

## **A STUDY ON VISUAL QUALITY OF TOURISM ACCOMODATION IN ECO-TOURISM SITE IN PAYA INDAH WETLANDS, MALAYSIA**

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*Visual quality is very important as observer's first response to his/her surrounding to the eco-tourism site. This factor should be stressed for eco-tourism sites such as wetland. An eco-friendly design of eco-tourism accommodations that harmonize and compatible to natural surrounding could increase the tourist interest to the place itself. A study was conducted in Paya Indah Wetlands aimed at assessing visual quality and perception of the eco-tourism accommodations using expert judgment technique. This study used selected photographs of the accommodation elements in Paya Indah Wetlands representing different types of buildings, park furnitures, parking features, pedestrian facilities, drainage and signages. The scoring scheme for visual quality and landscape features was valued using the six basic design elements, namely, form, line, colour, texture, shape and space. Data were gathered from 100 experts using a structured questionnaire with surrogated photos, distributed equally among landscape architects and architects. The results revealed that the visual quality of Paya Indah Wetlands accommodations were categorized as moderate in quality and some of the elements were considered as of poor quality. From the results, visual quality of the eco-tourism accommodations should be taken into consideration at the early stage in the development process to lend a higher visual quality to the wetland landscape of Paya Indah Wetlands.*

*Visual quality, eco-tourism, accommodation, tourism site*

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### **INTRODUCTION**

Managing visual quality can be the better strategies and tools for planning, designing, and managing of our tourism sites. On the other hands, it will also enhance the commitment for preventing and reducing adverse impacts and to look for positive opportunities for visual enhancement especially in predicting and judging the significance of the effects that new development may have upon landscape character and visual amenity.

Visual quality can be considered as the condition, character, and quality of a scenic landscape and the way it is perceived, preferred, or valued by the professionals or the public. The Review of Existing Methods of Landscape Assessment and Evaluation by the Macaulay Institute (2003,

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p.2), describes the terminology of visual quality as a phrase synonymous with beauty, but is intended to convey an impression of objectivity.

Visual quality becomes important because the visual quality of both natural and built areas in eco-tourism areas is an important factor in providing quality experiences and harmonizing development with nature. For example, volunteer paths proliferation and landscape degradation occur when steps are not taken to restore such areas. Once one volunteer path is established, others often appear in rapid succession. Visitors may read the landscape as one in which it is permissible to wander at will, or off established pathways. This is perfectly important because it helps to maintain the visual quality of the area.

Sell and Zube (1989) carried out a survey on the visual quality in national parks, the United State of America. The method used was a mail survey to ask the respondents on how they felt about the built environment in the national park system. Questions were posed about the significance of harmonious designs, recommended requirements for design themes and guidelines, and the importance of visual quality in the parks. A total of 1,179 questionnaires were mailed to superintendents and selected staff from a representative sample of 169 parks, a sample population of designers and planners at the Denver Service and Harpers Ferry centers, administrators and selected staff in the regional and Washington D.C. offices. A total of 755 questionnaires were returned, with about 64% response rate.

From the survey, it was revealed that only 8 of the 614 (1.3%) park unit respondents thought that visual quality was not important using a five point scale (1 = not important at all to 5 = extremely important). Reasons given by the respondents for why developed area visual quality was important were visitor expectations, National Park Service responsibility for setting high standards, and the need for consistently high visual quality standards in all parts of parks that were accessible to the public. In terms of the importance of elements that contributed to visual quality, the survey revealed that the overall maintenance quality was most important. Sign design, colours, consistency in interpretive exhibits, and appropriate plantings also were seen to be very important. Meanwhile, for the responses regarding which elements of new construction were important in creating harmonious relationships with existing natural environments, the respondents indicated that colours should blend with the surroundings, buildings should reflect traditional forms and styles, and natural materials should be used.

