

LCQ12: Provision of infrastructure

Following is a question by the Hon Alice Mak and a written reply by the Secretary for Development, Mr Michael Wong, in the Legislative Council today (September 29):

Question:

The current term Government advocates the adoption of the "infrastructure-led" and "capacity creating" approaches in planning for new development areas, so as to create more development opportunities for these areas and make the use of lands in their vicinity more efficient. Regarding the provision of infrastructure, will the Government inform this Council:

(1) as the Government indicated in the 2018 Policy Address that it must proactively create capacity through a "transport-first" strategy, of the respective numbers of transport infrastructure projects (i) proposed, (ii) in respect of which funding have been approved and (iii) commenced, since 2018, and set out by project name how the relevant projects create capacity and make the use of lands in their vicinity more efficient;

(2) of the various indicators adopted for reflecting the economic return of transport infrastructure projects (and whether these indicators include new economic activities and the increase in land value) and their respective weightings;

(3) of the details of the improvement works for the New Territories sewerage systems completed in the past five years, including the project names, the lots involved, as well as the commencement and completion dates of such works;

(4) of the current number of villages in the New Territories the sewerage systems of which have yet to connect to public sewers; the respective numbers of villages for whose sewerage systems the Government (i) has and (ii) has not yet carried out improvement works, together with the details of the former and the reasons for the latter; and

(5) whether, in the light of a number of large-scale development projects being carried out in the New Territories, it has plans to enhance the infrastructure in respect of electricity supply, fresh water supply, drainage and sewerage, etc., in the New Territories in the coming five years; if so, of the details and timetables of the various works projects?

Reply:

President,

With the other relevant bureaux consulted, my reply to the various parts of the question is as follows:

(1) The current term Government advocates the "infrastructure-led" and "capacity creating" planning approach in order to motivate development of land by provision of transport infrastructure. Based on the information provided by the Transport and Housing Bureau (THB), for instance, in terms of railway, the Government invited the MTR Corporation Limited to proceed with the detailed planning and design of the Northern Link (NOL) project in December 2020. The NOL is crucial to unleashing the development potential of the largely underutilised land along its alignment and increasing the supply of land and housing. Except a few low-to-medium density existing/planned residential developments in the vicinity of Kam Sheung Road and Au Tau stations, the other areas along the alignment are yet to be developed. The availability of the NOL can open up development opportunities with more efficient land uses for the relevant areas. Besides, the Government has been implementing Route 11 (section between Yuen Long and North Lantau), Tsing Yi-Lantau Link, widening of Yuen Long Highway (section between Lam Tei and Tong Yan San Tsuen) and Tuen Mun Bypass. The entire group of trunk roads can improve the traffic conditions of major roads connecting the north-western New Territories with the urban areas. By improving road infrastructure, it can also further strengthen the connectivity of trunk roads and enhance the capacity of interchanges, strengthen the connectivity of developments in the vicinity, and unleash the development potential of the relevant areas effectively.

Generally speaking, not only will the increased transport capacity benefit key government projects under planning, it will also incentivise private developers to advance their development plans with a larger housing yield.

(2) According to the THB, in line with common practice for other infrastructure projects and established methodology, the assessment on economic return is an indicator of the benefits that a proposed transport infrastructure project will bring to the community. Conventionally, economic return is represented by the economic internal rate of return (EIRR). The EIRR of a transport infrastructure project mainly reflects the savings in the travelling time of transport users over the project life (normally 50 years), as a measure of the overall cost-effectiveness of the project to the community.

The conventionally defined EIRR may not be able to reflect economic benefits of a transport infrastructure project which may not be readily quantifiable, such as supporting land development opportunities; and improvements to the environment arising from the provision of more environmentally friendly transport service (such as railway). According to the THB, all these factors are taken into account in the overall appraisal of transport infrastructure proposals as they are all concerned with the sustainability of a community, such as the quality of life, mobility of the population, and competitiveness of the economy of Hong Kong.

(3) In the past five years, the Drainage Services Department (DSD) completed 15 sewerage projects in the New Territories (including Lantau and Outlying Islands, same below), details as listed below:

Project Code	Project Title	Project Commencement Date	Project Completion Date
4332DS	Lam Tsuen Valley sewerage, stage 2	October 2012	May 2017
4372DS	Rehabilitation and construction of trunk sewers underneath Shing Mun River Channel	November 2010	November 2019
4378DS	North District sewerage stage 2 part 2A – Pak Hok Lam trunk sewer and Sha Tau Kok village sewerage	January 2012	January 2017
4382DS	Sewerage at Clear Water Bay Road, Pik Shui Sun Tsuen and west of Sai Kung town	January 2013	May 2018
4386DS	Village sewerage in Kau Lung Hang San Wai, Kau Lung Hang Lo Wai and Tai Hang, and southern trunk sewer between Wai Tau Tsuen and Nam Wa Po	June 2012	May 2017
4387DS	Upgrading of Mui Wo sewage treatment works and sewerage at Mui Wo town centre and Wang Tong	July 2012	April 2018
4395DS	Tolo Harbour sewerage of unsewered areas, stage 2 – phase 1	July 2013	April 2018
4396DS	Sewerage in Nam Wa Po and Wai Tau Tsuen	July 2013	November 2018
4397DS	Outlying Islands sewerage, stage 2 Lamma village sewerage phase 2, package 1	December 2013	September 2018
4404DS	Tuen Mun sewerage – Castle Peak Road trunk sewer and Tuen Mun village sewerage	July 2015	October 2019

