## For discussion

on 24 February 2015

# LEGISLATIVE COUNCIL PANEL ON DEVELOPMENT 

666CL - Formation, roads and drains in Area 54, Tuen Mun - phase 1<br>681CL - Formation, roads and drains in Area 54, Tuen Mun - phase 2

## PURPOSE

This paper seeks Members’ views on our proposals to -
(a) upgrade part of 666CL, entitled "Formation, roads and drains in Area 54, Tuen Mun - phase 1 stage 1 works" to Category A at an estimated cost of $\$ 493.4$ million; and
(b) upgrade part of 681CL, entitled "Formation, roads and drains in Area 54, Tuen Mun - phase 2 stages 3 and 4A works" to Category A at an estimated cost of $\$ 553.1$ million,
both in money-of-the-day (MOD) prices to carry out site formation works and associated infrastructure works in Area 54, Tuen Mun.

## PROJECT SCOPE

Phase 1 stage 1 works in Area 54, Tuen Mun
2. The part of $\mathbf{6 6 6 C L}$ which we propose to upgrade to Category A comprises -
(a) formation of about 2.9 hectares (ha) of land for a public housing development;
(b) construction of the following road works -
(i) a new local distributor road, Road L54D, comprising a section of dual two-lane carriageway and a section of
single three-lane carriageway, with a total length of about 450 metres (m); and
(ii) widening of a section of Hing Fu Street.
(c) construction of cantilevered noise barriers of about 250 m long and about 5 m to 5.5 m high;
(d) construction of associated footpaths, cycle tracks, slopes, retaining walls, drainage, sewerage, landscaping works and other ancillary works; and
(e) implementation of environmental mitigation measures and an Environmental Monitoring and Audit (EM\&A) programme for the works mentioned in 2(a) to 2(d) above.

## Phase 2 stages 3 and 4A works in Area 54, Tuen Mun

3. The part of $\mathbf{6 8 1 C L}$ which we propose to upgrade to Category A comprises -
(a) formation of about 4.5 ha of land in total for a public housing development and a government, institution and community (G/IC) site;
(b) construction of the following road works -
(i) a new local distributor road, Road L54A, comprising a section of dual two-lane carriageway and a section of single four-lane carriageway, with a total length of about 700 m;
(ii) widening of a section of Tsz Tin Road;
(iii) re-provisioning of a section of Tong Hang Road for connection to Road L54A; and
(iv) a public transport interchange.
(c) construction of the following -
(i) foundation of noise barriers ${ }^{1}$ of about 155 m long; and
(ii) vertical noise barriers of about 640 m long and about 1 m to 5 m high;
(d) construction of associated footpaths, cycle tracks, slopes, retaining walls, drainage, sewerage, landscaping works and other ancillary works; and
(e) implementation of environmental mitigation measures and an EM\&A programme for the works mentioned in 3(a) to 3(d) above.


#### Abstract

4. Layout plans showing the proposed works are at Enclosures 1 to 5.


5. Subject to funding approval of the Finance Committee, we plan to commence the construction in 2015 for completion in 2019.
6. After upgrading part of 666CL and 681CL as mentioned in paragraph 2 and 3 above, we will retain the remainders of 666CL and 681CL in Category B, which comprise the remaining site formation for public housing and school development sites, construction of roads, drainage, sewerage, slope, landscaping works and other ancillary works, and provision of noise mitigation measures in Area 54 of Tuen Mun. Funding for the remainders of 666CL and 681CL will be sought to dovetail with the implementation programme of the overall development in Area 54, Tuen Mun.

## JUSTIFICATION

7. Area 54 of Tuen Mun is situated at the north western part of Tuen Mun between Po Tin Estate and Siu Hong Court, which has been identified mainly for public housing development. In 1999, the then Territory Development Department (TDD) completed a "Planning and development study of potential housing site in Area 54, Tuen Mun" (the Study). The Study recommended a development proposal in Area 54 of Tuen Mun, which

[^0]included public housing, schools, G/IC facilities and the associated infrastructure works.
8.

