Universiti Teknologi MARA Cawangan Perak

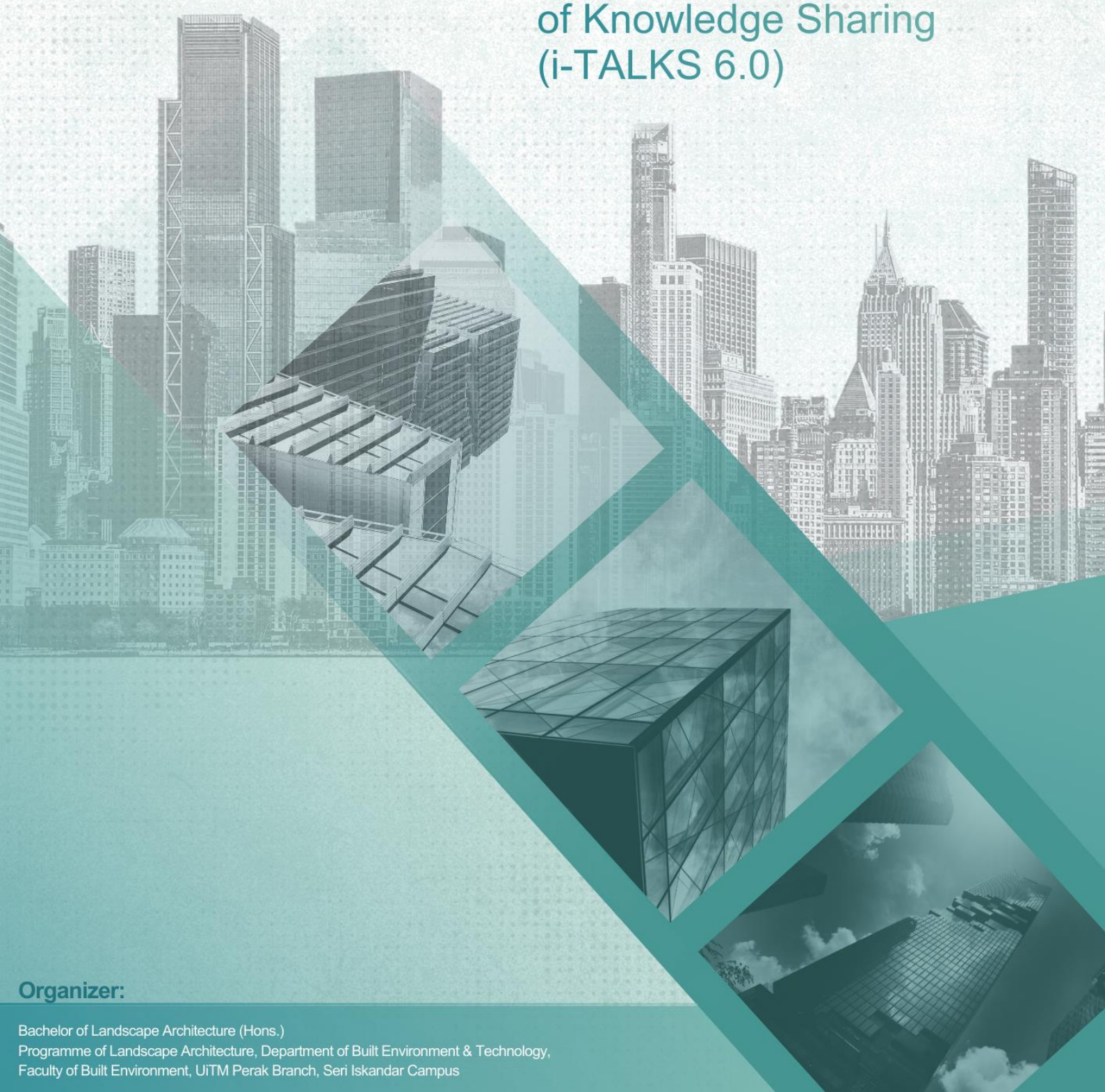
ناتورا studio

TALKS 6.0
THE ACCLAIMED LANDSCAPE OF KNOWLEDGE SHARING
"Harmony in Spaces : Blending Heritage, Nature and Design"

eISSN 3120-3337

PROCEEDING OF

6th Conference On The Acclaimed Landscape of Knowledge Sharing (i-TALKS 6.0)



Organizer:

Bachelor of Landscape Architecture (Hons.)
Programme of Landscape Architecture, Department of Built Environment & Technology,
Faculty of Built Environment, UiTM Perak Branch, Seri Iskandar Campus

TALKS 6.0

THE ACCLAIMED LANDSCAPE OF KNOWLEDGE SHARING

"Harmony in Spaces : Blending Heritage, Nature and Design"

PROCEEDING OF

6th Seminar On
The Acclaimed Landscape of Knowledge Sharing
(TALKS) 6.0

Organized By:

Landscape Architecture Seminar (LAN653)
Semester October 2025 - February 2026
Bachelor Degree in Landscape Architecture
UiTM Seri Iskandar Campus

PUBLISHED

31 March 2026

PUBLICATION FREQUENCY

Published twice a year in May and September

Alamat :

Unit Penerbitan UiTM Perak,
Pejabat Jaringan Industri, Masyarakat dan Alumni (PJIM&A)
Universiti Teknologi MARA, Perak Branch,
32610 Seri Iskandar Perak, Malaysia
05-3742716
uitmperakpress@gmail.com