4406DS	Shek Wu Hui sewage treatment works – further expansion phase 1A – advance works, consultants fees and investigation	May 2015	December 2019
4410DS	Trunk sewers at Hiram's Highway	March 2016	December 2020
4411DS	Upgrading of San Wai sewage treatment works – phase 1	May 2016	December 2020
4384DS	Yuen Long and Kam Tin sewerage, stage 3 package 2	September 2012	January 2017
4350DS	Yuen Long and Kam Tin sewerage and sewage disposal – consultants' fees and investigations	December 2006	December 2018

Moreover, the Government is currently implementing 29 sewerage projects in different areas of the New Territories.

(4) At present, all urban areas across Hong Kong have been provided with public sewerage systems, and over 93 per cent of the overall population in the urban and rural areas combined has access to public sewers, which is comparable to the coverage rate of the top ranking countries and regions. Whereas premises in those areas not yet covered by the public sewerage systems are required to continue using on-site sewage treatment facilities, such as biological treatment facilities or septic tanks and soakaway systems.

There are about 1 000 villages in the New Territories, among which sewerage projects for about 260 villages have been completed and about 225 villages have been included in the Public Works Programme as at June 2021, including about 65 villages currently being covered by the following sewerage projects:

Project Code	Project Title	Project Commencement Date	Target Completion Date
4435DS	Upgrading of Tuen Mun sewerage, phase 1, part 2	January 2021	December 2024
4434DS	Village Sewerage in Fanling Wai, So Kwun Po and Leng Pei Tsuen, Fanling	January 2021	March 2025

4423DS	North District sewerage stage 2 part 2A–village sewerage for Tong To	November 2018	May 2022
4430DS	Tolo Harbour sewerage of unsewered areas, stage 2, phase 2	July 2020	August 2024
4403DS	Upgrading of sewage pumping stations and sewerage along Ting Kok Road	February 2019	December 2023
4214DS	Tseung Kwan O sewerage for villages	October 2020	April 2025
4433DS	Construction of San Shek Wan Sewage Treatment Works and Pui O village sewerage	March 2021	September 2026
4353DS	Outlying Islands sewerage, stage 2 – extension of sewerage system to other unsewered villages in Mui Wo	October 2021	April 2026
4355DS	Outlying Islands sewerage stage 2 – Lamma village sewerage phase 2, package 2	October 2021	June 2026
4362DS	Sewerage for Ma Yau Tong village, Tseung Kwan O	October 2020	October 2024
4422DS	Outlying Islands Sewerage Stage 2 – Peng Chau village sewerage phase 2 package 1	November 2018	December 2022
4431DS	Port Shelter sewerage, stage 2, package 3	July 2020	May 2025
4432DS	Port Shelter sewerage, stage 3, package 2	July 2020	May 2025

Other minor works items	<ul style="list-style-type: none"> • Provision of trunk sewer to three villages in Tai Po including Ta Tit Yan, Yuen Tun Ha and Lo Lau Uk • Village sewerage at Kam Tin Shi, Kam Tin • Village sewerage at Ping Kong and Fu Tei Pai • Village sewerage at Tai Tei Tong, Pak Ngan Heung • Village sewerage for seven villages in Sai Kung 	From 2013	From 2022
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Remaining villages that are not yet included in sewerage works programmes are mainly located far away from the public sewerage network, scarcely populated or with local residents who did not accept the Government's proposed sewerage arrangement. In future planning, the Government will consider various factors, including level of improvement to the environment, density of village population, acceptability by residents, technical feasibility and cost effectiveness, to determine the priority of sewerage expansion programmes for progressive extension of sewage collection network.

(5) According to the Environment Bureau (ENB), regarding large-scale development plans in the New Territories, CLP Power Hong Kong Limited (CLP) will assess the electricity supply for New Development Areas (NDAs), and submit new project proposals in a timely manner for the Government's approval. To meet the electricity demand, the Government will critically examine the need, timing and cost effectiveness when reviewing the project proposals. Under CLP's current development plan, the Government has approved several electricity supply projects relating to NDAs in the New Territories, such as establishing new electricity substations to meet the demand of Kwu Tung North/Fanling North and Hung Shui Kiu/Ha Tsuen NDAs. These substations will commence operation successively in the coming few years according to the development progress of these NDAs.

