

## CHAPTER 1

### INTRODUCTION

#### 1.1 BACKGROUND

In the late fifteenth century, an Italian architect Leon Alberti (1485) wrote that “roads should be made rich with pleasant scenery” in his ‘ten books of architecture.’ It was followed by F. L Olmstead, an American architect, who has conceptualised the American parkways and reasserted the idea of visually pleasant roadways, through wide grassy median along the roads as a visual buffer and to segregate traffic as well. In Ancient Indian history, the glory of pleasant roadways for the travelers with avenues of trees was also recorded in the Post-Asoka Empire (dates: 273-236 BC). As such the concerns of perceptual-experience of the road travelers were quite an agreed phenomenon throughout the world.

The perceptual-experiential aspects of the landscapes are widely recognized and considered as an important research and decision making tool in the developed countries. Its significance is also noted in identifying existing landscapes as ‘visual resources’ in various land use planning decisions. In addition to the functional value of the landscape as the land that caters to access, production, and accommodation needs of the humans, the landscape as a visual resource is also well agreed to and documented by various scholars in diverse geographical contexts (Brown 2006; Tress et al 2006; Surova and Pinto-Correia 2008; Brown 2008; Gobster 2007; Jacobsen 2007; Klenosky et al 2007; Panagopoulos 2009; Thompson 2009; Geoffrey

Donovan and Jeffrey Prestemon 2012; Tim Kurz and Catherine Baudains 2012). However, the current study on perceptual-experiential factor of the landscapes traversed between tourist destinations or urban nodes are rather addressed rarely, especially in the current Indian contexts.

The perceptual experience of the traversed landscapes has immense impact on the day-to-day travel and tourism experiences. Further, its benefit to spiritual, emotional and mental health is also well documented by various scholars in diverse geographical contexts. So, by examining the travellers' perception and landscape preferences, as to what makes landscape as an attraction or a non- attraction, has a vital role to play to improve the visual quality of landscape that in consequence would enhance tourism activity and visual experience for the people and tourists.

## **1.2 RELEVANCE OF THE STUDY**

The earlier issues addressed widely have been the tourists' preferences on infrastructure and facilities at the destinations and along the traversed route or rarely on the visual qualities of the destinations. Further, the focus of these studies is mainly on the satisfaction level of the tourists' regarding the physical infrastructures offered, not on the visual experience of the traversed landscape observed by the travellers. In addition to this, research on landscape perceived is conspicuously minimal and highlighted by many scholars in contexts other than landscape in some way.

The study corridors selected are between the three main urban centers of Chennai, Kancheepuram and Mamallapuram, located in the Chennai region of Tamil Nadu. The corridors are intensely travelled by various categories of road travellers due to proximity to various centers of historic, religious, cultural and recreational significance. They are also important links to Chennai from regions in and around the country.

The traversed landscape preference studies are very significant around the globe as a tool for prescribing inclusiveness of the end users. They are also practised in place of implicit assumptions of land use planning expertise, especially in visually perceived landscapes. So, it is currently relevant in the Indian context for the following important reasons:

First, in recent times there has been an increasing concern for aesthetically and visually pleasant landscapes along the roads of India. At times they have often been addressed in various Indian print media, government notifications, and judicial observations as well (see Annexure E).

Second, a special budget allocation of Rs. 2,000 million from the Commonwealth Games (CWG) fund by the Delhi Government for the beautification of the roads in Delhi, during 2010 Commonwealth Games held in New Delhi. It showcases the recognition of demand for pleasant road landscapes. In view of the above, the significance of visual experience of the road travellers is justified and defensible.

Third, human travel by whatever mode, as a biological instinct with a 'mean exposure time' of around 'one hour per day' is well documented by Marchetti (1994) and others. Further, in the modern world, going for a drive by the middle and upper-middle classes of people in turn is perceived as an indispensable activity. The modern Indian urban culture that is rapidly turning automobile-dependent would demand the same as well. .

Fourth, it is reasonably justified by various evidences that India is a growing economy with an expanding middle income and middle class population with a rising purchasing power. Parallel to it, in consequence, the Indian automobile industry has also been in the recent years growing exponentially. So, in effect, the above would facilitate an automobile-driven culture that would demand a pleasant travel experience on roads, as an

important outdoor recreational activity, as is in any other developed country today.

