Volume 14

Issue 03



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RECENTLY COMMENCED PROJECTS

Project
Project Code
Location
Employer

	0
Engineer	: University of Morat
Type of Contract	: Design and Build
Design and Build Contractor	: Sanken Constructio
Date of Commencement	: 12 th of March 2019
Date of Completion	: 01st of March 2021
Time for Completion	: 02 Years
Funded	: GOSL
Value	: LKR 3,054,216,427.0
Design Architect	: ARCHT-X
Floor Area	: Office complex 2085
Structural Designer	: CODE Consultants
MEP Consultant	: MESAS Internation
Progress	
Sub Structure	: 20%
Super Structure	· 0%

: SKGO : Bandiyamulla, Gampaha : Ministry of Internal & Home Affairs and Provincial councils & Local government : University of Moratuwa : Design and Build : Sanken Construction (Pvt) Ltd : 12th of March 2019 : 01st of March 2021 : 02 Years : GOSL : LKR 3,054,216,427.05 : ARCHT-X : Office complex 20850 m² + 1000 Seats auditorium : CODE Consultants (Pvt) Ltd : MESAS International (Pvt) Ltd

Project Management Team

Assistant General Manager (Projects)
Manager (Projects)
Deputy Project Manager

: Mr. Ajith Jathunarachchi : Ms. Awanthi Wickramasinghe : Mr. H.G.P. Priyankara









Proposed Gampaha District Secretariat Building Complex SKGO Bandiyamulla, Gampaha Ministry of Internal & Home Affairs and Provincial councils & Local government SkGO Sanken Construction (Pvt) Ltd next newsletter are welcome. rashmig@sanken.lk



RECENTLY COMMENCED PROJECTS

MULTI PURPOSE BUILDING FOR ST. BRIDGET'S CONVENT

Project Name Location **Engineer of the Contract** Client **Date of Commencement Date of Completion Contract Sum Type Of Contract Project Details** No of Floors Built up Area **Project Progress** Sub Structure Super Structure **Total Structure** Overall **Consultant** Team

: Proposed Multi Purpose Building for St. Bridget's Convent (SKBC) : No. 85, C.W.W Kannangara Mawatha, Colombo 07 : Mr. Namal Peiris : St.Bridget's Convent Collegiate School : 02nd May 2019 : 24th July 2020 : LKR 373,230,021.16 : Measure and Pay : 05 Floors & 01 Mezzanine Floor : 3966.98m² :81%

:38% :51%

:24%

Architecture Structural Engineer **MEP Engineer**

: ACS Integrated

: Civil & Structural Engineering Consultants (Pvt) Ltd

: Mr. Prasanna Alahakoon

Project Management Team

Executive Director/DGM (Projects) **Project Manager** Deputy Project Manager

- : Mr. Mervyn Fernando : Mr. T.D.S.L. Gunawardena
- : Mr. Gayan Mallawa



RECENTLY COMMENCED PROJECTS EXHIBITION, CONVENTION & BANQUET HALL COMPLEX



Project Name	: Construction of Proposed Exhibition, Convention & Banquet Hall Complex		
Project Code	: SKTM - 01		
Location	: No. 31 A, New Hospital Road, Sri Jayawardenepura		
Client Name	: Monarch Imperial (Pvt) Ltd		
Date of Commencement	: December 2018		
Date of Completion	: November 2019		
Contract Sum	: LKR 581,796,678.15 (With VAT)		
Floor Area & No. of Floors	: Four Storied Building, GF (5150m ²) / 1 st Floor (2524m ²) / 2 nd Floor		
	(4513m ²) / 3 rd Floor (1973m ²) / 4 th Foor (1969m ²) / Ramp (1481m ²)		
Type of Contract	: Lump Sum Contract		
Project Progress			
Overall	: 80%		
Structure	: 86%		
Block Work	: 30%		
Financial Progress	: 65%		
Sanken Work Scope	: Structural Work and Block Work		
-			

Project Management Team

Executive Director/DGM (Projects): Mr.Rohana WannigamaAssistant General Manager (Projects): Mr.Sanjeewa KarunarathneSite Manager: Mr.Kalum Vitharana