PROCEEDING OF

6th Conference On
The Acclaimed Landscape of Knowledge Sharing
(TALKS) 6.0

@Unit penerbitan UiTM Perak, 2026

eISSN 3120-3337

9 773120 333006

All rights reserved. No part of this publication may be reproduced, copied, stored in any retrieval system, or transmitted in any form or by any means; electronic, mechanical, photocopying, recording, or otherwise;without permissions on writing from the director of Unit Penerbitan UiTM Perak, Universiti Teknologi MARA, Perak Branch 32610 Seri Iskandar Perak, Malaysia

Cover Design : Nur Alia Fatihah Binti Muzapar
Typesetting : Nur Farisha Fariza Binti Mohd Zaini

EDITORIAL BOARD

EDITORS-IN-CHIEF

Assoc. Prof. Ts. Dr Siti Rasidah Md Sakip

REVIEWERS

PM. Ts. Dr Norhafizah Abdul Rahman
PM. Ts. Dr Siti Rasidah Md Sakip
LAr. Dr Helmi Hamzah (CA)
LAr. Dr Norizan Mt Akhir
LAr. Dr Zulkefle Ayob
IDr Dr Nadiyanti Mat Nayan
Ts. Dr Izham Abd Ghani
Dr Nur Huzeima Mohd Hussain
Dr. Wan Noor Anira Wan Hj Ali @ Yaacob
Dr Suriati Ahmad
Dr Nor Izana Mohd Shobri
LAr. Ahmad Zamil Zakaria
LAr. Atikah Raihanah Amir
LAr. Azran Mansor
LAr. Khairul Adham Ibrahim
LAr. Nur Hanim Ilias
LAr. Ruwaidah Borhan
Ts. Mohd Zulhaili Teh
Azrul Bahaluddin
Falihin Jasmi
Norasikin Hassan
Siti Syamimi Omar

Organized by,
Landscape Architecture Seminar (LAN653)
Programme of Landscape Architecture
Semester October 2025 – February 2026

ORGANISING COMMITTEE

Chairman : Assoc. Prof .Ts. Dr Siti Rasidah Md Sakip

MAIN SECRETARIAT

Project Director : Mohammad Aznel Bin Ahmad Kamal
Deputy Project Director :Nur Alia Fatihah Binti Muzapar
Marketing/Promotion/Welfare Team :-
Nur Hafizatul Akma Binti Mohd Yusri | Nur Adeena Binti Zainul Asri |
Hani Syafiqah Binti Hamdi | Nur Laili Balqis Binti Noorhafis | Nur Aiman Widad Binti Rosli | Nur Damia Humaira Binti Yusdi | Siti Zulaikha Binti Khairul Anuar | Nurul Nailatul Husna Binti Husin |
Technical Support Team :-
Danish Saputra Bin Asmadi | Muhammad Amirul Farhan Bin Kamaruzaman | Mohammad Farrish Emil Hakimi Bin Ahmed Halemee | Siti Nurul Balqis Binti Mohd Ariff | Nur Iffah Nadhirah Binti Azizan | Siti Safiyyah Binti Abdul Majid | Nurul Nadrah Binti Rosli | Nur Bahiyah Binti Abu Naim | Shaqira Emelya Fatiha Shahril Fitri | Muhammad Irsyad Daish Bin Mohd Kamal El Asyeeq | Arsyad Jazli Bin Suhazeli | Noralya Balqis Binti Syed Guntur | Mohammad Aznel Bin Ahmad Kamal
Design Team :-
Muhammad Amsyar Farhan Bin Kamaruzaman
Muhammad Akmal Bin Abdul Talib
Editorial Team :-
Nur Farisha Fariza Binti Mohd Zaini
Nur Alia Fatihah Binti Muzapar
Additional Support Task :-
Muhammad Hazim Bin Nordin
Zawanie Fatini Binti Mohd. Jamzury
Aazib Luqman Bin Hisyamudin

Assessing Scenic Quality through Landscape Visual Assessment along Road Corridors in Kuala Kangsar, Perak

Siti Zulaikha Khairul Anuar[1] , Khairul Adham Ibrahim[2]

[1,2,] *Department of Built Environment Studies and Technology, Faculty of Built Environment, Universiti Teknologi MARA Seri Iskandar, 32610 Seri Iskandar,Perak*

ABSTRACT

Kuala Kangsar, the royal town of Perak, is well known for its historical and cultural identity that blends traditional Malay architecture with colonial influences. However, increasing urban development and the lack of coordinated landscape planning have resulted in visual inconsistencies along the town's main roads and public spaces. To address this issue, Landscape Visual Assessment (LVA) is applied as a systematic method to evaluate and interpret the visual quality, aesthetic value, and public perception of Kuala Kangsar's road landscape. This study aims to assess the visual quality of the main road corridors in Kuala Kangsar by identifying the dominant landscape elements, analysing their visual significance, and understanding the community's perception toward the aesthetic character of the roadside environment. The research develops a quantitative evaluation model for assessing the visual quality of road corridors in Kuala Kangsar, Perak, by integrating deep learning techniques and eye movement analysis. Through visual scoring and spatial analysis, the study will classify the road corridors into high, medium, and low visual quality zones, highlighting areas that require improvement and those with strong scenic potential. The findings will provide essential insights into landscape planning, urban design, and heritage conservation, ensuring that visual aesthetics are integrated into future development and maintenance of the royal town. This research emphasizes the importance of incorporating Landscape Visual Assessment (LVA) into local landscape planning frameworks to preserve and enhance Kuala Kangsar's distinctive streetscape character. By promoting visual harmony, cultural appreciation, and sustainable design principles, the study contributes to creating a more visually appealing, culturally rich, and liveable royal town environment.