Fifth, the surface road or highway is still an important mode of travel to access intra- and inter-regional destinations and its expansion would further give impetus to a demand for pleasant roadside landscape experiences in India. Since the year 2002, the Indian Government has, to boost the economy, initiated policies to modernize and expand Indian road network to improve passenger and freight movements. There have thus been an increase in the demand for pleasant road landscapes. The landscape preferences studies have thus been a response to such needs as are felt by the road travellers.

In planning and design perspective, it is also important to acknowledge that demand for public participation in decision making process has been rising at various levels of policy, planning, design and execution. This would include city development planning, land use planning, landscape planning and in design fields as well. So landscape preference studies are a powerful tool that would generate data essentially pertaining to landscape visual quality, its character and components and the 'landscape users' who have some socio-demographic traits. The data would authenticate the land use planning processes, where and when demand for pleasant visual experiences of the landscapes are acknowledged as an important parameter for land use and design decisions. The decisions not only pertain to urban or tourist centres but also to the traversed landscapes that are observed along the roadways.

### **1.3 RESEARCH QUESTIONS**

Based on the above discussion, the following research questions have been framed to study the relationships between values of perceived

traversed landscape components and character types with respect to various socio-demographic and associative factors.

- i. Are all road travellers' preference values for landscape components related and, are they, in complete agreement or disagreement with various landscape components? If so, to what extent the levels of agreement vary for universally acclaimed primary components and locally observed secondary components?
- ii. What are the perceived landscape component values and how do the perceived values of landscape components demographically correlate with each other with respect to various demographic groups and their association or associated traits?

Further, visual land use compatibility appears to explain landscape users' perceptions and preferences of visual quality more than any visual variable that was showcased in a few of the studies (for example, Zube 1987; 1977 and Zube et al 1975). So in line with the earlier work, the following research questions have been raised:

- iii. Do the preferences (like the utilitarian preferences and aesthetic preferences of landscapes) influence the overall preference scores (mean preference scores) of the road travellers?
- iv. Does the location-specific landscape character type of Vistas (that is, those decided by the composition of the four landscape components) influence the overall preference scores?

- v. Does the influence of the type of preferences on scores depend on the location specific landscape character type of Vistas?

#### **1.4 AIMS AND OBJECTIVES**

The main aim of this study is to evaluate the landscape preferences of the travellers, travelling between selected destinations (Vistas: (noun) the visual percepts of a region or regions; for example: "the most desirable feature of a park are the beautiful views") and suggest measures to enhance the visual quality of the traversed routes and landscapes. Based on the above aim, the following objectives are formulated:

- To identify and select an appropriate number of vistas from the study region, that is, the Chennai Region for deeper analysis;
- To classify the landscape vistas on the basis of landscape character types and their compositions of various landscape components (with the help of existing land use data and site reconnaissance surveys);
- To analyze the levels of preferences for landscape components and types, and demographically correlate the perceived landscape component values based on primary landscape components and the secondary landscape components;
- To explore the variations in scenic value and utilitarian preferences value for vistas that poses different visual landscape character types (vistas); and
- To suggest measures to improve the visual quality of traversed landscapes in general and the selected vistas of the study region in particular.

## 1.5 METHODOLOGY

The general procedure for the landscape preference studies involves few sequences after literature review and data collection. By and large, it is a reiterative process to understand the landscape components that are universally recognized from earlier literature and to match with locally identified components and landscape character types from site reconnaissance survey. On choosing the appropriate case study, the pilot survey was conducted and utilized for the modification of questionnaire. Further, it involves interaction with the administrative officials for secondary data (data like landuse maps and reports, technical documents relevant to study area) and consent for on-field survey (see Annexure C).

The observers, the observed and the responses are three essential contents in a landscape preference study. The observers are the selected respondent samples (road travelers, tourists), the observed landscapes (traversed landscapes) are represented as scene samples collected from the field for off-field responses or responses observed directly on-field, whereas responses are obtained through questionnaire or interview method: questionnaire method for the tourist groups and interview method for collecting responses from the off-field respondents for open and descriptive responses. In this study the respondents are the road travelers on the selected vista, observed landscape are the selected vistas with certain character with primary and secondary landscape component parts. The responses are mostly obtained from the respondents through a landscape preference questionnaire survey on-field.