PROJECTS IN PROGRESS PRE-CLINICAL DEPARTMENT FACULTY OF MEDICINE



Project Name	: Proposed 17 Storied Building (Including 2 No. Basements) for Pre-Clinical		
-	Department Faculty of Medicine, University of Colombo		
Site Code	: SKFM		
Location	: No. 25, Kynsey Road, Colombo 08		
Client Name	: The Vice Chancellor, University of Colombo		
Date of Commencement	: 05 th of June 2017		
Contract Sum	: LKR 4,707,563,953.46 (Excluding VAT)		
Project Progress			
Overall	: 42 %		
Structure	: 99%		
Brick Work	: 81%		
Plastering (Internal)	: 53%		
Painting Work	:9%		
MEP Works	: 29.4%		
Financial Progress	: 28.62%		

Work Scope

Balance work of proposed 17 storied building(Including 2 No. Basements) for Pre-clinical Department

Project Management Team

Executive Director/DGM (Projects) Project Manager Site Manager (Construction) Site Manager (Engineering) : Mr. Mervyn Fernando : Mr. W.L.Upali : Mr. Anil Jayathilaka : Mr. Dinesh Silva

COMPLETED PROJECTS

MODERN OFFICE COMPLEX - TWO UNION SQUARE

Project Name	: Proposed Modern Office Complex - Two Union Square
Project Code	: SKUT
Location	: No. 163, Dr. Colvin R De Silva Mawatha, Colombo 02
Client	: M.S.A.Shamsudeen Developments (Pvt) Ltd
Main Consultant	: Larsen, A & CE (Pvt) Ltd
Project	: Construction of Basement, Ground plus 10 floors of Modern Office complex including an Automated Car Parking System, 4 numbers passenger lifts, Gondola system and all related services.
Commencement Date	: 16 th of July 2016
Date of Completion Contract Price	: 20 th of May 2019 (Extension Granted up to 31 st of May 2019) : LKR 1,445 Million

Project Management Team

Executive Director/DGM (Projects)	: Mr. W.R.K. Wannigama
Assistant General Manager (Projects)	: Mr. Ajith Jatunarachchi
Project Manager	: Mr. Dimuth Delpachitra
Site Manager	: Mr. H.G.P. Priyankara



COMPLETED PROJECTS ORION TOWERS







Project Name	: Civil & Plumbing Works for the Proposed Orion Towers Phase 01 Development		
Project Code	: SKOT		
Client	: Orion Towers Limited		the st.
Location	: No: 736, Dr. Danister De Silva Mawatha,		Lu.
	Colombo 09		
Commencement Date	: 01 st of January 2016	1118	
Completion Date	: 31 st of July 2019		
Value of the Project	: LKR 2,398,180,681.01		CHINE .
No. of Floors	: 21 Stories + Basement		Statille
Scope of Work	: Structural and Finishing		
MEP Services/ID Works	: Nominated Sub Contractors		

Project Management Team

Executive Director/DGM (Projects) Project Manager Site Manager : Mr. Mervyn Fernando : Mr. Nirojan Karunanithy : Ms. M.M.T. Perera















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COMPLETED PROJECTS RESEARCH & TRAINING COMPLEX

Project Name	: The Project for the Establishment of Research and Training Complex at the Faculty of Agriculture, University of Jaffna
Site Code	: SKJA - 03
Client	: Ministry of Higher Education and Highways
Project Value	: Yen 744.5 Mn
Progress	: Completed
Commencement Date	: October 2017
Completion Date	: August 2019

Project Management Team

Executive Director/DGM (Projects) Project Manager Deputy Project Manager Site Manager

- : Mr. Mervyn Fernando
- : Mr. S. G. Jayasinghe : Mr. Saman Wanniarchchi
- : Mr. V. Rameshkumar







MIL











COMPLETED PROJECTS

RESEARCH & TRAINING COMPLEX

The objective of the project is to provide effective and efficient research and education activities on dry zone agriculture in the Northern Region at the Faculty of Agriculture, University of Jaffna.

There are two construction sites in this project.

1) Research and Training Complex Site - Construction Site Area: Approximately 20,871 m²

2) Research and Training Farm - Construction Site Area: Approximately 81,168m²

Type of the Buildings

1) Research and Training Complex Site Building

Name of the Building	Stories	Total Floor Area (m²)	Building Area (m²)
Research & Training Building	2	3,741	3261
Processing Training Building	1	337	337
Total		4,078	3,598

2) Research and Training Farm

Name of the Building	Stories	Total Floor Area (m²)	Building Area (m²)
Farm Management Building	1	592	632
Animal Measurement Building	1	39	48
Goat Shed	1	50	57
Dummy Cow Building	1	100	104
Total		781	841

Outline of the Scope of Works

- Architectural and Structural Works.
- Electrical Work (including stand-by generator system).
- Mechanical and Plumbing Works (Including water supply treatment system and waste water treatment plant,
- Ventilation work, etc.)
- Furniture Work (General Furniture)
- External Work (Pavement, external drainage)
- Agriculture Work (Field treatment and irrigation work, etc.)