In 2005 and 2012, the Civil Engineering and Development Department (CEDD) conducted two reviews to update the recommendations of the Study taking into account changes in the development layout and parameters in Area 54 of Tuen Mun since the completion of the Study. The reviews confirmed the feasibility of the latest development proposal in Area 54, Tuen Mun.
9. Two public housing sites, Site $1 \& 1 \mathrm{~A}$ and Site $3 / 4$ (East) under 666CL and 681CL respectively, are proposed to be formed in Area 54 of Tuen Mun. The Housing Department aims at providing at these sites about 4000 public housing flats for population intake in 2020/21 and about 3000 public housing flats for population intake in 2021/22 respectively. A community hall/sports centre site will also be formed at Site 4A (West) under 681CL. To cater for the anticipated traffic increase arising from the development proposal, we need to construct Roads L54A and L54D as well as to widen the existing Hing Fu Street and Tsz Tin Road.

## FINANCIAL IMPLICATIONS

10. We estimate the capital cost of the proposed works under 666CL and $\mathbf{6 8 1 C L}$ to be $\$ 493.4$ million and $\$ 553.1$ million respectively in MOD prices, broken down as follows -

| (a) Site formation works | 114.9 | 72.9 |
| :--- | :--- | :--- |

$\begin{array}{lll}\text { (b) } & \text { Road works } & 108.2 \\ 89.8\end{array}$
(c) Noise barriers $52.0 \quad 58.6$
(d) Ancillary works
77.1
178.5
(i) Drainage and sewerage 56.5 works
(ii) Landscaping and 19.9 21.1 irrigation works

## \$ million

(iii) Electrical and
mechanical works for
roads

681CL
(Part)
1.1

| 666CL | 681CL <br> (Part) | 1.1 |
| ---: | ---: | ---: |

$2.2 \quad 2.4$
11.7
11.7

| (i) Advisory services for | 10.7 | 10.7 |
| :--- | :--- | :--- |
| New Engineering |  |  |
| Contract administration |  |  |

(ii) EM\&A programme
1.0
1.0
(g) Contingencies
31.1
32.5

Sub-total $\quad \overline{397.2} \quad \overline{446.4}$
(h) Provision for price
96.2
106.7
553.1
(in September 2014 prices) adjustment

Total | 493.4 | 553.1 |
| :--- | :--- | :--- |
|  |  |

## PUBLIC CONSULTATION

11. We consulted the Tuen Mun Rural Committee and the Environment, Hygiene and District Development Committee (EHDDC) of the Tuen Mun District Council (TMDC) on 30 June 2012 and 23 November 2012 respectively on the proposed development in Area 54 of Tuen Mun. Whilst both committees had no objection in-principle to the proposed housing development, some members expressed their concerns on the sufficiency of the ancillary facilities for the housing development including the designed road capacities, anticipated traffic flows and junction arrangements or improvements. We have addressed their concerns. We have also reported to the Working Group on the Development and Complementary Facilities in Area 54 formed under the EHDDC of TMDC for monitoring progress of the development proposal on a regular basis.
12. We also consulted the Advisory Committee on the Appearance of Bridges and Associated Structures ${ }^{2}$ (ACABAS) on the aesthetic design of the noise barriers and retaining wall of the development proposal on 19 November 2013. The Committee accepted the proposed aesthetic design.
13. The road works were divided into two parts for gazetting under the Roads (Works, Use and Compensation) Ordinance (Cap. 370). The first part ${ }^{3}$ was gazetted on 28 March 2013 and 5 April 2013 while the second part ${ }^{4}$ was gazetted on 26 April 2013 and 3 May 2013. For the first part, no objection was received and the road scheme was authorized by the Secretary for Transport and Housing on 18 September 2013. For the second part, we received eleven objections during the objection-lodging period. Out of the eleven objections, four of them were unconditionally withdrawn and one of them was conditionally withdrawn. Notwithstanding our explanations, the remaining six objectors maintained their objections. On 11 March 2014, the Chief Executive-in-Council authorized the proposed works under Cap. 370 without modification, which was gazetted on 31 March 2014.
14. The sewerage works were divided into two parts for gazetting under the Water Pollution Control (Sewerage) Regulation (Cap. 358AL). The first part ${ }^{5}$ was gazetted on 28 March 2013 and 5 April 2013 while the second part ${ }^{6}$ was gazetted on 26 April 2013 and 3 May 2013. For the first part, no objection was received and the sewerage scheme was authorized by the Director of Environmental Protection (DEP) on 27 September 2013. For the second part, one objection was received during the objection-lodging period. Notwithstanding our explanations, the objector maintained his objection. On 11 March 2014, the Chief Executive-in-Council authorized the sewerage scheme under Cap. 358AL without modification, which was gazetted on 11 April 2014.

