



## A Comparative Study on the Conservation of the Historical Streetscape in Japan and Australia

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## **A Comparative Study on the Conservation of the Historical Streetscape in Japan and Australia**

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### **Abstract**

Historical streetscapes are considered to be important in terms of their ability to contribute to an area's historical and cultural heritage and identity as well as for their landscape value. In this study, through a comparison of historical streetscapes in Japan and Australia with differing historical and cultural backgrounds and different architectural styles, it was sought to discover appropriate conservation methods for individual areas. It was found that, with regard to the conservation of historical streetscapes, as well as considering the careful conservation of single traditional structures, it is important to focus on the conservation of rows of historical structures, and that not only the architectural style of traditional structures but also landscape elements such as street furniture and street signs were important in creating the atmosphere of historical streetscapes.

### **Purpose of Research**

In the early 1970s, the value of historical streetscapes as elements which contribute to an area's historical and cultural heritage and identity was readdressed. In areas throughout Japan, conservation activities began and a legal framework covering areas of conserved traditional structures was established. In the 1980s, the criterion of landscape value was added, and conservation was promoted positively within the various frameworks covering urban landscape planning, while the conservation methods used by them were reexamined. In this study, through a comparison of historical streetscapes of differing historical and cultural backgrounds and architectural styles in Australia and Japan, appropriate conservation methods for individual areas were investigated.

### **Research Method**

The areas investigated in Japan were the Sannenzaka and Gionshinbashi districts of Kyoto, areas displaying traditional Japanese architectural styles and designated as areas of conserved traditional buildings, and the Kitanoyamamoto district of Kobe, which has sites displaying Western architectural styles. Areas surveyed in Australia were the Parkville and St.Kilda districts of Victoria, which provide examples of Victorian-style architecture. Investigations were carried out initially by means of a survey of reference material in order

to establish the historical background of each area. The aim of laws regarding conservation and the content of relevant regulations and guidelines were classified systematically at the same time. After this, slides were taken showing the 'streetscape' and the facade of structures. Using these photographic images as a stimulus, in cognitive survey question 1, evaluations were made as to the degree to which each of the 13 landscape elements covered in the regulations and guidelines contribute to historical streetscapes. These were measured on a scale of 1~5. In question 2, a similar 5-point scale was applied to eight antonyms as possible descriptions for the overall atmosphere of the sites in order to assess subjective value. For analysis purposes, each of the 5 points on the scale was assigned a value from -2 to +2 and averages for each slide calculated. These figures were used as the basic data for factor analysis, the results of which were used in further investigation.

## Results of Analysis and Discussion

### 1) Historical Background and Content of Regulations and Guidelines

#### (1) *Historical Background*

Figures 1~5 contain tables of regulations and guidelines and photographic data on each area.

The Sannenzaka area of Kyoto was designated as an area of conserved traditional structures in 1976. It is an area where examples of traditional Japanese architecture are conserved in a relatively uninterrupted pattern. The streetscape of this area consists of a facade of traditional Japanese structures and stone pavements with 'inuyarai' (a bamboo structure projecting from the lower part of a wall and designed to prevent dogs urinating) and the narrowness of the streets adds further to the human scale of the area.

