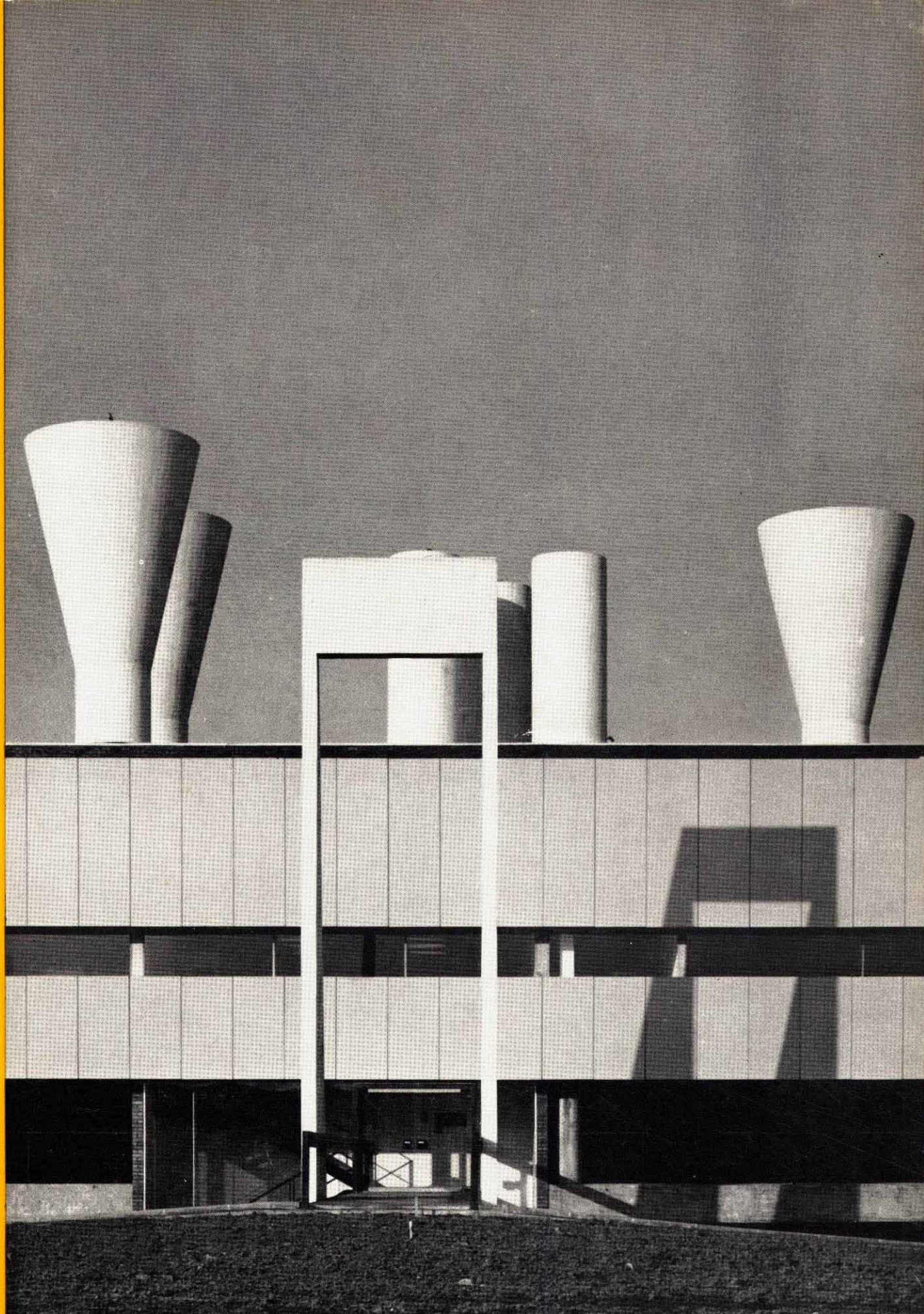
CONCRETE QUARTERLY 80



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CONCRETE QUARTERLY 80

JANUARY-MARCH 1969

Contents

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FRONT COVER: *Gas Council Engineering Research Station, Killingworth, Northumberland. Architects and engineers: Ryder & Yates & Partners. Contractors: Brims & Company Limited. Photograph:* The Architects' Journal

FRONTISPIECE: *Concrete block houses at Wildblad, Black Forest, Germany (page 29). Photograph: Richard Einzig.*

Beauty, Keats said, is truth. And fair enough. The difficulty comes when he tries it the other way round. Truth is not always beauty, although there is a school of thought that would have it so – especially in art and architecture. It is a line of thinking that can lead to all sorts of bizarre conclusions, like making a fetish of the service pipes or the dustbins or the boiler because they are true.

Similarly, there is an intellectual and esoteric approach to concrete which insists that it is a rough elemental sort of material and rather glories in the idea. After all, the great master Le Corbusier said it was a rough material and used it as such. So rough it shall be. And the image of concrete becomes one of a splendidly rugged substance full of 'honest' inconsistencies, shovelled – with a certain abandon – into rough-sawn forms.

But of course this viewpoint is not appreciated by everyone, especially those who take what they see literally without going through any intervening intellectual process. There was, for instance, the reaction of the girl who, returning from a pilgrimage to Corbusier's Unité d'Habitation at Marseilles, declared simply that she had 'torn her stockings on it'. Some people are shocked at Chandigarh, seeing only the crudeness of the surface concrete. And indeed, you might argue, what is the total impact of a beautiful face modelled on fine bone structure if it is covered with spots? Or is this also a truth we must admire?

So it should be said that there is a certain *intellectual* approach to concrete finishes which is fraught with hazards. Certainly it springs from an honest attitude to the material, but it may lead to honest shapes of bare concrete – rough in execution, unprotected from the weather, unbroken in surface and, often enough, horribly stained and streaked within a year or two.

In fact, the issue resolves itself into two parts. First, concrete must be properly mixed and placed, with some care, and in properly constructed formwork. There is no way round this. But having said that, it should be emphasized that *as much again will depend on architectural detailing.* There is nothing wrong with exposed concrete if it is properly detailed for weather protection. And in this damp country, such detailing is absolutely essential. The same will apply to any other material. Maybe we will have to return to the copings, ledges, drips and other devices which have latterly disappeared from the architect's vocabulary (see page 41). Or else – as we have said manya time in the pages of this journal – the surfaces of a building must be broken up, given depth and modelling in such a way that weathering will flatter rather than disfigure. Concrete lends itself exceptionally well to this sort of surface treatment. And – as we have seen – it is not a bad idea architecturally either.

Acland Burghley School

Tufnell Park London

insulated against external noise

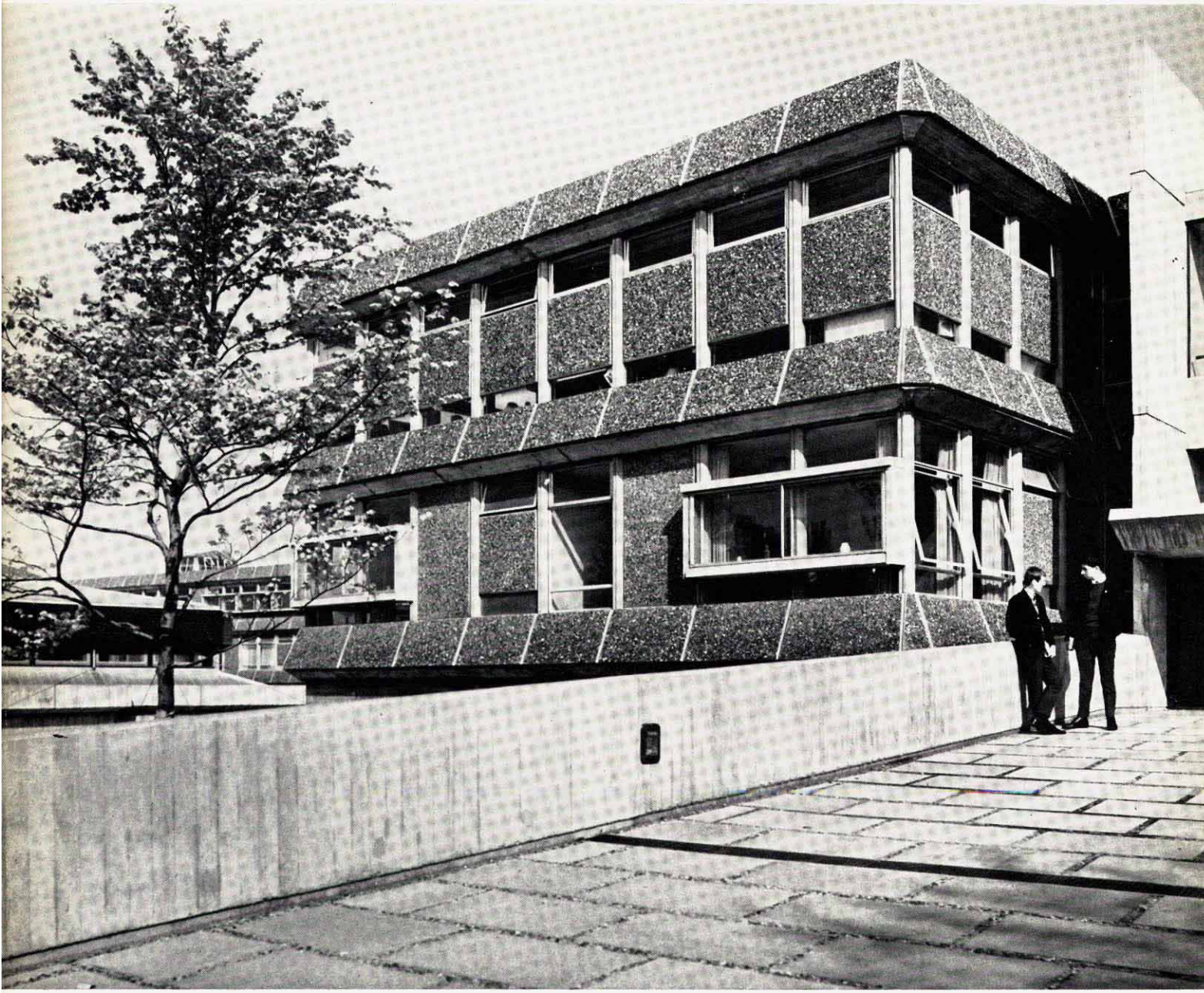
Architects:	Howell, Killick, Partridge and Amis
Structural engineers:	Harris and Sutherland
Contractors (buildings):	William Sindall Limited
Contractors (deck over railway):	Higgs & Hill Limited
Cladding panels:	Trent Concrete Limited
Precast columns:	William Sindall Limited

The Acland Burghley School is one of the latest comprehensive schools, built for the Inner London Educational Authority in Tufnell Park, north London. Architecture apart, it is of great social significance – not just because it is a comprehensive school, but because more than 330 of the 1,108 pupils are from abroad, including North and South America, Malta, Greece, India and Africa. If you walk round the corridors of the three main wings during class time, it is likely that you will see, framed in the glass panel of a door, children of many different ethnic origins side by side sharing the same lessons. There is something quite un-selfconscious about their attitudes, and it is an intensely moving sight. The drawing reproduced here was displayed on the wall of one of the art rooms – a joint effort by three English girls. Of course, you might think that the rather obvious message had been suggested to them. In fact this was not the case, and it was entirely spontaneous. The headmaster, Mr. Abley, says that the children work and play together in complete harmony. And he isn't just saying it either.

As a building, the school appears at first a trifle forbidding. But this is because it turns its blanker faces – for practical reasons – towards the roads and the main hub of traffic around Tufnell Park underground station; when planting matures, these aspects will, of course, change. Also one must remember that the school houses over 1,000 pupils and appears much smaller than it might have done. On plan, the function of the comprehensive school is given full expression with three main wings for upper, middle and lower schools fanning out from three central stairways. In this way, each wing achieves an identity of its own, so that the children are not made to feel as if they were in a large comprehensive packing case – or glasshouse, as schools occasionally tend to be. When you start to walk round the school and the surroundings, it all appears much more intimate than one had at first thought, and full of surprising vistas, due to the splaying of blocks which create partially enclosed spaces between. Particularly striking are the art rooms – busy, thriving places at the centre of the classroom wings, top lit to give maximum wall space for exhibits (adjoining one of these was a notice 'Truth is infiltrating . . .').

In fact, the architects had an unusually difficult job to plan this school, the story going back to 1960 when the then L.C.C. first briefed them. Not only was there the existing old school on the site which had to remain in use until the new buildings were completed; there was also the small matter of a four-track railway cutting on one side of the site, which was finally bridged over by precast concrete beams to form a deck. This takes up about one-third of the total site area and is used as

Black-and-white drawing by three 13-year-old pupils: Lesley Ley, Susan Leonard and Joyce Watson.



One of the classroom wings from the main entrance approach.

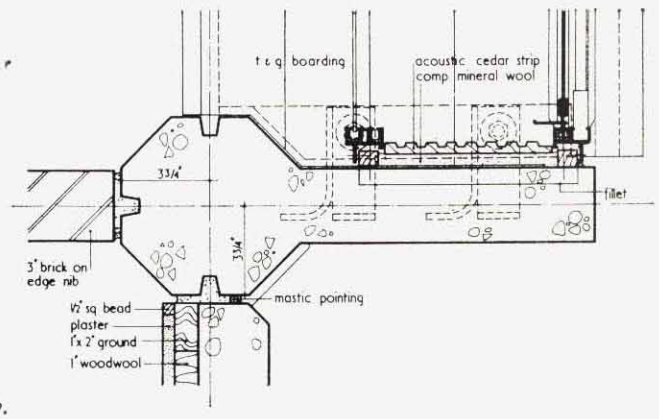
Photographs by John Donat

a playground in the centre with a games hall and gymnasia at one end, and a car park at the other. The playground is open, but there is a traditional covered play space between it and the main school building. Free standing, apart from a covered way, is the hexagonal assembly hall, partly sunk into the ground, concrete-walled and framed at ground level and with a subtly top-lit and timber-lined interior. In spite of the appalling initial difficulties, the architects have managed to produce a cohesive design which works well and at the same time is fully articulated into its separate elements.

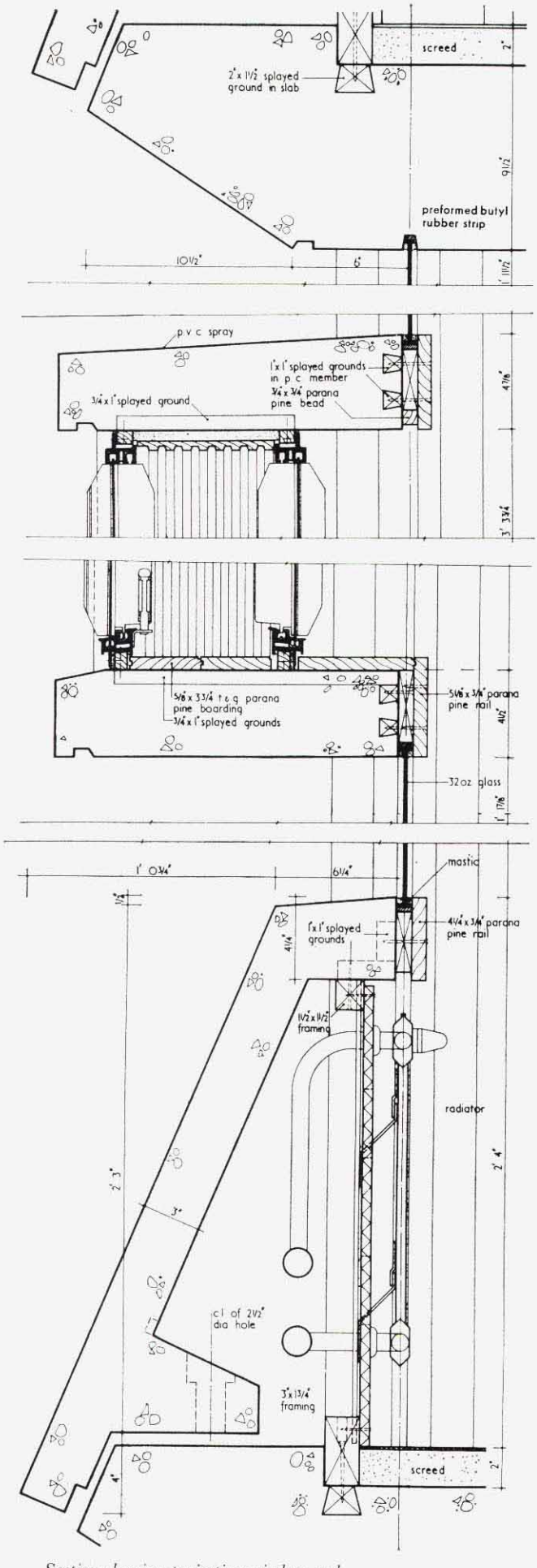
A main characteristic of the design, and one which serves a practical as well as aesthetic purpose, is the carefully worked-out modelling of the concrete faces in the classroom wings. These mainly comprise precast concrete cladding panels, dark grey in colour and with a textured exposed-aggregate finish of Walley flints. The panels are splayed outwards below windows to contain services within the spaces so formed; internally there are radiators. Where the panels are used as cladding instead of windows, they are vertical and lined internally for thermal insulation. In addition, an ingenious system for classroom windows has been devised. These are boxed out with precast concrete projections and double windows. The windows may be slid open externally at one end and internally at the other so that, apart from thermal insulation, noise from outside is reduced – the more so because it has to travel over acoustic boarding between outer and inner windows. Octagonal precast concrete columns of storey-height are used with this

Detail of one of the classroom wings showing the modelling achieved by splayed cladding panels and projecting window.

ACLAND BURGHLEY: *continued*



Plan of projecting window.



Section showing projecting window and typical cladding details.

Drawings by courtesy of The Architect and Building News

system, and these are grooved to receive glazing direct or a fixing for partitions.

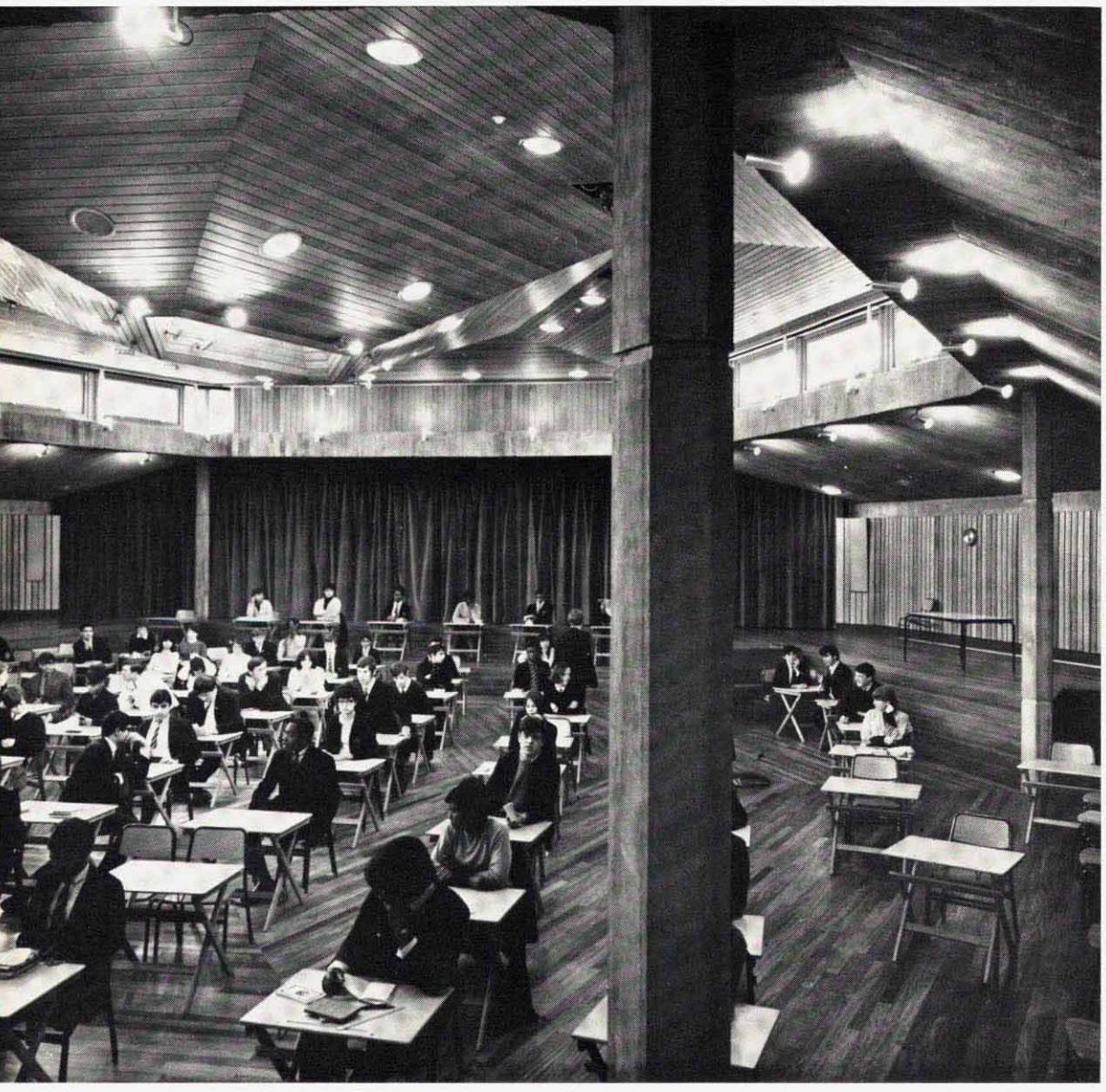
From this it can be seen that the external precast concrete expression of the classroom wings arises directly out of the two special problems common to most urban buildings in this country – sound and thermal insulation. Of course we are now a good deal more thermal-insulation minded than we were, but it is still fairly uncommon to find that much has been done about insulating a building from the increasingly serious problem of external noise.