2 The ACABAS, which comprises representatives of the Hong Kong Institute of Architects, the Hong Kong Institution of Engineers, the Hong Kong Institute of Planners, an academic institution, Architectural Services Department, Highways Department, Housing Department and CEDD, is responsible for vetting the design of bridges and other structures associated with the highway system, including noise barriers and enclosures, from the aesthetic and visual impact points of view.
3 The road scheme in this gazette relates to the construction of part of Road L54D associated with Site $1 \& 1 \mathrm{~A}$ under 666CL .
4 The road scheme in this gazette relates to the construction of part of Road L54D associated with Site $3 / 4$ (East) and Site 4A (West) and the widening of Hing Fu Street under 666CL as well as the construction of Road L54A, widening of Tsz Tin Road and re-provisioning of Tong Hang Road under 681CL.
5 The sewerage scheme in this gazette relates to the sewerage works at part of Road L54D associated with Site 1\&1A under 666CL.
$6 \quad$ The sewerage scheme in this gazette relates to (i) the sewerage works at part of Road L54D associated with Site $3 / 4$ (East) and Site 4A (West) and Hing Fu Street to be widened under 666CL; and (ii) the sewerage works at Road L54A, Tsz Tin Road to be widened and Tong Hang Road to be re-provisioned under 681CL.

## ENVIRONMENTAL IMPLICATIONS

15. The proposed works fall within the study area of the Study as mentioned in paragraph 7 above. The Study is a Designated Project under Schedule 3 of the Environmental Impact Assessment (EIA) Ordinance.
16. The then TDD completed the EIA report for the development in Area 54 of Tuen Mun, which covers the proposed works. The EIA report was approved by the DEP on 3 September 1999. The report concluded that there would not be any significant residual environmental impacts upon implementation of the recommended mitigation measures. The EIA recommendations were further reviewed and agreed by the DEP in September 2013 taking into account information on the latest development proposal. The EIA report, together with its review findings, concluded that with the implementation of the recommended mitigation measures and EM\&A programme, the environmental impacts arising from the proposed works will be mitigated to ensure compliance with the statutory requirements.
17. We will incorporate the recommended mitigation measures into the works contract to control the environmental impact arising from the construction of the works to within established standard and guidelines. These measures include frequent watering of the site, provision of wheel-washing facilities, covering of materials on trucks, use of silenced construction plant, and provision of mobile noise barriers. We will also implement the EM\&A programme recommended in the EIA report and the EIA review. We have included in paragraph 10(e) above a sum of $\$ 2.2$ million and $\$ 2.4$ million (in September 2014 prices) in the project estimates of the proposed works under 666 CL and 681 CL respectively for the implementation of environmental mitigation measures and the EM\&A programme.
18. 

At the planning and design stages, we have designed the levels and layout of the proposed site formation works and road works to minimize generation of construction waste where possible. In addition, we will require the contractor to reuse inert construction waste (e.g. excavated soil) on site or in other suitable construction sites as far as possible, in order to avoid the disposal of inert construction waste to public fill reception facilities ${ }^{7}$. We will encourage the contractor to maximize the use of recycled or recyclable inert

[^1]construction waste, as well as the use of non-timber formwork to further reduce the generation of construction waste.
19. At the construction stage, we will require the contractor to submit for approval a plan setting out the waste management measures, which will include appropriate mitigation means to avoid, reduce, reuse and recycle inert construction waste. We will ensure that the day-to-day operations on site comply with the approved plan. We will require the contractor to separate inert portion from non-inert construction waste on site for disposal at appropriate facilities. We will control the disposal of non-inert construction waste at landfills through a trip-ticket system.
20. We estimate that the proposed works will generate in total about 322278 tonnes of construction waste which will be disposed of as shown below -

|  | 666CL <br> (Part) <br> Tonnes | 681CL <br> (Part) <br> Tonnes | Total |
| :--- | :---: | :---: | :---: |
|  | 158440 | 131611 | Tonnes |
|  |  |  | 90051 <br> $(90 \%)$ |
| Inert construction waste <br> to be reused on site | 17604 | 14623 | 32227 <br> $(10 \%)$ |
| Non-inert construction <br> waste to be disposed of at <br> landfills | 176044 | 146234 | 322278 |
|  |  |  | $(100 \%)$ |

