

Appendix E. Checklist of Key Assumptions Adopted in the EIA Report

Table E.1: Checklist of Key Assumptions Adopted in the EIA Report

EIA Ref.	EM&A Ref.	EP Condition	Environmental Protection Measures	Location / Duration of measures Timing of completion of measures	Implementation Stage		
					Des	C	O
Air Quality Impact – Construction Phase							
5.2.3.9	Ch 2	N/A	There will be no open storage of cement on the Deep Cement Mixing (DCM) barges or the supporting vessels.	Airport construction / Construction Period		✓	
Air Quality Impact – Operation Phase							
5.3.4.18	Ch 2	N/A	A decreasing trend in helicopter flights to an average of four flights per month.	Design and operation Period	✓		✓
5.3.4.26	Ch 2	N/A	The use of ultra-low sulfur diesel (0.005%) for airside Ground Service Equipment (GSE).	Design and operation Period	✓		✓
5.3.4.31	Ch 2	N/A	By 2031, all the non-GSE will likely be changed to Euro V standard.	Design and operation Period	✓		✓
5.3.4.31	Ch 2	N/A	By 2017 all salon vehicles on the airside will be electric (AAHK policy).	Airport operation / Operation Period			✓
5.3.4.37	Ch 2	N/A	From 2014, all aircraft parking at stand will be required to connect to the fixed ground power and the use of APU will be prohibited (AAHK policy).	Airport operation / Operation Period			✓
5.3.4.37	Ch 2	N/A	APU will be operated before the aircraft reach the gate (around 1 minute); and after the aircraft has left the gate, with the main engine not yet started (around 5 minutes).	Design and operation Period	✓		✓

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5.3.4.4 2	Ch 2	N/A	For Government Flying Services (GFS), aircraft replacements will take place by 2031 where ZLIN Z242L will be replaced by Diamond DA42NG with 2 x Austro Engine A300 and Jetstream 41 will be replaced by Bombardier Challenger 605 with General Electric CF 34-3B engines.	Design and operation Period	✓		✓
5.3.4.4 6	Ch 2	N/A	No expansion to the existing aviation fuel farm on the airport island is proposed.	Design and operation Period	✓		✓
App. 5.3.1-2	Ch 2	N/A	International Civil Aviation (ICAO) gradual tightening of NO _x emissions standards and long-term objective for 2026 to be at 60% (+/- 5%) below the Committee on Aviation Environmental Protection (CAEP) stringency level of CAEP/6, which may be achieved with a gradual introduction of new aircrafts and new engine types.	Design and operation Period	✓		✓
Hazard to Human Life – Construction Phase							
Not applicable							
Hazard to Human Life – Operation Phase							
Not applicable							
Noise Impact – Aircraft Noise							
7.3.2	Ch 3	2.21	Aircraft departing to the northeast are required to adopt the noise abatement take-off procedures stipulated by ICAO so long as safe flight operations permit.	Airport operation / Operation Period			✓
7.3.2	Ch 3	2.21	All aircraft on approach to the HKIA from the northeast between 11:00 pm to 07:00 am are encouraged to adopt the Continuous Descent Approach (CDA).	Airport operation / Operation Period			✓
7.3.3	Ch 3	2.21	Putting the existing south runway on standby where possible at night between 2300 and 0659.	Airport operation / Operation Period			✓
7.3.3	Ch 3	2.21	Aircraft departing to the south are required to take the via West Lamma Channel route during east flow at night from 2300 to 0659, subject to acceptable operational and safety consideration.	Airport operation / Operation Period			✓
7.3.3	Ch 3	2.21	Preferential use of the new arrival Required Navigation Performance (RNP) Track 6 in the west flow direction (i.e., runway 25 direction), between 2300 and 0659 and by year 2030, instead of the existing straight-in tracks.	Airport operation / Operation Period			✓
7.3.3	Ch 3	2.21	Implementing a preferential runway use programme when wind conditions allow such that west flow is used when departures dominate while east flow is used when arrivals dominate during night-time.	Airport operation / Operation Period			✓

