

# 推動歷史建築保存再利用之產學研發操作成果

## 摘要

本送審人的技術報告升等主題屬於建築文化資產保存與再利用的產學合作案，個人執教進入第 21 年，教學過程中除擔任總務處建校工作外，也持續以產學合作案方式將所學應用於歷史建築的保存調查研究與再利用規劃工作上。而以學校名義簽約的產學案，從民國 99 年迄今計算，大小共計 15 個產學合作案，累積金額達 1513 萬 6811 元，其中有關歷史建築文化保存與再利用的產學案有 8 個，計 812 萬 7200 元。這些歷史建築文化保存與再利用的產學案源於以委託或競標方式透過公開評選的過程而爭取高屏地區政府轄區內古蹟歷史建築保存與再利用的勞務工作案，關注於歷史建築文化資產的調查研究、修復評估、與再利用規劃的操作執行。而這些產學合作案所呈現出的成果；是歷史建築文化保存推動過程中不同階段性的四個面向貢獻；分別是：一、完成具歷史性建築的基礎史料建立與重要建築構件的保存；二、完成歷史保存區的設立與指定區內建築物為古蹟與歷史建築；三、完成古蹟歷史建築的研究調查(含結構損壞評估)；四、完成歷史建築保存再利用規劃等四個不同階段性成果貢獻。

**值得特別一提**，在 99 年所執行的《原岡山日本海軍航空隊宿舍群（樂群村）基礎資料調查案》與《原岡山日本海軍航空隊宿舍群(樂群村)保存規劃與研究案》兩案報告書，成功地將本案送審指定成為保存區、古蹟與歷史建築。而在 100 年所執行的《水利署第六河川局員工宿舍(原日本海軍航空隊岡山基地招待所)建築史料與構件保存計畫》本案建築在拆除興建防汛大樓之際，緊急進行建築物測繪與重要構件拆卸，予以建立建築史料與構件保存，提供日後進行保存展示之用。另在 100 年所執行的「高雄市美濃區歷史建築美濃(分駐所、宿舍)舊橋調查研究計畫案」，其分駐所、宿舍已被修復完成，於 104 年 11 月並成為『美濃文創中心』，美濃舊橋也完成結構補強與修復工作，並重新對外開放，今日已成為美濃區最重要的歷史建築文創區。此些案例點出送審人長期在歷史建築保存再利用領域中的具體操作成果與貢獻。

**技術報告的研發理念**基於對歷史環境保存修復的真實性史實精神為調查基礎，並以整體性歷史環境保存為修復計畫目標，思考推動「人與環境一起保存下來」的建築保存再利用論述，進而提出保存後空間再利用的營運方案，同時提出歷史環境管理維護機制。為求正確的文化資產價值與再利用適宜性的評估，對古蹟歷史建築之調查研究工作的開展，包括歷史環境沿革、建築特色、構造工法、匠師技藝的分析等，均首重真實性的追求。歷史建築物絕不

可能也不會允許在整修的過程中未經歷史考證而任意更動，因為歷史的真實性是讓文化資產保存得以存在之最根本因素。在這種認知下，「不完整」古蹟，遠比修護過「完整的非原物」更具有其真實性，在 2013 年所執行的《屏東縣佳冬鄉神社暨防空洞調查研究案》，即是一個例證，本案神社建築本體已不復存在，僅存台基、參道與鳥居等，並以此作為保存再利用。因此並不鼓勵只求完整但忽略真實性的古蹟整修。所呈現歷史環境保存的作法，不僅在忠實地保存單獨建築體文化遺產的真實性，也致力於整體性的歷史環境，包括中庭廣場等。同時當新計畫植入時也小心翼翼地處理新建築體對既有建築群的配置與開放空間的虛實意義。這一部份的保存規劃的處理掌握，也是本研究工作謹慎處理的重要考慮。