The Gionshinbashi area of Kyoto, like Sannenzaka, was designated an area of

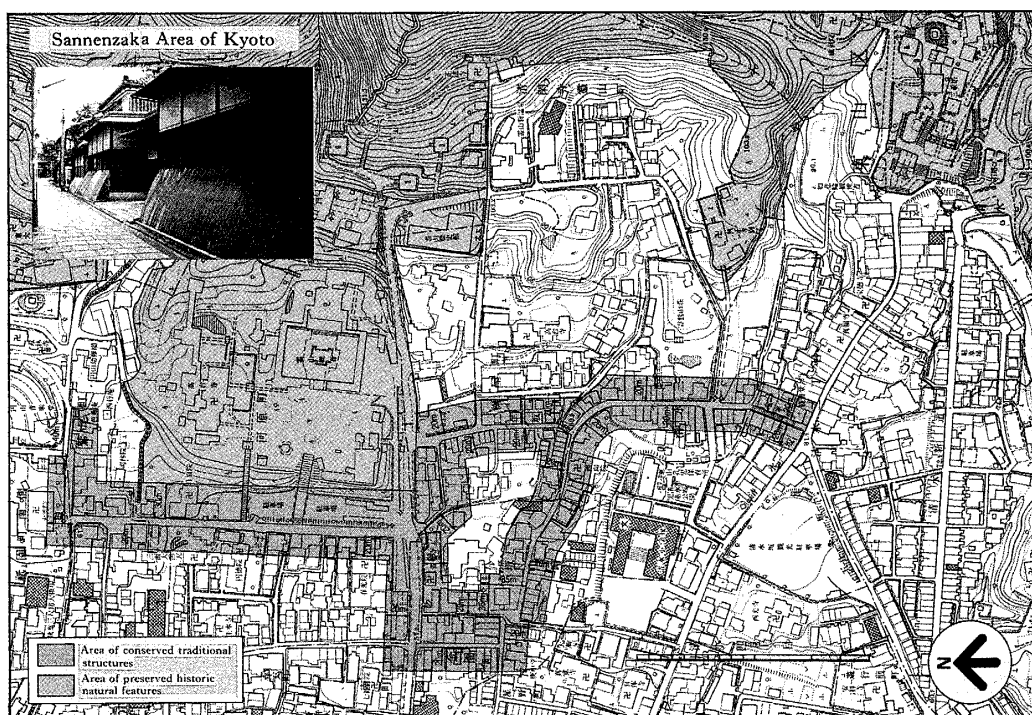


Fig. 1 Area of Conserved Traditional Structures

conserved traditional structures in 1976 and is also an area where examples of traditional Japanese architecture are conserved in a relatively uninterrupted pattern. The streetscape of this area consists of a traditional Japanese facade of fences or bamboo blinds while the width of the streets is not as narrow.

The Kitanoyamamoto area of Kobe as a whole was designated a urban landscape consolidation area in 1979, and a portion thereof as an area of conserved traditional structures. Scattered throughout this area are a number of conserved 'ijinkan' (foreign houses) constructed during the Meiji period using Western architectural styles. The

