Supplementary Information from AAHK on 3RS EIA Report to ACE EIASC Secretariat
On Water Quality, Landscape and Visual and Waste Management

Item no.	Comment	Responses	Relevant Sections in EIA Report
(E)	Water quality		
	➢ Further information on the use of barges and construction vessels to be deployed in the project area which might increase the release of suspended solids (SS) contaminating the surrounding waters; technical guidelines for the contractors in minimizing such impacts	The average and peak numbers of barges to be deployed in the project area are shown in Appendix 13.13, Figure 4 and 5. On average, marine traffic generated by the barging activities would be 64 transits per 24-hour period throughout the construction period. Despite these numbers, all construction vessels would be restricted to speeds of 10 knots or less for safety and environmental protection reasons. Other construction vessels are mainly the rigs associated with ground improvement works (e.g. DCM rigs, PVD barges, etc.), which are stationary for the majority of the time and would only require slow position shifts. It should be noted that good practices have also been specified in Section 8.8.1.2 to further minimise the risk of SS release due to construction vessel activities, including: • Barges or hoppers shall not be filled to a level which will cause overflow of materials or pollution of water during loading or transportation; • Use of Lean Material Overboard (LMOB) systems shall be prohibited; • Excess materials shall be cleaned from the decks and exposed fittings of barges and hopper dredgers before the vessels are moved; • Plants should not be operated with leaking pipes and any pipe leakages shall be repaired quickly; • Adequate freeboard shall be maintained on barges to reduce the likelihood of decks being washed by wave action; • All vessels shall be sized such that adequate clearance is maintained between vessels and the sea bed at all states of the tide to ensure that undue turbidity is not generated by turbulence from vessel movement or propeller wash; • The works shall not cause foam, oil, grease, litter or other objectionable matter to be present in the water within and adjacent to the works site. These mitigation measures have been specified in the implementation schedule which forms part of the technical guidelines that are to be implemented by the contractor as part of the EM&A programme.	Appendix 13.13, Section 8.8.1.2
	➢ Information on the full list of pollutants and contaminants (including TKN and zinc) collected by the storm water surface runoff; assessment on the potential impacts of such pollutants on marine life	As detailed in Section 8.7.2.48, aircraft maintenance and washing areas are equipped with separate drainage systems to collect, treat, and/or to eventually discharge into the foul sewer, hence do not contribute to stormwater discharge, while the aircraft apron and fuelling areas are equipped with an oil interception system including a spill trap containment system, to prevent stormwater runoff carrying fuel oils into the marine environment. Aside from these activities, there is no substantial difference between runoff from airport paved areas, and runoff generated by typical urban paved areas. Hence there is no reason to expect significant	Table 8.17, Section 8.5.2.5, 8.7.2.48, 8.7.2, 8.8.2.3

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		concentrations of heavy metals and other contaminants in stormwater runoff from the airport. The water quality parameters and results from the non-statutory marine environmental monitoring conducted for HKIA is presented in Table 8.17 of the EIA report. Zinc has not been monitored as part of the non-statutory monitoring. As stated in Section 8.5.2.5, discharge of stormwater may contribute a pollution load to the marine environment, and pollutants typically found in stormwater runoff include sediment, heavy metals, synthetic organics and pesticides, which are generated from potentially polluting activities including maintenance, fuelling, etc. With reference to EPD's pilot study on urban stormwater pollution, the main pollutants in stormwater runoff from urban drainage are SS, BOD, and to a certain extent, nutrients. Concentrations of other contaminants such as heavy metals and organics in stormwater from urban drainage are low in comparison (lower than levels permitted under the Technical Memorandum on Standards for Effluents Discharges into Drainage and Sewerage Systems, Inland and Coastal Waters) hence the major concern when assessing impacts of stormwater discharge in previous approved EIAs has been the SS, BOD, and nutrient concentrations in stormwater discharge. Consequently, these parameters were the focus of the water quality impact assessment for this project (results presented in Section 8.7.2) and the findings show no exceedances of the relevant water quality criteria due to the project, hence no adverse impacts on marine life. It may also be noted that contaminants such as heavy metals, by their chemical nature, would be strongly adsorbed onto particulates rather than occur in dissolved (aqueous) form. As stated in Section 8.8.2.3, one of a number of measures to be applied to minimise contaminants in runoff include installation and maintenance of roadside gullies to trap and remove silt and grit from stormwater. These measures are already in place for the existing 2RS and the findings from the non-statutory marine environmental monitoring conducted for HKIA has generally shown that SS levels at the impact stations are similar to or lower than that of the control stations, which demonstrates the effectiveness of these measures. It can thus be expected that the similar provision of such measures under the 3RS (which would follow the same drainage design principles as 2RS) would significantly reduce the amount of SS released into the marine environment, and thereby also reduce the associated pollutants that may be adsorbed to the SS.	
	➢ Information on technical specifications of the proposed double layer silt curtain and silt screens and their projected performance and suitability under the assumed hydrodynamic model; supporting evidence on the assumptions that 80% of SS could be screened out	As specified in the EIA Report Appendix 8.9, Type II and Type III silt curtains (as defined by the United States Army Corporation of Engineers) will be adopted for this project, and the typical specifications for such Type II and III silt curtains are shown in Appendix 8.9 Figure 3, while example manufacturer specifications of typical Type III silt curtains available are presented in the EIA Report Appendix 8.9, Annex B. As stated in Appendix 8.9, based on the hydrodynamic outputs from the Year 2016 scenario, the peak flow speeds at the eastern works areas to be mitigated may reach up to 0.8 m/s, while the average water depth in this area is approx. 5m. These factors form the main technical specifications for the	Appendix 8.9

<table>
<tr><th>Item no.</th><th>Comment</th><th>Responses</th><th>Relevant Sections in EIA Report</th></tr>
<tr><td></td><td></td><td>proposed double layer silt curtains to be deployed around the reclamation works.

