





Annual Report 2014



innovative construction product assessments

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Foreword by the Minister of Public Works



The Honourable Mr TW Nxesi (MP) Minister of Public Works

Agrément South Africa continued with its role as an agent of the National Department of Public Works (NDPW). Agrément assists the NDPW in sustaining its turnaround strategy of ensuring good governance, fast-tracking service delivery and raising the bar in performance. The NDPW's mandate includes being the:

- 'handy man' of the state
- leader of the Expanded Public Works Programme
- regulator of industries and associated professions falling under its jurisdiction
- asset manager for and on behalf of the state.

The year under review is dedicated to former President Nelson Mandela and also marks 20 years of a democratic government. Agrément South Africa has continued its excellent performance in support of the national priorities. The government's Mediumterm Strategic Framework (MTSF) calls for the promotion of sustainable livelihoods, enhancement of service delivery as well as massive investment in public infrastructure. These goals offer an opportunity for the introduction and use of modern and improved innovative construction technologies to the market that will accelerate infrastructure roll out. The NDPW vision is to be a world-class public works department. The NDPW is proud to have an internationally recognised technical assessment agency in Agrément South Africa.

One of the main highlights of the year under review was the tabling of the draft bill before the national Cabinet on 4 December 2013. The Bill, which was approved for gazetting, recognises Agrément South Africa as a public entity. The memorandum on the objects of the Bill was published in the Government Gazette on 17 January 2014. The public was invited to submit comments to the NDPW before 17 February 2014.

The draft Bill is important in that it seeks to give Agrément South Africa the legal status. This is of vital importance, given the critical role the organisation plays in the industry. Agrément South Africa is mandated to, amongst other objectives, evaluate the fitnessfor-purpose of non-standardised construction-related products or systems for which a national standard does not exist, for use in the construction industry. The NDPW considers the bill as a catalyst for the creation of a dynamic and innovative construction industry that positively impacts on job creation while contributing to government's infrastructure plans.

It is pleasing to note that various government departments rolled out various pilot projects using Agrément South Africaapproved construction technologies in the year under review. It is also encouraging to note that government is in the process of developing a strategy to implement infrastructure roll-out using innovative construction technologies. The strategy will result in a roll-out plan for the construction of clinics, schools, housing and student residences using innovative construction technologies across the country. The strategy will also result in an advocacy policy for the roll out of innovative construction technologies as well a public education framework for the implementation of large scale public infrastructure projects in the country. Institutional arrangements will include draft policy incentives, risk management, procurement methodology as well as drafting suitable contract documents. Technical support will ensure the world's best practice is incorporated into this strategy. The key goal of the implementation strategy is to ensure that innovative technologies maximise industrialisation, mitigate climate change, create jobs and align to global sustainability objectives.

The NDPW is of the strong opinion that this strategy will increase the use of innovative construction products, improve methods of construction and will contribute towards government's developmental goals. Achieving these goals will make a positive difference in the lives of ordinary citizens of our beloved country. I have full assurance in the performance of the Board of Agrément South Africa, ably led by Mr Pepi Silinga and fully supported by the rest of the Board members as well as the technical staff led by the CEO Mr Joe Odhiambo. Agrément South Africa has executed its mandate as required and is a proud member of the NDPW family.

The Honourable Mr TW Nxesi (MP) Minister of Public Works



Review by the Chairperson



Mr Pepi Silinga Chairperson of the Agrément South Africa Board

The Board of Agrément South Africa continued to exercise its oversight role during the year under review. It has intensified its strategic activities which culminated in the national Cabinet approving the gazetting of the draft Agrément South Africa Bill on 4 December 2013. The memorandum on the objects of the Bill were published in the Government Gazette of 17 January 2014. The Board of Agrément South Africa took a proactive stance throughout the year and engaged with various stakeholders to ensure that the Agency exercised its important strategic objective to the optimal level possible within the available scarce resources.

During the year under review service delivery protests were witnessed around the country at an increasingly worrying frequency. This has put the government under severe pressure, especially in the area of service delivery. This provides opportunities for the government and local authorities to utilise Agrément South Africa-approved technologies to deliver modern appropriate infrastructure especially roads, bridges, schools, hospitals, sanitation and housing projects. It must be noted that the provision of basic services is a constitutional right and the authorities have no choice but to deliver these services to the people of South Africa. There has been a sustained increase in service delivery, however, the government and local authorities have not relented to hasten the pace, effectiveness and efficiency of service delivery. Several local authorities have reported some challenges, including a lack of appropriately skilled technical staff, especially engineers, as a key impediment to infrastructure roll out. The Board of Agrément is of the strong opinion that some of the certificated innovative construction systems can provide an answer. Lately, the strategic role that innovative construction systems can play in the industry has come to the fore. The benefits of some of these innovative systems has been highlighted and include lending themselves to less technical skills for roll out, thus overcoming the skills shortages in some of our local authorities. Some of the systems can also be erected faster reducing the construction period on site considerably, while other innovative construction systems cost significantly less when compared to conventional systems of construction.

The entire Board takes its responsibilities seriously in assisting government to overcome developmental challenges and it will continue to ensure that the Technical Agency deliver upon its mandate of undertaking technical assessments. The Boards oversight role will also ensure that the core principle of financial accountability, risk management & compliance, good governance, professional and ethical conduct are strictly adhered to both within Agrément South Africa and in all it's interactions with all their stakeholders.

The CSIR, of which Agrément South Africa is part of, has been heralded as one of the best employers in the South African corporate industry. It's excellent financial performance and clean financial audits for over ten years running has seen it recommended by the Auditor General as an example of excellent financial management in South Africa. Despite this, the Board does conduct detailed oversight on the financial and non-financial aspects of the day to day operations of the agency.

The Board of Agrément South Africa has over the past 45 years certificated hundreds of construction systems and products. Several of these systems and products have proceeded to be used as conventional products in the industry, for example, PVC bath tubs, PVC piping and the Harveytile roofing tiles. The impact of these products on the construction industry is well respected. As South Africa is a developmental state, several of these systems and products could lend themselves to meeting the countries key priorities of job creation, poverty eradication and reduction of inequality. The available choice of solutions is very wide and these systems and products bring one form or another for innovation to the construction industry.

The upper segment of the construction industry in South Africa has almost completely moved over to using innovative construction systems as the only and preferred mode of construction. The challenge to the South African economy remains 'how to translate this benefit' to the rest of the construction industry, which represents the largest portion of the economy. The advantages of these modern forms of construction have the potential to catapult the South African construction industry to a world-class industry.

The year under review saw the broadening of assessments to cover accreditation for traffic and weigh-in-motion system suppliers and service providers. The Board recognises and appreciates the contribution and cooperation from industry partners especially the CSIR transport infrastructure engineering team and the South African National roads Agency Limited (SANRAL) in their role in developing the assessment criteria. The Board believes these weigh-in-motion system assessments will have tremendous benefits to the South African transportation industry. The major advantage of these systems is the reduction in time required to weigh, as the trucks and other motor vehicle are weighed while in motion as opposed to stationary weighing at conventional weigh-bridges. The Board recognises the highly skilled and specialised nature of the competence required to undertake independent technical assessments of innovative products and systems and the scarcity of such competence within the country. As such, the Board welcomed the Technical Agency consolidating its human resources by focusing on enhancing the technical skills of staff within the agency. Staffs were provided with additional and necessary skills allowing them to operate at a much higher lever of technical competence. This was of strategic importance as the global construction industry is facing an aging workforce hence the vital need for rebuilding or equipping the younger technical staff with the prerequisite technical assessment skill. The Board is pleased to report that much work that was previously outsourced is currently being undertaken in-house due to the transformation, empowerment and development of the level of highly skilled technical competence within the agency.

In the year under review, the technical committee of the Board approved a total of 20 certificates. The year also saw a total of 33 applications for certification being accepted by the Board. In total 30 offers for technical assessment for Agrément certification were submitted by applicants with a total of 24 being accepted.

In the year under review the Board held a strategic planning session on 20 February 2013. This session deliberated on the origin of the Agrément South Africa concept, certification process, compliance with the National Building Regulations, certification and financial trends since 1999 and the conceptual date of the current ministerial delegation of authority. This strategic planning session formed the basis for future engagements and interaction between the Board members and the Minister and Deputy Minister of Public Works.

According to the delegation of authority, the Minister of Public Works appoints the Chairperson of the Board and Board members who report directly to the Minister. The current Board, appointed in 2011 consists of eight members who will serve for a period of three years. The Board members are shown on the next page.

Members of the Board



Mr Pepi Silinga (Chairperson of the Board) – Coega Development Corporation



Mr Denzil Fredericks – SHEM Consulting and Training (Pty) Ltd



Mr Frank Makamo – South African Bureau of Standards



Mr Hans Ittmann – Consultant and logistics expert



Dr Jeffrey Mahachi (Chairperson of the Technical Committee) – National Home Builders Registration Council



Ms Adelaide Ranape – Consultant and legal expert



Ms Mariana Marneweck -National Regulator for Compulsory Specifications



Ms Ntebo Ngcobo – Civil Engineering Department, University of Johannesburg.

