North East New Territories (NENT) Landfill Extension

Environmental Mitigation Implementation Schedule (EMIS) Construction Phase Recommended Precautionary/Mitigation Measures EIA EM&A Objectives of the Who to Location of the What requirement or Status Ref. Log (to be implemented when the trigger level is exceeded, where Recommended implement measures standards for the Ref. necessarv) Measures & Main the measures to achieve? Concerns to address measures? Air Quality S3.8. S3.1.8 The contractor shall follow the procedures and requirements given in the Good construction Entire NENT To control the dust Contractor \checkmark Air Pollution Control (Construction Dust) Regulation. I andfill impact to within the 1 site practices to • Dust emission from construction vehicle movement is confined control the dust Extension site HKAQO and TM - EIA criteria (Ref. 1-hr and within the worksites area. impact at the nearby sensitive receivers to 24hr TSP levels are 500 ٠ Watering facilities will be provided at every designated vehicular within the relevant μ g/m⁻³ and 260 μ g/m⁻³, exit point. Good site practice is recommended during construction phase. criteria. respectively) ٠ Construction Noise S4 S4.9 Use of good site practices to limit noise emissions by considering the Control construction Entire Noise Control Ordinance 1) Contractor \checkmark airborne noise by construction following: Only well-maintained plant should be operated on-site and plant means of good site site • should be serviced regularly during the construction programme; practices Machines and plant (such as trucks, cranes) that may be in ٠ intermittent use should be shut down between work periods or should be throttled down to a minimum: Plant known to emit noise strongly in one direction, where possible, ٠ be orientated so that the noise is directed away from nearby NSRs; Silencers or mufflers on construction equipment should be properly ٠ fitted and maintained during the construction works; ٠ Mobile plant should be sited as far away from NSRs as possible and practicable; ٠ Material stockpiles, mobile container site officer and other structures should be effectively utilised, where practicable, to screen noise from on-site construction activities. S4 S4.9 2) Select "Quiet plants" which comply with the BS 5228 Part 1 or TM Reduce the noise Entire Noise Control Ordinance \checkmark Contractor levels of plant items construction & its TM standards. site Annex 5. TM-EIA

EIA	EM&A	Recommended Precautionary/Mitigation Measures	Objectives of the	Who to	Location of	What requirement or	Status
Ref	Log	(to be implemented when the trigger level is exceeded, where	Recommended	implement	the	standards for the	
	Ref	necessary)	Measures & Main	the	measures	measures to achieve?	
			Concerns to address	measures?			
Constru	uction Rund) /f					
S5.8.1	S5.2.1	Construction on Site Runoff	Control construction	Contractor	Entire	ProPECC PN 1/94	\checkmark
		• At the start of site establishment, perimeter cut-off drains to direct	runoff and erosion		construction		
		off-site water around the site should be constructed with internal	from site surface,		site	Water Pollution Control	
		drainage works and erosion and sedimentation control facilities	drainage channel,			Ordinance	
		implemented. Channels (both temporary and permanent drainage	stockpiles, wheel				
		pipes and culverts), earth bunds or sand bag barriers should be	washing facilities, etc				
		provided on site to direct stormwater to silt removal facilities.	to minimize water				
		• The dikes or embankments for flood protection should be	quality during				
		implemented around the boundaries of earthwork areas. Temporary	construction stage				
		ditches should be provided to facilitate the runoff discharge into an					
		appropriate watercourse, through a silt/sediment trap. The					
		sediment/silt traps should be incorporated in the permanent					
		drainage channels to enhance deposition rates.					
		• The design of efficient silt removal facilities should be based on the					
		guidelines in Appendix A1 of ProPECC PN 1/94, which states that					
		the retention time for silts and sediment traps should be 5 minutes					
		under maximum flow conditions.					
		Construction works should be programmed to minimize surface					
		excavation works during the rainy seasons (April to September). All					
		exposed earth areas should be completed and vegetated as soon					
		as possible after earthworks have been completed, or alternatively,					
		within 14 days of the cessation of earthworks where practicable. If					
		excavation of soil cannot be avoided during the rainy season, or at					
		any time of year when rainstorms are likely, exposed slope surfaces					
		should be covered by tarpaulin or other means.					
		• The overall slope of the site should be kept to a minimum to reduce					
		the erosive potential of surface water flows, and all traffic areas and					
		access roads protected by coarse stone ballast. An additional					
		advantage accruing from the use of crushed stone is the positive					
		traction gained during prolonged periods of inclement weather and					
		the reduction of surface sheet flows.					
		All drainage facilities and erosion and sediment control structures					
		should be regularly inspected and maintained to ensure proper and					
		efficient operation at all times and particularly following rainstorms.					
		Deposited silt and grit should be removed regularly and disposed of					
		by spreading evenly over stable, vegetated areas.					