In terms of performance, reference has been made to past approved EIA studies, however, the actual performance of the silt curtains for this project cannot be pre-determined and needs to be tested under real conditions on-site, hence the requirement for a silt curtain efficiency test to be conducted at the early stage of construction has been specified in the EM&A Manual.

SS reduction efficiencies tested and demonstrated by past projects are summarized below

<table>
<tr><th>Reference</th><th>Type of silt mitigation</th><th>Description of SS reduction</th></tr>
<tr><td>Pak Shek Kok Reclamation, Public Dump EIA (1997)</td><td>Silt screen at seawater intake</td><td>60% reduction was demonstrated</td></tr>
<tr><td>Yam O Reclamation</td><td>Two silt curtains</td><td>>80% reduction was demonstrated</td></tr>
<tr><td>Lamma Power Station Navigation Channel Improvement</td><td>Cage-type silt curtains</td><td>Reductions of between 76 – 81% achieved</td></tr>
<tr><td>Sunny Bay Reclamation Contract No. CV/2000/09</td><td>Two independent silt curtains</td><td>>80% reduction efficiency demonstrated by silt curtain pilot tests</td></tr>
<tr><td>Wanchai Development Phase II – Central – Wanchai Bypass</td><td>Floating and cage-type silt curtains</td><td>Reductions of between 89 – 96% demonstrated by silt curtain pilot tests</td></tr>
</table>

Despite the findings of past projects, the 3RS adopted a 61% reduction due to deployment of double layer silt curtains around the reclamation works to represent a worst case in terms of silt curtain efficiency. The 84% reduction assumed for deployment of silt screens plus double layer floating silt curtains is only applied to ‘at receiver’ mitigation. The affected WSRs are both seawater intakes, located in relatively sheltered areas which typically experience current speeds of <0.4 m/s. Taking into account these conditions, the SS reductions demonstrated by past projects are considered to be directly applicable.

Notwithstanding these assumptions on silt curtain efficiency, water quality monitoring will be conducted at impact monitoring stations surrounding the reclamation site as well as at the nearest WSRs, and event and action plans are in place to protect WSRs during construction phase.</td><td></td></tr>
</table>

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	➢ Information on how the proposed seawall will be constructed; precautionary measures to suppress the release of SS during construction of seawall, in particular if silt curtain is to be used when building the seawall	As stated in Section 4.2.2.5 and shown in Figure 4.1, the seawalls will comprise mainly of rock sloping seawalls with rock fill core and rock armour. A sand blanket layer would first be placed onto the seabed, followed by ground improvement works. The specific ground improvement method adopted depends on the seawall location. As stated in Table 4.1, DCM would be adopted at the CMP areas, while a combination of other non-dredge methods such as steel cells, stone columns, sand compaction piles, vertical sand drains and/or DCM may be adopted outside the CMP areas. After ground improvement, the structure of the seawall will be formed by placing the rock fill core and rock armour using hopper barge and derrick lighters. The construction method proposed has already avoided or minimised the risk of SS release, via: • Using only rock fill (or sand filled steel cells) as the seawall core • Using non-dredge method for ground improvement • Placement of sand blanket on top of the seabed • Using derrick lighters to place the rock armour With the aforementioned construction method adopted, there would be no significant SS release associated with seawall construction. Silt curtains are not necessary for deployment around construction of new seawalls, although in cases where sand blankets for the seawall areas are being deployed as part of larger scale sand blanket installation for ground improvement works, silt curtains may be utilised as described indicatively in Appendix 8.9.	Section 4.2.2.4, Figure 4.1, Table 4.1
	➢ Feasibility of setting up more water quality control stations and impact monitoring stations before, during and after the construction phase in view of the large site area	To clarify, there are already a total of 25 monitoring locations (14 impact stations, 8 sensitive receiver stations and 3 control stations) specified in the EM&A Manual, of which 12 of the impact stations are specifically to monitor the reclamation works. These 12 impact stations already provide full coverage of the area surrounding the reclamation works, hence it is considered that no additional merit can be gained from increasing the number of impact stations. The 3 control stations are also already located in strategic points taking into account the dominant tidal flow directions affecting the project. As the purpose of the control stations are to provide the same day data on water quality directly upstream of the project works, so as to enable comparison against the impact station data (to determine how much of the pollutants measured at the impact station is due to project activities, rather than natural variations in ambient conditions), the provision of additional control stations in areas other than these strategic locations would not provide representative control data, hence there is no merit to increasing the number of control stations.	

