

# ADOPTABILITY OF GREEN LEASE IN DEVELOPING COUNTRIES: THE CASE OF SRI LANKA

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## ABSTRACT

*The concept of Green Buildings is now being promoted as there is an increasing requirement for energy efficient buildings. With the boom of Green Buildings, Green Lease concept has become significant. However in Sri Lanka, presently Green Lease is not practiced very much. Nevertheless, attempts at adopting Green Lease cannot be ignored as there are clauses relevant to green buildings even in the existing lease agreements. Therefore, this research was carried out to investigate the adoptability of the Green Lease concept in Sri Lanka. Firstly, a literature synthesis was carried out to understand the Green Lease concept and its significance. Semi structured interviews and a documentary review were done thereafter to further identify the importance, and enablers and barriers of Green Lease. Subsequently, the findings were validated through expert interviews. The analysis revealed the significance of the Green Lease concept which provides a healthier work environment, lower utility charges and a good reputation for both the tenant and the landlord. However, there can be enablers and barriers of Green Lease. The contribution from the Green Building Council of Sri Lanka (GBCSL), the Government's attempts to promote sustainable activities and conducting of business in Green Buildings are few of the enablers. Factors such as lack of policies and government rules, and poor awareness of the community about Green Lease are the significant barriers. The Government's positive influence and the promotion of the Green Lease within the community will be beneficial towards adopting Green Lease. Several suggestions to minimize the identified barriers also have been made through the development of a framework.*

**Keywords:** Green Building; Green Lease; Sri Lanka; Adoptability.

## 1. INTRODUCTION

The concept of Green emerged at the time the industrial revolution took place with the history of the concept going back many years (Stone, 2011). A Green Building enhances both the environment and its occupants' well-being (Mendis, 2013). According to WGBC (2013), there are two major parties that have interest in Green Buildings, i.e. tenants and the landlords. Sharp (2009) has reported that each party has his/her own interests in Green Buildings. According to Welsh School of Architecture, United Kingdom (WSAUK, 2009), clauses on rental property can be included in a lease agreement with the mutual consent of the tenant and the landlord. Early action on the part of the commercial leasing market is essential to address global warming (Brooks, 2008). The incorporation of environmentally favorable practices in a commercial lease may enhance building performance (WSAUK, 2009).

A Green Lease is a lease agreement between a landlord and a tenant that ensures sustainable operation and management of Green Buildings (Hughes and Melia, 2010). Commercial leasing of Green Buildings enhances building performance and improves the relationship between the landlord and the tenant (Dingwell, 2010). Green Lease also enhances the efficiency of resources, increases the asset value, reduces the operating cost and heightens the occupant's comfortability and health (Kaplow, 2009). Kremer and Nicholas (2012) have pointed out that both the landlord and the tenant may benefit through a Green Lease. Department of Climate Change and Energy Efficiency (2012a) has stated that a Green Lease may help to reduce Green House Gas Emissions (GHG) as well as enhance the energy efficiency of a building. However despite its benefits, it is not easy to introduce a fresh concept to landlords and tenants (Sharp, 2009).

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The clients of recent building projects in Sri Lanka have made considerable effort to pursue the Green Building concept towards optimizing building performance. The world's first green factory is in Sri Lanka (Sri Lanka Export Development Board, 2012) and the first Leadership in Energy and Environmental Design (LEED) certified building in the world and the first LEED certified building outside the United States of America (USA) - the "Heritage Kandalama" is also in Sri Lanka (Sri Lanka Business and Bio diversity Platform, 2014). Still, Green Lease is a new concept to Sri Lanka. Therefore, it is important to identify the adoptability of Green Lease in Sri Lanka in which most of the researchers in the past have not been interested.

Eventhough, there have been studies to ascertain the requirement, risks and the applicability of Green Lease in developed countries, no attention has been paid to the adoptability of this novel concept in developing countries. There is therefore a need to investigate on "How to adopt Green Lease concept in Sri Lanka?" Hence this research aims to investigate the adoptability of Green Lease concept in Sri Lanka. The study set the following objectives to achieve the aforementioned aim.