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Noise Impact – Fixed Noise Sources							
7.4.7	Ch 3	N/A	All aircraft parking at frontal stand are required to connect to the fixed ground power and the use of APU is prohibited since 2014. APU will be operated before the aircraft reaches the gate (for around 1 min), and after the aircraft leaves the gate when the main engines has not been started yet (for around 5 min),	Within the Project site / During operation phase / Throughout operation phase			✓
7.9.2	3.2.1	N/A	Specification of the maximum permissible SWLs of the project’s fixed plants during daytime / evening and night-time should be followed.	Within the Project site / During operation phase / Throughout operation phase	✓		✓
Noise Impact – Construction Phase							
Not applicable							
Water Quality Impact – Construction Phase							
8.5.1.3	Ch 5	2.31	Use of non-dredge ground improvement methods for land formation for avoidance of SS and contaminants release.	Within construction site / Duration of the design and construction phase	✓		✓
8.6.4.1	Ch 5	N/A	Only rockfill will be used in the construction of the seawall core for avoidance of SS release during seawall construction.	Within construction site / Duration of the design and construction phase	✓		✓
8.6.4.1	Ch 5	N/A	Where steel cells are used as part of seawall core construction, sand fill will be deposited directly into the steel cell structures, which are isolated from the surrounding marine waters, hence no release of SS will arise from this activity.	Within construction site / Duration of the design and construction phase	✓		✓
8.6.4.9 & 8.6.4.10	Ch 5	N/A	Fine content of sand (to be specified in the relevant works contracts) = 5 % to 10 %	Within construction site / Duration of the design and construction phase	✓		✓
8.7.1.62	Ch 5	2.28	Use of horizontal directional drill (HDD) method for submarine aviation fuel pipelines diversion.	Within construction site / Duration of the design and construction phase	✓		✓

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8.7.1.65	Ch 5	N/A	Only welding works will be carried out on the floating platform, and bulk storage of chemicals is not required at the daylighting point at Sha Chau	Within construction site / Duration of the construction phase		✓	
8.7.1.65	Ch 5	N/A	No dewatering of pipe at Sha Chau	Within construction site / Duration of the construction phase		✓	
8.7.1.66	Ch 5	N/A	Provision of a small concrete bund wall around the high side of the pit, and a cover to prevent rain entry at the daylighting point at Sha Chau to prevent muddy runoff	Within construction site / Duration of the construction phase		✓	
8.7.1.68	Ch 5	N/A	Drilling is conducted via a closed-loop system at the launching point at airport island, and drilling fluid is reconditioned and reused	Within construction site / Duration of the construction phase		✓	
8.6.4	Ch 5	2.31	Use of water jetting method and closed grabs for field joint excavation for diversion of submarine 11 kV cables to minimise SS and contaminant release	Within construction site / Duration of the design and construction phase	✓	✓	
8.8.1.4	Ch 5	N/A	Connection works for outfalls to be undertaken during dry season.	Within construction site / Duration of the construction phase		✓	
Water Quality Impact – Operation Phase							
8.7.2.39	Ch 5	2.33	Connection of sewage to public sewerage system and transfer to the Siu Ho Wan Sewage Treatment Works (STW) for treatment.	During design and operation phase	✓		✓
8.7.2.43	Ch 5	2.33	Reuse of treated greywater to reduce sewage effluent and fresh water usage	During operation phase			✓
8.7.1.62	Ch 5	N/A	Placement of submarine aviation fuel pipelines under seabed rocks to avoid possible damage from marine vessels and fuel leakage	During design phase	✓		
8.6.3.3	Ch 5	N/A	Appropriate design of the land formation to avoid major changes in local and regional hydrodynamics	During design phase	✓		
8.8.2.4	Ch 5	N/A	Restrict operation of the fuel supply and refuelling systems to qualified and trained personnel	During operation phase			✓