Keyword**:** Landscape Visual Assessment, Road Corridor, Scenic Quality, Kuala Kangsar, Landscape Planning.

INTRODUCTION

Assessing scenic quality through landscape visual assessment is a critical component in the planning and management of road corridors. Traditional methods often struggle to quantify drivers' subjective visual perceptions, leading to a need for innovative approaches that reconcile the subjectivity-objectivity dichotomy in landscape quality research. Various methodologies have been developed to evaluate visual landscape quality (VLQ), including the use of computer vision techniques and multi-camera configurations to capture and synthesize landscape images fitting the human field of view. These methods aim to quantify landscape qualities across dimensions such as naturalness-artificiality, diversity-coherence, and openness-deepness, providing a comprehensive evaluation system. Empirical studies have shown that visual

landscape preferences can vary significantly between different driving directions and sections of a road, highlighting the importance of tailored scenic road planning. Additionally, the integration of subjective scenic quality evaluations with objectively measurable landscape structures has proven effective in large-scale assessments, offering valuable insights for strategic planning and policy formulation. These advancements in landscape visual assessment methodologies are essential for enhancing the aesthetic and functional quality of road corridors, ultimately contributing to the high-quality development of scenic roads. Empirical studies have verified that the visual landscape preferences of a road can vary significantly between different driving directions and sections, reflecting the importance of tailored scenic road planning. It also turned out that linking subjective assessments of scenic quality with objectively measurable structures of the landscape works in large-scale assessments, providing highly relevant insights into strategic planning and policy formulation. These evolvements of landscape visual assessment methodologies are essential to enhance the aesthetic and functional quality of road corridors, which will contribute to the high-quality development of the scenic road. *(Yang & Kim, 2021)*

RESEARCH OBJECTIVES

1. To observe and identify the visual characteristics of road corridors in Kuala Kangsar, focusing on how the road view highlights significant landmarks and royal heritage elements within the town.

2. To develop a quantitative evaluation model for assessing the visual quality of road corridors in Kuala Kangsar, Perak, by using photographic surveys and visual quality scoring.

3. To propose planning and design recommendations for improving visual quality and enhancing the aesthetic experience of road users while preserving the identity and cultural landscape of Kuala Kangsar.

LITERATURE REVIEW

Landscape Visual Assessment (LVA)

Landscape Visual Assessment (LVA) is a method used to evaluate the aesthetic and perceptual value of landscapes based on elements such as (i) form, (ii) texture, (iii) colour, and (iv) composition. It combines objective techniques, like GIS analysis and terrain modelling, with subjective approaches such as public perception surveys to assess scenic quality. *According to Ebenezer et al. (2020),* LVA helps planners identify and protect areas of high visual value during development. In Malaysia, it has been applied in places like Taiping and Cameron Highlands to integrate visual sensitivity into landscape planning *(Planning Malaysia, 2025)*. Overall, LVA links technical assessment with human perception, ensuring that landscape planning reflects both scenic and experiential qualities.

Road Corridor

Road corridors are key visual components in landscape assessment, serving as the main channels through which the public experiences scenery and place character. They present a sequence of unfolding views shaped by built form, vegetation, and design style. *According to Samsudin et al. (2023)* found that openness, visual continuity, and natural elements enhance visual preference, while cluttered signage and unplanned development reduce quality (*MDPI Land Journal*). As visual gateways to regional identity and

culture, road corridors play an important role in shaping aesthetic experiences. Incorporating visual assessment in their planning helps manage vegetation, signage, and view protection, ensuring roads enhance the landscape's scenic and cultural value.

Scenic Quality

Scenic quality refers to the perceived beauty of a landscape, shaped by natural and cultural features such as vegetation, topography, water bodies, and architectural harmony. It is a subjective assessment influenced by emotional and cultural factors. *According to Arriaza et al. (2004),* landscapes with coherence, naturalness, and visual balance exhibit higher scenic beauty. In Malaysia, open views, greenery, and natural landforms especially paddy fields and tree-lined roads are most preferred for their calming effects *(MDPI Land Journal).* Scenic quality assessments help planners identify and protect visually valuable areas, guiding development to preserve the aesthetic integrity of the landscape.

Kuala Kangsar

Kuala Kangsar, the royal town of Perak, is known for its rich cultural heritage, traditional Malay architecture, and scenic river views along the Perak River. Landmarks such as the Ubudiyah Mosque, Istana Kenangan, and colonial buildings define its unique landscape identity. However, modern development has begun to disrupt the town's visual harmony and scenic value. *According to Ahmad et al. (2021),* cultural mapping and heritage trail studies highlight the town's key visual and heritage elements, forming a basis for future visual assessments (*Planning Malaysia, 2025*). Conducting a Landscape Visual Assessment in Kuala Kangsar would help balance heritage conservation and urban growth by identifying scenic routes, preserving iconic views, and strengthening the town's royal and cultural identity.