1. Review the Green Lease concept
2. Identify the importance of the Green Lease concept
3. Investigate the enablers and barriers of the adoption of the Green Lease concept in Sri Lanka
4. Make suitable suggestions to minimize the identified barriers

## **2. LITERATURE SYNTHESIS**

### **2.1. GREEN BUILDINGS AND EXISTING LEASE PRACTICES RELATED TO GREEN BUILDINGS**

Buildings were identified by Kibert (2004) as having a direct, complex, and long lasting influence on the environment. According to USDE (2009), buildings are in the highest energy consumption sector. Green Buildings have been recognized worldwide as a solution to mitigate the inefficient energy usage while contributing to the reduction of global GHG (Howe, 2010; Brown and Southworth, 2006; Berardi *et al.*, 2013). Basically, Green Buildings minimize resource usage (Vancouver Economic Commission, 2009).

Green Building is not just the assembling of environmentally friendly elements or just retrofitting existing buildings (Karolides, 2002). According to Green Building Council of Australia (GBCA, 2015), the concept should include designing, constructing, operating, maintaining and demolishing a building. Environmental Protection Agency (EPA), one of the reputed agencies in USA, defines Green Building as the practice of creating structures and using processes that are environmentally responsible and resource-efficient throughout a building's life-cycle starting from its siting to its design, construction, operation, maintenance, renovation and deconstruction. This practice expands and complements the usual building design concerns on economy, utility, durability and comfort. A Green Building is also considered as a sustainable or 'high performance' building (EPA, 2014).

Atputharajah and Bombugala (2010) state that even though Green Buildings cost 20 - 25% more than a conventional building, their benefits can be ten times more than those of conventional buildings. Baier (1999 cited Heerwagen, 2000) has reported that Green Buildings will lead to a higher demand for space when renting or selling that space. The study therefore considers only rentable green built space. Existing leasing practices basically fulfill the goals of the landlord and the tenant independently (WSAUK, 2009). None of the common objectives can be met through existing lease agreements. This is a major disadvantage. Furthermore, Brevard (2012) reports that the existing leasing practice is not contributing to the active participation of both the tenant and the landlord.

Dingwell (2010) considers a well-established Green Lease as a step towards achieving energy efficiency as well as obtaining the commitment of stakeholders for ensuring sustainability. Thus, a Green Lease goes beyond an existing lease and provides for optimum resource utilization with a higher environmental responsibility while eliminating barriers of the existing lease practices (Kaplou, 2009).

### **2.2. GREEN LEASE CONCEPT**

Green Lease is an agreement between a tenant and a landlord (Green Building Alliance, 2013). Up to now, there has been no accepted definition for Green Lease. A Green Lease can be defined as a

collaborative agreement between a landlord and a tenant to ensure sustainability and to achieve both shared and individual objectives.

The involvement of the government in Green Lease is an important enabler of Green Lease (WSAUK, 2009). However, implementing Green Lease is not an easy task since it gets obstructed by its barriers. As stated by the Department of Climate Change and Energy Efficiency (2012b), the following costs incurred by the tenant are the major barriers for implementing Green Lease.

- Costs associated with administration, e.g., record keeping, participation at meetings etc.
- Costs related to changing the behaviour and the attitudes of tenants - tenants have to adjust their behaviour in order to achieve the targeted energy efficiencies.