The Technical Committee of the Board continues to be chaired by Dr Jeffrey Mahachi. This committee has set the following rules as the basis for acceptance with regard to applications for certification:

- The application must relate to a product, material, element, component, method, process or system (hereafter referred to collectively as the 'product') for use in the construction industry.
- The application must contain a clear and comprehensive description of the product and its intended use.
- The product must fall within the definition of a 'nonstandardised' product (i.e. not covered by an SABS standard specification, or falling outside the scope or limitations of a standard specification).
- The application must clearly and unambiguously state the name and physical address of the organisation or other legal persona responsible for production/design/installation or erection of the product.
- If the application deals with a building product that clearly contravenes or is in conflict with the National Building Regulations, it must be rejected.
- If the application deals with a product of a type for which insufficient expertise is available locally to enable evaluation to be carried out, application must be refused or put on hold until relevant and accessible international expertise can be located.
- If the application deals with a product of a type for which there are no Agrément Criteria and Test Methods Applicable to Products (ACTMAPs) or technical guidelines but there is sufficient technical expertise and data available to compile adequate technical guidelines then the application must be put on hold until the necessary guidelines have been finalised. (See section under heading "Development of ACTMAPs and other technical guidelines and indicators" for definitions and procedures).
- If the application deals with a product of a type which requires an ACTMAP for it to be assessed but such an ACTMAP has not yet been developed, the application must be put on hold until the ACTMAP becomes available. In the event of the Board deciding that the developing of an ACTMAP cannot be justified, the application must be rejected. (See section under heading "Development of ACTMAPs and other technical guidelines and indicators" for definitions and procedures).
- A number of safety specifications in the form of Compulsory Standards have been issued by the SABS (e.g. electrical

safety) which are legally enforceable. Deviation from such specifications is prohibited and applications dealing with products that fall within the ambit of such a specification can only be considered if it can be demonstrated that the product complies with the prescribed safety requirements. It must also be highly probable that the non-standardised aspects of the product will not affect compliance with the safety requirements in any way.

The Board advises clients, end users and all persons and organisation specifying and overseeing the erection/installation of innovative products that comply with the above conditions to ensure that:

- contract documents state that the products are erected/ installed in accordance with an approved Agrément South Africa certificate
- the certificate is still valid by referring to Agrément South Africa's website (www.agrement.co.za) or by contacting the offices of Agrément South Africa on tel 012-841 3708.
- any variations from the certificate have been approved by Agrément South Africa in writing. Certificate holders are obliged to inform clients of any variations from the certificate.
- the party responsible for the supply and erection of the system is the certificate holder or a licensee of the certificate holder who is registered with Agrément South Africa. The party responsible for erection must also be registered with the cidb register of contractors (http://registers.cidb.org.za/ reports/contractorlisting.asp). The name of the certificate holder is printed on the certificate. In the case of licensees, all enquiries must be made with Agrément South Africa.
- copies of the Agrément certificate for the system being erected are readily available to all persons involved in the project with one copy being available at all times on site (typically certificates are 12 to 24 pages long, or longer in some instances. Copies are available from the certificate holder or may be obtained from Agrément South Africa's offices.
- during the erection phase, the terms and conditions of the certificate are being adhered to and the assessed construction details are being used.

The Board wishes to advise the public to notify Agrément South Arfica in writing of unsatisfactory service and problems arising from non-compliance with the requirements of the certificate. Notification can be made to Agrément South Africa at agrement@csir.co.za.

The Board also wishes to advise the public that it is vitally important before using a product with an Agrément certificate, that one needs to check that the certificate is still valid (i.e. that it has not lapsed or been cancelled). Valid certificates are listed on the Agrément website www.agrement.co.za.

On behalf of the entire Board I would like to thank Minister TW Nxesi and the Deputy Minister Jeremy Cronin for the their excellent leadership, guidance, robust energy, support as well as the warm relations they have maintained with the Board throughout the reporting period.

I wish to thank my fellow Board members for their continued support and active participation in the Board activities during the year under review. On behalf of the Board I wish to express my sincere gratitude to the hard working CEO Mr Joe Odhiambo, Technical Assessor Team Leaders Mr Sammy Skosana, Dr Benson Wekesa and Ms Mary Mabuse and the entire technical agency, especially the winner of the award for the best employee of the year, Ms Issie Thysse, for their exceptional contribution to yet another exceptional year's performance. We look forward to the future for the sustained excellent performance which has become the trademark of Agrément South Africa in its pursuit of continuing as a world-class technical assessment agency.

Mr Pepi Silinga Chairperson of the Agrément South Africa Board



Management Report



Mr Joe Odhiambo CEO of Agrément South Africa

Agrément South Africa continued its excellent performance during the reporting year. The first quarter saw the strong momentum of solid technical performance continue within the Agency with ongoing projects being completed and new ones being commenced. The projects underwent various stages of technical assessments and evaluations. The period also saw increased intensification in the level of technical assessment work within the agency. There was continued growth in interest for the adoption of innovative construction technologies. The Department of human settlements research task team on innovative construction technologies continued to work on guidelines and selection criteria for the use of innovative construction technologies.

In the past financial year the Board held regular meetings as is required by its mandate and continued its strategic oversight role over the agency. The Board discussions confirmed the current mandate of Agrément South Africa as being relevant and reiterated the important strategic role that Agrément South Africa plays in allowing the safe introduction of scientifically tested innovative construction systems. The Agrément South Africa concept is performance based where possible. It is a procedure for assessing innovations in the building and construction industry which facilitates and encourages the use of innovations by issuing fit-for-purpose certificated products and building systems. The certificate indicates to clients and building authorities that the building system, product or techniques are, in the opinion of Agrément South Africa, technically sound and capable of giving satisfactory performance. Certificates are granted after a successful technical investigation has been carried out. Agrément South Africa is an independent technical assessment organisation operating under a delegation of authority and reporting to the Ministry of Public Works. The organisation assesses the fitness-for-purpose of non-standardised building and construction products and systems by applying performance-based criteria in its assessment procedure. Where a system or product is assessed to be fit-for-purpose, the Board of Agrément South Africa grants it a certificate. These certificates are technical documents that:

- describe the system or product
- summarise the assessed performance
- list the uses for which the subject of the certificate has been assessed to be fit-for-purpose
- give the conditions and requirements that must be met if the assessed performance is to be attained
- state which National Building Regulations are deemed to be satisfied by the subject of the certificate.

As far as building systems are concerned, the following aspects are assessed:

- structural strength and stability
- behaviour in fire
- water penetration
- thermal performance and energy requirements
- durability and the maintenance required
- the likelihood of condensation forming on the inside of the building
- acoustic performance
- the applicant's quality management system.

In the case of products such as roofing materials, piping, roads products, etc., criteria appropriate to the subject and its intended use are applied. The subject of a certificate is reappraised if there are changes to the subject, or to Agrément criteria or to the relevant regulations.

In South Africa the Agrément concept has been in operation for 44 years and in this period a total of over 980 applications for certification have been received. Some of these applications were subsequently withdrawn and in other cases the applicants had to supply additional information before evaluation assessment offers could be prepared. Over 600 evaluation offers prepared by Agrément South Africa have been accepted. However, in some cases once the investigations were underway, the subjects failed to meet one or more of the Agrément South Africa's performance criteria and had to be modified by the applicants.

In this period a total of over 556 products or systems have received Agrément South Africa certification of fitness-for-purpose. This translates to an annual average of 21 applications for certification received, 13 applications accepted and 12 certificates granted. These average figures over the 45 year period of the existence of Agrément South Africa are used in setting our current annual performance targets. It is also important to note that the staff complement within the Agency has shrunk considerably over the period from over 20staff members to the current number of 13. The staff complement within the Agency has shrunk due the Agency developing its own in-house full-time technical staff members instead of relying on part-time staff members who acted as consultants to undertake the complex technical assessment work. This has led to the skill and competency level within the Agency rising considerably.

The construction industry uses more raw materials than any other sector, and the creation and operation of the built environment accounts for an important consumption of natural resources. There is also a pressing need to address the regeneration of many rural areas of South Africa, in particular the realisation of major infrastructure works. Certificated innovative non-standard products can play an important role in realising this objective as well as preventing sub-standard and inferior products from entering the market.

Agrément South Africa certification leads to improvements in the quality of construction by bringing to the fore modern, advanced and improved methods of construction. The Agrément South Africa's certification is thus contributing to both an improvement of the quality of innovations in the construction industry introduced on the market and assisting entrepreneurs, as well as in facilitating the task of local and other regulatory authorities which have to decide whether or not a given innovation is acceptable.

For the year under review Agrément South Africa acknowledges and appreciates the superb guidance and leadership from the Director-General Mr Mziwonke Dlabantu of the National Department of Public Works.

In the year under review Agrément South Africa continued to exercise its mandate and the activities which are listed below.

1. Agrément South Africa serves the consumer interest by providing assurance of fitness-for-purpose of innovative, nonstandard construction as well as on-going quality assurance.

Agrément South Africa certification leads to improvements in the quality of construction by bringing to the fore modern, advanced and improved methods of construction. The Agrément South Africa's certification is thus contributing to both an improvement of the quality of innovations in the construction industry introduced on the market and assisting entrepreneurs, as well as in facilitating the task of local and other regulatory authorities which have to decide whether or not a given innovation is acceptable or not. The thought of not having an independent technical assessment Agency are far too dire to contemplate. Agrément South Africa's role includes the dissemination of accurate, impartial and applicable technical information related to innovative construction technologies. This information is made available to any party in the country and is vital to assist those responsible for roll out of infrastructural developments nationwide. Information is shared regularly with other regulatory organisations as well as the building control officials to ensure that they are all kept abreast of the developments in the industry. The granting of all Agrément approved certificates are published in the Government Gazette. The full certificates granted are also published and listed on the Agrément South Africa web site (www.agrement.co.za).

