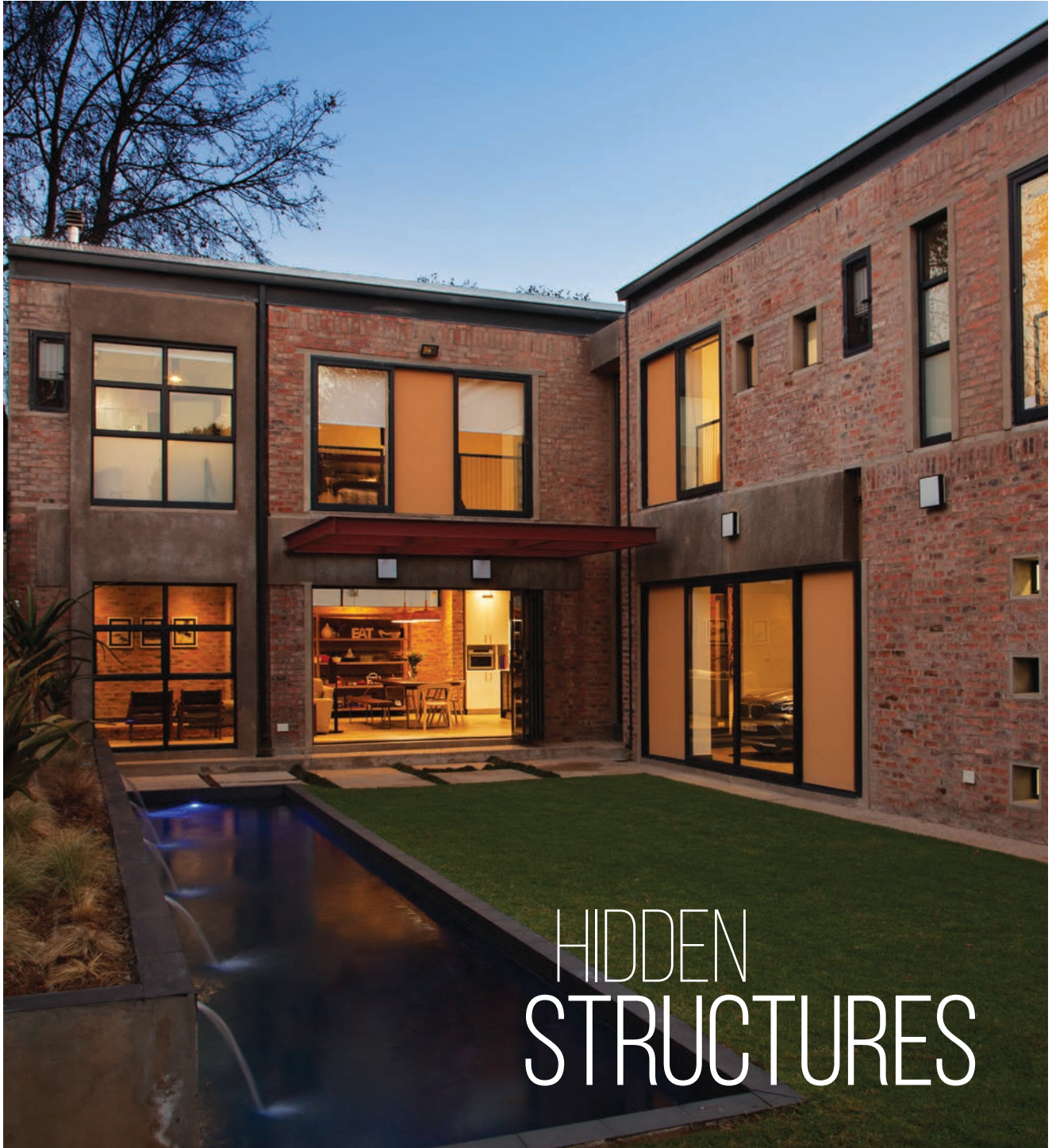


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House Arshad
 (Photo: Sarah de Pinah)