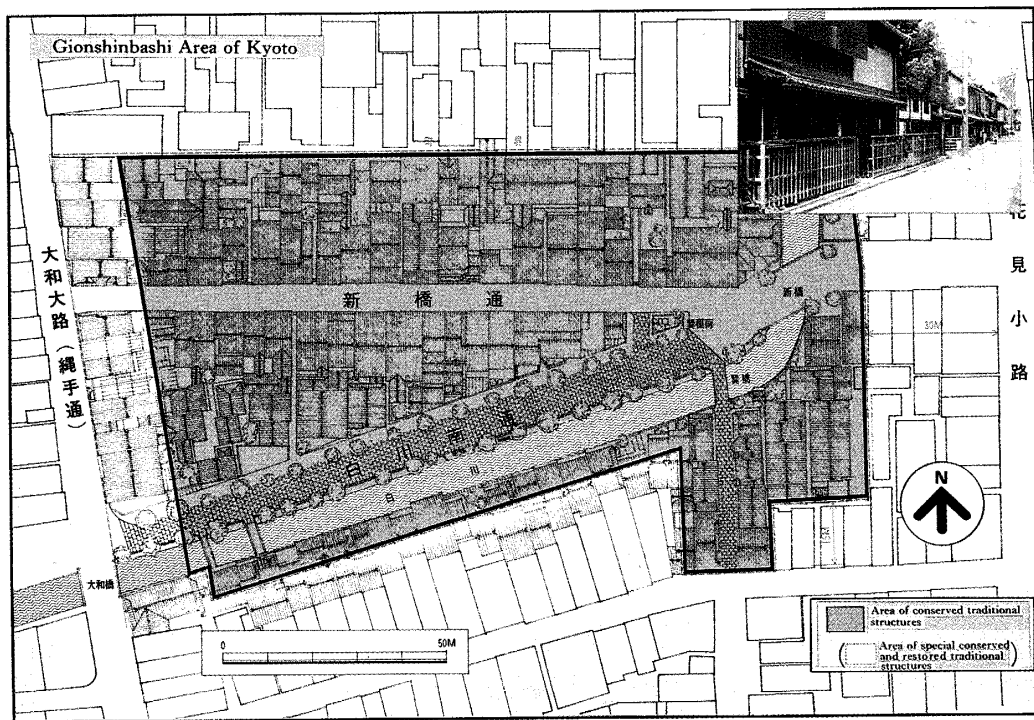


Fig. 2 Area of Conserved Traditional Structures

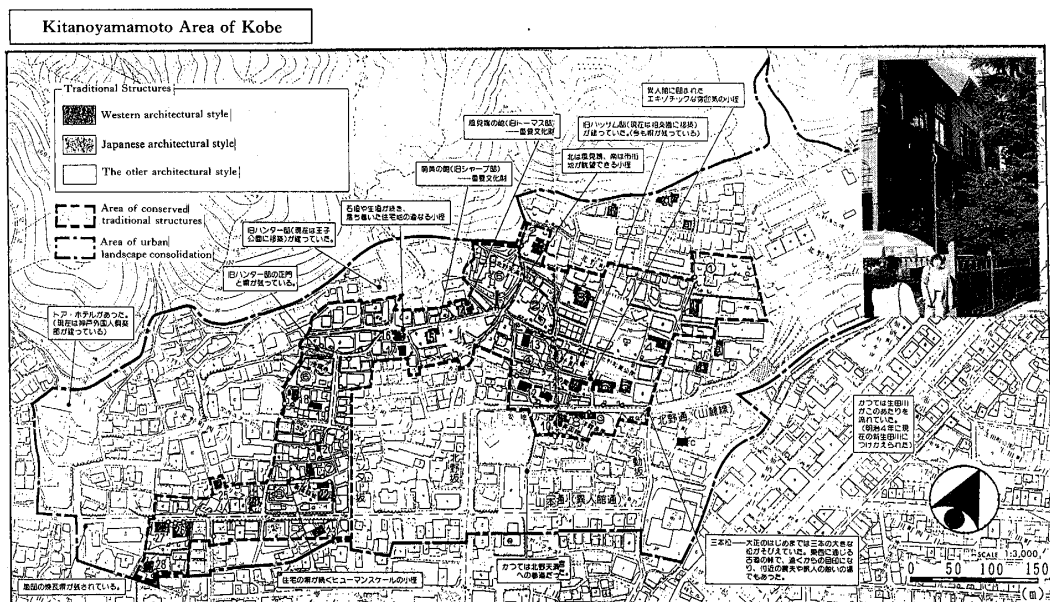


Fig. 3 Area of Conserved Traditional Structures

streetscape of this area reflects its commercial nature and consists of a blend of modern buildings and 'ijinkan', presenting an animated and variegated aspect.

After the designation in 1974 of a number of grade A and B historic structures, the Parkville area was recently designated a conservation area. The streetscape has been

