

The Rise and Fall of Whitfield's 'Skarne' Blocks

by Peter Atkinson



Introduction

How the development of the built environment unfolds, and the part the general public plays in the planning process, is subject to constant change. The modern planning system, sometimes distrusted, and scrutinised by society as never before, places far greater importance on public engagement than was the case in the past. Buzz-words like 'charrette', 'place-making' and 'co-creative' are descriptors, sometimes controversial, for engagement exercises that would have been unheard of even twenty years ago. It is now expected, and is a legal requirement, that members of the public take part in the design of their own built environments. The approach in the post-war era, however, was somewhat different. Planners, architects and other professionals responsible for the built environment often considered themselves to be experts with a specialist understanding of society's needs. Local communities were 'consulted', but the conversation was more often than not a one-way affair, with models presented and information

given, but no real effort made to listen to people's concerns or consider their ideas. This approach was often to have disastrous consequences for the people on whom such large scale developments, and in particular housing estates, were foisted.

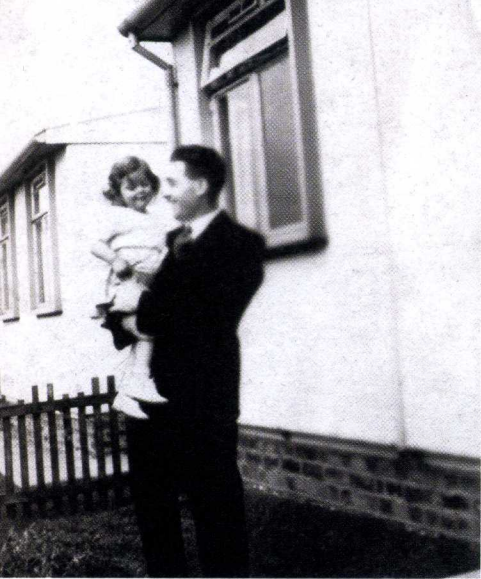
No urban development in Dundee has encountered the same level of infamy as the so-called Skarne flats in Whitfield. Such a failure in design and social terms that it is almost without peer in Scotland, it is known by almost every Dundonian, a large number of whom had the experience of living in them themselves. Aerial photographs of hexagonal blocks stretching into the distance present an almost otherworldly image, something akin to science fiction. The story of the development of the project, and its downfall, is more mundane, but

nonetheless stands as an example of what not to do when designing urban environments and maintaining them in the long term.

A need for action

Dundee, despite decades of incremental and sporadic reconstruction, was by the late 1960s still faced with an enormous slum housing problem. Poor quality tenements had been thrown up in haste during the boom years of the 19th and early 20th century jute economy, as





But the densely populated city was running out of space for redevelopment, even with such epic clearance efforts. Greenfield land in the north of the city beckoned and the Dobson Chapman report of 1952 had selected a large tract now known as Whitfield, named after a farm on the site, for future development. An outline plan was drawn up in 1965, detailing the development of 4700 homes set around an open area of greenery dividing development into Upper and Lower Whitfield. To build such a large number of units would require an innovative approach and new and radical construction methods were needed if the corporation wished to achieve its lofty ambitions.