Landscape Planning

Landscape planning integrates visual, ecological, and cultural factors into spatial development to maintain scenic quality and sustainability. *According to Mohd Noor et al. (2020),* Malaysian landscape planning increasingly incorporates visual landscape assessment and scenic sensitivity analysis into planning processes to prevent visual degradation (E-BPJ Journal). Tools like Landscape Character Assessment (LCA), Scenic Beauty Estimation (SBE), and GIS-based modelling support better decision-making. In Kuala Kangsar, landscape planning is vital for protecting visual quality, heritage, and scenic corridors. By applying LVA findings, planners can develop policies that safeguard view corridors, promote sustainable roadside design, and ensure heritage-sensitive development.

RESEARCH METHODOLOGY

This study uses the quantitative research methodology through the Landscape Visual Assessment (LVA) method to examine the scenic value of Kuala Kangsar's three major road corridors, namely Sultan Abdul Jalil Shah Bridge, Jalan Raja Idris, and Jalan Kolej Melayu. Such methodology helps to determine the visual appeal and character of the roads and how they contribute to the town's environmental and cultural identity. The quantitative approach allows the researcher to study visually how people perceive and enjoy the landscape.

Data are primary and secondary. Primary data are accessed via field observation and photo documentation. Field observation records the physical features such as trees, topography, and built-up elements, while

photo documentation provides physical evidence that can be analysed. Secondary data such as maps, planning reports, and official reports are used to support and validate findings.

The research involves objective as well as subjective judgments. The objective part uses visual observation to identify key landscape features and scenic spots. The information gathered is analysed through basic statistical methods to obtain a Scenic Quality Index (SQI), which determines the areas of high and low scenic quality. These results are subsequently utilized to guide future landscape design to improve the visual quality and sustainability of Kuala Kangsar's road corridors in the context of its royal heritage identity.

Visual Quality Score

The Visual Quality Score in this study is assessed using a five-point hedonic rating scale, ranging from 1 (very poor) to 5 (excellent). This approach evaluates respondents' visual preferences based on their aesthetic perception of landscape images, considering factors such as harmony between natural and built elements, visual coherence, and overall scenic appeal. The assessment is conducted across four visual criteria, resulting in a maximum total score of 20 for each image. A score of 1 indicates very poor visual quality, where the landscape appears highly disordered, visually unattractive, and lacking harmony. A score of 2 represents poor visual quality, reflecting weak visual integration and noticeable inconsistencies among landscape elements. A score of 3 denotes moderate visual quality, where the landscape is generally acceptable with some degree of visual unity but limited aesthetic impact. A score of 4 indicates good visual quality, characterised by clear harmony, balanced composition, and pleasing visual characteristics. A score of 5 represents excellent visual quality, where the landscape demonstrates strong visual unity, high aesthetic value, and a coherent integration of natural and built elements. The five-point hedonic scale is commonly applied in landscape visual quality assessment due to its simplicity, clarity, and effectiveness in translating subjective visual perceptions into structured and quantifiable data, making it suitable for comparative visual analysis.

Table 1. Score description of visual quality assessment

Score	Description
1	Very poor visual
2	Poor visual
3	Moderate visual
4	Good visual
5	Excellent visual

RESEARCH DESIGN

This study uses a quantitative method called Landscape Visual Assessment (LVA). It examines the scenic value of Kuala Kangsar's with this roads (i) Persisiran Sayong, (ii) Sultan Abdul Jalil Shah Bridge, (iii) Jalan Daeng Selili, (iv) Jalan Istana, (v) Jalan Laksamana, and (vi) Jalan Shahbandar The method evaluates the visual appeal and character of the roads. It also considers their contribution to the town's environmental and cultural identity. The quantitative approach studies how people perceive and enjoy the landscape. Data include primary and secondary sources. Primary data come from field observation and photo documentation. Field observation records feature like trees, topography, and buildings. Photo

documentation provides evidence for analysis. Secondary data, such as maps, planning reports, and official documents, support and validate the findings. The research uses both objective and subjective judgments. Objective observation identifies key landscape features and scenic spots. Data are analysed using basic statistics to produce a Scenic Quality Index (SQI). The SQI shows areas of high and low scenic quality. Results guide future landscape design. The study aims to improve visual quality and sustainability while reflecting Kuala Kangsar's royal heritage identity.

Site Selection

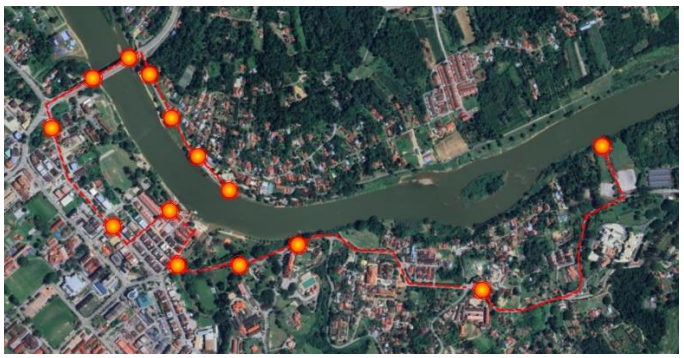


Figure 1. Site Selection riverfront corridor in Kuala Kangsar.