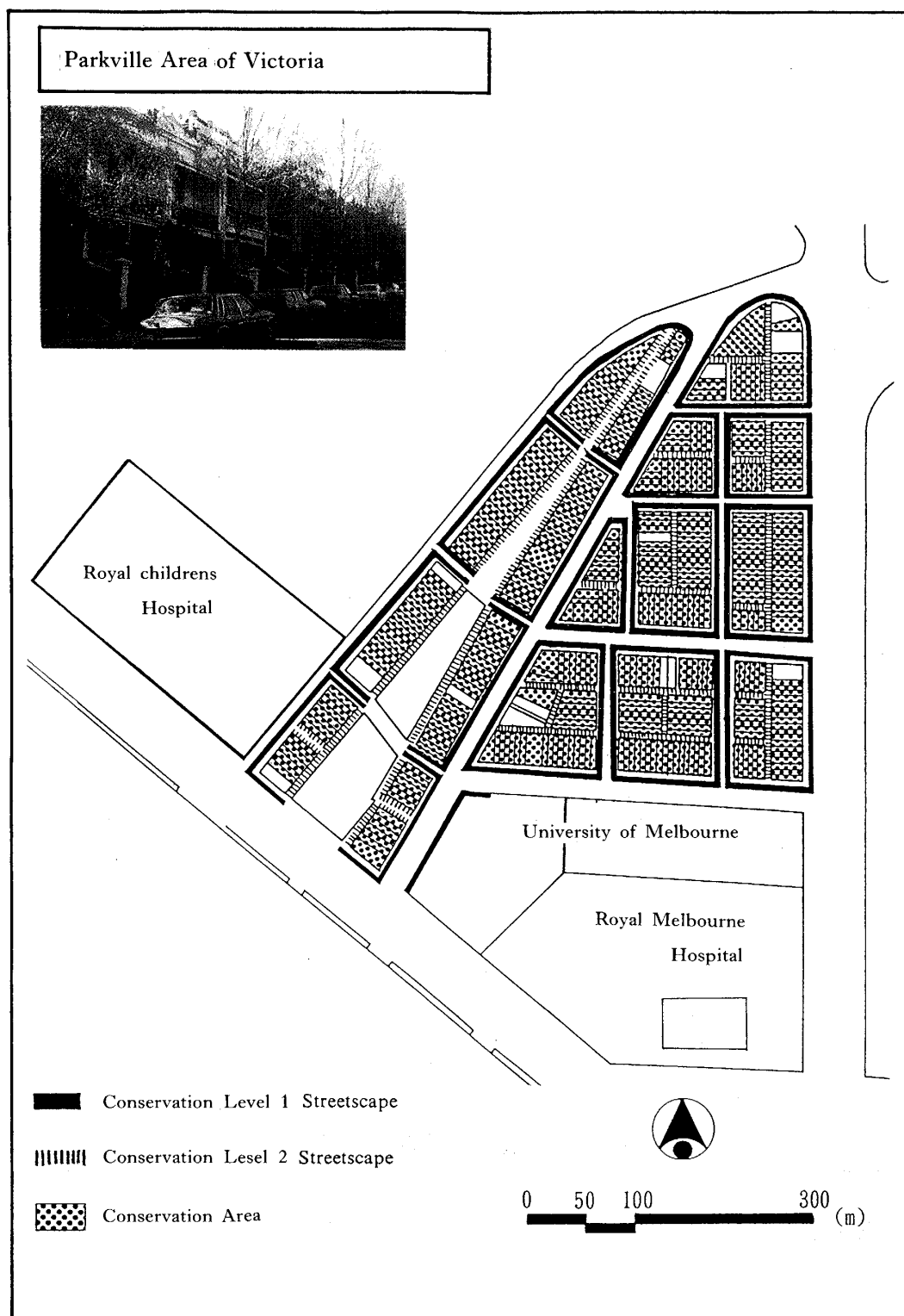


Fig. 4 Area of Conserved Traditional Structures

designated as level 1 or level 2 accordingly. The streetscape of this area consists of rows of terrace houses with Victorian-style cast iron handrails and railings.