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<tr><th>Item no.</th><th>Comment</th><th>Responses</th><th>Relevant Sections in EIA Report</th></tr>
<tr><td></td><td>➢ Indicate the locations of the proposed monitoring stations on a map and the frequency of monitoring near the ecologically sensitive areas in Lantau such as San Tau Beach SSSI, SCLKC Marine Park and other potential MPs in North and West Lantau before, during and after the construction phase to ensure that the habitats of these areas will not be affected by the changes in hydrodynamics and water quality due to the construction and operation of the 3RS project</td><td>Please be advised that this information is already presented in the EM&A Manual of the EIA report. The relevant information / source is summarized below for your easy reference.

<table><tr><th>Monitoring</th><th>Locations</th><th>Frequency</th></tr><tr><td>Before construction (baseline)</td><td rowspan="3">See Table 5.2 and Drawing MCL/P132/EMA/5-001 and MCL/P132/EMA/5-002 in the EM&A Manual</td><td rowspan="3">3 days per week, two times each day (once for mid-flood and once for mid-ebb tide)</td></tr><tr><td>During construction (impact)</td></tr><tr><td>After construction (post-construction)</td></tr></table></td><td>EM&A Manual Table 5.2, Drawing MCL/P132/EMA/5-001, MCL/P132/EMA/5-002</td></tr>
<tr><td>(F)</td><td><u>Landscape and visual</u></td><td></td><td></td></tr>
<tr><td></td><td>➢ To provide specific visual quality criteria to help elaborate on the overall visual environment of the 3RS project</td><td>In terms of criteria for landscape and visual impact assessment (LVIA), the EIAO Guidance Note No. 8/2010 on LVIA, Landscape Value Mapping of Hong Kong, and Hong Kong Planning Standards and Guidelines have been observed in the course of the preparation of the LVIA and consideration of the proposed mitigation measures. The adopted mitigation measures are based on the identified landscape and visual impacts of the project and relevant legislation/ guidelines/ standards of Hong Kong which may include various ordinances and Government's guidelines, for example, Forests and Countryside Ordinance (Cap.96), DEVB TC(W) No. 2/2012 Allocation of Space for Quality Greening on Roads, DEVB TC(W) No. 10/2013 Tree Preservation, ETWB TCW No. 2/2004 Maintenance of Vegetation and Hard Landscape Features, etc. Please refer to Section 15.2, Tables 15.6, 15.7, 15.8 and 15.10 of the EIA report for details.

In terms of visual design aims of the 3RS, a new passenger concourse that will form the central feature of the 3RS may illustrate this though this aspect is more related to the ongoing scheme design work rather than the EIA study. The Third Runway Concourse (TRC) will be built with many green features, including a planned courtyard area at the centre of the concourse, where its green lawn and landscapd area may offer a tranquil setting for relaxation and enjoyment of passengers. The design of the TRC will balance operational efficiency with HKIA's commitment to being the world's greenest airport. Some initial architectural and landscape schemes have been prepared by the scheme design consultants for the future TRC building, and these include the following:
• Open air courtyard area – landscaped gardens within the central part of the TRC, with a combination of mature trees, shrubs and/or planted embankments to increase greenery within the TRC building and provide outdoor amenity for airport users. Any planned trees will only be acceptable when they do not produce fleshy fruits or these will attract birds;</td><td>Section 15.2, Tables 15.6, 15.7, 15.8 and 15.10

Details not in the EIA report as these are more related to the ongoing scheme design work</td></tr>
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		• Sunken gardens – located at the edge of the TRC to soften the edges of the TRC building, these will comprise a few trees and small plants and the aim is the provide different temporal landscape themes that would change with the seasons, or for festivities, thus providing airport users with visual interlude. **Annex 1** presents a few slides that would illustrate the architectural and landscape design of the TRC.	
	➢ Whether "future users" of the airport and "coastal users" have been taken as visual sensitive receivers and thereby incorporated in the study; elaboration on the meaning of "moderately" or "significantly affected"	Yes, the Visually Sensitive Receivers (VSRs) addressed in the LVIA include, *inter alia*, numerous existing and planned VSR groups in and around the airport (including passengers), along the coast and in coastal waters. The indicative locations and identities of all VSRs are indicated on drawing MCL/P132/EIA/15-016, which is also colour coded to show the residual visual impact significance predicted for each VSR after mitigation. The VIA methodology is described in detail in EIA section 15.4.4. By synthesising the degree of sensitivity to visual change of a VSR group (categorised as Low, Medium or High sensitivity), the magnitude of visual change experienced by that VSR group (categorised as None, Negligible, Small, Intermediate, Large magnitude of change), and the number of individuals in that VSR group (categorised as Very Few, Few, Many, Very Many individuals), it is possible to categorise the predicted degree of significance of the impact. Bearing in mind that visual impacts may be either positive or adverse depending on circumstances, the significance categories are defined (in EIA section 15.4.4.11) as follows: **Substantial**: Adverse/beneficial impact where the proposal would cause significant deterioration or improvement in existing visual quality perceived by the general population. **Moderate**: Adverse/beneficial impact where the proposal would cause a noticeable deterioration or improvement in existing visual quality perceived by the general population. **Slight**: Adverse/beneficial impact where the proposal would cause a barely perceptable deterioration or improvement in existing visual quality perceived by the general population. **Insubstantial**: No discernible change in the existing visual quality perceived by the general population. **None**: Absolutely no change in the existing visual quality perceived by the general population.	Drawing MCL/P132/EIA/15-016, Section 15.4.4
	➢ Experience on visual and landscape impacts learnt from the planning and operation of the existing HKIA which can be of reference for mapping out the landscaping and greening plans of the 3RS project	Planting scheme of the existing airport had been established for many years. Basically, the airport island had been divided into the following four zones in respect of the distances from runways and land use (see Figure below) based on approved plant species list. The acceptability of each species and management strategy has been evaluated based on their growth form and attractiveness to wildlife,	Details not in the EIA report as these are more related to