**技術報告的學理基礎**根基於建築保存國際發展的理念出發，即從歐洲文藝復興時期展開，並漸次發展成具廣泛性、多元層次的保存理念與作法。1883 年，義大利 Camillo Boito 提出具體的保存理念：「古蹟不只對於建築研究有其價值，同時亦為國家及人民成就的佐證，古蹟的補強勝於修理，修理勝於復原，同時應避免翻新添加」。1931 年《雅典憲章》提出修復計畫應注意：「提出的修復計畫都應受到知識性的評斷以避免造成構造物特徵及歷史價值喪失之錯誤」。1964《威尼斯憲章》首度將歷史場域的概念帶入保存工作中，而將「歷史文化紀念物定義為不只是單棟建築作品，而且還有其中發現某一特殊文明、一項重要發展或一件歷史事件之都市或鄉村場域」。而 1987 年《華盛頓憲章》的提出，對歷史城鎮與歷史街區的保護具有重要的推動作用和指導意義，提出「居民參與與涉入是維護計畫成功之必要條件」，也提出「維護計畫應決定哪些建築物必須保存，哪些應該在某些情況下加以保存，而哪些應該在某些情況下可以被放棄」。日後 1994 年《奈良真實性文件》進一步闡述真實性意涵，並尊重所有文化的多樣性與價值，2005 年《西安宣言》的宣告更說明了「強調有必要採取適當措施應對由於生活方式、農業、發展、旅遊或大規模天災人禍所造成的城市、景觀和遺產線路急劇或累積的改變；有必要承認、保護和延續遺產建築物或遺址及其周邊環境的有意義的存在，以減少上述進程對文化遺產的真實性、意義、價值、整體性和多樣性所構成的威脅」。從上述歷史聚落保存理念的法制發展與變遷過程學習中，成為送審人對歷史建築物保存法制與操作面向的基本素養，並重視當代生活與建築文化意義，致力營造友善文化環境，回應當代生活價值，提出「多樣化、多層次、柔軟性、地域性」的歷史建築保存再利用政策。

**技術報告所呈現的主題內容**是送審人從事推動歷史建築保存再利用的系列產學案成果，重點在闡述執行過程中的操作性手法與意義，以考證出建築物之歷史地理時空背景與建築文化技藝，烘托出此歷史建築的文化價值，提出建築拗存修復與再利用規劃。產學工作的操作內容包括：1.歷史研究與文化內涵闡釋與對近代化過程的脈絡分析。2.環境調查與建築資料繪

製分析，包含相關地方公部門與管理權責單位的訪談及居民口述歷史資料整理，文獻史料蒐集，建築測繪等，並建立完整的基本資料檔案。建築研究的部分包括年代判定及建築形制的變遷、建築形制、營建概略、工法研究等，同時進行傳統匠師技藝、材料分析調查、建築修復計畫與經費評估。3.構造與結構分析與維護建議，透過結構檢測、構造分析、構件調查、損害狀況評估等工作掌握建築物硬體之整體狀況，並提出維護（或修復）策略之具體建議。4.環境規劃與再利用提案，將整體空間之發展進行規劃與再利用的機能評估以及可能之替選方案等，同時整合地方社區的發展方向，提出整體規劃之建議。5.進行研究成果之推廣，包括宣導書面與解說資料製作，及數位資料之製作等工作。

**技術報告的方法技巧**基於以下五項，包括：文獻史料收集與歷史脈絡沿革考證、建築資料繪製分析與構造結構損壞修復評、社區訪查研究、建築保存再利用之評估與規劃、地方溝通與專家審查等。首先為歷史建築價值的調查研究方法，包括古文獻分析、古今圖資套繪圖、實地攝影測繪、耆老訪談、構造研究等；同時進行建築損壞調查與結構安全評估，其次以部份保存、部份改建的整體規劃方式提出多重保存規劃方案，置入多樣保存價值闡述的方案選擇討論，再舉辦公聽會以對地方居民說明建築歷史文價值與保存再利用的規劃方案，爭取地方認同；最後將各項工作成果以報告書方式提交文化資產審議委員會上，進行工作內容的審查，以確保建築保存研究調查工作與建築再利用規劃設計的各项工作成果。