As regards water supply systems, the Water Supplies Department will upgrade water supply infrastructures, including extension of Ngau Tam Mei Water Treatment Works and Siu Ho Wan Water Treatment Works and water supply networks, to supply fresh water along with new town development projects, including Kwu Tung North/Fanling North, Ping Che/Ta Kwu Ling, Hung Shui Kiu/Ha Tsuen and Tung Chung New Town Extension. Details and timetable of the extension works for water treatment works are tabulated below:

Project Title	Anticipated Project Commencement Year	Anticipated Completion Year	Details
Siu Ho Wan Water Treatment Works Extension	2021	Completion in phases from 2025 to 2028	Increasing the water treatment capacity of Siu Ho Wan Water Treatment Works from 150 000 cubic metres (m3) per day to 300 000 m3 per day and the associated raw water transfer capacity
Ngau Tam Mei Water Treatment Works Extension	2024	2028	Increasing the water treatment capacity of Ngau Tam Mei Water Treatment Works from 230 000 m3 per day to 440 000 m3 per day; constructing an extension of Ngau Tam Mei Fresh Water Primary Service Reservoir and laying new fresh water mains

On drainage systems, at present, the DSD has five on-going drainage improvement projects in the New Territories. Details are as follows:

No.	Project Title	Project Details (Note 1)
4118CD	Drainage improvement in Northern New Territories – package B (remaining works)	Construction of about 900 m of stormwater drains at Ho Sheung Heung Road
4172CD	Rehabilitation of underground stormwater drains – remaining works	Rehabilitation of about 19 km of underground stormwater drains in various areas of the territory

4180CD	Rehabilitation of underground stormwater drains stage 1	Condition survey of about 35 km of underground stormwater drains and rehabilitation of about 11 km of stormwater drains in various areas of the territory
4185CD	Drainage improvement works at Yuen Long, stage 1	Construction of about 1 km of drainage channels and about 490 m of stormwater drains at Tai Tseng Wai, Shui Tsiu San Tsuen, Ho Lik Pui and Shan Ha Tsuen
4186CD	Rehabilitation of underground stormwater drains – stage 2	Condition survey of about 55 km of underground stormwater drains and rehabilitation of about 11 km of underground stormwater drains in six districts (Note 2)

In addition, the DSD now has 11 drainage improvement projects under planning and design stage in the New Territories. Three of these projects (*) will be submitted to the Finance Committee in 2022 for funding approval, and relevant works will commence the soonest possible. Details are as follows:

No.	Project Title	Project Details (Note 1)
4112CD	Drainage improvement in Northern New Territories – drainage improvement works in San Tin – remaining works	River improvement works to existing river sections, construction of box culvert and associated flood prevention facilities in San Tin West
4161CD*	Improvement of Yuen Long Town Nullah (town centre section)	Construction of the dry weather flow interception system at the Yuen Long Town Nullah
4165CD	Drainage improvement works at North District	Construction of village flood protection schemes, drainage channels, box culverts, drains, and other ancillary works at North District
4166CD-2*	Drainage improvement works at Yuen Long – stage 2	Construction of drainage channels and stormwater drains at Shan Ha Tsuen, Sung Shan New Village, Tai Wo, Lin Fa Tei and Ha Che

4166CD-3	Drainage improvement works at Yuen Long (remaining works)	Construction of drainage channels and stormwater drains at Fung Kong Tsuen
4173CD	Drainage improvement works in Ta Kwu Ling	Improvement works to tributary sections of Ping Yuen River, drainage improvement works at Ping Yeung Village and construction of road drainage system at Ping Che Road
4178CD*	Yuen Long barrage scheme	Construction of a barrage and ancillary flood prevention facilities at Yuen Long Nullah to improve the flood protection level in Yuen Long town centre and enhancing the local environment quality of a section of Yuen Long Nullah
4182CD	Drainage improvement works in Sha Tin and Sai Kung	Construction of stormwater pumping stations in Sha Tin and drainage upgrading works in Sha Tin and Sai Kung
4183CD	Drainage improvement works in Tai Po	Construction of stormwater pumping station, expansion of existing stormwater pumping station, drainage improvement works and river training works in Tai Po
4187CD	Revitalisation of Tai Wai Nullah	Beautification of the existing Tai Wai Nullah, provision of walkways and dry weather flow interception system, construction of viewing decks, revamp of existing footbridges and provision of drainage system
4188CD	Revitalisation of Fo Tan Nullah	Beautification of the existing Fo Tan Nullah, provision of dry weather flow interception system, construction of viewing deck and revamp of existing footbridge

On sewerage systems, along with the on-going large-scale NDA projects in

the New Territories, the ENB, in collaboration with the DSD, has been planning for sewerage infrastructure and implementing expansion plans in the respective areas. The Government has commenced the reconstruction and upgrading of the Shek Wu Hui sewage treatment works to cope with the development plan at Kwu Tung North/Fanling North NDA. The works will be completed in phases between 2025 and 2034. Also, to support the future development at Hung Shui Kiu/Ha Tsuen NDA and Yuen Long South NDA, sewerage facilities are being planned in these two areas, and the construction works are anticipated to commence in the period between 2027 and 2028.

Note 1: Details of project may be adjusted subject to design development, comments received during public consultation and other relevant factors.

Note 2: The six districts comprise Tsuen Wan, Kwai Tsing, Sham Shui Po, Yau Tsim Mong, Kowloon City and Wong Tai Sin Districts.