A study on visual quality that was carried out by Sell and Zube (1989) is applicable for Malaysia because it is one of the methods to identify the quality of the park based on the assumption of the people on the built environment in the tourism site. Through this exercise, analysis on the design character and level of destruction of the natural environment in tourism site could be determined. The evaluation process was based on the six basic formal visual assessment elements in design: line, colour, texture, shape and space. Through this, the significance and extent of the visual quality affected by the tourism accommodation elements of the site was observed and analysed.

## **METHODOLOGY**

The approach of the study was based on a formal aesthetic model, developed by the Bureau of Land Management (BLM) in 1980. A scoring scheme for visual quality was valued using the six basic design elements, namely: form, line, colour, texture, shape and space. In this approach, the landscape visual assessment was based on experts judgment to evaluate eco-tourism

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accommodation elements in Paya Indah Wetlands, Dengkil, Selangor, Malaysia. The elements, which were evaluated, including buildings, park furnitures, parking features, pedestrian facilities, drainage and signages. An expert-based scenic assessment was conducted using photographic surrogates (Shuttleworth, 1980), applying six descriptor variables: form, line, colour, texture, shape and space. The six descriptors represented the six basic design elements that had interrelationships.

The numbers of experts included were 100, of which 50 of them were landscape architects who made up of 15% out of 337 Institute Landscape Architect Association of Malaysia (ILAM) corporate and graduate members in Malaysia. This group was selected due to fact that they have skilled and knowledge on visual assessment. The other 50 were architects who made up of 4% out of 1261 Institute Architect Malaysia (PAM) corporate and graduate members in Malaysia. This group was selected due to the fact that PAM has long been established in Malaysia. They also have went through a similar education background in assessing the visual quality of environment. Both of these groups were trained to observe and judge specific landscape attributes based on the principles of art, design, resource management and ecology in the university.

The respondents were selected “judgemental” through a company list of ILAM and PAM. They were called and asked whether they were willing to become respondents for this survey. When they agreed, they were provided with explanation and evaluation forms with photos to evaluate. The respondents self-administered the evaluation process. After two days the evaluation forms together with the photos were collected.

To enable the evaluators to evaluate the tourism accommodation elements in eco-tourism sites, each of the evaluators was given a set of photographs. The photos were taken from the study site during fieldwork on existing conditions. These photos were categorized into six types, namely: buildings, park furnitures, parking features, pedestrian facilities, drainage and signages. Each object was photographed from four different views which was printed in size of 7cm x 5cm. All the photos were mounted on A4 size paper and compiled according to their types as an attachment to the questionnaire.

The procedures of the assessment were limited to the selected eco-tourism accommodation elements in the Paya Indah Wetland corridor only. The elements of buildings, park furnitures, parking features, pedestrian facilities, drainage and signages were identified and categorized according to their types and functions. After that, the photos were taken using a digital camera between 10.00 am and 2.30 pm. Only clear photos were selected for assessment. Each image was assessed using six basic design elements (form, line, colour, texture, shape and space) as shown in Table 1.

Based on the photo showing the eco-tourism accommodation elements of Paya Indah Wetlands, evaluators were asked to evaluate and give a score in the score forms according to their types and descriptors based on the variables in Table 1. Evaluators were asked to do the evaluation sincerely and independently based on their professionalism without any external interference when giving the score for each photo. In the final part of the assessment, the eco-tourism accommodation elements were divided according to the Visual Quality Class (Table 2). After the evaluation, Visual Rating (VR) was calculated as follows:

$$VR_{ij} = BT_{ij} + PF_{ij} + PFe_{ij} + PA_{ij} + DR_{ij} + SG_{ij}$$

where: VR = Visual rating for a personal and subjective assessment of aesthetic satisfaction derived from a landscape type

$$BT = \text{Total scores of building types, } BT_{ij} = \sum_{i=1, j=1}^{6,6} a_{ij}$$

$$PF = \text{Total scores of park furniture, } PF_{ij} = \sum_{i=1, j=1}^{5,6} a_{ij}$$

$$PFe = \text{Total scores of parking features, } PFe_{ij} = \sum_{i=1, j=1}^{4,6} a_{ij}$$

