The origins and legacy of Ryder and Yates’s Kenton Bar Estate, Newcastle upon Tyne, are examined as an innovative outcome of the relationship between art and architecture.

The Art and Architecture of Peter Yates and Gordon Ryder at Kenton, Newcastle upon Tyne

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This paper has two aims. The first is to investigate the origins of Kenton Bar Estate, Newcastle upon Tyne in North East England, in terms of its design elements and representation, as developed in the 1960s by the architects Ryder and Yates. Its genesis can be found in the ideas and work of some of the leading architects, artists and designers of the 20th Century. The second aim is to study its legacy as represented by the responses of local artists, current and former residents, and school children. Public housing in England in the 1960s is characterised by high-rise and deck-access flats. The demand for new houses and the shortage of land led to what were perceived as high density solutions. In addition, the traditional trades and materials had not recovered from the Second World War, and therefore industrial methods were to be employed. Nevertheless, as later studies by Leslie Martin and Lionel March (1972) proved, low-rise could achieve the same density as high-rise development. Using hypothetical models, they also discovered that courtyard housing could be particularly effective. There was an imperative to offer high quality public housing. Its precedents therefore often became popular private developments, which were similarly arranged around well landscaped courts. ¹ The innovative and influential Parker Morris report ‘Homes for Today and Tomorrow’ recognised the changes that were taking place in family life. As part of acknowledging the huge increase in electrical goods, it proposed that house design should respond to the different lifestyles of family members; whether it be listening to records, watching television, doing homework or a number of other activities. The report also addressed the increase in car ownership and the need for its provision. It advocated a separation of people and vehicles and even referred to Radburn, New Jersey, where this kind of separation had been pioneered. While living in flats is prominent in the report, terraced houses are clearly presented as an alternative. ² The principles of family lifestyles are also stated in the Development Review Plan for the City and County of Newcastle upon Tyne, 1963, ³ which proposed the construction of new houses for 20,730 people, including council houses and flats for 16,500 tenants. These were to accommodate an increasing population, and re-housing following the clearance programme. An area of land at Kenton Bar, adjacent to the North Kenton suburb of north-west Newcastle, was the first to be developed. Today, the Estate remains virtually intact. There have been window and door replacements, and some different tones applied to the render; but it has
escaped major interventions such as selective demolition and addition of pitched roofs, which have routinely befallen other modernist housing schemes; especially a comparative scheme at nearby Killingworth New Town, in North Tyneside. In fact, Kenton Bar is unique. The highest concentration of public housing in Newcastle is in the city’s west end; primarily in the areas of Woollington, Denton and Newburn. However, none of these areas contains more than a scattering of modernist houses and flats. Certainly, there is nothing resembling the scale and integrity of Kenton anywhere in the city.

The scheme design report states that the proposed development of the North Kenton site is in some measure an experiment, which will be examined with the greatest interest in the North East and further afield, and will have a profound influence on all future housing projects. The 81 acre site is situated on the north western edge of the main built-up area, about three and a half miles from Newcastle upon Tyne city centre. The objective was to provide 632 local authority houses and flats at a density of 68.6 persons per acre, as well as shops, schools, and green spaces. One of the original resident’s notes:

*We moved from a rather uninspiring rented flat to the heights of Council House luxury. My mum and dad had visited the new house previously and described it in glowing terms.*

As a result of Right-to-Buy legislation, the Estate is left with only 60% of its houses and flats in City Council Ownership, managed by the Arms Length Management Organisation, Your Homes Newcastle.

It was originally conceived that St Cuthbert’s Road in nearby Fenham, also designed by Ryder and Yates, would be a pilot scheme for Kenton Bar. However, of the eight house types designed for Kenton, just four were selected for the 22 dwellings at St Cuthbert’s. The notion of a pilot scheme was frustrated by a series of difficulties experienced with the building contractors and the scheme was only completed in August 1966, with Kenton scarcely two years later (Newcastle City Council, 1963, 1966, 1968). Ironically, St Cuthbert’s won all the awards, probably because it was finished first, but it is Kenton that really demonstrates the practice’s design philosophy. In recent years, St Cuthbert’s has also been the recipient of crude pitched roofs and is hardly recognisable as the completed design.

The architecture of Ryder and Yates benefited greatly from their personal contact with some of the leading architects, artists and designers of the 20th Century. Peter Yates became a lifelong friend of Le Corbusier and greatly admired his painting as well as his architecture. He also met Georges Braque in Paris and was influenced by his novel painting techniques. The future partners were further stimulated by Berthold Lubetkin when they became a part of the small Peterlee Design Team. Clive Entwistle was an innovative modernist designer and Peter Yates worked with him and Le Corbusier in Ove Arup’s London office. Three key publications have been produced about Ryder and Yates: John Allan’s (1992) definitive biography of Berthold Lubetkin includes his arrival in Britain, the establishment of the Peterlee Design Team, its architecture, and significance for the Partnership; Austin Peter Fawcett’s (2001) paper titled ‘Learning from Le Corbusier
and Lubetkin’, is a reflection on the latter’s way of working, contrasting it with that of Le Corbusier, it describes Yates’s Parisian experience, and the relationship of both partners with British artists of international standing; most recently, there is Rutter Carroll’s (2009) book about the development of the practice, containing a catalogue of all their work.7

The End of World War Two
The formative years of Ryder and Yates go back to the end of World War Two. Clement Attlee’s post-war Government is probably best remembered for the welfare state, and the nationalisation of credit, power and transport.8 In an atmosphere of public idealism, egalitarianism and the hope of radical social reform, it must have seemed to many Labour politicians that the creation of a new kind of society had actually become a practical possibility.9 A home for every family became one of the most popular slogans at the time.

