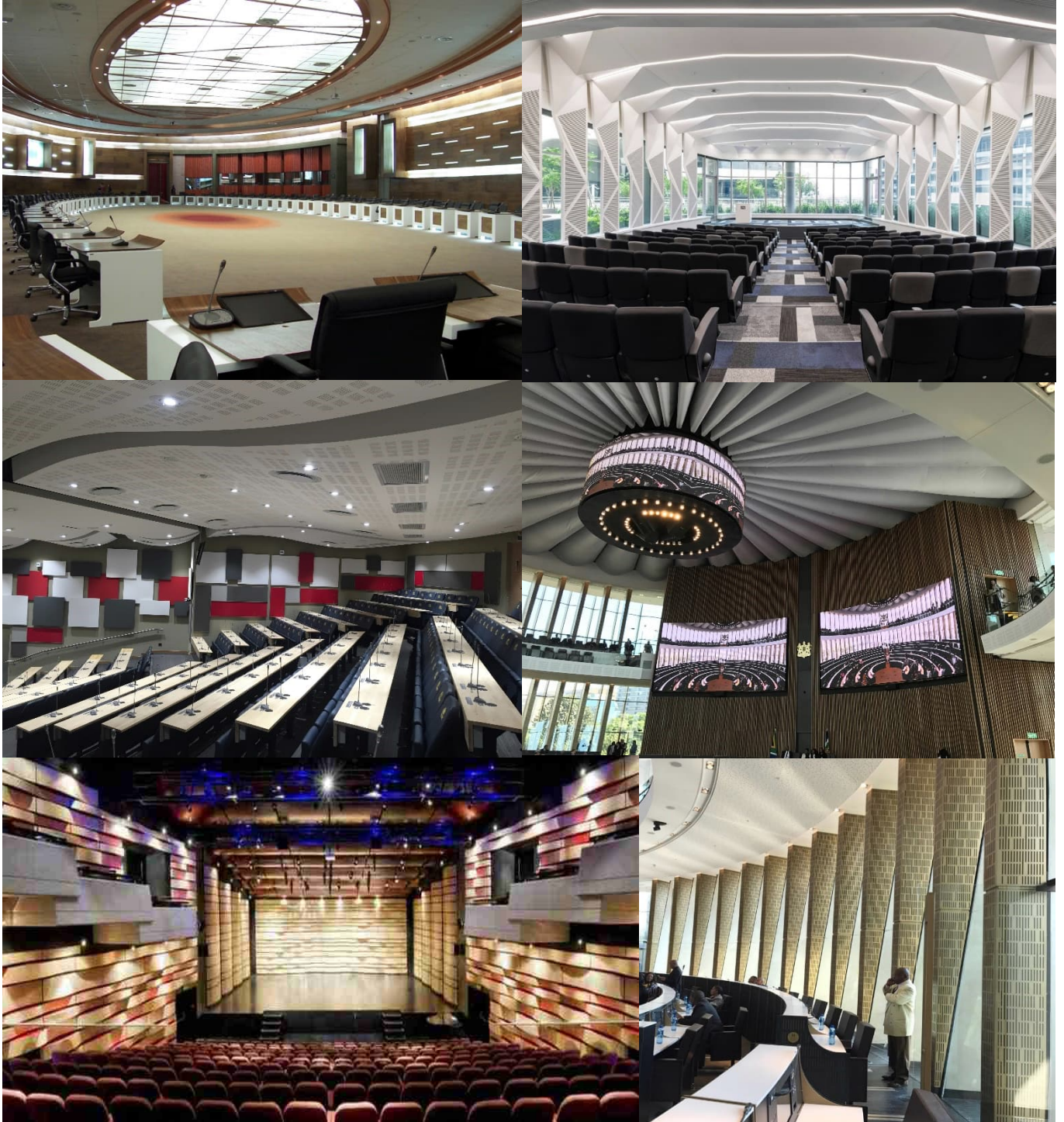


# L I N S P A C E

ACOUSTICS • AV • SPACE ENABLING

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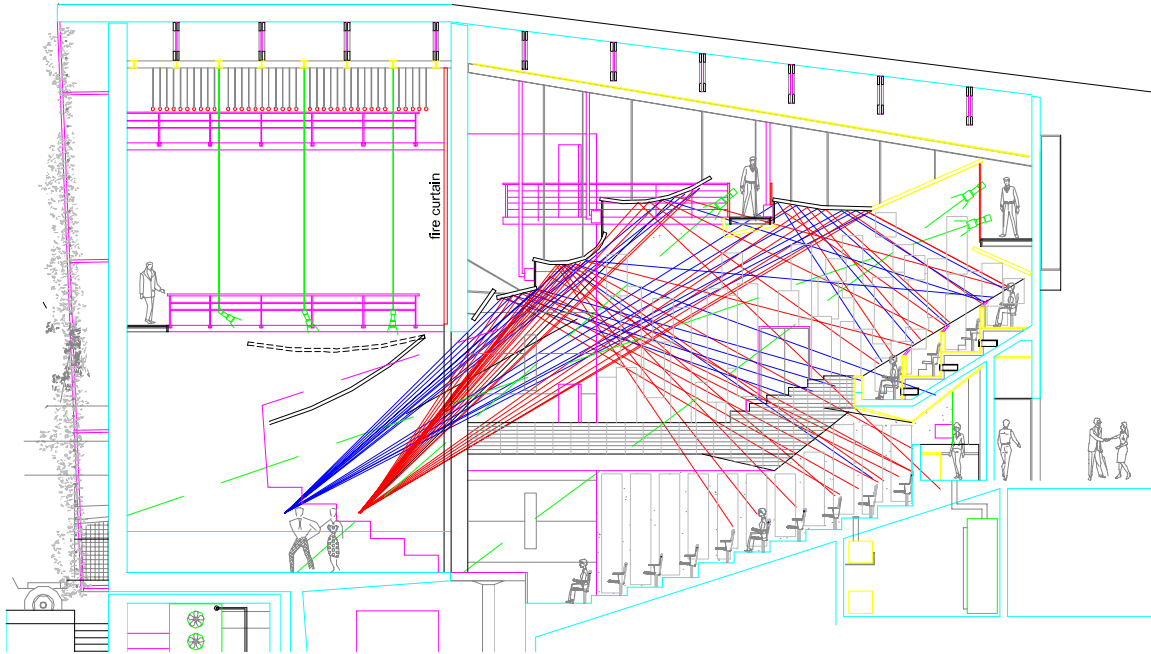


January 2023



LINSPLACE (Pty) Ltd 2014 / 250741 / 07  
Director: Ivan Lin Pr.Eng. BScEng(Elec)(Wits)  
Associate Engineers: Allen Wiggill Pr. Eng. BScEng(Mech), Ian Gordon BscEng(Aero)

# 1. INTRODUCTION



## 1.1. Credentials of LINSPLACE Engineers

LINSPLACE - Previously Known as Pro Acoustic Consulting Engineers (PACE)

31 years of proven consulting track record with the largest client base in Africa.

LINSPLACE engineers have been entrusted with major and iconic projects

New JHB glass Council Chamber, SASOL, SA Reserve Bank, DSTV, Bowman glass auditorium, Soweto Theatre, Standard Bank, ABSA, Nedbank, FNB, Vodacom, MTN, Facebook JHB, Google (JHB, Accra & Lagos), Microsoft (JHB & Nairobi), Old Mutual Sandton, BMW, etc. etc.

LINSPLACE engineers are SPACE ENABLERS

The principal engineer Ivan Lin has been actively promoting "User Experience Driven Engineering" or "User Experience Driven Architecture" for the last 15 years.

LINSPLACE engineers understand space performance issues

Linspace engineers are active researchers in the relationship between occupant work performance and environmental designs approaches.

LINSPLACE enables "Form" to function, beautifully

We design and make beautiful "Forms" work acoustically: [www.linspace.co.za](http://www.linspace.co.za)

LINSPLACE engineers challenge the Norm

LINSPLACE engineers believe that even if Norm is OK, it does not mean Norm is acceptable. If any improvement in the space performance/cost ratio is possible, the Norm must be challenged.

LINSPLACE engineers set standards

LINSPLACE engineers assisted in drafting the following:

GBCSA Office Tool V1 IEQ12 Acoustic credits and GBCSA Retail Tool V1 Noise rating tool

GBCSA Interior Tool Pilot Acoustic Quality credits,

GBCSA Existing Building Performance Pilot Acoustic Quality Credits

LINSPACE engineers set records (possibly!)

Possibly world first deployment of large-scale multi-media interface for Parliamentary Delegate System (Cape Town Parliament chamber 2003)

Ivan Lin invented Intelligent Adaptive Multi-zone Sound Masking System (IAMSA). More than 200,000 sqm of successful deployment to date in SA.