PROJECTS IN PROGRESS - MALDIVES SUBSIDIARY COMPANIES SANKEN OVERSEAS

Project Name	: Proposed Staff Campus and S	ervice Facilities – Island 04
Location	: Rah Falhu Huraa Island,	
	North Male Atoll, Maldives.	
Project Value	: USD 51,440,708.93	
Completion Date	: April 2020	
Project Manager	: Mr. Rangana Jayathilake	
Deputy Project Mana	iger: Mr. Ravilal Managama	
Planning Manager	: Mr. Daminda Dhananjaya	Jos Internet
Site Managers	: Mr. Malith Manodya	
	: Mr. Sajith Dilshan	

: Mr. Gihan Wikramarathne



Construction and

: Rah Falhu Huraa Island,

: Proposed works for the Design,

Completion of Island - Island 03



Project Name

Location



North Male Atoll, Maldives.Project Value: USD 112,873,974.77Completion Date: July 2020Project Manager: Mr. S. SenthanDeputy Project Manager:Mr. Dushan Kodithuwakku

Project Name

Completion Date

Project Manager

Location Project Value

- : Reclamation Works for the
- Blue Beach Resort, Maldives
- : Emboodhoo Lagoon, Male
- : USD 2,578,224.00
- : August 2019
- : Mr. Hirantha Jayasinghe









Location

Project Value Completion Date Project Manager

- - : Kudakurathu Island Resort Construction Project - OZO Resort
 - : Kudakurathu Island, Raa Atoll, Maldives.
 - : USD 39,568,073.45 Lump sum
 - : November 2020
 - : Mr. Nilina Peiris

PROJECTS IN PROGRESS - MALDIVES SUBSIDIARY COMPANIES SANKEN OVERSEAS

Project Name Location Project Value Completion Date Project Coordinator

- : Proposed Alila Resort Project
- : Kothaifaru, Raa, Maldives
- : USD 48 Million
- : October 2020
 - : Mr. Visal Achintha





PROJECTS IN PROGRESS - SYSCHELLS SUBSIDIARY COMPANIES SANKEN OVERSEAS

Project Name Location Project Value Completion Date Project Manager Site Manager

- : Nouvelle Vallee Hotel Resort and Spa Project
- : Beau Vallon, Seychelles
- : USD 4,047,229.00
- : June 2020
- : Mr. Saranga Gunathilake
- : Mr. Abilash Rupasinghe





PROJECTS IN PROGRESS - KENYA SUBSIDIARY COMPANIES SANKEN OVERSEAS

Project Name Location Project Value Completion Date Country Manager Project Manager Site Engineers

: Mombasa Port Development Project – Phase 02 : Mombasa Port, Kenya

- : USD 12,000,000.00
- : October 2021
- : Mr. Nishantha Rathnayake
- : Mr. Nilantha Padmasiri
- : Mr. Tharindu Harshana
- : Mr. Karunanayake Ranasinghe
- : Mr. Suneth Sanjeewana



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PROJECTS IN PROGRESS - MYANMAR SUBSIDIARY COMPANIES

SANKEN OVERSEAS

Project Name

Location

Project Value Completion Date Project Manager

Project Name Location Project Value Completion Date Project Manager

- : Yangon Technological University Project : Insein Township, Yangon, Myanmar : USD 250,000.00 : November 2019
 - : Mr. N.C.J. Fernando









PROJECTS IN PROGRESS - BANGALADESH SUBSIDIARY COMPANIES

SANKEN OVERSEAS

Project Name: Supply , Installation &Location: Matarbari, Cox's BazaProject Value: USD 2,773,250.00Completion Date: December 2023Project Manager: Mr. E. A. I. L. EdirisinConstruction Manager: Mr. U.R.A.S. Kumara

: Supply , Installation & Operation of Batching Plant
: Matarbari, Cox's Bazar, Bangladesh
: USD 2,773,250.00
: December 2023
: Mr. E. A. I. L. Edirisinghe
: Mr. U.R.A.S. Kumara







Project Name Location Project Value Completion Date Project Manager Construction Manag