A childhood accident excluded Gordon Ryder from war service. In 1940, he entered King’s College, Durham (now Newcastle University) as an RIBA probationer. The School of Architecture had advanced greatly following the appointment of Professor W. B. Edwards in 1933. Ryder used his opportunities well, qualifying in 1944 before going onto postgraduate study in town planning. He became immersed in architecture and Edwards recognised his abilities by appointing him as studio demonstrator, which he developed until other opportunities presented themselves in 1948. Ryder’s approach to design was essentially practical and he had a particular passion for technology.10

As a member of the Royal Air Force, Peter Yates entered Paris with the Allied Forces in 1944. He took time to seek out Le Corbusier, and finding him dishevelled, offered food and supplies. There began a friendship that would last until Le Corbusier’s death in 1965. Although studying architecture at Regent Street Polytechnic, Peter regarded himself primarily as an artist. So, at 24 Rue Nungesser et Coli, Porte Molitor, he asked Le Corbusier if he could see the paintings. Le Corbusier suddenly became very animated and rushed around tossing the contents of his portfolios on the table. Then he said: ‘would you like one?’ Yates found The Three Giantesses and the author pencilled on it – ‘Peter Yates, amicalement’, and signed and dated it, 3 February 1945 [1].11
During his time in Paris, Yates also visited Georges Braque in the studio Lubetkin had designed while working for Auguste Perret. He noted that Braque had amassed jugs that he had painted throughout the years, stuffed with forests of brushes. There were many easels, each with two or three paintings on view, and he worked in front of a huge screen of bright puce-pink.\(^{12}\)

Modernist painting introduced an emphasis on the tactile and the physically immediate. In this context, Braque viewed traditional painting in perspective as subordinating aspects of the picture. He advocated bringing the objects closer to the viewer. The term *Braque in his Studio* is applied to most of the professional photographs of him. The set by Willy Maywald in 1948, seems particularly significant. Two of the photographs show pots on the floor with brushes in them. Other brushes are laid out on the floor; but it is all very ordered. Earlier photographs from 1931 show structured easels and tables in geometric formation. Behind the easels, pots and brushes are panels – presumably coloured.\(^{13}\) Peter Yates captured this essence of Braque in his painting [2].
It is likely that he relied on a combination of his memory and the photographic sets, although it is known that he sketched everywhere he went. The painting appears to be a representation rather than an actual scene. It brings together the elements of the studio – easels, brushes, jugs and screens. There is a strong vertical and horizontal emphasis, in a similar way to Manet, some of it forming squares hinting at cubic forms. These are elements that were to become evident in Ryder and Yates’ architecture.

Following his time in Paris, there is a clear change in Peter Yates’s art. His early drawings and paintings, especially those depicting St Paul’s Cathedral in wartime, were in the academic tradition. After he met Le Corbusier, Braque, Picasso and others in Paris, he appreciated their immediacy in artistic representation. Braque also included sand, sawdust and iron filings in the paint to create a more tactile experience. Peter became familiar with this technique and noted it for future application. Another form of representation that would become significant is collage; a technique devised by Picasso and Braque in 1912.

After demobilisation in January 1946, Yates worked with Clive Entwistle on the abortive Crystal Palace competition, in Ove Arup’s London office. Arup recalled: The importance of having a simple guiding idea to help in the solution of an architectural problem was brought home to me when in 1946 Clive Entwistle was working on his scheme for the Crystal Palace competition in my office. It
contained, as a central feature, a very large pyramid covered entirely in glass-bricks. Le Corbusier, who took a friendly interest in the work of his pupil...worked on the scheme for several days.¹⁶

Yates recalled that they received a telegram from New York to announce his immediate arrival in London. Le Corbusier worked with them for three exhausting days and nights. He was full of wise advice about the clarity of form.¹⁷ The glass pyramid was widely admired as a modern variant of the old building. The Crystal Palace design owed much to Yates’s draughtsmanship¹⁸ and the competition entry was one of his collages/³.

Figure 3: Design for Crystal Palace, Clive Entwistle, Peter Yates and Ove Arup, 1946

It was while at Arup’s office that Yates first met Berthold Lubetkin, who engaged Arup on a number of Tecton projects.