Ivan Lin has been involved in the design of more than 10 parliamentary environments in SA and internationally, possibly the most in the world.

LINSPACE engineers have been entrusted by the largest commercial building industry client base in SA.

### 1.1.1 Acoustics

#### Architectural Acoustics

The engineers of LINSPACE are recognized leaders in the field of Architectural Acoustics in South Africa. Our role in the Architectural Acoustic field is to ensure that a proposed building will be conducive to its intended purpose from an acoustic perspective.

Past projects of LINSPACE engineers include the ABSA Towers, American International School, New Anglo American Rosebank Offices, Barclays Johannesburg, BCX IT Head Office, BMW Head Office, Citibank Sandton, Council of Johannesburg new Chamber, DSTV new head offices, Embassy Towers, Facebook Head offices, FNB Call Centres, Google Johannesburg, Google Ghana, Huawei Head Office, Hotel Verde Zanzibar, Market Theatre, Microsoft South Africa, MTN head offices, Nedcor New Town Development, Old Mutual new Offices Sandton, Palazzo Steyn, SASOL Head Office Sandton, Steyn City, Sol Plaatjie University, Standard Bank Rosebank, Telkom SA new offices, Total Johannesburg, University of Mpumalanga, University of Pretoria campuses, Vodacom head offices, Werkmans, Sandton, etc.

#### Hospitality Sector:

The Principal Engineer Ivan Lin has been assisting on Hospitality Projects in the EMEA region since 1992. In recent years, Ivan has also been engaged directly by development or tenant clients to ensure the design professionals adhering to the prescribed acoustics performance and user experience criteria in commercial, public and hospitality sectors. For the Hospital Sector, Ivan have been assisting with acoustic design, acoustic brand standard compliance and rationalisation. Hotel brands assisted include Hilton Hotels & Resorts brands, Radisson Hotel brands, Accor Hotel brands, Lux\* Resorts & Hotels, One&Only...etc.

LINSPACE has been selected as a Preferred Acoustic Consultant on certain hotel brands.

#### Green Building Acoustics

As sustainability, environmental responsibility and employee well-being gains greater relevance and importance in the development of modern buildings, more emphasis is placed on the "green design" of buildings. The Green Star Council of South Africa (GBCSA) was created to establish a common language and standard of measurement for green buildings. This is done through the Green Star rating tools.

An important element of the building design is the indoor environmental quality (IEQ) offered by a building. This relates to air quality, lighting levels and noise levels. It is accepted that internal noise levels have a significant effect on the occupants of a building, affecting their satisfaction, well-being and hence their health and productivity. The GBCSA, through the Green Star Tool aims to “recognize buildings that are designed to maintain internal noise levels at an appropriate level” by awarding up to two Green Star points to such projects.

We have been involved in several Green Star projects, preparing the documentation required to claim the points related to internal building noise levels. Notable examples include the Nedcor Phase 2 building (the first building to be officially certified under the Green Star tool) and the Vodafone Innovation Centre (the first building to achieve a 6 star Green Star rating). Recently, we have been advising on the new Green Building Council Head Office in Johannesburg.

### 1.1.2 Audio-visual Engineering

In the past, Audiovisual System Design has been a grey area where clients or engineers would be reliant on contractors for proposals. The absence of specialist engineers to prepare technical specifications and to evaluate submissions would often lead to tender award decisions being made with insufficient technical justification.

LINSPACE engineers have identified these challenges and have been entrusted by major clients such as Anglo American, the Department of International Relations and Cooperation, United Nations Office at Nairobi, Macquarie South Bank Limited, Total South African Head Office, Loftus Stadium, Sasol, Cape Town Unicity, South African Reserve Bank Head Office, South African Parliament Chamber, NCOP Chamber, Mpumalanga Legislature, Tanzanian Parliament, Council of Johannesburg, DSTV, American School International Johannesburg, Development Bank SA, Free State Legislature, and recently the Johannesburg City Council Chamber, to provide technical specifications - handling the design, tendering process, and implementation of their AV presentation systems, videoconferencing systems, and parliamentary congress and simultaneous interpretation systems.

## 2. COMPANY DETAILS

### 2.1. History

Pro Acoustic Devices C.C. 1992-

Pro Acoustic Devices CC (PAD) was established in 1992 with a primary focus of development and research of architectural acoustic conditioning products, mainly for the broadcasting and music industry in South Africa.