- : RC Works, Matarbari Coal Power Plant Project
- : Matarbari, Cox's Bazar, Bangladesh
- : USD 12,607,340.62
- : January 2024
- : Mr. E. A. I. L. Edirisinghe
- Construction Manager : Mr. U.R.A.S. Kumara







PROJECTS IN COLOMBO CI



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IN PROGRESS CITY CENTRE



SANKEN PRECISION ENGINEERING (INDIA) PVT LTD SUBSIDIARY COMPANIES **TEEJAY ADMIN BUILDING**

Project Name Location Client Manager (Projects) Site Manager Quantity Surveyor Date Of Commencement: 01st April 2017 Contract Sum

: Teejay Admin Building : Brandix, Visakhapatnam, India : Teejay India (Pvt)Ltd : Mr. Saman Kadahetti : Mr. Vimukthi Vithanachchi : Mr. Sampath Ruwan : 3,25,81,069 (INR)







BRANDIX UNIT - 1 HOSTEL RENOVATION PROJECT PHASE -1,2 & 3



Project Name

- Location Client Manager (Projects) Q.S / Project Coordinator Site In - Charge Date of Commencement Date Of Completion **Contract Sum**
- : Brandix Unit-01 Hostel Renovation Project Phase - 1, 2 and 3
- : Brandix, Visakhapatnam, India
- : Brandix Apparel India Pvt.Ltd Unit 01
- : Mr. Saman Kadahetti
- : Mr. Sampath Ruwan
- : Mr. Ganamuruthulu
- : 01st of April 2018
- : 30th November 2019
- : 4,54,31,861 (INR)





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SANKEN PRECISION ENGINEERING (INDIA) PVT LTD SUBSIDIARY COMPANIES

BRANDIX UNIT-II FACILITY BUILDING PROJECT

Project Name Location Client Manager (Projects) Site Manager Q.S / Project Coordinator Site In- Charge Date Of Commencement Date Of Completion Contract Sum Brandix Unit - 02, Facility Building Project
Brandix, Visakhapatnam, India
Brandix Apparel India (Pvt)Ltd, Unit - 02
Mr. Saman Kadahetti
Mr. Suresh Kumara
Mr. Sampath Ruwan
Mr. Madhusudhan
26th of June 2018
31st June 2019
8,45,98,363 (INR)

ADHISTHAN VILLA (DOUBLE STORIED)



Project Name Location Client

Manager (Projects) Q.S / Project Coordinator Site In - Charge Date Of Commencement Date Of Completion Contract Sum

- : Adhisthan Villa(Double Storied
- : Brandix, Visakhapatnam, India
- : Adhisthan Investments India (Pvt)Ltd
- : Mr. Saman Kadahetti
- : Mr. Sampath Ruwan
- : Mr. Ganamuruthulu
- : 13th of August 2019
- : 30th November 2019
- : 6,034,897 (INR)



PROJECTS IN PROGRESS SUBSIDIARY COMPANIES

VONLAN

1. Medirigiriya Distribution Phase II, Supply & Laying DI/PVC Pipes and fittings, Construction of Pipe Bridge, Design & Construction of 9 Nos Staff Quarters (SKVM)

- Client Project Value Progress Project Manager (H/O) Deputy Project Manager Commencement Date Completion Date
- : NWS&DB : LKR 1227 Mn : 98.5% Completed : Mr. Nalin Gilbert : Mr. Nuwan Fernando : March 2016 : September 2019





2. Medirigiriya WSP III (Transmission - Pumping Main) (SKVM2)

- Client Project Value Progress Project Manager (H/O) Project Manager Commencement Date Completion Date
- : NWS & DB : LKR 616.4 Mn : 74 % Completed : Mr. Nalin Gilbert : Mr. Nuwan Fernando : June 2017 : October 2019



3. Galpaya Water Supply Scheme (SKVG2)

- Client Project Value Progress Project Manager (H/O) Construction Manager Commencement Date Completion Date
- : Ministry of City Planning and Water Supply
- : LKR 303.3 Mn : 90% Completed : Mr. Lalith Adikari : Mr. K. Hassan : February 2018
- : August 2019





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PROJECTS IN PROGRESS SUBSIDIARY COMPANIES

VONLAN

4. Water Supply Extension to Elagamuwa from Greater Dambulla WSS (SKVE)

Client **Project Value** Progress Project Manager (H/O) : Mr. Nalin Gilbert Site Manager **Commencement Date Completion Date**