2. Agrément South Africa works with the construction industry in the development of cost-effective, innovative technology and nonstandardised construction technology.

The draft bill for the creation of Agrément South Africa as a legal state entity was prepared by the National Department of Public Works after extensive consultation with industry stakeholders including the:

- The South African Bureau of Standards (SABS),
- The Council for Scientific and Industrial Research (CSIR),
- The National Regulator of Compulsory Specification (NRCS),
- The Construction industry Development Board (cidb),
- The Council for the Built Environment (CBE),
- The National Home Builders Registration Council (NHBRC),
- Professional bodies and several government departments.

The stakeholder consultations highlighted the need for additional funding to cater for adequate technical facilities, human resources, marketing awareness and visibility. The mandate of Agrément South Africa needs to be commensurate with the responsibilities placed on the agency to enable it to effectively execute its mandate.

The agency is prepared and looks forward with great enthusiasm to any strategic role it is trusted with by the new legislation or as deemed appropriate by the executive authority. The agency possesses specialised technical knowledge of the intricacies of the Innovative Construction Technologies (ICTs) also referred to as Alternative Buildings Technologies (ABTs). The agency is open to any role that may be deemed appropriate for it to play in this important government initiative to have 60% of all government construction by 2017 to be built using ABTs. The agency strongly believes the construction using ABTs heralds a brighter future but cautions that all the required precautions highlighted earlier must be addressed for it to succeed..

The agency believes that this Government initiative is a step in the right direction if the projects are executed strictly in accordance to the conditions of certification. It is pleasing to note that the agency possesses highly specialised technical knowledge of the intricacies of the non-standard construction technologies and is open to

any role that may be deemed appropriate for it to play in the implementation of these non-standard construction technologies. It is therefore vital for all government agencies to seek expert advice from Agrément South Africa prior to the implementation of any project using non-standard construction technologies.

In the reporting financial year, it has come to our attention that there is a lack of knowledge on the procurement and processes in the construction industry when non-standard or ABTs are being used. This has manifested in various forms including but not limited to:

- Conditions of certification not being adhered to
- Inadequate design input and/or site supervision
- Unacceptable quality of standard aspects of the project while the innovative or nonstandard aspects of the project are acceptable.

Examples are foundations, doors, windows, roofing and ceilings which may be specified as conventional in the certificate that need to be designed or specified by the client's professional team.

In order for the public to protect themselves and their clients or end users, Agrément South Africa urges all persons and organisations specifying and overseeing the erection of these systems to ensure that the following conditions of certification are strictly adhered to:

- Clients who use Agrément-approved building systems are required to inform and register the projects with the agency.
- Contract documents should state that the building or buildings are to be erected in accordance with an approved Agrément South Africa certificate.
- Ensure that the certificate is still valid by referring to Agrément South Africa's website www.agrement.co.za or by contacting the offices of Agrément South Africa on Tel 012 841 3708.
- Any variations from the certificate have been approved by Agrément South Africa in writing. Certificate holders are obliged to inform clients of any variations from the certificate.

- The party responsible for the supply and erection of the system is the certificate holder or a licensee of the certificate holder who is registered with Agrément South Africa. The party responsible for erection must also be registered with the cidb register of contractors http://registers.cidb.org.za/reports/contractorlisting.asp. It is important to ensure that the name of the certificate holder is what is printed on the certificate. In the case of licensees, all enquiries should be directed to Agrément South Africa.
- Ensure that copies of the Agrément certificate for the system being erected, should be readily available for all persons involved in the project with one copy being available on site at all times. Typically certificates are 12 to 24 pages long, or longer in some instances. Copies are available from the certificate holder or Agrément South Africa.
- Ensure that during the erection phase, the terms and conditions of the certificate are adhered to and the assessed construction details are being used.
- The system is installed or used in accordance with the technical description set out in the certificate and the certificate holder's installation manual or specification, good building practice and the Conditions of Certification.

Any change to material formulations, the production process, or the installation techniques as set out in the certificate holder's specifications could result in various aspects of the performance of this product no longer complying with Agrément South Africa's performance criteria. Any change not authorised by Agrément South Africa in writing prior to its implementation will invalidate the Agrément certificate and the certificate can then not be used to demonstrate compliance with the National Building Regulations.

Please note that Agrément assessments cover the non-standard aspects of the system and how these affect the standard aspects of the system and vice versa. Aspects or components of manufacture, construction and erection not specifically covered in the certificate must be addressed in the contract administration and management, that is, in accordance with project specifications, South African National Standards, Codes of Practice and good building practice.

Agrément South Africa considers that the quality and performance of the non-standard construction technologies will be satisfactory, provided that the requirements stipulated in this certificate are adhered to. However, Agrément South Africa does not on behalf of itself, or the state, or any of its employees or agents guarantee such quality or performance. Responsibility for compliance with the requirements of this certificate and the quality of the finished product resides with the certificate holder. It is the professional team's responsibility to ensure erection is carried out in accordance with the certificate.

In the event of unsatisfactory service and problems arising from non-compliance with the requirements of the certificate, reports are invited to be submitted in writing to Agrément South Africa. The agency is available and willing to provide support and advice to any client who wishes to use an Agrément approved system.

Several innovative construction systems have the potential to be cost effective. Some of the systems certificated could have advantages over conventional systems in that they can be completed faster than conventional ones. Others could cost less than conventional systems. The current emerging trend is for energy-efficient structures and the agency is looking forward to playing its regulatory responsibility by evaluating appropriate software for the assessment of energy efficiency in buildings.

3. Agrément South Africa disseminates correct, objective and relevant information to all concerned in respect of the technical, socio-economic and regulatory aspects of innovative technology and non-standard construction technology.

Agrément South Africa maintains a database of hundreds of industry stakeholders with whom it maintains regular contact. This is important to keep the industry stakeholders abreast of developments in the innovative construction industry. Any new criteria as well as any certificate approvals are shared with the stakeholders. This ensures that any new information is received in the industry.

4. Agrément South Africa continues to support policy makers at all levels to minimise the risks associated with the use of innovative technologies. The agency's staff members are actively involved in the SABS's standards generation committee and various other technical committees.

In South Africa, several buildings exist that were constructed many decades ago and it is therefore important that the buildings constructed today should be in existence and still be suitable for habitation several decades into the future. We are all aware of the global environmental challenges facing the world and it is therefore imperative for Agrément South Africa to take cognisance of these factors. It is anticipated that the following factors will play an important role in the future of construction in South Africa.

- Designs will need to take into account climate changes predicted to occur.
- Environmental sustainability to play a key role in the selection of the technologies to be used.
- Limit the negative impact on the environment by minimising construction waste and reducing the carbon footprint.
- Promotion of the use of marginal materials as conventional material are becoming scarce.

The cidb standard conditions of tender contain clauses which permit alternative tender offers (clause F.2.12). This provides an avenue for innovative construction products to be submitted in tenders and thus provides an avenue for the promotion of innovations. In order to promote alternative Agrément-certificated solutions which could lead to developments in the market place or improvements in performance, the following needs to be

undertaken by project implementing agencies.

- Provision of sample clauses for inclusion in the scope of works of a design and construct or develop and construct contracts to brief contractors on requirements and to enable alternative proposals to be evaluated and accepted.
- Develop sample clauses for inclusion in the tender data to enable alternative technologies for buildings to be evaluated.
- Develop clauses for inclusion in the scope of work for professional service providers to review alternative design.
- Publish a guide to promote the use of alternative technologies on public sector contracts.

These initiatives will provide opportunities that will ensure Agrément South Africa will remain effective, appropriate and relevant to the current and future needs of the South African construction industry.

Agrément South Africa maintains industry links with other regulatory bodies. Interaction with the SABS is vital. Any new application for an Agrément South Africa certificate is checked against SABS standards to see whether existing SABS standards cover the product. Agrément South Africa only accesses products for which no national standards have been developed. The SABS is represented on the Board of Agrément South Africa by Mr Frank Makamo.

5. Agrément South Africa supports the application of the National Building Regulations.

The Agrément certification process supports the National Building Regulations (NBR) by offering an authoritative, independent and complete assessment of non-standard systems, products or materials. Certificates indicate which regulations are deemed to be satisfactory as well as the uses for which the subject is considered suitable. Furthermore, certificate holders are required to have fully functional quality systems in place that provide assurance of quality consistency of the end product.

Compliance with the functional requirements of the National Building Regulations (NBR) may be demonstrated by:

- adhering to all prescriptive requirements of South African National Standard (SANS) 10400
- appointing a competent person to carry out a rational design in terms of SANS 10400
- adhering to the requirement of a valid Agrément certificate
- appointing a competent person who satisfies the sub-regulation (1) in terms of sub-regulation (1)(b)(ii) to demonstrate, or to predict with certainty, to the satisfaction of the local authority, that the non-standard system, product or material has an equivalent or superior performance to that required of similar subjects in SANS 10400. Where doubt remains as to the efficacy of a solution proposed following this process, the local authority may call for further assurance in the form of a test report from the SABS or the CSIR, where appropriate, or an Agrément certificate.

6. Agrément South Africa actively maintains international links with peer organisations and continues to support the South African construction industry in its export activities by facilitating the approval of South African innovative construction products to countries abroad.