Berthold Lubetkin and Peterlee (1948-50)
By the time Lubetkin arrived in Paris during 1925, he was highly receptive to the powerful influence of the artists that he encountered there. He remembered conversations about the relationships between images in painting and architecture that made a profound impression on him. He analysed the work of Braque, and appreciated and admired his capacity to create vigorous structured design with a freer, lyrical elaboration of the elements.¹⁹ When he moved to England in 1931, Lubetkin was only thirty years of age. Nevertheless, his origins in Georgia seemed exotic. He had experience of a classical Russian education, followed by periods in Berlin, before moving to Paris. Howard Robertson, Principal and Director of the Architectural Association in London, had published enthusiastic commentaries on Lubetkin’s European travels from the early 1920s. All the students had read these accounts and some had helped to edit them. For students in the late 1920s and early 1930s who were interested in modernism, the Architectural Association was the most auspicious school to attend. A group of six graduates in 1931 were committed to stay together to promote modernism; Godfrey Samuel introduced his five colleagues to the newly arrived master towards the end of 1931, and it was this group that went on to form the core of Tecton.²⁰
As Tecton started to disintegrate after the Second World War, Lubetkin was seeking new opportunities; Dr Monica Felton, whilst vice-chair of Stevenage New Town Corporation, attempted to attract him to the position of Architect-Planner in 1947. He refused the offer. When Felton moved to Peterlee, it provided a different proposition altogether. As one of the 22 New Towns established under the auspices of the 1946 New Towns Act, Peterlee would not merely be a relief town for London overspill promoted by central government but would offer coherent identity to a mining community. Lubetkin’s drive to build socialistically had for a while been satisfied at Finsbury, where he designed Spa Green and Priory Green housing estates and the iconic Finsbury Health Centre. By 1948, this drive was receding. Peterlee offered the opportunity for a new chance, on a far greater scale – to plan and build a town for 30,000 people, with a clear social purpose. It was to be a town for a community with a strong culture of its own based on the common source of employment and hazard – coalmining. Lubetkin appreciated the miners’ closeness to the ground and it was his desire to produce a modern interpretation of the traditional miners’ terraces. At the end of March 1948, the Peterlee Development Corporation was formally constituted with Lubetkin as its Architect-Planner. An advertisement for architectural staff was produced. Lubetkin remembered that there were over 800 applications from all corners of the world, but it was a small team of eight personnel that he finally assembled [4].

Figure 4: The Peterlee Design Team, 1948, Peter Yates left, Gordon Ryder second right. Roger Dobson not present
For Yates, one of those appointed, ‘Peterlee was a place of dreams saved for this exercise. It was a crime to build anything ordinary there’. Gordon Ryder, a fellow appointee, simply noted that ‘we learnt everything from Lubetkin’. The emphasis had been on the town centre project, but Lubetkin’s frustration about lack of progress prompted him to commence the 100 houses scheme at Thorntree Gill. The site sloped sharply from the north-west but its chief characteristic was the splendid view over Castle Eden Dene.

The proposed dwellings were the only specific buildings that Lubetkin was ever able to design at Peterlee. The main house type was set in a continuous terrace of linked villas with a variety of façade treatments. It was certainly by such means that he intended to suggest the cohesive character of the mining community, and therefore held out against the technically simpler but socially less symbolic alternative of semi-detached scatter. They were two storey linear designs with single storey utility wings that enabled them to be stepped where needed, while retaining the principle of terraces with small patios.

Yet Lubetkin was even thwarted in realising the house designs and he resigned on 19 October 1949. This marked the beginning of a thirty year estrangement from public life. During his professional work, he had never been in doubt as to his artistic debt to Le Corbusier although his ideal was type. By contrast, Lubetkin was overtly site specific.

Although nothing had been built in their three years at Peterlee, the experience of working with Lubetkin enriched Ryder and Yates architectural vocabulary and reinforced their modernist values. Peter Yates produced many of the exquisitely rendered presentation drawings for the new town, which Cheryl Buckley describes as resembling constructivist painting with abstract, geometric forms; and the panoramic sketch of the 100 houses site, which showed the influence of his work with Clive Entwistle.
The correspondence of art and architecture had been commonplace during the heroic inter-war years of the modern movement but was rare in post-war Britain. Gordon Ryder worked with Lubetkin on the 100 houses project, which because of the topography symbolised beads down the hillside. This architectural imagery would appear in later work, especially in the houses at Kenton.

Following the breakup of the Peterlee Group in 1950, Yates re-visited his Crystal Palace experience by seeking employment with Clive Entwistle, who was running the *Unite D’informations Visuelles* in Paris, mainly working on exhibition design. Meanwhile, Gordon Ryder started to win commissions for individual houses, which were generally narrow linear plans, sequentially organised with secondary areas included in linked pods. These were strongly influenced by the 100 houses project. The importance of a dominant living space, in particular, had become a recurring theme in Lubetkin’s work. The linear plan was a pre-occupation with Gordon Ryder, and often with single aspect. Despite Ryder’s focus on architecture, he developed strong relationships with painters of international standing, such as Victor Pasmore and Kenneth Rowntree. They did much to place his work in the prevailing cultural milieu.

A chance meeting in London led to Ryder persuading Yates to join him in Newcastle.