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	Ref		Measures & Main	the	measures	measures to achieve?	
			Concerns to address	measures?			
Construc	ction Runo	ff (Cont'd)					
S5.8.1	S5.2.1	Measures should be taken to minimise the ingress of site drainage into	Control construction	Contractor	Entire	ProPECC PN 1/94	\checkmark
		excavations. If the excavation of trenches in wet periods is necessary,	runoff and erosion		Construction		
		they should be dug and backfilled in short sections wherever	from site surface,		site	Water Pollution Control	
		practicable. Water pumped out from trenches or foundation	drainage channel,			Ordinance	
		excavations should be discharged into storm drains via silt removal	stockpiles, wheel				
		facilities.	washing facilities, etc				
		• Open stockpiles of construction materials (for example, aggregates,	to minimize water				
		sand and fill material) of more than 50 m ³ should be covered with	quality during				
		tarpaulin or similar fabric during rainstorms. Measures should be taken	construction stage				
		to prevent the washing away of construction materials, soil, silt or					
		debris into any drainage system.					
		• Manholes (including newly constructed ones) should always be					
		adequately covered and temporarily sealed so as to prevent silt,					
		construction materials or debris being washed into the drainage					
		system and storm runoff being directed into foul sewers.					
		• Precautions to be taken at any time of year when rainstorms are likely,					
		actions to be taken when a rainstorm is imminent or forecasted, and					
		actions to be taken during or after rainstorms are summarised in					
		Appendix A2 of ProPECC PN 1/94. Particular attention should be paid					
		to the control of silly surface runoff during storm events, especially for					
		areas located near steep slopes.					
		All vehicles and plant should be cleaned before leaving a construction					
		site to ensure no earth, mud, debris and the like is deposited by them					
		on roads. An adequately designed and sited wheel washing bay					
		should be provided at every construction site exit. Wash-water should					
		have sand and silt settled out and removed at least on a weekly basis					
		to ensure the continued efficiency of the process. The section of					
		access road leading to, and exiting from, the wheel-wash bay to the					
		public road should be paved with sufficient backfall toward the wheel-					
		wash bay to prevent vehicle tracking of soil and silly water to public					
		roads and drains.					
		Oil interceptors should be provided in the site drainage system					
		downstream of any oil/fuel pollution sources. The oil interceptors					
		snould be emptied and cleaned regularly to prevent the release of oil					
		and grease into the storm water drainage system after accidental					
		spinage. A bypass should be provided for the oil interceptors to					
		prevent flushing during neavy rain.					

EIA Ref.	EM&A Log Ref	Recommended Precautionary/Mitigation Measures (to be implemented when the trigger level is exceeded, where necessary)	Objectives of the Recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	What requirement or standards for the measures to achieve?	Status
Construc	ction Runo	ff					
S5.8.1	S5.2.1	 Construction solid waste, debris and rubbish on site should be collected, handled and disposed of properly to avoid water quality impacts. Requirements for solid waste management are detailed in Section 6 of this Report. All fuel tanks and storage areas should be provided with docks and sited on sealed areas, within bunds of a capacity equal to 110% of the storage capacity of the largest tank to prevent spilled fuel oils from reaching water sensitive receivers nearby. To prevent pollution risks arising from works area (waste reception area) and haul roads, intercepting bund or barrier along the roadside should be constructed. 	Control construction runoff and erosion from site surface, drainage channel, stockpiles, wheel washing facilities, etc to minimize water quality during construction stage	Contractor	Entire construction site	ProPECC PN 1/94 Water Pollution Control Ordinance	✓
S5.8.1	\$5.2.1	 Sewage Effluent from Workforce Portable chemical toilets and sewage holding tanks are recommended for handling the construction sewage generated by the workforce. A licensed contractor should be employed to provide appropriate and adequate portable toilets and be responsible for appropriate disposal and maintenance. Notices will be posted at conspicuous locations to remind the workers not to discharge any sewage or wastewater into the nearby environment during the construction phase of the Project. Regular environmental audit on the construction site can provide an effective control of any malpractices and can achieve continual improvement of environmental performance on site. 	Control sewage effluent arising from the sanitary facilities provided for the on- site construction workforce	Contractor	On-site sanitary facilities	ProPECC PN 1/94 Water Pollution Control Ordinance Waste Disposal Ordinance	✓
S5.8.1	S5.2.1	<u>Accidental Spillage of Chemical</u> Any service workshop and maintenance facilities shall be located within a bunded area, and sumps and oil interceptors shall be provided. Maintenance of equipment involving activities with potential for leakage and spillage will only be undertaken within the areas.	Control of chemical leakage	Contractor	Service workshop and maintenance facilities	ProPECC PN 1/94 Water Pollution Control Ordinance Waste Disposal Ordinance	V

