

--	--

TO:	CHAIR AND MEMBERS PLANNING & ENVIRONMENT COMMITTEE
FROM:	JOHN M. FLEMING MANAGING DIRECTOR, PLANNING AND CITY PLANNER
SUBJECT:	APPLICATION BY: CITY OF LONDON CITY WIDE PUBLIC PARTICIPATION MEETING ON APRIL 23, 2013

RECOMMENDATION

That, on the recommendation of the Managing Director, Planning and City Planner, the following actions be taken with respect to the application of the City of London relating to a City Wide amendment to Zoning By-law No. Z.-1 pertaining to stacked parking:

- (a) the proposed by-law attached hereto as Appendix "A" **BE INTRODUCED** at the Municipal Council meeting on April 30, 2013 to amend Zoning By-law No. Z.-1, in conformity with the Official Plan to add to Section 2 Definitions, between "SPECIES, VULNERABLE OR SPECIES AT RISK" and "STACKING LANE" the definition "STACKED PARKING" means a parking space that is positioned above or below another parking space and is accessed by means of an elevating device;
- (b) to change Section 4.19 2) to add the words at the end of the sentence to include "but does not apply to stacked parking"
- (c) to change Section 4.19 6) b) to add the words at the end of the sentence to include "but does not apply to stacked parking"
- (d) to change Section 4.19 6) (c) by deleting the word "or" after "dwelling" and before "townhouse", and adding the words "or stacked parking" after "dwelling" and before "provided" and adding the words after "unit" "and when using stacked parking, to provide required parking, that the following shall be required:
 - i) stacked parking be located wholly within a structure
 - ii) a development agreement be entered into which includes:
 - i. implementation of all mitigation measures recommended in a Traffic Impact Analysis which includes a functional parking study to the satisfaction of the City;
 - ii. implementation of all mitigation measures recommended in a noise and vibration study to the satisfaction of the City; and
 - iii. a qualified operator, certified by TSSA in the operation of a stacked parking device be provided at all times.;
- (e) the proposed by-law attached hereto as Appendix "B" **BE INTRODUCED** at the Municipal Council meeting on April 30, 2013 to amend Zoning By-law No. Z.-1, in conformity with the Official Plan to change Section 4.19 6) (d) by adding the words, stacked parking between "barrier" and "or" and to add following "vehicle" the words "but does not include the use of any fee to remove these temporary barriers to any driveway or entrance required to access a required parking space excluding institutional uses and legally established commercial parking structures or lots."

--	--

PURPOSE AND EFFECT OF RECOMMENDED ACTION

The purpose and effect of the requested Zoning By-law amendment is to allow for the use of stacked (mechanical) parking spaces to meet parking standards required by the City of London Zoning By-law Z.-1.

RATIONALE

1. The proposed amendment will define stacked parking.
2. The proposed amendments will permit the use of stacked (mechanical) parking systems to provide for parking required by Zoning By-law Z.-1.
3. The proposed amendments will allow for obstructed access to parking required by Zoning By-law Z.-1 only in the case of stacked parking.
4. The proposed amendments will not allow for the obstruction through the use of fees of access to required parking on any property except in relation to Institutional uses and and legally established commercial parking structures or lots.
5. The proposed amendments would require that due diligence be exercised in evaluating the consequence of using stacked parking in studies to be provided for that purpose and that the operation of stacked parking comply with TSSA standards and requirements.

BACKGROUND

Date Application Accepted: March 6, 2013	Agent: N/A
The City of London has had some very recent inquires to allow the use of mechanical systems to provide required parking spaces. The purpose and effect of the requested Zoning By-law amendment is to allow for the use of stacked (mechanical) parking spaces to provide required parking on a lot.	

SIGNIFICANT DEPARTMENT/AGENCY COMMENTS

Transportation Planning & Design Division

Transportation Planning and Design has reviewed the Z-1 Zoning By-law amendment Z-8150 to allow for the use of mechanical parking spaces for the required parking on a lot.