**Ryder and Yates (1953-82)**

In the early days, the new partners were experimenting with exhibition design as a means of working out the intellectual base that they later brought to their architecture. The involvement in exhibition design had been followed by modernists since the 1920s, when trade stands and exhibition pavilions mapped the course of the new architecture with seminal stands by Le Corbusier and others. Yates re-invented his Parisian exhibition design experience within Ryder and Yates, and the careful juxtaposition of primary forms was to inform subsequent commissions. Le Corbusier had asserted that ‘cubes, cones, spheres, cylinders or pyramids are the great primary forms that light reveals to advantage’. All of these forms of pure three dimensional geometry would feature in the practice’s exhibition design and architecture.
After working for almost a decade on predominantly small scale projects, from almost nowhere an opportunity presented itself to make a major contribution to public housing. Known as ‘Mr Newcastle’, T. Dan Smith was Leader of Newcastle City Council from 1960 to 1965. A great supporter of modern architecture, Smith’s plan was to re-create the city as ‘The Brasilia of the North’. He was especially keen to invite Le Corbusier to help in its development and he was disappointed when it came to nothing.\textsuperscript{33} When Smith asked Eric Lyons to design the scheme at North Kenton, he declined, but recommended Ryder and Yates largely as a result of the Beadnell beach houses design in 1953.\textsuperscript{34} Although only a pair of beach houses, they are representative of the power of the unbuilt architectural design, evident throughout the 20\textsuperscript{th} Century from Mies van der Rohe to Richard Meier. Nevertheless, Ryder and Yates had not developed housing projects larger than individual houses, and there was no evidence that they could deliver a project on the scale and complexity of Kenton. At this time, the practice comprised just six personnel, even fewer than Lubetkin had at Peterlee. They also had socialist tendencies, so there was a flexibility and morphing of activity in the office that may have not been possible with other architectural practices. As Carroll states, Rudolf (Ru) Williams was asked to be project architect at Kenton.\textsuperscript{35} However, the layout only started to take shape when another employee, David Lonsdale, found motivation in an article about Eric Lyons’ Blackheath design.\textsuperscript{36} Lyons’ work influenced the architects working on the Kenton project in the following three distinct ways:

\textit{Return to the terrace}

Schemes such as Lubetkin’s Highpoint 1 had been seen as the epitome of modernist dwellings. Even Le Corbusier had been uncharacteristically enthusiastic about it. By contrast, F.R.S. Yorke showed terraced houses to be a perfectly acceptable modern form.\textsuperscript{37} In 1935, Lubetkin made a significant contribution at Genesta Road, Plumstead, with flat roofs that allowed re-thinking of the terraced house form; reflecting JJP Oud’s 1920s terrace of workers’ housing in Amsterdam.\textsuperscript{38} It has already been shown that a community reared on socialist idealism at Peterlee had led to the possibility of reforming the miners’ terraces, and this began to distance Lubetkin’s architectural vocabulary from the Corbusian prototype.\textsuperscript{39} Lyons’ Span developments paid homage to these socialist principles and provided significant precedents for Kenton.

\textit{Courtyard Design}

Lyons’ design philosophy generated a form in which the houses enclosed common gardens in a single total landscape concept, one of the principles of Modernism. The spaces in-between the buildings were not left to chance, and this integrated design process led to a cohesive outcome where buildings helped to create the settings and the settings enhanced the buildings.\textsuperscript{40} In this way, not only was the terraced house open to new interpretation but so was the layout of houses in relation to grouping and access. The courtyard had been a traditional arrangement found in colleges and Inns of Court. It became central to Span developments.\textsuperscript{41} It was Lyons’ firm
conviction that grouped houses encourage a sense of community, as well as enabling the use of modern building techniques through repetitive design, i.e. the use of house types. The absence of front gardens allows the central lawn to be extended up to the buildings. The grouping of garages in separate courts provides visual and practical advantages that are exploited in most Span developments.

Separation of People from Vehicles.
In 1929, at Radburn New Jersey, Clarence Stein and Henry Wright carried forward the now famous arrangement of providing access for pedestrians only, at the front of the houses. Vehicles were restricted to back courts, with garages for residents and pathways to back doors. This was the iconic reversal of the conventional distinction between front and back. The separation was based on a concern for child safety at a time of growing car ownership. The Radburn layout, as interpreted by Eric Lyons, created a cul-de-sac network of streets accessible by car. These are distributed by a perimeter road that encircles the site. Pedestrians follow pathways on the inside of the schemes. In this way, pedestrians never have to cross routes used by vehicles.

The Design at Kenton
These principles determined the layout at Kenton. The vehicles are routed around the perimeter of the Estate, and distributed to the parking courts via small cul-de-sacs. The pedestrian pathways are on the inside, always providing the pedestrians with the shorter and more direct routes.

Figure 7: Diagrammatic Layout for Kenton Bar Estate, 1964
The site appears as two discrete areas with a fulcrum between them. This provides the focus of the development with a central square defined by shops and flats, and the primary school. It was also intended to include a new kind of family-orientated
public house, but unfortunately it was never built. The main axis of the site at Kenton runs approximately south-north, and falls in two planes at a comparatively steep inclination to the north of 1 in 12 towards and away from a flatter central area. This was a major determinant in the design and the source of much debate in the office. The open space provision of six acres had been allocated by the Council as one major open space, but was used by the architects to open up the scheme into a number of smaller areas to meet the particular needs of the community. Essentially the houses and flats were designed around the Lyons-style courtyards.