Other details of the school which seem particularly successful include the precast concrete paving slabs laid with 2 in. wide flint-filled joints to give a strong and unifying pattern to surrounding areas. At upper ground floor level externally, a rhythm of projecting concrete beams introduce a slightly Japanese note into the building as well as extra modelling. Internally, partition walls are either of fair-faced in situ concrete or brick-on-edge walls, all painted. In fact, these neutral-coloured painted surfaces appear to have marked hardly at all, even in passages and stairs. The walls are putty-coloured and the doors a dark gun-metal grey (this rather sombre effect is intended as a neutral background for coloured notices and art-work). As already mentioned, the interior of the assembly hall is particularly good with its shaped pine ceiling, special timber wall lining and exposed concrete surfaces.

The cost of the deck over the railway tracks was £261,000, and of the school building, including furniture and equipment, about £650,000.

The main entrance approach. Note the wide flint-filled joints between paving slabs.

ACLAND BURGHLEY:
continued



Exterior and interior views of the assembly hall, Acland Burghley School.

Photographs by S. W. Newbery

The front of the theatre seen from the Drawing Schools.

The new theatre at ETON COLLEGE

Architects and structural engineers: A. M. Gear and Associates
Main contractor: Taylor Woodrow Construction Limited

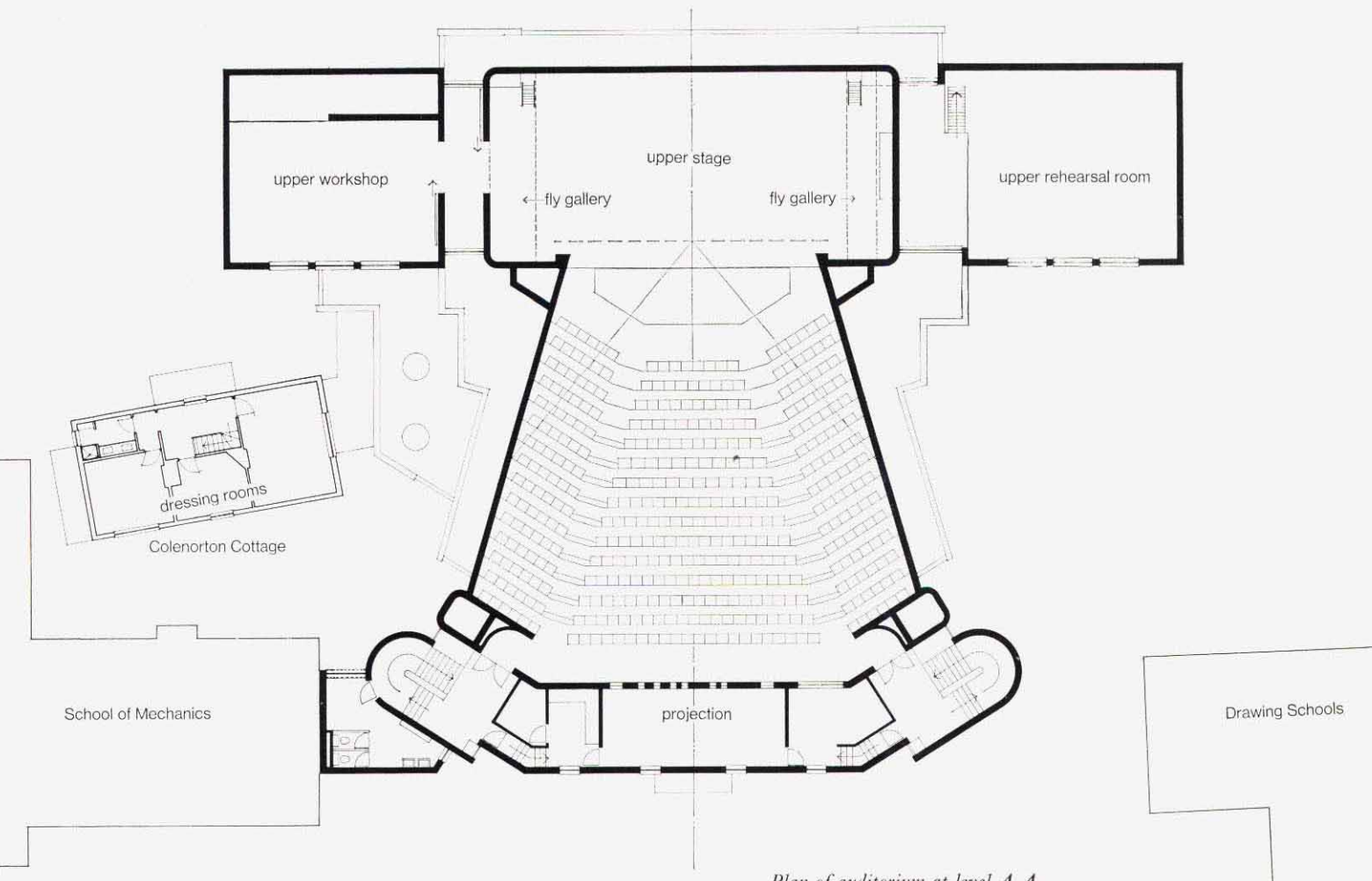
Eton College's new theatre – known as New Hall – is, by any standards, finely equipped. It is the sort of building that some west-end theatre managers, struggling with back-stage antiquities, might eye covetously. But it is not luxurious or extravagant. In fact it is quite plain inside and out, although Eton boys can count themselves lucky. The building seats 401 in a visually simple auditorium which is flexible enough to allow a stage apron to be added by raising the orchestra lift platform, and a peninsular stage to be formed by removing some seats and adding side wings. Money was too short to build special dressing-rooms, so these are housed at present in an existing cottage linked to the new building; provision has been made for building on proper dressing-rooms later at

Seating area off the main foyer.

the rear. But the theatre is badly needed: Eton has 25 boarding houses, many of which produce plays, so that it has to be possible for rehearsals and productions of different house plays to take place in quick succession – apart from the official school plays, functions, lectures, film shows and the like. With a proper scenery workshop and rehearsal room provided, the educational value of this building will no doubt rank very high indeed.

The building overlooks the existing parade ground and is sited between the School of Mechanics and the Drawing Schools. Although brick is the traditional material of most of the Eton buildings, there are exceptions such as the chapel which stands apart in stone. Similarly, the architects have thought it appropriate to contrast the new theatre in the modern equivalent of stone – concrete. This is exposed and textured on the outside with a striated finish which has been very expertly and regularly carried out.

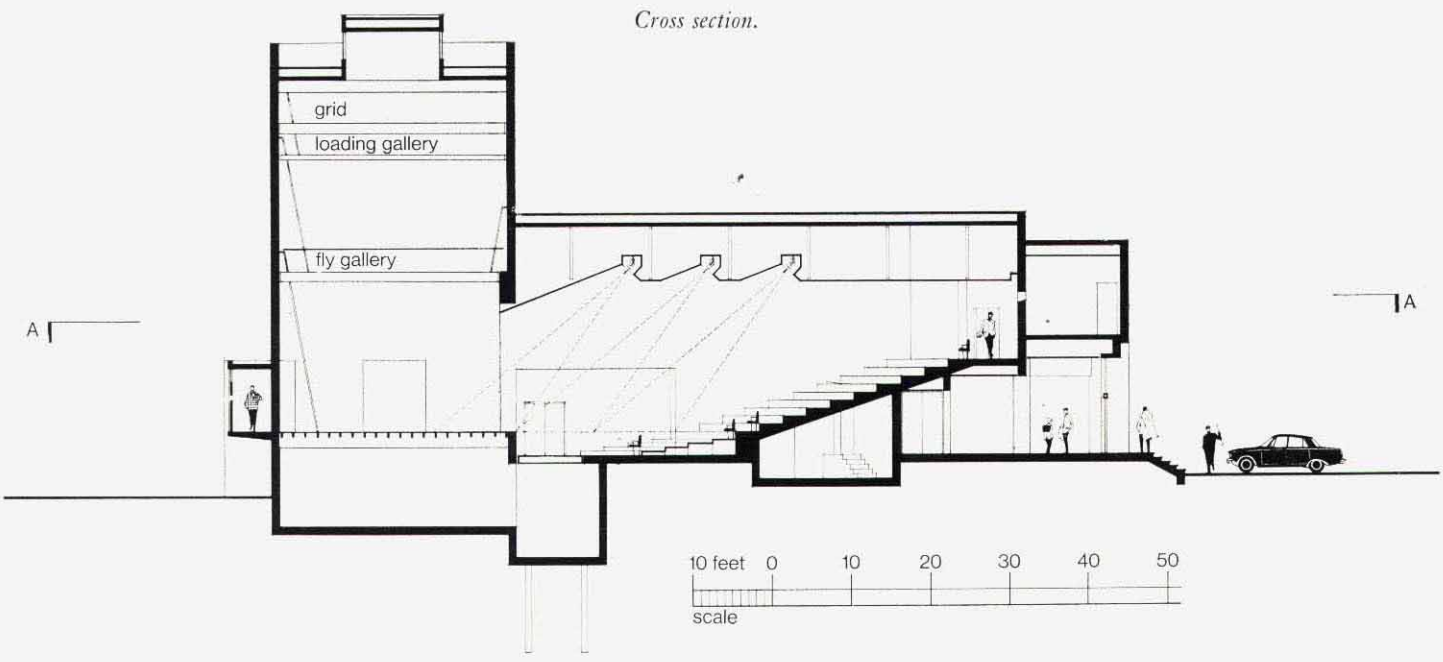
One of the main design difficulties was dealing with aircraft noise which, in this area, reaches a high level (particularly noise from low-flying aircraft after take-off). This suggested heavy construction, with an external envelope around the auditorium, stage and tower to give a large sound-transmission loss. On the other hand, short bored piles were necessary to carry the loads down to firm ground, so it was desirable to



Plan of auditorium at level A-A.

Interior view of the auditorium.

Cross section.



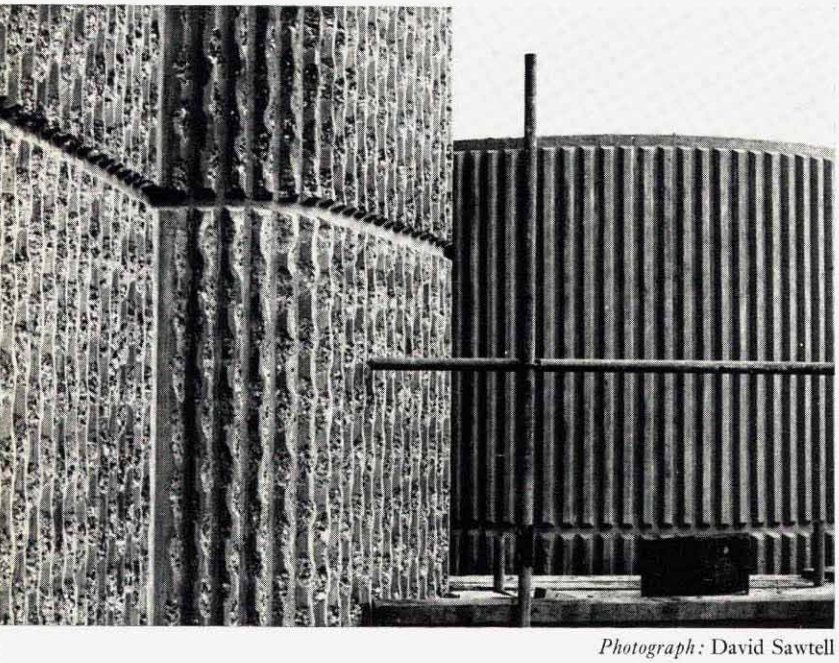
Photograph: David Sawtell

The concrete was hammered on alternate sides of each rib. Wavy guide lines drawn with a template can just be seen on the unhammered ribs.

ETON COLLEGE: *continued*

keep the weight down to reduce foundation costs. The compromise was to build a wall envelope of 6 in. thick structural in situ reinforced concrete, with an inner leaf of brick. The roof envelope is of 6 in. thick reinforced concrete covered with woodwool slabs. The haystack lantern in the roof is double-glazed for sound insulation. The envelopes of those parts of the building not needing such good sound insulation were constructed of brick and concrete to suit the circumstances.

The concrete ribs before and after hammering, showing the extremely even effect achieved.



Photograph: David Sawtell

The actual shape of the auditorium – and consequently the building – was determined strictly by performance requirements, angles of sight, fire requirements, acoustics and so on. The plan shape of the auditorium was in fact derived from an arithmetical progression. A fly-tower was thought essential for flexibility in the use of the auditorium, so that changes can rapidly be made from projection screen to maps to back-drops for plays.

The clients required a building with as little maintenance as possible. 'Natural' materials have therefore been largely used. Externally there is ribbed concrete and brick on bush-hammered concrete plinths. Here the deeply ribbed concrete and rounded corners have helped to reduce the bulk of the fly tower which is large in relation to its surroundings.

Internal wall finishes are mainly of rough board-marked concrete, smooth fair-faced concrete, fair-faced brick and wood panelling – all undecorated. And these robust plain surfaces look particularly well in the foyer, stairways and passages.

The external ribbing of the concrete, expertly carried out, was achieved by casting against timber forms fitted with fillets $1\frac{1}{2}$ in. deep and placed at 4 in. centres. The projections were then Kango-hammered – not continuously, as can be seen in the detail photograph – but at spaced intervals on alternate sides of each rib. This has given a subtle 'twist' to the appearance of the projecting ribs, and an interesting character to the surface texture as a whole.

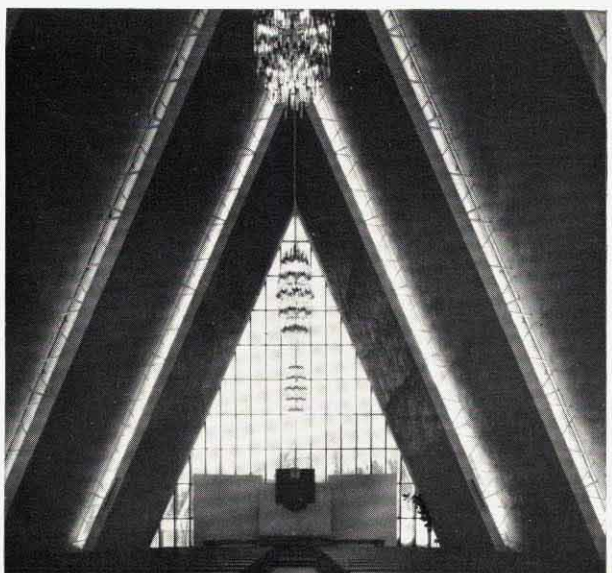
The building was constructed very quickly: site work started on June 5 1967 and the building was handed over to the clients on October 31 1968.

ARCTIC CATHEDRAL

built of lightweight concrete

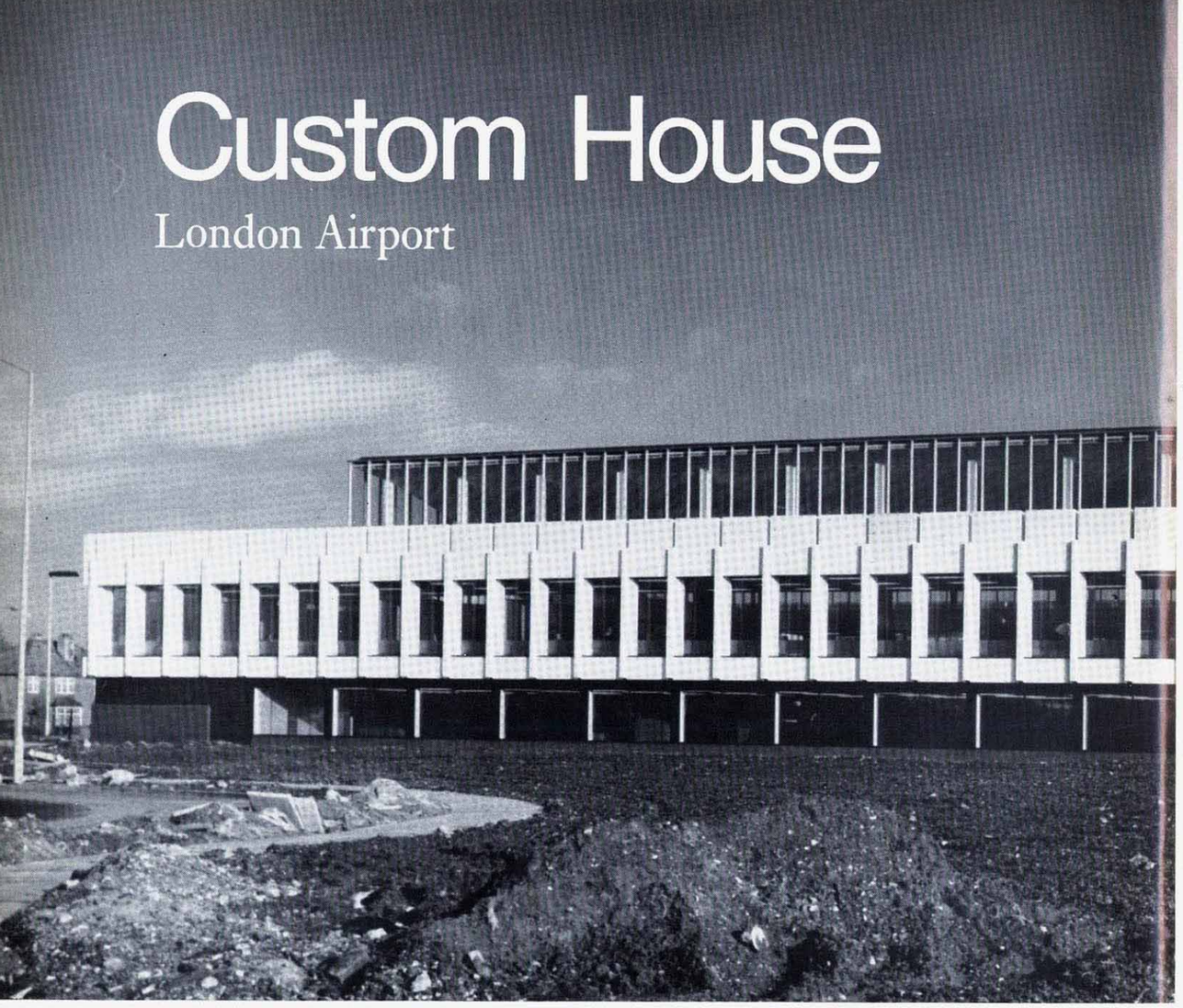
Architect: Inge Hovig

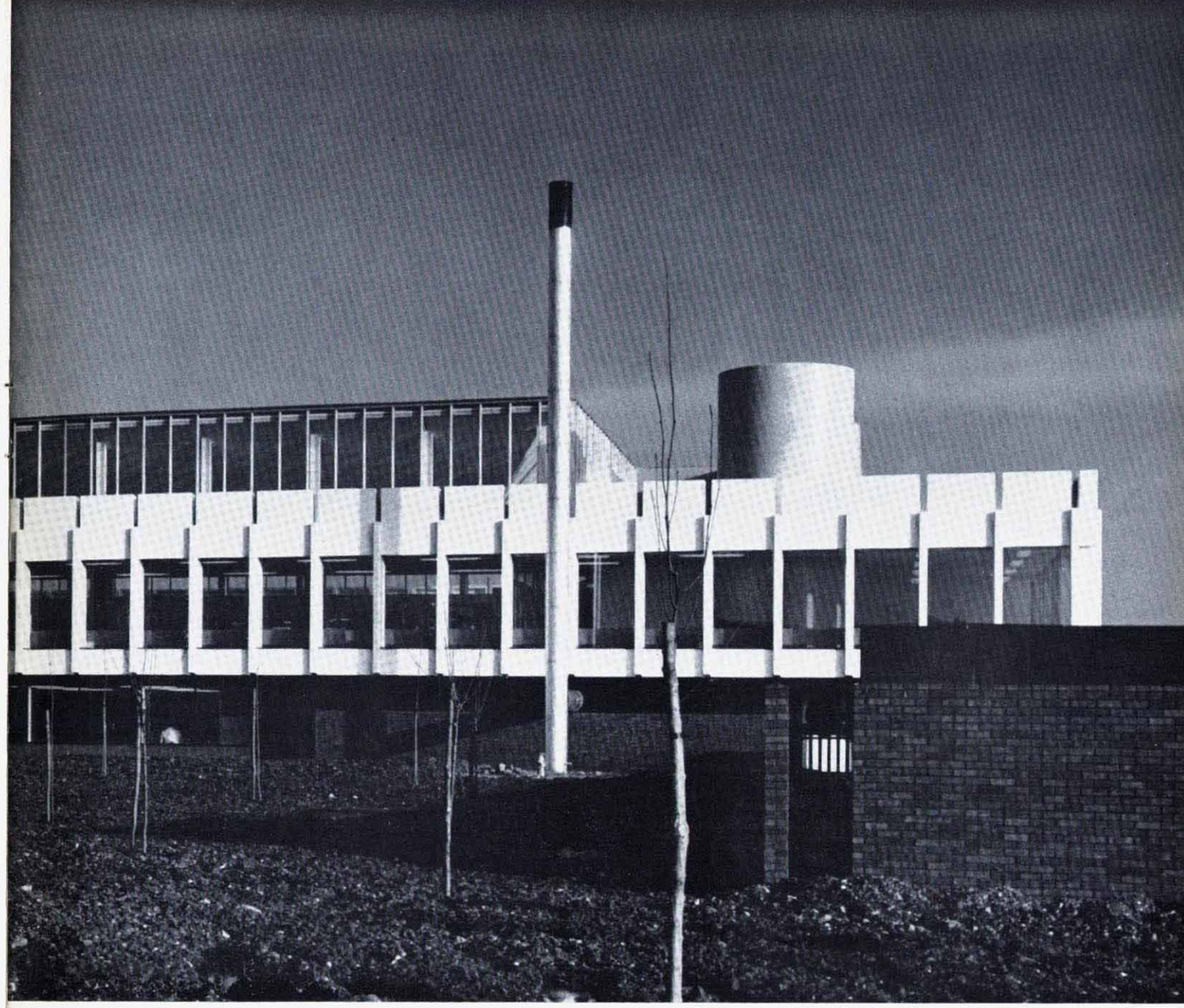
This cathedral church has been built in the extreme north of Norway at Tromso, which is well within the Arctic Circle. Construction consists of a series of steeply-pitched slabs of Leca lightweight concrete forming triangles of different heights, separated from each other by strips of glass. The slabs are protected externally from the elements by thin aluminium plates. On the inside, the slabs are merely painted. The effect of the glass strips internally is to lighten the mass of the building visually. Structurally, the building is, of course, also lightened by the use of lightweight concrete, and thermally insulated to a high degree.