$$PA = \text{Total scores of pedestrian facilities, } PA_{ij} = \sum_{i=1, j=1}^{4,6} a_{ij}$$

$$DR = \text{Total scores of drainage, } DR_{ij} = \sum_{i=1, j=1}^{2,6} a_{ij}$$

$$SG = \text{Total scores of signage, } SG_{ij} = \sum_{i=1, j=1}^{4,6} a_{ij}$$

i = Elements of man-made landscape, i = 1, ..., 6

j = Basic design elements, j = 1, ..., 6

Percentage of the total score points are calculated as below:

$$\begin{aligned} \text{\%Score} &= \frac{\sum_{i=1, j=1}^{n,k} VR_{ij}}{\sum_{j=1}^k A_j} \times 100 \\ \text{(Percentage scores by respondents for each element)} & \end{aligned}$$

Where: VR = visual rating score

$$\sum_{j=1}^k A_j = \text{maximum score}$$

i = number of respondents, i=1, ... n = 100

k = number of category of man-made landscape, A=6

j = number of elements of man-made landscapes, j=1, ... 25

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**Table 1**  
**Explanation of Variable and Rating Score**

<b>Variable</b>	<b>Score</b>	<b>Criteria</b>
<b>Form</b>	5	form blends with the environment and has a spirit of place (genius loci)
	4	form reflects regional and existing landscape context
	3	form partially fits the existing landscape context
	2	form slightly respects the natural character of landscape
	1	form does not respect the natural character of landscape
<b>Line</b>	5	utilizes natural lines of forces
	4	major lines of force recognize some effort to mitigate contrast
	3	lines partially utilize natural lines of force
	2	lines slightly break natural lines of force
	1	break natural lines of force causing tension and starkly contrasting boundaries
<b>Colour</b>	5	complements nature and existing landscape
	4	in harmony with the surrounding, deliberately simple and natural
	3	colours blend with the surroundings but moderately complement existing landscape
	2	colours are not in sharp contrast to natural landscape colours
	1	does not complement nature
<b>Texture</b>	5	pleasing, comfortable feeling and touch
	4	blends with the existing landscape
	3	moderate feeling and touch through human's view
	2	deliberately pleasing and blends with the existing landscape
	1	too contrasting with the surrounding
<b>Shape</b>	5	follows natural forms and is concerned with the variation of lines and edges of planes and volumes
	4	moderate, follows natural forms and is partially concerned with the variation of lines and edges of planes and volumes
	3	deliberately follows natural forms and relates to existing landscape
	2	is slightly concerned with the natural forms of landscape
	1	does not concern with the natural forms of landscape
<b>Space</b>	5	the structural composition is parallel to the line of vision that evokes a landscape
	4	object's background gives a visual sense of space
	3	the structural composition is partially parallel to the line of the density and gradient of background textures
	2	object's background slightly gives a visual sense of space
	1	the structural composition does not concern with the sense of space and landscape background

**Table 2**  
**Visual Quality Class**

<p><b>A (High quality)</b> (Score % 70-100)</p>	<p>Form and shape respect or are in harmony with natural character of landscape; utilize natural lines of forces; colours in complement with nature; space arrangement in harmony with the site contour; vegetation, stream, building materials portray local character and texture pleasing; comfortable feeling and touch through human's view and reduce contrast.</p>
<p><b>B (Moderate quality)</b> (Score % 39-69)</p>	<p>Form and shape partially respect or in harmony with natural character of landscape; major lines of force recognize some effort to mitigate contrast; colour in harmony with the surrounding; kept deliberately simple and natural; space arrangement partially in harmony with the site contour; vegetation, stream, texture have moderate feeling and touch through human's view.</p>
<p><b>C (Poor quality)</b> (Score % 1-38)</p>	<p>Form and shape do not respect or are not in harmony with natural character of landscape; contradicts or breaks natural lines of force causing tension; stark contrasting boundaries; colour does not complement with nature; not in natural arrangement and texture is contrast with the surrounding.</p>

**RESULT AND DISCUSSION**

a. Design aspects

Data relating to the distribution of ratings and the indications of evaluation among the evaluators were generated using SPSS computer package. The results of the visual rating of the tourism accommodation for Paya Indah by the respondents are shown in Table 3.

