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政府帳目委員會秘書
朱漢儒先生

朱先生：

政府帳目委員會
研究《審計署署長第七十二號報告書》第 1 章
公眾泊車位的規劃、提供和管理

你在 2019 年 10 月 11 日來信，要求運輸署提供進一步資料以便政府帳目委員會審議《審計署署長第七十二號報告書》第 1 章。

現附上所需資料(中文及英文)，以供參考。

運輸署署長

(劉漢偉



代行)

副本送：

運輸及房屋局 [經辦人：首席助理秘書長(運輸)2](傳真 3904 1774)

2019年11月4日

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政府帳目委員會審議
《審計署署長第 72 號報告書》 - 第 1 章
公眾泊車位的規劃、提供和管理

政府帳目委員會秘書 2019 年 10 月 11 日的查詢

請政府提供以下資料：

根據《審計署報告書》第 5.20 至 5.22 段所述，審計署留意到，並沒有記錄顯示運輸署在 2002 年發表《第二次泊車位需求研究最終報告》(《2002 年研究報告》)後曾就智能泊車系統進行相關先導研究，直至 2018 年，請告知：

- (a) 在 2002 年至 2018 年期間，有否就智能泊車系統進行研究。如有，詳情(包括研究結果)為何。如否，未就此跟進《2002 年研究報告》的原因為何；以及
- (b) 有關先導研究的進展為何。

答覆

- (a) 就智能泊車系統(又稱「機械泊車系統」)，政府自 2001 年起(在第二次泊車位需求研究(下稱「第二次研究」)之前)，除了法律規定之外¹，亦制訂了相關指引²(副本見附件 1)以便利此類系統的規劃。使用智能泊車系統旨在增加泊車位供應，而第二次研究則建議以此作為長遠解決泊車問題的可行措施。事實上，第二次研究發現，在 2000 年日間和夜間分別有 97,000 個及 82,000 個剩餘泊車位，並預計在 2006 年及 2011 年仍然會出現泊車位剩餘的情況。有見及此，我們其後檢討了《香港規劃標準與準則》內有關泊車設施的標準，並分別在 2009 年及 2014 年公布就資助房屋發展及私人住宅發展作出的有關修訂。兩次檢討均建議減少發展項目所需提供的泊車位數目，以反映當時的需求。鑑於當時及預期出現的泊車位供應有剩餘情況³，當時未有迫切需要推動更廣泛使用智能泊車系統。運輸署一直監察泊車供求情況，並就短期租約停車場及運輸署轄下公眾停車場的使用情況進行定期調查以監察泊車位的需求情況。有關調查顯示，運輸署轄下公眾停車場的平均使用率在 2014 年前維持在相對低的水平(50% 以下)，其後逐漸增至逾 70% (附件 2)。

¹ 機械泊車系統的設計、建造及保養受香港法例第 327 章《升降機及自動梯(安全)條例》規管，該條例已廢除並由現行的香港法例第 618 章取代。

² 即運輸署的《運輸策劃及設計手冊》及地政總署編號 2/2000 作業備考《泊車位的規定—機械泊車系統》。

³ 在 2000 年代及 2010 年代初期，泊車位與私家車比例維持在相對高的水平(例如在 2012 年前，該比例維持在約 1.3 或以上)。

為探究導致整體道路交通擠塞的各種因素，並制訂短、中、長期措施紓緩道路交通擠塞情況，政府在 2014 年邀請交通諮詢委員會(下稱「交諮會」)進行《香港道路交通擠塞研究報告》。交諮會提出的各項建議當中，包括檢討泊車政策以就泊車位的供應量定出合適水平。其後政府在 2017 年完成檢討泊車政策，建議在整體發展容許的情況下提供適量的泊車位，但不希望誘使慣常使用公共交通工具的市民轉用私家車，以免加劇道路交通擠塞情況。政府已制定各項措施以增加泊車位的供應，而智能泊車系統被確認為值得進一步研究的可行措施。在 2018 年，政府按照「一地多用」原則繼續推展各項措施，在合適的政府項目中增加公眾泊車位的供應。因此，運輸署認為應更集中探討最新的智能泊車系統技術，以及通過推展 6 個先導項目以確定其在香港的適用性，遂在 2018 年年初展開智能泊車系統的先導研究。