Custom House

London Airport





Architects:	Manning and Clamp
Engineers:	Jenkins and Potter
Contractors:	Gazes of Kingston Limited
Precast units:	Portcrete Limited

The new Custom House at London's Heathrow airport strikes a note of order in the confusion around the main passenger termini. Largely clad with crisp white units of precast concrete, the building is literally one of the bright spots on the landscape. It has an important function in that – in terms of value of imports and exports – it controls the third largest flow of goods in the U.K., including all sea ports. It is also thought to be the first purpose-built custom house at any airport in the world.

Built at a contract cost of £336,000, the Custom House is designed to form part of a homogeneous group around the new Sipson Road entrance roundabout which already includes the recently completed Airport Police Headquarters designed by the same architects. It marks a further stage in the clearance and rebuilding of the airport's northern perimeter.

The building is designed on a 5 ft. grid and measures 120 ft. wide by 200 ft. long. Principally, it houses a staff of about 270 people in the Collector's Office which used to be in the old North Terminal buildings. This office deals mainly with the presentation, checking and passing of custom entries for the clearance of inward freight and the payment of duties on these goods. The large first-floor open-plan office (traditionally known as the Long Room) is the focus of this activity. The larger part of the ground floor is taken up with filing.

Situated only 100 yards from the main runway, the problem of jet aircraft noise determined a mechanically ventilated building making extensive use of fixed double-glazing and 'heavy' materials. Ninety per cent of the outer glazing is fixed and fitted direct to the structure with a 15 in. air space between the outer and removable inner panes.

The ground floor has a reinforced concrete-framed structure with 9 in. square columns in the external walls, and 12 in. square columns on a 20 ft. grid internally. Facings at this level are of dark brick and black anodised aluminium.

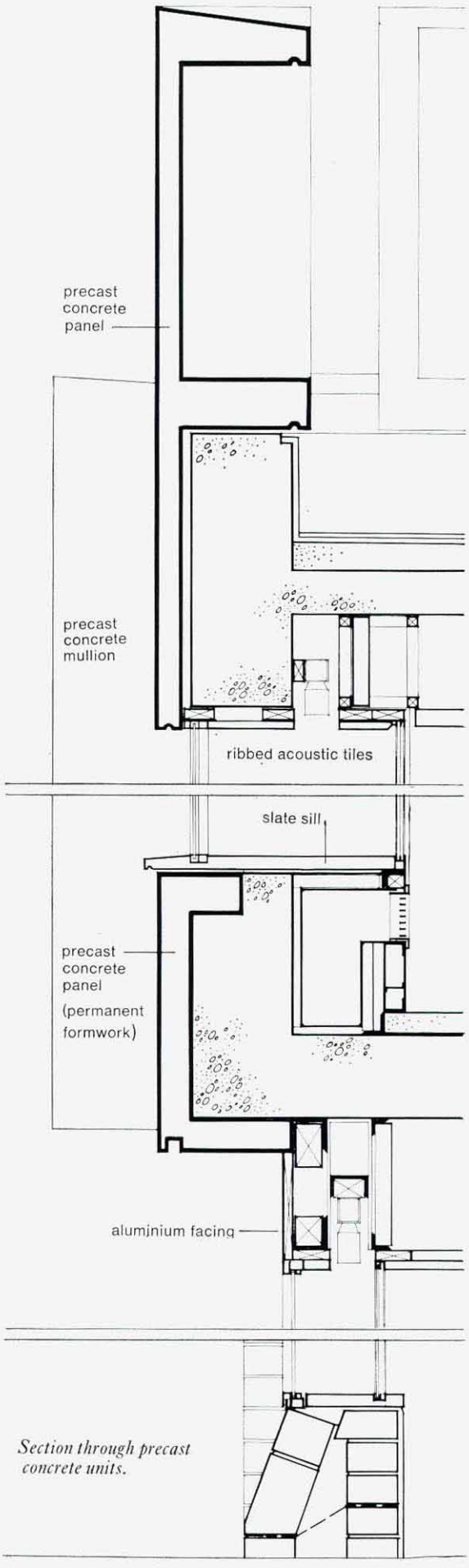
The first floor is of similar construction but faced with precast white concrete 'Capstone' units. These comprise mullion units forming a series of projecting fins at 5 ft. intervals around the perimeter of the building, infilled with sill and parapet units.

The clerestory over the first floor room is a light steel and glass structure giving a 16 ft. ceiling height and continuous glazing.

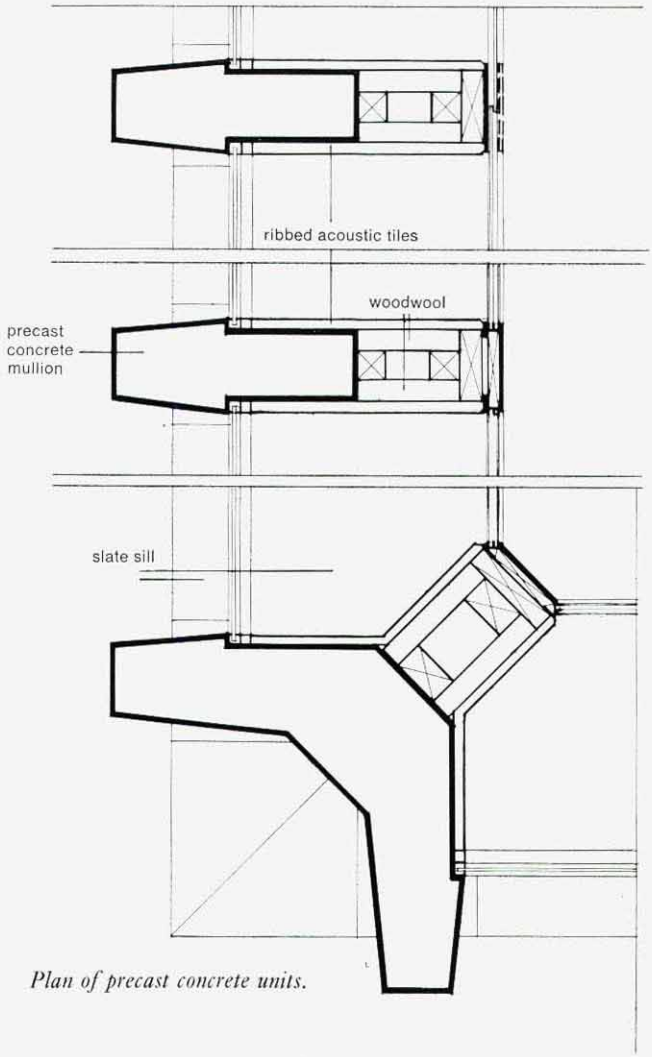
Externally there is a broad paved terrace outside the entrance, with sloped embankments planted with trees in order to screen parked cars from the perimeter road.

Photographs by Sam Lambert

Oblique view of the Custom House from the broad paved terrace.



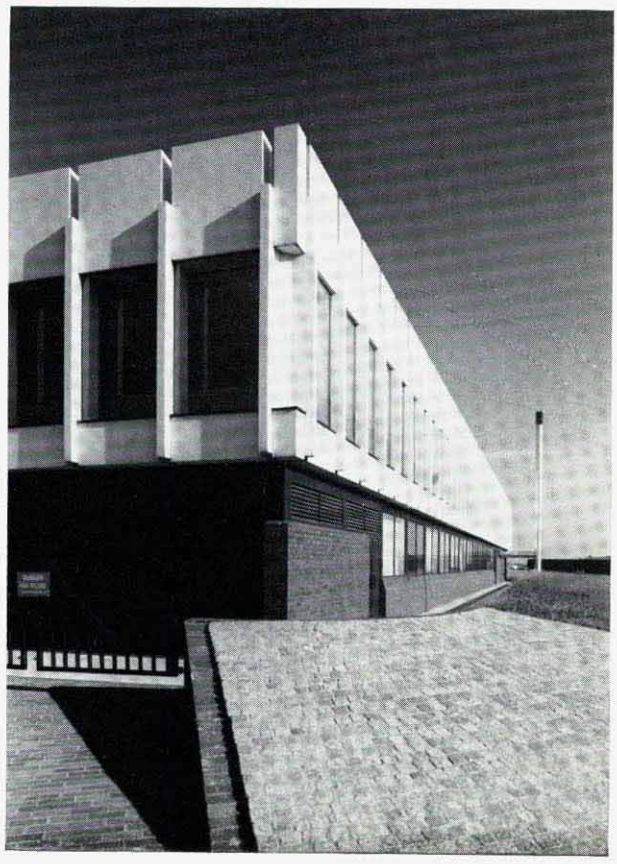
Section through precast concrete units.



Plan of precast concrete units.

CUSTOM HOUSE: *continued*

Corner detail showing the crispness of the white precast concrete units.



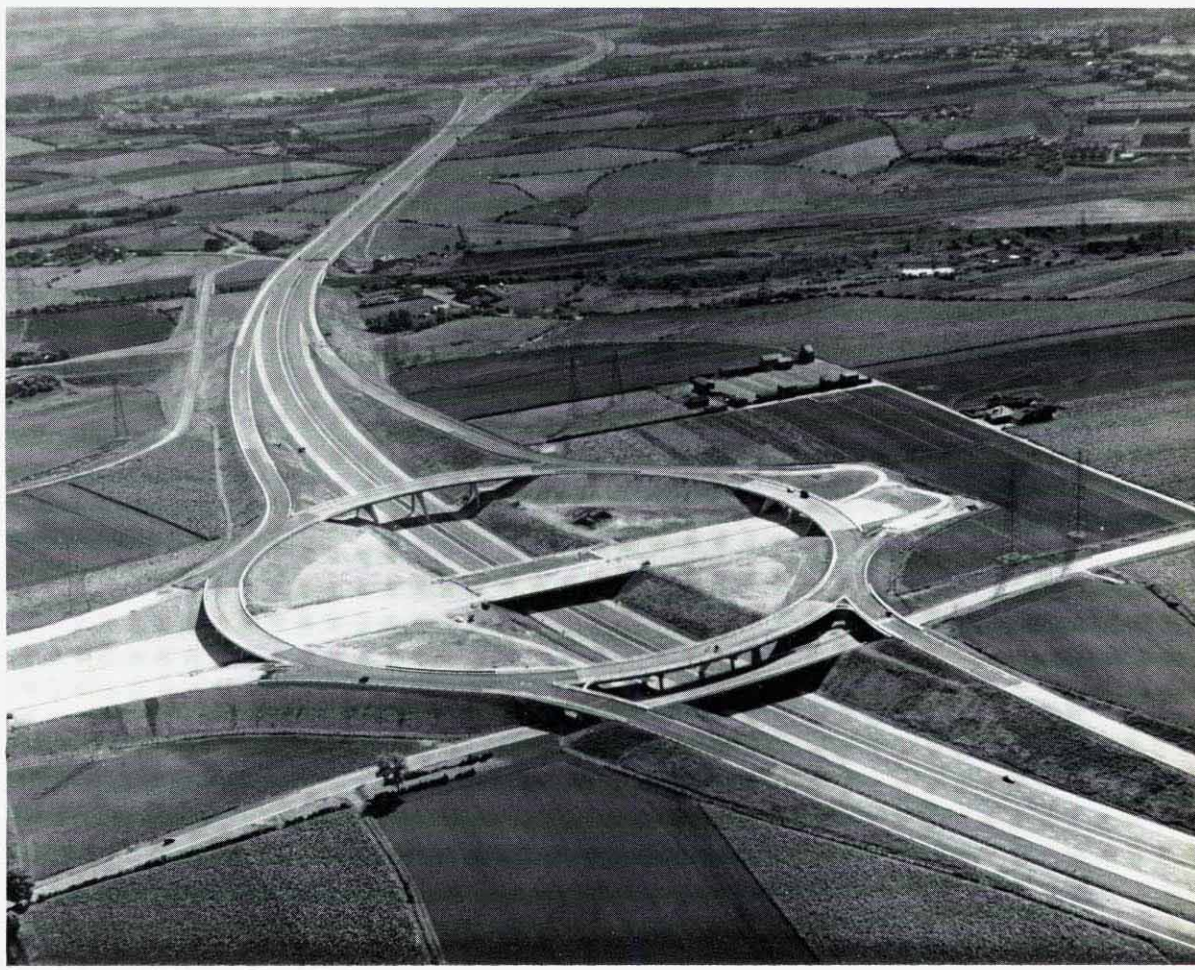
Bridges on the Aston-Sheffield-Leeds Motorway

In the additional 6½ miles of the M1 in the West Riding of Yorkshire, opened on 12 June last year, no fewer than nineteen bridges have been constructed to take the motorway over or under roads and railways, or to provide pedestrian access to the farms on the route. Some of the most interesting of these are here described. A major construction problem was the prevalence of mine workings in the area, and techniques had to be devised to prevent or minimize the effects of subsidence.

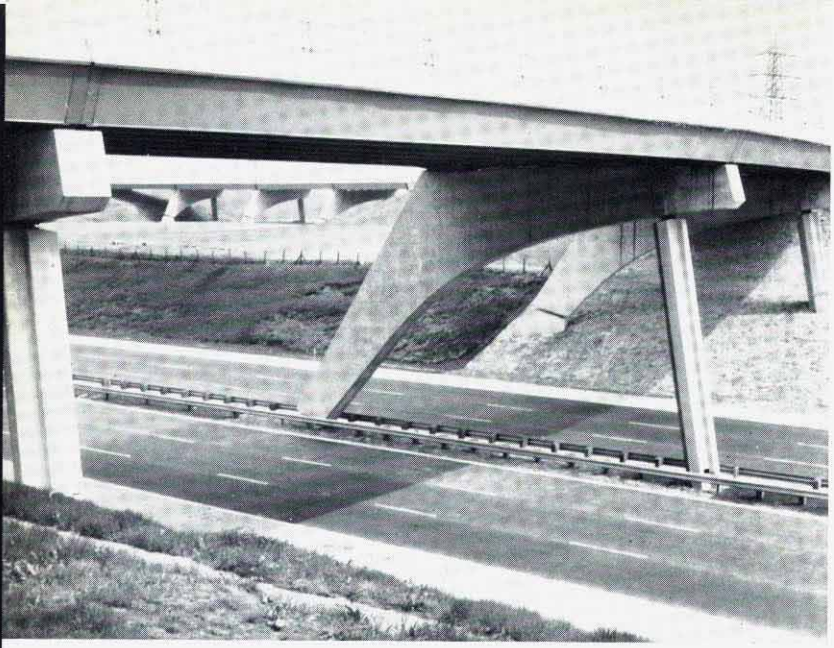
These structures have been designed by the Highways and Bridges Department of the West Riding County Council under the direction of The County Engineer and Surveyor, Col S. M. Lovell, CBE, ERD, TD.

Lofthouse Interchange

One of the main problems in the entire project was the intersection of the Sheffield-Leeds section of the M1 with the Lancashire-Yorkshire M62, solved by constructing a three-level roundabout. The M1 is in a cutting at the lowest level and is crossed at the intermediate level by the M62. At the top level is the vast roundabout (800 ft. in diameter) carried on four bridges across the two motorways and linked to them by eight slip roads. The centre bridge (carrying the M62) is a four-span structure having a multi-cellular deck supported on three piers – all in reinforced concrete. The roundabout bridges are of particularly



The 8-bridge 3-level circular interchange at Lofthouse where the M62 joins the M1.



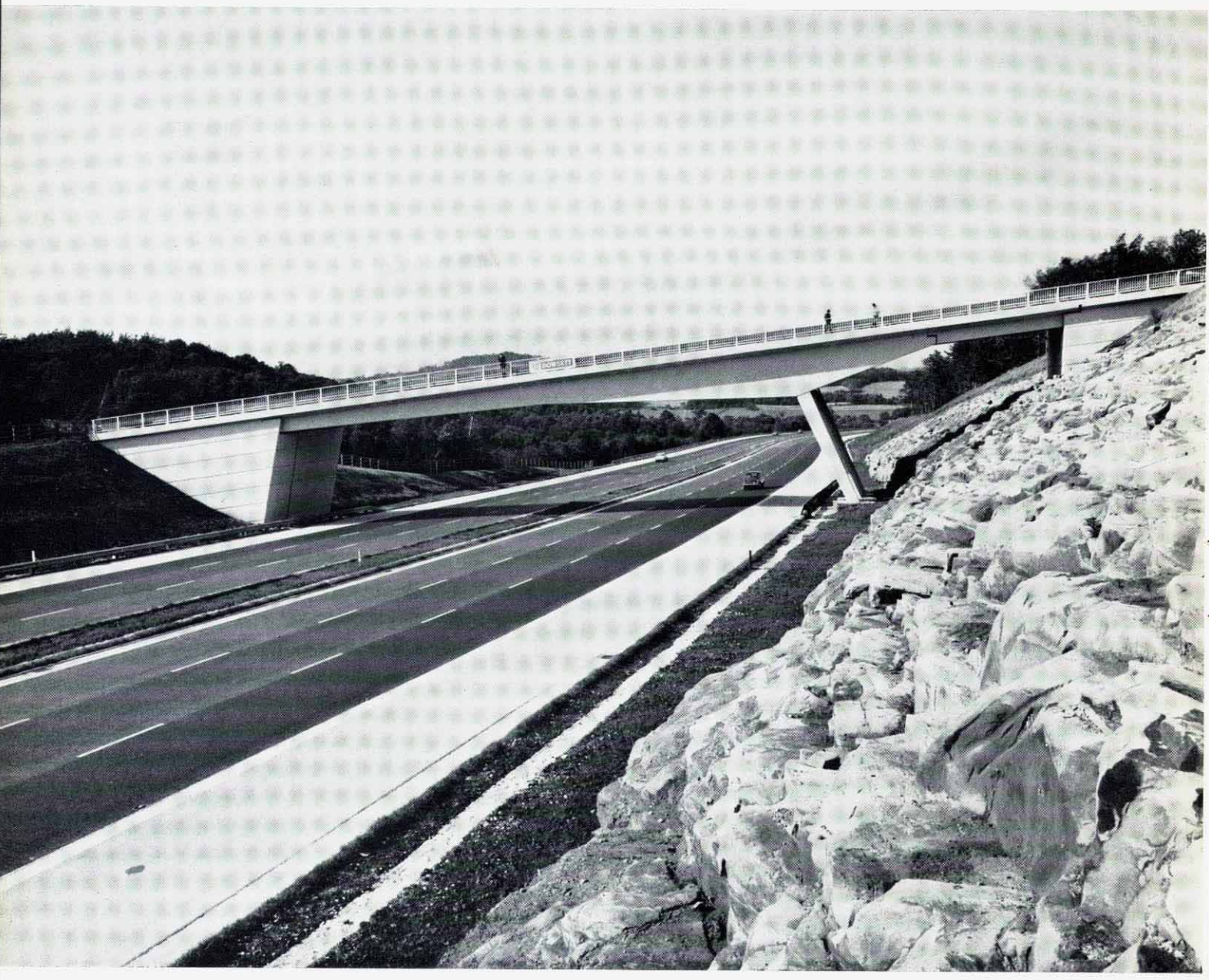
Lofthouse Interchange showing curved prestressed concrete members supported on cruciform precast concrete props.

striking design. Each of the piers which carry the composite superstructure consists of a prestressed concrete member curving up from ground level and supported at one end on a slender precast concrete prop of cruciform cross-section; hemispherical bearings are used to articulate the pier members. Two mine shafts were discovered during exploration for the foundations, so that provision for possible movement had to be built into the design. A. Monk & Co. Ltd were the main contractors.