**Table 3**  
**Visual Rating (VR) of Tourism Accommodation in Paya Indah**

Item	% Respondents (n)					Mean
	1	2	3	4	5	
Building Types (BT)	-	15	51	33	1	3.2
Park Furniture (PF)	6	34	46	12	2	2.7
Parking Features (PFe)	56	37	7	-	-	1.51
Pedestrian Facilities (PA)	10	28	43	16	3	2.74
Drainage (DR)	30	37	26	6	1	2.11
Signage (SG)	48	40	8	4	-	1.68

Note: 
$$\text{Mean} = \frac{\sum x_{ij}}{N}$$

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From Table 3, the results showed that more than 60% of the respondents gave visual ratings to the eco-tourism accommodation in Paya Indah ranging from scores of 1 to 3 (means from 1.51 to 3.2). Score 1 means 'not harmonious at all' to 5 which means 'harmonious and blend with the environment'. The results showed that the visual quality of building types (administration building, Toni bistro, 'Rumah Melayu', commercial precinct, chalets and the albatross) was moderate (mainly score 3, mean = 3.2). Parking features (rubbish collectors, lighting poles, covered parking and guard house) and signages (direction signage, information signage, location signage and road signage) were rated the lowest (mainly score 1, means = 1.51 and 1.68 respectively), which revealed that the designs of these two elements are not harmonious with the surrounding environment of the existing site.

The results revealed that on the whole the tourism accommodation in this park, were moderately complementing and harmoniously blended with existing environment. However, some of the elements such as parking features and signage were considered as not harmonious with the surrounding environment. The average mean rating of below 3.2 showed that the respondents tend to consider the visual quality to be of moderate or poor quality. Based on their professional background, the respondents preferred three accommodation; (i) building types (administration building, Toni's bistro, Rumah Melayu, commercial precinct, chalets and The Albatross), (ii) park furniture (gazebo, shelter, benches, wakaf and rubbish bins) and (iii) pedestrian facilities (boardwalk, jetty, covered walkway and pedestrian path) as partially appropriate for the existing landscape context in terms of form. These three elements were rated as partially utilizing natural lines of force, for example, associations of rooflines and vegetation lines. In terms of colour application for those three elements, the evaluators thought that these elements blended with the surrounding but only moderately complementary. These three elements tend to be rated as inducing moderate feeling and touch. Probably due to the way they are used in the existing park environment of Paya Indah Wetlands.

The results also revealed that parking features (rubbish collectors, lighting poles, covered parking, and guard house) and signage had poor visual quality. Evaluators unanimously agreed that the form of these elements did not suit the natural landscape. Furthermore, their structure broke the natural lines of force causing stark contrasting boundaries. The colour application for these elements did not complement with the wetland nature and the texture was too contrasting with the surrounding environment. They also rated the shape of parking features and signage as not harmonious with the natural forms of the landscape. The low rating of these two elements was based on space and location, as the respondents believed that the composition of these facilities did not blend with the sense of space and landscape.

### b. Design analysis

Table 4 (page 12) shows an analysis on the factor of the six basic design elements (form, line, colour, texture, shape and space). Building types were given mainly score 3 (mean average = 3.19), park furniture was given mainly score 2 (mean average = 2.67), parking features were given score 1 (mean average = 1.49), pedestrian facilities were given mainly score 2 (mean average = 2.51), drainage was given mainly score 2 (mean average = 2.14), and signages were given mainly score 1 (mean average = 1.61).