The St.Kilda area, like the Parkville area, after the designation in 1974 of a number of grade A and B historic structures, was recently designated a conservation area. Comparatively large terrace houses are scattered throughout the area. The streetscape of

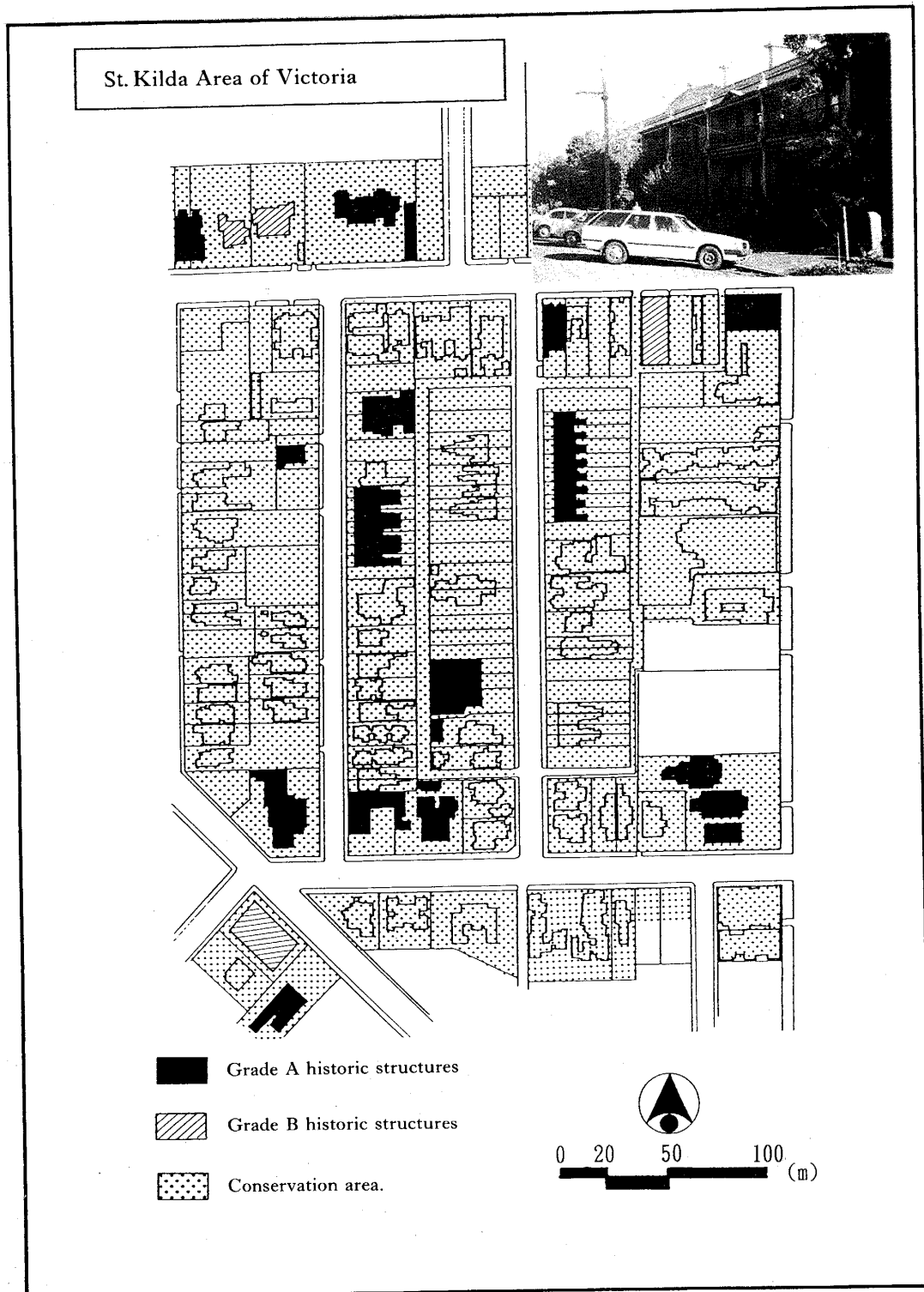


Fig. 5 Area of Conserved Traditional Structures

this area consists of terrace houses with Victorian-style cast iron handrails and railings, but is more conspicuously intermingled with modern structures.