: LKR 307 Mn : 61% Completed : Mr. K. Viraj : December 2017

: December 2019



5. Orubandiwewa Rural Water Supply Scheme (SKVO3)



Client **Project Value** Progress Project Manager (H/O) : Mr. Lalith Adikari Site Manager **Commencement Date** Completion Date

- : Ministry of City Planning & Water Supply
- : LKR 354 Mn
- : 29% Completed
- : Mr. Saliya Rathnayake
- : December 2018
- : May 2020



6. Belummahara Water Supply Project (SKVB4)

Client	: National Water S	Supply & Drain	nage Board
Project Value	: LKR 689.1 Mn		0
Progress	:7% Completed		
Project Manager (H/O)	: Mr. A.A.L. Adika	ari	
Project Manager	: Mr. Nuwan Ferr	nando	
Commencement Date	: February 2019	VIII	THE REAL
Completion Date	: August 2020		
			CONTRACTOR AND





PROJECTS IN PROGRESS SUBSIDIARY COMPANIES **VONLAN**

7. Akbarally Apartment Complex (VLAAB)

Client **Project Value** Progress Project Manager (H/O) **Deputy Project Manager Commencement Date Completion Date**

: Mrs. S.S. Akbarally : LKR 280.9 Mn : 60% Completed : Mr. Lalith Adikari : Mr. M.N.M. Nimaz : January 2018 : September 2019





8. Toyota Lanka Kadawatha Ware House (VLTMKB)

Client **Project Value** Progress Project Manager(H/O) **Project Manager Commencement Date Completion Date**

: Toyota Lanka (Pvt) Ltd : LKR 450 Mn : 100% Completed : Mr. A.A.L.R. Adikari : Mr. U.C.I. Guruge : May 2018 : August 2019





9. Anuradhapura Hospital Building (VLAB)

: Gunawardhana Ayurvedha Holdings (Pvt) Ltd

Client **Project Value Progress Project Manager (H/O)** : Mr. Nalin D. Gilbert Project Manager **Commencement Date Completion Date**

- : 98% Completed
- : Mr. J.A.D.R.D. Jayasooriya
- : November 2017
- : August 2019

: LKR 410 Mn









ROLE OF THE PROJECT MANAGER IN ACHIEVING ENVIRONMENTAL SUSTAINABILITY

1. Introduction

Sustainable development is an important challenge currently facing the economy. It deals with how to develop the economy without jeopardizing the life of future generations. Organizations have incorporated the concept of sustainability in their overall organizational structures. In recently the concept of sustainable development has been associated with project management (Peter B1 & Lu cas02, 2017).

Project managers are vital instrument in the achievement of strategic objectives, because they are important in the execution and implementation of the objectives. The project manager is responsible for identifying and analysing issues and situations which are socially relevant and are not within the knowledge of the top management. Issues which include the inconsistencies that exist between the minimum required law and what is suitable for the society, and others which can be ranked in the same manner as other project risks either in term of probability or in term of impact (Russel, 2008).

The Environmental Sustainability is the rates of renewable resource harvest, pollution creation, and non-renewable resource depletion that can be continued indefinitely. Then they are not sustainable. Sustainability is the ability to continue a defined behaviour indefinitely. According to the (Afgan & Carvalho, 2008) sustainability has been reinvented as the key word to describe a political discourse concerning quality of life issues, limitation of natural resources and the sense of commitment to the future generation. To define what environmental sustainability is turned to the experts. The principle of the three pillars of sustainability says that for the complete sustainability problem to be solved all three pillars of sustainabile. The three pillars are Social sustainability, Environmental sustainability, Economic sustainability. The most important is environmental sustainability if this is not solved , then no matter how hard , try the other pillars cannot be made strong. It has been emphasized on a collective responsibility to advance and strengthen the independent and mutually reinforcing pillars of sustainable development.

According to the (Ngowi, 2000) construction industry is to provide the required buildings, infrastructure and reduce environmental degradation, it must adopt more sustainable practices. Building Research Establishment Environmental Assessment Method (BREEAM) aims to reduce the negative effects of construction and development on the environment (Lowe, Watts, Jack, & Norman, 2011). There is a considerable amount of cross-over between BREEAM and Sustainability when planning a building project. However, the main differences are that BREEAM is an assessment methodology and sustainability is a philosophy and a way of life.