The results revealed that the design elements of Paya Indah are clearly rated in the range of score 1 to score 3. The mean average value for all of the eco-tourism accommodation (six elements), using a five-point scale (1 = not harmoniously at all to 5 = harmoniously and blend with the environment) was 2.27. This figure revealed that the design elements of the eco-tourism

accommodation in Paya Indah have taken into less consideration the basic design elements (form, line, colour, texture, shape, and space) at the early stage of the design. This problem caused their design elements to be not harmonious with the existing environment and reduced the visual quality of the site. The basic design element that had been given high ratings is colour and the lowest rating was space. More efforts should be put in order to increase the visual quality of these elements. This can be done by taking into consideration the relationship of the tourist accommodations with the existing landscape and considering form, line, colour, texture, shape, space, and landscape degradation issues in park development, as evaluated by the respondents.

The sixth basic design element that is used in the evaluation is the basic foundation for enhances visual quality in park designs. Therefore, it is very important to study these elements before designing any eco-tourism project, especially in natural areas such as wetlands, to reduce destruction of visual quality. Previous research done by Sell & Zube (1989) revealed that form and colour were the two most important elements in creating harmonious relationships with the existing natural environment. Shape also was considered as a powerful tool for the eyes to detect shapes in the landscape. Rewards should be given to the designers to use natural forms to enhance visual quality. Swan (1993) mentioned that the best way to produce visual quality in the parks was the integration of park development with landscape form, using native materials, textures, colours and respecting culturally significant resources.

According to this study, many design characteristics in Paya Indah have resulted in visual incompatibility and can cause disappointment to visitors. Facilities and landscape details are not well coordinated in the park in terms of texture, shape and space. The management should realize that a simple design with the highest quality, durability, energy efficiency and cost-effective maintenance provide the best design solution in enhancing visual “pattern of the place” (National Parks Report, 1993, p. 51). The management needs to establish a visual theme or character for the park, identify desired standards, and then implement and maintain those standards.

This expert evaluation survey that has been done for the park reveals that the respondents seem to consider that the man-made landscape elements in the park do not suit the site. The respondents gave a slightly lower visual rating for these element (parking features, drainage and signage). They tended to give moderate quality for most of the elements (building types, pedestrian facilities and park furniture). Some of them gave poor quality to parking features and signage. They rated the visual quality of those elements in the range of score 1 to score 3. Clearly the designers had not manipulated successfully the form, line, colour, texture, shape and space of the buildings, park furniture, parking features, pedestrian facilities, drainage and signage in order to produce a good visual quality. They also were not concern with the natural environment, instead they ignored the “sense of place” of the site.

c. Visual quality

The scores of the visual rating by the respondents were grouped into three categories of visual quality class in order to identifying their visual quality. The three groups were high quality class (% scores 70 to 100), moderate quality class (% scores 39 to 69) and poor quality class (% scores 1 to 38). Table 5 shows the visual quality class of eco-tourism accommodations in Paya Indah. Sixty-six percents of the evaluators rated these elements as moderate class (% scores 39 to 69). Thirty two (32) of them rated them as poor quality class (% scores 1 to 38). Only two (2) respondents rated these elements as high quality class (% scores 70 to 100).



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**Table 4**  
**Analysis of the Six Basic Design Elements**

Item	Score Frequency					Mean	Mean Average	
	1	2	3	4	5			
BT	Form	-	12	46	40	5	3.32	3.19
	Line	-	20	48	29	3	3.15	
	Colour	-	8	45	40	7	3.46	
	Texture	1	13	53	31	2	3.20	
	Shape	2	22	46	27	3	3.07	
	Space	4	25	44	26	1	2.95	
PF	Form	5	38	39	16	2	2.72	2.67
	Line	5	45	34	12	4	2.65	
	Colour	7	25	47	17	4	2.86	
	Texture	3	34	44	16	3	2.82	
	Shape	10	40	42	5	3	2.51	
	Space	11	45	32	11	1	2.46	
PFe	Form	58	33	9	-	-	1.51	1.49
	Line	48	39	9	4	-	1.69	
	Colour	59	35	5	1	-	1.48	
	Texture	64	29	7	-	-	1.43	
	Shape	64	31	5	-	-	1.41	
	Space	65	29	6	-	-	1.41	
PA	Form	13	30	44	12	1	2.58	2.51
	Line	10	35	42	10	2	2.62	
	Colour	8	34	42	16	2	2.66	
	Texture	13	37	38	11	1	2.50	
	Shape	21	40	30	8	1	2.28	
	Space	18	34	37	10	1	2.42	
DR	Form	28	32	32	8	-	2.20	2.14
	Line	25	41	26	7	1	2.18	
	Colour	20	46	28	4	2	2.22	
	Texture	24	43	27	5	1	2.16	
	Shape	33	38	21	7	1	2.05	
	Space	35	39	17	9	-	2.00	
SG	Form	55	27	16	2	-	1.65	

