Annex A

Background of 2024 AHA projects

59 Emerald Hill Road
Award for Conservation

Owner	Ms Dawn Chan
C&S Engineer	KEON Consult Pte Ltd
Contractor	HB Resources Pte Ltd
Conservation Specialist	Studio Lapis Conservation Pte Ltd
Additional Team Members	Mr Frédéric Blachier (Interior Designer) Foo Woodmaking Pte Ltd (Timber Restoration Specialist) Laim-Tec Pte Ltd (Tile Restoration Specialist)

An Intact Historic Townhouse

1. 59 Emerald Hill Road is a rare example of a largely intact historic townhouse. Developed by Low Koon Yee, a merchant who spearheaded the development of 16 other units in the area, the house remained within the Low family for 3 generations. Designed by architect R.T Rajoo in 1924, the house is notable for its combination of Western classical pilasters, ornate plaster mouldings, and a range of polychromatic tiles – both imported and locally manufactured, to give its distinct Singaporean aesthetic.

Minimal Approach, Maximum Effort

2. Given the remarkable intactness of the house and the owner's enlightened approach, minimal intervention was done, and the focus was on careful restoration of the building. A thorough pre-condition survey assessed the building to be structurally sound. However, signs of wear and tear after a century of use were evident.

3. The systemic research and documentation guided the scope of the restoration works. The curved “pantile” roof tiles, which were later additions, were removed and replaced with traditional V-shaped tiles, reinstating the roof's original design. The façade, previously covered in thick layers of paint, was restored through detailed paint analysis. Archival research, manual paint stripping, and delicate stucco repair revealed the building’s original 1924 palette. White paint was used on trimmings of the restored plaster mouldings, enhancing the façade’s visual depth and accentuating its crisp architectural details.

4. Localised repairs were only needed to the interior elements as they were highly intact and in good condition. Rare examples of gilded lacquer work as seen in the built-in wall cabinets, window and door screens were carefully cleaned to retain their rich patina, while historic ironmongery was reconditioned and reused.

5. The house's original walls and floors, featuring majolica, cement encaustic, and rare locally manufactured artificial marble tiles, were carefully preserved, with minimal repairs carried out using precise colour-matching techniques. Custom-made dado tiles were reinstated, matching the dimensions and colours of the

originals. Electrical works were strategically planned, restricted to areas above the dado tiles on the first storey, ensuring the historic tiles remained untouched. This meticulous approach preserves the home's authentic materials and details.

Time to Rediscover

6. Also outstanding is the preservation of the house's original internal layout to maintain the townhouse's historic and classic character. A key discovery was a 1920s timber-framed room with removable skirting boards and a delicate lattice above the partition, hidden for decades behind newer boards. The owner chose to keep this rare ensemble, now a centrepiece of the restored home.

A Home Across Generations

7. Through meticulous restoration and minimal intervention, 59 Emerald Hill Road has been transformed into an elegant, timeless family home that retains its historical integrity. It serves as a model for other owners of intact historic homes, showcasing how sensitive conservation can preserve the past while adapting a property for modern living.

1005 Bukit Timah Road, Bukit Timah Railway Station
Award for Conservation (Distinction)

Developers	Urban Redevelopment Authority National Parks Board
Architect	Kay Ngee Tan Architects
C&S Engineers	Lee & Lee Consultants Pte Ltd (Design to Construction stage) KEON Consult Pte Ltd (Construction to TOP/CSC stage)
Contractor	Towner Construction Pte Ltd
Conservation Specialist	Dr Yeo Kang Shua
Additional Team Members	Grant Associates Singapore Pte Ltd (Landscape Architect) ICON Engineers LLP (M&E Engineer) Lee & Lee Consultants Pte Ltd (Quantity Surveyor, Design Stage) BCM Consultants Pte Ltd (Quantity Surveyor, Construction Stage) Nipek Pte Ltd (Lighting Designer) Pico Art International Pte Ltd (Environmental Graphics Designer) Mobistudios Pte Ltd (Interactive Panel Specialist) Bautec Pacific Pte Ltd (Brick Masonry Treatment) Windhoff Singapore Pte Ltd (Design and Build of Service Wagon)

An Endearing Railway Icon

1. Built in 1932, Bukit Timah Railway Station served as a key station for suburban Singapore, as well as a loading point for goods and livestock. The Station and Railway Staff Quarters reflect Arts and Crafts influences, with fair-faced brickwork, distinctive brick patterns, timber columns, roof trusses, and terracotta roof tiles - significant symbols of the nation's early economic development and historical links to Peninsula Malaya.