## (2) Content of Regulations and Guidelines

Figure 6 shows elements covered by regulations and guidelines in the survey areas, subdivided into the three categories of open space, structures and others. Regulations and guidelines are in force in all five areas regarding the design, color and material of structures, hedges, walls, and fences and in all but the Parkville area regarding shape of rooves and eaves. In the two areas of Kyoto surveyed, outer walls and the shape of rooves and eaves are covered by detailed regulations protecting traditional architectural styles, showing an approach strongly supportive of conservation of tradition, while in the surveyed areas of Australia, guidelines on the continuation of traditional architectural styles in surrounding new and restored buildings exist alongside measures to protect historic structures, indicative of a conservation method with emphasis on the streetscape.

## 2) Cognitive Evaluation of Historical Streetscapes

### (1) Landscape Elements Contributing to Historical Streetscapes

Figure 7 shows landscape elements contributing to historical streetscapes, using factor load values obtained by applying factor analysis to the results of cognitive survey question 1.

		1	2	3	4	5
Open space	Feeling of trees	●				
	Landscaping	●				●
	Change of land features	●				
Structures	Use				●	
	Set-back of building	●			●	●
	Building coverage				●	
	Height restrictions	●			●	●
	Wind design					●
	Location of parking space				●	●
	Shape of roof/eaves	●	●	●		●
	Wall surface		●	●		
	Structural alteration/No. of floors	●	●	●		
	Design of balcony/veranda					●
	Architectural facilities	●				
	Sun shades	●				
	Overall structural -design	●	●	●	●	●
	-color	●	●	●	●	●
	-material	●	●	●	●	●
	Design of hedges, wall and fences	●	●	●	●	●
	Color of hedges, wall and fences	●	●	●	●	●
	Materials of hedges, wall and fences	●	●	●	●	●
Others	Privacy				●	
	Sunshine hours				●	

1 : Kitanoyamamoto area      4 : Parkville area  
 2 : Sannenzaka area      5 : ST. Kilda area  
 3 : Gionshinbashi area

Fig. 6 Landscape Elements Covered by Regulations and Guidelines

In the Sannenzaka area of Kyoto, the first factor showed high values in relation to the design, color and materials employed in the roof, the second factor in relation to the design, color and materials employed in hedges, walls and fences and the third factor correlated with the open space in front of the structure, the height of the structure, the width of the street and the types of street sign and street furniture employed.

In the Gionshinbashi area of Kyoto, as in Sannenzaka, the first factor showed high values in relation to the design, color and materials employed in the roof, and the second factor to the design, color and materials employed in hedges, walls and fences. The third factor, unlike in Sannenzaka, showed high values for the design, color and materials employed in the walls of structures.

In the Parkville area, the first factor showed high values in relation to the design, color and materials employed in the walls of structures, the second to the design, color and materials employed in hedges, walls and fences, and the third to open space in front of structures.

In the St.Kilda area, as in the Parkville area, the first factor correlated with the design, color and materials employed in the walls of structures, the second with the design, color and materials employed in hedges, walls and fences, while the third factor, in contrast to the Parkville area, showed high values in relation to the design of street signs and furniture.

Thus, in both the Gionshinbashi and Sannenzaka areas of Kyoto, which consist of traditional Japanese structures, the design, color and materials employed in the roof of structures had the largest influence followed by the design, color and materials employed in hedges, walls and fences. According to the nature of the area other factors also played a secondary part. In both the Parkville and St.Kilda areas, which consist of traditional