**Table 5**  
**Visual Quality Class of Man-Made Elements in Paya Indah**

Visual Quality Class	Frequency	% Score
High	2	70 – 100
Moderate	66	39 – 69
Poor	32	1 - 38

Notes: - % score - 70 – 100 = High quality  
 39 – 69 = Moderate quality  
 1 – 38 = Poor quality

An analysis of the percentage of visual quality of the six accommodation elements of the ecotourism facilities in Paya Indah (Table 6) indicating that the majority of respondents gave these elements scores 2 (moderate quality, % VR = 39 to 69), except for the building types which were rated as good quality (% VR = 70 to 100, n = 63). However, overall the respondents rated the lowest for parking features, drainages and signages.

**Table 6**  
**Percentage of VR According to Tourism Accommodation**

Man-made Landscape Element	% VR Frequency			Mean	Rank
	1-38	39-69	70-100		
Building Types	-	37	63	2.63	1
Park Furniture	5	65	30	2.25	3
Parking Features	24	62	14	1.90	4
Pedestrian Facilities	9	56	35	2.26	2
Drainage	30	52	18	1.88	5
Signage	31	57	12	1.81	6

Notes: - % scores: 70 to 100 = High quality  
 39 to 69 = Moderate quality  
 1 to 38 = Poor quality

In terms of ranking, Table 6 shows that building types were ranked as the highest (mean = 2.63), followed by pedestrian facilities (mean = 2.26), park furniture (mean = 2.25), parking features (mean = 1.90) and drainages (mean = 1.88). The lowest rank was for the element of signage (mean 1.81), which means that the design of these structures was in poor quality and considered as not eco-friendly to the existing environment of Paya Indah. This ranking revealed the importance of eco-friendly design characteristics of eco-tourism accommodation elements based on the criteria of visual quality class of design elements in this study. These results revealed that the design quality such as park furniture, parking features, pedestrian facilities, drainage, and signage had reduced the visual quality of the park and did not complement the ambience. For this reason, the park management should improve the design quality of their park in order to enrich its visual quality through upgrading of activities. For instance, Table 6 shows that signage was rated lowly. In this case, the park management should enhance the design quality of this element through close consultation with the team of experienced professionals from landscape architects, architects, and lighting specialists in order to achieve a better signage design.

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Sixty-six (66) respondents agreed that form and shape of the said elements were partially in harmony with the natural character of landscape. The respondents also agreed that the major lines of force recognized some efforts to mitigate contrast. In terms of colour application in the park, the respondents agreed that this item is in harmony with the surrounding environment. Colours are kept deliberately simple and natural. However, they felt that the space arrangement of the eco-tourism accommodation elements in this park was only partially harmonious with the site contour, vegetation and stream. The respondents also agreed that the texture applied to the elements gave moderate feeling and touch. The elements with the three lowest ranks reveal that form and shape do not blend with the natural character of wetland landscape. Colours used do not complement with nature, space arrangement is not in a natural arrangement and texture is too contrasting with the surrounding.