Bringing History to Life

2. A photograph by Darren Soh, capturing streaks of light from the last train along the tracks, served as the primary inspiration and guided the team in revitalising the site.

3. Meaningful curation of the Station's setting incorporated the surrounding natural and man-made elements as integral to the historic buildings they have long been intertwined with. Landscaping retained both native and introduced vegetation, complemented by established familiar vistas. Historic features, such as the 200-meter-long platform, railway key token posts, and replicas of service wagons, serve as vivid reminders of the Station's operational past.

Evoking Historic Charm, Enhancing Experience

4. While the Station was thoughtfully curated as a heritage gallery, the Railway Staff Quarters employed two distinct approaches: the relatively intact East Wing adhered to a maximum retention strategy with only localised repairs, while the heavily altered West Wing underwent a more liberal adaptation to highlight its architectural elements. Its interior walls were left unfinished to expose the original brickwork, and the ceiling was removed to reveal the timber structure, enabling visitors to easily distinguish between altered and original elements.

5. Anchored in the 3R principles and with thorough investigations into construction methods and architectural history, the restoration retained much of the Station's

and Railway Staff Quarters' original elements, including timber-framed doors and windows, clay vent roof tiles, and brick walls. Severely damaged parts were replaced on a one-for-one basis judiciously, in line with conservation best practices.

6. The project's meticulous restoration extended to the finer details as seen in the Station's original ticket counter, signal panels, antique gear levers, and Bakelite switches. These provide subtle yet tangible connections to the past. Objects and materials found on-site were creatively repurposed: old steel tracks became armrests for timber benches, and a concrete septic tank was reimagined as a planter box. These approaches were key to evoking and recapturing the Station's sense of place and memory, creating a unified spatial experience.

7. This unique combination of heritage, nature, and community is further enriched by new ancillary facilities, which were sensitively designed to meet modern needs without compromising the site's historical integrity.

A New Legacy

8. Today, the Station stands not just as a relic of a bygone era but a celebrated part of Singapore's Rail Corridor, inviting future generations to appreciate and engage with its legacy.

Bukit Timah Truss Bridges
Award for Conservation

Developers	Urban Redevelopment Authority National Parks Board
Architect	Urban Redevelopment Authority
C&S Engineer	DWB CS-Engineering Consultants
Contractor	Tang's Engineering Pte Ltd
Additional Team Members	CKMbT International Pte Ltd (Structural Investigation) V-Top Pte Ltd (Electrical Works)

Milestones of Historic Engineering

1. The two steel truss bridges were part of the former Keretapi Tanah Melayu (KTM) railway line which stretched 24 km across Singapore. Designed by United Engineers, they reflect a combination of function and elegance, and was an engineering feat of the era.

Restoring with Precision

2. The restoration of the bridges was guided by the 3R principles – maximum Retention, sensitive Restoration, and careful Repair. As the bridges had been decommissioned since 2011, extensive investigations including laser scanning and 3D modelling were conducted to assess the condition of the structural elements to determine the necessary scope of repair. These models also guided the precise installation of scaffolding over the busy roads, ensuring safety throughout the complex restoration. While no significant structural works was required, corrosion and wear were addressed through targeted interventions, with rust removed and members carefully repaired or replaced one-for-one under the guidance of the Professional Engineer.

3. The most significant restoration task involved the careful and painstaking documentation and storage of all 172 sleepers – 114 timber ones and 58 concrete before their systematic removal for waterproofing repairs on the bridge decks. The precision and engineering expertise applied throughout the restoration ensured the bridges' long-term serviceability, demonstrating how a robust engineering approach to understanding the fundamentals of structure and heritage can enhance the integrity of conservation outcomes.

Community Participation and Innovation

4. A key consideration for the project was to enhance the safety for the public visiting the bridges. This was achieved through new additions such as railings and accessible floor finishes. These were designed to portray their original look and feel. Through lengthy consultations with stakeholders, including Friends of the Rail Corridor, multiple iterations and mock-ups of the new safety railings were made before the designs were decided. Today, they blend seamlessly with the bridges original appearance while providing necessary protection and accessibility for all users.