This study is situated in Kuala Kangsar and encompasses several major roads that serve as important movement and connectivity corridors within the area. These include Persisiran Sayong, Sultan Abdul Jalil Shah Bridge, Jalan Daeng Selili, Jalan Istana, Jalan Laksamana, and Jalan Shahbandar. The selected study area is characterised by a diverse urban and natural landscape, where transportation routes, riverfront spaces, and built environments are closely integrated. In addition, the area contains significant elements of cultural and historical heritage, including traditional and contemporary buildings, as well as extensive natural planting along the river and streetscapes. This combination of heritage features, waterfront setting, architectural character, and greenery contributes to the distinctive identity and environmental quality of Kuala Kangsar. I chose this river area as the study site because it offers a clear combination of natural and built elements, allowing for a comprehensive assessment of visual quality and landscape structure along the river corridor. Additionally, the river serves as a focal point for the local community and features diverse habitats and landscape characteristics, making it suitable for analysis in terms of visual unity, aesthetic appeal, and human-environment interactions. The river site was chosen for data collection due to its mix of natural and built features, providing diverse landscape characteristics for assessing visual quality and human-environment interactions, in line with landscape character assessment principles (Swanwick, 2002)

ANALYSIS AND DISCUSSION

The Visual Quality Assessment was conducted at fourteen designated visual observation points along selected visual corridors, including Persisiran Sayong, Sultan Abdul Jalil Shah Bridge, Jalan Raja Idris, Jalan Daeng Selili, Jalan Sultan Nadrin Shah, Jalan Istana, Jalan Laksamana, and Jalan Shahbandar. It located at Kuala Kangsar, Perak. A structured checklist was utilised to assess visual unity by evaluating the level of integration between natural elements and built elements, which were subsequently rated using a five-point Visual Quality Assessment scoring system ranging from very poor (Score 1) to excellent (Score

5). Field observations were carried out over a two-day period under rainy and overcast weather conditions, which influenced visibility and the quality of photographic documentation. The study area predominantly comprised riverfront corridors, where the assessment focused on analysing riverfront character, overall visual quality, and development sensitivity to support informed decision-making for future landscape development.



Figure 2. View of visual point 1 at Persisiran Sayong.

Based on the visual evaluation of the riverfront landscape in Kuala Kangsar at Persisiran Sayong, the calculated corresponds to an overall Visual Unity score is 14. This score reflects a generally strong integration between natural and built elements, where the river corridor, grass-covered embankments, and surrounding greenery form a dominant and coherent visual structure. Built elements along the riverbank are visually compatible in scale and placement, contributing to the riverfront character without overpowering natural features. Although certain aspects, such as limited textural diversity and modest architectural expression, reduce the overall strength of visual identity, these do not significantly disrupt visual harmony. Overall, the landscape demonstrates good visual unity, clear spatial layering, and balanced composition, indicating a visually appealing environment with positive potential for sensitive and context-responsive riverfront development.

Visual Unity Score = (3 +3 + 4 + 4) = Total score of visual unity are 14.



Figure 3. View of visual point 2 at Persisiran Sayong.

Based on the visual evaluation of the Kuala Kangsar riverfront landscape, the calculated average score across the assessed criteria of form, texture, colour, and composition is approximately 13, which corresponds to an overall Visual Unity Score is This score reflects a landscape that is visually pleasant and environmentally coherent, but not yet strongly unified in spatial or architectural character. Natural elements, particularly the river channel, grassed embankments, and mature trees, form the dominant visual structure of the scene and provide a continuous green framework along the river edge. The natural river corridor visually defines the character of the site, while the open grassed slopes and wide water surface enhance spatial openness and visual continuity. Together, these features establish a calm and natural visual environment that supports the

identity of the riverfront landscape.

Visual Unity Score = (3 + 3 + 3 + 4) = Total score of visual unity are 13.



Figure 4. View of visual point 3 at Persisiran Sayong.

Based on the visual evaluation of the second riverfront view in Kuala Kangsar, the calculated average score across the criteria of form, texture, colour, and composition, which corresponds to an overall Visual Unity Score are 16. This higher rating reflects the stronger visual coherence created by the continuous line of mature trees, the well-defined grassy embankment, and the clear river edge, which together form a structured and legible riverfront corridor. The repeated tree spacing and consistent canopy height generate a rhythmic visual pattern that enhances spatial order and strengthens the overall landscape form. The bright blue water surface further reinforces the river's presence as a dominant visual element, contributing to clarity and contrast within the scene.

Visual Unity Score = (4 + 4 + 4 + 4) = Total score of visual unity are 16.



Figure 5. View of visual point 6 at Persisiran Sayong.

Based on the visual evaluation of the Kuala Kangsar riverfront landscape shown in the image, the calculated average score across the assessed criteria of form, texture, colour, and composition corresponds to an overall Visual Unity Score are 13. This score reflects a landscape that is visually cohesive, attractive, and well-integrated between natural and built elements. The broad river, gently sloping grassed embankments, and mature trees form a continuous green corridor that frames the riverfront and provides strong visual continuity. These natural components create a calm and open spatial structure, reinforcing the identity of the riverfront as a scenic and environmentally coherent landscape.

Visual Unity Score = (3 + 3 + 3 + 4) = Total score of visual unity are 13.



Figure 6. View of visual point 7 at Sultan Abdul Jalil Shah Bridge.

Based on the visual observation of this image at Sultan Abdul Jalil Shah Bridge, between natural elements and built elements, resulting in a moderately coherent visual composition. Natural elements such as greenery hills, open sky, and surrounding river environment provide a soft scenic backdrop that helps balance the hard surfaces of the built structure. The built elements, including the bridge, roadway, pedestrian walkway, street lighting, and safety barriers, are arranged in a strong linear form that dominates the foreground and guides visual movement. In terms of colour and texture, the neutral tons of concrete and asphalt contrast gently with the greens of the landscape and the muted sky, creating a visually calm atmosphere. However, limited vegetation along the bridge reduces landscape richness and visual variation.