Industrialised housebuilding

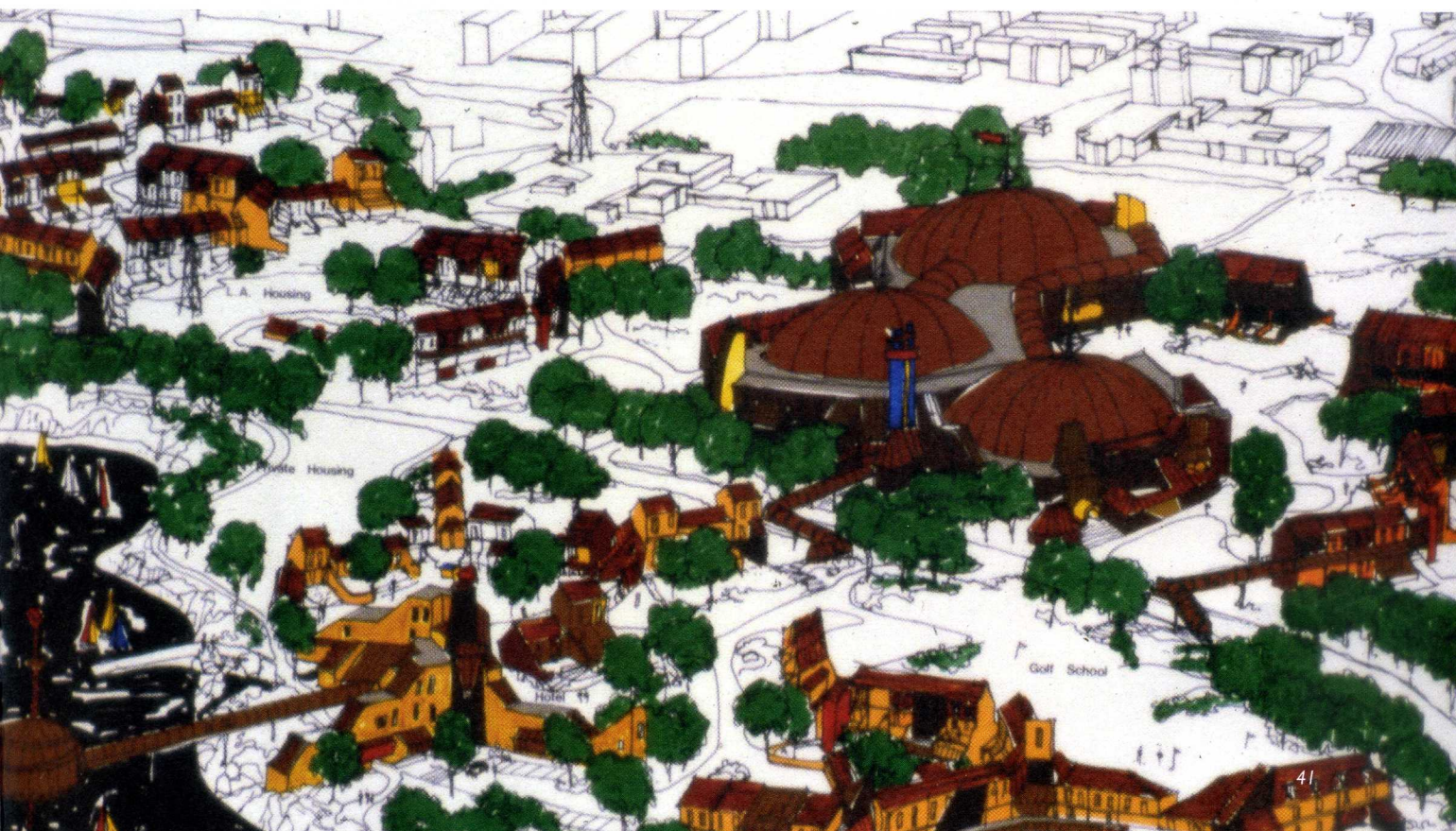
Manufacturing prefabricated homes on an industrial scale has a relatively long history, with examples in Scotland dating to the interwar era. The Scottish Special Housing Association (SSHA), founded in 1937 to construct housing in depressed areas, was permitted to build solely by non-traditional means due to a shortage of bricks and masonry at the time. The Second World War brought about pressures in the housing sector as a result of bombing, population movement, low supplies of building materials and manpower.

