3 Project Description and Construction Methodologies

3.1 Key Elements of Works

3.1.1.1 **Section 2** has described the approaches adopted to avoid and minimise various environmental impacts throughout the design process. As mentioned in **Section 2.1**, the site formation of the original design is about 10ha as stated in EIA Study Brief (ESB-271/2014), however, during the design process, environmental impacts are considered, and the site formation of the final design has reduced to about 8ha. The final design has therefore been taken forward as the basis for this EIA to demonstrate that all statutory requirements under EIA Study Brief (ESB-271/2014) and the Environmental Impact Assessment Ordinance (EIAO) are complied with. A brief summary of key elements of the project is given below:

Area	**Proposed Works**
Works Within Study Area	• Site formation of about 8ha of land for proposed C&C Facilities (including the proposed pick-up and drop-off area for shuttle buses). • Widening of the existing Sha Ling Road (about 900m) - from existing 3m wide to a 7.3m wide single two-lane carriageway, including its associated noise barriers. • Construction of internal roads for C&C Facilities. • Widening of the existing Lin Ma Hang Road (about 1.4km long) – from existing 6m wide to a 7.3m wide single two-lane carriageway, including its associated noise barriers. • Construction of a new road (about 600m) including a section of viaduct connecting platform for Crematorium and Man Kam To Road. • Construction of the pick-up and drop-off point at Man Kam To Road.
Outside the Columbarium / Crematorium Site	• Temporary pick-up and drop-off points of shuttle buses for grave-sweepers during festive periods at MTR Kwu Tung Station, Sheung Shui Landmark North Public Transport Interchange, MTR Fanling Station, and layby at Pak Wo Road near Flora Plaza. • Necessary landscaping, sewerage, waterworks and utility works for the proposed development along Man Kam To Road.

- Barging point in Siu Lam.

3.1.1.2 The construction of the proposed works elements within the Study Area would involve relatively more construction activities, especially those for the site formation work and associated infrastructure. In comparison, the works for the temporary pick-up and drop-off points of shuttle buses for the MTR stations would be very minor and only involve some retrofitting of existing facilities such as rearrangement of planter and street furniture (i.e. street lighting and railing) and bus routes. Major excavation works etc. would not be required. For MTR Kwu Tung Station (including the PTI and shuttle bus services area), it will be constructed under the Planning and Development Study on North East New Territories (NENT) Contract and will be available by 2026. In addition, a barging point currently used by the Express Rail Link project at Siu Lam is added.

3.1.1.3 The barging point is located off-site along Tsing Fat Street, Tuen Mun. In order to reduce the impact on road traffic, surplus inert construction and demolition (C&D) materials from the construction of the C&C facilities at Sandy Ridge Cemetery and Lin Ma Hang Road will be stored at a temporary stockpile area on-site. The surplus inert C&D materials will be transported to designated barging point facility by lorries, and then transported by barges for the reuse of other concurrent projects. The maximum number of barge movement is 2 round trips per day. The current location is an existing barging point used by the Express Rail Link project. Minor construction works for the tipping halls and new ramps are required. No maintenance dredging is required and no night-time operation is anticipated.

3.1.1.4 As improvement works at the barging point will be land-based on existing hard standing / developed area and levels of marine traffic will be very low and following route to avoid areas of high dolphin density (**Section 9** for details), it is considered that the use of this site is unlikely to change, the evaluation of habitat quality and potential impacts on the coastal environment is considered not necessary.

3.1.1.5 The comparison of the scope of works and designated projects of the original design and the current design is given in **Table 2.1** below:

Table 3.1 The comparison of the scope of works and designated projects of the original design and the current design

	Description (Study Brief ESB 271/2014)	**Original Design**	**Current Design**
Scope of works	Site formation and associated works of about 10 hectares of land including landscaping, geotechnical, drainage and sewerage works, waterworks, and other utilities services for development of C&C faculties at Sandy Ridge Cemetery;	✓ (10 ha)	✓ (8 ha)
	Road works including access road, tunnel and viaducts within Sandy Ridge Cemetery;	✓ (1 tunnel and 6 viaducts)	✓ (Tunnel removed and