Other than these barriers, a few other categories also were identified, viz., process related barriers, organizational related barriers, and economical and other cost related barriers and social related barriers. Accordingly, USDE (2009) has reported that the low commitment of tenants and their lack of awareness on the costs and benefits of Green Lease practices are barriers for implementing Green Lease. EMW (2015) has identified the following challenges for Green Lease:

- Longer time duration
- Higher initial cost
- Lack of awareness on the importance of energy efficiency and Green Lease
- Disagreements among landlords and tenants

Barriers of Green Lease have to be avoided to enable its development as there are merits in adopting Green Lease such as lower operating and maintenance costs, achievement of environmental objectives of landlords, tenants and good reputation for them (James, 2010). It is essential to identify the possibility of introducing the Green Lease concept in Sri Lanka. Therefore, Green Building practices in Sri Lanka as well as Green Lease need to be discussed. According to Mendis (2013), in Sri Lanka there is an increasing tendency to convert existing buildings into green buildings. Therefore, the requirement for adopting the Green Lease concept in Sri Lanka is quite clear.

### 3. RESEARCH METHODOLOGY

In this study, the qualitative research approach was selected as Green Lease is not practiced very much in Sri Lanka as at present. Since numerical data cannot be taken to analyze the adoptability of Green Lease in Sri Lanka, three case studies were selected to verify the strength of the data. Since when there are many cases, similarities and differences need to be understood, it is better to go for multi-case studies (Yin, 2003). The researcher selected semi-structured interviews and a documentary review as data collection techniques for the selected case studies. In addition, viewpoints of industry experts were considered in arriving at conclusions. Data was collected through three case studies, interviews and a documentary review. From the data collected, the importance of the Green Lease concept was identified fulfilling the second objective of the study. The third and fourth objectives were fulfilled by identifying the enablers and the barriers of Green Lease and from suggestions made based on the case study findings. Ultimately, the findings were consolidated with an expert interview. Figure 1 shows how the case study contributed to data validation.

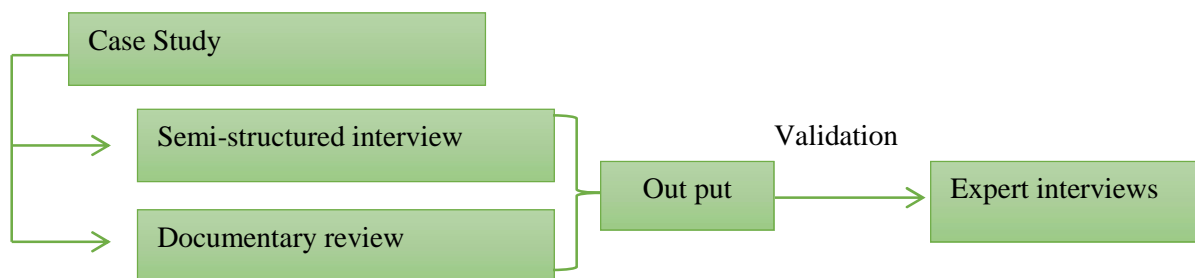


Figure 1: Research Methodology

Two respondents (see Table 1) were interviewed for each case.

Table 1: Respondents

Case	Respondents
Case A	Senior Manager (Facilities Management)
	Legal Manager
Case B	Chief Engineer
	Legal Manager
Case C	Administrative Executive
	Manager (Facilities Division)

Table 2 gives details pertaining to the expert interviews conducted to consolidate case study findings.

Table 2: Expert Interview Details

Agency	Designation of the Expert	Sector	Number of Years of Experience in the Field
E1	Professor	Government Sector (Academic)	22
E2	Chief Executive Officer (CEO)	Private Sector	11
E3	Legal Consultant	Private Sector	24
E4	Manager (Administration)	Private Sector	12
E5	Chief Executive Officer (CEO)	Private Sector	30

## 4. RESEARCH FINDINGS

The research considered Green Buildings that have been identified as being energy efficient and rentable since the research was to focus on the adoptability of Green Lease.