The Cock Inn Bridge

At the point where Pilley Lane crosses the M1, a skew overbridge carries the unclassified road over the

Cock Inn Bridge.



Needle Eye Accommodation Bridge.

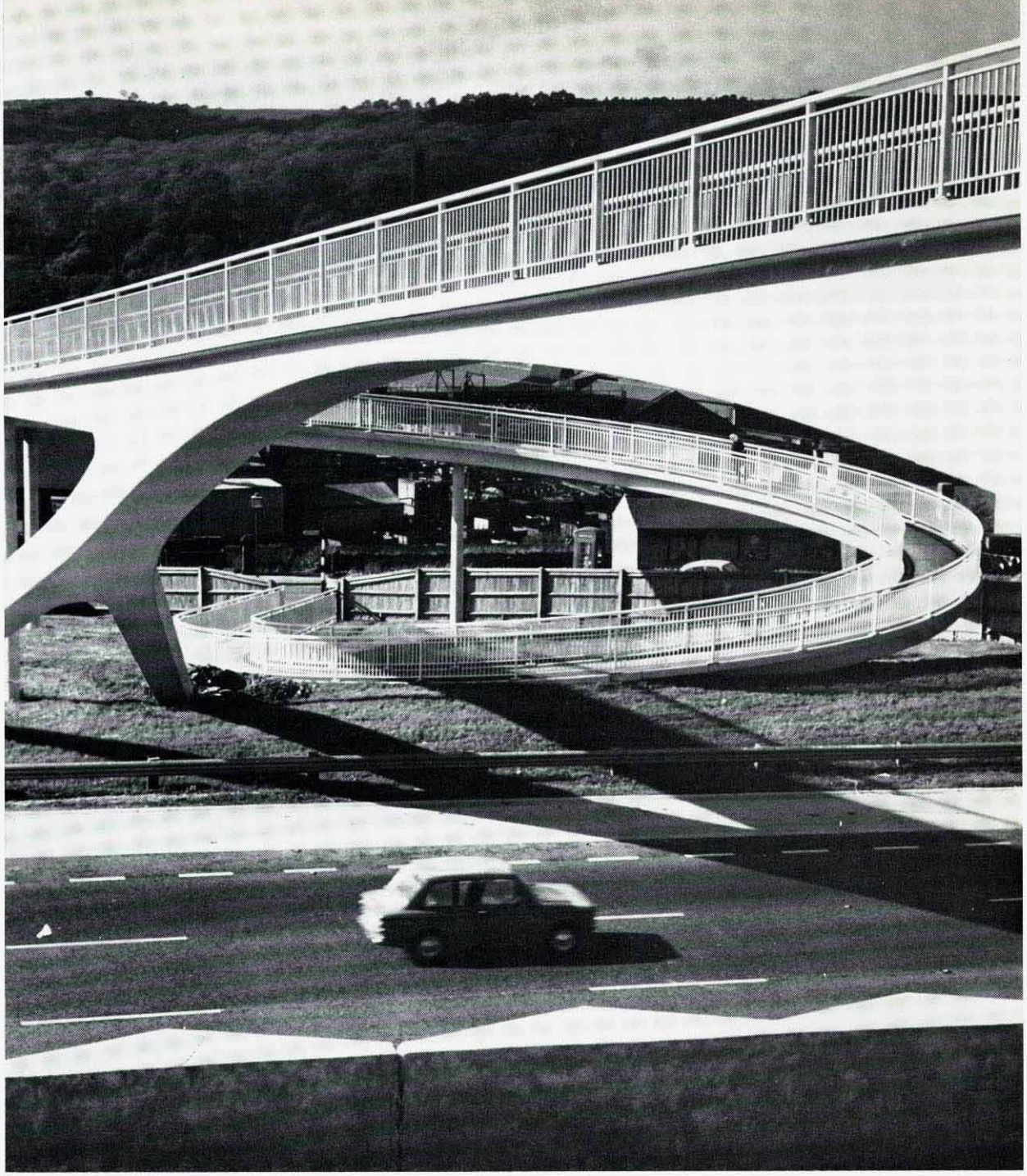
Photograph: Elsam, Mann & Cooper

motorway in one sloping span. The superstructure consists of a single 120 ft. span with a cantilever arm supporting a terminal 30 ft. suspended span. The deck has a skew of 10° and a gradient of 1 in 10. The main span is composed of four non-prismatic prestressed concrete box beams. The lower end is supported by a reinforced concrete abutment; at the cantilever springing, a pier formed of four reinforced concrete raking columns with hemispherical bearings at head and foot carries the superstructure. The suspended span is composed of eight reinforced concrete T-beams and the terminal end is supported on a mass concrete bankseat on sliding rotating bearings. This bridge is designed to accommodate mining strains and ±6 in. longitudinal movement over the extent of the structure. It was built by Dowsett Engineering Construction Limited.

Needle Eye Accommodation Bridge

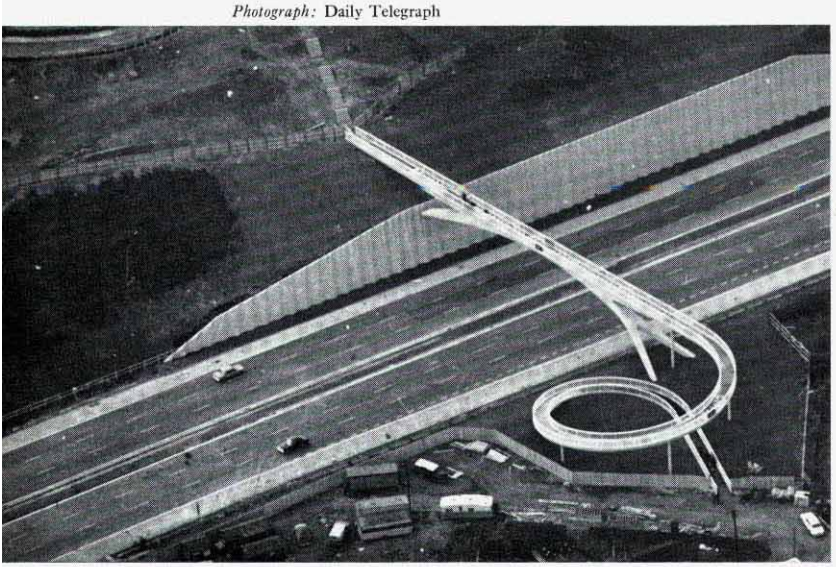
A bridge that is particularly pleasing visually is the Needle Eye Accommodation Bridge, which sweeps across the motorway and slip roads in one curving arch through which a vista of rolling, wooded country is seen. The structure, which will be used by farm traffic and pedestrians, consists essentially of a three-pin arch with side cantilevers each supporting an 82 ft. long suspended approach span; the overall length is 434 ft. and the width 16 ft. 4 in. This impressive arch is no less than 290 ft. between springings and its height above the motorway at the crown is 53 ft. The arch and cantilevers are of reinforced concrete while the suspended spans are post-tensioned units. The double-box-section suspended beams were cast in situ. The bridge was built by Clugston Civil Engineering Limited.

Photograph: The Guardian



Above: Droppingwell Footbridge.

Photograph: Daily Telegraph



Aerial view showing the elegant curves of the Droppingwell Footbridge.

Droppingwell Footbridge

A beautiful footbridge which springs across the motorway in a single 170 ft. span and then coils itself gently down on the other side. It conveys pedestrians from a housing estate on high ground, across the M1, to the Blackburn Road with its factories below motorway level. To achieve this (and for easy pushing of prams) a steady gradient of 1 in 10 is continued across the superstructure and the approach ramp, which is of spiral form to fit into the restricted area available. The main superstructure of the arch, which springs from a footing behind a retaining wall on the east side and from a bifurcated support on the west, is formed

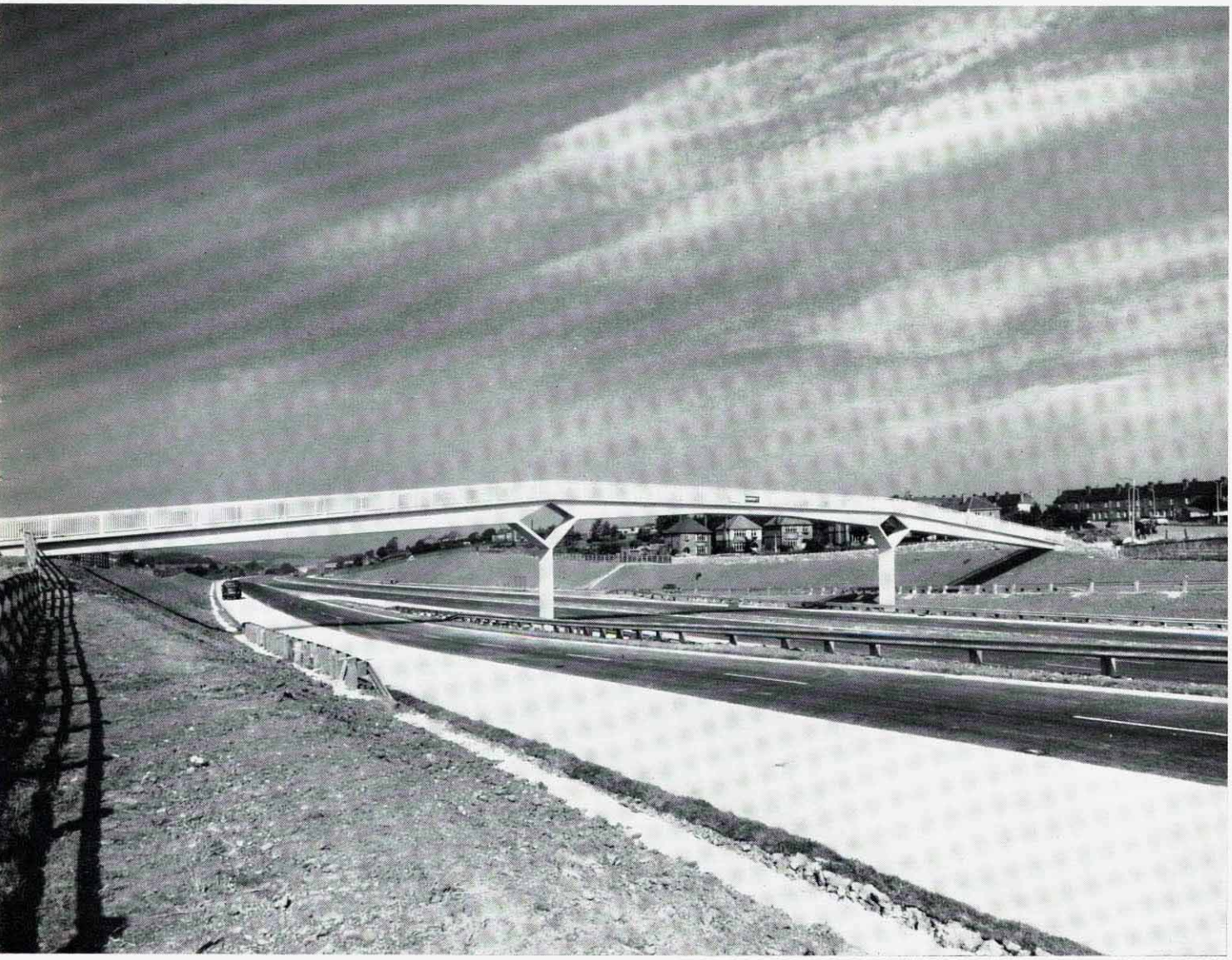
of box sections of reinforced concrete which, at the crown and the lower sections of the supports, taper into solid sections. To provide lateral rigidity and prevent tensile stresses in the twin concrete hinge throats (due to lateral wind forces), a section 10 ft. long at the top centre hinge is locally prestressed with Macalloy bars. The suspended spans of the footbridge to the east and west of the arch are formed with precast concrete T-sections; the 58 ft. eastern span is prestressed and the 20 ft. western span reinforced. The spiral approach ramp is of reinforced concrete and is supported on four concrete columns, each with a circular concrete hinge at top and bottom. The ramp is, therefore, only fixed rigidly at its lower abutment and by dowel pins to the end of the western (suspended) section. Holland & Hannen and Cubitts (Civil Engineering) Ltd were contractors for this bridge.

Smithy Wood Footbridge

A totally different design from Droppingwell was evolved for the footbridge at Smithy Wood where, instead of curves, the ramp is zigzag on plan. This footbridge is a three-span concrete structure, crossing the M1 just south of the Rotherham to Penistone Road: the main span is 158 ft. and the side spans each 76 ft. long. It is believed to be the first concrete bridge to employ the Wichert Truss principle (the pinned end members over the internal piers forming open rhomboids) combining the best features of both simply supported and continuous constructions. As in the case of simply supported construction, the truss action permits differential settlement of any support and, as in continuous construction, relieves the mid-span moments and permits a reduction of member size at these points. Another design feature is the use of concrete 'tri-hinges', designed and developed by West Riding engineers and used for the first time on this bridge; the tri-hinges connect the rhomboid struts to the tops of the piers. The device is simple, inexpensive and requires no maintenance; compression in three directions from the three members assists the effective action of the concrete as a hinge. The construction of Smithy Wood footbridge by A. Monk & Co. Ltd was in situ, except for the internal piers which were precast.

One of the Smithy Wood type of bridges.

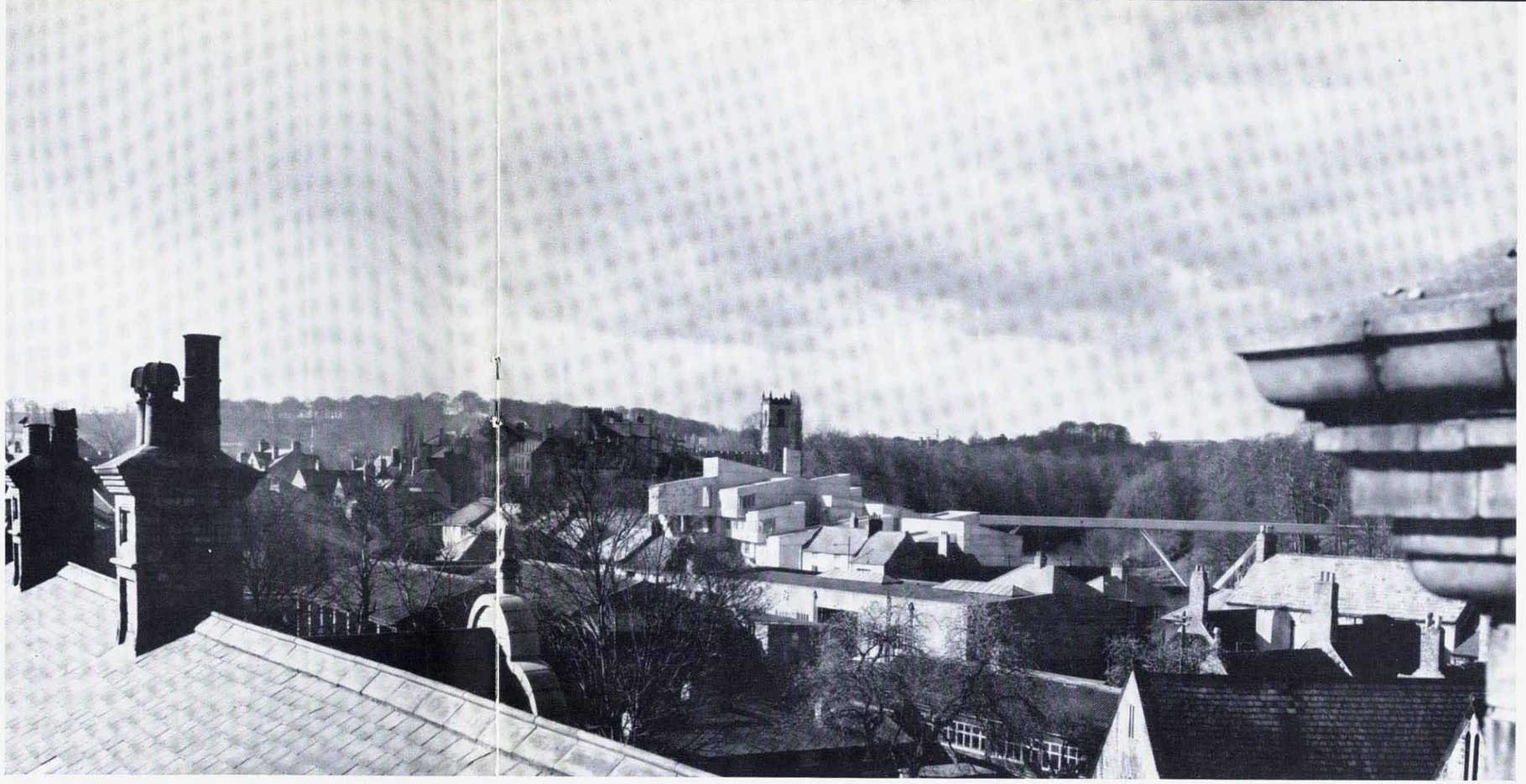
Photograph: Elsam, Mann & Cooper



Professor Napper looks at developments in the

North East

Professor Napper is professor of architecture at Newcastle University.



Durham roofscape with Dunelm House (Architects' Co-Partnership), University of Durham, centre, and Ove Arup's Kingsgate Footbridge over the River Wear to the right of it.

Photograph: John Donat

In writing about new developments in the north-east, one is tempted to compare what one thought might happen in the optimistic period of the '50s and early '60s with what has actually been achieved. Of course one is aware of the huge task involved in restructuring so many 19th century areas, but it is still possible to journey by certain routes through Northumberland and Durham and see only marginal improvement. It is also possible to select routes which show that a great deal has in fact been done.

Durham, with its western valleys into the Pennines, and Northumberland, with its vast open spaces to north and west and its superb coast-line, contain their industrial activities mainly in the Rivers Tyne, Wear and Tees conurbations. The closing of mines in both counties is tending more and more to increase this concentration, for in the last century many mines generated new villages in the countryside. One of the problems today is whether or not to establish other kinds of industry in these villages to compensate for the loss of the mines. So it is in the three conurbations that a visitor must look for new developments.

Many of us had hoped that large-scale schemes of rehabilitation might be possible in the '60s but to make any impression, astronomical capital investment was needed and so much of the investment would have had little apparent economic justification. For instance, few people know that the 'three rivers' even a hundred years ago were as beautiful as any in Britain – their upper reaches still are. If only the banks of their lower reaches could be cleared and their waters purified, what a change it would be. Their banks and waters could provide recreation lungs for miles, right within the most densely populated areas, and provide sites for all kinds of buildings. The rivers are still used for shipbuilding on Tyne and Wear, and the Tees port is to grow and help to earn the money which the region needs to rehabilitate the other stretches of the rivers. But it is a slow business.