The World Federation of Technical Assessments Organisations (WFTAO) is a worldwide network for coordinating and facilitating the technical assessment of innovation in the construction field.

The WFTAO comprises officially recognised national bodies active in the field of technical assessments for construction products and systems. The WFTAO currently has 23 member organisations from 22 countries across the global market.

The members of the WFTAO deliver favourable technical assessments of the fitness for use and continuing quality of innovative products and systems that deviate from established standard specifications.

A technical assessment in the sense of the WFTAO is an authoritative favourable declaration of technical fitness for an intended use of an innovative or non-standardised construction product, service or process.

The primary objective of the WFTAO is to facilitate the transfer of national products to the global marketplace through the acceptance of technical assessments delivered by its members. acceptance of technical assessments delivered by its members. Assessments delivered by a WFTAO member will:

- provide a means of demonstrating the fitness for purpose of the product with building regulations
- be more readily accepted by building control personnel
- show that the holder's manufacturing and QA systems meet high standards
- save valuable selling time, by easing acceptance of new products in a conservative market
- provide a good opportunity for media coverage for the holders to use the distinctive WFTAO logo on advertisements.

Agrément was established for scientific and technical advice regarding complex non-standardised implications of modern construction technology and scientific research. In view of the growing global pool of knowledge in science and technology and its relevance in the advancement of humankind, it is important for South Africa to have an independent technical assessment agency. Agrément as a founder member of the WFTAO plays an important role in promoting the use of innovative construction systems products and materials in South Africa. Another complementary role is the facilitation of non-standard construction products by local firms to the broader Southern African export market. WFTAO activities facilitates cooperation with a group of similar institutions with relevant expertise in the field of technical assessment worldwide. Unfortunately Agrément South Africa is the only WFTAO member from Africa and has been tasked with encouraging the uptake of membership by African technical assessment institutions to the WFTAO.

The following organisations are members of the WFTAO.

No.	Country	Organisation	Abbreviation
1.	Australia	Australian Building Codes Board	ABCB
2.	Brazil	Instituto de Pesquisas Tecnológicas do Estado de São Paulo S.A.	IPT
3.	Canada	Canadian Construction Materials Centre, NRC	ССМС
4.	Czech Republic	Technical and Test Institute for Construction	TZUS
5.	Denmark	ETA-Danmark	ETA
6.	Finland	VTT Building and Transport	VTT
7.	France	Centre scientifique et technique du bâtiment	CSTB
8.	Germany	Deutsches Institut für Bautechnik	DIBt
9.	Hungary	Non Profit Company for Quality Control and Innovation in Building	ÉMI Kht
10.	Ireland	NSAI Agrément	NSAI
11.	Israel	National Building Research Institute	NBRI

No.	Country	Organisation	Abbreviation
12.	Japan	The Building Center of Japan	BCJ
13.	Japan	The Center for Better Living	CBL
14.	New Zealand	Building Technology Limited/BRANZ	BRANZ
15.	Norway	Norges Byggforskningsinstitutt	NBI
16.	Poland	Instytut Techniki Budowlanej	ITB
17.	Portugal	Laboratório Nacional de Engenharia Civil	LNEC
18.	Romania	Institutul National de Cercetare-Dezvoltare in Constructii si Economia Constructiilor	INCERC
19.	Russian Federation	Science-Technical Centre for Certification in Construction	FCC
20.	South Africa	Agrément South Africa	ASA
21.	Spain	Instituto de Ciencias de la Construccion	IETcc
22.	United Kingdom	British Board of Agrément	BBA
23.	United States	ICC Evaluation Service Inc	ICC-ES

7. Agrément South Africa continues to facilitate the acceptance of innovative products within the context of the government's new priorities and policies.

Construction uses more raw materials than any other sector, and the creation and operation of the built environment accounts for an important consumption of natural resources. There is also a pressing need to address the regeneration of many rural areas of South Africa, in particular the realisation and rehabilitation of infrastructure works. Innovative non-standard products can play an important role in realising this objective as well as preventing sub-standard and inferior products from entering the market. One question that needs to be answered is whether South Africa can afford not to have a technical assessment agency. The risk of wanton use of non-standard products without an independent technical assessment agency is too great to contemplate and is one of the primary reasons for the setting up of the agency.

Several new projects have been rolled out in the recent past using innovative construction products and systems. There have been several successes where Agrément South Africa-approved, innovative construction systems or products have been used. One vital aspect is the certificate holders are obliged to comply fully with all aspects of certification as any change in one aspect could change several aspects of performance. The growing use of innovative construction systems illustrates the confidence in innovative construction technologies.

Quality management audits play an important role in ensuring the certificate holders maintain an adequate standard of manufacturing,

transporting and erection of their products. The audit inspections are carried out in accordance with ISO9001-Quality Management Systems and are designed to ensure Agrément South Africa meets the needs of customers and stakeholders. The Agency currently has three SABS-qualified auditors.

Queries may be referred to Agrément South Africa's Mary Mabuse, mmabuse@csir.co.za or telephone: (041) 371 371; 072 7540 684.

The purpose for establishing Agrément South Africa was to advise and disseminate scientific and technical knowledge on the implications of the using complex and non-standardised innovative construction technology and scientific research. In view of the growing global pool of knowledge in science and technology and its relevance in the advancement of humankind, the need for Agrément South Africa as an independent technical assessment body has never been greater.

The agency strongly believes construction using ABTs heralds a brighter future but warns that unless all the required precautions are taken into consideration it may result in an absolute disaster. However it is pleasing to note that the agency possesses specialised technical knowledge of the intricacies of the ABTs and is open to any role that may be deemed appropriate for it to play in the implementation.

The national Cabinet approved the gazetting of the draft Agrément South Africa Bill on 4 December 2013 and the Memorandum on the objects of the Bill was published in the Government Gazette on 17 January 2014. The public were invited to submit comments to the national department of public works before 17 February 2014. Thereafter the Bill will follow the normal legislative process prior to being enacted as a national Act of Parliament.

The draft Bill makes provision for the recognition of Agrément South Africa as a public entity. The Board of Agrément South Africa is mandated to, among others, evaluate the fitness-for-purpose of non-standardised construction-related products or systems for use in the construction industry, and for which a national standard does not exist.

This will contribute to the creation of a dynamic and innovative construction industry that positively impacts on job creation while contributing to government's infrastructure plans.

Agrément South Africa proposes that to promote the use of various Agrément-certificated solutions which could lead to developments in the market-place or improvements in performance, the following needs to be undertaken by project implementing agencies:

- Inclusion of clauses in the scope of works for design and construct or develop and construct contracts to brief contractors on requirements and to enable alternative proposals to be evaluated and accepted.
- Inclusion of data in the tender documents to enable alternative technologies for buildings to be evaluated.
- Inclusion of clauses in the scope of work for professional service providers to review alternative design.

A need further exists to publish guidelines on the use and promotion of alternative technologies in public sector contracts. The cidb standard conditions of tender can be used as a starting point to develop guidelines for procuring innovative construction technologies. The conditions already have clauses which permit alternative tender offers (clause F.2.12), which provide an avenue for procuring innovative construction products.

The agency ensured it achieved its quarterly and annual targets by intensifying its efforts and ensuring that all targets were met within the required timeframes and well as to the required quality of performance. An upward trend in the applications for technical assessments was noticed within the reporting period. This was also complemented by several products being certificated as fitfor-purpose. In the reporting period the criteria for the assessments and accreditation for traffic and weigh-in-motion system suppliers were completed and advertisements placed in the local media. The advertisements received much interest from industry suppliers of the traffic and weigh-in-motion systems. These applications will lead to the assessment and accreditation of the approved suppliers. The advantage of traffic and weigh-in-motion systems is that heavy traffic will be able to be weighed while still in motion unlike the current system which requires the heavy truck to be stationary to be weighed.

Agrément South Africa would like to recognise and appreciate the support from the CSIR Built Environment unit and in particular the Executive Director, Dr Cornelius Ruiters and the shared services team without whom Agrément would not have been able to achieve its objectives.

Agrément South Africa would like to thank the Chairperson of the Technical Committee of the Board, Mr Jeffery Mahachi, as well as the entire team of industry technical experts who serve on the technical sub-committees for their immense contribution, attention to detail, commitment and dedication which are the cornerstone of the technical assessments.

Agrément South Africa would also like to thank the Chairperson of the Board Mr Pepi Silinga and the entire Board for its oversight role and strategic leadership which has guided Agrément South Africa to yet another extremely successful year.

In conclusion, on behalf of the agency and the Board of Agrément South Africa, I would like to sincerely thank the Minister, Mr TW Nxesi and the Deputy Minister, Mr Jeremy Cronin for their collective guidance, support and encouragement during the entire year and in particular for bringing the Agrément South Africa Bill to Cabinet.

be Odhiambo

JOE ODHIAMBO CEO OF AGRÉMENT SOUTH AFRICA

Financial Statements

Internal Audit Services (IAS) has been requested to provide a certificate to confirm the attached statement of income and expenditure incurred for **Agrement South Africa** for the period 01 April 2013 to 31 March 2014.

IAS confirms that the statement agrees with the balances for the project in the financial records of the CSIR. In addition, IAS has performed the following audit procedures:

- Agreed income received to supporting documentation.
- Verified on a sample basis, the labour hours per the accounting records to the approved timesheets and the labour rates to the approved charge out rates per the accounting records.
- Selected a random sample of running expenses and agreed to supporting documentation.