Private gardens were excluded at the front of the dwellings, allowing for a communal greenery, which Lyons’ business partner Ivor Cunningham called ‘wall-to-wall landscape carpeting’, and ‘the landscape washing up to the buildings’. Rear gardens were seen as private places, where people could pursue outdoor creative skills, keep their toddlers in safety and hang out washing. The idea of communal space at the front was integral to the design for Lyons’ Corner Green, Blackheath of 1959; and became a precedent for Kenton. Ryder and Yates also adopted Lyons’ system for designating house types as T1-T8.

Kenton Bar Estate is primarily a combination of houses and flats. The houses that run down the hill are clearly derived from those designed for the 100 houses project [5, 8].

Figure 8: Ryal Walk, Kenton Bar Estate, Henk Snoek, 1968
The other primary house type runs along the gradient but is designed in split levels to accommodate the slope [9].
Both of these house types are in the Lubetkin mode of responding to the site. The north facing slope had been a concern from the beginning; although offering stunning views all the way to the Cheviots, a lack of sunlight entering the houses might have been problematic. The steps and staggers down Ryal Walk, together with Gordon Ryder’s favourite device of a single aspect linear plan provided a solution. The other house type is orientated east-west. Ryder and Yates’ Damerell House – Harlequin (1954) was designed with twin parabolic roof lights, allowing clerestory sunlight and transforming the flat roof. This was the model for the south facing roof lights that flood the stairwell with sunlight and provide a door onto the lower flat roof, which can then be used as a terrace. The minutes of the City Council reveal long-running arguments about costs (Newcastle City Council, 1965). It is extremely unfortunate that the rooflights were perceived as an unnecessary expense and were omitted from all of the houses except for those onto Kenton Lane. The rooflights contribute so much to the character of the houses and would have added a stunning effect if included throughout the estate. In contrast to the houses, the flats are in the Corbusian model of type. There are essentially two sorts – a long rectilinear form and a cube, reflecting Le Corbusier’s emphasis on pure three-dimensional geometry.
Both are located on the flatter parts of the site and do not take account of the topography.

The continuous search by Ryder and Yates for a fitting architectural language was informed by Peter Yates’s role as painter. He used the canvas as a laboratory for exploring architectural form. Yates considered that composition need no longer be a labyrinthine trap, but offer a number of permutations including staccato, densely packed content, and a horizon of calm – as a source of variety. This is achieved through the juxtaposition of forms and zones of colour, bringing the viewer close to the objects. Peter Yates represents elements in solid colour. His paintings show a subtle patchwork of cool greys and greens leading the eye. In some instances, colour yawns out into a horizon of calm, with solid blue and white suggesting iridescence. From his time in Greece, he viewed water and where possible the sky, as bright blue, what Lubetkin called ‘Ultramarine rhapsody of Cyclopic islands’.

Kenneth Rowntree wrote of Yates’s painting that:

_Peter could create the feeling of a whole vernacular architecture by the shrewd choice of a single door or window, or evoke a whole culture by the minimum of artefacts. The economy, the paring away of inessentials, with poetry never very far away, and on occasions a whiff of magic._

According to Lonsdale, Gordon Ryder advocated pushing the windows to the edges of the building while this has been perceived as duality, Ryder claimed that it created a visual tension. Alternatively, Yates favoured a simple statement. This is clearly apparent in his painting of the Grocery Shop [10], and translated into the centrally placed window at Kenton; which in Yates’s words, is ‘an eyeglass on the world’ [8]. The painting Farm in the Lake District [11] depicts long and low, white and grey buildings with windows reminiscent of the Grocery Shop [10]. The proportion of the building and its white finish offered an image for the design at Kenton. The landscape in the painting is shown totally in green and emphasises the grass with stylised trees and bushes. The painting expresses Lyons ‘wall-to-wall landscape carpeting’ which is, as noted, is a feature of the Estate. The stylised trees are also evident in the illustration for the project [12]. The scheme design report emphasises a scarcity of existing mature trees. Shrubs and ornamental trees with pyramidal form were proposed. This relationship of dwellings and greenery is fundamental to the design.
Figure 10: Grocery Shop, Greece, Peter Yates, 1958

Figure 11. 'Farm in the Lake District' 1956. Building in the Landscape, Peter Yates buildings in white and grey, green grass as a carpet up to the building

The elevations of the flats also demonstrate the painterly influence of Yates [12], with a variety of patterns expressing solid and void; very much as taught by Lubetkin at Peterlee, and later apparent in Victor Pasmore’s proposals at Peterlee.
A quintessential element of the Modern Movement is plain white walls, best formed from concrete but normally constructed of brick and block walls that are cement rendered. Yates balanced the purity of forms abstracted from reality, as Le Corbusier advocated, with integration of elements from the real world. He took Braque's tactile approach by adding rock salt to some of his paintings. It not only offered tactility but also provided a glistening in the light. Peter reproduced this effect in the facades at Kenton by adding shells in the render, which gleamed in the sunlight. The houses have been painted and re-rendered so many times in the last fifty years that unfortunately this effect is no longer in evidence.