We have concern that during peak periods of use – usually in the morning – that the mechanical devices will not be able to keep up to demand. This may require motorists to wait in queue before being served and the queue may spill onto the street. The reverse may be true in the afternoon peak as motorists leave the site. People leaving the site may have to wait for extended periods before getting their car back. Both conditions could lead some motorists to park on abutting or nearby streets.

Based on our concerns we request a provision be placed in the Zoning amendment requiring a Functional Parking Study be undertaken for each mechanical parking site. This study will review the impact on queuing and parking on nearby street.

--	--

PUBLIC LIAISON:	On March 7, 2013, Notice of Application was sent to all internal and external commenting agencies including the Urban League of London, LDI, LHBA and the London Area Planning Consultation. Notice of Application was also published in the <i>Public Notices and Bidding Opportunities</i> section of <i>The Londoner</i> on February 28, 2013.	No replies were received
<p>Nature of Liaison: The purpose and effect of the requested Zoning By-law amendment To allow for the use of mechanical parking spaces to provide required parking on a lot.</p> <p>Possible Amendment to “Section 4.19 – Parking” of the General Provisions of the Z.-1 Zoning By-law to add a new subsection for “Mechanical Parking” and to add wording under 4.19 to permit mechanical parking systems. This amendment may include definitions for mechanical parking systems, coverage, Zones and Parking Areas where mechanical parking systems may be permitted, dimensions, systems management and other special considerations, including possible consequential amendments to the site plan review by-law. Possible amendments to Z.-1 Zoning By-law “Section 2 – Definitions” and “Section 4 – General Provisions” may also be necessary.</p>		
Responses: None		

ANALYSIS

Nature of the Application

The nature of the intended amendments to the Zoning By-law Z.-1 is to define and permit the use of stacked (mechanical) parking to meet the required parking standards on a property. The City has not processed any development approval that has contemplated the use of stacked parking to date. The request to use stacked parking to meet the parking requirements of Zoning By-law Z.-1 is not a common request in London and, as discovered through the canvassing of other Ontario municipalities is not common in the Province. The City of London has had some very recent inquires to allow the use of mechanical systems to provide required parking spaces. The proposed amendments would allow for the use of stacked parking systems to provide required parking spaces provided that a development agreement is entered into requiring a trained operator to be available at all times and that all measures that have been identified in a required traffic impact analysis and in a noise and vibration study will be implemented to mitigate any potential impacts on the abutting land uses.

What is Stacked Parking?

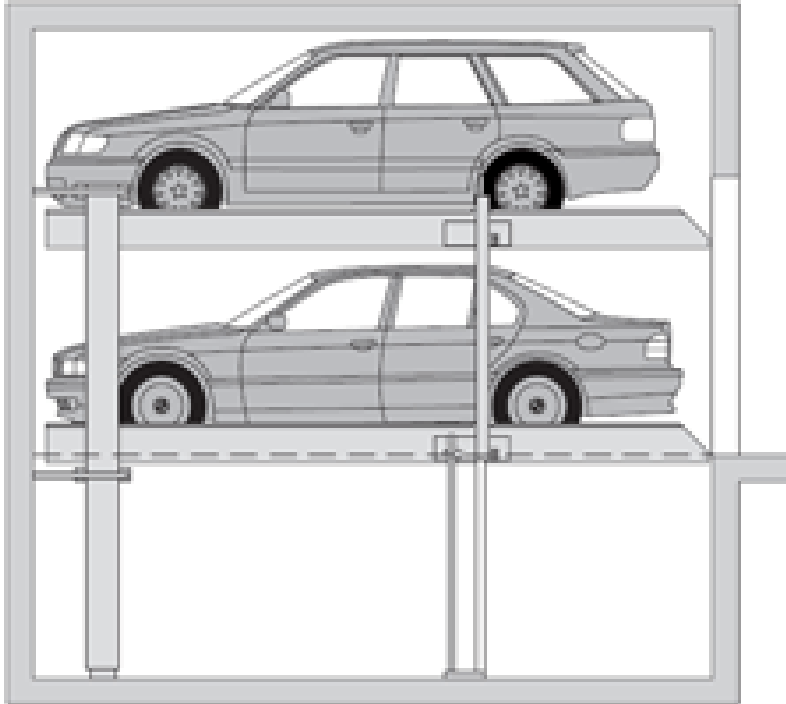
Stacked parking and the devices that are used to provide stack parking come in many forms and styles. There are numerous terms used for this form of parking: *mechanical*, *automated*, *automatic* and *stacked*. Referencing the illustrations below, these systems can be used to accommodate two or more vehicles typically used in a residential application or thousands of vehicles typically used in a terminal application such as an airport. Stacked parking systems can be best described as a mechanical system designed to minimize the area and/or volume required for parking cars.