### 4.1 IDENTIFYING THE IMPORTANCE OF THE GREEN LEASE CONCEPT

It was important to study existing lease agreements before analyzing the requirement for Green Lease in Sri Lanka. The pros and cons of existing lease agreements were presented at the interviews and most of the respondents agreed on the need to have a Green Lease concept in Sri Lanka, considering the deficiencies of the current leasing practices. The following were studied to gather the required data:

- Rent and other utility charges stated in the existing lease agreements
- Split incentive barriers stated in the existing lease agreements
- Clauses relevant to Green Lease in the existing lease agreements
- Benefits of adopting Green Lease

There are no special provisions in Sri Lanka regarding the payment of rent and other utility charges of Green Buildings. In general, the operating cost is borne by the tenant. Therefore in most of the cases, a split incentive barrier was provided in the existing lease agreements. The developer does not have to invest on energy efficiency systems, as he will not reap the benefit of energy reduction. This is one of the major deficiencies of the existing lease agreements.

Although Green Lease is not currently practiced, there are clauses relevant to it in existing lease agreements as indicated below which the tenants are bound to adhere to:

- Abstaining from covering or obstructing window sky-lights and ventilation shafts
- Keeping all trash and garbage in suitable receptacles and arranging their proper removal from the premises
- Ensuring a pre-defined water efficiency level and obtaining permission from the facility management before installing new fixtures
- Abstaining from installing new air conditioning equipment as it will affect the pre-defined energy efficiency level
- Abstaining from using CFC based refrigerants

The benefits of the Green Lease concept indicated below underline the significance of the concept.

- Lower operating cost
- Attraction to foreign customers
- Independence from energy
- Independence from water
- High impact the use of recycled material has on the cost of both the tenant and the landlord.
- Good reputation available for both the tenant and the landlord. Easy marketing of the leased space and the lower carbon emission that positively affects the building
- Good interior and exterior appearance and pleasant environment

After studying the existing lease agreements, the respondents agreed on the adoption of the Green Lease as a concept. In Sri Lanka there are both enablers and barriers to the adoption of Green Lease.

#### **4.2. ENABLERS, BARRIERS AND SUGGESTIONS TO ADOPT GREEN LEASE CONCEPT**

The findings convinced that in Sri Lanka there are national as well as organizational enablers of Green Lease. Categories identified from the literature were further developed by the respondents as indicated below. Accordingly, enablers, barriers and suggestions that will minimize the identified barriers were grouped into six categories as indicated below.

- Process related barriers connected with the Green Lease process
- Organization related barriers connected with organizations
- Economical and other costs related barriers connected with the economy
- Government and other legal related barriers connected with the Government and the legal system
- Socially related barriers connected with individuals and the community
- Others

#### **4.3. ENABLERS OF THE GREEN LEASE CONCEPT**

Most of the respondents agreed that there are enablers of the Green Lease Concept in Sri Lanka that promote the implementation of the concept in the country. Table 3 presents these enablers.

Table 3: Enablers of the Green Lease Concept

<b>Category</b>	<b>Identified Enablers</b>
<b>Process Related</b>	<ul style="list-style-type: none"> <li>▪ Not many restrictions to incorporate new clauses</li> <li>▪ Tendency to go green</li> </ul>
<b>Organizational Related</b>	<ul style="list-style-type: none"> <li>▪ Carrying out business in a Green Building</li> <li>▪ Ease with which it can be adopted by rich tenants</li> </ul>
<b>Economy Related</b>	<ul style="list-style-type: none"> <li>▪ Low cost of natural resources</li> <li>▪ Attraction of foreign tenants</li> </ul>
<b>Government and Legal Related</b>	<ul style="list-style-type: none"> <li>▪ Absence of restrictions on Green Lease</li> <li>▪ Support of the Government to enhance sustainable activities</li> </ul>
<b>Social Related</b>	<ul style="list-style-type: none"> <li>▪ Peace prevailing in the country in the absence of the civil war</li> <li>▪ Young and knowledgeable crew</li> <li>▪ Contribution from the GBCSL</li> </ul>
<b>Others</b>	<ul style="list-style-type: none"> <li>▪ Availability of natural resources</li> <li>▪ Presence of a non-profit oriented organization to encourage Green Lease</li> </ul>

According to Table 3, there are six types of enablers identified from semi-structured interviews. These enablers were further verified through experts in Green Building and construction law. The Green Lease process being not stringent, it is not difficult to incorporate new clauses in the existing lease agreements. Even though according to case studies, conducting a business within a Green Building is an enabler, the experts did not totally agree with this as the trend of constructing Green Buildings is not satisfactory. However, because of the significance of the Green Lease concept, the experts considered the conversion of a proposed building to Green as an enabler.