5. A similar effort was made for the old railway ballasts. These were reused by being bound together to form continuous and secure paths along both sides of the railway track, maintaining the rustic aesthetic of the surrounding area. These minimal, yet

impactful interventions complement the bridges' industrial past while providing a safe and inclusive environment for visitors.

6. Beyond the structural works, existing vegetation around the site was retained, with native plant species introduced to recreate the historical landscape. Soft and warm lighting was installed to illuminate the bridges at night, with wiring carefully concealed. The subtle floor lighting enhances safety while preserving the ambience of the space.

A New Chapter

7. The restoration has revitalised these railway icons, turning them into dynamic spaces for community interaction. By preserving their historical integrity, the project has allowed the bridges to continue serving as physical reminders of Singapore's engineering heritage while inviting the creation of new memories.

Former 17, 19, & 21 Jiak Kim Street Warehouses (Presently Jiak Kim House, 5 Jiak Kim Street)
Award for Conservation

Owner	Frasers Property Singapore Pte Ltd
Architect	P&T Consultants Pte Ltd
C&S Engineer	KTP Consultants Pte Ltd
Contractor	Woh Hup Pte Ltd
Conservation Specialist	Studio Lapis Conservation Pte Ltd
Additional Team Members	Mr Edwin Cheong (Heritage Interpretation Artist) SCDA Architects Pte Ltd (Design Architect) Farmwork Pte Ltd (Interior Designer) SALD Pte Ltd (Landscape Architect) J Roger Preston (S) Pte Ltd (MEP Engineer) MAEK Consulting Pte Ltd (Material Specialist) Bautec Pacific Pte Ltd (Brick Masonry Treatment)

Mercantile Past

1. These three warehouses, also known as 'godowns' locally, were part of an extensive landscape of trade that lined the entire Singapore River. As one of the earliest forms of the architecture of trade and once ubiquitous, they are now rare survivors from the early 20th century, with 17 Jiak Kim Street having a unique curved pediment.

Deep Research

2. Comprehensive research was conducted on the extensive changes made to the warehouses driven by commercial and functional needs over the past century. These efforts uncovered valuable insights from archival maps, building plans, drawings, and newspaper records, shedding light on the buildings' ownership, past functions, and architectural significance. This information guided the restoration process.

3. The conservation strategy focused on preserving the defining features of the godowns, such as their distinctive gable-end facades, timber works, and original brick walls. Although the steel columns and roof frames were not part of the original 'godowns', they marked the transformation of the site into Zouk, a significant chapter in the buildings' history, making them elements worthy of retention.

Rediscovery and Repair

4. One aspect of the restoration approach was the reinstatement of the cut-up interior from its previous use as a discotheque. This uncovered the original lofty interiors that are a signature of this building typology. With this spatial recovery, the steel columns and roof frames of its discotheque days also become visible.

5. For the historic building fabric, a full suite of conservation treatments was applied methodically to address rising damp and salt damage to brick and plaster, and to prevent future damage in a site with a high water-table.

Repositioning and Reuse

6. Sensitive and meticulous attention to detail has allowed the warehouses to be adapted for modern use while meeting regulatory requirements, without compromising their original architectural character. A creative flood prevention solution, using discreet removable flood gates, preserves the building’s attractive proportions. Additionally, an elegant and understated foreground, along with finely detailed new glass canopies at the drop-off area and river promenade, has enhanced both the commercial and visual appeal of the historic buildings, creating a cohesive and well-presented ensemble.

Stories to Reconnect

7. Beyond the physical restoration, this project excels in how it presents the site's history. A diverse range of carefully designed interpretive tools - plaques, storyboards with engaging visuals and writing, 3D models, and contextually relevant artworks - are seamlessly integrated. This creative approach draws the public into understanding the site's unique characteristics while connecting them to the broader social and architectural history of the transformed Singapore River. By linking the past with the present, the project ensures that the legacies of Singapore’s riverine and maritime trade will continue to flow into the future.