EIA Ref.	EM&A Log Ref	Recommended Precautionary/Mitigation Measures (to be implemented when the trigger level is exceeded, where necessary)	Objectives of the Recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	What requirement or standards for the measures to achieve?	Status
Erosion		casures	Erecien control	Controptor	Drainaga		
S5.8.2	\$5.2.2	 Erosion Control /Measures a. Preserve Natural Vegetation This Best Management Practices will involve preserving natural vegetation to the greatest extent possible during the construction process. and after construction where appropriate. Maintaining natural vegetation is the most effective and inexpensive form of erosion prevention control. b. Provision of Buffer Zone A buffer zone consists of an undisturbed area or strip of natural vegetation or an established suitable planting adjacent to a disturbed area that reduces erosion and runoff. The rooted vegetation holds soils acts as a wind break and filters runoff that may leave the site. c. Seeding (Temporary/Permanent) A well-established vegetative cover is one of the most effective methods of reducing erosion. Vegetation should be established on construction sites as the slopes are finished, rather than waiting until all the grading is complete. Besides, Hydroseeding will be applied on the surface of stockpiled soil and on temporary soil covers for inactive tipping areas to prevent soil erosion during rainy season. d. Ground Cover Ground Cover is a protective layer of straw or other suitable material applied to the soil surface. Straw mulch and/or hydromulch are also used in conjunction with seeding of critical areas for the establishment of temporary or permanent vegetation. Ground cover provides immediate temporary protection from erosion. Mulch also enhances plant establishment by conserving moisture, holding fertilizer, seed, and topsoil 	Erosion control	Contractor	Drainage system	ProPECC PN 1/94 Water Pollution Control Ordinance	
		in place, and moderating soil temperatures.					

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S5.8.2	S5 2 2	e Hydraulic Application	Erosion control	Contractor	Drainage	ProPECC PN 1/94	
50.0.2	55.2.2	 e. Hydraulic Application Hydraulic application is a mechanical method of applying erosion control materials to bare soil in order to establish erosion-resistant vegetation on disturbed areas and critical slopes. By using hydraulic equipment, soil amendments, mulch, tackifying agents, Bonded Fiber Matrix (BFM) and liquid co-polymers can be uniformly broadcast, as homogenous slurry, onto the soil. These erosion and dust control materials can often be applied in one operation. f. Sod Establishes permanent turf for immediate erosion protection and stabilizes rainageways. g. Matting There are numerous erosion control products available that can be described in various ways, such as matting, blankets, fabric and nets. These products are referred as matting. A wide range of materials and combination of materials are used to produce matting including, but not limited to: straw, jute, wood fiber, coir (coconut fiber), plastic netting, and Bonded Fiber Matrix. The selection of mattring materials for a site can make a significant difference in the effectiveness of the Best Management Practices. h. Plastic Sheeting Plastic Sheeting will provide immediate protection to slopes and stockpiles. However, it has been known to transfer erosion problems because water will sheet flow off the plastic at high velocity. This is usually attributable to poor application, installation and maintenance. i. Dust Control Dust Control is one preventative measure to minimize the wind transport of soil, prevent traffic hazards and reduce sediment transported by wind and deposited in water resources. 			system	Water Pollution Control Ordinance	•

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		necessary)	Measures & Main			measures to	
			Concerns to			achieve?	
			address				
Surface W	ater Drainag	je System					
S5.8.2	S5.2.2	Temporary surface water drainage system will be provided to	Surface Water	Contractor	Surface water	Water Pollution	\checkmark
		manage runoff during construction and operation. This system will	Management/		system	Control Ordinance	
		consist of channels as constructed around the perimeter of the site	Control run off		Construction		
		area. This system will collect surface water from the areas of higher				TM-water	
		elevations to those of lower elevations and ultimately to the point					
		of discharge. Erosion will therefore be minimised.					
		The temporary surface water drainage system will include the use					
		of a silt fence around the soil stockpile areas to prevent sediment					
		from entering the system. Regular cleaning will be carried out to					
		prevent blockage of the passage of water flow in silt fence.					
		Intermediate drainage system will be installed for filled cell/phase.					
		The major purpose of the intermediate drainage system is to					
		prevent the clean surface water run-off from the filled phases					
		coming into contact with the waste mass in active cell and to					
		prevent excessive surface water infiltration through the					
		intermediate cover, thus contribute to increasing volume of					
		leachate. The intermediate drainage system will collect the clean					
		surface water run-off and divert it to the permanent discharge					
		channels connected to the public drainage system.					
		In addition, surface flow from the haul road (especially near the					
		wheel washing facility) will be collected to a dry weather flow					
		interceptor and conveyed to the on-site leachate treatment plant					
		for further treatment.					