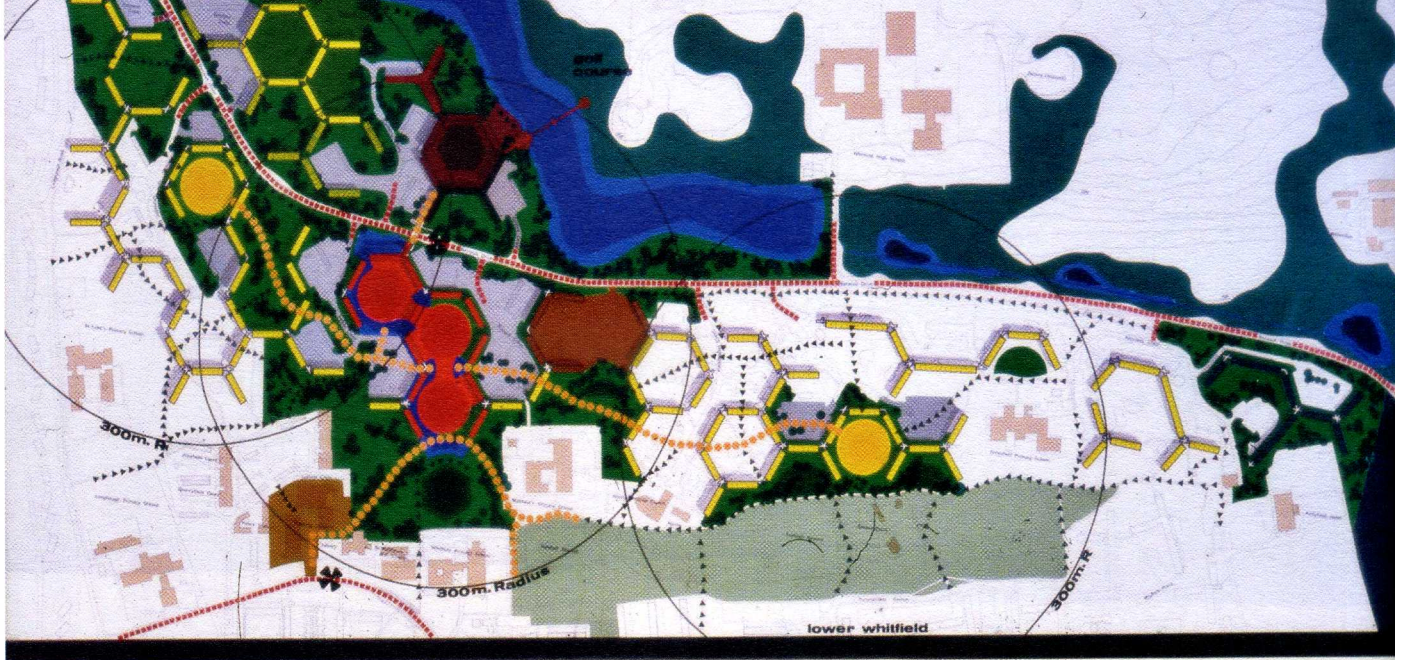
The Burt Committee, formed by the UK government during the war, undertook a programme of research into means of providing housing quickly and efficiently. The famous prefab temporary housing units formed part of the committee's output and the investigations led to the creation of systems employing timber, metal and concrete to accelerate the building process. The concept of industrialised building was born, whereby as many construction elements as possible could be assembled in a factory setting, the final erection of the combined elements taking place, hopefully quickly, on the building site. By the late 1960s, pre-cast concrete systems with names like Bison Wall Frame, Reema Hollow Panel, and Wates PRC were well known in the construction industry and used to develop tens of thousands of housing units.

Skarne and the 'Million Programme'

The notion of industrialised building was not unique to the United Kingdom. A Europe-wide post war population boom, coupled with a desire to improve living conditions, led a large number of other nations to investigate similar solutions. France employed prefabrication in the development of its grands ensembles, Germany with its Großwohnsiedlungen

workers flooded into Dundee from as far afield as Ireland and the Highlands seeking accommodation. Only half of the city's dwellings had a bath and a quarter had no indoor toilet in 1967. The quality of many of these homes, aside from such statistical truths, was dire. The city was faced with an enormous problem to tackle, but, post-war, it was doing just that. Comprehensive Development Areas (CDAs) were established to eradicate en masse less salubrious areas of the city, leaving a clean slate for the construction of new housing and other amenities. 400 slum dwellings had been cleared each year of the mid 60s and the Corporation aimed to build a staggering 14,000 new homes between 1968 and 1970.





Schematic Layout

Sport, Leisure and Swimming Complex	Public Car Parks	Existing Public Buildings	Water Features
Local Satellite Hubs	Service, Industry	Existing Shops	Woodland
Golf Complex	Vehicular Routes	Improved District Council Housing	Trees
Hotel Complex	Pedestrian Spine	Existing Parkland	All Uncoloured Landscape Also Upgraded
	Bus Termini		

and the systematised approach came to be synonymous with construction efforts attempted in the countries of the eastern bloc. Scandinavia, too, had its systems, one of which was created by the Swedish company, Skarne. Started by Oskar Skarne in 1897, Ohlsson and Skarne had, by the 1940s, emerged as a leading player in the Swedish construction industry.

