It is evident that the Ceylonese had constructed forts such as Sigiriyya, Wakirigala, Yapahuwa, Dambadeniya and Govinda Hela in isolated hilltops since the ancient times. The name 'Bandaawaara' was used by the Ceylonese for forts. By the time of Polonnaru era, forts were known as 'Dugga' [1]. According to other sources, forts were introduced by the name of 'Kotta' and the book 'Dambadeni Asna' reports that the King Prakramabahu-II constructed forts using stone plates and clay plates with wood [2]. However, the Bopitiya inscription mentions that the forts belonged to Queen Kalyanawathi were destroyed by the Tamils [3].

Evidence from Gamploa era reports that there were various security methods such as Attala" Antarattala" Forts, Idahini” Kurubili and Palimugam [4].

Cities of Ancient Ceylon and Forts

Forts were established near cities in ancient Ceylon. In the thirteenth century there were forts, bulwarks, guard posts, fort gates and entrance gates for cattle in Kurunegala and Wathagiriya. In the fourteenth century there were huge water canals/ flumes, guard posts, conicals and char coals to secure the city of Jayewardhanapura Kotte. There was a type of guard rooms called 'Attalaya’ in the city of Jayewardhanapura Kotte. Mayura Sandeshaya mentions that there were strong and highly secured forts were built around the city of Jayewardhanapura Kotte to prevent from enemy attacks [5]. Such evidences not only Kotte era but also from Polonnaru and Dambadeniya era provide us a hint that construction of forts to secure the kingdom was not a new thing for the Ceylonese.

Ancient Ceylonese strategically used natural materials as well as the geographic landscapes to construct their forts. After the death of the King Manabharana, people decided to secure their freedom from the invasion of the King Parakramabahu by setting camps in each entrance, by building canals and by blocking roads with cut down trees [1]. Codrinton mentioned some facts on the construction of forts by Ceylonese when they were having internal conflicts in the 12th century. He stated that the Ceylonese built these forts by standing huge logs and covering the city with a wall that cannot even be destroyed by the elephants. There was an entrance to the fort. However, before the entrance there was a canal with conical. All the roads from the nearest forests towards the forts were blocked by fallen trees. In one occasion some enemies tried to use house breakers who use antlers to enter these forts. Codrinton explained of a strong fort, which is being
described in the Mahawamsa. "The four story fort has two walls around it. In between the walls there is a canal around a width of 20 or 30 cubits. There are conical inside the canal. Sometimes the circumference of this canal is around 700 feet. The outer wall also has another canal similar to the previous one. Next to the canal there is a line of conical. Then there is a bone fence and another deep canal. The forest around the fort was deforested and remains as a clear open space. There are pit-falls in all the entrances to the fort and archers closer to the pit-falls. When the fort is attacked, there are machines to back attack with huge stones, fired tubes and arrows [6]"

Wilmeh Giger has also explained the several strategies of building pit-falls by Ceylonese parallel to the construction of forts. "After digging the ground they placed huge woods that had points as similar as the point of a javelin. While doing that they built pit-falls and canals. Wherever possible, they made canals. They tried to make the access impossible by placing fallen down huge trees from the twice a distance of a flying distance of an arrow. They placed conical in by roads and covered the conical with dried leaves and sand to lure the enemy. In the middle of the fort there was a four story building. When enemies were approaching archers used this building to shoot arrows and stones. Machines were placed in this building to shoot fired conical and bamboos [7]. The king Wijaya Rajasinghe had made seven road forts according to the necessity and placed 30000 clever soldiers to protect the Kandyian kingdom [8].

Since the kingdoms of Pandukabhaya, Dutugamunu, Vijayabahu and Parakramabahu, Ceylonese had the technology of fort construction. Even during the invasions of Europeans, locals made forts using available physical resources and environmental factors in the 16th century. When the king Wimaladarmasooriya understood the strategy on imprisoning him in the Kandy by building forts of Portuguese, he started building forts in several places such as Mottapulliya, Kiriwalapitiya and Thalampitiya apart from protecting citadel roads [9]. Portuguese also used wood, soil and sticks to build forts such as Ruwanwella Fort except the forts that they built using stones [10]. It can be identified that Portuguese also concerned of protecting citadel roads when building their forts.

Attacking against the enemy by Ceylonese happened in a special way. The fighters send several migrant groups all over the island to both to obtain information and to devastate the neighbouring villages. These groups, block several entrances to the enemy camps and attack the camps from different areas. Then they divide the camp. They attack the enemy in the night to prevent the enemy from resting and also launch their major attack in the day light against the enemy. During the era of Portuguese, king Rajasinghe I, used a zigzag method as a way of setting security rings and blocking the forts from the seashore to a certain distance to attack the Negambo fort of the Portuguese. From a 03 feet distance away from the enemy's fort the Ceylonese used 10 feet wicker shields to approach the enemy. To reach towards the enemy camps, Ceylonese used hay fascines as well. These hay fascines were made with the purpose of pushing, setting fire and stopping the gun balls. Hay fascines were made of tightly bruising rush ropes to prevent from injuries. It is confirmed that Ceylonese made use of the natural recourses by considering the environmental barriers at the battlefield. Ceylonese protected citadels such as Balana through Attapitiya, Ethgaaltota, Damunugashinna and Hatalisphuwa forts. Alawwa fort and Mottalipulliya fort were used to protect Galagedara citadel. Idolashinna citadel was protected by the Batugedara fort [9]. The British also wanted to protect the same citadels and they built their own several forts to secure the citadels. By building their own forts, the British also aimed at preventing the arrivals of the Kandyan fighters to the lower part of the country, which was their ruling area.