**產學研發操作的三個主要成果貢獻**，首先成功協助地方政府執行保存計畫案並有效引導居民自覺建築文化環境保存的社會與教育意識，其次是深化建築設計專業教育與地方產學的連結互動；第三為專業養成協助政府部門執行其他保存計畫案。回顧送審人在歷年產學合作的主要貢獻在於將建築文化資產保存學理技術的專業養成，以組成建築專業師生團隊帶入地方歷史建築環境的實際操演方式，形成文化資產學術論述與地方建築保存運動互動連結的產學合作模式；包括透過完整地建築文化資產的保存調查，建立地方歷史建築史料方面，以居民訪查、舉辦說明會方式有效引導居民自覺建築環境保存的意義、提出歷史空間再利用的規劃設計協助地方政府執行推動保存計畫案等方面，逐步協助高雄市政府有效達成歷史建築的保存與再利用工作。同時透過建築保存再利用的實務工作經驗回饋至教學活動與論文研究寫作的學術面向，不僅讓大學教育者成為地方行政的智庫人才，同時也使得大學師生教學活動走出校園深入地方，是學校教育工作、政府政策執行、與地方建築保存再發展等三贏的產學合作模式。

**綜合歷年來持續致力於建築文化環境保存的產學合作案**，其過程經驗也回饋至教學與研

究上，具體成果之公信力佐證如下簡要說明：

**1.教學開課課程：**大學部開設「居住與環境」、「建築與室內設計」；研究所開設「建築學的歷史與理論專題」、「環境保存與建築再生」，也在文化部文化資產局補助本校辦理的「台灣當代文化資產增值規劃設計 T.K.E 跨域學程」講授「空間活化再利用計畫書」、「歐洲、英、日及我國文化資產保存的理論、政策、法規與實踐」。

**2.在學術獨立研究的能力：**個人研究論文發表有關建築文化保存類型的研究成果能量亦顯現在各式論文發表上；計有期刊 8 篇、國際學術研討會論文 6 篇、國內學術研討會論文 17 篇。也指導帶領研究生至馬來西亞完成馬來西亞華人新村（歷史性建築）之住屋型式調查研究。

**3.校內教學服務績效的獲獎：**送審人亦獲得 93 年學務優良導師獎、與 100 年服務績優教師獎、與 103 年度教學優良教師等殊榮肯定。

**4.校外競賽獲獎：**過程中衍生的教學成果效益除了帶領學生進入環境調查規劃設計工作外，以個人名義參與 99 年金門縣政府歷史環境公共藝術亦獲得〈金門縣燕南書院暨太文巖寺新建工程設置公共藝術案〉，第一名、〈金門縣明遺老街設置公共藝術案〉第三名。也帶領學生參加相關競賽分別獲得〈2004 糖鐵再生研討會～糖鐵保存與再造創意競賽〉，佳作、〈2004 年總爺新樂園—台南市總爺老街再生設計案〉，佳作。

**5.媒體報導與環境保存成果：**媒體報導送審人協助搶救建築文化資產計 4 篇報導。

**6.擔任公部門審查委員：**因產學績效與學術成就而獲邀協助地方政府推動進建築文化保存與環境再造工作，有獲邀擔任〈100-102 年客委會客家文化生活環境營造計畫南區督導團案〉的顧問，與擔任地方政府評選委員或審查會議委員計 86 次。

**7.積極投入社會服務工作：**也因參與〈高雄市八一石化氣爆地區建築景觀改善實施計畫委託規劃輔導案〉獲市長特別頒贈感謝狀。

本學術產學合作技術報告的精髓在於送審人在多年的課堂教學、學術研究、與產學合作的過程中，逐步將所學專業知識帶入建築保存再利用的實務操作中，同時帶領研究團隊也培養研究人員，以學術研發為底、產學致用為實、跨域整合為用，執行守護地方建築文化資產，規劃歷史建築再利用，逐步實踐大學教育環境為地方發展的伙伴智庫關係，期盼為建築教育多盡一份心力。