The results of the above procedures are satisfactory and no exceptions were noted.

The validity of the transactions charged to the project has not been audited. However, IAS performs an annual review of the key controls to cover aspects of proper authorisation, validity of transactions, proper recording and others. The results of the previous audit conducted did not yield issues of concern. As at March 2014, management has calculated interest to the amount of R162 442. The interest was allocated to Agreement based on the compound interest method. IAS has tested the accuracy of the interest calculations.

The statement of income and expenditure reviewed is attached and signed for identification by ourselves.

Regards

valo

PONI NGWATO MANAGER: RISK ASSURANCE AND IT CSIR INTERNAL AUDIT SERIVCES 18 AUGUST 2014



CSIR- Built Environment

Statement of Revenue and Expenditure for Agrement South Africa

Period: 1 April 2013 to 31 March 2014

	2013/2014	2012/2013
REVENUE	11 052 016	9 933 321
Parliamentary Grant	9 121 053	8 692 992
Parliamentary Grant: Agrement South Africa	9 121 053	8 686 842
Parliamentary Grant: CSIR	-	6 150
Contract Income	1 930 963	1 240 329
Local private sector	1 688 133	1 138 529
Local public sector	5 000	31 400
International sector	237 830	70 400
Other Income	4 250	14 170
Total operating income	11 056 266	9 947 491
Running expenses	10 911 181	10 298 870
Employees 'remuneration	5 624 813	5 411 237
Depreciation	278 171	439 947
Operating expenses	5 008 197	4 447 686
Other expenses	-	-
Total operating expenditure	10 911 181	10 298 870
Finance income	162 442	185 755
Profit/ (loss) for the year	307 527	(165 624)

Certificates Granted

Building System/Product

General Description



Weber Brush Coat

The Weber Brush Coat is a single-coat application for weather- proofing walls in all regions of South Africa. It is applied using a block brush on cast in-situ and precast concrete, unrendered concrete bricks or hollow concrete blocks, un-rendered clay bricks and sand-cement rendered substrates. It is supplied in 20 kg bags and mixed on site with water.

Exelis Development Building System



The Exelis Development Building System is a combination of innovative and conventional construction method. It is a single-storey structure that utilises factory-produced wall and roof panels. Walls are light-weight sandwich panels comprising a polyurethane (PU) or expanded polystyrene (EPS) core encapsulated in two layers of magnesium oxide (MgO) boards. Foundations are conventional concrete designed by a professional engineer or a competent person. The roof panels are of the same material as the wall panels which are covered externally with light or heavy-weight cladding. Alternatively the roof is conventional. Windows and door frames and all other services are conventional. The Exelis Development Building System is for the erection of single-storey buildings for occupancy classes including small shops (F2), offices (G1), dormitories (H2), domestic residences (H3), and dwelling houses and other related outbuildings (H4).

RPM PHB Building System



The RPM PHD Building System is for a single-storey structure which is based on a sandwiched panel-system in which fibre cement boards encapsulate a polyurethane core. The system incorporates galvanised light-weight steel frames. The walls are finished with waterproof skim plaster and joints are sealed with a silicon-based sealant. The panels are delivered with factory-fitted window and door frames, electrical conduits and plumbing already inserted. Foundations are conventional concrete which are designed by a professional engineer or a competent person. The roof is constructed of standard light-weight steel trusses clad with metal sheeting, concrete roof tiles or Agrément-approved cladding. The RPM PHD Building System is for use in all areas of South Africa for the erection of single-storey buildings for occupancy classes including places of instruction (A3), low-risk commercial (B3), industrial (D1, D2 and D3), hospitals (E2), other institutional (residential) (E3), shops (F1, F2 and F3), offices (G1), hotels (H1), dormitories (H2), domestic residences (flats and row houses) (H3), and dwelling houses (and related out-buildings) (H4).



General Description

Coffor Structural Formwork Building System

The Coffor Structural Formwork Building System is a permanent shuttering system for reinforced concrete structures. It consists of two expanded metal laths, attached to vertical stiffening sections. The set of metal lath and stiffening sections are further strengthened by a horizontal rebar. Foundation and floor slabs are conventional concrete. The ground-floor slab has starter bars for anchoring the wall to the foundation. The design and detailing of all reinforcement steel bars are the responsibility of a professional engineer.

The walls are constructed by placing the permanent shuttering system in position, starting from the corners or openings and concrete is cast to form a reinforced concrete core. The suspended floor slabs, beams and supporting columns, where applicable, are designed, detailed and constructed in accordance with SANS 10100. Walls are finished externally with a pratliperl plaster and internally with conventional plaster. The roof is conventional and is constructed of either timber or light-weight steel trusses with light or heavy-weight roof cladding. Door and window frames and all other services are conventional. The Coffor Structural Formwork Building System is for erection of single and multi-storey buildings for occupancy classes including places of instruction (A3), moderate and low-risk commercial service buildings (B2 and B3), low and moderate-risk industrial (D1 & D2), offices (G1), hotels (H1), dormitories (H2), domestic residences (H3), and dwelling houses and related buildings (H4).



Specialised Insulated Panel Building System

The Specialised Insulated Panel Building System is constructed with prefabricated components that are assembled on site. The foundation and floor slab are conventional concrete. The walls comprise expanded polystyrene (EPS) core with fire-stop board on the inside, both encapsulated by pre-galvanised chromadeck sheeting. Roofs comprise the same material as the wall panels. Window and door frames are aluminium, and are purpose-made. Plumbing and electrical conduits can be pre-fixed or surface mounted. The Specialised Insulated Panel Building System is for the erection of single-storey buildings for occupancy classes including domestic residences (H3) and dwelling houses (detached houses) and related outbuildings (H4).



Febajoint Bridge Deck Expansion Joint System

The Febajoint Bridge Deck Expansion Joint System is an asphaltic plug joint utilising imported binder and local aggregates, bridging plates and drainage channels. The binder and aggregates are heated on site and combined in situ to form a 'plug' in a trench cut through the deck surfacing. The 'plug' is installed over a bridging plate which covers the expansion joint gap. The joint is installed in terms of a license agreement with Universal Sealants (UK) Ltd who also supply the binder.

General Description



Britflex (BEJ) Bridge Deck Expansion

Joint System The Britflex (BEJ) Bridge Deck Expansion Joint System is a single seal, surfacemounted system. The elastomeric seal is inserted into housings formed in two metal runners or carrier rails. A sinusoidal anchorage is welded to the rail and the assembly is set into a patented, rapid curing elastomeric resin compound known as Britflex Resin Mortar. The joint is installed in terms of a license agreement with Universal Sealants (UK) Ltd (USL) who also supply the resin mortar.

AquaFRICTIONCourse Road Surfacing System



AquaFRICTIONCourse (AFC) road surfacing system is an ultra-thin friction course (UTFC) bituminous surfacing system, with a nominal compacted thickness of between 16 and 20 mm. It consists of open-graded asphalt placed on a film of COLTACK L tack coat by self-priming paver. The tack coat provides a seal to the existing surface, while the AFC mix provides the functional friction course. The product is to be used as a wearing course for heavily trafficked highways and major roads. The product is proudly South African, it was developed by Aqua Transport and Plant Hire (Asphalt division) and Specialised Road Technologies (SRT) laboratories. A mix design is performed for every project and the design engineer ensures that the design is carried out in accordance with the design method as stipulated by Aqua Transport and Plant Hire (Pty) Ltd (Asphalt Division). The system was assessed for use on roads classified as category 1B, (2B) which means that the certificate is valid for use:

- In lanes with a speed limit > 60km/h
- gradients $\leq 6\%$
- annual Average Daily Truck Traffic (AADTT) is between 2 000 and 7 000.

StarFront Software for designing compliant aluminium windows and doors

Starfront Designer cost and cutting computer software is intended to assist the manufacturers of aluminium window, door and shop-fronts to design, cost and manufacture products based on Wispeco (Pty) Ltd's aluminium extrusion systems. Functions and capabilities offered in the software include:

- the setting of user options and maintenance of master data files
- contract document management
- contract costing
- report creation
- software tools allowing the generation of and delivery via e-mail of quotations and contracts to clients, requests for software and technical support from Wispeco, cutting lists to factories and the ordering of materials from suppliers
- the setting of parameters and design properties pertaining to glass, aluminium window profiles, window hardware, handles, catches, latches and hinges access to documentation on-line a Help facility.

The software is used by organisations approved by and subject to the terms and conditions of Wispeco (Pty) Ltd.





General Description

IES Virtual Environment Software (Version VE 2013)

IES Virtual Environment Software (version VE 2013) is an integrated software system for environmental performance assessment of buildings. Dynamic thermal simulation is carried out using ApachemSim calculation methods and software. The software provides tools specifically designed for both architects and engineers to design buildings that consume significantly less energy and incorporate low carbon and renewable technologies.

The software version VE 2013 may be used for the rational design of air-conditioned buildings or naturally ventilated buildings of all occupancies in terms of the requirements of Regulation XA3 b) and c) of Part XA: Energy usage in buildings of the National Building Regulations.