2. Sustainable Construction

Sustainable construction has been developing since the late 1980s. According to the (Rehmann, 2010) the construction industry play an important role in adopt the concept of sustainability in order to achieve the sustainable development. Construction projects are seen as a mechanism of change both within an organization and the economy at large (Peter B1 & Lu cas02, 2017), and this mechanism play a crucial role in achieving both sustainable business process and practice. The construction of a buildings has negative impact on the environment, green building is improving quality of life and thus allowing people to live in a healthy environment (Kangalingam, 2014) because of that it is becoming increasingly popular worldwide.

Sustainable buildings are regarded as buildings that use key resources like energy, water, materials and land more efficiently than buildings that are just built to code (Kats, 2003).

3. Sustainability Concept

The definition of "sustainability" is the study of how natural systems function, remain diverse and produce everything it needs for the ecology to remain in balance. It also acknowledges that human civilization takes resources to sustain our modern way of life. Sustainable development is defined as a pattern of resource use that aims to meet human needs while preserving the environment so that these needs can be met not only in the present, but also for future generations. The cornerstone of sustainable design are providing buildings which are energy efficient, healthy, comfortable to occupy and flexible in use and designed for long life (APCU, 2008). The goals of sustainable development are; Social equity, economic efficiency and environmental performance. It was reinforced by (Silvius, Brink, & Kohler, 2010,2009).

When designing a sustainable building, the considerable parameters are; Reduce energy use to a minimum, Choose materials wisely, Consider energy re-generation- photovoltaics / solar panels, ground source heat pumps, Conserve resources- waste water / grey water recycling and Reduce environmental damage (APCU, 2008). Further discussed increasingly scarce resources and rising energy costs, places sustainability high on the agenda and cannot be ignored when planning a building project. The adoption of the sustainable building concept become benefits to the industry (Hakkinen & Belloni, 2011)

4. Project Management

According to the PMBOK (Project Management Body Of Knowledge) Guide Fifth Edition, 2013, project management is the application of knowledge, skills, tools and techniques to project activities to meet the project requirements. (Russel, 2008) stated that project managers are vital instrument of strategic objectives, because of they are important in the execution and implementation of the objectives. The project managers are seen as change agents who play important role on the sustainability of an organization (Peter B1 & Lu cas02, 2017). The importance of project manager is not limited to their functional roles as implementers of sustainable, technical solutions, but refers to the broader institutional role that professions exercise in accomplishing radical change.

According to the (Beratan, Kabala, Loveless, Martin, & Spyke, 2004) sustainable project management from internal environment aspect include relationship, project team, human resource, result, communication, stakeholder management whilst others are based on external aspects such as resource, waste , energy, pollution.

5. Role of Project Manager in Sustainable Environment

Project managers need to take in to cognizance the scope of sustainable environment within the projects (Silvius, Brink, & Kohler, 2010,2009) (Gareis, Huemann, & Martinuzzi, 2011,2009) further the scope of work is limited to project deliverables or whether the project relates with the organization. In the industry it has been recent connection of project management with sustainable environment. As per (Peter B1 & Lu cas02, 2017) Sustainable project management was defined as the management of project oriented change in policies, assets or organizations , with a concern on the economic , social and environmental effect of the project. As per the (Russel, 2008) analysing sustainable environment with the social perspective the suitable development that was discovered in a project; by measuring the level of the project, using end result of the project and overall effect of the project. According to the (Taylor, 2008) idea of sustainable environment should be incorporated in every stage of the project life cycle.

The role of project manager consist with implementing environmental management system while considering potential cost saving regarding reducing waste management system and energy efficiency in work places, further more controlling risks to prevent the increase of related cost ,careful choice of building methods, implementing health and safety management system . The sustainable construction as a new approach in construction industry there for it needs training and education such as regular meeting and being in charge of these meeting are the project managers responsibility according to (Arditi & Ongkasuwan, 2009)

for educating green building practices and objectives for all site workforces and also training and education sessions for subcontractors improvement. (Matar, Georgy, & Ibrahim, 2008) Stated that the lack of training and education in sustainable building is one of the general barriers to sustainable construction. (Hills, Fox, Hon, Fong, & Skitmore, 2008.) Disclosed a unique role for project managers in encouraging improvements for subcontractors through training and education session on site.