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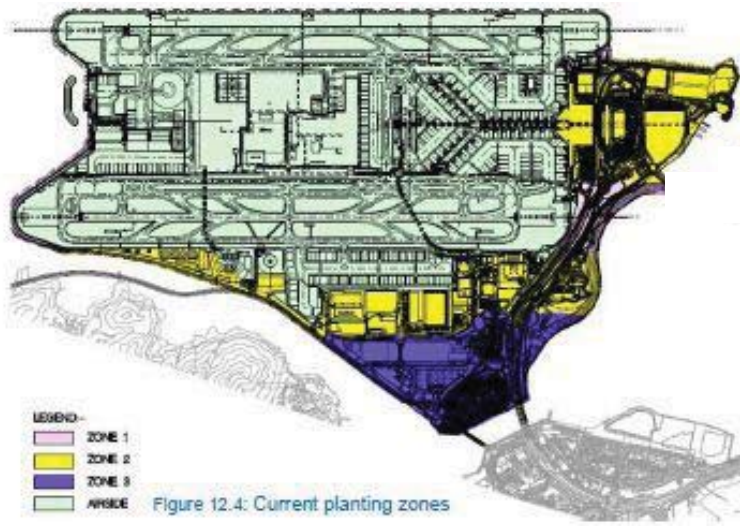
		particularly birds which need to be avoided at the runway and airside area.  Figure 12.4: Current planting zones Plants in landside areas were surveyed in 2012 for update of plant species list in the airport island. Plants were divided into five categories according to their growth form, namely tree; small tree/shrub; herbs and ground cover; climber; and plam. The potential attractiveness of fruits of the plant species to birds were reviewed and relative abundance of each species was also estimated.	the ongoing scheme design work
	➢ Broad-brush targets to be adopted for greening or planting	The Landscape and Visual Mitigation Arrangement Plans are shown in 7 drawings numbered MCL/P132/EIA/15.028.1 to /15.028.6 and 15.029. The plans numbered MCL/P132/EIA/15.028.1 to /15.028.6 illustrate the genaral locations of the proposed mitigation measures. Summary titles of the mitigation measures are listed on the plans, however more detailed descriptions of the mitigation measures are provided in EIA section 15.6.4.	Drawing MCL/P132/EIA/ 15.028.1 to /15.028.6 and 15.029, Section 15.6.4, 15.5.7

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		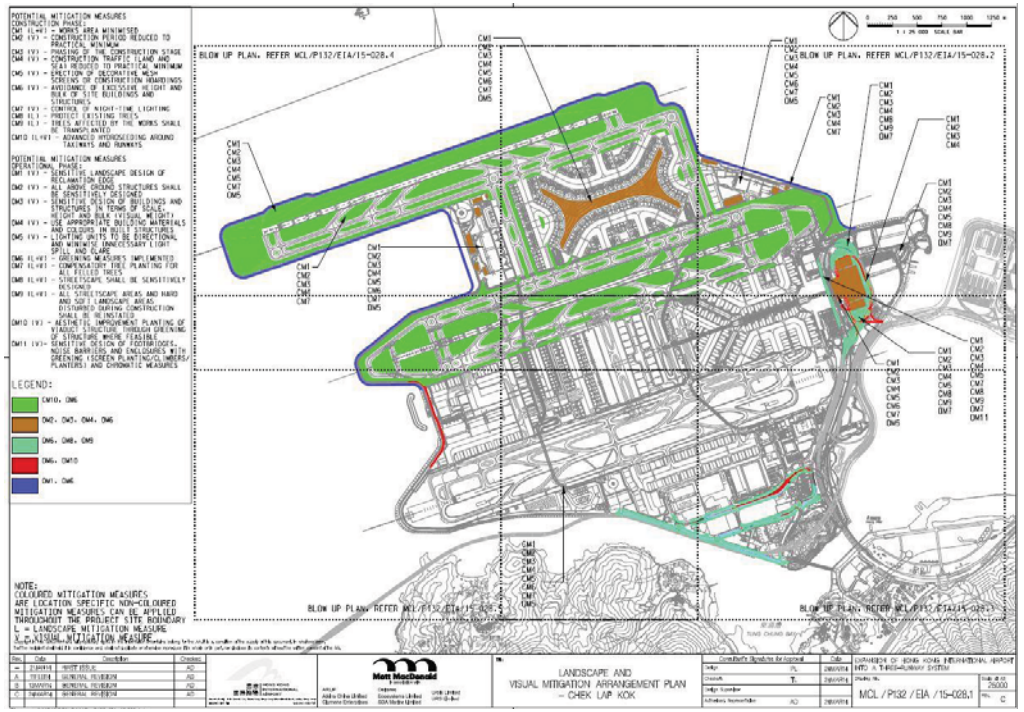 The broad brush targets for greening or planting are as follows: [OM1] “Sensitive Landscape Design of Reclamation Edge by incorporating different angles of gradient and the use of a range of armour rock” (a conceptual section illustrating this mitigation measure is presented in drawing MCL/P132/EIA/15-029): This measure includes greening of the reclamation edge as shown in the cross section, and applies to new reclamation edge which is measured at approximately 13km long.	