**關鍵詞：**歷史建築、保存與再利用、產學研發、操作性

# **An Operational Result Discussion of the Industry-Academic Cooperation on Promoting the Historical Building Preservation and Reuse**

## **Abstract**

The subject of the technical report belongs to the architecture cultural heritage preservation and reuse of the Industry-academic cooperation. Personal teaching career has been into the 21st year, the teaching process in addition to serving as general affairs office, but also continued to apply teaching knowledge to the architecture cultural heritage preservation and reuse. And these contracts signed in the name of the university, From the Republic of China 99 years to date, a total of 15 Industry-academic cooperation cases, The accumulated amount is NT \$ 15,136,811, among them, there are 8 cases of cultural preservation and reuse of historical buildings, accounting for NT \$ 8,127,200. These cases of historical building preservation and reuse in Kaohsiung and Pingtung area, were strived by the commission or bidding through the process of open selection. The contents of these contracts focus on the investigation study, repair assessment, and reuse planning of the historical architectural cultural assets. And the results of these Industry-academic cooperation cases, respectively, are the four different stages of contribution to promote the historical building heritage to the preservation and reuse. They are first is to complete the historic building with historical data and the establishment of important building components. Second is to complete of the establishment of the historical preservation area and designated buildings for the monuments and historical buildings. Third is to complete the historical research of monuments (including structural damage assessment). Fourth is to complete the historical building preservation and reuse planning four different stages of contribution.

It is worth mentioning, in the two cases of "the former Okayama Japanese naval air force dormitory group (Lequn village) basic architectural investigation case" and "the former Okayama Japanese naval air force dormitory group (Lequn village) plan and the study case", Successfully submitted to the case designated as a preservation area, monuments and historical buildings. Which was implemented in 2011, " Sixth River Management Office, Water Resources Agency staff dorm (the former Okayama Japanese naval air force base guest house) architectural history investigation and architectural component preservation plan". The case was urgently carried out for building surveying and demolition of Important building components. In order to establish the architecture historical data and the preservation of the building components, it will be provided for the exhibition in the future. In

addition, Which was implemented in 2011," the Kaohsiung City Meinong District Historic Building (Japanese colonial police station, dormitory):the Meinong old bridge investigation plan". The Japanese colonial police station and the dormitory has been repaired, In November 2015 they became into " Meinong Cultural and Creative Center" The Meinong old bridge has been repaired too, and reopened to the public. Today has become the most important historical cultural building and creative area in Meinong district. These cases pointed out specific operational results and contributions that the author has made efforts in the historical building preservation and reuse in the long-term.

The R & D concept of the technical report is based on the authenticity of the historical environment preservation and restoration of the historical facts, and the preservation of the overall historical environment as the goal of the restoration plan. Think about the demonstration of "the preservation of the living with the environment" and then puts forward the operational plan for the reuse after the building renovation, and at the same time puts forward the historical environment management and maintenance mechanism. On the historical research of monuments, In order to assess the correct value of cultural heritage and the appropriateness of reuse, Including the history of the environment, architectural features, structural methods, craftsmen art analysis and so on, the first pursue of all efforts is the authenticity. Historic buildings can never and will not allow any changes in the process of refurbishment without historical research, because the authenticity of history is the most fundamental factor in the preservation of cultural assets. Under this kind of cognition, the "incomplete" monuments are far more authentic than the "complete but non-original" In 2013, the implementation of the "The Shrine and anti-cavitation investigation case in Jiadung Town Pingtung County ", that is, an example. So it is not encouraged to seek a complete refurbished monument but ignore the authenticity. The practice of preserving the historical environment is not only faithfully preserving the authenticity of the cultural heritage of the individual buildings, but also the holistic historical environment, including the atrium square. At the same time, when the new plan embedded in the new building on the existing buildings and open space. It is need to carefully deal with the meaning of the actual-virtual space.