Pro Acoustic Consortium (Pty) Ltd 1999-

During 1999, due to the increasing awareness of work space functional quality in the commercial building sector and growing requests received for consulting services, the principal engineers of PAD realised that a product independent architectural acoustic consulting services was required. PAD was then closed and the pure consulting services Pro Acoustic Consortium was born.

Renaming: Pro Acoustic Consulting Engineers (Pty) Ltd 2011-

During 2011, the directors felt that the word “Consortium” was not appropriate. Pro Acoustic Consortium was then renamed to Pro Acoustic Consulting Engineers.

Pro Acoustic - Evolved: LINSPLACE (Pty) Ltd 2015 -

Pro Acoustic restructured into two separate companies. Ivan Lin starts a new consultancy LINSPLACE in March 2015. LINSPLACE is a professional consultancy offering a User Experience Driven Design approach in Acoustics and AV technologies for Architecture and Interior Spaces.

## 2.2. Registration with professional and associated bodies

- Member of the Green Building Council
- Engineering Council of South Africa (ECSA)
- South African Institute of Electrical Engineers (SAIEE)
- South African Acoustic Institute (SAAI)
- Audio Engineering Society (AES) (International) (individual registration)

## 2.3. Key technical staff

Ivan Lin Pr.Eng. – Principal Engineer

Nationality:	South African
Qualifications:	BSc (Eng) Elec (Wits), Pr.Eng (ECSA)
Membership:	Engineering Council of South Africa (ECSA) South African Institute of Electrical Engineers (SAIEE) South African Institute of Acoustics, Senior member (SAAI) Audio Engineering Society (International) (AES)
Position:	Director / Acoustic and Electro-Acoustic Engineer
Specialities:	Radio, Television and Music Studios, Auditorium and Theatres, Corporate offices, Conference facilities, Worship Spaces, Hospitality and Leisure Sector Projects, Environmental Acoustics, Electro-Acoustics

Ian Gordon

Nationality:	South African
Qualification:	BSc Eng (Aeronautics) (Wits)
Position:	Project Engineer
Membership:	South African Institute of Acoustics Engineering Council of South Africa (ECSA)

Allen Wiggill

Nationality:	South African
Qualification:	BSc Eng (Mechanical) (Potch) , Pr.Eng (ECSA)
Position:	Project Engineer
Membership:	South African Institute of Acoustics Engineering Council of South Africa (ECSA)

## 2.4. CONTACT DETAILS

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Craighall 2024  
Johannesburg South Africa  
Street Address: 141 Boundary Lane  
Sandhurst  
Sandton 2196  
Johannesburg South Africa

## 2.5. ACOUSTIC PROJECTS (CURRENT AND PASS PROJECTS)

Auditoriums and Education Spaces	Parliamentary/Council Chambers
ABSA Towers North AGORA	Cape Town Unicity Council Chamber, Cape Town Civic Centre
American International School Dakar	Ehlanzeni Council Chamber
American International School Johannesburg:	Free State Legislature Chamber
Theatre & Arts Court	Johannesburg New City Council Chamber
Bank of Botswana	Maluti-a-Phofung Council Chamber
BAOBAB School Lusaka Zambia	Mpumalanga Provincial Legislature
Botswana School of the Performing Arts	National Council of Provinces (NCOP)
Bowman & Gilfillan new auditorium	South African Parliament Chamber
BUSKAID Music School	Tanzanian Parliament
Cell C Auditorium	United Nations Office at Nairobi (UNON) Kenya
Conewall Hill College	
Dainfern College	
Dimension Data Campus Development	Office and Health Care Buildings
Discovery Health Building, Sandton	102 Rivonia Road (Ernst & Young)
Drakensburg Boys' Choir Auditorium	11 Diagonal Street (ex JSE)
Ekurhuleni West TVET College Auditorium	129 Rivonia Road: MMI and ENS
Ekurhuleni East TVET College Auditorium	ABSA Capital Illovo offices
Eskom Simmerpan	ABSA Ridgeside Durban
GIBS Lecture Theatres upgrade	ABSA Towers West
Green School South Africa	ABSA Project X
Heronbridge College, Johannesburg	ACSA AWPO building
International School Uganda	ACSA Business Gate
International School Dakar	African Medical Centre of Excellence, Abuja Nigeria
Jafza VVIP Auditorium, Dubai	Allen & Overy Sandton
JSE Building, Sandton	Ampath Laboratories, Centurion
KPMG Campus: Phase 1	Anglo American New Head Offices 144 Oxford Rosebank
Lebone School Hall	Anglo American New Oxford Parks- Ikhusasa Offices
Mapulaneng Hospital auditorium	Anglo American 44 Main Street
Midstream College auditorium	Anglo American 55 Marshall Street
Mmamethlake Hospital auditorium	Anglogold
National Research Foundation	ATNS (Air Traffic & Navigation Services) Ltd.
National Olympic Committee South Africa (NOCSA)	Arthur Andersen offices
Nedbank, Menlyn Maine, Pretoria	Bank of Botswana