Oskar's son Allan, following in his engineer father's footsteps, led the company to build Sweden's first prefabricated building in the early 1950s and then to produce 'System Skarne 66', an industrialised method designed to be used on a large scale. The system was used widely as part of Sweden's 1965-74 Miljonprogrammet or Million Programme, an enormous construction initiative undertaken with the intention of providing every family in the country with a good quality home at an affordable price. Ohlsson & Skarne merged with Skånska Cementgjuteriet in 1967 but the international element of Skarne remained within the family's ownership and relocated to Switzerland.

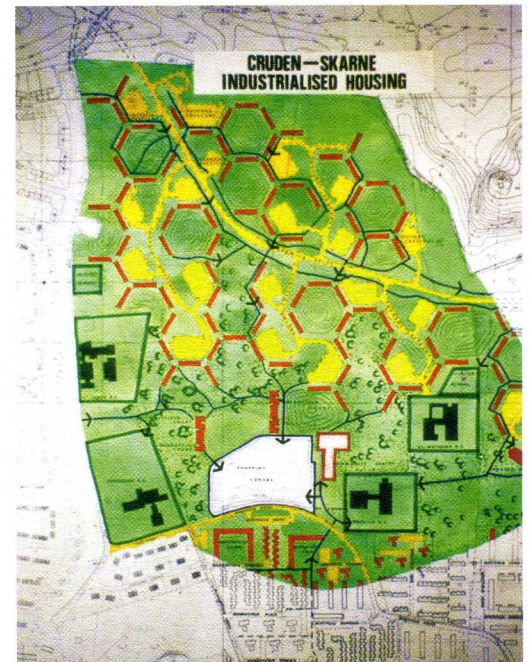
Design and the masterplan

Crudens Ltd of Musselburgh, Skarne's agent in Britain and with George Bowie

as chief architect, was awarded a contract by Corporation of Dundee in 1967 to provide an enormous 3500 homes, 2500 at Upper Whitfield and the remainder in a location not at the time disclosed. The Whitfield scheme as a whole was intended house a population of 12000, twice that of Brechin. The timescale allowed for construction was striking; the entire development was to be complete by 1971, a turnaround of only four years. Building on such a vast scale, in such a short time, would utilise the truly industrialised approach that Skarne offered. Components for the blocks were to be produced at a facility at the nearby former Longhough Quarry, ready to be trucked northward and assembled on site. Tubes for wiring, ventilation ducts, window units with glass already in place and pipes for water and sewage were incorporated into pre-prepared panels. Once bolted together, all that remained was for the contractors to provide water, electricity and install doors, kitchens and bathroom suites.

The masterplan for the development was striking. If Dundee was a buzzing

industrial centre in the late 60s, then the Whitfield development was to be its hive. 130 blocks of up to five storeys in height and arranged in hexagonal formations were spread across a vast site, the arrangement ostensibly being



chosen to avoid overlooking from flat to flat. The space within the hexagons was intended to be a safe area for children to play, from where they could be seen from the surrounding flats; dedicated play areas, however, were located on the