- (b) 運輸署現正進行有關智能泊車系統的顧問研究，研究在數個選址採用智能泊車系統以確立在香港應用智能泊車系統的可行性及適用性。相關顧問研究預期在 2020 年年初完成。同時，運輸署現正進行合共 6 個先導項目，以期在興建、營運和管理不同種類的智能泊車系統以及相關財務安排等方面吸取及積累有關經驗，藉此於日後在政府和私人公眾停車場推廣應用。運輸署因應泊車需求、地理環境及規劃上的限制、對區內的交通影響的準則，到目前為止已物色 4 個先導項目的選址。其中，運輸署正積極考慮在荃灣區短期租約用地、深水埗欽州街及通州街交界休憩用地、上環中港道的政府大樓及柴灣常茂街擬建的政府大樓的選址推展智能泊車系統項目。就荃灣區短期租約用地，我們已於本年 5 月獲得荃灣區議會的支持，運輸署正與其他相關部門安排有關執行細節，預期可於 2020 年初進行有關招標工作。至於深水埗的先導項目，我們已於本年 4 月獲得深水埗區議會的支持，並正評估其技術可行性。至於上環及柴灣的擬建政府大樓，我們會適時諮詢相關區議會。至於其餘兩個選址，我們在與相關部門積極探討初步技術可行性後，會適時公布擬議選址及諮詢有關區議會。