	Description (Study Brief ESB 271/2014)	Original Design	Current Design
			only 1 viaduct required)
	Pedestrian walkway between MTR Lo Wu Station and proposed columbarium;	✓	×
	Widening the eastbound of Choi Yuen Road near MTR Sheung Shui Station from 1-lane to 2-lane carriageway (widening by about 3m) for about 400 length	✓	×
	Widening a section of Lin Ma Hang Road (about 1km in length) from 6.5 to 7.3m	✓	✓
Designated projects	Item A.1 – A road which is an expressway, trunk roads, primary distributor road or district distributor road including new roads, and major extension or improvement to existing roads;	✓	×
	Item A.8 – A road or railway bridge more than 100 m in length between abutments;	✓	✓
	Item I.1 (b)(vii) – A drainage channel or river training and diversion works which discharges or discharge into an area which is less than 300 m from the nearest boundary of an existing or planned conservation area.	✓	✓

3.2 Tentative Implementation Programme

3.2.1.1 It is anticipated that the site formation and associated infrastructural works for the development of columbarium, crematorium and related facilities will be commenced in the 3rd quarter of 2017 and is targeted for completion by 2022. The tentative construction programme is given in **Appendix 3.1**.

3.2.1.2 A summary of the key dates for construction phase is given below. All these key dates are tentative and would be subject to amendment as the design evolves.

Table 3.2 Summary of key construction dates

Key Construction Elements	Tentative Dates	
	Commencement	Completion
Columbarium (site formation, retaining walls, slopes, internal roads, etc.)	Q3 2017	Q4 2020
Crematorium (site formation, retaining walls, slopes, internal roads, etc.)	Q3 2018	Q4 2021
New road with viaduct	Q3 2019	Q4 2022
Widening of Sha Ling access road	Q3 2017	Q4 2020
Utilities laying	Q1 2020	Q2 2022

Key Construction Elements	Tentative Dates	
	Commencement	Completion
Lin Ma Hang Road Widening and associated slopes, etc.	Q2 2019	Q2 2022

3.3 Consideration of Alternative Construction Methodologies

3.3.1.1 **Section 3.1** has described the keys elements of works required from the proposed development at Sandy Ridge. In order to develop these elements in an environmentally friendly manner, a number of alternative construction methods and sequences including the following have been considered:

- Avoid using blasting for site formation to reduce impulsive noise;
- Avoid using percussive piling for site formation to reduce impulsive noise;
- Use of temporary stockpile area to maximise on-site reuse of C&D materials and reduce number of trucks to barging point;
- Use of bored pile foundation for retaining walls to minimise impacts on underground water flow;
- Avoid disposal by barges at Shenzhen River or Deep Bay to minimise impacts on Shenzhen River and Deep Bay; and
- Avoid disposal to landfill.

3.3.2 Avoid Using Blasting for Site Formation

3.3.2.1 Given the extent of site formation and the local geological conditions, there are two possible ways for the excavation for the main platforms for both the columbarium and crematorium, including using blasting or mechanical excavation.

3.3.2.2 The benefit of using blasting for the site formation is that the site formation work could be completed within a shorter period of time. Although the impulsive noise and the dust generated by the blasting process could be readily mitigated by good site practices, the transportation and use of explosives may cause concern for some of the residents in the vicinity, especially the explosives would need to be transported to the site via a number of heavily trafficked roads including Man Kam To Road, and other roads along which residential premises are located in close proximity (e.g. Sha Ling Road). In fact, using blasting would still inevitably require mechanical equipment to break up the boulders into manageable sizes.

3.3.2.3 In comparison, the use of mechanical excavation for the site formation would generally require more equipment such as excavator, piling rig and drilling rig, dump truck, etc. to be operating on site. However, it

could be seen that the site formation work for the main platforms for both the columbarium and crematorium are located at a distance from the nearest Noise and Air Sensitive Receivers, in the range of 250m. Quantitative analysis in **Sections 4** and **5** have illustrated that, with the use of good site practices, the construction noise caused by the site formation work would not be the dominate noise sources, and the cumulative dust impacts would comply with the statutory requirements.

3.3.2.4 Hence, on the basis of the above discussion, the use of mechanical excavation for the site formation has been selected as the preferred construction methodology.

3.3.3 Avoid Using Percussive Piling for Site Formation

3.3.3.1 As far as the foundation of retaining walls and bridge sections are concerned, the use of percussive piling against bored pile has been considered. The benefit of using percussive piling is to achieve a shorter construction programme and hence a lower construction cost. However, the use of percussive piling would inevitably generate a much higher impulsive noise.

3.3.3.2 For example, using one pneumatic driving steel pile at a distance of 250m from the Noise Sensitive Receiver would generate a maximum noise level as high as 77dB(A). In comparison, using a vibratory piling rig will cause a sound pressure level of 62dB(A) at the same distance. Hence, the use of percussive piling would cause more nuisances to the sensitive receivers.

