Planning Review on Development of Ex-Cha Kwo Ling Kaolin Mine Site

Final Report

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Ex-Cha Kwo Ling Kaolin Mine Site - Master Layout Plan

EXPLANATORY STATEMENT

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1 INTRODUCTION

GENERAL

This explanatory statement is intended to assist in understanding the planning proposals contained in the Master Layout Plan (MLP) for the Ex-Cha Kwo Ling Kaolin Mine Site (ex-CKLKMS), the Study Area. It sets out the existing planning content, planning intentions and the objectives for the various proposed land use zonings.

BACKGROUND

- This Planning Review was commissioned by the Planning Department in July 2011.

The overall objective of the Planning Review was to revisit the land use proposals prepared under the Feasibility Study for the development at the ex-Cha Kwo Ling Kaolin Mine Site (CKLKMS) commissioned by the then Civil Engineering Department (CED) completed in 2003, which was to investigate the feasibility of the development for housing, schools and other uses at the area. Owing to the changing planning circumstances and public aspiration, there is a need for a planning review to facilitate early provision of residential sites at the upper platforms of the CKLKMS to meet the urgent need for housing land supply.

PREPARATION OF THE PLAN

The MLP sets out the broad land use proposals for the site on the basis of which more detailed planning, design and engineering works can proceed.

The preparation of the MLP has given consideration to the following:

- previous planning proposals produced under the 2003 Feasibility Study;
- topography of the development site;
- character and form of surrounding developments, including the Cha Kwo Ling Village;
- location of the site which is near the waterfront;
- existing G/IC and open space provision and the extent of provision that would be required for the proposed development;
- existing landscape resources;
- existing and proposed transport infrastructure;
- natural and man-made features;
- existing developments with cultural heritage significance; and
- geotechnical and environmental considerations.

2 THE STUDY AREA

The Study Area is situated at the East Kowloon waterfront and currently occupied by an abandoned mine and CKL Village. The site has a total area of about 18 ha comprising land that is mainly under government ownership, with some private lots mostly located in CKL Village. It comprises highly varied landforms including platforms, rock slopes, man-made slopes and vegetated slopes in levels ranging from 25mPD to 50mPD in the uphill portion, and CKL Village at the foothill flanking the East Kowloon waterfront. There are existing platforms on the uphill portion with a total area of about 4 ha. The platforms connects to Sin Fat Road via an access road.

The building topography in the surrounding area is characterised by high-rise residential development, village housing and open spaces. Surrounding land uses include private large-scale residential developments such as Laguna City to the north which incorporates buildings of between 28 to 31 storeys (including podium) in height, and Sceneway Garden to the northeast that rises 30 to 41 storeys (including podium) in height. Both developments are tightly clustered.
At southwest of the site is CKL Village which consists of low-rise village housing. To its immediate west, a number of 6 to 11 storey residential developments are also located on Fan Wa Street. To the east of the site is Sai Tso Wan Recreation Ground and open area. The southern edge of the site enjoys open view to the Victoria Harbour.

The Study Area is mainly zoned "Residential (Group A)4" ("R(A)4") (10.6ha), with the remaining parts zoned "Government, Institution or Community" ("G/IC"), "Open Space" ("O"), "Green Belt" ("GB") and "Road" on the draft Cha Kwo Ling, Yau Tong, Lei Yue Mun OZP No. S/K15/20. Under the Notes for "R(A)4" zone of the OZP, the development intensity is restricted to a maximum domestic gross floor area (GFA) of 610,000m² and 13,890m² of non-domestic GFA equivalent to a domestic plot ratio (PR) of 5.76 and a non-domestic PR of 0.13 on gross site basis.

The site is easily accessible due to its proximity to Lam Tin MTR Station and main trunk roads including the Eastern Harbour Crossing, Cha Kwo Ling Road and the proposed Tseung Kwan O-Lam Tin Tunnel (TKO-LTT).

A number of development opportunities exist which include:

- **Help Meet with Territorial Housing Shortfalls** – The development will provide additional housing land in Hong Kong. This will help to remedy current housing shortages and provide additional residential development of a size and scale appropriate for a range of people to access.

- **The Provision of Government, Institution and Community (G/IC) facilities** – As part of the proposal a site will be reserved for G/IC use. This G/IC facility is located at the entrance of the ex-CKLKMS adjacent to Laguna City. It is proposed this G/IC site will be utilised as a Primary School.

- **Landscape Enhancement** – There is the opportunity to apply for landscape enhancements to the existing rock surfaces and provide additional outdoor leisure outlets such as public open space and nature trail. This will serve the residents in the area.

- **Proximity to MTR Station** - the platform areas are highly accessible as they are located within 380m to the southwest of Lam Tin MTR Station.

- **Enhancement to Connectivity between the Harbourfront and Sai Tso Wan Recreation Ground** - the Sai Tso Wan Recreation Ground and planned open space is located to the east of the development site; to the south is a planned waterfront promenade within Yau Tong Bay redevelopment and the proposed waterfront promenade at Cha Kwo Ling is located to the south-west of the development site. Development within the establishment of platforms at appropriate levels could facilitate the introduction of additional footpaths and pedestrian links enhancing connectivity to the harbourfront and the open space and recreation facilities in Sai Tso Wan.