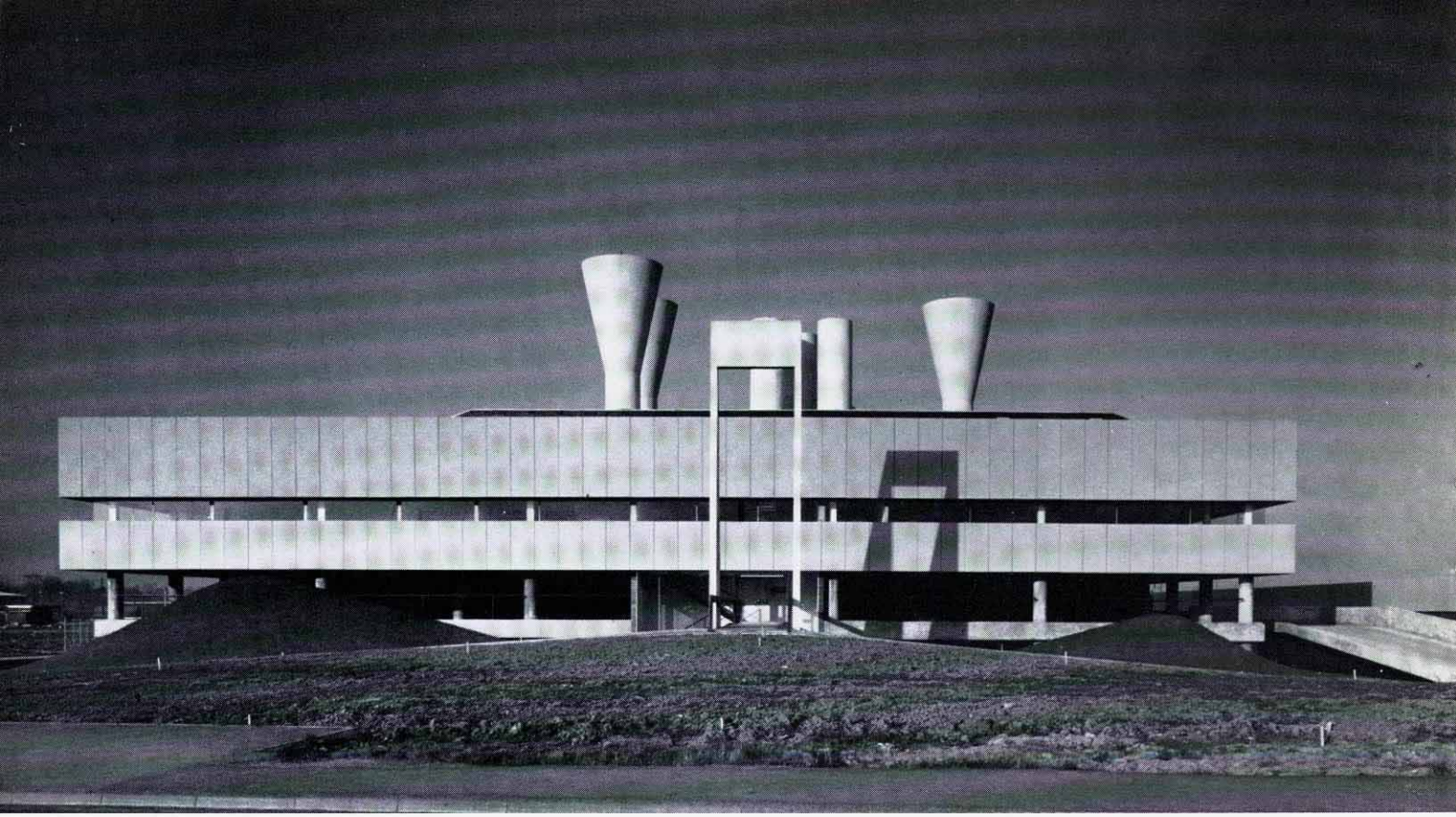
As would be expected in an industrial region which is in a phase of massive redevelopment, the first large-scale efforts have been directed to the expansion of power supplies and improvement in communications. Blyth and Tees-side power stations are now operational and soon North Sea gas will be available.

In communications, geography continues to dominate the situation on the Tyne and the Tees, as in the past. The last sections of the A1(M) will be completed this year into Gateshead and will provide at last a dual carriage road all the way to London. But the rivers have not yet been conquered at Newcastle and Middlesbrough. At least two new bridges will be necessary between Gateshead and Newcastle and two across the Tees. The major bridge across the Tees to carry the A.19 would allow this road to generate industrial development on Tees-side and in east Durham and is now needed urgently. It is particularly required to reinforce the success of Tees port and its container service. Also, as in the past, little is to be seen of improvements in the road systems connecting the north-east and the north-west. Within the conurbations, however, large-scale works are improving inter-town communications, and the Newcastle-Tynemouth coast road and parts of the Gateshead-Sunderland roads are well advanced. The Newcastle urban motorway system is due to start construction later this year to link up with those in Gateshead and A1(M).

As far as the railways are concerned the north-east has always had good passenger services to London and these continue in that tradition, but travellers on the east-coast, midlands and west-coast main lines will have compared the developments at Birmingham, Coventry, Manchester and Leeds with stations on the old LNER line. So we have no new road bridges and no new stations, though the great new marshalling yards at Lumley with modern control systems are an achievement which is little known even to north-easterners.

Photograph: Turners (Photography) Limited

Newcastle Civic Centre (City Architect: George Kenyon ARIBA*).*



Gas Council Engineering Research Station, Killingworth (Architects: Ryder & Yates & Partners). The building received Civic Trust and Financial Times Industrial Architecture awards. The concrete roof structures are for liquid storage and air extraction. The precast concrete facing panels are painted (see also front cover).

NORTH EAST: *continued*

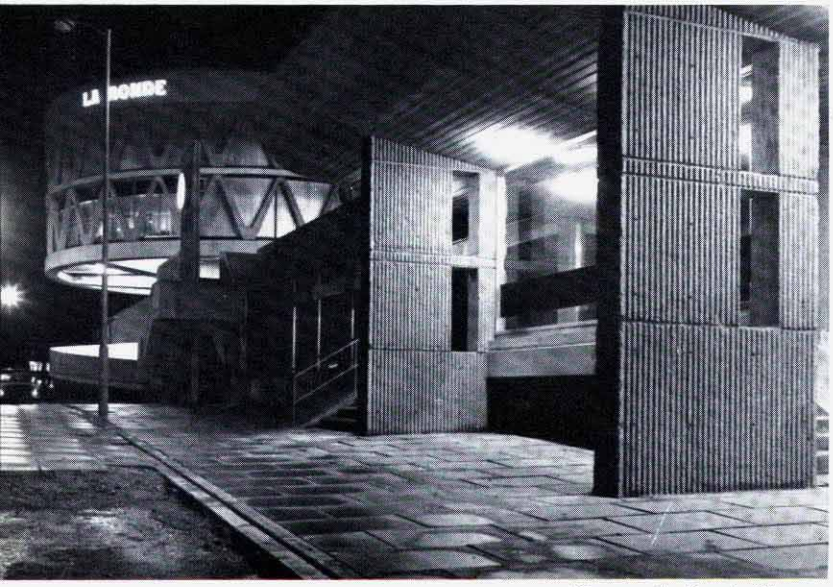
Against this background the main new buildings are associated with industry and with local government – their own civic centres, housing, schools and swimming baths. The two universities of Newcastle and Durham have expanded rapidly too. Generally the private sectors of building have been active mainly in industrial buildings and housing, but there is little to show in the form of commercial development compared with the south-east and the midlands. This reflects government and local government policy and its concern with providing, first, workplaces and housing along with schools.

Buildings for the larger industries like ICI at Billingham, and Parsons Reyrolles are impressive, particularly the chemical plants at Billingham. Perhaps the finest industrial buildings as such are Chrysler-Cummings at Darlington and the Research Building for the Gas Board at Killingworth. These stand out as exceptional buildings by any standards. Obviously the clients worked with first class consultants but they gave just that backing and drive without which few successful buildings can be realized. Generally, however, the standard of industrial buildings in the region is much as elsewhere in the country and is likely to continue so.

New buildings to house the activities of local government are dominated by the new Shire Hall at Aykley Heads for Durham County and by the new Civic Centre in Newcastle where the second annual conference of the Concrete Society is to be held this year. Sunderland's new centre is under construction and Darlington's is well in hand. The new Teesside authority will no doubt be considering theirs soon. How the results of the Local Government Boundaries Commission will affect such buildings we have yet to know but their report cannot be delayed much longer. Certainly the Geordie citizen appreciates the *panache* of his Civic Centre in Newcastle with its tower carillon, its flambeaux, its flood lighting and its landscaping.

Local authorities' major efforts in the County Boroughs, boroughs, urban and rural districts have been concentrated on housing. In the larger boroughs, tower flats – along with the football-ground 'drench' lighting-pylons – dominate the urban scene. Newcastle's policy of locating their towers is now becoming

Shopping centre and night-club, Billingham (Architects: Elder, Lester and Partners).



Photograph: Dennis Wompra

apparent so that a pattern is emerging which leaves the city centre free from the dominance of excessive height. Other housing of lower height is to be seen everywhere beyond the centres but recently experiments have been made in less conventional forms such as those at Kenton Bar (Newcastle), Peterlee and Washington UDC (Edith Avenue). Industrialized building methods using large slab concrete techniques have been used extensively in Sunderland and Gateshead and on a lesser scale at Spennymoor and Houghton-le-Spring, not all of them in towers. Generally the restrictions on cost are producing a situation where few authorities can afford the capital and running costs of adequate landscaping and supporting service buildings. One can look on this as misguided but one must acknowledge the difficulties and hope that these large-scale additions to the region will not be forgotten when money does become available.

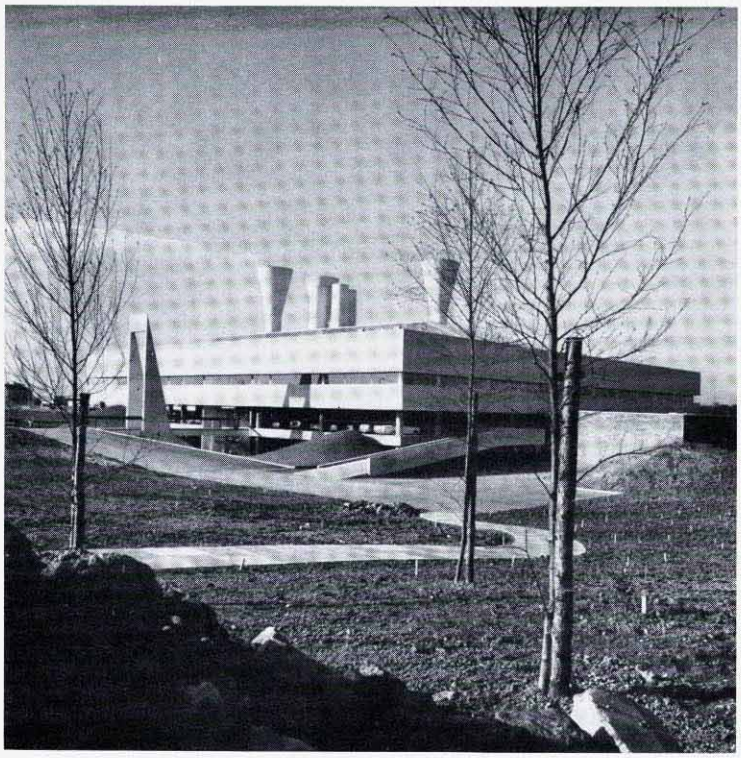
In every new town – Newton Aycliffe, Peterlee, Washington, Killingworth, Cramlington and Billingham – new buildings embodying new ideas are to be seen in varying stages. Landscaping at Peterlee with its lake; Norgas House and factory buildings at Killingworth; the Sports Centre at Billingham are indications of the more interesting developments. At Thornaby large-scale developments are proceeding in a new town centre.

Of commercial building, two are outstanding: the ICI Offices at Billingham and the new office block in the centre of the Newcastle Pilgrim Street intersection. Whatever one may think about the siting of this 'gateway' to Newcastle the building in reinforced concrete and precast cladding, has a scale and strength appropriate to its dominating position.

In all the region, the new building groups in Newcastle and Durham universities probably are the most interesting. The tight grouping on an urban site in Newcastle, opposite the completed Civic Centre,

Thornaby Town Centre (Architects: Elder, Lester and Partners).

Photograph: Dennis Wompra



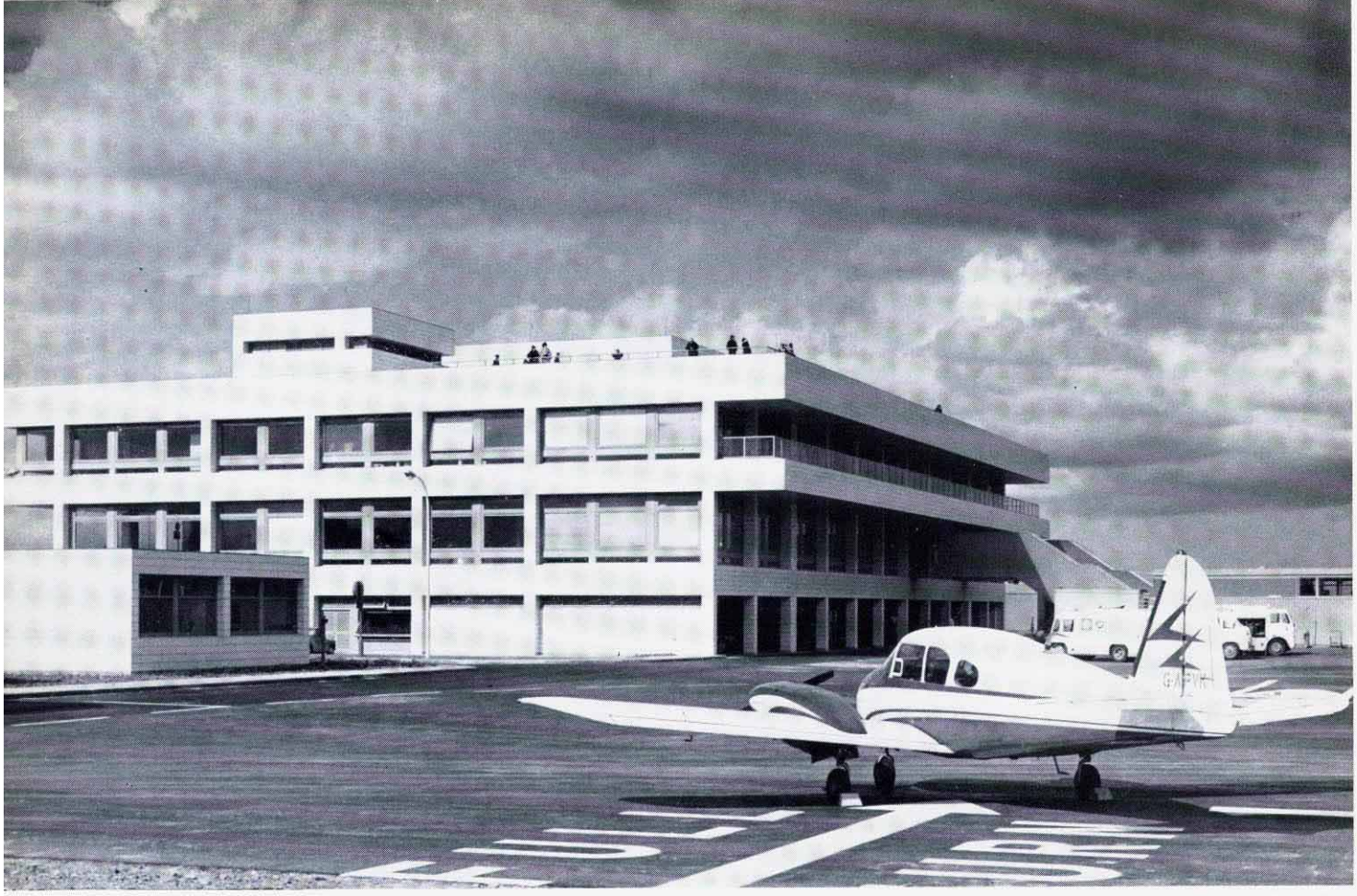
Photograph: The Architects' Journal

Gas Council Engineering Research Station, Killingworth (see also opposite).

Gateshead Shopping Centre (Architects: The Owen Luder Partnership).

Photograph: Sam Lambert

Photograph: The Architects' Journal



Photograph: Sam Lambert

Newcastle Airport – one of the most successful buildings in the north-east. It received an RIBA Architecture Award for 1968 (Architects: Yorke, Rosenberg, Mardall).

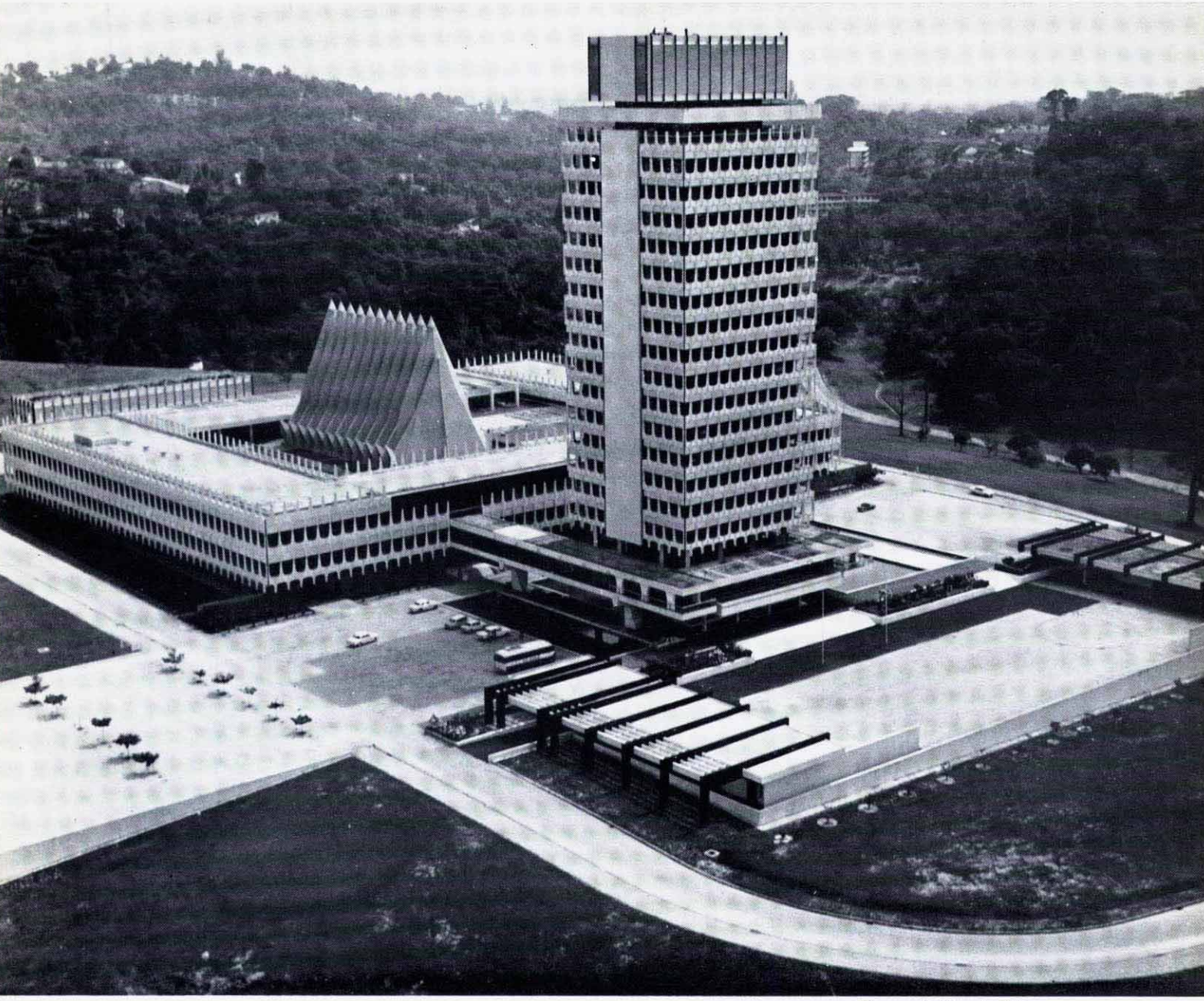
NORTH EAST: *continued*

even now in their still incomplete state gives some idea of how central areas can be developed to reasonably high plot ratios and still leave pleasant spaces between. Much still remains to be done in Newcastle although the new halls of residence at Castle Leazes near the partially restored Leazes Terrace are a step in the direction of building residences near the precinct.

Durham University must end this account for it is a site unique in the world and no visitor to the region can be said to know it without a visit there. It is no museum but a vitally growing place and with its ancient treasures is not an easy one to develop. Nevertheless its recent buildings are cunningly sited and well designed and built, especially those for the university. A written description of the town and university would be quite inadequate – the place repays revisiting time after time.

Durham old and new: a glimpse through the new Milburngate Bridge over the River Wear (Design: County Engineer and Surveyor, W. H. B. Cotton; County Architect, G. W. Gelson).