3.3.3.3 Given the environmental setting of the Noise Sensitive Receivers in the vicinity, such high and impulsive noise lasting for months would cause significant nuisance on the neighbouring community.

3.3.3.4 Hence, on the basis of the above discussion, the use of percussive piling for the foundation of retaining wall and the bridges has not be further considered.

3.3.4 Use of Temporary Stockpile Area

3.3.4.1 Given the extent of site formation, a stockpile area will be located at the proposed columbarium site during construction phase for temporary storage of inert soft construction and demolition (C&D) materials. The temporary stockpile area will be located with an approximate capacity of 9,000m^3. The benefit of using stockpile area is to provide backfill material within the site formation and thus will reduce noise and dust generation from transportation of inert soft C&D materials from external site.

3.3.4.2 Hence, on the basis of the above discussion, the use of temporary stockpile area for the site formation has been selected as the preferred construction methodology.

3.3.5 Use of Bored Pile Foundation for Retaining Walls

3.3.5.1 A wet woodland is located at the western side of the site formation of columbarium. In order to allow groundwater to pass through, the foundation design would compose of bore piles of about 0.6m in diameter and the spacing between each pile would be approximately 3.5 – 5m. As compared to other foundation designs such as (Diaphragm wall) D-wall or pipepiles, the proposed small diameter bored pile system would allow a notional free area of about 87– 91% for groundwater to pass through.

3.3.5.2 Hence, based on the above arguments, it is considered that the use of bored pile foundation for retaining walls facing the wet woodland would not cause a significant change in the groundwater flow to the wet woodland and it has been selected as the preferred construction methodology.

3.3.6 Avoid Disposal by Barges at Deep Bay / Shenzhen River

3.3.6.1 Other than using lorries, the use of barges at Deep Bay / Shenzhen River to transport C&D materials away from the construction site has also been considered. However, the water level of Shenzhen River is shallow and there is not enough draft for the barges to navigate through. Hence, large amount of dredging work would be required and these dredging works would inevitably generate a large amount of sediment of uncertain quality.

3.3.6.2 Due to the nature of this project, the dredged sediment cannot be reused on–site and hence has to be disposed of at designated marine disposal sites. Since the sediment marine disposal sites have limited capacity, it is preferred to minimise their utilisation. Besides, Deep Bay and certain sections of Shenzhen River are famous in their biodiversity and extensive dredging would inevitably generate certain direct ecological impacts as well. Other than the large amount of sediment dredged and the direct ecological impacts, the large number of barges navigating through Shenzhen River and subsequently through Deep Bay would increase the possibility of indirect impacts on the sensitive ecological habitats in the vicinity.

3.3.6.3 Hence, on the basis of the above discussion, the use of trucks for disposal of C&D materials during site formation has been selected as the preferred construction methodology.

3.3.7 Avoid Disposal to Landfill

3.3.7.1 As discussed above, the surplus inert C&D materials from the construction of the C&C facilities at Sandy Ridge Cemetery and Lin Ma Hang Road will be stored at a temporary stockpile area on-site. In order to minimise the disposal to landfill, the use of trucks for transport of inert surplus C&D materials to designated barging point at Siu Lam for the reuse of other concurrent projects has been selected as the preferred construction methodology.

3.4 Preferred Construction Methodology – Works Within Study Area

3.4.1.1 The preferred construction methods are presented in the following sections.

3.4.2 Site Formation

3.4.2.1 The total area for the site formation work is about 8ha. As shown in **Figure 1.1**. The eastern portion of the development will comprise a total of 2 platforms. The two platforms with formation levels at +37mPD and +40mPD, will accommodate building blocks of Crematorium, Funeral Parlour, Visitor Service Centre and associated facilities which are to be separately implemented.

3.4.2.2 The western portion of the development comprise of one platform with a formation level at +50mpD. It will serve as the pick-up / drop-off area for shuttle buses, and accommodate the building blocks for the Columbarium and associated facilities such as joss paper burner and refuse collection point respectively.

3.4.2.3 For the columbarium site, the site formation works for the platform is mainly for the provision of pick-up / drop-off area to cater for visitors during festive days. Meanwhile, cut/fill slopes will be more preferable than retaining walls for the design of geotechnical engineering features, where more landscaping works can be provided to mitigate the visual impacts. Most of the columbaria buildings will be constructed along the slope to minimise the visual impacts and the extent of site formation works.