Agenda Item # Page #

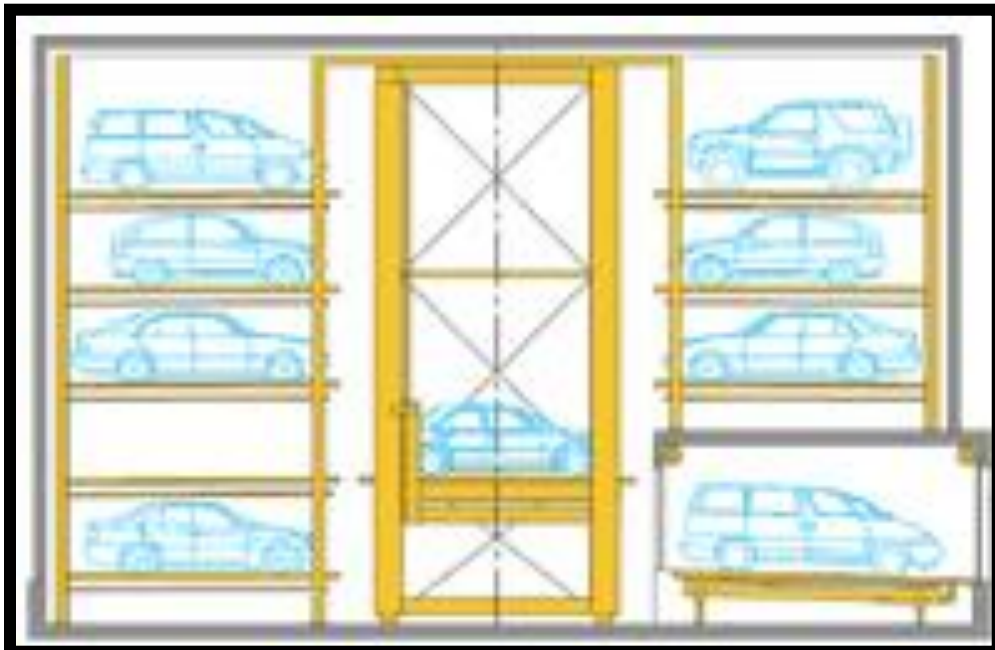
--	--

File: Z-8150
Planner: C. Smith

Simple two space unit



Simple elevator parking system



--	--

What do other Municipalities do?

Planning Staff surveyed 11 other municipalities in Ontario regarding how their municipalities regulate the use of stacked parking spaces (Vaughan, Markham, Oakville, Waterloo, Kitchener, Richmond Hill, Mississauga, Brampton, Windsor, Ottawa, and Toronto).

Most municipalities responded that the use of stacked parking has never been proposed to provide the required parking in the zoning regulations of their municipalities. The City of Ottawa indicated that it had processed one development proposal to use a stacked parking system to provide for required parking. The stacked parking was permitted through an application for minor variance. Ottawa has not undertaken any further study(s) required to create specific provisions for mechanical parking to be incorporate into their Zoning By-law.

Toronto is the only municipality which has regulations in its Zoning By-laws which govern the use of stacked parking spaces.