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CONTENTS

ISSUE 86

- EDITOR'S NOTE**
- 02 HIDDEN STRUCTURES**
 Professor Paul Kotze, Editor
- NOTES AND NEWS**
- 05 SAIA REACHES OUT TO GOVERNMENT**
 Mr Obert Chakarisa, SAIA CEO
- 05 NEWS FROM SAIA PRACTICE**
 Ms Su Linning
- BOOK REVIEW**
- 09 ENERGY EFFICIENCY IN THE CONTEXT OF CLIMATE CHANGE**
 Professor Hans Wegelin
- PROJECTS**
- 10 HOUSE ARSHAD**
 Ms Victoria de la Cour
- 16 NELSON MANDELA CHILDREN'S HOSPITAL**
 Mr Gareth Leonard and Ms Caron Schnaid
- 24 WHERE ARCHITECTURE MEETS ART**
 Mr Stephen Hobbs
- REFEREED ARTICLES**
- 32 INFORMAL SETTLEMENTS – AN UPGRADE PART 2**
 Dr Carin Combrinck, Professor Piet Vosloo & Professor Amira Osman
- 40 READING HISTORY PART 1**
 Ms Janie Johnson
- TECHNICAL**
- 50 EXOSKELETON**
 Mr Mike Louw
- END NOTE**
- 52 AN INTERVIEW WITH MS SITHABILE MATHE**
 Professor Gerald Steyn

HIDDEN STRUCTURES

PAUL KOTZE,
Editor

Imagine all the millions of words, codes, regulations, diagrams, formulas, legal documents, etc. that collectively endeavour to structure and give form to a part of the world's built environment. Imagine all of these combined in volumes and stored in 'an Archive of Hidden Structures'. As architects we know that these rules and guidelines control and determine what can be built, as well as how it can be achieved.

Most of these structures endeavour to manage the physical relationships of society in our day-to-day world. It is mostly rules that are, supposedly, applicable to all in any given locale. It also tries to determine minimum standards of built quality, services and increasingly, energy usage. These rules are mostly applied in the present, but with a view towards lasting outcomes in the future. Such rules and structures have been in existence since the beginning of humanity's built heritage. It has not always been codified and documented. Very often also, it has been underpinned by a mutual handshake and common sense. Often these structures or rules were

culturally determined and gave physical evidence of deeply held cultural beliefs that eventually determined social relationships.

In a world that previously evolved slowly over time in a context of low population growth these hidden structures were often implied in the way that the physical context was made. It is also not difficult to argue that it was precisely with the start of some social groupings' desire to expand territory, commerce and influence that these ways

of making also became a physical symbol of conquest and domination. In this manner the issue of building regulations were, in a way, the underlying method and expression of colonialism. For example, the now famous/infamous 'Laws of the Indies' used by the Spanish in their colonial forays into North and South America can be mentioned in this regard.

With the rapid rise in the world's population and the increase of the forces of globalisation these generally small-scale rules regulating the built environment were also disrupted. Generally we now live in a highly regulated formal and rich world juxtaposed

with an informal and poor world. In many ways the idea of building regulations are at the heart of these physical expressions. This juxtaposition is amply and dramatically illustrated in Hobbs's article 'When Architecture meets Art'. In this article, architects and artists discuss the tensions and potentials inherent in this seemingly dualistic world. In another way, Combrinck et al offer some relief to the apparent impasse between the formal and informal.

In a way, it is also unthinkable that we can live without these regulating structures wherever we find ourselves in either the formal or informal world. Sometimes they are the only way to save us from our own follies.

There will also, always be a pushback against such rules in whatever form they might be. This is, like life, a dynamic process that will always try to create a form of equilibrium. The way that this pushback action is managed is of crucial importance. A lack of control will invariably lead to the violation of the rights of others and the inevitable loss of the value of their investments in the built environment that we all know is a great store of wealth for future generations. On the other hand the draconian enforcements of rules would eventually lead to the inhibition of innovation. The benefits of negotiation within the regulatory framework are described by de la Cour in her article on House Arshad. This process gave rise to the re-emergence of the courtyard typology. When this typology is such an obvious answer to some of the perceived problems of the South African built environment, one should wonder why it is so difficult to repeat?