The Government indirectly influences sustainable activities. Training programmes conducted by the Green Building Council of Sri Lanka, a non-profit oriented organization motivated by the Green Building concept, is also another important enabler.

#### 4.4. BARRIERS OF THE GREEN LEASE CONCEPT

Barriers impede the adoption of the Green Lease concept and based on case study findings, they were categorized as indicated in Table 4.

Table 4: Barriers of the Green Lease Concept

Category	Identified Barriers
<b>Process Related</b>	<ul style="list-style-type: none"> <li>▪ Difficulty in adopting the concept immediately as it comes from overseas</li> <li>▪ Difficulty to adopt new clauses at once</li> <li>▪ Long time taken by the process</li> </ul>
<b>Organizational Related</b>	<ul style="list-style-type: none"> <li>▪ Need to conduct meetings</li> <li>▪ Need to conduct internal auditing</li> <li>▪ Need to conduct awareness and training programmes</li> <li>▪ Need to maintain proper documentation</li> <li>▪ Need to bear the cost of meetings, training programmes etc.</li> <li>▪ Lack of financial support from the organizations concerned</li> <li>▪ Other administrative costs</li> </ul>
<b>Economy and Other Cost Related</b>	<ul style="list-style-type: none"> <li>▪ The fact that Sri Lanka is a developing country</li> <li>▪ Difficulty in competing in the foreign market</li> </ul>
<b>Government and Legal Related</b>	<ul style="list-style-type: none"> <li>▪ Absence of government policies, rules and regulations on Green Lease</li> <li>▪ Absence of encouragement from the government to adopt Green Lease</li> </ul>
<b>Social Related</b>	<ul style="list-style-type: none"> <li>▪ Lack of understanding of the value of Green Lease</li> <li>▪ Lack of concern on the environment and the sustainability</li> <li>▪ Lack of awareness on Green Lease</li> </ul>
<b>Others</b>	<ul style="list-style-type: none"> <li>▪ Lack of commitment by the management</li> <li>▪ Use of less manpower</li> <li>▪ Considering the concept as an additional financial burden</li> </ul>

The identified barriers were further verified through experts. E1 was of the view that it is not easy to incorporate sustainable clauses in a lease agreement, since the tenant may not like them. Even though administrative barriers were identified through the literature and case studies, experts did not consider them as barriers.

The fact that Sri Lanka is a developing country has also been identified as a barrier. However, the experts were of the view that although there are certain areas that need to be developed, *a considerable progress has already been made by Sri Lanka. They were of the view that the status of the country's economy cannot be a barrier and that there is a need to adopt the concept.* The absence of government policies, rules and regulations was also identified as a barrier by experts. However, the lack of awareness of the Green Lease concept and the lethargy in implementing sustainable concepts were considered as other important barriers.

#### 4.5. SUGGESTIONS TO MINIMIZE THE IDENTIFIED BARRIERS

Since all the enablers and the barriers were verified through expert interviews, suggestions were developed through case study interviews and through expert ideas and opinions. Suggestions that will minimize the identified barriers were grouped into six categories which respondents tabulated as given in Table 5.