For the overall results, the mean VR which is below 3.2 revealed that the basic design elements were not creatively manipulated by the designers to improve the visual quality during the design process. The designs that were not well integrated into this park were the elements that had been rated the lowest: form, colour, texture and space. Probably, the designers did not go to the field before designing and they did not use the form, colour, texture and space according to the site condition. Zube (1993) mentioned that the facilities designed for a park should concern form, colour, materials, and concerns for issues such as landscape degradation, preservation of the natural process, and protection of biological diversity if we wanted to increase the visual quality of the park. The Paya Indah management should make more efforts to increase the visual quality of this site especially concerning elements that have low scores such as park furniture and signage through upgrading of activities or replacement of furniture. They have to rethink about the basic design elements and the architectural character of the eco-tourism facilities especially for future development.

The challenge of Paya Indah management is to increase the visual quality of the site. They should take into consideration the form, shape, colour, texture, line, and space. They also should be concerned about landscape degradation and preservation of natural processes. They must realize that what the visitors see can influence how they feel and behave in the park (Zube, 1993). The management should know that the visual quality of the park is an important factor in providing quality experience to the visitors.

### d. Design Recommendation

An eco-friendly man-made landscape design that blends with the nature landscape and natural visual context is the key objective in increasing the visual quality of eco-tourism site such as wetlands. Here, this writer proposes design guidelines to provide designers, developers and authorities with common goals concerning design work needs to be done, what quality should be achieved and how visual quality is to be obtained. These design guideline can be incorporated into landscape planning that influences the visual quality of neighbourhoods by placing limitations on elements such as building setbacks.

These guideline are not intended to limit the creative designs of landscape architects, architects, and engineers, but to protect the visual quality of eco-tourism site especially in natural areas such as wetlands which are managed by different agencies, and of private lands or projects where the government has some involvement. The guidelines are to provide ideas and increase awareness to produce better designs and reduce adverse impacts on the visual quality of wetland areas.

It is recommended that the designers or developers must ensure that man-made structures should interfere as little as possible with the natural ecosystem. Meanwhile, site buildings and structures should give minimum disruption to natural features such as trees. Care should be taken not to cause the natural landscape to take an urban character or a cultural landscape to lose its sense of place in the historical context.

There should be a comprehensive and detailed analysis of the limits of ecological pressures or loads (environmental carrying capacity) with respect to resource consumption, sensitivity to disturbance and potential threats to flora and fauna. In order to minimize destruction of the visual quality, no setting up of camp sites should be allowed within the park. It is the “single most damaging activity a visitor can do; it destroys vegetation; it creates litter problem; it poses a fire risk and encourages vermin” (MNS 1993).

The management should also monitor at regular intervals the biophysical impacts such as water quality, wildlife, and wilderness changes in order to maintain the visual quality of the park. The peat swamp forests in the park should be protected by not allowing any development to be carried out here (except for minimal disturbance such as trekking trail). Nature should be allowed to continue its course without human interference.

The planting shall establish a natural environment ecosystem and consist of indigenous tree species, shrubs, and macrophytes such as reed. Mitigation measures should be applied to predict residual impacts for different periods of time, such as day of opening, year 5 and year 15. If the site has a lake, the lake edges should be planted with plants of natural wetland character to encourage wildlife in the shallow water with dense tree vegetation that forms green backdrop to enhance visual quality. Furthermore, existing trails which tourists move through in the park should be rehabilitated to create more attraction of scenic interest to increase the visual quality of the park.

It is recommended that only designers registered with professional bodies are selected to design parks in sensitive areas such as wetlands. They are more responsible because of the nature of their professional responsibilities. Also bear in mind, the aesthetic and recreational values of land and water areas should be made a part of the landscape design. Every possible attempt should be made to design in such a manner that it will not disturb existing vegetations, wilderness, peat swamps, streams and historical sites. These areas should be protected and become important features in the design layout.

It was suggested that the management of the parks such as administrators, designers, and planners should ensure that a design theme or concept that has been indicated are fully developed (such as eco-tourism) to enhance the overall theme or to blend harmoniously with the environment. This consideration is very important to enhance the visual quality of the parks. The park management should have design guidelines to ensure that the theme established earlier is realized in the developed areas of the park. These guideline are important to provide instructions about the use of specific details to blend harmoniously with the environment.