Ukuzwana Building System

The UkuZwana Building System is for the erection of single-storey structures utilising factory-produced or cast in-situ cellular light-weight concrete (CLC) wall panels. The foaming agent for CLC is Neopor. Wall panel incorporates service connections and door and window openings. Foundations are the conventional cast in-situ concrete and are the responsibility of a professional engineer. The roof consists of either a pitched timber roof trusses or waterproofed precast concrete slab. Doors and window frames are either fixed into openings on site after erection of the wall panels or are cast in place during manufacturing. All other aspects of construction are conventional. The UkuZwana Building System is for the erection of single-storey buildings for occupancy classes including places of instruction (A3), moderate risk commercial services (B2), low risk commercial services (B3), small shops (F2), other institutional (residential)(E3), moderate risk storage (J2), low risk storage (J3), offices (G1), hostels, semi-detached, row and detached houses (H2, H3 and H4).

Non-tacky Tack Coat (nt-cote)

The Non-tacky Tack Coat consists of 50/70 penetration grade bitumen that complies with the requirements of SANS 4001 – BT1:2012, emulsifier and filler which comply with the confidential specification under the manufacturer's control. The water conforms to national standards for potable water (SANS 241:2011). The Non-tacky Tack Coat is applied to asphalt surfacing in a manner similar to the conventional SS60 tack coat.

The Non-tacky Tack Coat is an effective binding agent for an overlaid asphalt layer. It has a lower tackiness than the SS60 tack. The Non-tacky Tack Coat does not ultimately prevent pick-up tack however, it retards pick-up of the tack under construction vehicles. Also, it does not decrease the inter-layer asphalt strength in any way. It is safe to use by workers and friendly to the environment. Non-tacky Tack Coat (nt-cote) is for use as a binding agent for an overlaid asphalt layer while simultaneously allowing for limited trafficking of construction vehicles prior to the asphalt overlay being placed. It is applied to the surface at a rate of 0.6 l/m² at ambient temperature prior to the application of an asphalt overlay.





General Description



Modified Calcium Carbonate Coating System

The Modified Calcium Carbonate Coating System is a single-coat, polymer-based, textured, coloured wall coating for use on all sound, and suitably prepared surfaces. It is suitable for use in all regions of South Africa for all types of occupancy classifications with restrictions. It is available in a variety of colours. It is packaged in 5 litre and 20 litre containers. It is thoroughly stirred on site at regular intervals to prevent settlement and it is applied using a block brush or a lamb's wool roller.

FrictionPave: Ultra-thin Bituminous Surfacing System

FrictionPave is an Ultra-thin Friction Course (UTFC) bituminous road surfacing system with a nominal compacted thickness of between 16 and 25 mm. It is placed on a tack coat using a self-priming paver.

The tack coat provides a seal to the existing surface and ensures a high tensile bonding between the friction course mix and the existing surface. The FrictionPave has been designed as a thin surfacing or re-sealing layer to provide the functional friction course and to preserve the underlying road base structure. It is a South African product.

The mix design, manufacturing and placing of the product is strictly controlled and under the supervision of a competent person and approved by the manufacturer's design engineer. The application category is 1B and 2A which means that the certificate is valid for:

- a maximum Annual Average Daily Truck Traffic (AADTT) of up to 7 000 in free-flowing traffic situations, and
- an AADTT of up to 2 000 in a situation with slow traffic, such as intersections and lanes with inclines of more than 6%, respectively.

NEOPOR Building System



The Neopor Building System is for single and double-storey structures. The walls are constructed of Cellular Light-weight Concrete (CLC) cast in-situ. The CLC consists of sand, cement, water and Neopor as the foaming agent. Externally walls are finished with a 15 mm sand-cement plaster.

Foundations are conventional concrete cast in-situ and are the responsibility of a professional engineer. The roof consists of conventional pitched timber or steel roof trusses clad with metal sheeting, concrete roof tiles or Agrément-approved cladding. Doors and window frames are fixed on site into openings after casting or erecting of the walls. All other aspects of construction are conventional. The Neopor Building System is for the erection of buildings for occupancy classes including places of instruction (A3), offices (G1), dormitories (H2), domestic residences (semi-detached houses or row houses) (H3), dwelling houses (detached houses) and related outbuildings (H4). Double-storey buildings include domestic residences (semi-detached houses or row houses) (H3), and dwelling houses (detached houses) and related outbuildings (H4).



General Description





Power Profile Building System utilises both conventional and innovative aspects of construction. The foundations are conventional and the responsibility of the engineer. The external walls are structural prefabricated panels made up of expanded polystyrene core encapsulated by zincalume sheets. The inside face of the panel is lined with Isover glasswool cavitybatt insulation and fire-stop board. Internal walls are made from the same panel as the external walls but with fire-stop boards on either side. All external wall panels are finished with two coats of water-based acrylic paint or any similar Agrément-certified paint. One coat of the same paint is applied on the internal walls. In corrosive conditions the external wall facings require special treatment. The roof structure is conventional and the design and erection are the responsibility of an engineer. Windows and door frames are made up of aluminium or steel, and provisions for all openings are pre-cut during the panel manufacturing stage. Electrical and plumbing services and/or conduits are conventional. The Power Profile Building System is for the erection of single-storey buildings for occupancy classes including places of instruction (A3), moderate and low-risk commercial service buildings (B2 and B3), low and moderate risk industrial (D1 & D2), small shops (F2), offices (G1), hotels (H1), dormitories (H2), domestic residences (semi-detached houses or row houses) (H3), dwelling houses (detached houses) and related outbuildings (H4).

Appletech Light Steel Frame Building System



The Appletech Light Steel Frame Building System comprises cold rolled light-gauge steel sections designed and erected in accordance with SANS 517. The foundations and the floor slab are conventional and are the responsibility of a professional engineer. The frame has Cavibatt glasswool as infill material and is clad internally with fire-stop Gypsum board. It is clad externally with an Oriented Strand Board (OSB). This is further covered by a vapour permeable membrane and a 2-mm thick profiled polyvinyl-chloride (PVC) layer. Window and door frames are conventional and are installed in a pre-set frame that includes PVC modules at the factory. They can either be galvanised steel, aluminium or timber. The roof trusses are constructed from light-gauge galvanised steel channel sections or timber with light or heavy-weight cladding and are the responsibility of an engineer.

Electrical conduit holes are incorporated in the frame and all other services are conventional. The Appletech Light Steel Frame Building System is for the erection of single-storey buildings for occupancy classifications including places of instruction (A3), moderate risk commercial (B2), low-risk commercial services (B3), small shops (F2), other institutional (residential) (E3), offices (G1), domestic residences (H3), dwelling house and related outbuildings (H4), moderate-risk storage (J2), and low-risk storage (J3).

General Description

Conform Building System

The Conform Building System utilises conventional concrete foundations and surface bed that are the responsibility of the professional engineer. The superstructure walls are constructed of sliding and interlocking polyvinyl-chloride (PVC) modules incorporating vertical and horizontal cavities in which reinforcement steel are installed and filled with concrete. The PVC modules provide permanent shuttering. A continuous concrete ring-beam which incorporates roof holding-down anchors is cast at door or window height to support the roof structure. The roof is constructed of conventional light-weight steel or timber trusses, with light-weight or heavy-weight roof cladding. The roof is always insulated with EPS and a conventional ceiling is installed. Window and door frames are conventional and are installed in a pre-set frame that includes PVC modules during factory production. All other aspects of construction are conventional. The Conform Building System is for use in all regions of South Africa for the erection of single-storey buildings for the occupancy classes including places of instruction (A3), moderate and low-risk commercial service buildings (B2 & B3), moderate and low-risk industrial buildings (D2 & D3), small shops (F2), offices and day-care clinics (G1), hostels, semi-detached, row and detached houses (H2, H3 & H4).

Ezee Build Modular Building System



The Ezee Build Modular Building System utilises conventional concrete foundations and surface bed, which are the responsibility of the professional competent engineer. The superstructure walls comprise galvanised three-dimensional welded wire mesh cages, connected with specially designed connectors (stools, shoes, etc.), which are filled with polystyrene slabs and finished both sides with structural plaster. Roofs are constructed of conventional light-weight steel or timber trusses with light-weight or heavy-weight roof cladding. Window and door frames are conventional and are installed in a pre-set frame module during factory production. All other aspects of construction are conventional. The Ezee Build Modular Building System is for erection of single-storey buildings for the occupancy classes including entertainment and public assembly, places of instruction,worship, outdoor sport (A1, A3, A4 and A5), moderate and low-risk commercial service buildings (B2 and B3), moderate, low-risk industrial buildings and plant rooms (D2, D3 and D4), small shops (F2), offices and day-care clinics (G1), hotels, dormitories, domestic residences, dwelling houses and hospitals (H1, H2, H3, H4 and H5), and parking garages (J4).

General Description

Rhino Linings Waterproofing System

The Rhino Linings Waterproofing System is a two-part coat liquid application for use in all regions of South Africa on sound, suitably prepared, external outdoor surfaces as follows:

- waterproofing layer to trafficable concrete roof surfaces suitable for pedestrian traffic and light vehicular traffic including car parking
- on normal sand/cement screeds and other smooth substrates
- pre-manufactured thermal insulation boards
- tanking to basement walls and floors and a waterproofing layer behind retaining walls.

Rhino Linings Waterproofing System comprises a two-part coat liquid spray applied polyurethane-based waterproofing system. It is applied evenly using a spray to a minimum thickness of 3 mm on horizontal surfaces and a thickness less than 0.5 mm on vertical. Where the thickness exceeds 0.5 mm on vertical surfaces, safety distances will apply. The water proofing coat is available in black and brown colours.