3.4.2.4 In considering of the placing the pick-up / drop-off area decked or at an open area, according to the current design, the future columbarium building blocks are recommended to be sited separate from the pick-up/ drop-off area for the following considerations:

- An integrated complex housing the pick-up / drop-off area and the columbarium buildings with 200,000 niches will inevitably become a mega-structure towering over the +50mPD platform, which would introduce adverse visual impacts to the surrounding due to its massive building bulk.
- In view of its location, an open-air pick-up / drop-off area arrangement will have no adverse environmental impact and will result in less energy consumption in future operation than a covered pick-up / drop-off area, for which mechanical ventilation system would be unavoidable.
- The development of the columbarium at Sandy Ridge Cemetery is expected to span over 10 years in different phases to meet the demands. If an integrated design for columbarium and pick-up / drop-off area is used, when Phase 1 (i.e. the completion of pick-up/ drop-off area and one of the columbarium buildings) is completed and in operation, construction works for the following phases will inevitably cause safety risks and

nuisances to the users / visitors especially during the festive days, which would be undesirable.

3.4.2.5 Given the size of the site formation work, the construction methodologies have been duly reviewed to ensure that the associated environmental impacts are optimised during this design stage. A description of the key construction stages is given below:

Key Stages	**Construction Methodology**
Site Clearance	Firstly, trees will be cleared by backhoes and transported out of the site by crane lorries. After that, the top soil, rock and inert debris will be cleared by backhoes and transported to the stockpiling area for temporary storage. The top soil will be considered to be used for grassland reinstatement. The remaining top soil, rock and inert debris will be transferred to or public filling area by trucks. The surplus inert C&D materials will be transferred to the barging point at Siu Lam for the reuse of other concurrent projects.
Construction of haul road	Construction of access route mainly involves temporary cut and fill works. Therefore, excavators and bulldozers will be deployed to excavate and place the fill material to the desired slope angle of the proposed access road. After placing the fill material on the haul road, vibratory rollers will be used for compaction.
Earth filling and excavation	The existing soil will be excavated by excavators while the general fill will be placed by backhoes. After finishing the excavation and filling works, the surface of soil will be further compacted by vibratory rollers.
Construction of Bored Pile Foundation and Soldier Pile Foundation for the Retaining Walls	For the construction of retaining walls with bored pile foundation, piling rigs will be mobilized to drill the holes. The steel case will be inserted and the piles will be tremie concreted by concrete pump. For the construction of retaining walls with soldier pile foundation, piling rigs will be mobilized to drill the holes. The H piles will be inserted and tremie grouting will be carried out. This method is mainly used in site formation to

	allow minimise the change in the groundwater hydrology connecting to the wet woodland.
Construction of Reinforced Concrete (RC) L-shape retaining walls for roads	For the construction of L-shape retaining wall, backhoes will be deployed for the excavation of soil and then excavation lateral support will be installed for temporary support against the pressure of soil. These two steps will be repeated until reaching the formation level. After that, construction of the L-shape retaining wall will be started and follow by the backfilling of soil to the finish level. This retaining structure will be mainly used in road widening work.
Construction of soil nailing	For the soil nailing works, metal scaffolding will be erected and nail locations will be set out on site. Drilling rigs will be mobilized to form the holes and the steel reinforcement will be inserted. Tremie grouting will be carried out and the sprayed concrete will be applied on the nail heads. Where applicable, the construction method of soil nail is faster and causes less environmental impact compared to other retaining structures.

3.4.2.6 For the construction of retaining walls for site platform in particular, the foundation design has considered the use of D-wall or pipepiles. However, the use of D-wall or pipepiles may affect the groundwater hydrology to the wet woodland. Therefore, the use of bored piles for the retaining wall has been selected to allow passage of groundwater to the wet woodland. More details have been discussed in **Section 6.5**.

3.4.3 Widening of Sha Ling Road & Internal Roads

Sha Ling Road

3.4.3.1 In order to fully utilize the existing Sha Ling Road, about 900m of the existing Sha Ling Road (approximately 3m wide) would need to be widened. That section will be widened to a single two-lane carriageway with a width of 7.3m and with a 3m footpath on both sides as the main access to the Columbarium site (except the portion beside the pick-up / drop-off area which is single two-lane carriageway with 4m footpath on both sides).

3.4.3.2 Vehicular traffic can then access the Columbarium site via the internal road, which is also designed as single two-lane carriageway with 2m to 4m footpath on both sides.