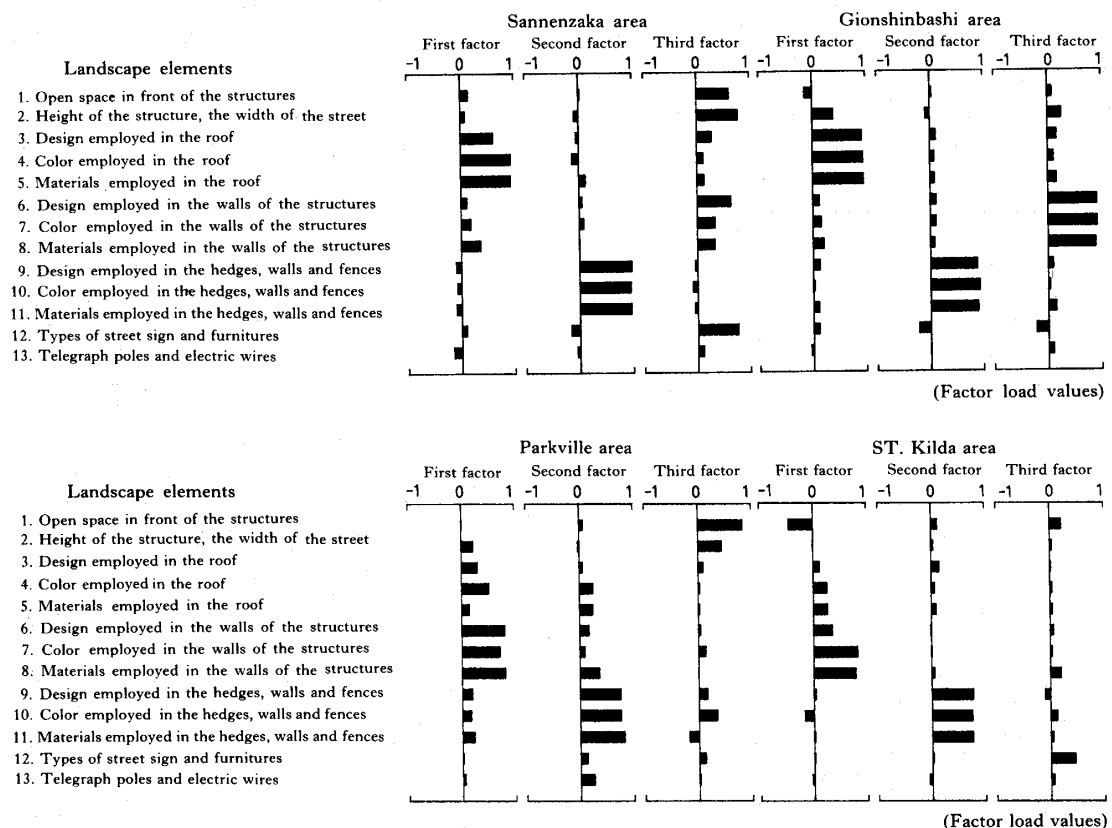


Fig. 7 Landscape Elements Contributing to Historical Streetscape



Victorian terrace houses, the design, color and materials employed in the walls of structures had the largest influence, followed by the design, color and materials employed in hedges, walls and fences. According to the nature of the area other factors also played a secondary part. In the Kitanoyamamoto area, there were no specific landscape elements contributing to the historical streetscape.

## (2) Subjective Evaluation of Historical Streetscapes

Figure 8 shows the results of cognitive survey question 2 after application of factor analysis with each slide plotted on a graph using factor load value of each feature and the evaluation points received by each feature as coordinates.

In this study, up to two factors with values greater than 1.0 were recognized. From the factor load values of the eight evaluation items, the first factor was judged to be 'harmony' and the second 'activity'.

Using figure 8 to evaluate each area in terms of the above-mentioned factors of harmony and activity, the Sannenzaka area of Kyoto showed a high rating for harmony, while the Gionshinbashi area of Kyoto had a relatively low rating for both harmony and activity. In the Parkville area, there was a relatively high degree of both harmony and activity, while the St.Kilda area had an average degree of harmony, with activity showing ratings at opposite ends of the scale depending on the point from which slides were taken. The Kitanoyamamoto area of Kobe had a low degree of harmony while activity showed opposite ratings depending on the point from which the slides were taken.