The total cost for accommodating construction waste at landfill sites is estimated to be $\$ 4,028,375$ for the proposed works (based on a unit charge rate of $\$ 125$ per tonne at landfills as stipulated in the Waste Disposal (Charges for Disposal of Construction Waste) Regulation).

## HERITAGE IMPLICATIONS

21. The projects will not affect all declared monuments, proposed monuments, graded historic sites/buildings, and government historic sites identified by the Antiquities and Monuments Office (AMO). Part of the proposed works are within the Siu Hang Tsuen and Kei Lun Wai Sites of Archaeological Interest (see Enclosures 2 and 4). We have conducted
archaeological investigation at the proposed works sites and no significant archaeological remains have been discovered. As a precautionary measure, the AMO should be informed immediately in case of discovery of antiquities or supposed antiquities during the course of construction works. Agreement from the AMO would be sought on the follow-up actions if required.

## LAND ACQUISITION

22. We have reviewed the design of the proposed site formation and road works to minimize the extent of land acquisition. All necessary land resumption for the proposed works was completed in July 2014 and clearance is ongoing. We have resumed about 92011 square metres $\left(\mathrm{m}^{2}\right)$ of private land (about $30203 \mathrm{~m}^{2}$ for 666CL and $61808 \mathrm{~m}^{2}$ for 681CL) and cleared $57758 \mathrm{~m}^{2}$ of government land (about $33306 \mathrm{~m}^{2}$ for 666CL and $24452 \mathrm{~m}^{2}$ for 681CL) for the proposed site formation and road works. The cost of land resumption and clearance estimated at $\$ 1,178.89$ million is charged to Head 701 - Land Acquisition. The land resumption and clearance affects 120 land owners and 231 households involving 432 persons. The affected land owners or households have been offered ex-gratia allowances and/or, where eligible, accommodation in public housing in accordance with the established rehousing policy.

## BACKGROUND

23. 

666CL and 681CL were included in Category B in January 2000 and September 2000 respectively.
24. On 25 May 2001, we upgraded part of 681CL as 686CL "Consultants' fees and site investigation for site formation, roads and drains in Area 54, Tuen Mun - phase 2" to Category A, at an estimated cost of $\$ 25.9$ million for carrying out site investigation and engagement of consultants to undertake detailed design of the site formation and infrastructure works for the phase 2 development in Area 54, Tuen Mun.
25. On 15 April 2011, we upgraded part of 681CL as 744CL "Formation, roads and drains in Area 54, Tuen Mun - phase 2 stage 1 works" to Category A, at an estimated cost of $\$ 325.2$ million for carrying out site formation works at Site 2 for public rental housing development and associated infrastructure works. The site formation works and associated infrastructure works commenced in September 2011 for completion in April 2015.
26. On 11 May 2012, we upgraded part of 681CL as 755CL "Formation, roads and drains in Area 54, Tuen Mun - phase 2 stage 2 works"
to Category A, at an estimated cost of $\$ 178.9$ million for construction of the Tuen Mun Area 54 sewage pumping station. Construction of the sewage pumping station commenced in October 2012 for completion in March 2016.
27.

Of the 2219 trees within the project boundary, 1887 trees will be felled and 331 trees preserved. Besides, one important tree ${ }^{8}$ will be affected during the implementation of the proposed works. Details of the important tree affected are provided at Enclosure 6. We will incorporate planting proposals as part of the proposed works, including estimated quantities of 1641 trees (including trees to be planted in housing Sites $1 \& 1 \mathrm{~A}$ and $3 / 4$ (East) by Housing Department) and 76193 shrubs.
28. We estimate that the proposed works under 666CL and 681CL will create about 150 jobs (125 for labourers and another 25 for professional/technical staff) and 170 jobs ( 140 for labourers and another 30 for professional/technical staff), providing a total employment of 6400 and 7240 man-months respectively.