There are many reasons why the developments at Peterlee never came to fruition. In the case of the 100 houses, the reasons included indecision and obfuscation over the layout and elevations. By contrast, the adoption of Eric Lyons' principles in the layout, and surety about the form and fenestration, avoided these difficulties at Kenton. The paintings and other illustrations helped to work through the imagery before the architectural design commenced.

**Legacy**

The design of the estate provides a legacy in relation to social housing. As part of the aspiration to design superior council houses, of a standard that would equate to the private sector, the architects recognised the demand for increased car ownership. This emphasised the need to ensure that residents, and especially children, remained safe. While the separation of people from vehicles started in New Jersey before 1930, it was rare in UK houses, appearing in the Parker Morris Report only three years before Kenton was designed. Although considered as a challenge, the north facing slope offered opportunities for further innovation. The garages are located in parking courts. However, if they were provided in this way for all families, they would have become a very dominant feature. The houses in the east-west orientated terraces had a significant change in level from front to back. Integral garages were designed adjacent to the front doors, facing north at the lowest
level. Thus, no habitable rooms were located at this level. The three dimensional spatial relationship was split level, enabling sunlight to penetrate through the stairs from a south facing glass door at the top. The door led out to a private roof terrace, which together with the garden, faced south. The split-level arrangement also assisted with noise separation, enabling different lifestyles of family members to co-exist without disturbance; a priority of the Parker Morris report, the Development Plan\textsuperscript{57} and also noted in the scheme design report. The north-south orientated terraces were based on Lubetkin’s one and two storey linked pavilions \textsuperscript{5}. This design readily enabled the houses to step down the site, and also be staggered in respect to one another. The staggers permitted sunlight to enter south facing windows to the living space and principal bedroom \textsuperscript{8}. The Parker Morris report also introduced the notion of partial central heating, stating that bedrooms could be heated to a lower temperature, with the heat filtering though from the living spaces. In accordance with the philosophy of high quality, all the houses in this scheme had full central heating installed from inception.

Peter Yates designed permanent play objects, some treated as sculpture, along the main pedestrian routes to the school and shops. At the formal area on the upper level of the central square, the main effect was provided by the sheltering buildings and the pyramidal fountain, pool and play sculpture they enclosed. In fact, the pyramid became the motif for the scheme. Again, it is one of Le Corbusier’s forms of pure three dimensional geometry. Covered in smooth grey tiles, the concrete pyramid stood 5.5m in height \textsuperscript{13}. It was a re-invention from the Crystal Palace design with Clive Entwistle \textsuperscript{3}, and acted as the fountain from which water flowed into the pool. This led to a waterfall between the upper and lower levels, from where the water was pumped back to the base of the pyramid. The pool was very shallow, and the blue base could be seen through the clear water \textsuperscript{14}. Sadly, the pyramid and pool became neglected and were removed as part of a re-modelling by Newcastle City Council in the early 1990s, but they live on in the memory of residents and former residents, and through web-blogs such as ‘Kenton Bar Pyramid – The Icon of Kenton Bar Estate’.\textsuperscript{58} Indeed, the pyramid has almost moved into folklore in the minds of local children, with memories passed onto them by their parents and grandparents.
It has already been established that collage was developed by Picasso and Braque in 1912, and that Peter Yates saw the technique for himself when he visited Braque in Paris. He used this form of representation on the Crystal Palace competition and later resurrected it for the design at Kenton. The land forms are
reminiscent of the panoramic sketch for Peterlee New Town [6]. The buildings are represented as long low terraces in white and grey, together with the iconic image of the cubic flats. The landscaping is depicted as the grass carpet, punctuated with clumps of bushes, and slender trees.

Figure 15: Design Collage Kenton Bar Estate, Peter Yates, 1964

Local interest in the art and architecture of the practice was revived by events commemorating its sixtieth anniversary in 2013. This was followed by an exhibition at Newcastle’s Hatton Gallery in 2015, for which a series of new works were commissioned. They mainly took the form of photographs and collages. One of the retrospective collages [16] is based on the original elevations for the shops and flats at the focus of the estate.

Figure 16: Kenton Bar Estate retrospective collage of shops, flats, pyramid and grass carpet, 2014

The building appears as a long, low rectilinear form. The bushes are also evident on the original drawings. The trees were included from the description in the scheme design report [60] and from other design drawings of the Estate. The pyramid has been added close to its former position. This location is on a flatter part of the site, which has been made completely level, as represented in Ryder and Yates’ drawings. [61] The grass carpet and the sky were taken from the 2014 set of
photographs of the Estate. As the collage is in monochrome, the pure blue sky could not be reproduced, so more realistic clouds were added. The dragonfly motif was used to represent the Practice on their Christmas cards, and other collages and photomontages, such as the British Gas buildings with Killingworth Lake in the foreground, were also featured on the cards.62

A second retrospective collage [17] features Yates’s favourite cubic type of flats – an image clearly derived from the 1964 collage [15]. The bushes are added in the same way as achieved on the design collage. The retrospective collage demonstrates the two responses to topography. In the background, the houses can be seen stepping down the site, whereas a horizontal base has been built-up for the flats. Both the stylised images of houses and flats are based on the design elevations, reinforcing response to site in the house design, and expression of type with the flats.