During the colonial era, Ceylonese did not receive funds from the royal treasury to construct forts. Therefore, the constructions of the forts happened by experiencing scarce facilities. The method of construction of Ceylonese' forts was being described by Captain L. de Bushe. "Security walls of their forts do not have an equal distance. In between the space of untidily stood three pillars, there are garbage, wooden sticks, stones, soil or any other fillings, which they could obtain from their hand distance. Enemies attacked us behind those walls. They used their own small guns to shoot us. However, their bullets flew above in between 20 – 40 feet of our heads and hit the trees nearby [9]. Though the British writers perceived the fort construction of the Sinhalese hilariously, it is revealed through such writers that the Ceylonese fighters had a method of building forts by using materials from the natural environment such as wood. Apart from wood, sand, earth and earth clods were being used to build fort walls. Being behind such security walls barric fighters are used to attack the enemy even in the present. During the British rule in Ceylon, it is clear that the Ceylonese had the knowledge of using previously mentioned strategy. Another feature that can be identified in the fort construction is that most of the Ceylon forts were built at the root of the citadel close to a forest. It is a strategy used by these fighters to protect the citadel by blocking the enemies' approach. Such a construction makes the enemy uneasy to surround the fort. Queryros [10] stated that the camps of Ceylonese were covered with stones. So that the enemy easily could not break-into the fort and set fire to the fort.

**Using Gravets as Guard Posts**

Gravets were very much useful for the Ceylonese as a security centre. There were several

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strategic locations of gravets in the Kandyan kingdom such as Balana Gravet [6], Kandy Gravet, Katukale Gravet [6], Gatahatte Gravet [6], Demuwata Garvet [6], Sapoli Gravet [6], Deganthuduwa Gravet, Seethawaka Garvet [6], Mulgampola Gravet and Hapugahala Gravet [6]. It is mentioned that the king Wimaladarmasooriya I presented villages for the peasants who were securing the gravets. Kotta and Panola were two of the peasants who did their guard duties in a gravet called Wilkda during the era of the king Wimaladarmasooriya I [8]. As an assured measure Ceylonese built camps/forts around the gravet. However, John Fibus mentioned that there was no any building that could be named as a fort in the city of Kandy [12]. But in the year of 1762 on May 15th, his diary reported that he passed a clay building with cannons [12]. This building definitely must be a fort.

By the year of 1810, there was a 12 feet high door and a stone wall across the road of Balana gravet. During that time there were four Dutch soldiers on duty with five or six javelins and three cannons[6]. Safety precaution methods used in the gravets were much organised and spot on. If a person was passing through the gravet to enter inside the Kandyan kingdom, the security guards of the gravet had to know the details of that person. Any Kandyan person who was about to meet a stranger inside the Kandyan kingdom, must provide the details of that stranger before the stranger was about to enter the Kingdom through the gravet to the gravet security guards. When such a process was not happened, the stranger was allowed to send a message to the person who lived in the Kandyan kingdom. Or the security guards at the gravet could confirm the identity of the stranger and grant the permission to pass the gravet to enter the Kandyan kingdom. On the 25th day of September 1810, there were two Appuhamis with three letters from the Maha Disawe of Colombo. They wanted to walk across the Balana gravet to convey a message to the Thun Korale Disawa. However, those two people were not allowed to pass through the Gravet as the security guards were not informed of these two messengers. The messengers had to wait at the gravet until the security guards confirm the truth. The guards of the gravet sent a message to the Thun Korale Disawa regarding the incident. As a response, a man of Yatanwala Vidane and Galapata Archchi arrived in the gravet next morning. They met the two Appuhamis and confirmed that those two people were carrying a message to Thun Korale Disawa. However, the Appuhamis had to wait at the gravet and the man of Yatanwala Vidane and Galapata Archchi sent a message to Thun Korale Disawa confirming the truth. Thus, two people who belonged to Atapattu army arrived in the gravet and they took two Appuhamis at night with flambeaux lights to Thun Korale Disawa. This journey was a long walk. In the midnight, two Appuhamis had to cross the Ruwanwella River and spend the night at a house in Yatnwala. Then, the next day they walked along with Yatanwala Disawe and two Dutch soldiers to meet Thun Korale Disawa. Still, they could not meet Thun Korale Disawa. Ahiyagoda Nilame once again inquired the messengers and uncovered that they had a message to Thun Korale Disawa. After three days, a Korale and a Gamladde had visited these messengers and took them to the Thun Korale Disawa at Pannalapitiya around 7O clock at night. [6] This story tells us the complicated, serious and well organised security process of the gravets, which were used to protect the officers of the Kandyan kingdom as well as the Kingdom.

As like as the Colombo fort there were a stone cavern in the gravets [6]. This cavern was occupied with guard officers. It can be identified that there were two Binge Maduwe officers (cavern officers) and two Indian soldiers to protect the Kandy gravet [6]. Gravets were being used until 1815 in Ceylon. However, even after that, gravets were established at the district landmarks with a bone door. All those gravets were used by Ceylonese as security posts against enemies.

CONCLUSION

Since ancient kingdoms of Sri Lanka, such as Anuradapura kingdom Ceylonese paid their attention on building forts. Foreign invasions were one of the major reasons that affected such constructions. Therefore, based on historical evidences it is pertinent to state that the technology and usage of Ceylon fort constructions were at a developed stage even before the European invasions in Sri Lanka. However, during the period of British invasions Ceylonese built less forts compared to previous ruling eras in Sri Lanka as Ceylonese used Guerilla technique as their major battle strategy. Instead, the Ceylonese used gravets as one of their major barric points. According to historical evidences, security process that happened in the gravets can be identified as a strict and an advanced security system.

REFERENCES