3.4.3.3 Both the widening of Sha Ling Road and the internal roads would require site formation, cut-&-fill and slope retaining structures. The

construction methodology would be similar to those for the site formation work for the platform although the scale of work involved would be less extensive.

3.4.3.4 For the at-grade section of Sha Ling Road in particular, the existing ground level will be excavated to the soffit level of proposed manhole. The manhole will be constructed and the pipe will be laid after the completion of excavation. Subsequently, backfilling with granular sub base and bituminous material will be carried out by excavator and road grinder.

3.4.3.5 It should be noted that part of Sha Ling Road would require the installation of noise barrier as a noise mitigation measures to abate road traffic noise (see **Section 5**). The total length of the proposed noise barrier is approximately 185m. These noise barriers would involve using concrete footings or mini-piles for the foundation and light weight panels installed to achieve the designated height. According to the requirements in Guidelines on Design of Noise Barrier by Environmental Protection Department and Highways Department in 2003, the lower portion of the noise barriers would be installed with sound absorptive panels.

3.4.3.6 For the foundation of using mini-piles, piling rigs will be mobilized to drill the holes first. After that, the existing ground level will be excavated to the formation level of footing by backhoes. If there are proposed underground utilities, they will be installed before backfilling soil. After laying underground utilities, soil compaction by vibratory rollers would be carried out after soil backfilling. Finally the noise barrier will be installed by mobile cranes.

Internal Roads

3.4.3.7 The upgrading of an existing short section of Sha Ling Road to MacIntosh Fort and the proposed roundabout as turnaround facility for vehicles is considered necessary. The internal roads with dead end aligned on the slope near the proposed open car park are emergency vehicular access (EVA) for the columbarium buildings, and EVA is required according to Architectural Services Department's (ArchSD) design standard to comply with the Code of Practice for Fire Safety in Buildings.

3.4.4 New Road connecting Crematorium Site and Man Kam To Road

3.4.4.1 A new road junction at Man Kam To Road will be formed to allow the vehicular access to the Crematorium site via the at-grade road and a new viaduct, which will link to the internal loop surrounding crematorium and funeral parlour. This new road is designed as single two-lane carriageway with 7.3m in width and 2m footpath on both sides.

3.4.4.2 For the at-grade section, the existing ground level will be excavated to the soffit level of proposed manhole. The manhole will be constructed

and the pipe will be laid after the completion of excavation. Subsequently, backfilling with granular sub base and bituminous material will be carried out by excavators and road grinders.

3.4.4.3 For the viaduct section which is approximately 300m long, the existing ground level will be excavated to the soffit level of footing by excavator. Drilling will be carried out by piling rig or earth auger. The mini piles or bored piles would be adopted. The pad footing will be constructed and concreted by concrete pumps. Steel reinforcement of column will be fixed with concrete casted in-situ by concrete pumps. The falseworks and formworks will be installed and the decking will be constructed afterwards by in-situ concreting.

3.4.5 Pick-up and Drop-off Point at Man Kam To Road

3.4.5.1 A pick-up and drop-off point for the mini-buses, taxis and private cars is proposed at Man Kam To Road as these vehicles are not allowed to go uphill during the festive periods.

3.4.5.2 Site clearance will be carried out to remove the obstruction. After that, the existing concrete paving will be broken and then soil excavation to the formation level will be carried out. The proposed underground utilities and sewage will be installed and finally, backfilling with granular sub base and bituminous material will be carried out by excavators and road grinders.

3.4.6 Widening of Lin Ma Hang Road

3.4.6.1 The existing Lin Ma Hang Road is approximately 6m wide and will need to be widened to single two-lane carriageway with 7.3m in width and a 2m footpath on both sides. However, Lin Ma Hang Road does not involve site formation instead it only involves minor slope works.

3.4.6.2 The existing ground level will be excavated to the soffit level of proposed manhole. The manhole will be constructed and the pipe will be laid after the completion of excavation. Subsequently, backfilling with granular sub base and bituminous material will be carried out by excavator and road grinder.

3.4.6.3 Apart from the roadwork, the construction of Lin Ma Hang Road may involve some construction of retaining structures. The size of retaining structure is relatively small compared to that of site formation at Sandy Ridge. Soil nail will be mainly adopted as its construction method cause less disruption to traffic and less environmental impact compared to other retaining structure.