The message contained in the publication edited by Chan and Laubscher, 'Building Governance and Climate Change: regulation and related policies' reviewed by Wegelin, draws our attention to the all-important regulatory environment of the 'Hidden Structures' within which we all work. A quotation used by Eisenberg (page 468) where Dr Jonas Salk is referred to could be an appropriate concluding thought.

This thought should not be lost on architects when we remember that the collaboration between Salk and the architect Louis Kahn resulted in one of the most important epoch defining buildings of recent times, namely the Salk Institute at La Jolla. ■

**OUR GREATEST
RESPONSIBILITY
IS TO BE GOOD
ANCESTORS.
— DR JONAS SALK**



1



House Arshad can be viewed to provide commentary on, and contradict, the existing urban fabric of Johannesburg's middle-class suburbs. It shows an alternative way to address the densification of our suburbs, maximising coverage while optimising garden space. Here, the house itself defends against the security pressures that are both perceived and faced in reality, by middle-class South Africa.

The house was designed and conceptualised by Michael Scholes, while the detailing and construction stages were overseen by Mark Schaerer of Scholes Rayne Schaerer (SRS Architects). A challenge was that the budget price came in much higher than the client's available funds, so a 'spec builder' was appointed at a much lower price. This meant that the implementation of some of the careful detailing wasn't realised during construction. It is thus the conceptual strength of the design that warrants further exploration.

Architects often have to balance a client's specific (and often grandiose) brief with restrictive town-planning and heritage constraints – and the ever-too-low building budget. In this case, the architect had a long relationship with the family, so a level of trust was implicit in the process from the outset. Scholes had already designed three residences for the father since the 1980s (a residence in Fordsburg; a new house in Mayfair; and a major alteration in Houghton). This house was for the son and his young family.

The brief requirements were excessive for the existing configuration of a typical Norwood stand of 500m² with a single-storey house positioned in the middle. The client required a large, open-plan living, dining and kitchen area; two large en-suite children's bedrooms; a master suite with dressing room and bathroom; a pyjama lounge; staff quarters; laundry as well as a separate office. >

PUSHING THE BOUNDARIES

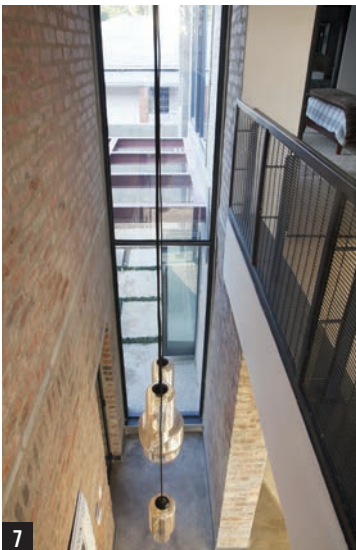
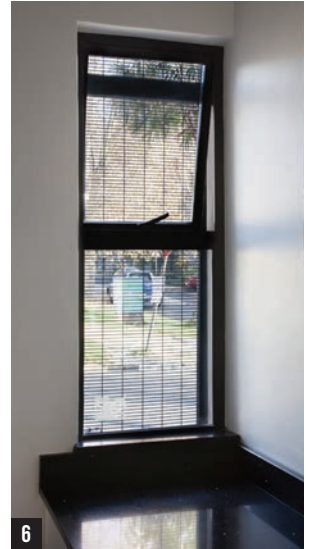
HOUSE ARSHAD, JOHANNESBURG

The conceptual strength of this Norwood home suggests a new typology for addressing the increased need for fortification and densification in Joburg's suburbs.

By: Victoria de la Cour, Photographs: Sarah de Pinah



THE IDEA OF POSITIONING A HOUSE ON THE BOUNDARY SO THAT IT FUNCTIONS BOTH AS THE WALL (OR LINE OF SECURITY) AS WELL AS THE PRIVACY AND NOISE BUFFER IS FAIRLY NOVEL IN THIS COUNTRY



The existing house was in a poor state, and while the original structure (a linear lean-to against the eastern boundary) dates from 1910, and the later house dates from the 1930s, it was immediately clear to Scholes that, in order to manifest the brief, the existing house would need to be demolished. The client agreed – something clients often shy away from, in light of the price already paid for the stand, the building and the cost of demolition. This approach deviates from the usual trajectory of enlarging the footprint, often creating nonsensical additions that undermine the clarity of the original, more modest, house. A heritage report was done, and the motivation for demolition was pursued and granted. Evidence of precedent within Norwood had to be displayed, as well as proof that the house was derelict and of questionable heritage value.