In the case of the Sannenzaka and Gionshinbashi areas of Kyoto, although the design and shape of historic structures are almost the same, the degree of harmony in the Sannenzaka area was considered greater due to the height of structures (H), the width of streets (D), and resulting feeling of scale (D/H), that is, a human scale. Through this is seen the importance of a feeling of scale determined by the height of structures and the width of streets. In both the Sannenzaka and Gionshinbashi areas of Kyoto and the Parkville area, where traditional structures are conserved in a relatively uninterrupted pattern, a high degree of harmony was recorded. In both the Kitanoyamamoto area of

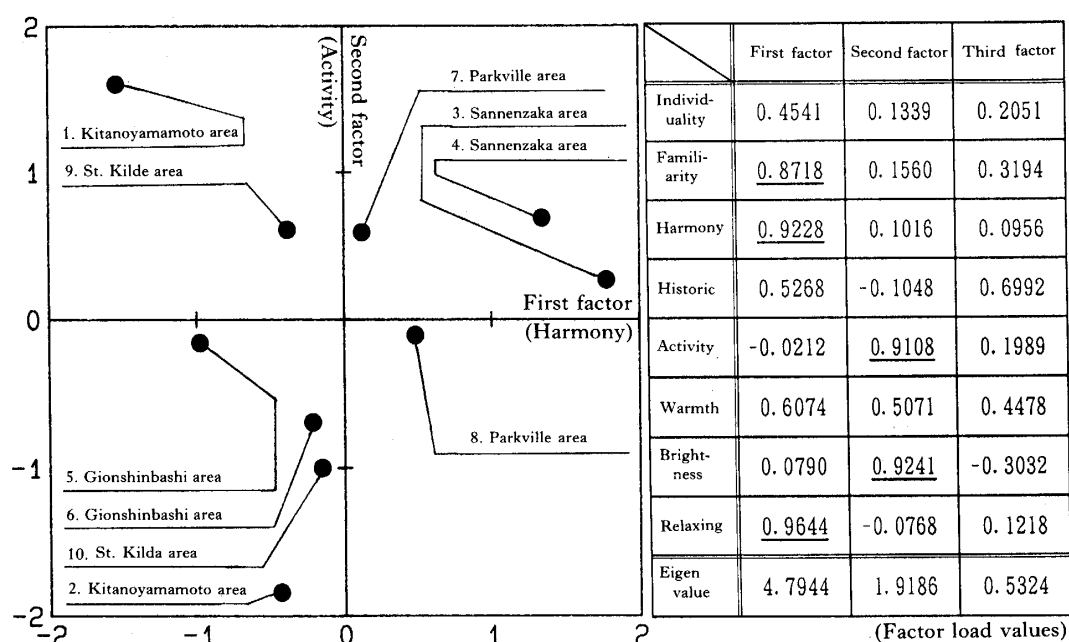


Fig. 8 Subjective Evaluation of Historical Streetscape

Kobe and the St.Kilda area, where traditional structures are scattered throughout the area, a low degree of harmony was recorded. Through this is seen the importance of conserving rows of traditional structures.

### Conclusion

From the above results it can be said with regard to the conservation of historical streetscapes that it is important to endeavor to conserve rows of traditional structures in addition to carefully conserving single traditional structures. Guideline policies aimed at the continued use of traditional architectural styles in new and restored buildings, examples of which were found in the Australian study, can be seen as an effective conservation method. With regard to streetscapes, the importance of a feeling of scale determined by the height of structures and the width of streets can be seen. The study also points to the important role in the creation of the atmosphere of historical streetscapes not merely of the architectural styles of traditional structures, but also of features such as traditional roof tiles, lattice windows and eaves, which are subject to regulation in the two areas of Kyoto surveyed, and of other landscape elements such as inuyarai, bamboo blinds and stone pavements. Of equivalent importance in the Australian survey were features such as Victorian-style cast iron handrails and railings. It would thus seem important to include landscape elements in an integrated approach to conserving streetscapes.

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