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		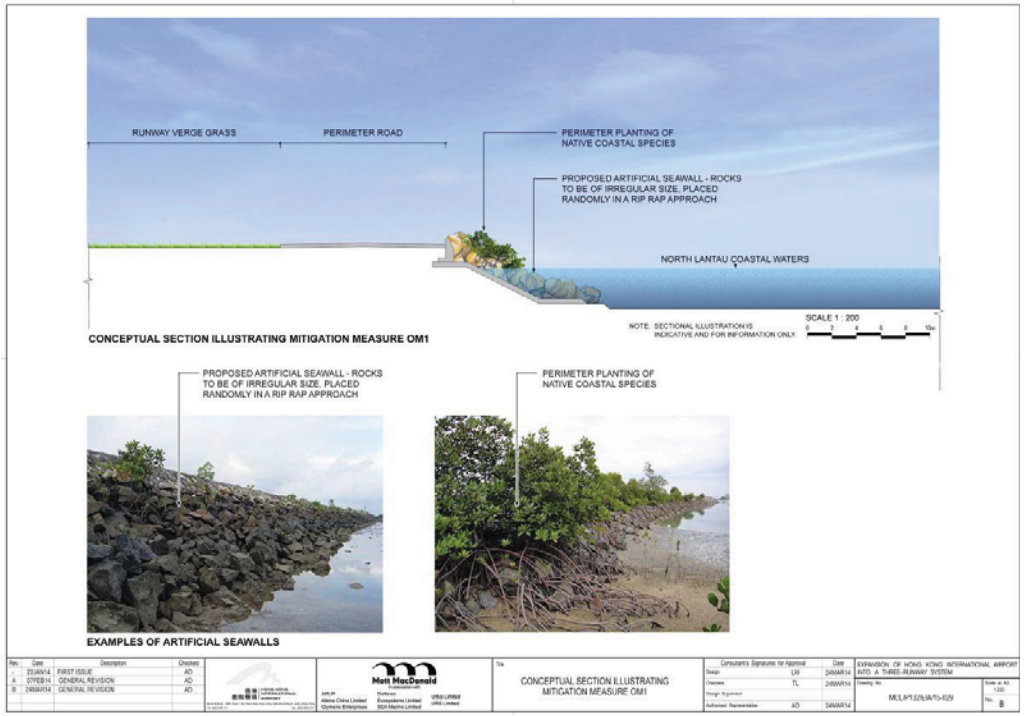 [OM6] “Greening measures, including vertical greening, green roofs, road verge planting and peripheral screen planting shall be implemented”: It is not possible at this stage to provide quantities of greening for buildings elevations, green roofs, and highways structures. Area of roadside verge greening is addressed below under OM9. Area of greening in the airside taxiway areas is addressed below under CM10. [OM7] “Compensatory Tree Planting for all felled trees shall be provided to the satisfaction of relevant Government departments. Required numbers and locations of compensatory trees shall be determined and agreed separately with Government during the tree felling application process under the relevant technical circulars.”: The broad target under the relevant technical circulars is 1:1 replacement of felled trees by tree number and tree girth.	

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		[OM9] "All streetscape areas and hard and soft lansdcape areas disturbed during construction shall be reinstated to equal or better quality (due to implementation of screen planting, road verge planting etc.) to the satisfaction of the relevant government departments.": The requirement is that 100% of disturbed areas shall be reinstated. The exact area that will be disturbed shall be minimised as far as practical and is estimated at approximately 16ha (this includes hardscape and softscape). [CM10] "Land formation works shall be followed with advanced hydroseeding around taxiways and runways." The area of airside soft landscape to be grassed is estimated at 270 ha. Grass species shall be selected so as not to attract birds.	
	➢ To provide photo montage(s) for the landscape design	Please refer to **Annex 1**.	
	➢ Quantifiable environmental targets/pledges and benchmarks against international standards/best practices if applicable	The pledge to become the world's greenest airport provides the basic guiding principle for the scheme design of the 3RS project. The TRC is a visually iconic feature and a key part of 3RS development. It will have a courtyard area on the Departure and Arrival levels, a feature that is not usually found in other airports. The courtyard will offer a green and relaxing environment for passengers. AAHK is currently looking into the design of the new passenger TRC to further enhance the passenger experience and visual characteristics at HKIA to set a new benchmark for establishment of a passenger friendly, green and environmentally sustainable concourse at HKIA. Other concepts such as provision of sunken gardens and interior landscaping provide opportunities for greening and creation of interesting areas within the future expanded airport. BEAM Plus Gold is currently the design target of the TRC, though alternatives based on other similar benchmarks such as LEED will be explored as part of the ongoing design work.	Details not in the EIA report as these are more related to the ongoing scheme design work
(G)	(G) <u>Waste management</u>		
	➢ Information on waste management plan for building design and operational phases which should drive towards a stricter waste minimization and recycling strategy	It has been described in the EIA Report Section 10.4.2.3 and the Table 10.18 that, in line with the existing airport operational policy to encourage recycling, recyclable portion of general refuse arisings from the 3RS project will be segregated and stored separately for delivery to outside licensed recyclers. The amounts of recyclable materials collected for recycling by AAHK had been increasing from 2008 to 2012 as detailed in the table below:	Section 10.4.2.3, Table 10.18