Visual Unity Score = (3 + 3 + 3 + 3) = Total score of visual unity are 12.



Figure 7. View of visual point 8 at Sultan Abdul Jalil Shah Bridge

Based on the visual evaluation of the second riverfront view in Kuala Kangsar, the calculated average score across the criteria of form, texture, colour, and composition is corresponds to an overall Visual Unity Score are 18. This higher rating reflects the stronger visual coherence created by the continuous line of mature trees, the well-defined grassy embankment, and the clear river edge, which together form a structured and legible riverfront corridor. The repeated tree spacing and consistent canopy height generate a rhythmic visual pattern that enhances spatial order and strengthens the overall landscape form. The bright blue water surface further reinforces the river's presence as a dominant visual element, contributing to clarity and contrast within the scene.

Visual Unity Score = (5 + 4 + 5 + 4) = Total score of visual unity are 18.



Figure 8. View of visual point 9 at the traffic light.

Based on visual observation of this image, an interaction between natural elements and built elements that creates a moderately unified urban landscape. Natural elements such as mature palm trees, roadside greenery, and the open blue sky with scattered clouds soften the visual impact of the road infrastructure and provide a tropical character to the scene. The built elements, including the road intersection, traffic lights, street signage, street lighting, and surrounding road furniture, form the dominant structural framework and clearly organize movement and circulation. These built components are functional and consistently scaled, helping to maintain visual order despite the busy traffic activity. In terms of colour and texture, the grey tones of asphalt and poles contrast with the vibrant greens of vegetation and the bright sky, producing a balanced yet slightly utilitarian visual quality.

Visual Unity Score = (3 + 3 + 3 + 3) = Total score of visual unity are 16.



Figure 9. View of visual point 10 at Jalan Daeng Selili.

Based on visual observation of this image, the urban streetscape shows a balanced yet moderately unite relationship between natural elements and built elements. Natural elements represented by the row of tall palm trees along the median and sidewalks, which introduce vertical greenery and help soften the dense commercial setting. The built elements, including shop houses, roadways, parked vehicles, street lighting, and commercial signage, dominate the visual field and strongly define the spatial character of the street. The repetitive building heights and continuous shop fronts create a sense of rhythm and visual order, although variations in façade colours and signage slightly disrupt overall cohesion. In terms of colour and texture, the contrast between concrete surfaces, colourful shop signs, and green vegetation creates visual interest but reduces uniformity. Traffic activity and on-street parking further contribute to visual complexity and movement.

Visual Unity Score = (3 + 3 + 3 + 3) = Total score of visual unity are 12.



Figure 10. View of visual point 11 at Dataran Lembah Sungai Perak.

Based on visual observation of this image, the harmonious relationship between natural elements and built elements demonstrates riverfront public space. Natural elements presence the river, open sky, and surrounding greenery, which form a calm and continuous visual backdrop. The built elements, including the paved promenade, benches, railings, lighting poles, and nearby structures, are clearly organized and support recreational use without dominating the scene. The linear arrangement of the walkway and river edge creates a clear visual structure and spatial coherence along the waterfront. In terms of colour and texture, the contrast between blue water and sky, green vegetation, and reddish paving enhances visual interest while maintaining overall unity. The open composition and unobstructed views allow smooth visual transitions between foreground, middle ground, and background elements.
Visual Unity Score = (5 + 4 + 5 + 4) = Total score of visual unity are 18.



Figure 11. View of visual point 12 at Recreation Park Kuala Kangsar.

Based on visual observation of this image, the riverfront landscape exhibits a strong and harmonious integration between natural elements and built elements. Natural elements are dominantly represented by the wide river, expansive sky, scattered clouds, and surrounding vegetation, which collectively create a calm and open visual environment. The built elements, including the paved promenade, railings, gazebos, and pedestrian pathways, are carefully positioned along the river edge to support public use without disrupting the natural setting. The gentle curvature of the river and walkway contributes to a smooth spatial flow and visual continuity across the scene. In terms of colour and texture, the contrast between blue sky, green vegetation, reflective water surfaces, and warm-toned paving enhances visual richness while maintaining coherence.
The open composition allows clear visual connections between foreground, middle ground, and background elements, reinforcing spatial unity.

Visual Unity Score = (5 + 4 + 4 + 4) = Total score of visual unity are 17.



Figure 12. View of visual point 13 at Recreation Park Kuala Kangsar.

Based on visual observation of this image, the river landscape presents a balanced and visually coherent relationship between natural elements and built elements. Natural elements are strongly expressed through the wide river, open sky, soft cloud formations, and continuous greenery along the riverbank, creating a calm and expansive setting. The built elements, including low-rise buildings, river-edge structures, and distant infrastructure, are modest in scale and blend gently into the natural backdrop. The horizontal alignment of the river and shoreline vegetation establishes a clear visual order and spatial continuity across the scene.

In terms of colour and texture, the harmony between blue sky, reflective water, green vegetation, and subtle built forms supports overall visual consistency. The open composition allows uninterrupted views and smooth transitions between foreground water surfaces and background development.

Visual Unity Score = (4 + 4 + 4 + 4) = Total score of visual unity are 16.