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Sewerage and Sewage Treatment Implication – Operation Phase							
Not applicable							
Waste Management Implication – Construction Phase							
10.5.1.1	Ch 6	2.31	The use of non-dredge methods for ground improvement will completely avoid bulk removal and disposal of any dredged materials.	Project Site Area / During design and construction phase	✓	✓	
Table 10.16	Ch 6	N/A	Most sloping seawall options can allow for the reuse of rock armour from the existing northern seawall to minimise waste generation.	Project Site Area / During design and construction phase	✓	✓	
10.4.1.36	Ch 6	N/A	All marine sediments to be generated from the foundation / piling / excavation works for constructing various tunnels, facilities, buildings and APM depot will be treated and reused on-site as backfilling materials, thus avoiding the need for disposal of the sediments.	Project Site Area / During design and construction phase	✓	✓	
Table 10.16	Ch 6	2.28	Use HDD method to construct the new pipeline will avoid dredging of seabed.	Project Site Area / During design and construction phase	✓	✓	
Table 10.16	Ch 6	2.31	Use of water jetting method to lay the new cable will avoid generation and disposal of any marine sediment.	Project Site Area / During design and construction phase	✓	✓	
Waste Management Implication – Operation Phase							
10.5.2.1	Ch 6	N/A	The initiatives currently implemented at the existing airport in segregating recyclable waste materials (such as cardboard, paper, metals, plastics, glass bottles, food waste, etc.) from general refuse for recycling should be extended to cover the expanded airport;	Project Site Area / Operation Phase			✓
10.4.1.66	Ch 6	N/A	The artificial seawall of the expanded airport island has been properly designed to achieve a shoreline without any sharp turns or abrupt indentation where floating refuse would easily be trapped or accumulated.	Project Site Area / Operation Phase			✓
Land Contamination – Construction Phase							
Not applicable							

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Terrestrial Ecological Impact – Construction Phase							
12.7.2.3 and 12.7.2.6	Ch 9	2.14	Avoidance of direct impact to egretty – the daylighting location should be outside egretty boundary	Project Site Area / During design and construction phase	✓	✓	
12.7.2.4 and 12.7.2.6	Ch 9	2.30	Construction activities at Sheung Sha Chau should avoid night-time and the ardeid's breeding season (April – July).	Project Site Area / During design and construction phase	✓	✓	
Marine Ecological Impact – Construction Phase							
13.8.2.5	Ch 10	N/A	Underwater percussive piling work will not be adopted for the project.	Project Site Area / During design and construction phase	✓	✓	
13.8.2.24	Ch 10	2.31	Non-dredge methods will be adopted for land formation which will substantially reduce the environmental impacts compared with the conventional dredging method.	Project Site Area / During design and construction phase	✓	✓	
13.8.2.48	Ch 10	N/A	The construction vessels will be travelled at slow speed, and will mostly be routed to travel from west and south around Lung Kwu Chau instead of through Urmston Road. The risk of vessel collision and chemical spillage will therefore be lowered.	Project Site Area / During construction phase		✓	
13.8.2.49	Ch 10	N/A	All vessels shall be sized with adequate clearance maintained between vessels and the seabed at all states of the tide to ensure that undue turbidity is not generated by turbulence from vessel movement or propeller wash.	Project Site Area / During construction phase		✓	
13.9.2.24	Ch 10	N/A	Backfilling activities for main land formation will be undertaken behind a 200 m advance of seawall to minimise the dispersion of fine materials.	Within construction site / Duration of the design and construction phase	✓	✓	
13.9.2.24	Ch 10	N/A	Seawalls will be constructed using rock fill and as only rockfill will be used in construction of the seawall core, the potential SS release during seawall construction is considered to be insignificant.	Within construction site / Duration of the design and construction phase	✓	✓	
13.9.2.29	Ch 10	N/A	The excavation rate for laying the new 11 kv submarine cables will be very slow, at only 300 m ³ /day, to avoid damaging the existing buried cable.	Within construction site / Duration of the design and construction phase	✓	✓	

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Marine Ecological Impact – Operation Phase							
13.8.3.2	Ch 10	N/A	The HKIAAAA is restricted to vessel entry, and therefore will provide a limited disturbance environment for the establishment of intertidal and sub-tidal communities at the extended seawall.	Project Site Area / Operation Phase			✓
Fisheries Impact – Construction Phase							
Not applicable							
Landscape and Visual Impact – Construction Phase							
Not applicable							
Landscape and Visual Impact – Operation Phase							
Not applicable							
Cultural Heritage Impact – Construction Phase							
Not applicable							
Cultural Heritage Impact – Operation Phase							
Not applicable							
Health Impact – Aircraft Emissions							
Not applicable							
Health Impact – Aircraft Noise							
Not applicable							

Notes:

Des=Design; C=Construction; O=Operation