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Table 10.18: Amount of Waste Recycled by AAHK from 2008 to 2012

	Amount Collected for Recycling (ton)				
Recyclable Materials	**2008**	**2009**	**2010**	**2011**	**2012**
Cardboard	264	413	456	531	511
Paper	372	372	536	843	1,089
Metals	152	107	99	88	48
Plastics	13	16	14	57	53
Glass Bottles	16	17	3	6	9
Food Waste	19	42	37	115	1,133
Wooden Pallets, Vehicle Tyres, Lubricating Oil, Fluorescent Tubes, Toners, Batteries and Waste Cooking Oil	5	5	10	28	114
Total	840	972	1,154	1,668	2,957

Source: HKIA Annual Reports 2007/08, 2008/09, 2009/10, 2010/11 and 2011/12.

In 2012, a total of 2,957 tons of recyclable waste materials were collected for recycling by AAHK, representing a waste recycling rate of around 18%. With continuation and strengthening of the current waste recycling initiatives in both existing and future facilities of the project, it is anticipated that waste recycling rate would be improved in future years and the amount of general refuse to be disposal will be accordingly reduced.

The Airport Authority is committed to reduce waste sent to landfill and maximize the separation of recyclables from non-recyclable waste. We are happy to share with ACE members more about our on-going and planned initiatives as follows:

On-going initiatives:

- AA has recently established an internal waste management task force to set out strategies and programs to achieve its target of recycling 50% of waste generated at AA by 2021.
- AA is leading a joint program with Airport Council International to conduct surveys with Asia Pacific airports to understand recycling practices and challenges for cabin waste recycling. It is our target to develop common guidelines of cabin waste recycling to facilitate and promote more cabin waste separation by airlines.
- Recyclables from aircraft waste are sorted at the airside waste station
- A food waste recycling service has been provided for all F&B outlets in terminal buildings

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		and airport community since 2011. Food waste collected is recycled as fish food and soil conditioner. • Surplus food from HKIA has been collected and donated to Food Angel since 2013. The surplus food is cooked and donated to people in need. • Waste cooking oil generated from kitchens has been recycled by a local biodiesel manufacturer since 2008. All AA's diesel vehicles have used B5 biodiesel generated from waste cooking oil since 2009. • Plastic bags are provided free-of-charge to tenants (F&B, retail, office) to facilitate waste separation at source. • Trials has been conducted in the T1 food court on using paperless food trays. It is our target to reduce the use of paper mat and hence the waste generated from food court. • Retail and catering licensees are required to conduct waste separation at source as part of the environmental best practices. • Sit-down restaurants have already been required in license agreement to use reusable utensils and cutlery. **Planned initiatives:** • A Refuse Compactor and Recycling Facility (RRF) is proposed to be built within the Eastern Support Area in the proposed 3RS project. The RRF is used for the delivery, temporary storage, consolidating and sorting of recyclables, as well as refuse compacting. • AA will conduct a study to implement waste charging to tenants and airport business partners according to the Government's proposal of MSW charging. • Increase the number of recycling bins in the terminal buildings from 68 to 320 by Q4 2014.	
	➢ Possibility of mapping out a more efficient works schedule to minimize the use of construction and demolition (C&D) materials to be disposed of (including those generated from the golf course on the airport island upon its removal) so as to reduce the overall volume of C&D materials required to be	Every effort would be made to mininise the extent of excavation and to ensure that as much of the inert C&D materials generated by the project will be reused on-site as practicable. For this, the relevant construction works and programme have been carefully planned and developed, based on which the amounts of inert C&D materials to be generated and reused on-site have been estimated. As detailed in Appendix 10.1 (as reproduced in **Annex 2**):	S10.4.1.8 to S10.4.1.12, Appendix 10.1