Development Constraints pertaining to the site include:

- **Potential Traffic Issue** – There is concern from surrounding residents that the vehicular access to the proposed development located on Sin Fat Road, will induce additional traffic loading onto the local road network of Laguna City along Cha Kwo Ling Road, in particular affecting the performance of the signalised junction at Cha Kwo Ling Road / Sin Fat Road.

- **Topography** - the CKLKMS is largely occupied by a former quarry with platform areas in highly varied topography. The geotechnical constraints in terms of the geological faults and terrain/slope stability will require land formation works.

- **Presence of a Grave** - there is a grave built on top of a reinforced concrete structure on the southern part of the Development Platform. FEHD and LandsD confirmed that the grave fell within unleased government land and there was neither a public cemetery nor a private cemetery as defined under the Public Health and Municipal Services Ordinance (Cap. 132). All concerned parties, including FEHD, KTDO and LandsD had no record on the grave. However,
recently, during the consultation of the MLP with Kwun Tong District Council, a Cha Kwo Ling villager claimed that the grave belongs to his clan. In mid 2013, a claim was filed at the High Court for possessory title to the land where the grave is erected, on the grounds of adverse possession. The legal proceedings is still in progress as at February 2014. Should the grave be retained, it would pose a major constraint to the future development on the platform. The grave is assumed to be removed for a better planning for the whole development. However, subject to the court judgement on the claim of possessory title, the proposed use of the land occupied by the grave and its immediate surroundings may need to be reviewed.

- **Environmental Impacts** - due to the close proximity of the proposed TKO-LTT and Trunk Road T2 Project, potential traffic, noise and air quality impacts on the future residents are likely to arise. Mitigation measures including setting back the residential blocks from the proposed TKO-LTT, adoption of appropriate building design, and, subject to further study during the OZP amendment stage, incorporation of ‘non-noise-sensitive’ uses such as retail shops and residents’ clubhouse as necessary. In addition, the proposal of developing the Territory East Material Recovery and Transfer Station (TETS), to the south of the southern platform within CKLKMS would impose significant environmental impacts to the proposed residential use on the adjoining upper platforms.

- **Development constraints due to Locational Factors** - the Study Area is situated at a prominent waterfront location. Relevant urban design guidelines and the Harbour Planning Principles will be respected. The existing green knoll within the site is one of the prominent green backdrops as viewed from the Victoria Harbour and the eastern part of Hong Kong Island. The scale, including development intensity, building height and layout of the proposed residential development have been carefully determined so as to protect the views from the identified public Visually Sensitive Receivers, including the Victoria Harbour, Quarry Bay Park, Kai Tak, and Sai Tso Wan Recreation Ground, and visual access to the harbourfront. Taking into account the existing building height profile in the area (i.e. Sceneway Garden with upper and lower blocks of about 150mPD and 120mPD acting as backdrop of the CKLKMS at the northeast, and Laguna City with its taller blocks at about 90mPD adjoining the CKLMS). Maximum building heights need to relate to adjacent development which may impose constraints on the density and disposition of the building layout.

3  **EXISTING PLANNING FRAMEWORK**

Under the draft Cha Kwo Ling, Yau Tong, Lei Yue Mun OZP No. S/K15/20, the Study Area is zoned, Residential (Group A)4 ("R(A)4"), Government, Institution or Community ("G/IC"), Open Space ("O"), Green Belt ("GB") and Road.

Under the Notes for "R(A)4" zone of the OZP, this zone is intended primarily for high-density residential developments. Commercial uses are always permitted on the lowest three floors of buildings or in the purpose designed non-residential portion of an existing building.

The development intensity under the current OZP is restricted to a maximum domestic gross floor area (GFA) of 610,000m² and non-domestic GFA of 13,890m² equivalent to a domestic plot ratio (PR) of 5.76 and a non-domestic PR of 0.13 based on a gross site area basis.

4  **OBJECTIVES OF THE PLAN**

The MLP provides a framework to guide the future development of the site. The primary objectives comprise the following:

- To provide a comprehensive planning framework to guide the development of the site in an integrated and co-ordinated manner in terms of spatial land use arrangements, development intensities and heights, infrastructural networks, open space and visual corridors etc.;
To promote the Development Platform at the northern part of the Study Area for residential development to meet strategic housing requirements whilst meeting prevailing legislation;

- To detail the road network;
- To ameliorate the impact of new development upon existing communities;
- To give cognisance to the existing urban form of surrounding developments;
- To follow the Harbour Planning Principles to work out the proposed development;
- To reserve land for open space, Government, Institution or Community (GIC) facilities, transport and other infrastructure to serve residents;
- To conserve, as far as possible, important sites of cultural heritage significance; and
- To provide a framework to form the basis for future design and engineering works.