Photograph: Turners (Photography) Limited



Photograph: Douglas Pike

Houses of Parliament

Kuala Lumpur, Malaysia

Architect: W. Ivor Shipley, MBE, KMN, ARIBA (now a senior partner of Fry, Drew and Partners)

Sun control in these houses of parliament is maintained by sheathing the whole structure in a sculptural cladding of locally-moulded precast concrete units. Each section is 11 ft. high and 3 ft. 4 in. wide and was installed by tower crane. The units are of solid white terrazzo ground smooth but not highly polished. A chemical hardener was used on the surface to ensure that they would be self-cleansing. The units are non-loadbearing and separated from each other horizontally and vertically. The top half of each unit is infilled with a panel of heat-absorbing and light-diffusing glass. The pitched roof over the Lower House of Representatives is of in situ reinforced concrete folded-plate construction, finished with a silver-coloured glass mosaic.

Welsh houses

at Dinas Powis, Glamorganshire

Architects:	T. G. Jones and J. R. Evans A/ARIBA
Contractors:	Wenvoe Construction Limited
Concrete blocks:	Lignacite Limited

A delightful development of six private houses known as Little Orchard has been built in the Welsh village of Dinas Powis on the outskirts of Cardiff. It received the 1968 Good Design Award for Wales from the Ministry of Housing and Local Government.

The houses are on two levels, taking advantage of the sloping site. The lower level contains a double garage and storage space, and the upper level contains the living accommodation. Two of the houses have a simple rectangular plan with a projecting porch. The other four, due to their position higher up the site, differ in plan shape and have reinforced concrete balconies to make the most of the views across to the wooded hillside opposite. Accommodation generally comprises 4 bedrooms, 2 bathrooms, kitchen and separate dining and living areas.

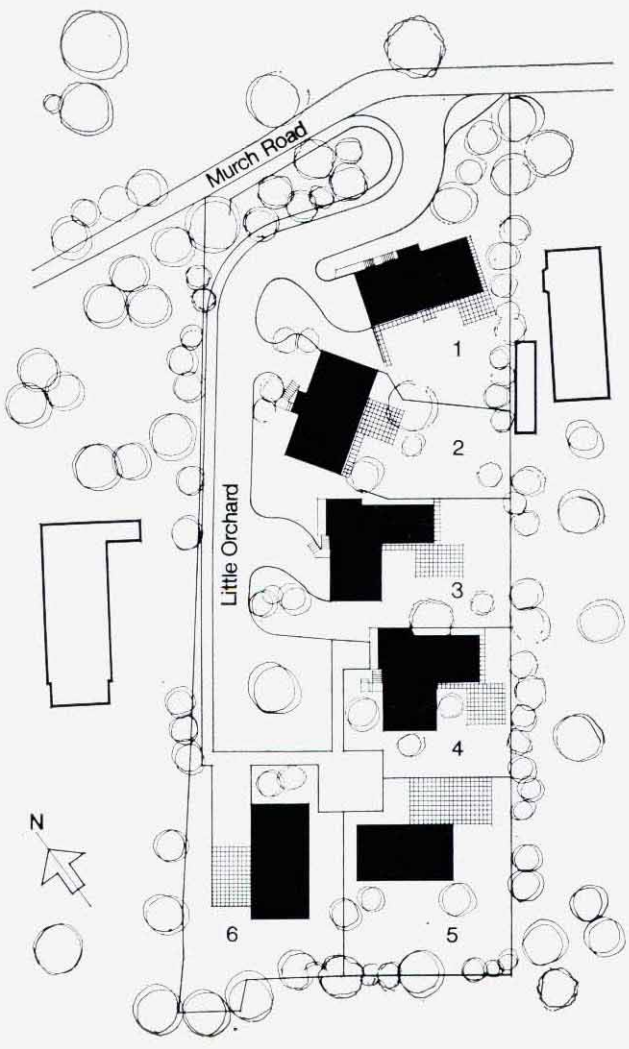
Construction, apart from the roof, is almost entirely concrete. The lower garage walls are of 5 in. reinforced concrete with a smooth fair-face finish painted white. The garage floor and main ground floor are also of reinforced concrete. As a contrast to the smooth concrete, the upper concrete walls have an outer 5 in. leaf with a rough striated finish. Internally these concrete walls are lined with 1 in. of foamed plastic insulation and 4 in. hollow concrete blocks. The same blocks are used for the loadbearing partition walls. The blockwork is painted white except for a few areas of cedar boarding and hessian wall covering, and tiling and mosaic in kitchens and bathrooms.

The striated concrete finish used in the upper external walls gives a suitably rugged character to the houses. A reddish stone was selected from a local quarry for these walls, giving them a slightly brown colour which contrasts with the white painted concrete elsewhere. The 5 in. thick striated walls have ribs projecting $1\frac{1}{2}$ in. These were hammered about a month after the forms were struck. Plywood formwork was used in 4 ft. by 10 ft. panels to which tapered battens were applied. The 4 ft. module of the panels played an important part in the initial planning of the houses.

Typical floor plan, with garage under.

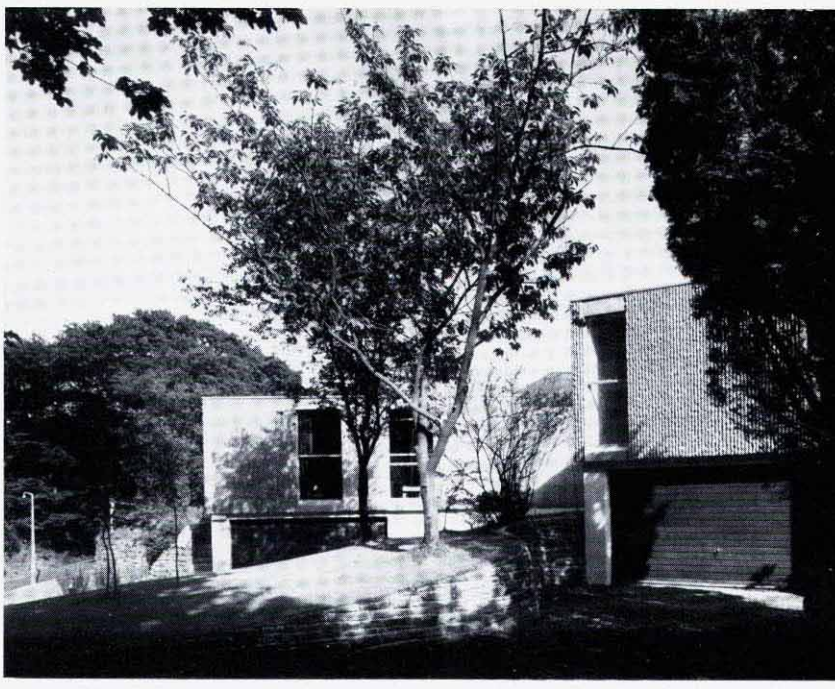
The houses have a striated concrete finish externally.

Photographs by H. Tempest (Cardiff) Limited



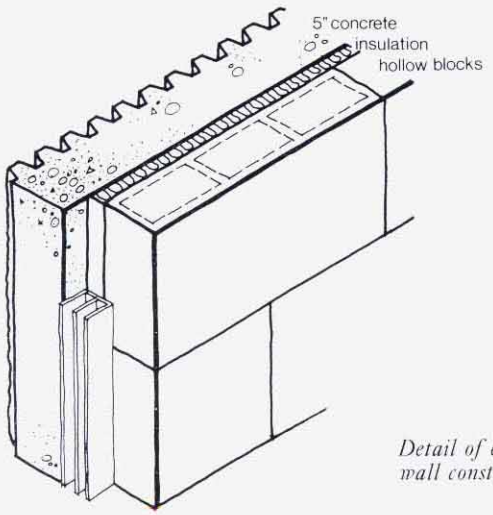
Site plan.

Garage approach.



The glazed porches in two of the houses make use of vertically ribbed glass which echoes the striated treatment of the concrete, and this is repeated in entrance doors which have specially designed random ribs of hardwood.

The houses have a high standard of thermal insulation, and apart from that already described in the walls, the concrete floors have a 2 in. thick quilt on top of which 3 in. thick floor screeds are laid containing heating elements. Three of the houses are heated by gas, with an embedded panel system of hot water running through steel tubes in the floor screeds; the other three houses are heated by electric under-floor heating. Floors are carpeted throughout, except for kitchens and bathrooms. The timber roof has a wood-wool decking and a layer of fibreglass insulation, in addition to cedar-boarded ceilings. Roof lights have a double skin of acrylic plastic. All windows are of aluminium with the exception of the large double-glazed windows in the living areas which have timber frames.



Detail of external wall construction.

The site is well wooded and originally contained a single house. By careful siting of the houses, as many trees as possible were retained and these have now been supplemented by new planting. A natural effect has been aimed at in the landscaping, with grass areas smoothly banked. Allied with the striated and white-painted concrete finishes, natural stone has been used for retaining walls, and there are some areas of granite setts.

View showing entrance steps, striated concrete finish to the walls, and the attractive landscaping.

Black forest houses

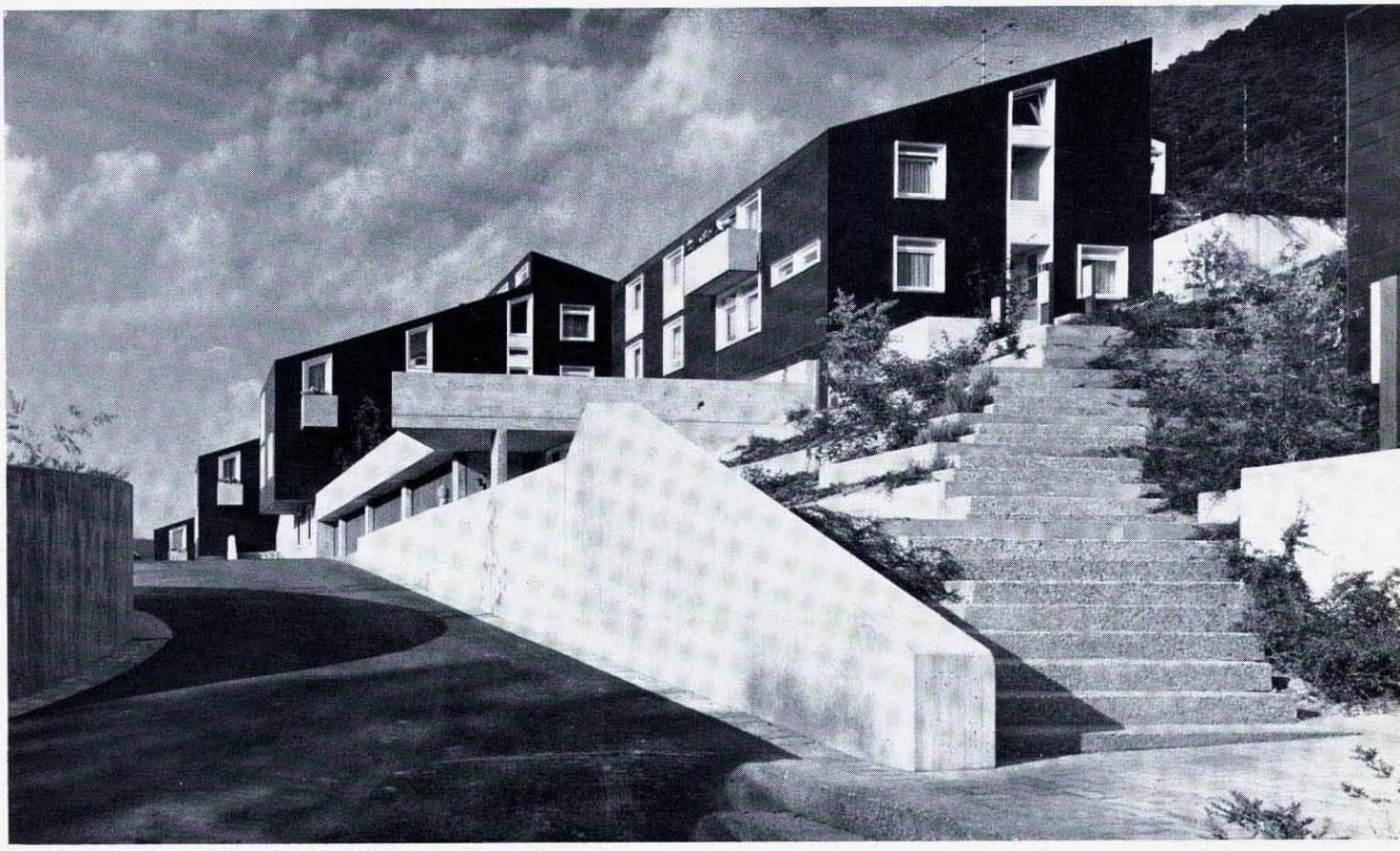
at Hohenacker, Wildblad, West Germany

Photographs by Richard Einzig

Architects: Hans Kammerer and Walter Belz
Landscape architect: Hans Luz

Over the last few years, the West German state-owned spa of Wildblad has been greatly extended. So it has become necessary to provide living accommodation for the personnel of the newly-built hospitals, thermal baths and hotels. Wildblad is in the Black Forest and in a narrow steep-sided valley. No building sites were available in the village itself for this new accommodation, so it had to be built on the steep slopes. And on them, the architects have ingeniously planned a delightful series of houses containing 96 single rooms, 17 double rooms, 4 apartments, 2 doctors' houses and a caretaker's flat. The basic planning idea was to create units which were as private as possible, avoiding heavy square buildings which could have been built on flat ground. The solution has been a group of 13 staggered houses connected with each other, but each separate entities and grouped around inner courtyards. The individual houses function independently and each have 8-10 rooms as well as a kitchen, bath, shower, w.c. and a small communal room. The inner courtyards adjoin each other but are staggered vertically half a floor. The Black Forest has a fairly rigorous climate, and so the houses are well insulated and built of concrete blocks. Externally, these are clad with asbestos-cement tiles which are graphite grey in colour – a material which blends well with the grassy slopes and forests behind. Internally, the houses are conventionally plastered.

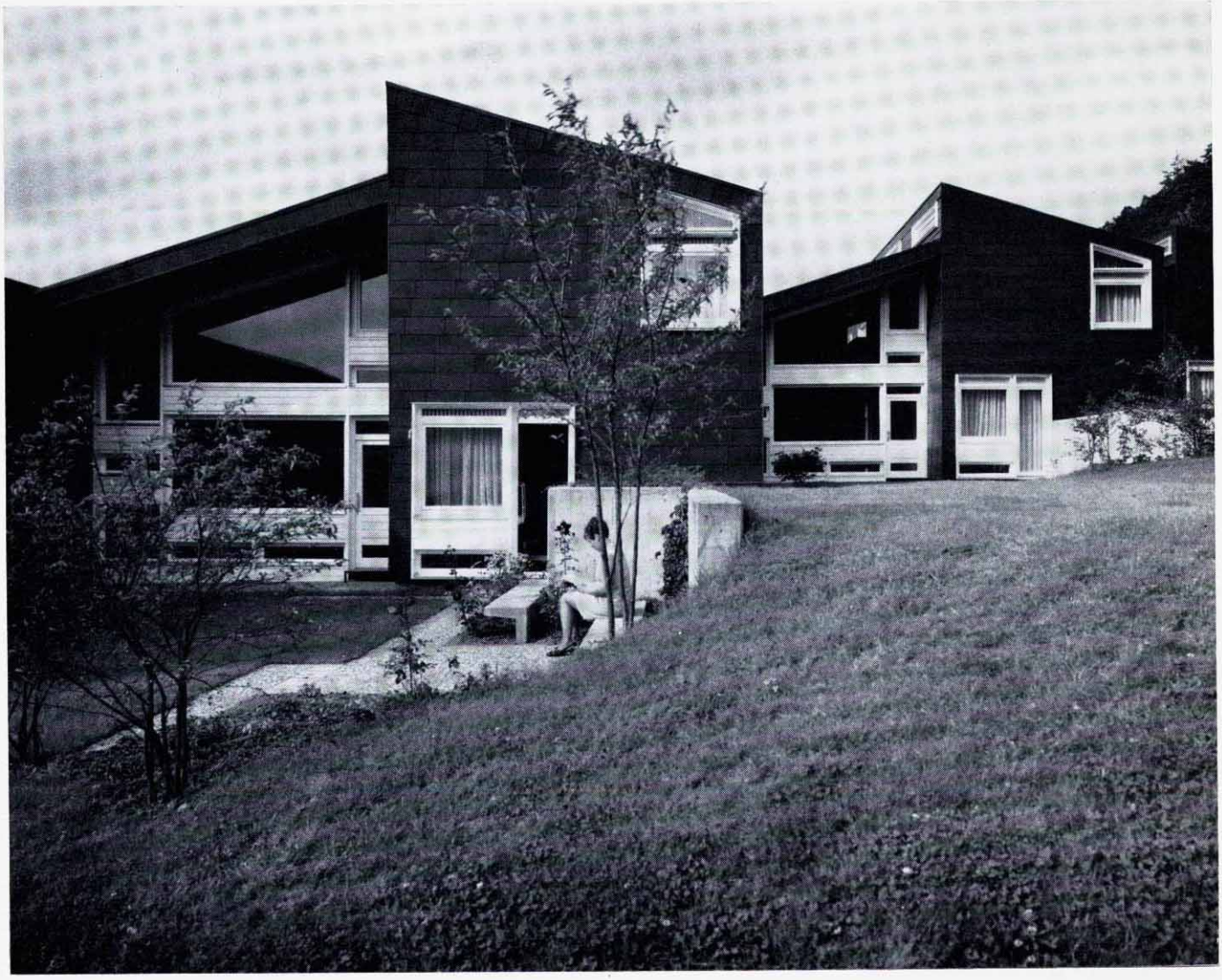
The houses are of concrete blocks clad with graphite grey asbestos-cement tiles.

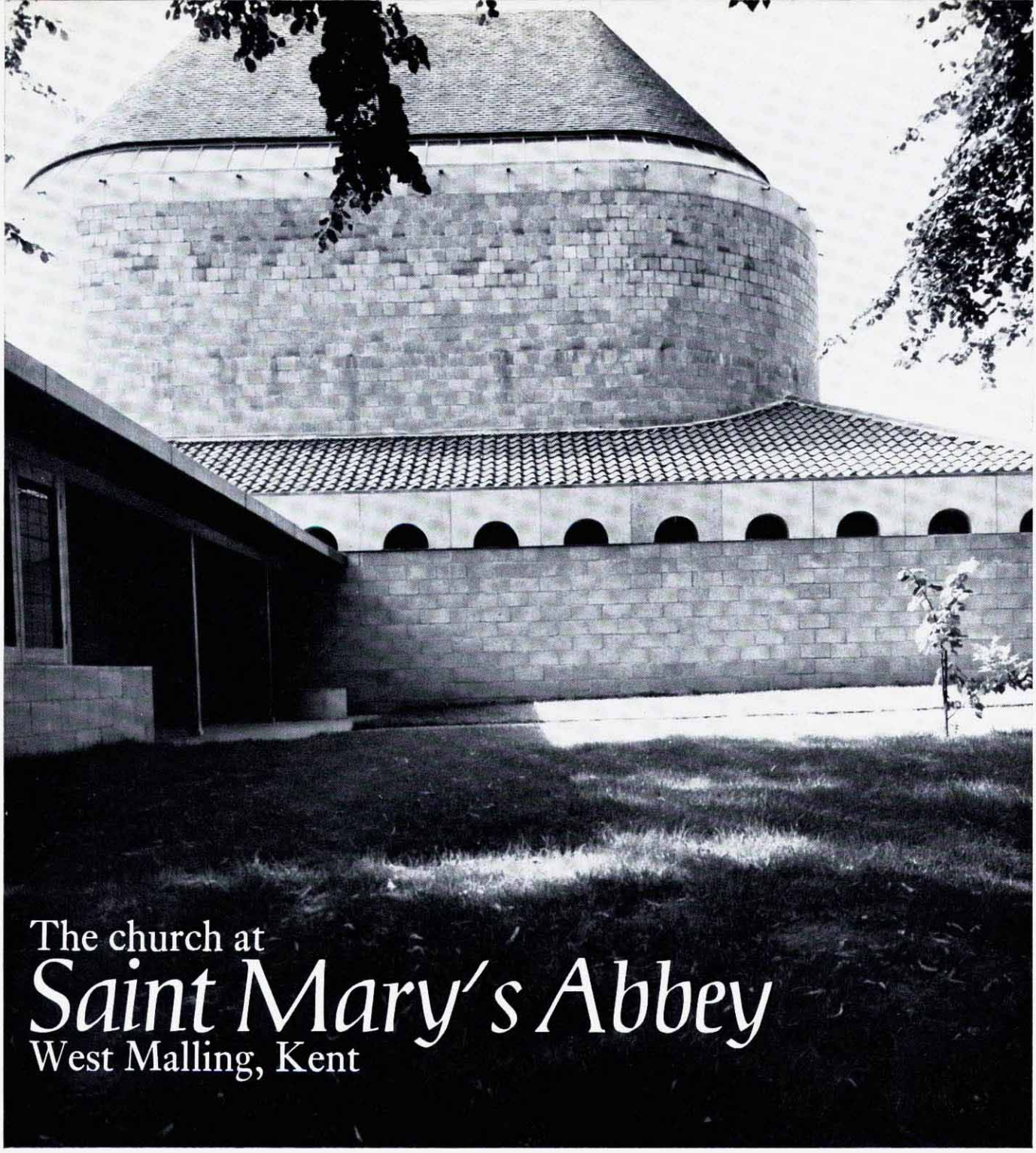


Site plan.