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	imported; constraints of further reducing the net generation of C&D materials	• From 2015 Q3 to 2018 Q3, only about 1.7 Mm^3 of inert C&D materials (or only 18% of total inert C&D material quantity) would be generated, but the fill demand for land formation during the same period would be about 12.61 Mm^3 (or 87% of total fill demand) due to the need to form the majority of the land by 2018 to allow for the subsequent land-based works. Therefore, during this period, all the inert C&D material would be reused on-site for land formation as the demand would be more than supply. • From 2018 Q4 to 2022, about 7.85 Mm^3 of inert C&D materials (or 82% of total inert C&D material quantity) would be generated, but the fill demand for land formation during the same period would be only about 1.94 Mm^3 (or only 13% of total fill demand). Therefore, during this period, only about 1.94 Mm^3 of inert C&D materials would be reused on-site for land formation as this is limited by the demand. Of the about 7.85 Mm^3 of inert C&D materials generated during the period from 2018 Q4 to 2022, about 3.55Mm^3 would be from surplus surcharge materials generated in a single quarter, i.e., 2018 Q4. Surchage materials refer to the materials that would be placed on top of "newly" filled area for accelerating the initial settlement of the area. To minimize the total amount of surcharge materials required, the "rolling" surcharge arrangment has been adopted in the initial scheme design, which means the surcharge materials would be placed on different "newly" filled areas in turn. Despite the use of such "rolling" surcharge, it is inevitable that surplus surchange materials would be left over after most of the land has been formed. Because of the inevitable "mismatch" of fill supply and demand as explained above, while the total public fill demand (about 14.55 Mm^3) is more than the total inert C&D materials generation (about 9.54 Mm^3), only a portion (about 38%) of the inert C&D materials generated would be reused on-site for land formation. Nevertheless, during the detailed design stage, any room for further increasing the amount of on-site reuse of inert C&D materials generated will be explored. The aforementioned quantities of inert C&D materials have included, among others, inert soil materials to be excavated from the golf course during construction of the new underground APM depot.	
	➢ Projected increase in food waste generated from F&B outlets and plan for handling and further reducing food waste generated	As detailed in Section 10.4.2.2, it has been projected that about 46,190 ton/year of general refuse would be generated by operation of 3RS in year 2038, which cover, among others, food waste. For ACE members' reference, please note the following current procedures will be extended to future concourses	S10.4.2.2

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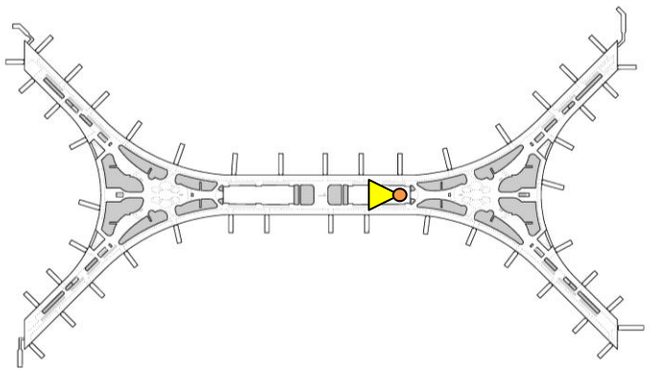
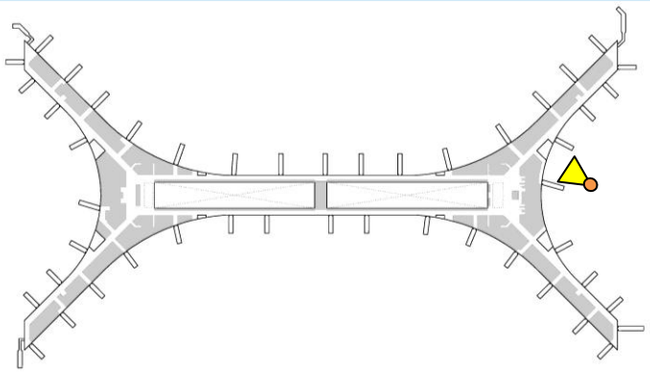
		and terminal buildings as they begin operations: • Since 2011, AA has initiated a food waste recycling program to F&B outlets and airline lounges operating in the terminal buildings, as well as airport business partners such as airline caterers, hotels, cargo terminals, airline headquarters. In 2013, around 1,600 tonnes of food waste was recycled through the program. • AA initiated a food rescue program in 2013 to collect surplus food from the airport community. AA sponsored a NGO Food Angel to buy a refrigerated truck and funded the food collection program for 3 years. In addition, AA has granted a storage room to Food Angel for free to facilitate their collection of surplus food within the terminal buildings. • From Aug 2013 to Mar 2014, around 8.7 tonnes of surplus food was collected from the airport community through the program and 12,607 meal boxes were produced and distributed to underprivileged communities.	