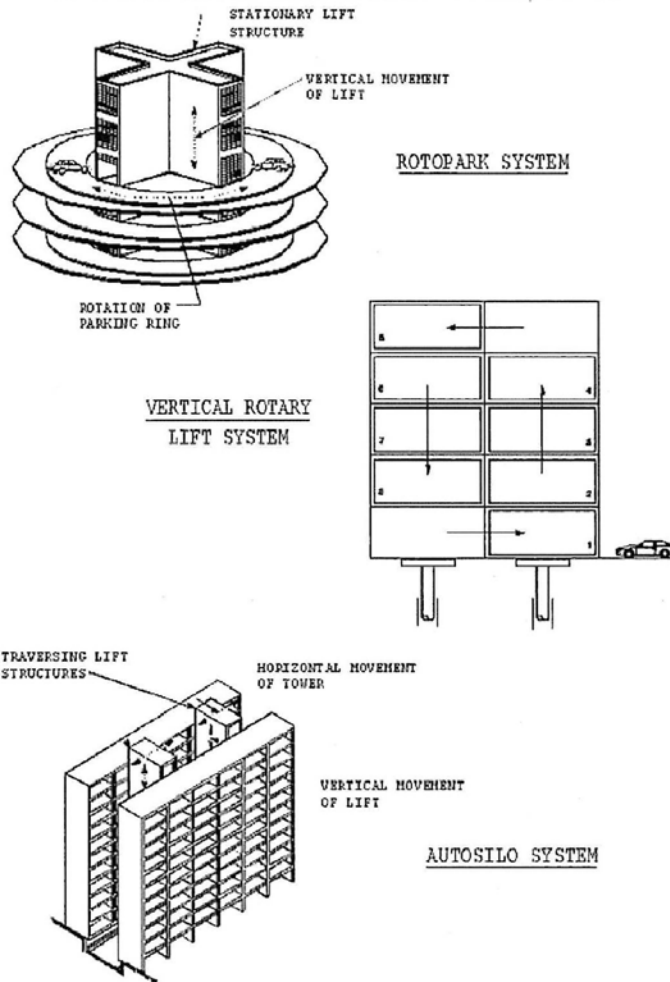
7.4.5 Mechanical Car Parks

- 7.4.5.1 A mechanical car park is a multi-storey car park in which one or more forms of mechanical devices are employed to deliver the car between the entrance/exit of the car park and the parking stall.
- 7.4.5.2 Mechanical means may be used to move cars in a vertical direction, in a horizontal direction, or a combination of the two. Different proprietary systems are available some of which are illustrated in Diagram 7.4.5.1.
- 7.4.5.3 As the simplest form of mechanical device, a car lift takes the place of ramp systems and serves vertical transportation of cars. The number of car lifts to be provided depends on the rate of arrival/departure of cars during the peak period, the number of floors in the car park, and the running speed of the lift. Since cars entering the car park could form a queue at the lift, it is important to estimate the length of the queue and to provide adequate reservoir space so that traffic flow on the main road would not be affected. Each case should be evaluated individually by queuing theory. As a rough guideline, at least 5 queuing spaces should be provided for each car lift. Consideration should also be given to providing back-up facilities at times of maintenance or equipment failure.
- 7.4.5.4 The horizontal movement of cars entering/exiting a car lift can also be achieved by employing mechanical devices. In a simple example, a car lift serves parking stalls at the back and front of the lift shaft on each floor. An arriving car is left in front of the lift with the brakes released. The attendant, by push-button control, causes a dolly to extend from the lift platform which moves the car onto the latter. On arrival at the selected floor, the dolly moves the car backward or forward into an empty stall.
- 7.4.5.5 Numerous other mechanical systems have been used worldwide, and devices are available, for example, in which movable plates are electrically operated along access aisles to locate cars in position. Great savings in space are achieved as the aisle widths and parking stall dimensions can be substantially reduced.
- 7.4.5.6 Mechanical parking, compared to conventional parking, has the obvious advantage of accommodating more car parking spaces per unit site area, which is achievable through the elimination of ramps and, in the case of more complex systems, the elimination of aisles.
- 7.4.5.7 A main disadvantage of mechanical parking is the need for regular maintenance of the mechanical and electrical plant. There are also obvious troubles during equipment failure.

* 委員會秘書附註：本文件只備英文本。

7.4.5.8 An additional disadvantage of mechanical parking is the rate of handling traffic. It is unable to accept surges of inbound or outbound traffic, thus requiring a large reservoir area at the entrance. It should be noted that the Building Authority may require any excessive area more than needed be counted for GFA. Mechanical car parks generally provide satisfactory service only when the parking demand is relatively uniform throughout the day without sharp peaks.

DIAGRAM 7.4.5.1: MECHANICAL CAR PARKS





Lands Administration Office
Lands Department

Practice Note

Issue No. 2/2000

Car Parking Requirement
Mechanical Parking System

Lease conditions usually contain clauses specifying the number of parking spaces to be provided in the development on the lot. The purpose is to ensure that an appropriate number of spaces is provided to serve the occupants of the building. The conventional approach to meet this requirement is to construct sufficient floors to accommodate all these spaces (the conventional system).

A mechanical car parking system may be an alternative way to achieve the same goal. When such a system is proposed as a means to achieve the compliance with the car parking requirement, I am prepared to grant approval under the lease to plans showing this subject to the following information being provided to my satisfaction:-

- (a) the type of mechanical parking system proposed;
- (b) the waiting area proposed together with an assessment report demonstrating that such area will be large enough to accommodate the anticipated vehicles waiting to enter the car park without causing a tail-back onto the public road; and
- (c) a layout plan, together with relevant elevation plans demonstrating that the system is capable of satisfying any stipulated parking requirement including space requirement for light vans which are categorized as private car.
- (d) the number of parking spaces provided does not exceed the minimum number stipulated in the lease.

always provided that not less than one-sixth of the total number of space provided shall be accommodated in the conventional system.

This practice note deals only with how car parking spaces may be provided. The car parking proposal should also satisfy other conditions contained in the car parking or other clauses of the Conditions of Grant governing the development.

(R.D. Pope)
Director of Lands
February 2000

Information required under the assessment report

The prime objective is to ensure no public road is affected by the car park. To achieve this objective no car is allowed to wait at the public street to enter the car park. A waiting area is therefore required to be provided inside the car park. In assessing the size of the waiting area required the following factors should be taken into account:-

- (a) The estimated hourly traffic volume at the entrance of the car park during peak hours. If the proposed mechanical parking system is inside a conventional car park, the hourly traffic volume that would use the parking system and the ordinary parking spaces should also be separately provided.
- (b) The longest time taken to park a car at the most remote location of the mechanical parking system. In case of tower parks, it means the time cycle between two cars leaving the waiting area assuming that both cars which arrive at the car park at the same time are using the same car lift or entering the same tower park. In case of stacking machines, it means the time taken to park the car at the upper space with the lower space being occupied.
- (c) The average waiting period during peak hours.

The assessment report should also provide a contingency plan to demonstrate the operation of the car park in case of mechanical failure during peak hours. The report should also provide a route inside the car park to divert traffic back onto the public road.