The City of Toronto Zoning By-Law No. 1156-2010 provides the following regarding the use of stacked parking spaces.

Chapter 800 Definitions:

Stacked Parking Space means a parking space that is positioned above or below another parking space and is accessed only by means of an elevating device.

Chapter 200 Parking Space Regulation

Requirement to Provide Parking Spaces: A parking space must be provided for each use on a lot in an amount that complies with the regulations in Chapter 200 - Parking Space Regulations.

Parking Space Access: Other than stacked parking spaces and tandem parking spaces, all areas used for required parking spaces must have driveway access to a street or lane that is direct and unobstructed. A gate, moveable barrier or similar security feature is not an obstruction.

Proposed Definition for the City of London

The proposed amendment to Section 2 Definition of Zoning By-law Z.-1 will add the definition of “Stacked Parking” which means a parking space that is positioned above or below another parking space and is accessed by means of an elevating device.

Through the canvassing of other municipalities in Ontario it is clear that the use of mechanical parking systems is not a common practice in Ontario at this time. The intent of the proposed definition to the City of London Zoning By-law will be consistent with the only other municipality (Toronto) that allows the use of stacked parking to meet required parking regulations.

Current By-law Regulations and Access to Required Parking Regulations

Section 4.19 of the City of London Zoning By-law Z.-1 regulates all parking requirements for all uses in the City of London. Section 4.19 regulates the number of required parking spaces, the location of required parking spaces on a lot, the size of required parking spaces, access to parking spaces and other such matters that dictate the required parking standards for any land use in the City of London. The use of stacked parking spaces does not conform to Section 4.19 6 c) and d) as listed below.

c) *Each required parking space shall be readily accessible at all times for the parking or removal of a vehicle and vehicular access to any such parking space shall not be impeded by any obstruction except as provided in Paragraph (d) of this Clause, except that this provision shall not apply to prevent the use as a parking space of any part of a driveway accessory to a single dwelling, semi-detached dwelling, duplex dwelling or townhouse dwelling provided that no parking space shall obstruct access to a parking area on any other lot or of any other unit.*

d) *Nothing in this By-Law shall prevent the obstruction of a driveway by a gate, a temporary barrier or similar obstruction used solely to restrict access to the said driveway and designed to be easily raised, swung aside or otherwise opened or removed when necessary to permit passage of a vehicle.*

--	--

The intent of paragraph c) above is to ensure that vehicular access is provided at all times to all required parking spaces on a lot for any use. The use of stacked parking spaces does not allow for the required parking space to be readily accessible at all times.

The intent of paragraph d) allows for the use of temporary barriers or similar obstruction provided that they are easily removed to provide readily accessible access to the required parking space. The use of stacked parking and the use of fees are not temporary obstruction that can be easily removed.

Intent of Proposed Amendments
Section 4.19 with proposed amendments

2) DIMENSIONS OF PARKING SPACES

A parking space required hereby shall have a minimum area of 2.7 metres by 5.5 metres (8.9 ft. by 18.0 ft.) but does not include stacked parking.

6) b) For uses subject to site plan control, the driveway widths shall be determined in the site plan approval process and agreement. For uses other than those described in Subsection 4.19(6)(a) and not subject to site plan approval, driveways and parking aisles shall have a minimum unobstructed width of 6.7 metres (21.9 feet) where two-way traffic is permitted and 3.0 metres (9.8 feet) where only one-way direction of traffic flow is permitted and is clearly indicated by signs, pavement markings or both but does not include stacked parking.