Updates on Third Runway Concourse Scheme Design

View at Central Courtyard



Updates on Third Runway Concourse Scheme Design

Sunken Garden

Updates on Third Runway Concourse Scheme Design

Passengers' Experience
Departure Level

Updates on Third Runway Concourse Scheme Design

Passengers' Experience
Arrival Level

Annex 2

Appendix 10.1 as Reproduced from the EIA Report

Timeframe	Inert C&D Materials Generated from the Project (in-situ volume, m^3)								Public Fill Demand for Land Formation (in-situ volume, m^3)		Inert C&D Materials Reused On-site for Land Formation (in-situ volume, m^3)		Inert C&D Materials Requiring Off-site Delivery (in-situ volume, m^3)		Public Fill to be Imported (in-situ volume, m^3)	
	Excavation for APM & BHS Tunnels, New APM Depot & Airside Tunnels, Piling Works for TRC & Other Facilities and Superstructure Construction Works	Surplus Surcharge Materials	Modification of Existing Northern Seawall	Excavation & Demolition and Superstructure Construction Works for T2 Expansion	Excavation for Improvement of Road Networks	HDD for Diversion of Existing Submarine Fuel Pipelines	Total Amount of Generation									
							Quarterly	Annually	Quarterly	Annually	Quarterly	Annually	Quarterly	Annually	Quarterly	Annually
Q1 2015	0	0	0	0	0	0	0	6,000	0	0	0	6,000	0	0	0	0
Q2 2015	0	0	0	0	0	0	0		0		0		0		0	
Q3 2015*	0	0	0	0	0	3,000	3,000		0		3,000		0		0	
Q4 2015*	0	0	0	0	0	3,000	3,000		0		3,000		0		0	
Q1 2016*	0	0	58,000	0	0	0	58,000	398,000	0	1,912,000	58,000	398,0	0		0	
Q2 2016*	0	0	98,000	0	0	0	98,000		0		98,000		0		0	
Q3 2016*	0	0	144,000	0	0	0	144,000		467,000		144,000		0		0	
Q4 2016	0	0	61,000	37,000	0	0	98,000		1,445,000		98,000		0		0	
Q1 2017	56,000	0	61,000	37,000	2,000	0	156,000	710,000	1,504,000	6,099,000	156,000	710,000	0		1,347,000	5,389,000
Q2 2017	130,000	0	40,000	37,000	3,000	0	210,000		1,557,000		210,000		0		1,347,000	
Q3 2017	130,000	0	7,000	37,000	3,000	0	177,000		1,524,000		177,000		0		1,347,000	
Q4 2017	130,000	0	0	37,000	0	0	167,000		1,514,000		167,000		0		1,347,000	
Q1 2018	140,230	0	0	37,000	0	0	177,230	4,359,230	1,514,000	4,788,000	177,230	773,230	0	3,586,000	1,336,770	4,014,770
Q2 2018	120,000	0	0	37,000	0	0	157,000		1,496,000		157,000		0		1,339,000	
Q3 2018	212,000	0	0	37,000	0	0	249,000		1,588,000		249,000		0		1,339,000	
Q4 2018	192,000	3,547,000	0	37,000	0	0	3,776,000		190,000		190,000		3,586,000		0	
Q1 2019	303,000	0	0	41,270	0	0	344,270	1,344,270	301,000	674,000	301,000	674,000	43,270	670,270	0	0
Q2 2019	330,000	0	0	49,000	0	0	379,000		164,000		164,000		215,000		0	
Q3 2019	264,000	0	0	7,000	0	0	271,000		128,000		128,000		143,000		0	
Q4 2019	343,000	0	0	7,000	0	0	350,000		81,000		81,000		[illegible]		0	
Q1 2020	360,000	0	0	0	0	0	360,000	1,531,000	116,000	835,000	116,000	835,00	[illegible]		[illegible]	
Q2 2020	394,000	0	0	0	0	0	394,000		209,000		209,000		[illegible]		[illegible]	
Q3 2020	408,000	0	0	0	0	0	408,000		255,000		255,000		[illegible]		[illegible]	
Q4 2020	369,000	0	0	0	0	0	369,000		255,000		255,000		[illegible]		[illegible]	
Q1 2021	357,000	0	0	0	0	0	357,000	689,000	243,000	243,000	243,000	243,000	[illegible]	446,000	[illegible]	0
Q2 2021	89,000	0	0	0	0	0	89,000		0		0		89,000		0	
Q3 2021	103,000	0	18,000	0	0	0	121,000		0		0		121,000		0	
Q4 2021	122,000	0	0	0	0	0	122,000		0		0		122,000		0	
Q1 2022	133,000	0	0	0	0	0	133,000	506,000	0	0	0	0	133,000	506,000	0	0
Q2 2022	60,000	0	0	0	0	0	60,000		0		0		60,000		0	
Q3 2022	60,000	246,000	0	0	0	0	306,000		0		0		306,000		0	
Q4 2022	7,000	0	0	0	0	0	7,000		0		0		7,000		0	
Total	**4,812,230**	**3,793,000**	**487,000**	**437,270**	**8,000**	**6,000**	**9,543,500**		**14,551,000**		**3,639,230**		**5,904,270**		**10,911,770**	

2015 - 2018 Q3:
Inert C&D materials generated: **1.70 Mm^3**
Public fill demand: 12.61 Mm^3
Inert C&D material reused on-site: **1.70 Mm^3**

2018 Q4 - 2022:
Inert C&D materials generated: 7.85 Mm^3
Public fill demand: **1.94 Mm^3**
Inert C&D material reused on-site: **1.94 Mm^3**

*Note: Inert C&D materials generated from Q3 of 2015 to Q3 of 2016 would be temporarily stored in stockpiles, which would then be reused for land formation from Q3 of 2016 onwards.