The theoretical basis of the technical report is based on the concept of international architecture preservation. That is, from the European Renaissance period, and gradually developed into a broad, multi-level preservation of ideas and practices. In 1883, Italy Camillo Boilito proposed a specific preservation concept "Monuments not only for building research has its value, but also for the achievements of the state and the people of the evidence, monuments reinforcement is better than repair, repair is better than recovery, and should avoid refurbishment add". In 1931, 《The Athens Charter》 proposed restoration projects should be noted: "Proposed Restoration projects are to be subjected to

knowledgeable criticism to prevent mistakes which will cause loss of character and historical values to the structures." In 1964, 《The Venice Charter》for the first time putted the concept of historical field into the preservation of the work: "The concept of a historic monument embraces not only the single architectural work but also the urban or rural setting in which is found the evidence of a particular civilization, a significant development or a historic event." And, in 1987 《The Washington charter》 "The conservation plan should determine which buildings must be preserved, which should be preserved under certain circumstances and which, under quite exceptional circumstances, might be expendable. "In 1994 "The Nara Document on Authenticity "further elaborated the meaning of authenticity, and respect the values of the cultural diversity and heritage diversity. In 2005 《 XI'AN DECLARATION》 "Stressing the need to address adequately the rapid or incremental transformation of cities, landscapes and heritage routes which result from changes in lifestyles, agriculture, development, tourism or large-scale disasters of natural or human origin, and to recognize, protect and sustain, adequately the meaningful presence of heritage structures, sites and areas in their settings as a way to reduce the threat these transformation processes constitute against the cultural heritage in the full richness of its authenticity, meaning, values, integrity and diversity. "From the above study, the concept of the historical environment preservation in development process becomes the author basic qualities of the operation for the historical buildings preservation, and pays attention to the contemporary life and architectural cultural significance, creates a friendly and cultural environment, responses to the value of contemporary life, puts forward "diversified, multi-level, soft, regional" historical building preservation and reuse policy.

The topics of the technical report presented that the author engaged in the industry-academic cooperation on the series reports of the historical building preservation and reuse. It elaborated on the operation and significance of the implementation process. The contents of the industry-academic cooperation include: I .To interpret the analysis the modernization process for the historical research and cultural connotation. II .Environmental survey and architectural data analysis, including the relevant local public sector and the management of the authority of the interview, and the oral of residents and historical data collation, literature and historical data collection, building surveying and mapping, and the establishment of a complete basic information files. The contents of the architectural research include the identification of the age and the change of the architectural form, the construction outline, the engineering research. At the same time survey the traditional craftsmen skills, material analysis and building restoration plans and funding assessment. III . The analysis of construction and structural and recommendations of the maintenance, they come out through the structure inspection, structural analysis, component survey, damage assessment and other work to grasp the overall situation of building hardware, and put forward the specific recommendations of the maintenance (or

restoration) strategy. IV. The environmental planning and reuse proposals, include the development plan of the overall space with the functional evaluation of reuse, and possible alternatives, etc., while integrate the local community development direction to put forward the overall planning recommendations. V. To promote the research results, including the production of written, and explanatory information, and the production of digital information, and so on.

The methods of master's work are based on the following five items, including: the collection of historical materials and the study of the historical context, architectural data analysis and structural damage assessment, community visits, building conservation and the assessment of reuse and planning, local communication and expert reviews. First of all, the historical construction value of the investigation and research methods, including ancient literature analysis, ancient and modern map sets of drawings, field photography mapping, early age interviews, structural research, simultaneous, investigation for the construction damage and the safety of the structural assessment. Second, proposed multiple preservation planning program with partial preservation and partial renovation of the planning approach, and placed a variety of preservation values to illustrate the options discussed in the discussion. Then, hold a public hearing to explain the historical value of construction and preservation of the planning program for the local residents. Finally, the results report will be submitted to the Cultural Asset Review Committee, they review these contents of the work to ensure fine results that the preservation research and reuse planning.