The conceptual framework for this study has been inspired from various research findings of the earlier research. The few important ones are; firstly, the 'transactional concept' (Zube 1987) to justify the experiential

paradigm of human and landscape interactions; secondly, the 'landscape component method' to identify (Crofts 1975). Simonic (2003) defines and categorizes observed landscapes into various components at 'universal' and at site-specific, 'local' or 'regional level' (explained in detail in Chapter II); and thirdly, landscape 'characterization method' (Ode Åsa et al 2008; Brown 2008; Herring 2009) to categorize the transport corridors of study as landscape character types, on the basis of quantity and variety of components present.

The primary part of this study is carried out by employing Photo-Interview survey using a questionnaire with respondents (travellers), mostly on-site (en-route and nodes). The questionnaire is structured with most close-ended and a few open-ended questions, on the basis of the universal components and locally derived constituents and landscape character types observed (characterization). The responses are obtained as ratings, rankings of the components and types (explained in the Chapter IV).

### **1.5.1 Observed Landscape: Components and Landscape Vistas**

The set of six landscape vistas are identified with distinct landscape character types between the six tourist destinations and urban centers as per composition of the physical landscape components observed, namely, vegetation, landform, water and built form(see Annexure A.). The six selected vistas link the six prominent urban centers, namely, Chennai, Porur, Sriperumbudur, Kancheepuram, Chengalpattu, and Mamallapuram (and back to Chennai as a Tourist Circuit). These are situated along the well-known roadways: National Highways (NH 4), State Highway (SH 58) and the East Coast Road (ECR) of Tamil Nadu, a state in South India (Figure 3.1). A detailed description of the centers and vistas are given in Chapter III.

### **1.5.2 Sample Selection**

The respondents sample (N=330) constitutes mostly of on-site respondents and a few off-site respondents as well. On-site respondents are road travelers identified by employing a simple random sampling technique, and their responses were obtained on-site through questionnaires, while directly experiencing the landscapes. Road travelers are the various types of tourists or day-to-day commuters. The tourist samples are also drawn randomly, while travelling on a one-day roundtrip organized by Tamil Nadu Tourism Development Corporation (TTDC), as the trip traversed through all the vistas selected for this study. Day-to-day commuters were surveyed at specific spots like petrol pumps and eating places between the urban centers. There were more than 60 one-day trips considered and accounted for, in the survey, and on each trip an average 6 respondents participated.

Off-site respondents are those who live or work in the urban centers like Chennai, Kancheepuram and Mamallapuram, who have travelled the vista before and are familiar with the landscapes. They are selected by snowballing survey technique conducted with the help of photo-interviews. They are predominantly locals and local commuters. Locals are selected from three major destinations - Chennai, Kancheepuram and Mamallapuram - whereas the local commuters were selected at different locations along the vistas and other smaller urban centers - Porur, Sriperumpudur, Chengalpattu, Kovalam, and Muttukadu.

### **1.5.3 Sample Respondents**

Respondents are road travellers who are travelling on-site or have travelled on the select roads before. The respondents are mostly domestic tourists (non-regional tourists), tourists belonging to the same region or neighbouring regions of Tamil Nadu (Regional Tourists), local commuters

and few local professionals and foreign tourists. They are further varying on the basis of socio-demographic characteristics such as gender, age, education status, income, nationality and associated factors based on familiarity of the vista, places lived longer and their environmental attitude.

The number of respondents who participated in this landscape preference study are 330 in total where more than two-thirds (230) were males and one-third (100) were females. All were reasonably literate, where majority of them (80 %) was at graduation level and beyond. In total 67 respondents were HSC passed or below, 151 under-graduates, 65 post-graduates and 47 professionals. Age group of the respondents range from 18 to above 55 years. About one third (32.4 %) of the total respondents are students and one-fourth (25.5 %) Government Employees, little more than one fourth belong to diverse professional background (13.3 %) and self-employed small business group (14.8 %). Unemployed respondent were mainly graduates, excluding students. Little more than nine-tenths of the respondents are Indians (93 %) and a few were foreigners (7 %). The meager number of Non-Resident Indians (1.5 %) participated were merged as the Indian nationals, in the nationality category.