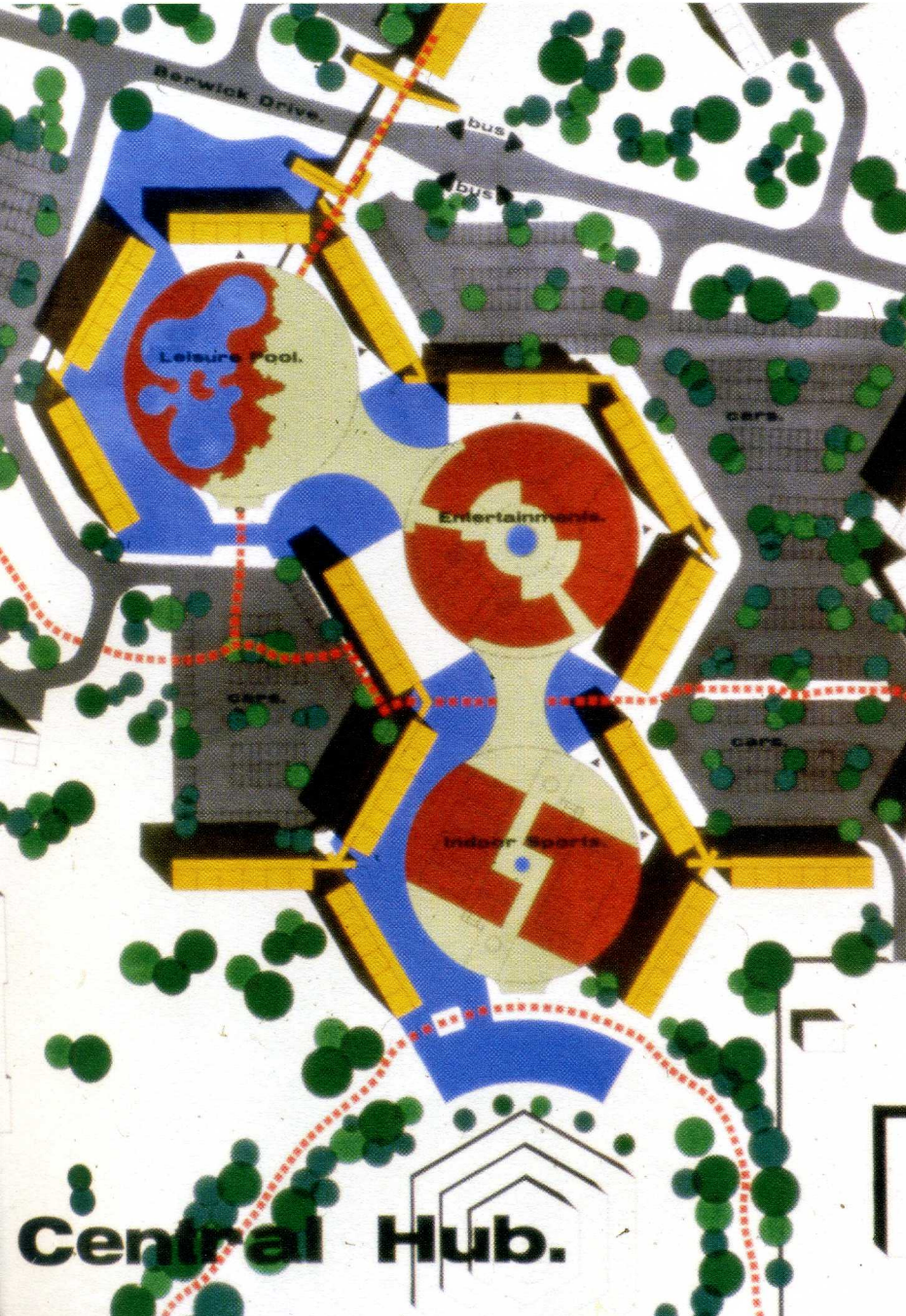
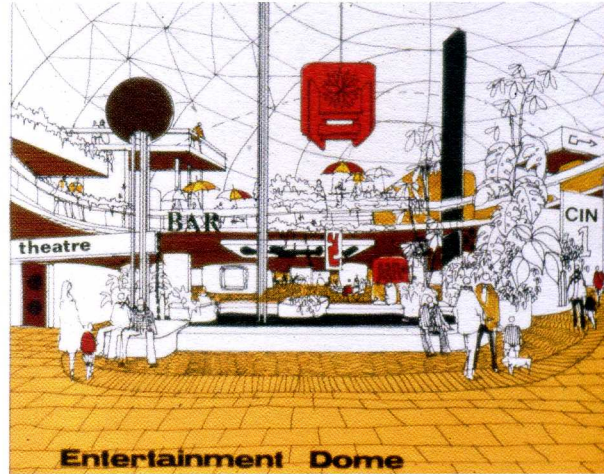
grassed areas between blocks. Each individual building was linked to its neighbours by deck style walkways located on the 1st, 3rd or 4th levels. Walkways from up to three blocks would meet at a staircase, provided with refuse chutes and allowing access to ground level. The flats themselves were in the form of single storey dwellings or maisonettes. Names chosen for each street in the complex, such as Berwick, Carberry, Dunbar, Haddington, Ormiston and Tranent, referred to locations in East Lothian, Crudens' base of operations, a connection perhaps lost on many of the development's inhabitants. A proposal for 20 shops, two supermarkets and a public house was made in 1967, a reduction on what was originally intended. It was said that the commercial scheme would be completed by 1970.