6. Suggestion to improve weaknesses to achieve environmental sustainability

To achieve sustainable projects the project manager to be improved or developed new strategies and techniques. The project cost will be increased when achieving sustainability environment. The project managers must manage the large number of suppliers, subcontractors to procure materials to become successful. The natural environment is the core of any economy, and economies cannot be sustained without environmental goods and services. The building material used for the creation of sustainable built environments should cause as law environment impact (RsMeans, 2011). The minimization of the natural resource based building materials is an important step for enhanced sustainability for future construction. Use of environmental friendly and cost effective alternatives possible with stabilized earth could also bring in many benefits (Jayasinhe & jayasinhe, 2009). The natural resource we can used such as day lighting for passive solar heating, solar water heating, Photovoltaics electricity and solar ventilation air preheating are effective energy saving source in sustainable environment. The energy is neither created nor destroyed, but may be converted from one form to another, for buildings, the important forms of energy are electrical power and chemical energy stored in fuels such as natural gas. Energy provides comfort in buildings (RsMeans, 2011).

7. Conclusion

Project managers have significant role in successfully delivering a sustainable building project because of the possibility of playing role in dealing with the challenges in sustainable building process. Project managers face these challenges in the projects differently due to the uniqueness of each project and the location.

The Employers, Clients, Contractors, Consultants, Government and all other stakeholders in the construction industry have great responsibility for efficient design construction and maintenance of the environment of the building in sustainable manner and adoption of the sustainable practices. To enhance the performance of sustainable concept there should be considerably good expert knowledge in the construction field. Better communication and coordination between stakeholdersboth in design and construction process is very important. The developing and implementing the new innovative ways to procure, design, construct, use and maintain development as a challenge for construction industry in sustainable construction.

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By Geethanganie Hettiarachchi Senior Quantity Surveyor

FORCE MAJEURE CLAIMS "THE EASTER ATTACK"

The terror that went to Sri Lanka on April 21, 2019 was something that our nation had never hoped for, and this tragic event have affected all of our pillars of survival, economics and security of this great nation. The most immediate and measurable effect of this terrorism is physical destruction. But we cannot forget that we have already lost hundreds of lives forever.

But when the problem arises in the construction industry, the real question is how the repercussions of this tragic event, which we never expected, can be restored in terms of time and cost. In particular, we all knew that our projects were directly or indirectly affected by this deadliest attack.

In this case, **The Force Majeure clause** is an essential key tool for managing the risk of such difficult circumstances in a project.

WHAT IS IT MEAN BY FORCE MAJEURE?

The term "force majeure" is principally identified as being an "exceptional" event or circumstance, **beyond the party's control.**

•Something that it could not have reasonably been provided against **before entering into the contract**.

• That may prevent or impact our performance in **contractual obligations.**

Some of the few events may be listed under force majeure as follows.

1. War, Hostilities, Invasion, Act of foreign enemies.

2. Terrorism, rebellion, revolution, insurrection.

3. Natural catastrophes such as earthquake, hurricane, volcanic events.

4. Riot, commotion, disorder, strike or lockout by other than contractor's personal.

Actually Force Majeure situation are not exactly limited in contract documents. Therefore, an event outside of situations may be considered force majeure if it conforms to the definition of the clause.

WHO SHOULD BE HELD RESPONSIBLE?

In this case we need to understand that type of the construction delays. Generally force majeure events, which excuses the liability from extending the contract time but without compensation. But we need to remember that, some cases if a force majeure delay resulted solely from the delay of contractor, the opportunity of delay damages would be recoverable by the client.

For example if your project delayed due to the contractor-delays and project time line (Original contract period) pushed beyond the April 2019 (Force majeure Event).

		Contractor Entitle	
Type of Delays	Responsible	Time	Cost
Non-excusable Delay	Contractor	-	-
Excusable Compensable Delays	Owner	Yes	Yes
Excusable Non- Compensable Delays	-	Yes	-

Then project may subjected to a **preventable force majeure delay** due contractors delay performances. Thus, the innocent party (Client) suffering damages has the right to claim against any delay that resulted from the negligence or tardiness of the other party (Contractor).

CONTRACTUAL BASIS

It should be noted that we must inform the other party within 14 days of the event aware by us. (Sometimes this period differ according to the type of contract) And you can refer more details in the following clauses of the standard documents,

•ĬCTAD/SBD/4

Clause 20 (force majeure) • FIDIC 1999 first Edition (Red Book) Clause 19 (force majeure)

SHORT AND LONG TERM CONSEQUENCES EXAMPLE : EASTER ATTACK FORCE MAJEURE EVENT

It is not easy to identify the consequences of this event in a mega-scale project. Especially if your project contains thousands of activities.

Hence it is highly recommended to follow the delay analysis using a detail program. And it is the common practice of the claim evaluation.