Associated socio-demographic categories 'prior knowledge / interest about landscapes', 'places associated' (whether lived longer in urban / rural / semi-urban) and 'familiarity with the study area' were also examined. Almost four-fifths of the total respondents were not familiar (79 %) with the sites and the rest were moderately familiar, with a meager few strongly familiar with the sites, due to association with regional development activities such as those of the Tamil Nadu Town and Country Planning Organization (TCPO), Housing and Urban Development Corporation Limited (HUDCO) and Central Public Works Department (CPWD). The employees of the above mentioned organizations were strongly familiar with the sites as observed through an

unstructured personal queries during the photo-interviews by the scholar in person.

#### **1.5.4 Significance of Primary Survey**

This study is significant for three reasons: (1) There are no previous references or available published data on landscape preferences on the selected study vistas (Kancheepuram or Chennai Region that include Kancheepuram and Mamallapuram towns). (2) On-site primary surveys are thus a necessary requisites for response data, from the landscape users to capture their lived experiences. (3) It is observed that the collection of socio-demographic characteristics for landscape preferences studies are found to be of high relevance to planning and design professionals as observed in the earlier studies by many scholars abroad.

#### **1.5.5 Questionnaire and Survey Administration**

The questionnaire was designed in such a manner that the first section dealt with an Environmental Attitude Assessment, and consisted of 12 questions directly adopted from the New Age Environmental Paradigm - Human Environmental Paradigm (NEP-HEP), a paradigm of agreement to assess the environmental attitude (Annexure D.1). The second section consisted of site- specific purposes of travels along the routes, such as to visit monuments in Mamallapuram, temples in Kancheepuram, beaches in Mamallapuram and Kovalam, look around rural Tamil Nadu, and travels connected with getting to and returning from schools / colleges / businesses or work related commutation or any other. Familiarity of the sites categorized on the basis of responses and travels of several times, or occasionally or never, that would decide the degree of familiarity. Similarly, prior knowledge of landscapes was examined using this section. The third section was an imperative part where ‘universal’ and ‘locally’ derived landscape

components were organized and asked to be ranked as to their order of preferences such as the order the landscape components the travelers would wish to see and enjoy, frequently while on travels. First, the ‘universal’ landscape components, the ones on the top row were asked to be ordered. Second, the site-specific local components under a particular, universal component were asked to be placed in an order as to their choices. Wherever necessary, the guiding panels as two booklets (one for the landscape components and other for character types observed in each of the six vistas) were provided as a ready-reference, for on-site surveys. In the case of the off-site surveys, the two booklets of guiding boards were critical and offered for elucidating good responses. A few questions were left optional for responses (for example, Environmental Attitude questions in Section 1), open-ended Likes and Dislikes about the six selected vistas (see Annexure D.3).

The open-ended Likes and Dislikes questions about the six vistas are for open descriptive responses to get some idea of personal views about the vistas. The D.3 and D.4 Section of the questionnaire consisted of a few general questions and four vital questions specific to the six vistas. In D.4 section, the first three questions dealt with the degrees of preferences by the respondents (strongly disagree to strongly agree, on a five-point scale) to ‘favors’ a particular use (residence, recreation, traversing) of the six vistas’ landscape types, and the fourth question addressed directly the scenic beauty of the six vistas. These questions were specific to respondents who were familiar to the sites and left the optionals to unfamiliar respondents. The last and the Sixth Section consisted of demographic profile of the respondents such as the gender, marital status, age group, education, occupation status, income category and nationality. Additional information on long time association of the respondents in urban, semi-urban and rural settings were also sought to identify their preferences for different types of landscapes and character types observed.

Though a large quantity of data was obtained from the primary surveys of the study, nevertheless the data analysis and findings in this report essentially pertained to the research questions addressed.

### **1.5.6 Data**

In addition to literature study in the form of research papers, newspaper articles, reports and documents to construct the theoretical base of the study, three types of data were collected for this landscape preference study in particular such as Landscape Data, data pertaining to respondents and their responses to questionnaire and other interviews.

#### **1.5.6.1 Landscape Map**

Existing land use map is required as a baseline information for identifying the urban centers, vistas of the study region and characterization of each vista on the basis of landscape component compositions in concordance with the on-site conditions.

It is secondary data pertaining to the existing land uses, data on case study vistas of the selected region, which is further derived and modified to the buffer limits (existing land use classes data at 1:50,000 from LISS-III merged PAN data, with a buffer limit of 5 km on both sides of the roads for the vistas. Further, the land use classes were sorted within the four physical landscape components (vegetation, landform, water and built form) as stated earlier. The area occupied by each component and the number of components were derived from the land use data for each of the six vistas using the GIS tool and technique.