6) c) Each required parking space shall be readily accessible at all times for the parking or removal of a vehicle and vehicular access to any such parking space shall not be impeded by any obstruction except as provided in Paragraph (d) of this Clause, except that this provision shall not apply to prevent the use as a parking space of any part of a driveway accessory to a single dwelling, semi-detached dwelling, duplex dwelling, ~~or~~ townhouse dwelling, or stacked parking provided that no parking space shall obstruct access to a parking area on any other lot or of any other unit and for the use of stacked parking, to provide required parking, that the following shall be required:

- i) stacked parking be located wholly within a structure
- ii) a development agreement be entered into which includes
 - i. implementation of all mitigation measures recommended in a Traffic Impact Analysis which includes a functional parking study to the satisfaction of the City;
 - ii. implementation of all mitigation measures recommended in a noise and vibration study to the satisfaction of the City; and
 - iii. a qualified operator, certified by TSSA in the operation of a stacked parking device be provided at all times.

6) d) Nothing in this By-Law shall prevent the obstruction of a driveway by a gate, a temporary barrier, stacked parking or similar obstruction used solely to restrict access to the said driveway and designed to be easily raised, swung aside or otherwise opened or removed when necessary to permit passage of a vehicle “but does not include the use of any fee to remove these temporary barriers to any driveway or entrance required to access a required parking space excluding institutional uses and legally established commercial parking structures or lots”

Background Information

In addition to canvassing other municipalities in Ontario, research was conducted to determine best practices and existing legislation in North America. The internet has many site devoted to the advancement of the use of mechanical parking systems but there appears to be few planning or other legislation or regulations available.

MAG Robotic Systems- has published their Industrial Standards Guidelines- 2007-2008- Standard Guidelines for Automated Parking Facilities in the United States document. This document references numerous American Reference Codes including the American National

--	--

Standards Institute. The guideline does provide best practice information that can be considered for the purpose of amending Zoning By-law Z.-1 to allow for the use of stacked parking systems.

The Guide states:

Section 5.4 Traffic and Queuing

For the implementation of a Mechanical/Automated System with more than 30 cars capacity, a traffic study shall be required to give the system manufacturer the opportunity to address queuing issues for that particular installation. For queuing calculations, a 15 min period of peak traffic shall be compared to the capability of the system to handle vehicles during that peak period. The result will indicate the number of Terminals required and the length of vehicle queue resulting - if any- and required at each Terminal.

Section 5.7 Sound Emissions/ Vibrations

As machines are moving weights of 10 to 20 Kips, certain noise emissions are to be expected as long as the structure is the supporting element for the machinery and the building. The manufacturer knows the dBa value and needs to ensure that the surrounding walls cover any sound emission of more than 40 dBa emanating outside the building, measured at the property line.

Should the garage be part of a mixed-use complex, not only sound but also vibrations resulting from the machinery need to be considered for potential negative impact to the rest of the building. Separating the foundation and supporting members are the best means to keep the influence to a very minimum.

The City of Miami Beach- passed an ordinance in October 2008 to allow mechanical and robotic parking systems. In the ordinance specific regulations are required to be considered by the Planning Board prior to approval which specifically includes:

- *Whether the scale of the proposed structure is compatible with the existing urban character of the surrounding neighbourhood.*
- *Whether the proposed use of mechanical parking results in an improvement of design characteristics and compatibility with the surrounding neighbourhood.*
- *Whether the proposed use of mechanical parking does not result in an increase in density or intensity over what could be constructed with conventional parking.*
- *Whether parking lifts or mechanisms are located inside “within a fully enclosed buildings” and not visible from exterior view.*
- *In cases where mechanical parking lifts are used for valet parking; whether approval is conditioned upon the proper restrictive covenant being provided stipulating that a valet service or operator must be provided for such parking for so long as the use continues.*
- *Whether a traffic study has been provided that details the ingress, egress and circulation within the mechanical parking facility and the technical and staffing requirements necessary to ensure that the proposed mechanical parking system does not cause excessive stacking, waiting, or backups onto the public right-of-way.*
- *The noise or vibration from the operation of mechanical parking lifts, car elevators, or robotic parking systems shall not be plainly audible to or felt by any individual standing outside and apartment or hotel unit at any adjacent or nearby property. In addition, noise and vibration barriers shall be utilized to ensure that surrounding walls decrease sound and vibration emissions outside of the parking garage.*

Further, Louisville KY and Portland Oregon both have ordinances that allow the use of stacked parking but include specific regulations requiring agreement(s)/guarantee(s) with the Planning Authorities to ensure that an attendant is present during all operations of the stacked parking systems.