Nedcor North Sandton  
Newtown Market Theatres  
Northwest Provincial Legislature Chamber  
OHR Somayach Synagogue  
Pretoria Boy's Auditorium – Phase 1 and 2  
RAU Art Centre  
Redhill School: Music Centre  
Sedibeng College  
Sol Plaatje University – All Campuses  
St Alban's College, Music School  
St David's Chapel  
St Mary's The Edge Performing Arts Complex  
St Peter's Primary School, Johannesburg  
St Vincent's School Hall  
Steinhoff Properties Auditorium  
Steyn City: School Hall Phase 2  
Telesure Auditorium  
Thabo Mbeki Presidential Library  
UNISA Florida Library  
UNISA Samuel Pauw Library  
University of Mpumalanga  
University of Pretoria: 2012 Lecture Venues  
University of Pretoria: Engineering III Faculty  
University of Pretoria: AE du Toit Extension  
University of Pretoria: AE du Toit Refurbishment  
University of Pretoria : Groenkloof Campus  
University of Pretoria: Javett Arts Centre  
University of Pretoria: Law Faculty buildings  
University of Pretoria: Engineering III Department  
University of Pretoria: Study Centre  
University of Pretoria: IT Atrium  
University of Pretoria: Engineering IV  
University of Witwatersrand: Pro Development  
Building  
University of Witwatersrand: John Moffat Hall  
University of Witwatersrand: Music School  
Auditorium  
University of Witwatersrand: Film School Cinema  
University of Witwatersrand: Health Sciences  
University of Witwatersrand: Smart Classrooms  
University of Mpumalanga – all campuses  
University of Mpumalanga Great Hall

Convention Centres  
Botswana Gaborone International Convention  
Centre  
International Convention Centre, Swaziland  
Jafza, Dubai  
Madinat Jumeirah, Dubai  
Sandton Convention Centre

Entertainment Venues / Cinemas  
DSTV Cinema

Barclays Bank South Africa  
BHP Billiton – 6 Hollard Street  
B.P. South Africa Head Office  
Blue IQ Innovation Hub  
Bowman Gilfillan  
British High Commission  
Business Connexion  
BMW Head Office Midrand  
BMW Warehouse Extension Midrand  
Centurion Square  
Citibank Sandton  
Covington Offices Johannesburg  
CSIR offices  
Debswana BDVC Facility & Technical Facility  
Department of Education, South Africa  
Department of International Relations and Cooperation,  
New Head Office  
Department of Rural Development and Land Reform  
Department of Science and Technology  
Deutsche Bank Securities, Sandton  
Dimension Data Campus Development  
Discovery Health Call Centre KZN  
Discovery Health Building, Sandton  
Discovery Health Fun Factory  
DSTV City new head office  
DSTV Experience Centre Mpumalaga  
DSV  
Edcon Refurbishment  
Embassy Towers  
Eris Property Group – Block G  
Everite Limited  
Facebook Offices  
Fairlands Developments: Westbank and FNB Homeloans  
Finastra  
FNB Atrium – Port Elizabeth  
FNB City Fraser Street Upgrade  
FNB Call Centre – Ferndale  
FNB Inanda Greens  
FNB Menlyn Mall  
FNB Umhlanga  
FNB Windhoek  
Global Options Head Office  
Goldman Sachs Sandton  
Google Offices, Accra  
Google Offices, Lagos – as Google inhouse validator  
Google Offices Johannesburg  
Gordon Institute of Business  
Greenhouse, Cape Town  
Greenstone Multi purpose hall  
Hannover RE  
Hollard Phase II  
Huawei Head Offices  
Illovo Phase 3