Computer-aided image processing software, Adobe Photoshop Elements, was used in map representation pertaining to the unit of study, to highlight information collected from various sources.

#### **1.5.6.2 Scene Samples for landscape preference survey**

Questionnaires with photographs (scenes of landscapes) were the purposively employed tools for both off-site and on-site landscape preferences surveys. In this study, the questionnaire consisted of both structured (closed-ended) questions and a few open-ended questions. The responses were facilitated by two sets of panel boards in the form of A4 printed panel boards (Annexure C): One, consisting of the sample scenes, highlighting the six selected 'universal' landscape components (vegetation, landform, water, built form, civic and spatial). The 'localized,' site-specific land use components were considered and organized under the six components (explained in Chapter III: Landscape Components). The other consisting of information about the six identified vistas as landscape character types referred to as the 'routes' and substantiating a few views, land use maps with route and important places were registered (Annexure B and C).

#### **1.5.6.3 Landscape scene sampling techniques**

A group of scene samples (photographs) was collected during the site reconnaissance surveys, for each landscape component on-site, to administer in the photo-questionnaire survey. Scene samples were also sorted out randomly with respect to landscape character type vistas. Adobe Premier Pro was used for video processing and assortment of scene samples from the video footages shot on-site with mini DV camera. Further, some scene samples were recollected using a Sony HDR CX7 series handy cam (earlier Sony camcorder) to record the AVCHD video directly to Sony's Memory

Stick PRO Du in High Definition format) and Nikon D90 series SLR still camera in the latter stage as well.

#### **1.5.6.4 Data of Responses**

The primary data consisted of responses from the respondents in the form of rank ordered data of landscape components, likes and dislikes of landscape character, type of vistas on a five-point Likert scale rating, and socio-demographic data and its association like familiarity of the site, environmental attitude, prior landscape knowledge, place associated for a long time (city, town and village) about the respondents.

#### **1.5.6.5 Analytical tools**

To address the research questions of this study, computer-aided data analysis tool, a Statistical Package for the Social Sciences (SPSS) was used. The analysis consisted of descriptive statistics of the demographic profile of the respondents, that is, travelers in the study (demographic variable / group variable) and their responses over the landscape components and landscape types (landscape variable: Vistas) as the mean preference score of the total respondents and mean preference score of various sub-groups such as gender, age, education status, and occupation. Mean preference scores of the total respondents were taken as benchmarks and correlated with the mean preference scores of the rest of the sub-groups using correlation method. Further, the landscape character types were determined by the composition of landscape components (its percentage of area, frequency and perimeter), present in the existing land use map of the selected vistas with the help of GIS software and excel sheets. The preference rating scores for the 6 universal landscape components (4 physical + 2 perceptual) that were often addressed as dominant landscape attributes in landscape preference studies were also analyzed.

### **1.5.6.6 Landscape character types (vistas) using preference and scenic evaluation**

The on-field responses and off-field responses (from respondents who were familiar with the sites but interviewed somewhere else, especially at tourist nodes) on the landscape character types were examined on the basis of preferences of scenic quality (scenic evaluative decision) and distinction from preferences for various activities such as living, recreating, and travelling (preferential decision). It can be considered as a practical value for landscape planning and management strategies. Further, such ‘distinctions could also be of importance in dealing with EIA for which preferential appraisals could be a major factor in one’s perception of proposed changes’ (Zube et al 1975). Further, to note the appraisal of scenic quality and appraisal as a place to live, recreate and travel would bring in variations in agreements and disagreements for each of the landscape type.

To address the question (RQ 2) the respondents were asked to rate their agreements on a 5-point scale (very low to very high). There were three questions on the agreement of three type of uses (Zube 1975) and the fourth in particular for the scenic quality of the vistas.

## **1.6 SCOPE AND LIMITATIONS**

The scope of landscape preference studies and their applications have now been extended to decision-making fields of land use planning, tourism planning policy, Environmental Impact Assessment (EIA) at various landscape scales. Its significance can be noted in three circumstances: (1) The present scenario necessitates public participation in every land use decision and so landscape preference studies are a good tool to tap how well the preferences of the ‘landscape users’ or the general public, agree to certain landscapes and its features or components. (2) There is a lack of empirical

data pertaining to visual quality of the perceived landscape that can be obtained precisely with the consensus of the landscape users. (3) Land use decisions need not acknowledge implicit assumptions or experts' presumptive notions about perceptual landscape experiences and preferences without valid background data.