143 Victoria Street, St Joseph's Church (Victoria Street)
Award for Conservation

Owner	Roman Catholic Church of the Archdiocese of Singapore
Architect	ONG&ONG Pte Ltd
C&S Engineer	FranzWood Associates
Conservation Specialist	FranzWood Associates
Additional Team Members	Squire Mech Pte Ltd (M&E Engineer) Northcroft Lim Consultants Pte Ltd (Quantity Surveyor) SHEVS IFT Consultants Pte Ltd (Fire Safety Consultant) Lighting Planners Associates (S) Pte Ltd (Lighting Consultant) Arup Singapore Pte Ltd (Acoustic and AV Consultant) Carillon Technology (S) Pte Ltd (Bell Restorer) Genesis Stained Glass Pte Ltd (Stained Glass Restorer) Granda Art Workshops (Marble Altar Restorer) Ms Filipa Machado (Artefacts Restorer)

An Unexpected Challenge

1. Although the Church is still an impressive structure of brick, plaster, timber, tile and glass after a century's use, much wear and tear have appeared. These included tilted roof trusses and a sagging choir loft, both of which needed urgent attention. However, as work progressed on these two areas, the restoration team encountered new challenges, such as structural cracks in the masonry walls, undulating floors, and severe rising damp. Undeterred, they bravely took on this expanded scope of responsibilities in restoring this beloved landmark to its former glory.

Heritage Informing Modern Requirements

2. The value of archival research is evident throughout this project. Pictorial documents from the early 1900s revealed a lost row of dormer windows. These dormer windows were reinstated, while ensuring they were also able to serve as a mitigation method for smoke hazard to meet present-day fire safety requirements. Ornamented vent panels were also sensitively enlarged for smoke escape.

3. Modern mechanical and electrical systems were discreetly integrated, with wiring concealed in architraves and cornices, and beside columns to maintain visual integrity. Air-conditioning vents were skilfully hidden, and a spiral escape stairway was visually tucked away to preserve the function of the choir loft.

Meticulous Craftsmanship and Attention to Detail

4. A particularly noteworthy discovery during the restoration was the uncovering of a historic fleur-de-lis pattern in one of the internal staircases. This intricate mural was subsequently painstakingly restored and protected. It added another layer of historical richness to the Church's interior. Specialist craftsmen were also employed to restore various significant artefacts, including statues, *azulejos* (blue and white traditional Portuguese tiles), and the Stations of the Cross.

5. Detailed attention was given to the treatment of the historic floor – an area that is subject to great wear and tear, but often overlooked. The original colourful encaustic floor tiles were carefully mapped, cleaned, repaired, and replaced only

where necessary, resulting in a high proportion of the tiles being reused. The correct paints, based on a historically informed colour scheme, were also applied for the walls. Appropriate lighting further enhances the overall sense of visual and physical comfort. This attention to preserve every detail of the Church's heritage is most commendable.

A Timeless Monument

6. The restoration of St Joseph's Church exemplifies a thoughtful balance of preservation, modernisation and sensitive innovation in a project that encountered unexpected challenges. This restoration project has also seen the community of the Church becoming deeply involved in the process. Many now volunteer as ambassadors to share the rediscovered history and heritage of their spiritual landmark.

7. Beyond physical restoration, the team has also implemented a comprehensive post-restoration maintenance plan, ensuring that the structural and historical integrity will be sustained. This holistic approach secures the future of the Church as an enduring and timeless monument for both the congregation and the wider Singaporean society.

12 Mount Sophia (Presently Tower House, 18 Mount Sophia)
Special Mention

Owner	CDL Regulus Pte Ltd
Architect	Architects 61 Pte Ltd
C&S Engineer	LSW Consulting Engineers Pte Ltd
Contractor	Woh Hup Pte Ltd
Conservation Specialist	Studio Lapis Conservation Pte Ltd
Additional Team Members	Rankine&Hill (Singapore) Pte Ltd (M&E Engineer) 2nd Edition Pte Ltd (Interior Designer) Coen Design International Pte Ltd (Landscape Designr) Threesixty Cost Management Pte Ltd (Quantity Surveyor) Tang Tuck Kim Registered Surveyor Pte Ltd (Conservation Surveyor) MAEK Consulting Pte Ltd (Material Specialist) Laim-Tec Pte Ltd (Tile Restoration Specialist) Bautec Pacific Pte Ltd (Brick Masonry Treatment)

1. Known as the Tower House, 12 Mount Sophia was constructed in 1892. It was acquired by the Methodist Church in 1932, to serve as an extension for the Methodist Girls' School across the road. Designed by Crane Brothers, the house boasts an asymmetrical composition culminating in a tower with a double-tiered roof, giving it its distinctive silhouette and name.