There are three major achievement contributions of the industry-academic cooperation. First, it succeeded in assisting local governments to carry out preservation plans, and effectively guide the residents to consciously preserve architectural cultural environment with the social and educational awareness. Secondly, it deepened the architectural design, and linked interaction between professional education and local production. Third, it assisted the government department in the other preservation cases. The author reviewed the main contributions of the author's industry-academic cooperation in the past years. There are to promote the professional theoretical technology in the architectural culture assets field, and to organize the professional teachers and students to implement the preservation work of the architectural environment, and formed the industry-academic cooperation model of the architectural preservation for the local construction conservation movement. Including through a complete survey of architectural cultural assets, then established local historical architectural data, and visited the residents to held a briefing to effectively guide the residents to consciously persevered the building environment, and put forward the planning and design of historical space reuse to assist the local government to promote the preservation of plans and other aspects, and gradually assisted the Kaohsiung

government to effectively achieve the preservation historical buildings. At the same time, the author went through the construction and reuse of practical work experience feedback to teaching activities and writing academic research. Not only lets university educators to become a local administrative talent treasure, but also makes the university teachers and students go into the communities from the campus teaching activities. It is the win-win cooperation model of industry and academia education, government policy implementation, and local building preservation and development.

Comprehensive over the years the author continued commitment to the historical building preservation and reuse, its process experience is also fed back to teaching and research. The specific credibility of the results is as follows by the brief description.

1. Teaching courses:

The University has opened "Residential and Environment", "Architecture and Interior Design". The Institute has set up the "History and Theory of Architecture", Environmental Conservation and Building Renewal" We also teach the "Space Activated and Reusable Drawings", "European, English, Japanese and Chinese Cultural Assets", which are also organized by the Ministry of Culture, Culture and Industry Bureau of the Ministry of Culture, "Taiwan's contemporary cultural assets plus value planning and design TKE cross-domain learning" Policies, regulations and practices

2. Ability in academic independent research:

Personal research papers published: on the architectural culture of the type of research results of energy also appears in the various papers published. There are 8 journals, 6 international academic symposium papers, 17 domestic academic symposium papers. The author also guides the graduate students to Malaysia to complete housing type survey in the Malaysian Chinese New Village (historic buildings).

3. Award for teaching performance in inside school:

The author received honors including the Excellent Tutor Award in 2004, the Service Merit Teacher Award In 2011, and the Teaching Excellent Teacher in 2014, and so on.

4. Award for competition award in outside school:

In addition to leading students to enter the environmental survey planning and design work, in 2000, in the name of an individual to participate in the historical environment of the Golden Gate County Government Public Art also received the "Golden Gate Yan Nanyuan College and Tai Wenshan Temple New Project to set up public art case", the first, "Golden Gate Ming Ming Street set up public art Case third. Also led the students to participate in the relevant competition were awarded the <2004 Sugar and Iron Recycling Seminar ~ Sugar and Iron Conservation and Rebuilding Creative Competition>, masterpiece, "2004 General Ye New Paradise - Tainan City, the main street regeneration design case", masterpiece.

5. Media coverage for environmental preservation results:

A total of four media coverage reported the author assist in the rescue of architectural cultural assets.

6. As a member of the Review Committee:

Due to academic performance and academic achievements and was invited to assist the local government to promote the construction of cultural preservation and environmental reconstruction work. The author has been invited to serve as a consultant for " The client Hakka cultural life environment and living environment in the Southern District Commander from 2011 to 2013". There are 86 times the author was a reviewer for the local government committee members of the review meetings.

7. Achievements in social services:

The author received a special gift from the mayor due to participation in the "The landscape improvement implementation plan of the August 1 gas explosion area in Kaohsiung City "

This technical report essence of the Industry-Academic Cooperation is that in the course of many years of classroom teaching, academic research, and the cooperation with industry. And gradually put the professional knowledge into the practical operation of the architectural cultural assets. While the author guided the research team, also trained researchers by academic research work, with the purpose of cross-domain integration for the action. Implement as the guardian of local architectural cultural assets, and plan the reuse of historical buildings. Gradual practice of university education environment has become a local development of the think tank relationship. Expect to make a heart for architectural education.

**Keywords** : historical architecture, preservation and reuse, industry-academic cooperation, implement