5 PLANNING REQUIREMENTS AND PARAMETERS

AVERAGE FLAT SIZE

Whilst recognizing the need to optimize the provision of residential development, accessibility to a range of housing sizes is also an important principle for the development site. An average flat size of 60m² has been taken into account resulting in approximately 2,200 units in total.

DEVELOPMENT DENSITY

In line with public aspirations to create a quality living environment, the approach to development will be to create an area that is attractive to live by introducing an appropriate development density. It is important that consideration for the surrounding developments is taken into account and future development integrates efficiently with existing development.

An average domestic PR of 4 (with PR ranging from 3.8 to 4.5 in each sub-area) is proposed. Such a PR is compatible with the scale of Laguna City to its north, and will serve as a transition between Sceneway Garden and CKL Village.

PERSONS PER FLAT

The design population for the current proposed housing development under this Study is derived based on the "2009 based Territorial Population and Employment Data Matrices for 2021" from the Planning Department in which identified that the average household size in the area adjoining ex-CKLKMS in 2021 would be approximately 2.67 persons per flat. As such, this assumption will be used for the development site.

CONSERVATION OF THE EXISTING GREEN KNOLL, NATURAL SLOPE AND CKL VILLAGE

As much as possible, the existing green knolls and natural slopes are to be retained. The existing CKL Village which covers an area of approximately 4.57 ha will also be retained as strong local objections are expected if the development involved clearance of the village.

TO PROMOTE PUBLIC AND VISUAL ACCESS TO THE HARBOURFRONT

Streetscape enhancement works are recommended for the proposed EVA route, which is to be converted from the existing haul road connecting the ex-Kaolin mine with Cha Kwo Ling Road. It is proposed to create pedestrian access to the waterfront from the development site via this route. This will allow for increased pedestrian circulation to and from the development site and surrounding areas to the waterfront.
6 LAND USE ZONINGS AND LAND USE BUDGET

RESIDENTIAL (GROUP B) (“R(B)”) – TOTAL AREA: 33,640m²

Four residential sites are zoned “R(B)”. These are namely, Areas A, B, C and D. The slope of approximately 1,580m² in Area A should be excluded from site area for GFA calculation. The general planning intention for “R(B)” zone is to provide medium density residential developments where commercial uses serving the residential neighbourhood may be permitted on application to the Town Planning Board. (Appendix 1 - Development Schedule Table)

These sites are subject to an average maximum Plot Ratio of 4.0 and a maximum building height of +110mPD for Area A and B and the maximum of +95mPD for Area C and D. This will allow a stepped height profile to be realised respecting the waterfront setting and minimizing the potential visual impacts to surrounding developments.

GOVERNMENT INSTITUTION OR COMMUNITY (“G/IC”) – TOTAL AREA: 9,360m²

The planning intention of the “G/IC” zone is to reserve sites for provision of Government, institution and community facilities. The provision of G/IC facilities has been planned according to the Hong Kong Planning Standards and Guidelines.

A site of 6,420 m² (excluding the slope area of 2,340m²) is provided at the northern part of the site for a 30-classroom Primary School with a maximum height restriction of 8 storeys. The school will be accessible either by pedestrian and / or by vehicle and a drop-off will be provided within the site.

An existing G/IC site of 600m² which accommodates the Tin Hau Temple is to be retained.

GREEN BELT (“GB”) - TOTAL AREA: 52,460m²

A total of 4 “GB” sites are provided. These are located around the Development Platform. Given there is a general presumption against development in the “GB” zone, these sites are intended to preserve the existing natural vegetation and green knolls, located at the fringe of the development platforms. However, the provision of nature trail could be considered in the zone.

CHA KWO LING VILLAGE - TOTAL AREA: 45,720m²

At present, CKL Village and its surrounding slopes are zoned “R(A)4” for high density development. To maintain the status quo of the Village, the current “R(A)4” zoning may not be appropriate and rezoning would be required. However, private lots are involved in the Village. Any rezoning proposal would affect the interests of the villagers. Detailed assessments on the impacts are required before making the recommendation on the rezoning. In the circumstances, a further and separate study is needed to review the zoning of Cha Kwo Ling Village.

Notwithstanding the above, improvement to the sitting out areas within the CKL Village is proposed, which is conceived as an improvement measure to the Cha Kwo Ling Village.

To implement the proposed EVA access route located to the south of the Development Platform, there is a need to acquire a portion of the sitting out area in CKL village. However, this should not have adverse impact on CKL residents given the proposed streetscape enhancements for the EVA access which will enable residents to utilise the proposed public open space. This proposed EVA is subject to further engineering feasibility study.

OPEN SPACE - TOTAL AREA: 11,780m²

DISTRICT OPEN SPACE (“DO”)

A total of 3 “DO” sites (11,150m² in total) are provided within the Study Area. These sites are intended to provide facilities for active and passive recreation to meet the needs of a district population (1m² per person).
LOCAL OPEN SPACE ("LO")

A “LO” of about 630m² in front of the Tin Hau Temple is marked on the MLP which is zoned “O” on the current OZP. This zone is intended primarily for the provision of outdoor open-air public space for active and/or passive recreational uses serving the needs of local residents as well as the general public. Local Open Space will be provided within the residential site on a basis 1m² per person serving the local residents.