Barnyard Theatre Pretoria  
British Airways Airport Lounge  
Boardwalk Casino, Conference Centre and Hotel  
Bulwer & New Osizweni Arts Centre  
Emperors Palace Cinemas  
Golden Gate Dino Park  
Germiston Theatre  
Hyde Park Events Venue, Sandton  
International Broadcast Centre for FIFA 2010  
World Cup Soccer  
Jabulani /Soweto Theatre Complex  
Market Theatres  
Northgate MTN Sundome  
Ocean Basket Branches  
Ster Kinekor  
Southdowns Art Theatre  
Southgate Food Court  
United International Pictures (UIP) Preview Cinema

Hotels, Apartments and Residences  
ACCOR Fairmont Project ICON  
ACCOR Novotel Kinshasa  
ACCOR Novotel Kolwezi DRC  
ACCOR Novotel Lubumbashi DRC  
ACCOR Pullman Airport City Accra Ghana  
Boardwalk Casino, Conference Centre and Hotel  
Capital Hotels and Apartments Sandton  
Caesars Casino, convention centre (world trade centre)  
Carnival City Casino, Brakpan  
Embassy Towers Sandton  
Emperor's Casino Arena and Hotel  
Grandwest Casino, Cape Town  
Hilton Canopy ALM Hotel Seychelles  
Hilton Double Tree Asaba, Nigeria  
Hilton Double Tree Addis Ababa, Ethiopia  
Hilton Legend Lagos, Nigeria  
Hilton Double Tree Gaborone  
Hilton Double Tree Mbabane  
Hotel Verde, Zanzibar  
Houghton Apartments and Hotel  
Jafza, Dubai  
Leonardo Legacy, Sandton  
LUX\* Grand Bay Mauritius  
One & Only Cape Town  
Palazzo Steyn  
Private Entertainment Facility for Undisclosed High-End Client  
Private Game Farm for Saudi Royalties  
Radisson Blue Umhlanga – advisory  
Radisson Blue Banjul Gambia  
Radisson One Place Accra Ghana  
Radisson Red Rosebank  
Secunda Graceland Casino Complex

In2Food Offices  
Johannesburg City Council  
JSE Building, Sandton  
KPMG Campus: Phase 1  
KPP  
Lakeside Growthpoint  
Law-on-Keyes  
Liberty Life Head Office  
Lesotho Central Bank  
Macquarie Bank, 1 Sandton Drive SA office  
Mastercard Foundation Ethiopia  
Mastercard Foundation Ghana  
Mastercard Foundation Kenya  
Mastercard Foundation Nigeria  
Mastercard Foundation Rwanda  
Mastercard Foundation Senegal  
Mastercard Foundation Toronto Canada  
Mastercard Foundation Uganda  
Marsh Head Office  
Menlyn Maine Development  
Midstream College  
Midstream Medical College  
Microsoft Johannesburg  
Microsoft Nairobi  
Midrand Vodaworld Auditorium  
Momentum Metropolitan Holdings New Head offices  
MTN Boardroom  
MTN Phase II and Campus Development  
MTN Regional Offices  
MTN Swaziland  
National Council of Provinces (NCOP)  
National Research Auditorium  
Nedbank Lakeview  
Nedbank Phase II  
Nedbank Newtown  
Nedcor North Sandton  
Old Mutual Emerging Markets  
Pan African Parliament  
Peregrine, Katherine Street Towers  
Polifin Auditorium  
Rani Towers Mozambique  
Rand Water Auditorium  
Redefine Offices Sandton  
Rio Tinto Head Office, Johannesburg  
Rosebank Towers – Virgin Active  
SAB Central Office  
SABS Call Centre  
Sappi Boardroom  
Sasol Head Office  
Sasol Oil Randburg  
Smollan Unilever Durban  
Softline head office, Woodmead  
South African Institute of Architects (SAIA) Offices



Steyn City, Johannesburg  
Sibaya Casino Hotel  
The Triple Cape Town  
Tswalu Private Resort for Oppenheimer Family  
Witbank Casino Hotel

#### Museums

Anglo Platinum Innovation Centre  
Freedom Park Phase II  
Hector Peterson Museum, Soweto  
National Film, Video and Sound Archives of South Africa, Pretoria

