

The number of deaths from specified causes is shown in Table 2, tabulated in similar fashion to Table 1. (See Table 2).

As indicated earlier, the data given in the tables cannot be accurate for any given year, as average annual figures have been calculated. For instance, in Table 1, the population figure of 1,089,767 for the City of Glasgow in 1951 was the highest for any year in the whole period and, without exception, fell slightly each year until it reached 861,898 in 1972. Unemployment, on the other hand, was 16,502 in 1951, but 21,684 a year later, then 17,182 in 1953. There were just over 4,000 fewer unemployed in 1955 and the figure remained steady until 1958, when it increased by over 10,000 from the previous year. In the 1960s, the figure fluctuated each year, 15,578 in 1965 being the lowest, 27,010 in 1963 the highest. After 1969, numbers increased dramatically to reach 35,481 in 1972. Such variations occur throughout the statistics. The tables, however, serve to show general trends. Whilst there is a slight rise in unemployment in the County of Ayr concomitant with population increase over the twenty year period, the Lanarkshire burgh indicates increasing unemployment with a fairly static population after 1960. The City of Glasgow population, however, drops dramatically, thus making the percentage rise in unemployment much higher than it would otherwise have been.

Tuberculosis deaths fell considerably in all three districts, while all heart diseases (combined A + D and others) showed a gradual increase from 1960 onwards. Suicides almost doubled in Ayrshire, but elsewhere there was a gradual decline in the numbers. No specific reason was apparent for the Ayrshire rise, although it had been custom to record drownings as accidental deaths at one time, and only later put them down as suicides when this was established.[xv] Although this was the most likely explanation, there was no

firm evidence that this was the case. Increasing pit closures may have been a contributory factor.

Whilst statistical data drawn from different record sources suffered from deficiencies in uniformity of recording, such discrepancies that occurred because of this were considered minimal. Likewise, the standardising of categorisation for ischaemic heart diseases after 1968 may have caused some confusion in relation to officers' recording methods locally. Nonetheless, the number of heart disease deaths tended to rise except in Glasgow, where the population was in steep decline. Here, the number of deaths fell, although the death rate relative to the population rose (Table 1). This leads to the conclusion that, for whatever reason, the population of Glasgow in particular and of the west of Scotland in general, was suffering considerably from heart related illnesses and deaths in the period under review. *Although not tabulated* here, the Medical Officer of Health reports of the towns of Hamilton, Kilmarnock and Paisley, as well as the County of Dumbarton, were meticulously researched, with similar results. This bears out the findings of community medicine practitioners referred to in the early part of this article.

Bronchitis deaths remained fairly stable throughout the period. This disease manifested itself in the older members of the populace, although it was more prevalent in ex-miners and former quarry workers suffering from pneumoconiosis and similar illnesses. In the County of Lanark MOH Reports for 1956, 83 deaths were recorded where pneumoconiosis was the primary cause. Of these deaths, 69 were working or retired coal miners, all but two being over 55 years of age. There were a further 46 deaths where pneumoconiosis was a contributory cause, of which 34 were in working or retired coal miners, all except one being over 55 years of age. Colliery closures would, in time, lead to a reduction in such illnesses, although by the 1970s, deaths that were being recorded were amongst extractive workers who had contracted the symptoms many years earlier.

No sufficient compatibility between unemployment and illnesses was recognised by Medical Officers of Health or others during the period

examined, although such conclusions have been formed in more recent studies, as discussed in the earlier part of this article. The figures given in the Tables for west of Scotland towns appear to bear out these findings as far as heart related illnesses are concerned. This could also be said of suicides or bronchitis for most of the period. Tuberculosis does not appear to be related to unemployment at all. As an increase in unemployment due to industrial closure in the west of Scotland was concomitant with an increase in illness, it would appear that a definite correlation existed between industrial closure and the health of the workforce in the period 1950 to 1975.

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