## WAY FORWARD

29. We plan to seek funding approval from the Finance Committee for the proposed works under 666CL and 681CL in the second quarter of 2015 after consulting the Public Works Subcommittee.

## Development Bureau <br> February 2015

[^2]




切面 B－B
SECTION B－B


| $\begin{gathered} \text { Tree } \\ \text { no. } \end{gathered}$ | Species |  | Measurements |  |  | Amenity value ${ }^{(3)}$ | Form | Health condition | Structural condition | Suitabili | y for transplanting ${ }^{(4)}$ | Conserva－ tion status （5） | Recommend －ation | Department to provide |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Scientific name | Chinese name | height <br> （m） | $\begin{gathered} \mathrm{DBH}^{(2)} \\ (\mathrm{mm}) \end{gathered}$ | crown spread （m） | （good／fair／poor） |  |  |  | （high／med－ ium／low） | Remarks |  | （Retain／trans －plant／fell） | expert advice to LandsD |  |
| A128 | Delonix regia | 鳳凰木 | 13 | 1335 | 10 | Poor | Fair | Poor | Poor | Low | －The tree belongs to species with brittle wood structure，and is prone to branch or trunk failure． <br> －Due to poor health with large cavities， serious decays，peeled off barks and broken main limb，the tree is not suitable for transplanting． <br> －Due to old age，large size and declining health condition，the tree is not likely to recover from significant crown and root pruning if it is to be transplanted． | No | Fell | AFCD | －The tree is in conflict with the proposed road alignment． <br> －If the proposed road is to be realigned in order to avoid affecting the tree，much more land resumption is required which is not cost effective． <br> －Even if the tree could be retained in－situ，it will be very close to the future road and sidewalk and will impose high risk to the safety of pedestrians／motorists． Since retention of the tree is considered impracticable because the survival rate after transplanting is low （please refer to ＇Remarks＇），the tree is proposed to be felled． |

[^3]${ }^{(2)}$ Diameter at Breast Height（DBH）of a tree refers to its trunk diameter at breast height（i．e．measured at 1.3 m above ground level）．
${ }^{(3)}$ Amenity value of the tree is assessed by its functional values for shade，shelter，screening，reduction of pollution and noise and also its fung shui significance，and classified into the following categories． Good ：important trees which should be retained by adjusting the design layout accordingly．
Fair ：trees that are desirable to be retained in order to create a pleasant environment，which includes healthy specimens of lesser importance than＂Good＂trees．
Poor ：trees that are dead，dying or potentially hazardous and should be removed．
 species（survival rate after transplanting）．
 Forests and Countryside Ordinance．


[^0]:    $1 \quad$ Noise barriers under item c(i) of paragraph 3 are recommended along a section of Road L54A adjacent to a planned school site under the approved Environmental Impact Assessment Review (the EIA Review) as part of the reviews of the Study mentioned in paragraph 8 of this paper. As the development programme of the school site is still uncertain, to avoid repeated road opening, we will complete the foundation of the noise barriers first and install the noise barrier panels later to tie in with the school site development programme.

[^1]:    $7 \quad$ Public fill reception facilities are specified in Schedule 4 of the Waste Disposal (Charges for Disposal of Construction Waste) Regulation. Disposal of inert construction waste in public filling reception facilities requires a licence issued by the Director of CEDD.

[^2]:    ${ }^{8}$ "Important trees" refers to trees in the Register of Old and Valuable Trees, or any other trees that meet one or more of the following criteria -
    (a) trees of 100 years old or above;
    (b) trees of cultural, historical or memorable significance, e.g. Fung Shui trees, trees as landmark of monastery or heritage monument, and trees in memory of an important person or event;
    (c) trees of precious or rare species;
    (d) trees of outstanding form (taking account of the overall tree sizes, shape and any special features), e.g. trees with curtain like aerial roots, trees growing in unusual habitat; or
    (e) trees with a trunk diameter equal to or exceeding 1.0 m (measured at 1.3 m above ground level), or with a height/canopy spread equal to or exceeding 25 m .

[^3]:    ${ }^{(1)}$ The subject tree is not in the Register of Old and Valuable Trees．