Table 5: Suggestions to Minimize the Identified Barriers

Category	Barriers	Suggestions Proposed
<b>Process related</b>	<ul style="list-style-type: none"> <li>▪ Difficulty in adopting the concept immediately being a concept that comes from overseas</li> <li>▪ Difficulty to adopt new clauses at once</li> <li>▪ Long time taken by the process</li> </ul>	<ul style="list-style-type: none"> <li>▪ Should explore advantages and disadvantages of adopting Green Lease</li> <li>▪ Should incorporate standard clauses relating to sustainability, energy efficiency, waste management and emission reduction</li> <li>▪ Should make both parties aware of sustainable clauses when incorporating them</li> </ul>
<b>Organizational related</b>	<ul style="list-style-type: none"> <li>▪ Need to conduct meetings</li> <li>▪ Need to conduct internal auditing</li> <li>▪ Need to conduct awareness and training programmes</li> <li>▪ Need to maintain proper documentation</li> <li>▪ Need to bear the cost of meetings, training programmes, etc.</li> <li>▪ Lack of financial support from the organizations concerned</li> <li>▪ Other administrative costs</li> </ul>	<ul style="list-style-type: none"> <li>▪ Should promote awareness among main stake holders.</li> <li>▪ Should conduct awareness and training programmes for employees.</li> <li>▪ Should encourage Green Lease within organizations</li> <li>▪ Should transfer the benefits of energy efficiency system implementation to tenants.</li> </ul>
<b>Economical and other cost related</b>	<ul style="list-style-type: none"> <li>▪ Difficulty in competing in the foreign market.</li> <li>▪ Centralized electricity supply</li> <li>▪ Increased cost of products</li> </ul>	<ul style="list-style-type: none"> <li>▪ Should decentralize the electricity supply</li> <li>▪ Should introduce alternative energy solutions</li> <li>▪ Should offer tax benefits to green followers</li> <li>▪ Should offer subsidiaries to the companies</li> <li>▪ Should increase private sector involvement</li> <li>▪ Should lower interest rates for the building sector to motivate it to adopt the Green Lease concept</li> </ul>
<b>Government and legal related</b>	<ul style="list-style-type: none"> <li>▪ Absence of government policies, rules and regulations to adopt Green Lease</li> <li>▪ Lack of encouragement from the government to adopt Green Lease</li> </ul>	<ul style="list-style-type: none"> <li>▪ Should develop a policy framework</li> <li>▪ Should introduce rules and regulations that empower Green Lease</li> <li>▪ Should amend the law to ensure sustainability of Green Lease</li> <li>▪ Should incorporate clauses relating to Green Lease in construction law, condominium law etc.</li> <li>▪ Should conduct awareness programmes to make the public aware of the value of sustainable living</li> </ul>
<b>Social related</b>	<ul style="list-style-type: none"> <li>▪ Lack of understanding of the value of Green Lease</li> <li>▪ Lack of concern about the environment and the sustainability</li> <li>▪ Lack of awareness on the Green Lease</li> </ul>	<ul style="list-style-type: none"> <li>▪ Should develop correct attitudes in the public</li> <li>▪ Should conduct awareness and training programmes</li> <li>▪ Should develop positive mindsets on Green Lease</li> <li>▪ Should make tenants aware of the benefits of Green Lease</li> </ul>

## 5. CONCLUSIONS AND RECOMMENDATIONS

Green Buildings provide the most comfortable environment to their occupants and increased profits to their developers. Green Lease is therefore required to enhance the efficiency of Green Buildings. The Green Lease is a significant concept that should be adopted early by the construction industry in Sri Lanka as the rapid development of the building industry can damage the environment. Both the enablers and barriers of Green Lease as applicable to Sri Lanka were recognized organizational wise as well as national wise. Enablers have to be further developed while barriers have to be eliminated.

Suggestions were made to minimize the identified barriers, e.g., introduction of a policy framework, rules and regulations, conducting awareness programmes, provision of tax benefits and subsidies to Green

followers, and the promotion of the private sector. It is recommended that the Government and the Green Building Council of Sri Lanka take action to conduct suitable awareness programmes to promote the Green Lease concept in Sri Lanka. Through workshops and seminars, construction industry stakeholders should also be made aware of this concept.

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