#### Studio Projects

33 Baker Street, Std Bank Video Studio  
Atlas Studios Johannesburg  
Cape Town Film Studios  
Cube Recording Studios  
East Coast Radio Studios  
EMI Powerhouse Studio  
Gordon Institute of Business Science Video Studio  
Homestudio Music Studios  
M'du Records  
Malawi Broadcasting Corporation - Blantyre  
M-Net Television Studios, various studios  
National Electronic Media Institute of South Africa  
Newzroom Afrika Studios  
Radio Safari  
RAU Television Studio  
SABC:  
Durban studios  
    Music Control Room  
Johannesburg studios  
    Radio 5 Studios  
    M4 music studios  
    Radio OB Vehicle  
    M4 Music Studio Control Room  
    Henry Video Production and SSL Final Mix  
    Drama Studio  
    M2 music studios  
Bloemfontein  
    Music Recording Studio and Control Room  
Cape Town: Music Recording Studio and Control Room  
Port Elizabeth studios  
Scorpio Music  
Shine Studios  
SASANI Studios new Stage 1 and 4  
SASANI Hyde Park Studios  
Sc-Bono Tv Studio  
SONY Studios Johannesburg  
Stark Studios  
Swaziland Broadcasting Studios

South African Blood Bank (SANB) Offices  
South African Reserve Bank (SARB) Head Office  
Refurbishment/Upgrade 2020  
Stauch Vorster Architects Offices  
Standard Chartered Bank  
Standard Bank, Morningside College  
Standard Bank of SA Ltd., Executive meeting room, Johannesburg  
Saint Gobain New Head Offices  
SAP New Offices AV design  
Standard Bank of SA Ltd. Kingsmead  
Standard Bank of SA Ltd., Rosebank  
Statistics South Africa  
T-Systems Head Office, Midrand  
Telesure Building  
Tiger Brands Head Office  
Upbeat Properties 101 – Total  
Head Office: Refurbishment  
Unilever Durban office  
Vereeniging Town Council  
Vodacom Florida, Bronberg and Midrand  
Wilde-at-Heart: Wonderland and Greenhouse  
World Bank  
Zurich Reinsurance, JHB CBD

Places of Worship  
Apostolic Faith Mission, Botswana  
Bet David, Johannesburg  
CSI Johannesburg North  
CSI Kyalami Castle  
CRC Johannesburg  
Bethesda Church, Pretoria  
Christian Family Church, Boksburg  
Church on the Hill, Nelspruit  
Delta Church, Moreleta Park  
God First: City Green  
Gracepoint Church  
Eastside Community Church, Pretoria  
Great Park Synagogue  
NG Studentgemeente  
NG Communitas  
Real Life Church  
Rivers Church, Morningside  
Rosebank Union Church  
St Dunstan's Church  
Tsu-Chi Buddhist Temple Bedfordview Johannesburg  
Universal Church Kingdom of God, Parkstation

Green Star Surveys and Assessments  
ABSA Towers West, Johannesburg  
BCX Head Office  
Centurion Square  
DSTV Randburg

Swaziland Broadcasting Corporation  
Downtown Studios  
Classic FM SA Radio Studios  
Primedia 702 and Highveld Studios Johannesburg  
Radio Algoa On Air Studios  
The Refinery Video/Audio Studios  
VIACOM Studios Johannesburg  
YFM Rosebank Studio complex  
Universal Music Studios (EMI)

Data Centres / Noise Mitigation Design  
Absa Towers West, Johannesburg  
Africa Data Centres – Cape Town  
Anglo Platinum, Rustenburg  
Dimension Data NTT Samrand JOH1 Data Centre  
Dimension Data Bloemfontein Data Centre  
Discovery Fun Factory HVAC, Sandton  
FNB Menlyn Corner, Pretoria  
Green Park Towers HVAC, Morningside  
Interxion Data Centre Accra Ghana  
IS Data Centre, Randburg  
JSE Data Room, Sandton  
Mediclinic Midstream Generators noise mitigation  
Sci-Bono Laboratory and Lecture Venue,  
Johannesburg  
Teraco Data Centres Johannesburg and Cape Town  
Vantage Data Centres Cape Town  
WITS Hall 29 Generator Room

FNB Contact Centre  
Green Building Council Head office Cape Town  
Green Building Council Rosebank  
Hyundai Head Office  
Illovo Phase 3  
KMPG Campus, Johannesburg  
Nedcor Phase 2 building, Sandton  
SASOL Corporate offices  
Upbeat Properties 101 - Total  
Villa Mall, Pretoria  
Vodafone SSIC

Stadiums  
Loftus Versfeld Stadium Acoustics and Audio/visual  
Systems upgrade to meet FIFA 2010 requirements