Figure 17: Kenton Bar Estate retrospective collage of cubic flats and houses,

The Kenton Bar Residents’ Association had been working on ceramics with an Artist in Residence. This arrangement had recently come to an end when they were introduced to the Exhibition in 2015. Through the Hatton Gallery’s education programme, a workshop enabled the residents to offer their own impressions of the Estate. An example is shown on Figure 18 [18].
This collage emphasises the importance of external private space, with trees and planting behind a boundary showing a variety of walls and fences. Community space is also depicted with a family walking along the parkland, bordered by plants and trees. The image may appear a little idealised, but it is a reasonable impression of the present estate.

A project with Kenton Bar Primary School Project in 2015-16, explored the pupils’ knowledge of the Estate. Not surprisingly, they had favourite places and their own names for particular locations. More surprisingly, information about the pyramid seems to have entered their consciousness from a collective memory of the adults on the Estate. The pyramid was demolished more than a dozen years before these children were born. They recognised its three-dimensional shape and that of the cubic flats enabling comprehension of Le Corbusier’s pure geometry. They also produced collages of their impressions of the Estate, in the manner of Peter Yates. In addition, former residents have set-up weblogs with anecdotes and requests for photographs of the pyramid in particular. These are all expressions of the cultural heritage generated by the architectural design.
Conclusion
The purpose of this paper has been to investigate the origins and legacy of the design for Kenton Bar Estate. The experiences of the architects go back to the end of World War Two, with its atmosphere of public idealism, egalitarianism and hope of radical social reform. Before receiving the opportunity to design this significant exercise in public sector housing, Ryder and Yates enjoyed amazingly rich and varied influences, which are represented in Table 1.
<table>
<thead>
<tr>
<th>Gordon Ryder</th>
<th>Peter Yates</th>
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<td><strong>1944-48</strong></td>
<td><strong>1944-45</strong></td>
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<td>Studio Demonstrator</td>
<td>Armed Forces</td>
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<td>Durham University</td>
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<td>School of Architecture</td>
<td>Le Corbusier</td>
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<td>Georges Braque</td>
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<td><strong>1946</strong></td>
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<td>Crystal Palace</td>
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<td><strong>1948-50</strong></td>
<td><strong>1948-50</strong></td>
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<td>Bertold Lubetkin</td>
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<td>100 houses project Peterlee</td>
<td>Peterlee Town Centre</td>
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<td>linked pavilions</td>
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<td>Clive Entwistle</td>
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<td><strong>1950-52</strong></td>
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<td>Eric Lyons</td>
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<td>Ryder and Yates 1953-82</td>
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<td>St Cuthberts</td>
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Table 1: Ryder and Yates' Influences

Three years after Peter Yates's death in 1982, his daughter, Sally Ann, was assembling an exhibition of his work at the Royal Institute of British Architects in London. She asked Bertold Lubetkin for a commentary. For reasons that are not evident, Lubetkin’s input arrived too late for inclusion; nevertheless, it was handed out on the opening night. The following is set out exactly as Lubetkin intended:

Some years ago I was talking to Le Corbusier about Peter Yates with whose work he was familiar, this boy can see things said he, but to me it seemed more relevant that Peter could do things. In his paintings he prodded the depths rather than depicting the surface. Simmering passions behind the stony immobility. Cathedrals like rocks and rocks like cathedrals. From the vision of his beloved Durham locked in the mist of time to the Ultramarine rhapsody of Cyclopic islands. By staking claims on the distance he excites the imagination. Simplicity, directness and purity give his work the power. That was Peter Yates my friend the poet architect. The song is over but the chords go on vibrating.64
The ‘some years ago’, to which he refers must have been more than twenty. Also, Lubetkin may have misunderstood Le Corbusier’s remark, as it is likely he was referring to his own seminal work *Towards a New Architecture*, where there is a section

*Eyes Which Do Not See – Our own epoch is determining, day by day, its own style. Our eyes, unhappily, are unable to discern it.*

It is conceivable that Le Corbusier was saying that Peter Yates could see and thereby design buildings in the style of the epoch of the 20th Century. The architecture of Ryder and Yates, and its expression at Kenton, were derived from a series of very special encounters. Peter Yates was already a skilled artist in the academic tradition before he met Le Corbusier, Braque, Picasso and others in Paris. They made a deep impression on him, and his painting style changed fundamentally as a result of these encounters. He adopted the use of collage, an emphasis on the immediate, and additions to the paint to create a tactile effect. His painting of Braque in his Studio follows Manet’s approach in the use of strong verticals and horizontals, as a structure for representation and design. This was the beginning of working out a design philosophy through painting, which would become invaluable to the future architectural practice of Ryder and Yates. Another powerful influence was Le Corbusier’s promotion of pure geometry. He asserted that cubes and pyramids in particular, are the great primary forms. The design for the Crystal Palace competition entry was a large pyramid, admired by Ove Arup for its simple guiding idea. Even Le Corbusier was impressed and helped Entwistle and Yates with the design. The competition entry itself was a Braque-inspired collage.