In addition to the heritage issues, the position of the stand on a corner meant that there were two 3m building lines to contend with along the south and west street boundaries. This significantly reduced the potential footprint of the building. The architects met this challenge by pursuing the relaxation of both of these lines. The proximity of the driveway to the street corner was another town-planning challenge, and similar precedent had to be found in the neighbourhood in order for the Johannesburg Roads Agency to be convinced to allow this. What was meant to be a double-storey studio in the north-west corner was reduced to a single storey as the allowable 110m² area for outbuildings had been exceeded and it wasn't possible to have this relaxed. The approval process took over a year, but through perseverance and thoroughness the architects are proud to say that everything achieved was legal (despite queries from neighbours about 'whose hands they had to grease').

The intention of the design was twofold: to maximise use and coverage, while giving a sense of space and view. The corner position and orientation of the stand (with north on the short end, furthest from the street) became the primary design driver for the planning arrangement put forward. The idea of positioning a house on the boundary so that it functions both as the wall (or line of security) as well as the privacy and noise buffer is fairly novel in this country. The client says many passers-by have commented on its 'strangeness' as well as its originality and effectiveness.

'The concept is simple,' says Scholes, 'and it was clear from the outset what needed to be done'. The building is composed of two monolithic, geometric forms placed at right angles to each other along the south (with living areas on ground level and main suite above) and west boundaries (with the garage on ground and children's bedrooms above). The garage acts as an overflow space for entertaining, opening directly onto the internal courtyard. A glazed 'knuckle' offsets the two blocks and forms the axis of entry directly off the street. Standing proud on the corner is the vertical circulation drum. These are typical forms used by Scholes and identify this building as part of his oeuvre.

The mono-pitch sheet-metal roof extends as vertical cladding on the street side and is clipped in line with the walls, further reinforcing the bulk form. The roof slopes down to the courtyard where water is collected in a gutter positioned above a recess.

The materials were selected for the robustness required for their urban context. The two accommodation wings are stock brick with a cement wash, which is contrasted with raw Tyrolean plaster on the circulation drum. The brick-wall finish continues inside the house on the ground floor, giving warmth to the otherwise stark and pared-down interior spaces. Polished concrete makes up the ground floor, with a warmer oak-strip floor for the bedrooms above.

THE DESIGN REACTS AGAINST THE SOMEWHAT INEFFICIENT TYPOLOGY OF AN EARLY JOHANNESBURG SUBURBAN HOUSE FACING OUT IN THE MIDDLE OF THE STAND WITH SPACE ALL AROUND

Aluminium windows sit within plastered recesses and are either recessed within the depth of the wall or flush with the outside face, in the case of the sliding doors. From inside the doorframes are concealed behind the reveal, so they appear as clean sheets of glass that slide away. The only painted colour appears on the plastered panels behind the doors, which receive the opening sections.

Incredible care was taken in the development of the design to coordinate the type of glazing (for thermal and sound insulation) as well as the position of each opening on the individual façades. They balanced the need for privacy against strategic views and optimal light penetration into the deep spaces. Windows on the south façade were kept primarily small and portal-like, and double-glazed to prevent traffic noise ingress and retain warmth. A long slot window just above eye level runs part of the length of the living space. It allows a glimpse up and out into the plane trees that line the Norwood streets, but prevents passers-by from seeing in. A smaller window at counter level in the scullery allows surveillance of the street corner.

The west façade is treated slightly differently with a combination of large and small openings. West light is brought deep into the interior through well-placed glazed openings including the front door and two large picture windows on the first floor. The fortunate position of an enormous plane tree on the street edge >

1 Courtyard view. 2 View from the entrance hall. 3 Living-room high-level window. 4 The bay window. 5 West elevation. 6 View from the scullery to the street. 7 The entrance hall looking towards the courtyard. 8 The reading room.