3.4.6.4 Similar to Sha Ling Road, some section of Lin Ma Hang Road will require noise barrier to abate road traffic noise impacts on sensitive receivers in the vicinity. The total length of the proposed noise barrier is approximately 400m. These noise barriers would involve using concrete footings or minipiles for the foundation and light weight

panels installed to achieve the designated height. According to the requirements in Guidelines on Design of Noise Barrier by Environmental Protection Department and Highways Department in 2003, the lower portion of the noise barriers would be installed with sound absorptive panels.

3.5 Preferred Construction Methodology – Works Outside Columbarium / Crematorium Site

3.5.1.1 There is a total of 4 pick-up / drop-off points outside the columbarium / crematorium site as mentioned in **Section 3.1.1.2**. Most of these pick-up / drop-off points would only require temporary and minor modification to the current existing facilities. There are permanent works proposed only at MTR Fanling Station and existing Sheung Shui Landmark North. For MTR Kwu Tung Station (including the PTI and shuttle bus services area), it will be constructed under the Planning and Development Study on North East New Territories (NENT) Contract and will be available by 2026. The description and construction methods are presented in the sections below.

3.5.2 MTR Fanling Station

3.5.2.1 In order to provide adequate bus lay-bys for pick-up and drop-off, some of the existing planters on Fanling Station Road and San Wan Road need to be removed to provide sufficient area for shuttle bus boarding /alighting. In addition, to avoid blockage of lane due to any broken down bus, the physical barriers at the Fanling Station Road pickup point will be demolished to provide ample room for bypassing.

3.5.2.2 Besides, some of the existing planters on Fanling Station Road and San Wan Road will be removed. The trees in the planters will be affected and subject to the tree removal application to be submitted later. One backhoe and one hand-held breaker will then be deployed to break the planter and the debris will be disposed of by truck. Finally, the concerned area will be constructed as the pedestrian footpath.

3.5.3 Sheung Shui Landmark North

3.5.3.1 It is noted that there is an existing KMB bus route 73K serving grave sweepers between Sheung Shui and existing Sandy Ridge Cemetery. It is proposed to provide a vehicular opening connecting the Sheung Shui Landmark North PTI and Lung Sum Avenue to avoid the detour of bus heading towards Man Kam To Road direction.

3.5.3.2 In order to achieve this, a portion of the existing traffic island would need to be retrofit to allow for a new vehicular opening. The road surface will then be reinstated by concreting**.**

3.5.4 Drainage, Sewerage, Waterworks and Utility Works

3.5.4.1 All the site formation works, road widening works, new road construction etc. would inevitably require re-routing of existing drainage, sewerage, waterworks and utility works.

3.5.4.2 The construction method of laying drainage, sewage, waterworks and underground utility is similar. The first stage will be to have trial pits to identify underground drainage and underground utility. After that, the existing ground level will be excavated to the formation level of proposed drainage and underground utility. If the depth of trench is large (typically deeper than 1.2m), necessary excavation lateral support (ELS) will be against the pressure of soil. Installation of drainage will then be carried out after flattening and clearing the formation level. Soil will then be backfilled by backhoes and compacted by vibratory rollers. Finally, the concrete paving will be reinstated by concreting

3.5.5 Temporary Works Sites / Areas

3.5.5.1 In order to minimise the potential disturbance and impact to the public and environment, the major works sites / areas are typically located at the site of the permanent works. To support the construction of the Project, additional temporary works areas would be required within project boundary for the provision of site office, storage of materials, utility, temporary traffic management scheme, temporary accesses / bridges, silos and ground treatment. The locations of works areas have been selected with consideration of their accessibility and suitability for construction works and future permanent facilities. The EIA report has included locations of the works sites / areas for the Project and indicated the project boundary (as indicated in **Figures 1.1** and **1.2**) within which minor activities / works for supporting the construction of the Project may occur based on the latest information at the time of writing.

3.5.5.2 As mentioned in **Section 1.3** and shown in **Figure 1.3**, a barging point is added and is located off-site along Tsing Fat Street in Tuen Mun. The site is being utilised as an existing barging point, no maintenance dredging and no night time operation are anticipated. Minor construction works for the tipping halls and new ramps are required.

3.5.5.3 Subject to actual site conditions and constraints, minor preparatory works could also be required to be conducted in and around the project boundary indicated in the EIA report. However, these would only be short-term without inducing major environmental implications to nearby sensitive receivers. With the implementation of appropriate standard control measures and good site practices for construction works, no adverse environmental impact would be anticipated.