ROAD – TOTAL AREA: 22,430m²

ROAD RESERVE

This area of 10,870m² is reserved for the TKO-LTT tunnel along the southeastern side of the Study Area.

ROAD WITHIN THE PLATFORM

A 7.3m two-lane single carriageway with 2m pedestrian footpaths on both sides (7,280m² in total) is proposed running through the residential platforms.

EXISTING ROAD

A portion of each of two existing roads with a total area of 4,280m² (namely, Sin Fat Road and a section of existing road connecting the proposed Road Reserve with Cha Kwo Ling Road) are included within the Study Area.

7 TRANSPORT NETWORK

ROAD NETWORK

The proposed development site is accessible from Sin Fat Road which is a light traffic local access road connecting from a district distributor, namely Cha Kwo Ling Road in the west and terminated at Sai Tso Wan Recreation Ground in the east end.

Cha Kwo Ling Road connects indirectly to a number of strategic transport corridors, including:

- Eastern Harbour Crossing (EHC) via Lei Yue Mun Road or Yau Tong Road;
- Tseung Kwan O Tunnel via Wai Yip Street and Wai Fat Road;
- Kwun Tong Bypass via Wai Yip Street;
- Kwun Tong Road via Lei Yue Mun Road;
- Future TKO-LTT via the future Cha Kwo Ling Road Interchange; and,
- Future Trunk Road T2 and Central Kowloon Route (CKR) (Route 6) via the future TKO-LTT interchange.

The aforementioned strategic transport routes available in the vicinity of the proposed development site provide convenient vehicular linkages to Hong Kong Island East, Eastern and Central Kowloon, Tseung Kwan O North and South areas.

The development site will be served by a 2-lane single carriageway of 7.3m wide with footpath on both sides. The road will branch-off from Sin Fat Road in the north in the form of a priority junction and terminate with a cul-de-sac in the south of the Development Platform. This road will serve the proposed primary school and the four residential plots in the Development Platform.

PROPOSED JUNCTION IMPROVEMENT
A traffic assessment has been conducted to appraise the potential impact of the proposed development on the surrounding road network based on the preferred development option.

The result of the assessment revealed that five key junctions in the vicinity of the development site would likely be affected by the proposed development, namely, the junctions at the proposed access road of the proposed development, Sin Ft Road, Wai Yip Street / Cha Kwo Ling Road, Cha Kwo Ling Road / Sin Fat Road, Cha Kwo Ling Road / Wai Fat Road / Shing Yip Street, and Wai Yip Street / Wai Fat Road. Traffic mitigation measures have been proposed to enhance the performance of the junctions.

The proposed junction improvement schemes for the five critical junctions include provision of additional traffic lane by using hatched area, setting back traffic islands, or converting staggered pedestrian crossings into straight crossings. Other improvement measures also include modification of traffic lane configuration, modification of method of control (MOC), increase cycle time and no-stopping restriction, etc. The assessment of these junctions based on the proposed improvement measures indicates that these junctions would operate satisfactorily with the proposed development of the preferred option in place.

PUBLIC TRANSPORTATION

The development site is within reasonable walking distance from the local public transport facilities including MTR, franchised buses, a GMB and cross harbour taxis stand, all of which are located along Sin Fat Road and Cha Kwo Ling Road.

In addition to the existing public transport services and facilities, enhancement of public transport services and facilities are proposed which include provision of a new taxi stand with shelter for non-harbour crossing service in close vicinity to the proposed primary development access. Moreover, it is proposed to introduce two new GMB routes serving directly to/from the proposed development site, with one feeder service to the existing loading/unloading bay opposite to the MTR Lam Tin Station Entrance D1 and the second one an inter-district route to West Kowloon via the future Route 6 (Cha Kwo Ling Roundabout, Trunk Road T2 and Central Kowloon Route). Enhancement of the existing loading/unloading bay on Sin Fat Road is also proposed to cater for the passenger pick-up/drop-off of the new GMB feeder service.

It is further proposed to extend the routing of existing bus services of Laguna City PTI to route via Cha Kwo Ling Road and turn back at the future Cha Kwo Ling Road Roundabout of the planned Lam Tin Interchange. New bus stop is proposed at the existing abandoned bus lay-by on Cha Kwo Ling Road westbound.

Shelters are also proposed for the new bus stop on Cha Kwo Ling Road westbound, the new GMB pick up / drop-off points near MTR Lam Tin Station Entrance D1 as well as the existing GMB stop on Cha Kwo Ling Road near the proposed EVA cum pedestrian linkage.

PARKING FACILITIES

The provision of parking and loading/unloading facilities within the proposed development site is in accordance with the criteria stipulated in the HKPSG. For the proposed residential areas, the parking facilities will be provided in the basement level. A total of 226 private car parking spaces and 12 motorcycle parking spaces will be provided. For each housing block, there will be a loading/unloading bay for goods vehicles and a service vehicle bay around each block.

