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運輸及房屋局
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Transport and
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Government Secretariat

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Secretary General
Legislative Council Secretariat
Legislative Council Complex
1 Legislative Council Road
Central, Hong Kong
(Attn.: Ms Sophie LAU)
(Fax no.: 2978 7569)

31 October 2014
By Email and Fax

Dear Ms Lau,

**Legislative Council Panel on Transport
Motion on “Public Lighting in Hong Kong” Passed
at the Meeting on 25 March 2014**

Thank you for your letter of 26 March 2014 to the Secretary for Transport and Housing. As regards the motion on “Public lighting in Hong Kong” passed at the captioned meeting, our response is as follows.

The Government supports in principle the use of renewable energy in public lighting in Hong Kong. We have been taking into account factors such as technical feasibility, cost-effectiveness and results of relevant trial schemes with a view to setting an implementation direction.

The Highways Department (HyD) implemented a trial scheme on the use of solar energy in public lighting in 2006. Seventeen solar road lights each with a 16W-20W fluorescent lamp, a photovoltaic (PV) panel and a battery were installed in Tuen Mun, Tsuen Wan and Yuen Long between 2006 and 2009. The findings of the trial are as follows –

1. as tall buildings in urban areas and trees in the countryside block the sunlight from reaching PV panels, this poses certain limitation to the choice of locations for solar road lights;

2. the duration of daytime in Hong Kong is limited and weather conditions are adverse from time to time. Moreover, days are shorter whilst nights are longer in winter in Hong Kong, hence an ever smaller amount of sunlight that can be collected. These have resulted in unstable and inadequate illumination of solar road lights in the night time throughout the year. If adequate sunlight is to be collected for full light output, the required size of a PV panel will be beyond the extent that a standard lamp post can sustain;
3. solar road lights require batteries to store the solar energy generated in the daytime for use in the night time. However, batteries are costly to maintain and will bring about environmental problems upon manufacturing and disposal; and
4. although the use of solar power can achieve lower electricity cost, the savings cannot offset the high capital as well as maintenance costs of solar road lights.

In view of the above-mentioned problems associated with small-sized and standalone solar road lights, the HyD has been implementing another trial scheme. PV panels with an area of about 200 m² are installed at the top of the noise barriers along the section of Fanling Highway between So Kwun Po Road and MTR Fanling Station to collect sunlight (see the location plan at **Appendix 1**). The solar energy so generated will be stored in the batteries housed inside a roadside public lighting control cubicle and used to power 16 road lights along a section of a cycle track in the vicinity. LED lights are adopted to achieve electricity savings and prolong the illumination duration. Moreover, the road lights are connected to backup power in case they cannot function properly on account of inadequate sunlight available. The trial scheme will commence in end 2014 for planned completion in 2016. The HyD will monitor and evaluate the effectiveness of the trial scheme with a view to gaining more operational experience about the use of renewable energy in public lighting.

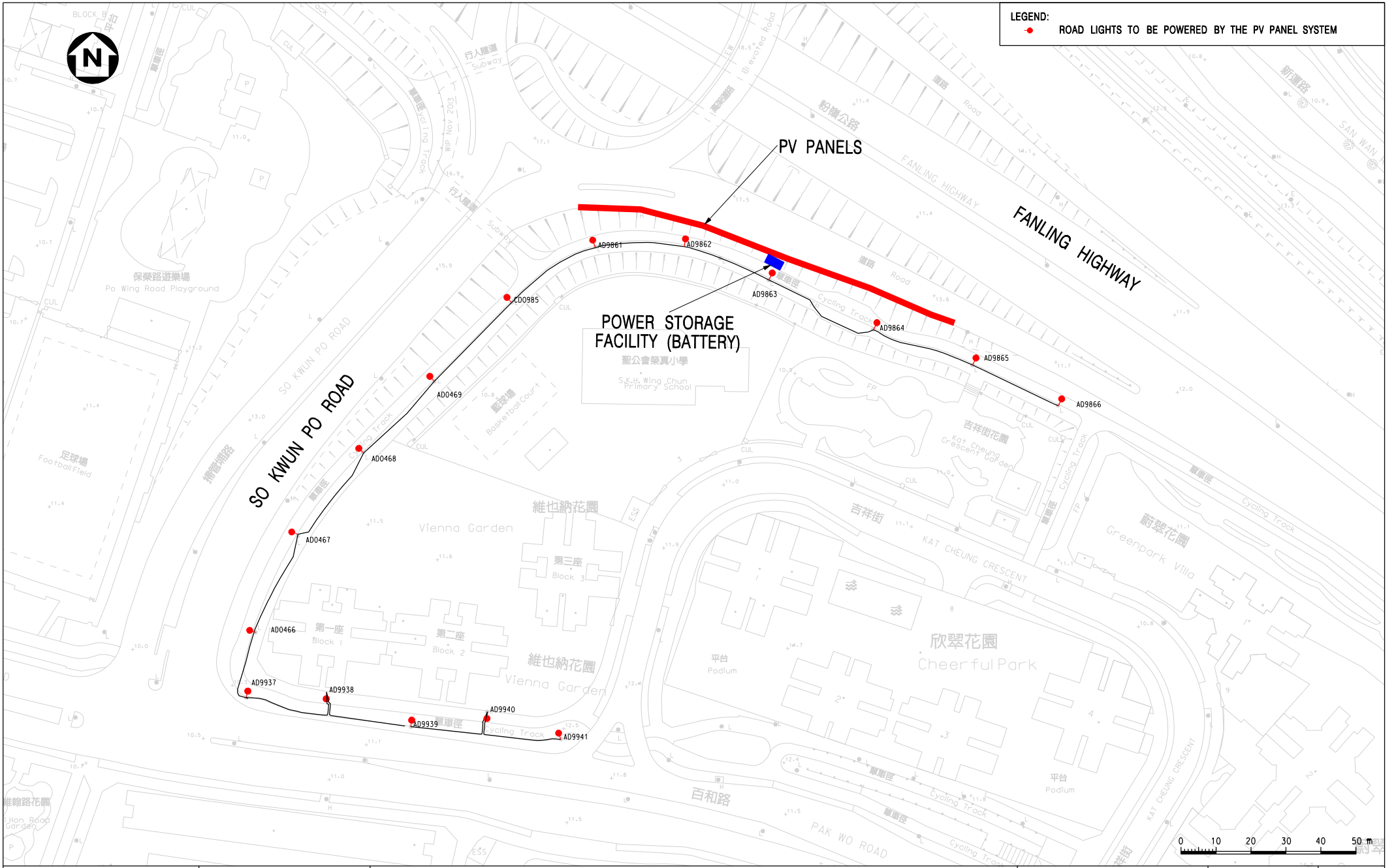
Yours sincerely,

(Nicky NG)
for Secretary for Transport and Housing

c.c.

Director of Highways (Attn.: Mr FOK Chi Chiu)


(Fax. no.: 2310 8489)



LEGEND:
 ● ROAD LIGHTS TO BE POWERED BY THE PV PANEL SYSTEM

YOUR REF.:
 OUR REF.: (35) in HyD LTG/15-3/6/6(3)
 SURVEY MAP NO.: 3SW06D, 07C, 11B & 12A (PART PRINT)
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DRAWING TITLE:
**LOCATION PLAN OF PV PANEL SYSTEM
 ALONG FANLING HIGHWAY**

TITLE: PUBLIC LIGHTING INFORMATION SCALE N.T.S. Sheet 1 of 1
 LIGHTING INFORMATION UPDATED AT APR 14

HIGHWAYS DEPARTMENT 路路
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