Construction on 'Industrialised Phase I' of the vast scheme began in the first half of 1967 and was completed in 1970; 'Industrialised Phase II' was proposed in 1969 and work ended in 1971. The development had been delivered on time, if not on budget; Crudens demanded an extra payment from the Corporation upon the completion of construction, the possibility of which was outlined in the contract for Phase II. The payment was never made, perhaps for reasons that would soon become clear.

Problems emerge

Despite the hubris surrounding the project, and the faith placed in industrialised construction methods, issues had begun to emerge even before the completion of the scheme. In 1970

How it might have been



the City Architect suggested that the enormous extent of walkways and other common areas would present problems for cleaning and maintenance. The first reports of vandalism, primarily to bin chutes and glazed elements of the stairways, reached the Corporation a year later. And the problems were far from small scale. The large open areas of indefensible space located within the hexagons became a no man's land, prone to littering, dog fouling (dogs were prohibited but enforcement was lax) and other undesirable activities.

The walkways immediately outside front doors were often noisy, as children chose to take shelter during times when it was raining, which it did with characteristically Scottish frequency. Disposal of waste, for those who wished

to do so legitimately, also presented problems as many of the rubbish chutes provided proved to be defective. Landings, stairways and paths were considered to be dangerous, particularly at night, due to the poor level of lighting provided and overgrown foliage.

Given that the same structural elements were employed to construct thousands of housing units, and the hexagonal design was repeated over an enormous area, it was inevitable that the development would be confusing to navigate and lack a sense of place, especially for newcomers or visitors. Ground level footpaths, despite the problems they caused, were taken for long journeys by many to avoid becoming lost in the maze-like warren of walkways. Vacant properties became a problem and tenants living in adjacent units feared the derelict units would lead to antisocial behaviour and/or arson.

The conditions found within the homes themselves were, themselves, highly unsatisfactory. Almost every unit suffered a defect of some kind. The design of the precast panels led to the build-up of mould on internal walls and the problem



was particularly severe on those found on the exposed gable ends of the buildings. Window vents, bafflingly designed to be permanently open, led to draughts during windy conditions and caused a leaking of heat from the homes on a near constant basis. The draught problem was made worse as the doors within the flats were found to be of the wrong size for their frames; several centimetres above any floor covering chosen. Front doors were substandard, as were the locks designed to secure them, and many of the window units built at the factory were defective and ill fitting. Outstandingly, it emerged that Crudens had built the flats to a lower

standard than those developed by Ohlsson & Skarne in Sweden, as they cited a lack of materials and expertise.

The Whitfield area as a whole suffered from a lack of health facilities, churches and other crucial aspects key to creating a successful urban environment. The shopping centre, as built, was only half the size of the development originally planned, with 8 units, one supermarket and a pub; the Skarne blocks, isolated at the opposite side of the vast swathe of open grass, were themselves never physically linked to the development. Residents were, therefore, forced to travel long distances to reach adequate





facilities, often in the city centre and on slow moving buses for those without a car. The area was physically, perhaps even psychologically, separated from the rest of the city, due to the constraint presented by the Dighty valley.

Hard to let

The Skarne development was, by 1975, officially identified as hard to let by the District Council, only four years after its completion. Safety catches were installed on 1583 of the scheme's windows in 1977 and grilles added to the raised walkways, installed with the intention of reducing the number of outsiders accessing each block. This modification, however, actually aggravated the situation as cleaning machines purchased around the same time were unable to travel along the decks for any distance. Lighting continued to be poor, weak doors, windows and locks were still present in a large number of flats and, given that the

District Council was by now sitting on a housing surplus citywide, and the estate was a no-go area, the problem of flat vacancy was of increasing concern. A report produced by DJCA/University of Dundee in 1982 found that 77% of the working age population living in the area was unemployed and the average income of the 23% who did work was below the national average. The Skarne development had become a sink estate. Despite improving 500 houses in Whitfield in the years from 1979 and undertaking changes to the management structure of its housing division in 1984, it was clear to the District Council that a long term radical solution would have to be sought.