In order to enhance the visual quality and to reduce the degradation of natural environment especially in tourism site, the designers should use natural forms for their inspiration, such as vegetation forms and hills for architecture. The use of forms must also have compability with materials, for example, from historic to contemporary designs. Architectural forms should portray traditional local forms. Designers should have the ability to understand, utilize and communicate forms as a volume and in three-dimensions – length, width, and depth. This is very important to

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ensure that any chosen forms would blend with the existing natural environment and has a spirit of place.

The designers should also utilize natural lines of forces such as the skyline to produce a design that is harmonious with the existing environment. This element is very important in controlling architecture such as the building line along which the frontage of buildings sets, sight lines or roof lines. The designers should also take into account the composition of volumes, planes and lines to maintain a harmonious balance.

It is recommended that the designers use colours that are complementary with the existing landscape. An appropriate colour scheme can give the strength and scale to the overall concept and the main forms. Too many colours tend to reduce the scale and create fussiness where simplicity is necessary. Pleasing, comfortable feeling and touch are recommended for buildings in natural parks. Try to avoid textures that are too contrasting with the existing surrounding landscape. To achieve this type of texture, it is suggested that the designers implement the concept of harmonious design based on the use of local materials and a scale and form that appear fitting to the existing landscape.

The shape of the tourism accommodation has powerful and evocative effects on the way tourists perceive the surroundings as patterns. Designers should analyze the design elements of the natural environment (normally irregular or organic) in relationship to the overall design. They should also endeavor to suit the architectural design using appropriate shapes derived from those present in the landform and vegetation patterns. They should respond to the visual forces in the landscape and to achieve a good scale relationship between the wetland and man-made elements, and between the different species and age of trees within the wetland. The most important is for the designers to follow natural forms and be concerned with the variation of lines and edges of planes and volumes.

Space is always directly related to form and the environment. The designers should evaluate the design ideas on the quality and purpose of the space provided. They should ensure that the structural composition is parallel to the line of vision that evokes a landscape. They should also be concerned about the sense of space and landscape background when designing the structural composition in the parks. The ability to understand, utilize and communicate form is essential in order to create a quality space in natural setting. For example, of an ideal use of space, see figure below.



The building in this sketch is aligned with the woodland edge which helps draw the eye to it creating a focal composition. There is good light, orientation and access. The position against the line helps to tie it into the landscape and it does not occupy as much space of the area.

## CONCLUSION

A good visual quality of the eco-tourism accommodation in the tourism site can give a better impression to the tourists and give long lasting or memorable. Therefore it is very important for the developers or person involves in tourism activities to manipulate successfully the form, line, colour, texture, shape and space of the tourism accommodations in order to produce a good visual quality. They also must put higher concerns with the natural environment through the understanding and adoption of the “sense of place” and “genius loci” of the site.

Given that the tourist accommodation elements are among the most important elements of the perceived visual quality of the landscape, planning the development of natural areas such as eco-tourism of wetland areas should include the impact of such features on the landscape and the possibility of using such features as an eco-tourism development tool. The basic design elements of form, line, colour, texture, shape, and space should be manipulated and well used to lead to a higher visual quality of the wetland landscape of Paya Indah as well as to the other eco-tourism places.

The visual quality of eco-tourism site/area greatly depends on their flora and fauna, supported by facilities that are harmoniously blended with the existing landscape. In order for the designers to produce a good visual quality, the uses of form, line, colour, texture, shape and space should be applied successfully. These elements are the basic foundation for producing a quality design, if they ignored or take for granted, their design will have problems in the future and not sustainable. For instance, the house foundation is the important parts of the house structure. If during the preparation of this part has been done incorrectly, the house will collapse.

Visual quality evaluation of the eco-tourism accommodations is important for reducing landscape degradation, encouraging preservation of natural resources, and protecting of biological diversity. Finally, it will help in attracting more and more tourists to come to our country.

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