There will be 5 private car parking spaces, 10 lay-bys for cars and taxis and 3 school bus lay-bys provided within the proposed Primary School boundary.

PEDESTRIAN NETWORK

Pedestrian connections between the proposed development site and the surrounding areas are provided by the footpaths on both sides of the proposed primary access leading to Sin Fat Road as well as a landscaped
pedestrian linkage cum EVA at the southern extent of the Development Platform leading to Cha Kwo Ling Road along the waterfront.

Enhancement of pedestrian facilities in the vicinity are proposed which include converting of cautionary crossing into signalized crossing at Cha Kwo Ling Road near Wai Yip Street, there may be potential for the provision of covered footpath along Sin Fat Road connecting the Development Platform with the MTR entrance, which will be subject to a detailed study on the feasibility and demand. Further study/review on the traffic aspect will be conducted at the ensuing engineering feasibility study.

8 ENVIRONMENTAL CONSIDERATIONS

TKO-LTT AND ASSOCIATED WORKS AND TRUNK ROAD T2

The Eastern Harbour Crossing and Cha Kwo Ling Road are the two major roads adjacent to the site. The residential blocks layout has set back from these roads to mitigate the potential noise and traffic emissions impacts due to these roads in order to achieve the environmental standards of HKPSG.

The Tseung Kwan O – Lam Tin Tunnel (TKO-LTT) project will be located to the southeast of the site. Environmental impacts from these projects were studied under the Project EIAs according to the respective EIA Study Briefs under the EIAO mechanism. Any environmental mitigation measures such as noise barriers, and their implementation will be subject to the approval of the related EIA reports and the issue of the environmental permits under the EIAO. Detailed assessments of the potential environmental impacts due to the existing road network and including these two new road projects shall be carried out under the engineering feasibility study and are incorporated in the TKO-LTT and Associated Works and Trunk Road T2 findings under the respective EIA studies.

RECOMMENDATIONS

According to the broad technical assessment result of the existing road networks, there would be slight exceedance to the road traffic noise impact at the southern boundary of the proposed residential site near Cha Kwo Ling Road. With the current layout design and the findings from this Broad Technical Assessment, no noise sensitive receivers (NSRs) are located at this location. It is recommended that NSRs shall be avoided to be located near the southern boundary of the proposed residential site in the future development layout. The future development layout will need to be designed such that all relevant environmental noise criteria are complied with. Where necessary, noise mitigation measures such as building block orientation and architectural fins will be considered for mitigating the impacts. In the design and disposition of the building blocks, due regard should be given to protecting NSRs, i.e. residential blocks, taking into account the noise mitigation proposals in the TKO-LTT and Associated Works and Trunk Road T2 EIA studies.

9 URBAN DESIGN AND LANDSCAPE PRINCIPLES

A number of principles, conforming to the prevailing standards and guidelines, have been incorporated into the design of the development in order to respond to the surrounding built environment as well as the site’s unique constraints and opportunities. These principles comprise:

A STEPPED HEIGHT PROFILE

A variation in the building heights within the development will help minimize the potential visual impact to the surrounding areas, therefore the development intensity of each sub-area will slightly vary. Area A and B at the northern portion of the Development Platform are located in proximity to Laguna City and Sceneway Garden, and can therefore afford a higher PR of 3.9 to 4.5 and a maximum building height of 110mPD.
Area C and D at the southern portion of the Development Platform are bounded by natural vegetation, and visually prominent from the harbourfront. Therefore, a lower PR of 3.8 to 3.9 and a lower maximum building height at 95mPD is more appropriate.

The increase in maximum building height at the northern portion of the platforms would allow a more pronounced stepped height profile, thus enhancing the overall setting.

This stepped height profile will respect and take advantage of the waterfront setting, whilst minimizing the potential visual impacts to surrounding developments through careful integration of the built and natural characteristics.

PROMOTING ACCESS TO WATERFRONT AND ENHANCING AIR VENTILATION

The planning for the development site recognises the need to maintain existing views to the harbourfront. The block arrangements have been deliberately employed to avoid creating walls of development and to promote visual permeability. To further enhance this, view corridors are principally aligned along two 20m wide air paths in a southwest-northeast direction. Streetscape enhancements such as the provision of a wider pedestrian footpath and street trees will help to create a pedestrian friendly environment and are encouraged along the proposed EVA access route to enhance public access to the waterfront.

DEVELOPING AN APPROPRIATE URBAN FORM

To ensure that an appropriate and responsive urban form will be realised, a number of development parameters regulating building heights and density to prevent a series of continuous high-rise developments were recommended, in conformity with PNAP APP-152: Sustainable Building Design Guidelines.

The proposed form allows for a degree of enclosure within the site, helping to create a sense of place and a series of connected spaces. However, a looser, curvilinear configuration reflects the site topography and nearby shoreline, whilst contrasting with the adjacent Laguna City development’s more rigid cruciform layout.

This more organic layout, coupled with the varied building heights, also helps to create a more natural progression from the rectilinear form of Kwun Tong to the west, and Yau Tong and its environs to the east, as well as providing a complementary backdrop to CKL Village.