Figure 13. View of visual point 14 at Jalan Istana.

Based on visual observation of this image, the roadway landscape demonstrates a balanced natural elements and built elements. Natural elements are strongly expressed through mature trees with wide canopies, dense greenery, and the surrounding hillside, creating a calm and refreshing environment. The built elements, including the curved road, fences, streetlights, and vehicles, are well-organised and integrated without overpowering the natural setting. The curved alignment of the road works harmoniously with the natural contours of the landscape, guiding movement and enhancing spatial continuity. In terms of colour and texture, the dominance of green vegetation combined with neutral road surfaces and subtle infrastructure tones supports visual harmony. The composition allows smooth visual flow from foreground to background, with trees framing the scene and reinforcing unity.

Visual Unity Score = (5 + 4 + 5 + 4) = Total score of visual unity are 18.



Figure 14. View of visual point 15 at Ubudiyah Royal Mosque at Kuala Kangsar.

Based on visual observation of this image, the mosque landscape presents a strong and visually unified relationship between natural elements and built elements. Natural elements are clearly expressed through the blue sky, scattered clouds, palm trees, shrubs, and landscaped greenery surrounding the mosque. The built elements, including the grand mosque with golden domes, minarets, paved roads, and nearby residential buildings, serve as the main visual focus while remaining well-integrated with nature. The symmetrical form of the mosque combined with the orderly layout of pathways and roads establishes a clear visual structure and balance. In terms of colour and texture, the contrast between white architectural forms, gold domes, green vegetation, and grey paving enhances visual harmony. The open spatial arrangement allows smooth visual transitions between foreground circulation spaces and the background skyline.

Visual Unity Score = (5 + 4 + 5 + 5) = Total score of visual unity are 19.



Figure 15. View of visual point 16 at Ubudiyah Royal Mosque at Kuala Kangsar.

Based on visual observation of this image, the river landscape shows a calm and visually coherent relationship between natural elements and built elements. Natural elements dominate the scene through the wide river, blue sky with scattered clouds, riverbank vegetation, and surrounding trees that create a peaceful atmosphere.
Built elements are minimal and subtle, possibly limited to distant embankments or human-altered river edges, allowing nature to remain the primary visual focus. The horizontal flow of the river and the continuous greenery along the banks establish strong visual order and spatial continuity. In terms of colour and texture, the harmony between soft blue skies, earthy river water, green vegetation, and sandy riverbanks enhances visual consistency. The open composition provides uninterrupted views and smooth transitions from the foreground riverbank to the background landscape.

Visual Unity Score = (4 + 4 + 5 + 4) = Total score of visual unity are 17.

Spatial Pattern of Scenic Quality and Visual Characteristics

This study aims to observe and identify the visual characteristics of road corridors in Kuala Kangsar, with particular emphasis on how road views highlight significant landmarks and royal heritage elements within the town. The analysis reveals a distinct spatial pattern of scenic quality closely associated with proximity to the riverfront. Visual observation points located near the river corridor, including Sultan Abdul Jalil Shah Bridge, Jalan Raja Idris, and Jalan Daeng Selili, consistently recorded higher visual quality scores. These corridors

benefit from the strong presence of natural elements such as the river, vegetated embankments, and open vistas, which enhance visual unity and reinforce the historic and cultural identity of Kuala Kangsar as a royal town. In contrast, road sections located further from the river or within more intensely built-up areas exhibit lower scenic quality due to visual interruptions from dense buildings, infrastructure, and mixed land uses.

Contribution of Visual Components to Scenic Quality

In line with the objective to develop a quantitative evaluation model for assessing visual quality, this study applied photographic surveys and visual quality scoring based on four visual components: form, texture, colour, and composition. The findings indicate that colour and composition are the most influential contributors to scenic quality along the road corridors. The dominance of natural green hues from vegetation, combined with the reflective surface of the river, creates a visually calming and harmonious environment. Furthermore, strong spatial composition is evident through the clear layering of foreground greenery, midground river space, and background settlement or heritage structures, which enhances visual coherence and legibility of the landscape. However, texture and form demonstrate more moderate performance, as the presence of rigid riverbank structures, retaining walls, and uniform built forms reduces visual richness and limits natural variation.

Relationship between Natural, Built, and Heritage Elements

The interaction between natural and built elements plays a critical role in shaping the visual character of Kuala Kangsar's riverfront road corridors. In many locations, built elements such as roads, bridges, and residential buildings remain visually subordinate to the river and surrounding landscape, allowing natural features and royal heritage landmarks to dominate the scene. This balance contributes to a cohesive and visually integrated townscape that supports Kuala Kangsar's cultural identity. Nevertheless, in certain segments, the absence of coordinated architectural treatment and limited landscape enhancement along the river edge weakens the visual transition between natural and built environments, resulting in a slight reduction in overall visual unity.

Riverfront Character, Development Sensitivity, and Planning Implications

Consistent with the objective of proposing planning and design recommendations, areas with higher Visual Quality Assessment scores (Score 4) are identified as visually sensitive riverfront zones that require careful planning and design control to prevent degradation of scenic quality. These areas possess strong natural character, high aesthetic value, and clear visual connections to heritage elements, making them suitable for low-impact and visually sensitive developments such as riverfront promenades, viewing decks, and landscaped public spaces. Conversely, road corridors with moderate visual quality scores (Score 3) present opportunities for visual enhancement through improved planting strategies, better integration of built

forms, and more coherent riverfront landscape treatments.