The Technical Safety Standards Association has a specific Elevating Devices Safety Regulation.

--	--

Part Division 1 — Individuals Who May Perform Regulated Work

3 (1) An individual must not perform regulated work in respect of elevating devices unless the individual

(a) is a licensed elevating device contractor,

(b) is employed by a licensed elevating device contractor to perform regulated work in respect of elevating devices,

(c) holds an appropriate certificate of qualification issued by a provincial safety manager, or

(d) is permitted to do so under this section.

Intent of the Proposed Amendment

The use of stacked parking systems to provide required parking is relatively new to North America. Proposals to use stacked parking in Ontario and specifically London are rare. The use of stacked parking systems are typically unique to the development as proposed and should be reviewed on the individual merits of the proposed development. It can be concluded that stacked parking systems are appropriate to provide parking as required by Zoning By-law Z.-1 provided that the following occur:

- That stacked parking must be located wholly within a structure. Requiring the use to be contained within a structure will assist in the mitigation of noise and vibration and will buffer any views from abutting land uses.
- A Traffic Impact Analysis which includes a functional parking study is required to the satisfaction of the City to:
 - detail how all parking as required by Zoning By-law Z.-1 is to be accommodated on the site which includes an analysis of the provision of surface parking and stacked parking and the percentage thereof;
 - the ingress, egress and circulation within the mechanical parking facility;
 - queuing studies to address the stacking of vehicles waiting to park or waiting to exit, specifically during peak hours, particularly impacts onto the abutting road allowance; and
 - an analysis of potential impacts of the proposed development on the parking conditions on neighbouring streets.
- A Noise and Vibration Study is required to the satisfaction of the City to ensure all mitigation measures as recommended will be implemented.
- The provisions of a qualified operator, certified by TSSA in the operation of a stacked parking device will be available at all times to operate the stacked parking system.
- That access to any required parking space cannot be obstructed by the use of a fee. Exception to the use of fees is for any lands that have a legally established commercial parking structures or lots. Commercial parking structures and lots are only permitted on lands that are zoned to permit that use and the use of fees is required to access these spaces.
- Also excluded from the obstruction of access to required parking through the use of fees are institutional uses, such as hospitals which traditionally require fees to cover parking expenditures related to their operational budgets.

--	--

File: Z-8150
Planner: C. Smith

CONCLUSION

The intent of Zoning By-law Z.-1 Section 4.19 is to ensure that all parking that is required by a use is provided on the same lands as the use without creating any parking impacts on the abutting land uses. The proposed amendment will allow for the use of stacked (mechanical) parking systems to provide parking as required by Zoning By-law Z.-1 on the same land as the use without creating impacts on abutting land uses. A development agreement will be entered into that implements all mitigation measures as recommended in the proposed required studies and that a trained operator is available at all times to operate the system.

PREPARED BY:	SUBMITTED BY:
CRAIG SMITH COMMUNITY PLANNING AND DESIGN	JIM YANCHULA, MCIP, RPP MANAGER, COMMUNITY PLANNING AND DESIGN
RECOMMENDED BY:	
JOHN M. FLEMING, MCIP, RPP MANAGING DIRECTOR, PLANNING AND CITY PLANNER	

CS/

--	--

File: Z-8150
Planner: C. Smith

**Bibliography of Information and Materials
Z-8150**

Request for Approval:

City of London Zoning By-law Amendment Application Form, completed by the City of London, April 3, 2013.

Reference Documents:

Ontario. Ministry of Municipal Affairs and Housing. *Planning Act, R.S.O. 1990, CHAPTER P.13*, as amended.

Ontario. Ministry of Municipal Affairs and Housing. *Provincial Policy Statement*, March 1, 2005.