LANDSCAPE

The landscape design approach seeks to positively respond to the physical framework and disposition of development. The walls of the former quarry formally “embrace” the proposed configuration of development. These in turn, in combination with the proposed circulation system, formally define areas that can be committed to specific purposes. The following outlines the proposed landscape works within and surrounding the development site.

DISTRICT OPEN SPACE

A total of three district open space zones are proposed. These include DO1 to the west of Area C and Area D, DO2 is located to the south of the proposed residential in Area D and DO3 is adjacent to Area B to the east. This zone is intended primarily for the provision of outdoor open-air public open space for active and/or passive recreational uses serving the needs of local residents as well as the general public.

ACTIVE AND PASSIVE RECREATION SPACES

The areas subject to landscape treatments are intended to promote active and passive activities. Each lot together with the district areas include facilities such as children play areas, exercise stations, open lawn, thematic gardens, tennis court and water feature areas. The active areas are located away from the residential towers, to minimize noise impact.
PEDESTRIAN CIRCULATION AND SHARED SPACES

Areas will include shade planting and landscape furniture, and will be physically connected by a series of walkways to increase pedestrian permeability within the Study Area, in order to minimise interaction between pedestrians and vehicles and ensure efficient circulation throughout the entire site.

NATURE TRAILS

Provision is also made for the inclusion of nature trails to improve pedestrian circulation within and surrounding the Study Area. Nature trails are linked to district open spaces, the Sai Tso Wan Recreation Ground and waterfront promenade, resulting in public gain and enhanced permeability.

ADDITIONAL LANDSCAPE ENHANCEMENTS

Landscape enhancements include the upgrading of existing open spaces, sitting out areas and surrounding slopes. Additionally, green knolls are also preserved, to assist in improving the overall amenity of the site and its environs, and to utilize the unique characteristics provided by the slopes to their full extent.

LOCAL OPEN SPACE

Local Open Space is provided within the residential platforms of the site. Within the residential development, it is important to ensure that a variety of type, character and scale of open spaces are provided, accommodating different uses for a range of user types.

By creating a quality outdoor active and passive recreational and open space environment, the living experience for residents will be enhanced and enriched. In addition, a lookout point is proposed to be located to the south of the local open space, connected to the nature trail network, proposed to facilitate physical and visual access to the harbourfront, and increase the sense of place.

10 UTILITIES AND SERVICES

WATER SUPPLY

Fresh water supply is primarily planned from the proposed Yau Tong No. 2 Fresh Water Service Reservoir situated on the hillside to the east of Ko Chiu Road Estate in the Yau Tong District. Salt water supply is planned to be drawn from the Cha Kwo Ling Salt Water Pumping Station by pumping seawater from the waterfront area of Cha Kwo Ling Road. A water impact assessment based on all confirmed development parameters for the site will be required after the completion of this planning review.

SEWERAGE AND SEWAGE TREATMENT

There are existing 450mm and 675mm diameter pipes laid along Cha Kwo Ling Road and Wai Yip Street and a 150/225mm diameter underground sewer at the north east corner of the site laid underneath Sin Fat Road and the vehicular access to the former kaolin mine factory. Also, two existing major sewerage networks traversing along Cha Kwo Ling Road / Wai Yip Street along the northern boundary of Laguna City to collect sewage generated from the adjacent areas including Sai Tso Wan Landfill, the waterfront areas along Cha Kwo Ling Road and Laguna City residential area, and discharge to the Kwun Tong Preliminary Treatment Works (KTPTW).

The 2003 Feasibility Study Report recommended that upgrading of existing downstream sewerage system would be required for the scheme proposed at that time. A sewerage impact assessment based on all confirmed development parameters for the site would be required after completion of this planning review.

DRAINAGE

According to the 2003 Feasibility Study Report, there are 1350mm to 1800mm diameter pipes laid along Cha Kwo Ling Road. It was recommended that a new outfall would be required for the scheme proposed at that time.
to increase the overall capacity of the drainage systems such that the quantity of runoff that would need to be conveyed at peaks would not exceed the capacities of the existing drainage systems at the downstream area. Details of drainage system requirements shall be subject to detailed study in the engineering feasibility study based on confirmed development parameters details of the Study Area after completion of this planning review.

ELECTRICITY

Electricity supply for this development will be provided by the China Light and Power Company. Detailed layout of electricity supply system shall be established during the detailed design stage.

GAS

The Hong Kong and China Gas Company advised that a gas supply main will be provided to serve the proposed development. Detailed layout of the gas supply to the proposed development will be subject to the detailed design of the future building layouts.

TELECOMMUNICATIONS

 Provision of telecommunication services for the proposed development has been expressed by the three service providers: the Pacific Century Cyber Works, the Hutchison Global Crossing Limited and the New World Telephone Co. Ltd. Arrangements and alignments of cable ducts shall be studied during detailed design stage.