2. 12 Mount Sophia has been sensitively repurposed through restoration, landscaping and lighting into a homely clubhouse for a new community of residents. This project demonstrates the team's technical competency and resourcefulness in finding creative solutions to meet regulatory requirements while retaining the historical fabric. A maintenance guide is in place to help safeguard its building fabric, while comprehensive heritage interpretation engages both the new occupants and the wider neighbourhood.

10 Pender Road, Golden Bell Mansion
Special Mention

Owner	Singapore Land Authority
Architect	Goy Architects Pte Ltd
C&S Engineer	KEON Consult Pte Ltd
Contractor	Towner Construction Pte Ltd
Conservation Specialist	MAEK Consulting Pte Ltd
Additional Team Members	QS Consultants Pte Ltd (Quantity Surveyor) Shing Design Atelier (Architectural Advisor) Laim-Tec Pte Ltd (Restorer of Fairfaced Brick Walls and Encaustic Tiles) Bautec Pacific Pte Ltd (Brick Masonry Treatment) Danish Seamen's Church in Singapore (Tenant) Mr Siang Orn Prasit (Artisan for Ornamental Plasterwork) Mr Uddin Sohel (Key Restorer for Fairfaced Brick Walls and Encaustic Tiles)

1. 10 Pender Road was built between 1909 and 1910 by Tan Boo Liat (grandson of Tan Kim Ching and great-grandson of Tan Tock Seng) with "Golden Bell" named after Tan Kim Ching. Designed by Mok Wee Tek, it is an exemplary model of Edwardian-style architecture with adaptations to the local climate. Once a place for gatherings of prominent Straits Chinese community leaders and even graced by Dr Sun Yat Sen in 1911 and 1912, it continues to serve the community since 1985 as the Danish Seamen's Church.

2. This historic house has overcome damage caused by persistent dampness, regaining its former architectural appeal despite a limited budget that precluded a full restoration. Careful diagnostic works guided changes to the gutter system to prevent moisture issues, while features for future roof maintenance were ingeniously incorporated. A 'maximum retention' and 'careful repair' approach by skilled artisans has retained the patina of the place.

471 Victoria Street, Malabar Mosque
Special Mention

Owner	Majlis Ugama Islam Singapura
Owner's Representative	Warees Investments Pte Ltd
Architect	Liu & Wo Architects Pte Ltd
C&S Engineer	Leng Consultants
Contractor	Mie-tech Engineering & Construction Pte Ltd
Additional Team Members	Conteem Engineers Pte Ltd (M&E Engineer) QS Consultants Pte Ltd (Quantity Surveyor) SiliconPlus Communications Pte Ltd (Heritage Gallery Curator)

1. Malabar Mosque, located at the intersection of Jalan Sultan and Victoria Street, was designed by A.H. Siddique. It was inaugurated by Singapore's first President, Yusoff Ishak in 1963. The introduction of the blue and white mosaic tile finish in 1995 by Abdul Rahman bin Kadir solidified its iconic status as Singapore's Blue Mosque.

2. This project exemplifies the delicate balance between preserving historic character and addressing a community's evolving spiritual and social needs. Guided by thoughtful stakeholder engagement since 2016, the spatial planning, design, and heritage storytelling in the 24/7 public walkway ensure the mosque's continued role as a place of worship and gathering. The approach also inspires the Malabari Muslim community to embrace their role as custodians of this heritage, fostering a stronger sense of pride and collective identity, while welcoming visitors from across Singapore.

244 South Bridge Road, Sri Mariamman Temple
Special Mention

Owner	Hindu Endowments Board
Owner's Representative	Sri Mariamman Temple Management Committee (2021 - 2024)
Architect	CAIDE Architects
Contractor	Dakshinamoorthy Sthapati of Hereditary Indian Traditional Architect and Sculptor
Conservation Specialist	MAEK Consulting Pte Ltd

1. Sri Mariamman Temple stands as the oldest and one of the most important of Singapore's Hindu religious buildings, with its elaborate tower-like *gopuram* gracing the historic streetscape along South Bridge Road.

2. A labour of love, the project embodied the collective aspirations of the temple committee, priests, devotees, specialist consultants and artisans to refresh Singapore's oldest Hindu temple. Building on the established 12-yearly cycle of maintenance for Hindu temples, this round of works entailed extra effort to combine scientific investigation to support traditional craftsmanship. New heritage panels also transmit its spiritual and cultural values to the devotees and visitors of this timeless landmark along South Bridge Road.