City of London. *Official Plan*, June 19, 1989, as amended.

City of London. *Zoning By-law No. Z.-1*, May 21, 1991, as amended.

MAG Robotic Systems- Industrial Standards Guidelines- 2007-2008- Standard Guidelines for Automated Parking Facilities in the United States

City of Miami Beach FL Mechanical and Robotic Parking Systems Ordinance- October 7, 2008

City of Louisville KY Land Development Code- March 2006

City of Portland OR Title 33, Planning and Zoning Code- July 2011

--	--

File: Z-8150
Planner: C. Smith

Appendix "A"

Bill No. (number to be inserted by Clerk's Office)
13

By-law No. Z.-1-13_____

A by-law to amend Section 2 Definitions and Section 4.19, Parking Section, of By-law No. Z.-1.

WHEREAS the City of London has applied to amend Section 4.19, of the Z.-1 Zoning By-law, as set out below;

AND WHEREAS the City of London has applied to amend Section 2, Definitions, of the Z.-1 Zoning By-law, as set out below:

AND WHEREAS these amendments conform to the Official Plan;

THEREFORE the Municipal Council of The Corporation of the City of London enacts the following:

1. Section 4.19, Parking, of the Zoning By-law, Z.-1, is hereby amended by amending the following paragraphs:

2) by adding the words at the end of the sentence to include "does not apply to stacked parking"

6) b) by adding the words at the end of the sentence to include "does not apply to stacked parking"

6) c) by deleting the word "or" after "dwelling" and before "townhouse", and adding the words "or stacked parking" after "dwelling" and before "provided" and adding the words after "unit" "and for the use of stacked parking, to provide required parking, that the following shall be required:

- i) stacked parking be located wholly within a structure
- ii) a development agreement be entered into which includes:
 - i. implementation of all mitigation measures recommended in a Traffic Impact Analysis which includes a functional parking study to the satisfaction of the City;
 - ii. implementation of all mitigation measures recommended in a noise and vibration study to the satisfaction of the City; and
 - iii. a qualified operator, certified by TSSA, in the operation of a stacked parking device be provided at all times.";

2. Section 2, Definitions, of the Zoning By-law, Z.-1, is hereby amended by adding the following definition after the definition for "SPECIES, VULNERABLE OR SPECIES AT RISK" and before the definition for "STACKING LANE ":

) "STACKED PARKING" means a parking space that is positioned above or below another parking space and is accessed by means of an elevating device.

PASSED in Open Council on April 30, 2013.

Agenda Item # Page #

--	--

File: Z-8150
Planner: C. Smith

Joe Fontana
Mayor

Catharine Saunders
City Clerk

First Reading - April 30, 2013
Second Reading - April 30, 2013
Third Reading - April 30, 2013

--	--

File: Z-8150
Planner: C. Smith

Appendix "B"

Bill No. (number to be inserted by Clerk's Office)
13

By-law No. Z.-1-13_____

A by-law to amend Section 4.19, Parking
Section, of By-law No. Z.-1.

WHEREAS the City of London has applied to amend Section 4.19, of the Z.-1 Zoning By-law, as set out below;

AND WHEREAS the City of London has applied to amend Section 2, Definitions, of the Z.-1 Zoning By-law, as set out below:

AND WHEREAS these amendments conform to the Official Plan;

THEREFORE the Municipal Council of The Corporation of the City of London enacts the following:

1. Section 4.19, Parking, of the Zoning By-law, Z.-1, is hereby amended by amending the following paragraphs:

6) d) by adding the words "stacked parking" between "barrier" and "or" and to add following "vehicle" the words "but does not include the use of any fee to remove these temporary barriers to any driveway or entrance required to access a required parking space excluding institutional uses and legally established commercial parking structures or lots".

PASSED in Open Council on April 30, 2013.

Joe Fontana
Mayor

Catharine Saunders
City Clerk

First Reading - April 30, 2013
Second Reading - April 30, 2013
Third Reading - April 30, 2013