11 CULTURAL HERITAGE RESOURCES

Tin Hau Temple and the Law’s Mansion in Cha Kwo Ling Village are Grade III Historic Buildings graded by the Antiquity Advisory Board.

Tin Hau Temple: The listed heritage temple, Tin Hau Temple, is located on Cha Kwo Ling Road at the southern end of the village. Originally built in the Qing Dynasty, it was destroyed in 1912 by a typhoon. The temple was rebuilt in 1941 using local funds. In 1999, it was renovated with a slightly more modern appearance. The building is dedicated to Tin Hau, Goddess of the Sea, to whom local residents still pay high respect. The temple is a Grade III historic building in reference to AMO, defined as a building with “some merit; preservation in some form would be desirable and alternative means could be considered if preservation is not practicable” under Hong Kong Planning Standards and Guidelines. A rock located to the west of the temple is recognised as “Child-Giving Rock” which is considered as a place of local heritage significance.

Law’s Mansion: Law’s Mansion is located in the centre of the CKL Village and is a Grade 3 historic building. It is believed to be a place of residence originally built a hundred years ago, then converted into three small factories in the 1950s before being converted back for residential occupation. Designed in Qing vernacular, the house is of local interest as it is a rare example of a typical old stone village house, yet even the rural village appearance of the house is scarred by a series of features that compromise its visual appearance.

12 SITE FORMATION

Site formation for the proposed development will involve the transformation and levelling of the rugged terrain into a series of level platforms. It includes the formation of cut and fill slopes, construction of retaining wall and level platform.

Three platforms will be formed at +31.0mPD, +32.0mPD and +37.0mPD. During the formation of the platforms, cutting and filling works are included. Excavated materials (rock and soil) can be re-used as the filling material subject to their compliance with the specification.

Cut and fill slopes will also be formed in the proposed development. Generally, the slope angle formed at the rock cut slope, soil cut slope and fill slope are 70°, 35° and 30°, respectively. Stabilization works may be required if steeper slopes are formed.
Retaining wall with height not exceeding 11m will be constructed. The walls are proposed to counter the level differences between the access road and its surrounding platforms and terrains.

13 IMPLEMENTATION

The Master Layout Plan provides a broad land use framework for development control and implementation of planning proposals. More detailed feasibility studies will need to be carried out such that the provision of infrastructure can be implemented through the public works programme.

Following completion of the Study, it is envisaged the CEDD will carry out the necessary engineering feasibility studies based on the Master Layout Plan.

A number of factors must be considered as part of the formulation of an appropriate institutional framework within which to implement the development proposals outlined in the Planning Review. It is likely that the relevant Government departments will take full control of initial implementation of the site area, and be responsible for the arrangement of land servicing and provision of engineering infrastructure.

This also includes implementing the public open spaces including the nature trail which are intended to connect the Study Area to the Sai Tso Wan Recreation Ground, waterfront promenade and the lookout point on the green knoll to the south of the site. Government will also be responsible for construction of the proposed primary school at the G/IC site.

Following this, it is assumed that private developer(s) will be invited to tender for lots within the site, and will ultimately construct the residential blocks and be responsible for providing the private open space throughout the development.

It is considered that programming relating to the disposal of development rights associated with the private property developments should be carefully formulated, with the programming relating to the provision of the necessary infrastructure to be appropriately matched.

Preparation for the disposal of the site(s) should be undertaken in parallel with the proposed land use zoning amendments to the OZP. This would allow the land sale programme to commence on completion of the statutory planning procedures.

14 WAY FORWARD

The Planning Review has proceeded on the basis that the lower platform area where Cha Kwo Ling Village is located will maintain the current status quo. The Master Layout Plan (MLP) \textbf{(Appendix 2)} provides the basis for the formulation of development parameters and the revision of the draft Cha Kwo Ling, Yau Tong, Lei Yue Mun Outline Zoning Plan (OZP) No. S/K15/20 where appropriate. Upon completion of the Planning Review, the Civil Engineering and Development Department (CEDD) will undertake the engineering feasibility study based on the MLP.
APPENDIX 1
Development Schedule Table
### Appendix 1 - Development Schedule Table for the Recommended Master Layout Plan