Key Findings on Scenic Quality of Kuala Kangsar Road Corridors

Overall, the findings demonstrate that the scenic quality of road corridors in Kuala Kangsar is strongly influenced by the dominance of the river, surrounding natural landscape, and the visibility of royal heritage elements. While the study area generally exhibits moderate to good visual unity, there remains considerable potential to further enhance scenic quality through strategic landscape planning, sensitive riverbank design, and improved integration between natural, built, and cultural components. Such improvements would not only enhance the visual experience of road users but also support sustainable development while preserving the distinctive identity of Kuala Kangsar.

CONCLUSION

This study has successfully observed and identified the visual characteristics of road corridors in Kuala Kangsar, focusing on the prominence of significant landmarks and royal heritage elements within the town. Using photographic surveys and a five-point hedonic visual quality scoring system, the study quantified the scenic quality along selected road corridors. The findings reveal that corridors adjacent to the riverfront, including Sultan Abdul Jalil Shah Bridge, Jalan Raja Idris, and Jalan Daeng Selili, generally exhibit higher visual quality scores due to the dominance of natural elements, harmonious spatial composition, and clear visibility of heritage features. Road sections further from the river or within heavily built-up areas show lower scores due to visual interruptions and reduced coherence. Among the four assessed visual components, colour and composition were identified as the strongest contributors to scenic quality, while form and texture had a moderate impact. Overall, the visual experience of Kuala Kangsar's road corridors is shaped by the interplay between natural, built, and heritage elements, with the riverfront acting as a key organizing feature that enhances visual unity and aesthetic value.

Based on the study's findings and objectives to enhance visual quality while preserving the town's identity, the following recommendations are proposed:

Riverfront Enhancement and Protection

Maintain and enhance natural vegetation along the riverbanks to preserve scenic quality.

Control developments along visually sensitive riverfront zones (Score 4) to prevent visual degradation.Integrate low-impact design interventions such as promenades, viewing decks, and landscaped public spaces that complement the natural and cultural landscape.(BRIAN CLOUSTON, 1986)

Visual Integration of Built Elements

Encourage coordinated architectural design and consistent landscape treatment to improve the transition between natural and built environments.Use materials, colours, and forms that harmonize with the surrounding landscape and heritage features.(Ning Kang & Chunqing Liu, 2022)

Landscape Planning for Moderate-Quality Areas

Implement strategic planting and spatial arrangement to enhance colour diversity and composition in areas with moderate scores (Score 3).Introduce visual buffers or screening for infrastructure elements that disrupt scenic quality.(Sullivan & Lovell, 2006)

Heritage Preservation and Visual Legibility
Emphasize visibility and connectivity of royal heritage landmarks through careful alignment of road views and viewpoints.Incorporate interpretive signage or small-scale features to highlight cultural and historic significance without overwhelming the visual environment.(Cristian A. Maestre et al., 2025)

Monitoring and Future Assessment
Apply the developed quantitative visual quality model for ongoing assessment to guide future development and urban design. Encourage community participation in evaluating scenic quality to integrate public perception with planning decisions.(Han et al., 2023)

By implementing these recommendations, Kuala Kangsar can strengthen the aesthetic experience along its road corridors, preserve its cultural and natural heritage, and promote sustainable, context-sensitive urban development that respects both scenic quality and local identity.

REFERENCES

Clouston, B. (1986). Landscape planning—A practitioner's view. 463–470.

Cristian A. Maestre, Garza, S., Albornoz, Y., Mejia-Arango, S., Melgarejo, J. D., & Maestre, G. E. (2025). Impacts of imageability of architecture. *Landscape and Urban Planning,* 1–14.

Fu, B., & Lu, Y. (2006). The progress and perspectives of landscape ecology in China. *Progress in Physical Geography: Earth and Environment, 30*(2), 232–244.

Han, Y., Liu, Y., Wang, C., Wu, X., & Wang, K. (2023). Assessment of the cultural-natural importance of the scenic spots from a network perspective. *Landscape and Urban Planning, 239,* 1–12.

Kang, N., & Liu, C. (2022). Towards landscape visual quality evaluation. *Ecological Indicators,* 1–13.
MDPI. (2008). *Sustainability.* MDPI.

Mohd Yunus, N. M., Endut, E., & Said, S. Y. (2021). Cultural mapping and heritage trail in Kuala Kangsar. *Planning Malaysia, 19*(15).

Ode, Å., Tveit, M. S., & Fry, G. (2008). Capturing landscape visual character using indicators: Touching base with landscape aesthetic theory. *Landscape Research, 33*(1), 89–117.

Sullivan, W. C., & Lovell, S. T. (2006). Improving the visual quality of commercial development at the rural–urban fringe. *Landscape and Urban Planning, 77*(1–2), 152–166.

Teh, M. Z., Abdullah, M., Ahmad Pugi, N., & Abdul Rahman, N. (2018). Visual landscape assessment: A method for analysing and planning for landscape structure. *Asian Journal of Quality of Life, 3*(14), 33–40.

View of Vol. 23 (2025): Planning Malaysia Journal: Volume 23, Issue 6, 2025. (2025). *Planning Malaysia.*

Yang, J., & Kim, B. (2021). Guilt and the consumption of products with an unhealthy image. *Sustainability, 13*(21), 11953.