Directory of Active Certificates

Directory of Active Certificates

Active Certificates

Bridge Deck JointsCellBRITFLEX Bridge Deck Expansion Jouint SystemStoArmoured And Asphaltic Plug (Via-Joint) Bridge Deck Road Expansion JointsFreeFebajoint Bridge Deck Expansion JointStoFPC-SA80 Single ElementFreeBSP 40 Bridge Deck Expansion JointDSBSP 80 Bridge Deck Expansion JointDSHonel E80 Bridge Deck Expansion JointHoMaurer D80C (FP) Bridge Deck Expansion JointDSMaurer Multi-element Bridge deck expansion JointDSThormajoint Bridge Deck Expansion Joint System DSDS

Ceilings

Isoboard® Nail Up Insulated Ceilings

Concrete: Additives

Cazeden S-Crete Fibres Moladichem Oxyfibre

Damp-proofing

Gundle Gunplas DPC 250 Gundle USB 170 GB damp-proof membrane Gundle USB 170 GB under surface-bed membrane

Insulation

IsoBoard® Over Rafter and Truss Insulation Isoboard® Cavity Wall Insulation Isoboard® Inverted Roof Insulation Isoboard® Over Purlin Roof Insulation Isotherm Thermal Insulation

Certificate Holder StonCor Africa (Pty) Ltd Freyssinet Posten (Pty) Ltd StonCor Africa (Pty) Ltd StonCor Africa (Pty) Ltd Freyssinet Posten (Pty) Ltd DSC-Zendon cc DSC-Zendon cc Honel Structural Products (Pty) Ltd Honel Structural Products (Pty) Ltd DSC-Zendon cc DSC-Zendon cc Bridge Jointing & Rehabilitation Contractors

Certificate Holder Isofoam (South Africa) (Pty) Ltd

Certificate Holder PropetFibre SA (Pty) Ltd Multi Construction Chemicals (Pty) Limited Oxyfibre (Pty) Ltd

Certificate Holder Gundle API (Pty) Ltd Gundle API (Pty) Ltd Gundle API (Pty) Ltd

Certificate Holder

Isofoam (South Africa) (Pty) Ltd Brits Textiles, a division of Seardel (Pty) Ltd

Plumbing

Africooker Geberit HDPE Above Ground Soil Geberit Pluvia Syphonic Roof Drainage System

Product

Non-tacky Tack Coat (nt-cote) JoJo Liquid Septic Tanks RotoTank™ Water and Liquid Storage Tanks EcoTanks Water and Liquid Storage Tanks Calcamite Water and Liquid Storage Tanks Betcrete Polycrete Window Sill Betcrete Polycrete Door Frames and Windows JoJo Liquid Storage Tanks Quick Sill

Roofing Products

Spunsulation Illumina Roofing Radiant Barrier Spunsulation 4 Contractors Choice Cyclo Roof Tiles Spunsulation Roofing Undertile Membrane Infra-Flash Self Adhesive Sealant Easyflash **Spunsulation 5 Light Roofing Radiant Barrier Spunsulation 5 Roofing Radiant Barrier Spunsulation 3 Roofing Radiant Barrier Gundle UT Woven Tile Underlay Resintile Roof Tiles Spunsalation 5 Roofing Radiant Barrier Compactroll Ridge and Hip Capping Marulelo Roofing Undertile Membrane Arma Tile Roofing System** The CMA Mono-Pitch Roofing System **The CMA Roofing System Duroplas UT 180 Undertile Membrane Gundle Gunplas UT 180 Undertile Membrane Gundle Gunplas UT 250 Undertile Membrane Harveytile Roofing System** Klip-Lok Roof Sheeting/Side-cladding Nam-Tex **Roofproof 400 Non Woven Undertile Membrane Spunsalation Roofing Radiant Barrier Monier Roofing Undertile Membrane**

Certificate Holder

Quick Struct cc Geberit Southern Africa (Pty) Ltd Geberit Southern Africa (Pty) Ltd

Certificate Holder

Tarspray cc JoJo Tanks (Pty) Ltd Affirm Manufacturing Services (Pty) Ltd Ecopolymers cc t/a EcoTanks Calcamite Sanitary Services (Pty) Ltd MG Innovation t/a Betcrete MG Innovation t/a Betcrete JoJo Tanks (Pty) Ltd Quick Sill cc

Certificate Holder

Spunbond Holdings (Pty) Ltd t/a Spunchem Interna Spunbond Holdings (Pty) Ltd t/a Spunchem Interna Cyclocor (Pty) Ltd Spunbond Holdings (Pty) Ltd t/a Spunchem Interna Infraset A Business Unit of Aveng Africa Limited Monier Roofing (Pty) Ltd SA Spunbond Holdings (Pty) Ltd t/a Spunchem Interna Spunbond Holdings (Pty) Ltd t/a Spunchem Interna Spunbond Holdings (Pty) Ltd t/a Spunchem Interna Gundle API (Pty) Ltd Plastiworld Trading (PTY) LTD T/A Resintile Monier Roofing (Pty) Ltd SA Monier Roofing (Pty) Ltd SA Monier Roofing (Pty) Ltd SA **Brownbuilt Metal Sections Concrete Manufacturers Association** Concrete Manufacturers Association Astrapak Kwazulu-Natal (Pty) Ltd Gundle API (Pty) Ltd Gundle API (Pty) Ltd Harveytile Roofing Products (Pty) Ltd **Brownbuilt Metal Sections** Nampak L & CP Astrapak Kwazulu-Natal (Pty) Ltd Monier Roofing (Pty) Ltd SA Monier Roofing (Pty) Ltd SA

Sanitation Products

Cemforce Easy Loo VIP Toilet System Calcamite 1250 litre On-site Sanitary Disposal Sys Calcamite 1500 litre Liquid Capacity On-site Sanit Cemforce Easy Loo Urine Diversion Toilet System

Thin bituminous surfacing systems

FrictionPave Thin Bituminous surfacing system Non-tacky Tack Coat (nt-note) AquaFRICTIONCourse Bituminous System UL-M 20/10 Thin bituminous road surfacing system FrictionPave:Thin bituminous surfacing system

Wall Coatings

Modified Calcium Carbonate Coating Weber Brush Coat StuccoMax PlasterMax **Brickseal Cementitious Wall Coating** Valamanzi Coating System Mega Grip Bonding Liquid **Sheerflex Coating System Prominent Paints Waterproofing Wall Coating (Amend** Weatherprufe Sealcoat Coating System **Flexiwall Coating System Fibrecote Fibre Reinforced Plaster Top Paint Waterrepellent Latex Paint Africote Cement Naturals RPR Coating System Africote Liquid Naturals RPR Coating System Cemcrete Cemwash Cemcrete Stipplecrete** Duoflex acrylic modified cementitious wall coating **Glutone Wall Coating** Khusela Emanzini Coating System Plaster Technology Kolorcote-T 24 Hour RPR Paint C **Techfin System** Unicemtex cementitious wall coating

Certificate Holder Cemforce cc Calcamite Sanitary Services (Pty) Ltd Calcamite Sanitary Services (Pty) Ltd

Cemforce cc

Certificate Holder FrictionPave Partnership JV Tarspray cc Aqua Transport and Plant Hire (Pty) Ltd National Asphalt (Pty) Ltd FrictionPave Partnership JV

Certificate Holder

R.Bright-Samber Trading Saint-Gobain Construction Products (Pty) Ltd GigaCrete Inc. GigaCrete Inc. Zambezi Mining Services (Pty) Ltd Optima Coatings (Pty) Ltd Hygiene Chemical Manufacturers cc Dekro Paints (Pty) Ltd Prominent Paints (Pty) Ltd Market Demand Trading No 263 (Pty) Ltd Duram (Pty) Ltd Imison (Pty) Ltd Top Paints (Pty) Ltd International Natural Stone (Pty) Ltd t/a Africote International Natural Stone (Pty) Ltd t/a Africote Cemcrete (Pty) Ltd Cemcrete (Pty) Ltd Union Flooring Tiles (Pty) Ltd Technical Finishes (Pty) Ltd Duraline (Pty) Ltd International Natural Stone (Pty) Ltd t/a Africote Technical Finishes (Pty) Ltd Union Flooring Tiles (Pty) Ltd