The observers as the end-users could vary as to the requirements and focuses of the study. However, in this study the end-users were the road travellers. The scope of the landscape preference surveys can be extended to internet based online methods. However, the survey was limited to direct on-field questionnaire survey, due to technological limitations. Moreover, out of the five senses that humans utilize to perceive their surroundings, only visual aspect has been taken as it predominates in the phenomenon of perception of landscape. And so this study, as any other visual landscape preference studies, would limit its scope to the visual aspects only.

The scope of the study is limited to the selected corridors of Chennai region. However, the methodology in the study can be employed to other road corridors, by considering the location-specific landscape attributes and components that may further vary as to the land uses. The time of the surveys was also limited to day time and further manpower, available data and technological limitations as well.

Though there is scope for detailed characterization of several landscape types along the chosen corridors, this study would limit to basic regional landscape character types observed along the vistas, on the basis of the predominance of the landscape components observed by field reconnaissance surveys and available land use data.

The landscape sub-components of the corridor (five-kilometer buffer on both sides of the roads) are drawn from existing land use classes

data on a scale of 1:50,000 from LISS-III merged PAN data and from the field observations.

## **1.7 SELECTION OF CASE STUDIES**

Six vistas were chosen as cases to examine distinct landscape character types and component parts. The locations of the chosen vistas were the traversed landscapes between destinations, which were situated on three major highways (NH 4, SH 58, and ECR) that linked three tourist destinations (Chennai, Kancheepuram, and Mamallapuram), which were located in Chennai-Kancheepuram Region of Tamil Nadu.

Chennai is a highly urbanized metropolitan capital city. Kancheepuram is a temple town with high religious and cultural attractions, whereas Mamallapuram is an international tourist attraction recognized by UNESCO, with many historic monuments and coastal recreational spots.

The selected vistas were characterized on the basis of identified landscape components in land use and land cover maps (1:50,000) using GIS tools and techniques as the secondary data, and by direct field observations and photo surveys as the primary data. Further, several local documents, technical reports were referred to in the study.

Three of the vistas were between Chennai and Kancheepuram (Vistas I, II, and III), two of them were between Kancheepuram and Mamallapuram (Vistas IV and V) and one between Mamallapuram and Chennai (Vista VI). The vistas were demarcated for display of a variety of landscape character types as a result of their vegetation, water, landform and built form compositions (see Annexure A and Figure 3.3).

Universally acclaimed, the six landscape components were derived from literature (physical: vegetation, landform, water, built form; perceptual: civic and spatial) and locally derived components were also evaluated by the respondents.

## **1.8 ORGANIZATION OF THE THESIS**

The thesis is commissioned in seven chapters. The present chapter is an introductory chapter and provides thus an understanding of the background, problem of study, aim and objectives, research questions and methodology of the study. The second chapter addresses the conceptual terms such as landscape, perception, travel and tourism in detail. It further deals with the significance and interactions and related issues and concerns that form the bases of the study. It also analyses a few theories, concepts, connotations and evaluation approaches related to landscape preferences and experiences. Moreover, the data required for landscape studies, their significance for preference studies in planning and at different policy levels are also dealt with in some length.

The third chapter deals with the existing landscape evaluation methods, tools and techniques to design a sound methodology. Observations from the literature are to evolve a conceptual framework, to carry out this study. The conceptual framework for the study draws some inspiration from a few of the concepts and approaches such as the 'transaction model', 'component approach' and 'landscape characterization' approach.

The fourth chapter is in two sections: the first section describes the general profile of the study region (Chennai Region) as to its location, demography, infrastructure and tourism attraction and the second section describes specific corridors (vistas) chosen between destinations and the character and composition of landscape components. Data analysis, results

and the major findings are discussed in the fifth chapter. It is broadly divided into three portions: 1) Demographic profile of the respondents who are the road travellers; 2) the observed landscape as component parts and a composed landscape character type (vistas); and 3) their responses on the observed component parts and the composed landscape character types (landscape vistas).

The sixth chapter discusses the significance of the study and the interpretations of the findings and conclusions while the seventh chapter deals with the broader conclusions and recommendations for improving and enhancing the attractions of the vistas in particular and scope for further research in the field of focus.