Sometimes a case of force majeure does not affect the critical path of the impacted program, therefor you may able to justify the delay period by analyzing the loss of working hours as (Fig.-01).

Anyway the determination of force majeure depends on the facts concerning the claim, actual cause of the delay, and the effect of the critical path and the nature of the cause of force majeure. Therefore your claim determination may depend on the above facts.

Claim should contain a separate section to explain the consequence of the Force majeure event. For example here are some facts about our example.

- 1. Sudden curfews all-around the country.
- 2. Sudden security warning.
- 3. Frequent security checks.
- 4. Emergency laws.
- 5. Local material scarcity.
- 6. Emergency laws.
- 7. Disturbances for work arrangements for specific works. (Night Works)

EVIDENCE OF DELAY TIMELINE

Although it is possible to claim time and cost in the event of force majeure, we must understand that the evidence showing the effects is essential for a fair determination. This may also be useful to justify the claim in case of dispute.



Figure -01: Loss of working hours

Therefore, we need to prepare the following documents along with such force majeure delays claims.

- 1. Impacted program updates
- 2. Notices for delay
- 3. Minutes of daily, weekly, monthly meetings
- 4. Daily , Weekly progress reports
- 5. Procurement register
- 6. Manpower and machinery records

CONCLUSION AND RECOMMENDATION

It is strongly recommended to understand the force majeure clause in a contract. In some cases, you may not be able to claim costs and time. Before you apply this clause for special cases you have to justify the contractual provision of it.

The Force Majeure clause also plays an important role in the case of optional termination, and release of payments. If such an event lasts more than 84 days or a total of 140 days, both parties have the right to terminate the contract.

REFERENCES

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- Standard Bidding Document of Works, Design of Build Contracts, ICTAD/SBD/04, 1st ed.;may 2003
- Guide to Conditions of Contract- Dr Ananda Ranasinghe; 1st ed.; April 2015

By: Prasad Sanjeewa Hathurusingha Planning Engineer Colombo City Centre Project (SKCC3)

MISCELLANEOUS NEW RECRUIMENTS

S/N	EMP No	Name	Designation	Site	Month	Remarks	
01	41465	Mr. D. B. S. Jayasooriya	Engineer - Electrical	SKCC 3	_		
02	41461	Mr. J. Pirasath	Assistant Engineer - Building Services Engineering (Designate)	SKJC 4			
03	41466	Mr. R. D. P. B. Rajapaksha	Assistant Engineer - Civil	SKUA]		
04	41464	Mr. H. W. A. Jayamal	Assistant Engineer - Civil (Designate)	SKUA	July		
05)5 41468 Ms. D. U. J. Muha		Assistant Quantity Surveyor	SKUA			
06	41462	Ms. S. R. G. Epitakaduwa	Assistant Quantity Surveyor	SKGA 2]		
07	41467	Ms. K. M. I. J. Kalupahana	Senior Draughtsperson	SKCS 1			
08	41473	Mr. P. A. M. Nishantha	Assistant Engineer - Civil	SKNG		Absorption to	
09	41474	Mr. S. Navaniran	Assistant Engineer - Civil	SKNG		Sanken from	
10	41475	Mr. I. M. Kaisam	Assistant Engineer - Civil	SKNG	August	SIAM	
11	10154	Ms.D.M.R.A.Gunathilake	Administrative Coordinator	ADMIN]		
12	10155	Mr. K. T. Dinesh	Purchasing Officer	SKPD			
13	10158	Ms. D. De. S. Mohotti	Secretary	COMM	September		

EVENTS

Sanken Construction (Pvt) Ltd Won the Best Main Contractor - 2nd Runner-Up Award

"Dha Abhimani" awarding ceremony 2019 organized by Ministry of Megapolis & Western Development was held at Sugathadasa Indoor Stadium on 08th August 2019 to commemorate the services rendered by the construction workers of the Urban Revival Project.

Sanken Construction (Pvt) Ltd won the best main contractor of the year 2018 - 2nd runner-up award in the Design and construction of 15 storied project comprising of 1076 Housing units at Henamulla.

The Prime Minister of Sri Lanka, Honourable Ranil Wickremesinghe awarded the Trophy to Mr. Ranjith Gunatilleke/Managing Director of the Sanken Construction (Pvt) Ltd. Mr. A.M.Rathnayake - Deputy General Manager (Projects) and Mr. H.B.S.Wijesekara - Project Manager were also present at the ceremony.