While Peter Yates was experiencing an evolution in his art, Gordon Ryder was teaching architecture. They came together when chosen by Berthold Lubetkin to join his small team for the design of Peterlee New Town, from hundreds of applicants. Ryder worked with Lubetkin on the 100 houses project. The two storey linear designs with single storey links symbolised beads running down the hillside. The design was formative in Ryder’s developing architectural vocabulary. Yates made a number of contributions including town plans that resembled Constructivist paintings with abstract, geometric forms. When the Peterlee team broke up following Lubetkin’s resignation, Ryder and Yates went their separate ways. Peter Yates returned to Paris to resume his working relationship with Clive Entwistle. He continued to develop modernist design by working with Entwistle on a series of innovative exhibition designs. Gordon Ryder continued with architectural design and began to win commissions for individual houses. The designs followed the Peterlee model, with linear plans and linked pods.

After a chance meeting, Gordon Ryder and Peter Yates formed their own architectural practice in Newcastle upon Tyne. Following some small but influential commissions, the surprise offer by the City Council to design over 600 houses at Kenton, enabled them to express the modernist philosophy that they had been exploring since the end of the Second World War. The layout was derived from Eric Lyons’ Blackheath development, with the separation of people from vehicles, courtyards, and communal landscape washing up to the fronts of the buildings. The
houses followed the concept of Lubetkin’s 100 houses, and the flats Le Corbusier’s cubic form. Yates’s paintings offered source material for the long low white terraces, integration with the landscape, and blocks of colour. He also demonstrated the central window concept and other patterns of fenestration in the paintings. Yates added rock salt to the paint, to achieve the tactility initiated by Braque. Yet, the rock salt also glistened in the light. He found this effect to be particularly pleasing and replicated it at Kenton by adding shells to the external render.

Kenton Bar Estate has a considerable legacy. It is the only substantial modernist housing estate in Newcastle upon Tyne, and includes innovations such as spatial responses to modern family lifestyle, integral garages and roof terraces. Its design language can be traced back directly to Le Corbusier, Lubetkin, Lyons and even Braque. It included a pyramid as a central feature, which was modelled on a design for the new Crystal Palace. Although demolished more than 20 years ago, the pyramid has taken on almost mythical qualities and remains in the collective memory of the residents. Engagement with the Estate and its history, has continued with artists and residents re-imagining Yates’s collages; bloggers remembering the experience of moving there; and primary school children recognising the primary geometry of cubes and pyramids in built form. Most estates never produce any significant response, especially 50 years after they were conceived. The interest of local artists and galleries, the tenants’ association, former residents, and pupils of the primary school specifically designed to be at the heart of the estate, is truly remarkable. This response may not be unprecedented but it is certainly rare. Ryder and Yates have created a living monument to 20th Century ideas, which provides a continuing resonance in the lives of people who live, work and educate there.

Notes
4. From the *Scheme Design Report* 1964, by Ryder and Yates, in the Ryder and Yates Archive held at Ryder Architecture.
6. From Your Homes Newcastle, *Database of Estates and Properties*.
25. Fawcett, ‘Learning from Le Corbusier’.
30. Fawcett, ‘Learning from Le Corbusier’.
34. From the Gordon Ryder papers referring to a 1953 *Architectural Design* article.
35. Carroll, *Ryder and Yates*.
36. From an interview with David Lonsdale at Kenton Bar Estate, 4 June 2015.
41. Powers, ‘Models for suburban living’.
43. From a seminar by Ivor Cunningham, entitled ‘Spick and Span’, at the Royal Botanic Gardens, Kew, on 7 March 1980.
44. Woudstra, ‘Landscape first and last’.
45. From the Scheme Design Report 1964, by Ryder and Yates.
46. From a seminar by Ivor Cunningham, entitled ‘Spick and Span’.
48. From a seminar by Ivor Cunningham, entitled ‘Spick and Span’.
49. From the Scheme Design Report 1964, by Ryder and Yates.
50. From Berthold Lubetkin unpublished contribution to Peter Yates Exhibition Catalogue at the Royal Institute of British Architects in 1985.
52. From an interview with David Lonsdale at Kenton Bar Estate, 4 June 2015.
54. From a seminar by Ivor Cunningham, entitled ‘Spick and Span’.
55. From the Scheme Design Report 1964, by Ryder and Yates.
57. City and County of Newcastle upon Tyne, Development Plan Review 1963.
59. Zurcher, Georges Braque.
60. From the Scheme Design Report 1964, by Ryder and Yates.
61. From the Ryder and Yates Archive, 1953-1982, held at Ryder Architecture.
64. From Lubetkin unpublished contribution to Peter Yates Exhibition Catalogue.

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