BLACK FOREST HOUSES: *continued*

The concrete block houses at Wildblad are built into steeply sloping ground (see also frontispiece).

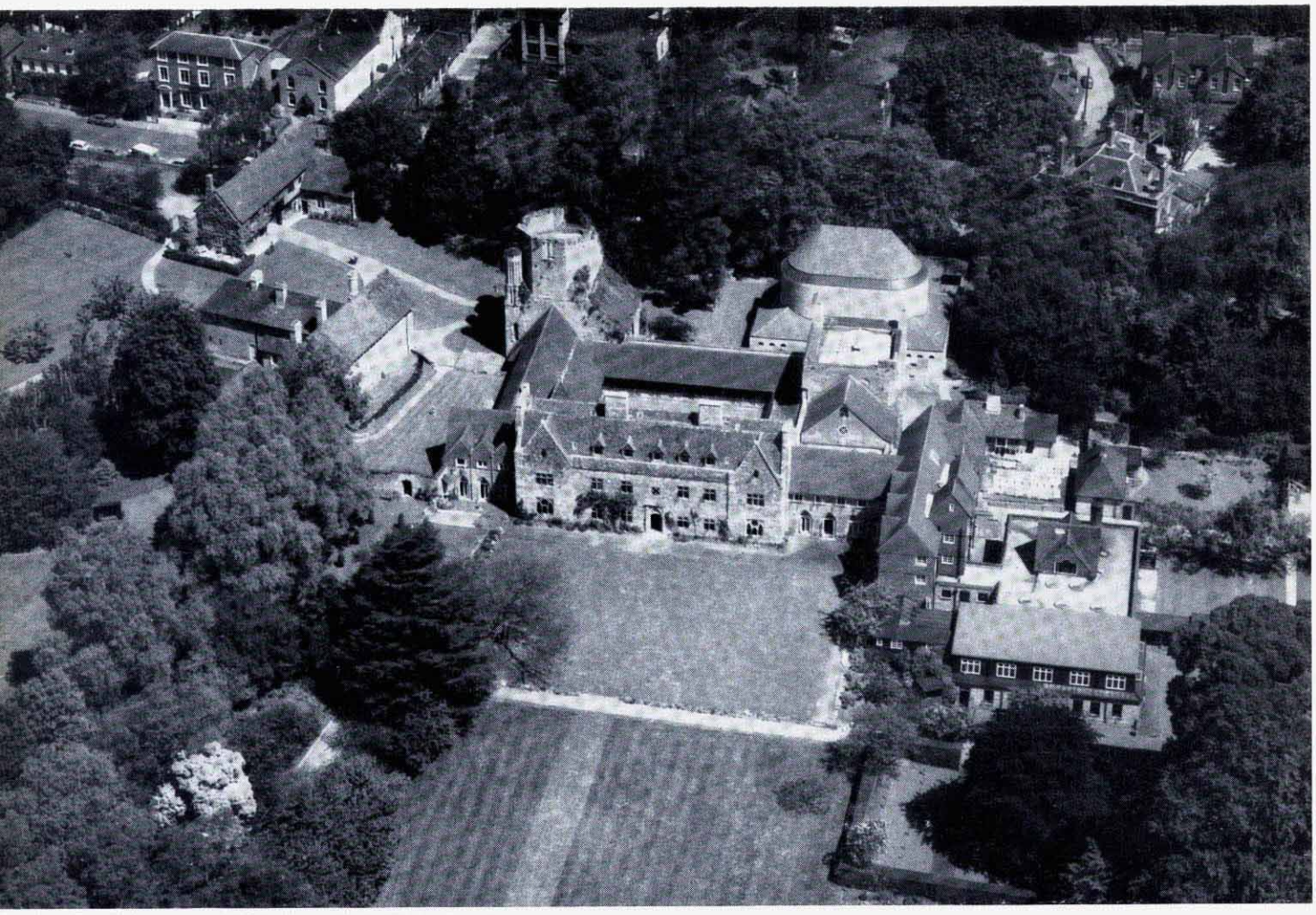




The church at *Saint Mary's Abbey*
West Malling, Kent

Architects:	Robert Maguire and Keith Murray
Structural engineer:	Richard Birch
Contractors:	James French & Son
Concrete blocks:	Atlas Stone Company Limited

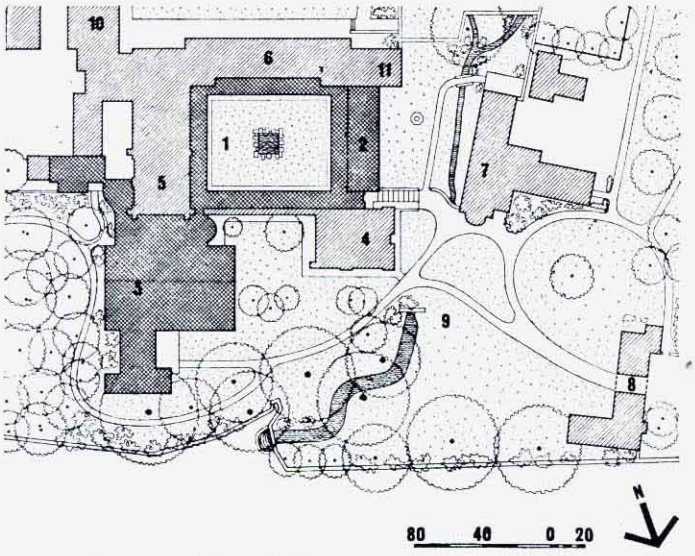
The challenge of designing a modern building in a historic setting is met in different ways by architects today. One theory is that few compromises should be made, and that a building truly expressive of this age is bound to fit well with buildings of other ages, like Regency and good modern chairs in a room. Or so it is supposed. Another school sees no reason why modern materials and structural methods should not blend closely in scale, 'grain' and texture with the old. This course seems, in many contexts, the more realistic and sympathetic. Certainly it is one which more and more architects incline towards, probably none giving a more convincing lead than Robert Maguire and Keith Murray, who are also among the very few architects in this country to design churches around modern liturgical principles. Following the success of their St. Paul's Church, Bow Common, and St. Matthew's, Penny Beeches, Birmingham (apart from a number of other churches now being built), their work at Saint Mary's Abbey, West Malling, constitutes the most skilful use of modern materials and structural techniques among a group of buildings which date back



Aerial view showing the layout of the abbey buildings.

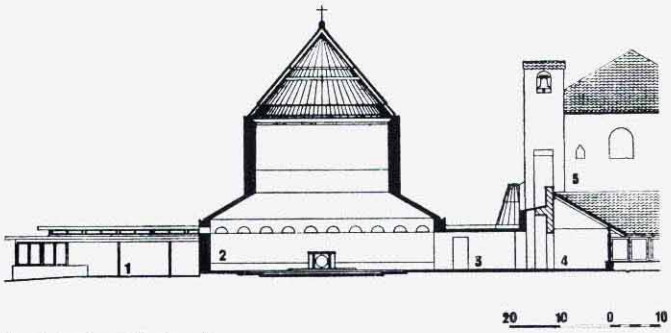
WEST MALLING ABBEY: *continued*

Drawings by courtesy of The Architectural Review



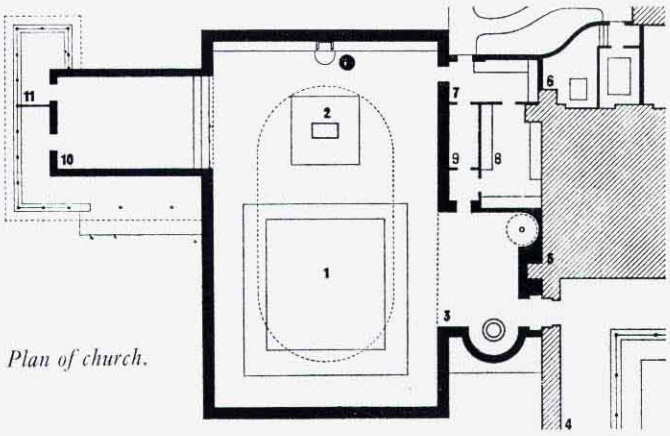
Site plan with new buildings cross-hatched.

1 New cloister
2 New west range
3 New church
4 Mediaeval tower
5 Mediaeval transept
6 18th century house
7 Mediaeval guest house
8 Mediaeval gate house
9 Re-landscaped garden
10 1935 residential block
11 Reconstructed infirmary



Section through church.

1 Guest chapel
2 Church
3 Chapel
4 Cloister
5 Mediaeval transept



Plan of church.

1 Nun's choir
2 Altar
3 Chapel
4 New cloister
5 Mediaeval transept
6 Boiler
7 Vestry
8 Sacristy
9 Confessional
10 Guest chapel
11 Interview room

View of the new church from the west, with the mediaeval tower on the right. Walls are of concrete blocks.

to the 11th century. And this without any apparent discordant note.

To visit this peaceful place, by way of the 15th century gatehouse and garden with its rippling stream, its massive Norman tower – still intact and part of the original abbey, its 14th century guest wing, and its marvellously preserved 13th century cloister arcade, is in itself a tonic. The 'enclosed' order of Benedictine nuns who live there are, for the most part, not apparent to the casual visitor. But the serene ladies who conduct visitors around are proud of the new buildings, even though recollection of the severe floods last summer – which by ill luck gave trouble in parts – causes them to spread their hands expressively.

The architects have added three main buildings to the existing group. First, they have enclosed the original cloister garth with a new west wing built of ragstone. Second, they have made a fine new cloister, intimate and domestic almost, around a grassed court with a gently welling fountain; this is a timber lean-to structure which protects the 13th century cloister wall from weather. And third, they have built a new abbey church.

Interior of the church, looking towards the altar with the stoup in the foreground.

The church is a cool spacious rectangular building, its white interior walls uncluttered, lit mainly from an apse-ended lantern roof above. The nuns' choir is central and defined by two steps down from the surrounding ambulatory. The structural materials are concrete blocks, exposed in situ reinforced concrete and timber – materials sympathetic to the ancient stones of the old abbey buildings. To have built the new church of stone would have been prohibitively expensive. The choice of concrete blocks for the main walls has proved not only economical, but exactly right in scale, texture and colour for this context. The blocks are built in cavity wall construction, with an outer leaf in the lower part of 18 in. by 9 in. by 9 in. blocks, lightly textured, mid-grey in colour and laid with slightly recessed joints. The cavity is 9 in. and the inner leaf is of similar-sized lightweight blocks painted white. The blocks form a continuous windowless wall at ground level which supports a tension band of U-shaped precast concrete units, forming a trough the width of the wall. High-tensile reinforcement was laid in the trough and covered with concrete. These units incorporate semi-circular windows for ventilation made of frameless plate glass with central bronze pivots at top and bottom.

From the top of this wall, an inclined reinforced concrete slab, 6 in. thick, externally covered in pantiles and internally exposed, forms the ambulatory roof, turned up 5 ft. 3 in. at the top to form a compression ring beam. On top of this, a further wall of concrete blocks 9 in. by 9 in. by 9 in. (a size of block which the architects find suitable in scale for many purposes) forms a base for the apse-ended lantern roof. This springs from a top ring beam again of precast concrete trough units. The roof, which has a 3 ft. strip of glazing at the base, is of timber with the exposed ribs stained blue and green internally, and covered externally with tiles.

The guest chapel wing, vestries and other adjoining rooms have a similar block wall treatment to the main chapel. The floor is paved with reddish-brown bricks.

Externally, a special point of interest about the concrete blocks is their slight variation in colour which gives a liveliness very much in keeping with the old stones elsewhere, and proving that absolute uniformity of colour may not always be desirable in concrete facing blocks. But without doubt, this delightful chapel represents a highly accomplished and sensitive use of the material.

The church seen from the stream which winds through the abbey grounds.

Tripoli sports city – main basketball court.

LIBYAN SPORTS CITIES

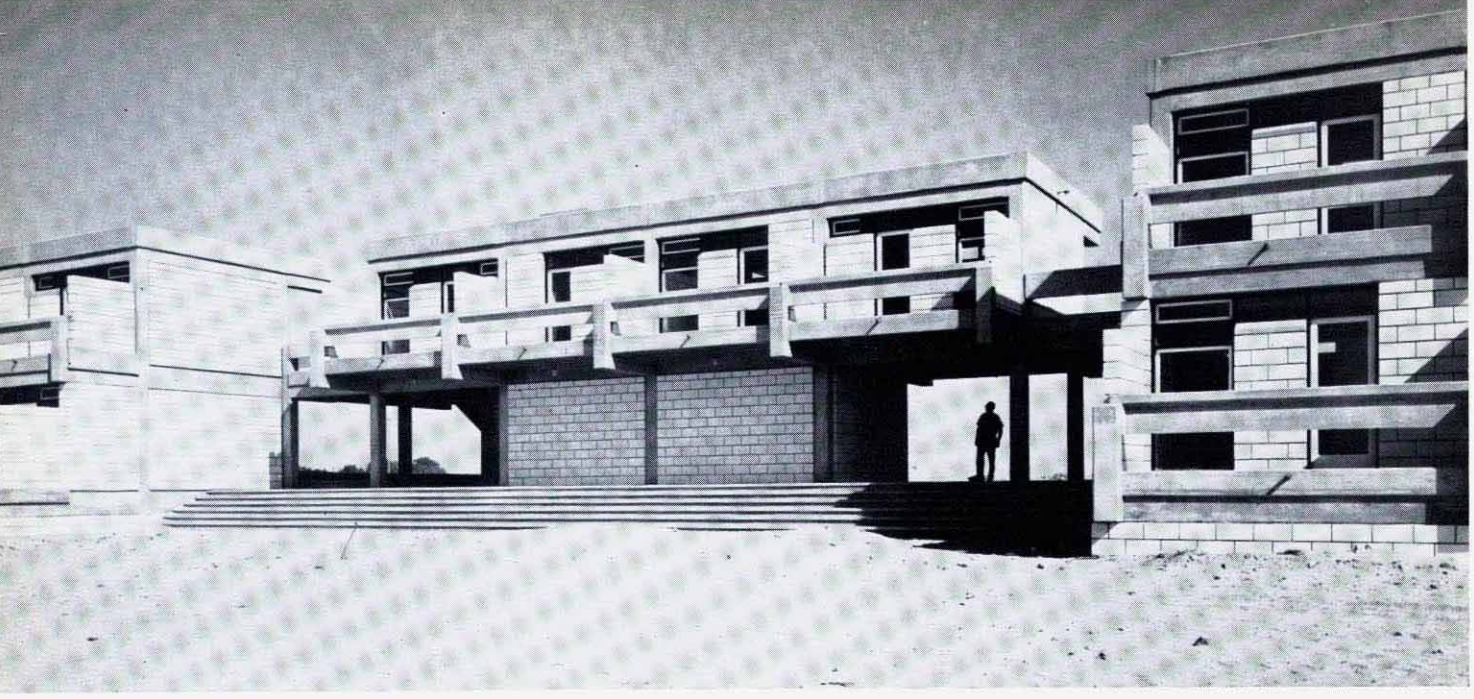
These Libyan sports cities were the only examples of the work of British consultants overseas, displayed at the International Exhibition held in Mexico City during the Olympic Games last year. As part of our export drive, with many British products and materials specified, they are, of course, of special interest at this time, apart from the contribution which they make to sport in this developing country.

Two years ago the Pan Arab Olympic Committee decided that the venue for the 1970 Pan-Arab Games would be Libya. Before that, however, twin sports cities at Tripoli and Benghazi had already been planned and first-stage contracts commenced. Additional facilities were therefore added for the 1970 Games.

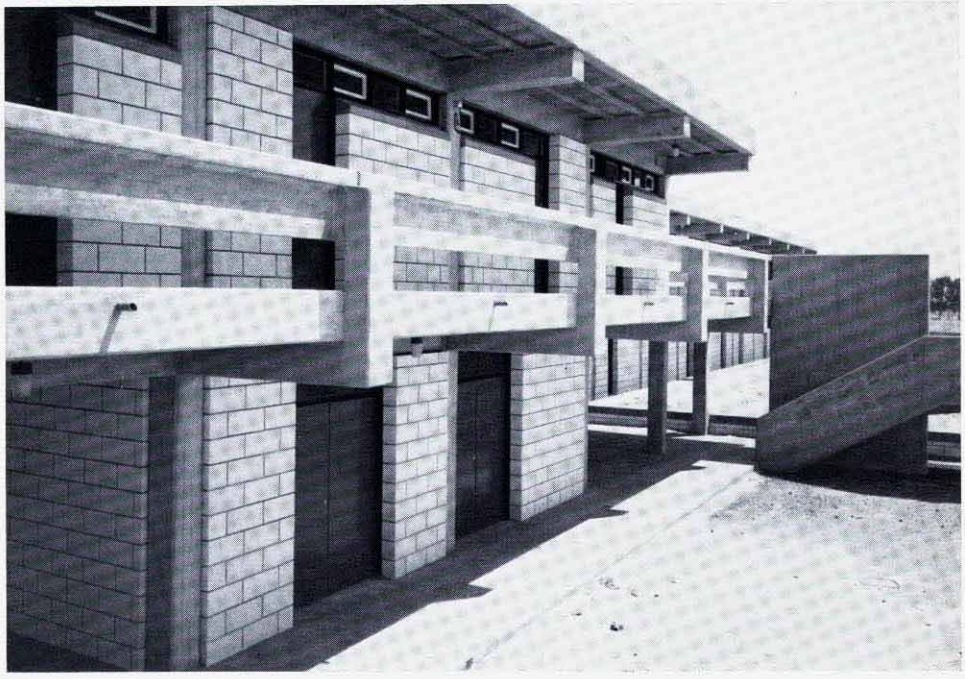
Illustrated here are the vast stadium and the students' hostel at Tripoli. The structures generally for all the sports buildings are of in situ reinforced concrete frames with precast beams and cladding. Considerable use has been made of precasting, using fibreglass moulds, and including such repetitive elements as seating and balustrade units. The precast hollow blocks for the walls of the students' hostel and buildings generally are of concrete manufactured on the site. Whilst the concrete was still 'green', the exposed faces were sprayed with an off-white Tyrolean finish. Laying and jointing were carried out using normal cement mortar.

These buildings – particularly the students' hostel – show an expert use of precasting from the architectural point of view, with some suitably robust detailing.

Architects, planners, and consulting engineers: Munce & Kennedy.
Overseas Group: James Munce Partnership.



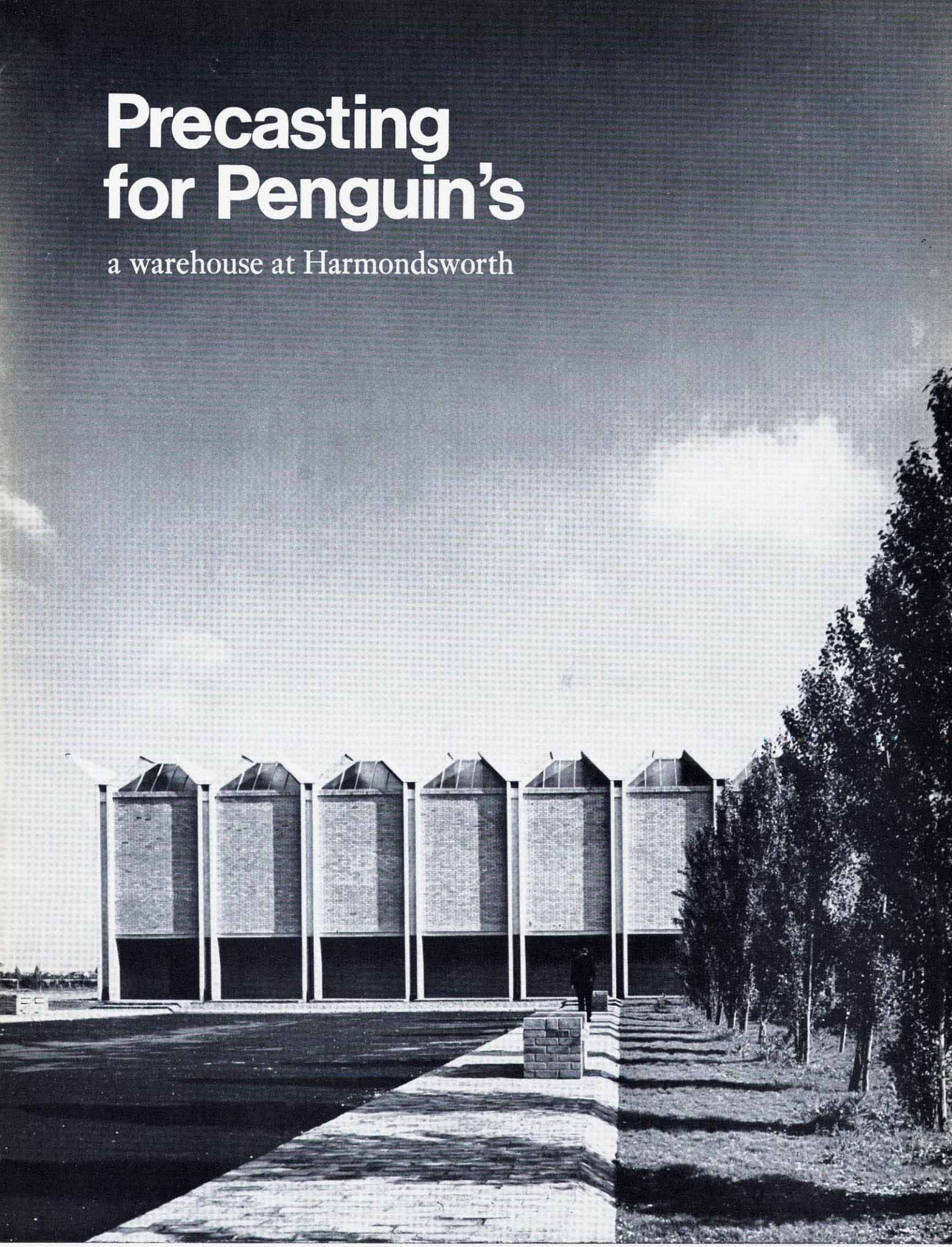
Above and right: Tripoli sports city – concrete block hostel for students.