9

filters the otherwise harsh west light. The presence of the tree is pulled into the living spaces, and the play of light and shadow softens the stark interior. A fine weld mesh covers the large openings, providing soft shading and security. Despite the steps taken for privacy on the south and west sides, it is a pleasant surprise that the transparency of the front door brings the street right in to the entrance hall.

Stacking doors on the north side of the living space focus energy into the courtyard garden with its lap pool along the east boundary. This is a reference to Islamic

THE MATERIALS WERE SELECTED FOR THE ROBUSTNESS REQUIRED FOR THEIR URBAN CONTEXT

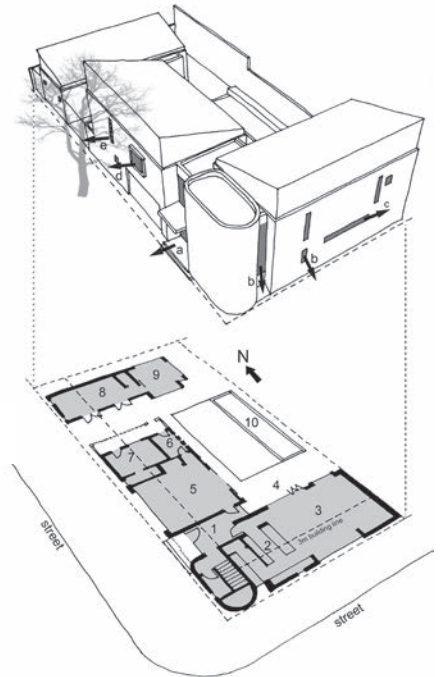
courtyards and their use of water to modify the internal climate. Water spouts activate the space with the added benefit of deadening the hum of traffic outside. Having the longer of the buildings along the west boundary means the courtyard is in shade for a large portion of the day, hence the position of the pool, hard up against the east boundary. Brise soleil openings on the ground floor of the west block reference Islamic screening devices

and conceal the service areas from the garden. The overflow space of the garage works well for entertaining. The careful design of the services reticulation, which the architects proposed, was sadly lost during construction. Downpipes were all to be recessed into the façade,

10

VIEWS

- A. THE GLAZED ENTRANCE AND READING ROOM.
- B. SLOT WINDOWS FOR SURVEILLANCE FROM THE KITCHEN.
- C. HIGH-LEVEL WINDOW PROVIDE VIEWS OF THE TREES WHILE MAINTAINING PRIVACY.
- D. BAY WINDOW LOOKING WEST ONTO THE TREE CANOPY.
- E. CONCRETE BLOCK WINDOWS FOR FRAMED VIEWS AND CROSS VENTILATION.



GROUND-FLOOR PLAN

1. ENTRANCE HALL
2. KITCHEN
3. LIVING ROOM
4. PATIO
5. GARAGE
6. LAUNDRY
7. STAFF ROOM
8. OFFICE
9. TERRACE

and all services were to be grouped and ducted.

Many of these ended up being exposed on the exterior, which detracts from the design intent of a seamless monolithic form.

In conclusion, this new typology responds to the changing urban environment and questions the inherent value of a building in its broader context merely because it is older than 60 years. The design reacts against the somewhat inefficient typology of an early Johannesburg suburban house facing out in the middle of the stand with space all around. Whether the repetition of this typology would enhance our urban fabric is questionable. In isolation, the success lies in the position of the house on a corner as well as the fact that urban densification is embraced by maximising coverage and pushing the boundaries. If repeated as a row typology, however, issues of orientation, overlooking and light ingress would need to be addressed.

The manifestation of House Arshad shows that, through a process of analysis and strong motivation, a bold approach to domestic architecture can be taken in response to heritage and town planning. Here, the architects took cognisance of the fact that the original character of suburbs such as Norwood has been drastically changed over time, and used it to argue for a new typology that responds to the increasing need for fortification and densification. ■

9 Street view from the south-west. 10 Views and ground-floor plan.

Consultants on House Arshad: TVNA Consulting Engineers and associates