<table>
<thead>
<tr>
<th>Land Use</th>
<th>Location</th>
<th>Approx. Area (m²)</th>
<th>GFA (m²)</th>
<th>No of Flats Produced</th>
<th>Max. Building Height (m_PD/No. of Storeys)</th>
<th>Projected Population</th>
<th>Plot Ratio</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential2</td>
<td>Area A</td>
<td>8,840 m² (7,260 m² after excluding the slope of 1,580 m²)</td>
<td>28,314 m²</td>
<td>472 units</td>
<td>108m_PD/ 22 storeys (3 Towers)</td>
<td>1,260 persons</td>
<td>3.9</td>
<td>- A slope of 1,580 m² should be excluded from site area for GFA calculation.</td>
</tr>
<tr>
<td></td>
<td>Area B</td>
<td>8,480 m²</td>
<td>38,160 m²</td>
<td>636 units</td>
<td>108m_PD/ 22 storeys (4 Towers)</td>
<td>1,698 persons</td>
<td>4.5</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Area C</td>
<td>5,900 m²</td>
<td>23,010 m²</td>
<td>384 units</td>
<td>89-91m_PD/ 16-18 storeys (3 Towers)</td>
<td>1,025 persons</td>
<td>3.9</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Area D</td>
<td>10,420 m²</td>
<td>39,596 m²</td>
<td>660 units</td>
<td>87-94m_PD/ 17-19 storeys (5 Towers)</td>
<td>1,762 persons</td>
<td>3.8</td>
<td>-</td>
</tr>
<tr>
<td>Sub-total</td>
<td></td>
<td>33,640 m²</td>
<td>129,080 m²</td>
<td>2,152 units (say about 2,200 units)</td>
<td>87-108m_PD/ 16-22 storeys</td>
<td>5,745 Persons (say about 6,000 persons)</td>
<td>Average PR 4</td>
<td>- including a slope of about 1,580 m²</td>
</tr>
<tr>
<td>District Open Space1</td>
<td>DO-1</td>
<td>1,400 m²</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>DO-2</td>
<td>8,460 m²</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>- Including the proposed natural trail and proposed look-out point in the south - Including a section of the proposed EVA of about 420 m²</td>
</tr>
<tr>
<td></td>
<td>DO-3</td>
<td>1,290 m²</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>- Extension of the existing “Open Space” zoned to the east on the OZP</td>
</tr>
<tr>
<td>Sub-total</td>
<td></td>
<td>11,150 m²</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Local Open Space</td>
<td>LO</td>
<td>630 m²</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>The open space in front of Tin Hau Temple. - Follow the “O” zone on the current OZP.</td>
</tr>
<tr>
<td>Sub-total</td>
<td></td>
<td>630 m²</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>G/IC</td>
<td>G/IC-1</td>
<td>8,760 m² (6,420 m² after excluding the slope of about 2,340 m²)</td>
<td>-</td>
<td>8 storeys</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>A 30-classroom primary school - Including a slope of about 2,340 m²</td>
</tr>
</tbody>
</table>
## Appendix 1 - Development Schedule Table for the Recommended Master Layout Plan

<table>
<thead>
<tr>
<th>Land Use</th>
<th>Location</th>
<th>Approx. Area (m²)</th>
<th>GFA (m²)</th>
<th>No of Flats Produced</th>
<th>Max. Building Height (mPD/No. of Storeys)</th>
<th>Projected Population</th>
<th>Plot Ratio</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>GfIC-2</td>
<td>600m²</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>- Follow the existing “GfIC” zone on the OZP for Tin Hau Temple</td>
</tr>
<tr>
<td><strong>Sub-total</strong></td>
<td><strong>9,360m²</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>Including a slope of about 2,340m²</strong></td>
</tr>
<tr>
<td>Green Belt¹</td>
<td>GB-1</td>
<td>26,480m²</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>- For the preservation of the existing green knoll</td>
</tr>
<tr>
<td>GB-2</td>
<td>25,490m²</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>- For the preservation of the existing green knoll</td>
</tr>
<tr>
<td>GB-3</td>
<td>120m²</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>- Including a section of the proposed EVA of about 310m²</td>
</tr>
<tr>
<td>GB-4</td>
<td>370m²</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>- Following the existing zoning on the OZP</td>
</tr>
<tr>
<td><strong>Sub-total</strong></td>
<td><strong>52,460m²</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>Including a section of the proposed EVA of about 1,120m²</strong></td>
</tr>
<tr>
<td>CKL Village¹</td>
<td>CKL-1</td>
<td>22,690m²</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>- Including a section of the proposed EVA of about 1,120m²</td>
</tr>
<tr>
<td>CKL-2</td>
<td>23,030m²</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>- Following the existing zoning on the OZP</td>
</tr>
<tr>
<td><strong>Sub-total</strong></td>
<td><strong>45,720m²</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Road within the Platform</td>
<td>Road</td>
<td>7,280m²</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>A two-lane single carriageway of 7.3m wide, with a footpath of 2m on both sides</td>
</tr>
<tr>
<td>Existing Road</td>
<td>Road (North)</td>
<td>1,120m²</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>- Part of Sin Fat Road in the north and part of an existing road extending to Cha Kwo Ling Road in the south.</td>
</tr>
<tr>
<td></td>
<td>Road (South)</td>
<td>3,160m²</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Road Reserve</td>
<td>Area to the east of Area D</td>
<td>10,870m²</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>Road reserve for the TKO-LTT</td>
</tr>
<tr>
<td><strong>Sub-total</strong></td>
<td><strong>22,430m²</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Study Area</td>
<td></td>
<td><strong>175,390m²</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Note:**

¹The area for the EVA route is included within the areas for GB-2, DO2 and V-2.
²Local Open Space should be provided within the areas for residential areas to comply with HKPSG requirement i.e. 1m² per person.
³Average Flat Size of 60 m² and 2.67 persons per flat is adopted for the projection.
APPENDIX 2
Master Layout Plan