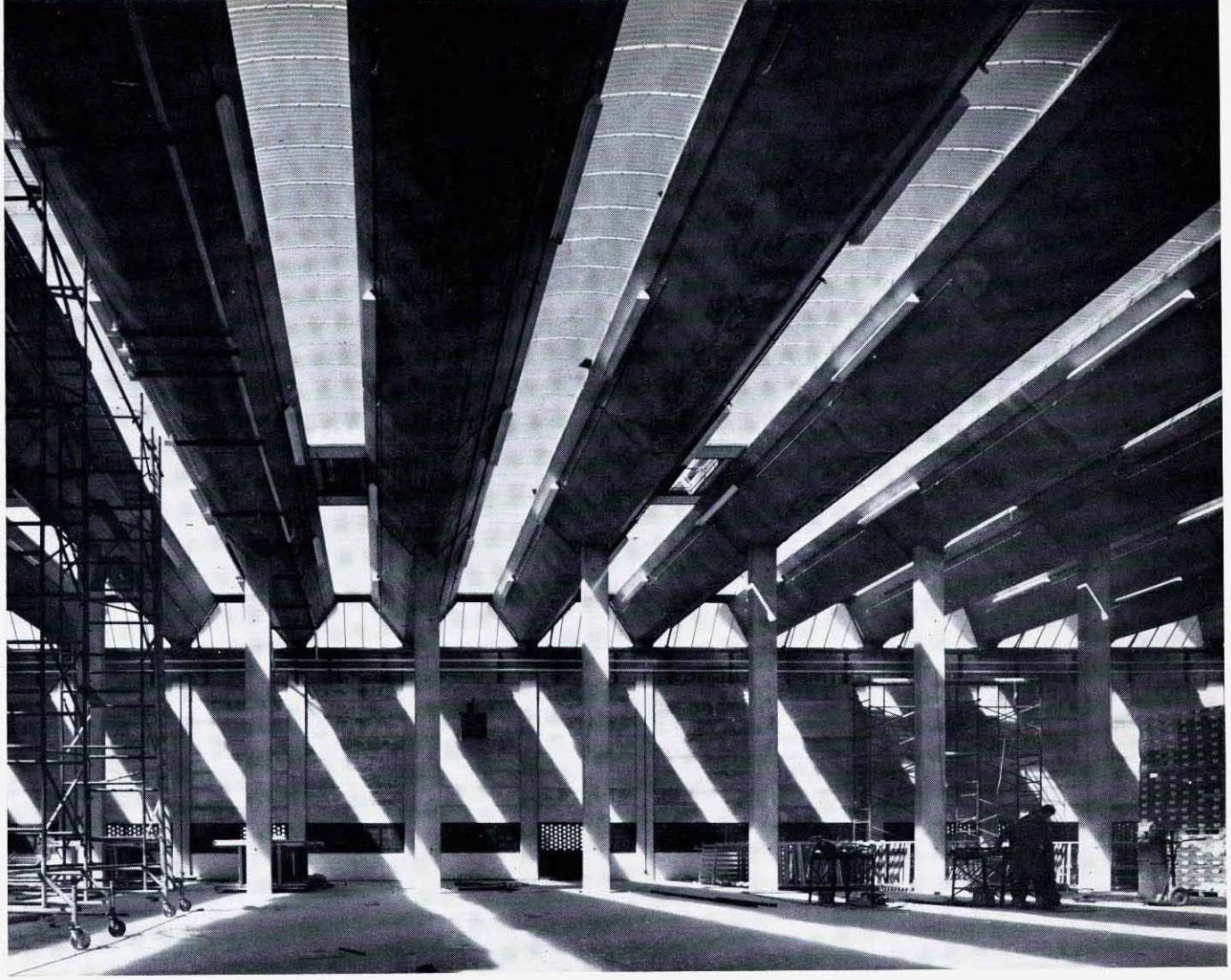
Tripoli sports city – stadium interior.

Precasting for Penguin's

a warehouse at Harmondsworth



Photographs by Colin Westwood



Warehouse interior showing the V-shaped trough units which, with the rooflights between, are continuous for the whole 300 ft. length of the building.

PRECASTING FOR PENGUINS: *continued*

Architects and engineers:	Arup Associates
General contractor:	Rush and Tompkins Limited
Precast concrete:	St. Albans Concrete Limited

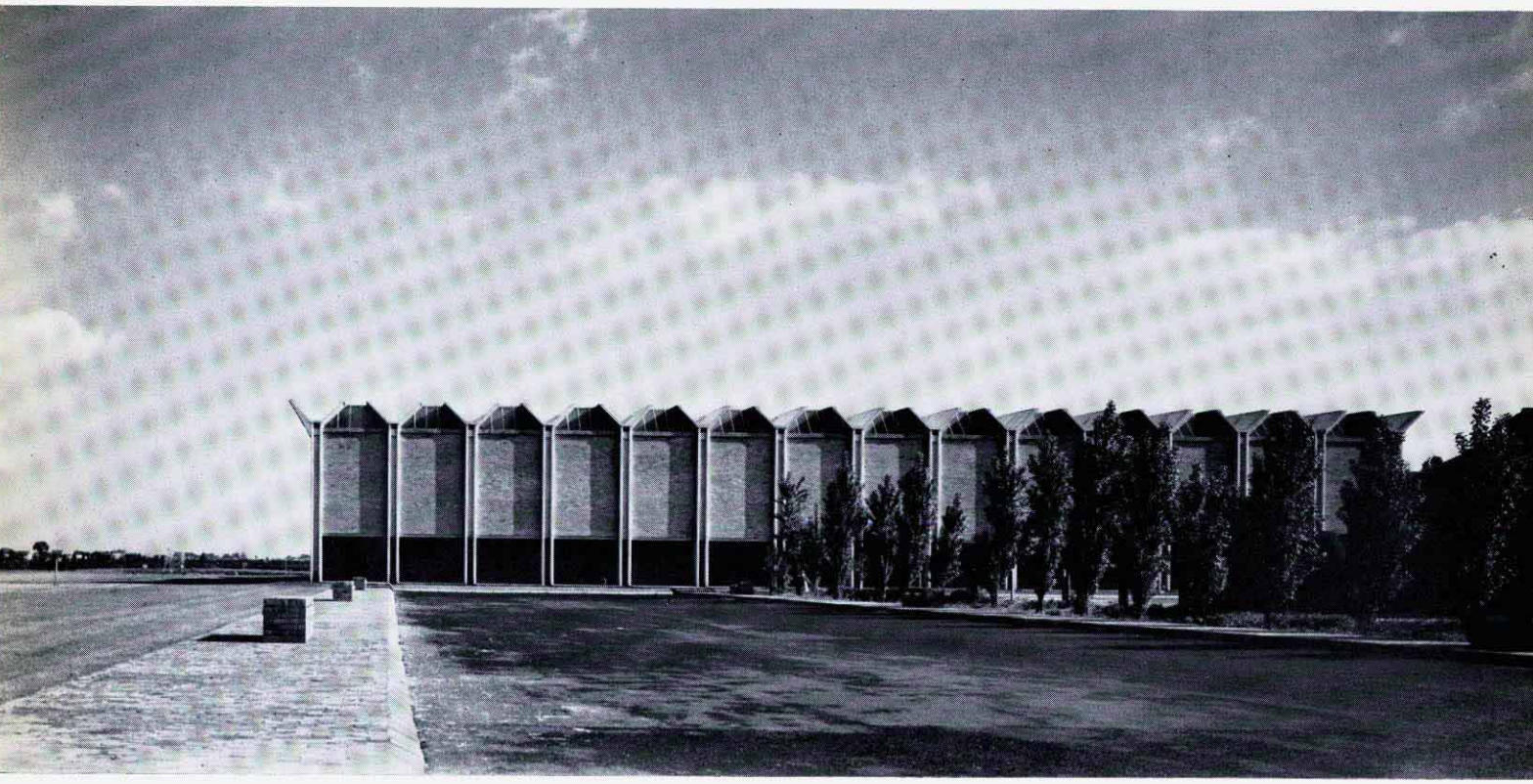
Perhaps it is not surprising that Penguin Books Limited, who have revolutionized publishing and influenced many branches of the arts and sciences, should now have produced one of the best pieces of industrial architecture of this decade. Their new warehouse at Harmondsworth, London, is a classic example of what happens when a client is sufficiently enlightened to care how an industrial building looks as well as how it works. In spite of the rather prosaic function of the building, the clients were determined that it should be an architectural asset and properly landscaped.

Penguin's headquarters and distribution centre at Harmondsworth is on the north side of the A4 London to Bath road, west of the main entrance to Heathrow Airport. The older buildings together have resulted in rather a hotch-potch of planning, and Penguin's are proposing to remedy this with a modernization scheme which includes this new warehouse.

The rectangular 301 ft. by 189 ft. building will hold about 37 million books. The critical factors in design were the height to which books could be stored and the amount of space given to circulation. After extensive research, a special fork lift truck was produced for Penguin's, requiring a comparatively narrow aisle width of 5 ft. 6 in. for operating. The standard size of storage pallets between is 4 ft. square, resulting in a dimension of 13 ft. 6 in. between aisle centres. This figure dictated the structural module in one direction. In the other direction, the longest possible dimension consistent with economy was used. The height of the building was determined by the fork lift truck which can stack pallets five high. The three lower levels are used for hand selection, and the two highest levels for bulk storage. Penguin's asked for good natural lighting and this is provided over each aisle by rooflights.

The precast concrete structure is clearly and effectively expressed both inside and out, and comprises columns at 13 ft. 6 in. centres supporting V-shaped trough units which combine the functions of roof, beam and gutter. The beams span a maximum of 77 ft. and extend the full 300 ft. length of the building. No expansion joints are incorporated in the beams, but up to $\frac{3}{4}$ in. expansion has been allowed at each end in the design of rooflights and connections with end walls.

The gap between the beams is 4 ft. wide and is



South facade of the warehouse.

covered with corrugated wire-reinforced translucent p.v.c. sheets which have been bowed into shape, for extra rigidity and strength. The rooflights are continuous for the full length of the building. Each column and beam system is independent laterally except at the end walls. The roof glazing is interrupted only by ventilators which have fusible links and act as smoke extracts in case of fire.

Internal columns are 12 in. by 24 in. and the end columns, which contain cast-in p.v.c. rainwater pipes are 24 in. square. The columns were erected by the post-hole method for accuracy of positioning. The first sections of the beams were bolted to the columns, and the intermediate sections simply supported between, making a continuous trough.

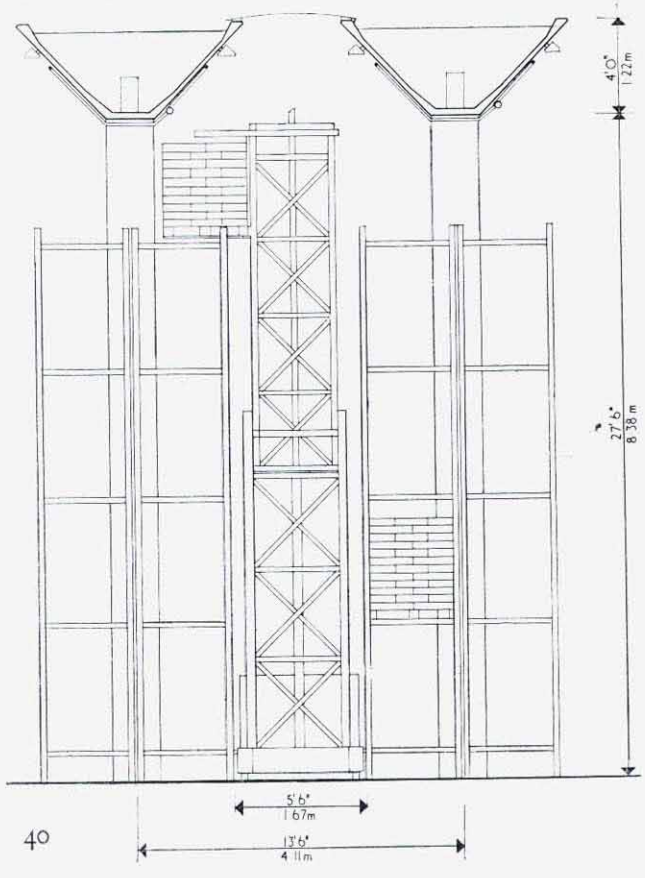
External walls are made up of precast reinforced concrete panels 2 ft. high and 4 in. thick spanning between the columns and forming the inner skin of a cavity wall. The outer leaf, joined by galvanized wall ties, is of red semi-engineering bricks.

The south end wall of the warehouse has been recessed in the lower part to provide, externally, a covered way from the new car park to the old buildings and, internally, a gallery to house the complete collection of Penguin books.

The precast concrete roof trough units are insulated and covered with three layers of bituminous felt. They act as gutters, but without falls. The top layer of felt is reinforced to withstand foot traffic for maintenance. Solar reflection is provided by white 'Mineralite' applied to the felt on the sides of the troughs.

Warehouse plan.

Drawings by courtesy of The Architects' Journal



Above: Detail of south facade, showing the clear articulation of precast concrete elements, brick infilling and rooflights.

Left: Detail showing the basic dimensions for book-stacking – a deciding factor in the structural form of the building.

PRECASTING FOR PENGUINS: *continued*

All services – electric conduits, fluorescent lighting, sprinkler system and pipes for the blown-air heating system – are supported on the undersides of the trough units.

The reinforced concrete floor slabs have an integral granolithic topping. Expansion joints are incorporated in the slabs.

The clients are reported to be lavish in their praise of the new warehouse, considering it 'one of the finest and most efficient buildings of its kind in the world'. 'And' they add 'it does not leak'.

The warehouse is staffed by only four men, each working an 8-hour day, and between them they handle more than 60 million books a year – far more than in any comparable building. Penguin's have now had so many foreign visitors over the building, including three parties from Japan, that they are now producing a special handbook in several languages to explain how it all works.

CASTING AROUND

a quarterly column of notes and comments

That other A.A. – the Automobile Association – is to be congratulated on its inspired tree scheme, launched by the A.A.'s magazine 'Drive'. In case anyone missed this bit of news, members of the Association are invited to subscribe £1 for a tree to be planted personally, or on their behalf, in an area of their own choice. The idea is to restore to Britain's countryside and towns thousands of trees which are lost every year through agricultural changes and urban developments. The Minister of Housing, Mr Greenwood, has praised the scheme enthusiastically and, early this year, sent £1 for his tree. For those who feel – as many of us do – that trees are a vital and often undervalued part of our environment, particularly in towns, the scheme is immensely cheering. Besides, most modern buildings – visually speaking – need trees. And we forget what a transformation is going to take place when young trees grow up in newly-built urban areas and alongside motorways. The trees will be planted on Plant a Tree Day which is 1 November 1969.

* * *

There is a very curious game on at the moment. It can be played in many different ways and is called 'Finding out what people want'. It is particularly curious when applied, as it sometimes is, to housing. For instance, elaborate probes have been organized to find out if 'people' would prefer to live this way, or that way. And the findings have found that 'people' like such and such, which is often not very surprising. But surely there is a more direct and simple way of finding out what 'people' want. It doesn't involve exhaustive questionnaires or probes. In fact it can be done without moving out of your chair. You simply ask yourself whether, given certain circumstances, *you* would prefer to live like this , or whether *you* would prefer to live like that. The answer is usually quite clear, providing you don't cheat. But of course you have to be quite sure you are a person. And this is the difficult bit.

The architect Robert Maguire's sensible suggestion that the new Euston needed an architectural joke, such as a classical propylaeum, to offset the formality of the rest, leads one to wonder whether humour has a place in modern architecture, and if so, what sort of buildings would benefit from it. Well certainly all railway termini for a start, and if we could be persuaded to smile in the cavernous gloom of Victoria or Waterloo, then we might well be starting the day right. Other types of buildings which suffer from a certain austere formality are airports, town halls, office blocks and – probably – computer buildings. Now why shouldn't some of these have a touch of humour? After all, what goes on inside is sometimes quite comic.

* * *

Short story: A visitor is touring the north-east of England for the first time. One day, he is driven by a local resident to Eldon Square in Newcastle. He gets out of the car to find the sun shining on an early Victorian square of elegant stone houses. In the middle of the square, a band is playing and people are sitting around on the grass enjoying the sun and the music. It is one of the most delightful scenes the visitor has come upon in his entire tour of the north-east. Certainly he has seen nothing like it in Newcastle. 'Marvellous' he exclaims 'one of the best things yet'. 'Yes,' replies the resident 'of course it's all going to be knocked down soon'. End of story. Or is it?

* * *

The Novosti Information Service from Moscow, which furnishes us weekly with news of the latest Russian achievements, has come up with a rather entertaining bulletin entitled 'Underwater seafood bar planned for Sochi'. The idea is that this Black Sea resort should have a 15–20 metre deep aquarium with a bar in it, connected with a restaurant by a passageway (to be 'finished in ship style'). The aquarium would sport rare species of fish not found in coastal waters. An alternative design envisages a submersible bar in the shape of an elliptical bathyscaphe connected with the shore by a gallery. In fine weather, the bathyscaphe would be submerged and in stormy weather it would be raised with the help of the gallery, which would act as a lever. Now what about one of those off Brighton pier?

* * *

An interesting comment by the great French architect Auguste Perret, and still of some relevance today, was reported in a recent article on his work. In 1934, the French periodical *Beaux Arts* organized a questionnaire entitled 'For or against ornament'. Perret replied to it as follows: 'Contemporary facades are too naked . . . let us give back to our buildings the organs necessary for *their defence against the weather:* cornices, string-courses, architraves and mouldings which allow a facade to remain what the artist intended it to be, in spite of the rain'. Admittedly this was 1934 (although the modern architectural movement was in full swing), and perhaps all this sounds shockingly retrograde to some. But when you think how many pure and uncluttered elevations have become sadly streaked and stained over the years – ruined in fact – does not Monsieur Perret's statement bear thinking about? Obviously we don't need the ponderous old classical details: just some of the principles behind them (see editorial page 1).

* * *

Following the success of their first public meeting on London's future, the GLC have pressed on with a series of smaller public meetings at nine centres in the inner and outer boroughs. All of them have been well attended, proving that Londoners care passionately about the future of their city – as well they might, with several thousand of them threatened with motorways through their sitting-rooms. At the last meeting of the series, at Battersea Town Hall, there was some attempt to get people off the subject of motorways. But of course everyone wanted to talk about them, because obviously the problem of cars versus houses is one that affects many people more profoundly than any other issue. There were some nice comments from the audience, memorable among them a remark from a lady who asked if there could not be 'a pill for planners'. Mr Bernard Collins, Director of Planning at the GLC, said that 'public transport must be made preferable to the private car' – a prime essential, of course, if the flow of traffic through London is to be checked rather than increased. Other notable remarks included a request for more shops to be built *with* the housing, so that people don't have to trek from one to the other. One man made a special point about the value of the 'shop-on-the-corner' – an important and fast-disappearing social amenity which really should be revived. And – surprise, surprise – a lot of people said that they would rather live in a house than a tower block. Meanwhile, all encouragement to the GLC and may they continue to allow the voice of Londoners to be heard.

* * *

From a poem of love by Manuel Duran: '. . . and the miracle will happen. Your mouth will have the taste of wet earth, of cement . . . '

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