Radical solutions

In 1988, less than two decades after its completion, Whitfield was chosen by the Scottish Office to be one of four areas in the country subject to major renewal, as

part of a trial scheme. The Whitfield Partnership, comprising of Tayside Regional Council, Dundee District Council, the NHS and a range of other sectoral participants, was tasked with undertaking a near comprehensive redevelopment of the area. 1000 homes were found to be lying vacant and derelict in Whitfield, with the problem worst within the Skarne blocks. It was intended that 1600 flats would be cleared and replaced with more traditional forms of housing, crucially featuring their own gardens. The programme was, by 1992/93 deemed to be a success, with the worst elements of the scheme replaced and units in Dunbar Park and Ormiston Crescent given a major refurbishment. Turnover of tenants within the area fell from 35% in 1989 to 21.7% in 1993, still high, but nonetheless an improvement.

A Courier article of 1995 triumphantly declared the demolition of the 'last Skarne block', in Ormiston Crescent, as



Skarne and Crudens today

What of Crudens and Skarne today? Both, surprisingly given the debacle and others like it in other locations, are still functioning companies, although in slightly different guises. The Whitfield scheme wasn't the only part of Crudens' mass housing output to face demolition. Other developments they built using the Skarne system, at Calder Park in Edinburgh and Ashfield Valley in Manchester, achieved local infamy and have now also been bulldozed. Indeed, most of their large scale developments have faced a similar fate, regardless of construction type, such as the Sighthill multi storey flats in Edinburgh and Glasgow, the 24-storey blocks found in Glasgow's

although their main line of work is now in property investment and management.

Conclusion

Many of the technical issues associated with system built dwellings, like those in Whitfield, have now been rectified. Greater thermal efficiency has been achieved using cladding technologies unheard of in the 1960s, design issues like open access stairs and decks have been improved by means of electronically restricted access and many of the problems of water ingress or mould have been alleviated. But house buyers seeking to purchase a flat within a surviving Skarne block, or indeed any other block employing a system or panel-built design, continue to face higher mortgage payments and the possibility that a loan on such a property might not be allowed at all. Lenders have

a local councillor took a sledgehammer to the doomed building. Demolition continued until fairly recently, the same newspaper in 2011 suggesting that, again, one of the last units would be removed at Ormiston, alongside the improvement of two blocks. As of 2018, only the Dunbar Park element of the scheme remains largely intact, alongside the isolated elements around Ormiston Crescent. The number of cars present outside the flats suggests that they retain some popularity, and they now fit more happily into their suburban surroundings with the help of some twee mock Tudor detailing, but the odd boarded up ground floor unit harks back to the problems of decades past. Whitfield itself is an area transformed, almost beyond all recognition. The 1960's shopping precinct has been demolished and new schools, a community and health centre dubbed 'The Crescent' and scores of new houses are gradually filling up the land once occupied by the Skarne development. The future looks positive and conditions in the area a world away from those of only a few decades ago.



Gorbals and their own Dundee high rises at Ardler, Menzieshill, Foggyley and in Whitfield itself.

Crudens Ltd ceased trading in 1986 but their latest flatted and low rise efforts, built under what can be assumed to be a successor company, Cruden Homes, appear to be popular and will doubtless continue to exist for a far longer time than their Whitfield forbears. Skarne, possibly the innocent party given that their original specifications were interpreted differently by Crudens, continues to produce panel built structures to this day, most recently the 'Skarne System Dynamic House',

recently tightened their criteria for allowing mortgages on non-traditional dwellings due to a perception that such properties will fail to hold their value in the long term. If the Corporation's intention had been to house as many people as possible as quickly as possible then they undoubtedly achieved their aim, but at some cost. The system-built movement has had a long term legacy and many people still live with the consequences half a century later.