Walling and Building Systems **Certificate Holder Ezee Build Modular Building System** Ezee Build Development **Conform Building System** Lemovales (Pty) Ltd **Appletech Light Steel Frame Building system** Apple Plastic SA (Pty) Ltd **Power Profile Building System** Shell Case 208 (Pty) Ltd **Neopor Building System** Khuthala Consulting (Pty) Ltd **UkuZwana Building System** UkuZwana Project Management Solutions (Pty) Ltd **Specialised Insulated Panel Building System** Specialised Panel Manufacturing cc **RPM PHD Building System** Pego Phd (Pty) Ltd **Exelis Development Building System** Exelis Development (Pty) Ltd **Vela Steel Building System** Vela Steel Building System (Pty) Ltd Khaya Readykit Building System Khaya Readykit (Pty) Ltd **Adventure Shells PVC Building System** Adventure Shells (Pty) Ltd E-Brick[™] Building System White Hall Trading and Projects 171 **Concretex Building System** Paveprint cc T/A Concretex **Cellular Concrete Building System** NRF housing (Pty) Ltd **Eco-Beam Building by Bag Building System** Ecobeam Technologies cc **Tutungeni Building System** Tutungeni Precast cc **Eco-Construction Building System** MR Gregory Francis Xavier Walker **World Housing Solutions Building System** Yokoyo Investments (Pty) Ltd **Coffor Structural Formwork Building System** Hosane Engineering and Manufacturing (Pty) Ltd **Concretex Building System** Paveprint cc T/A Concretex **RBM Greenbuild Building System** RBM Greenbuild (Pty) Ltd **UCO Solidwall Building System** United Fibre Cement Company (Pty) Ltd **Envirowall Building System Greggon Properties cc Amsa's Protea Building System** Arcelor Mittal South Africa Steel Service Centre Yangshu Sandwich Wall Panel Building System Yangshu Integrated House Building EXELIS DEVELOPMENT (Pty) Ltd **Oceansafe Building System Compressed Earth Blocks Building System** Use-It **Amsa's Alternative Building System** Arcelor Mittal South Africa Steel Service Centre **Mi Panel 1 Building System** MiBT SA Pty (Ltd) **Mi Panel 2 Building System** MiBT SA Pty (Ltd) **Modular Home Building System** Ekhaya Jabulani Housing Projects cc **Rapidwall Building System** Industrial Development Corporation (IDC) and Foskor **Vela Steel Building System** Vela Steel Building System (Pty) Ltd

Walling and Building Systems

Ikhaya Brick Building System LEPA Building System Goldflex 100 Building System Goldflex 800 Building System Goldflex 800 Seismic Building System Mega Building System ITAS Modular Building System MG SIP BUILDING SYSTEM HOUSE-IN-A-CAN BUILDING SYSTEM **Rhinowall Walling System Blast Building System CSIR Modular House Building System Alternative Steel Frame Building System Insulated Concrete Panel Building System Frame-Tech Building System Innovida Building System Bright-Kid Container Conversions APC Modular Building System Banbric Building System** Ikhaya Future House Double Storey Building System **Ikhaya Future House Building System ScipsT Building System CMA Building Foundation Beams IZOBLOK BUILDING SYSTEM TILT-UP PRE-FABRICATED BUILDING SYSTEM Cemforce GRC Building System Imison 3 Building System** InnoBlok[®] (Insulating Hollow Concrete Blocks) **Automapolyblock Building System Portable Container Building System Affordable Comfort Homes ARUBA 2000 SERIES BUILDING SYSTEM**

Certificate Holder Amakhaya Technologies (PTY) Ltd LWP Holdings (Pty) Ltd Group Five Construction (Pty) Ltd Group Five Construction (Pty) Ltd Group Five Construction (Pty) Ltd MEGA GREEN STRUCTURES (Pty) Ltd I.T.A Security Co (Pty) Ltd MARBLE GOLD 231 Pty (Ltd) HIAC GROUP OF COMPANIES BPB Gypsum (Pty) Ltd Nare Housing (Pty) Ltd **CSIR Built Environment** Tower Technology (Pty) Ltd. Winterstrand Construction cc Circle Capital Developments (Pty) Ltd Yokoyo Investments (Pty) Ltd Breidert Education Development cc **APC Homes Limited** Banbric Building cc Ikhaya Future House Systems (Pty) Ltd Ikhaya Future House Systems (Pty) Ltd Africa SCIPS cc **Concrete Manufacturers Association** Meeting of Minds cc Great Force Investment 140 Pty (Ltd) Cemforce cc Imison (Pty) Ltd Datel Consulting T/A Datlink Insulation Automa Building Products (Pty) Ltd Creative Aluminium T/A Merakeng Solutions Thyssenkrupp Hoesch Bausysteme GmbH Aruba Construction (Pty) Ltd

Walling and Building Systems

Besa 2 Building System (Schools, Day clinics & Off Besa Building System Eapro M Building Method FSM Building System Hydraform Building System Imison Building Process Imison Stud Column Walling System Micro-concrete cladding building system National and Overseas Factory Built Buildings Protea Umbono Building System: Amendment Robust Building System Space Frame 2000 Building System

Waterproofing

Rhino Linings Waterproofing Systems Derbigum SP Waterproofing Index Fidia `P` Roof Waterproofing Index Testudo 20 Waterproofing

Non-traditional soil stabiliser

PC FOR ROADS Non-traditional soil additive

Software

IES Virtual Environment Software (Version VE 2013) StarFront Software for designing compliant aluminium windows and doors DesignBuilder (Version 3.1) Building Energy Analysis Software BSIMAC (Version 9) Building Energy Analysis Software

Roads Products

AquaFRICTIONCourse road surfacing system Pro-Phalt Infrared Road Repair System Enviro Prime Certificate Holder Agrement South Africa Agrement South Africa Easec (Pty) Ltd Fabricated Steel Manufacturing Co (Pty) Ltd Hydraform Developments (Pty) Ltd Imison (Pty) Ltd Imison (Pty) Ltd Imison (Pty) Ltd Anton Bonacich cc National and Overseas Modular Construction Protea FSG Robust Kits (Pty) Ltd Graca & Gaspari Associates cc Styrox Holdings (Pty) Ltd

Certificate Holder

Rhino Linings SA (Pty) Ltd Derbigum Manufacturing (Pty) Ltd ABE Construction Chemicals (Pty) Ltd ABE Construction Chemicals (Pty) Ltd

Certificate Holder Marble Gold 453 (Pty) Ltd

Certificate Holder

Integrated Environmental Solutions(IES) LTD. Wispeco (Pty) Ltd Greenbuild Consultants Alec Johannsen Consulting Engineers

Certificate Holder

Aqua Transport and Plant Hire (Pty) Ltd Pro-Phalt SA (Pty) Ltd Tarspray cc



Directory of Inactive Certificates

Directory of Inactive Certificates

Inactive Certificates

Bathroom and Toilet Units

Rocla bathroom & toilet units

Ceilings

Supalite Ceiling Board

Insulation

Exterior Insulation Facade System

Plumbing

Salutron Pan Gully Combination Trap: Amendment Main Industries ABS Sewer and Drain Pipe Fitting Marley RD Pipe Marley Twin Wall Pipe

Roofing Products

Dektile Self-supporting Roofing System Thatch Lock Thatching System

Thin bituminous surfacing systems NOVACHIP

Walling and Building Systems

Zenzele Building System Zinki Affordable Housing System Crane Building System Eapro A Building Method 1DR Build Building System Abkin`s J1 Building System (M) Abkin`s Norman 2 Building System Abkin`s Simon 4 Building System **Certificate Holder**

Rocla (Pty) Ltd

Certificate Holder Ceiling Solutions (Pty) Ltd

Certificate Holder Foam Technology SA (Pty) Ltd

Certificate Holder Salutron (Pty) Ltd Petzetakis Africa (Pty) Ltd Marley Pipe Systems (Pty) Ltd Marley Pipe Systems (Pty) Ltd

Certificate Holder HH Robertson Thatch Lock cc

Certificate Holder CONCOR Holdings (Pty) Ltd

Certificate Holder

Provincial Administration: Eastern Cape Dorbyl Structural Products Crane Group International, LLC Easec (Pty) Ltd H W Visser Designing & Planning ESG Projects (Pty) Ltd ESG Projects (Pty) Ltd ESG Projects (Pty) Ltd Deryck Noakes Pr. Eng.

Walling and Building Systems **Certificate Holder Cemwall Precast Walling System** Cementation (Africa Contracts) (Pty) Ltd **Con-Cottage Building System** CONCOR Holdings (Pty) Ltd **Dri-Block Building System** Dri-Block (Pty) Ltd **Estra Building System** Estra Homes (SA) (Pty) Ltd **Formington Phoenix System I** Aura Developers (Pty) Ltd **Formington Phoenix System II** Aura Developers (Pty) Ltd **Gethal Building System** Batim Homes (Pty) Ltd **Isorast Building System** Mr Anton Daurer **Josseph Shoshany Chopsa** Josseph Shoshany Horizon Homes **K M L Pre-Engineered Homes** K M L Homes Africa (Pty) Ltd **Locktite Block Building System** Guy Bright (Pty) Ltd **LSF Building System** Stauch Vorster Architects **LTA Rimon** Grinaker-LTA Ltd **M2 Emmedue Building System** M2 Emmedue S.R.L. - Italy **Masonite Hardboard Dry-Fill Building System** Masonite (Africa) Ltd Rocla (Pty) Ltd **Matla Housing System MDA Housing System** Michael Dyson Associates Ltd **Megacom Housing System** Megacom Housing (Pty) Ltd **Megacom Mantag Building System** Megacom Housing (Pty) Ltd **Panelcast Buildings** Pancast cc **Riftec Kit House** Labor Construction Co (Pty) Ltd **Sandwich Modular Panel Housing System** International Wood Products - Norway (SA)(Pty) Ltd **Space Frame Construction System** Graca & Gaspari Associates cc **Tronco Building System** Intertronco SA, Geneva **Vertibar Building System** Vertical Building Systems (Pty) Ltd Waffle-Crete Mantag System Mr D Carruthers Wigwam Timber Building Systems (Pty) Ltd **Wolfbrick Building System** Wolfbrick Systems (Pty) Ltd Wonder Homes **Wonder Panel Building System**

Cold Stores

Isowall System

Certificate Holder

Isowall Southern Africa (Pty) Ltd

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