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			Concerns to	measures?		measures to	
			address			achieve?	
S6	WM1	C&D Materials (Cont'd)	Good site	Contractor	Entire	Waste Disposal	\checkmark
		Excavated slope, stockpiled material and bund walls should be covered by tarpaulin until	practice to		construction	Ordinance	
		used in order to prevent wind-blown dust during dry weather, and to reduce muddy runoff	minimise C&D		site		
		during wet weather. Appropriate measures to minimise windblown litter and dust during	waste generation			ETWB TC(W)	
		transportation of waste by either covering trucks or by transporting wastes in enclosed	and			No. 19/2005	
		containers.	reuse/recycle all				
			C&D on-site as			DEVB TC(W)	
		If any topsoil-like materials need to be stockpiled for any length of time, consideration	far as possible			No. 6/2010	
		should be given to hydroseeding of the topsoil on the stockpile to improve its visual					
		appearance and prevent soil erosion.					
		Nomination of approved personnel to be responsible for good site practices and making					
		arrangements for collection of all wastes generated on-site and effective disposal.					
		Training of site personnel for cleanliness, proper waste management procedures					
		including chemical waste handling, and waste reduction, reuse and recycling concepts.					
		Regular cleaning and maintenance programme systems, sumps and oil interceptors.					
		Prior to disposal of C&D waste, wood, steel and other metals should be separated for re-					
		use and/or recycling to minimise the quantity of waste to be disposed of to landfill. Proper					
		storage and site practices should be implemented to minimise the potential for damage					
		or contamination of construction materials.					
		Plan and stock construction materials carefully to minimise amount of waste generated					
		and avoid unnecessary generation of waste. Minimise excessive ordering of concrete					
		mortars and cement arout by doing careful check before ordering					
56	\W/M2	Chemical Waste	Ensure proper	Contractor	Entire	Waste Disposal	
00	V IVIZ	Chemical waste that is produced as defined by Schedule 1 of the Waste Disposal	disposal of	Contractor	construction	(Chemical	`
		(Chemical Waste) (General) Regulation should be handled in accordance with the Code	chemical waste		site	Waste) General	
		of Practice on the Packaging, Labelling and Storage of Chemical Wastes	denerated on-site		5110	Regulation	
			to minimise the			1 Cogulation	
		Plant/equipment maintenance schedule should be designed to optimise maintenance	associated			Code of Practice	
		effectiveness and to minimise the generation of chemical wastes. Where possible	hazards on			on the	
		chemical wastes (e.g. waste lube oil) should be recycled by licensed treatment facilities	human health			Packaging.	
			and environment			Labelling and	
						Storage of	
						Chemical Waste	

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			Concerns to	measures?		measures to	
			address			achieve?	
S6	WM2	Chemical Waste (Cont'd)	Ensure proper	Contractor	Entire	Waste Disposal	\checkmark
		Containers used for storage of chemical wastes should be suitable for the substance they	disposal of		construction	(Chemical	
		are notaing, resistant to corrosion, maintained in a good condition, and securely closed;	cnemical waste		site	Waste) General	
		FIRE Display a label in English and Chinese in accordance with instructions prescribed in	te minimine the			Regulation	
		Schedule 2 of the Regulation	associated			Code of Practice	
			hazards on			on the	
		The storage area for chemical wastes should be clearly labelled and used solely for	human health			Packaging	
		storage of chemical waste, enclosed with at least 3 sides, having an impermeable floor	and environment.			Labelling and	
		and bund of sufficient capacity to accommodate 110% of volume of the largest container				Storage of	
		or 20 % of total volume of waste stored in that area, whichever is the greatest, having				Chemical Waste	
		adequate ventilation, being covered to prevent rainfall entering, and being arranged so					
		that incompatible materials are adequately separated.					
		Chemical waste should be collected by licensed waste collectors and disposed of at					
		licensed facility, e.g. Chemical Waste Treatment Centre.					
	14/14/2						
56	VVIVI3	General Refuse	IVIINIMISE	Contractor	⊢ntire	vvaste Disposal	▲/
	_	Concerned refuse generated on site should be preperly stored in opelaged bing or	concretion of	Contractor	construction	Ordinanco	Y
	-	General refuse generated on-site should be properly stored in enclosed bins or comparison units separately from construction and chemical wastes	generation of	Contractor	construction	Ordinance	v
		General refuse generated on-site should be properly stored in enclosed bins or compaction units separately from construction and chemical wastes.	generation of general refuse to		construction site	Ordinance	Y
		General refuse generated on-site should be properly stored in enclosed bins or compaction units separately from construction and chemical wastes.	generation of general refuse to avoid odour, pest and visual		construction site	Ordinance	v
		General refuse generated on-site should be properly stored in enclosed bins or compaction units separately from construction and chemical wastes. All recyclable materials (separated from the general waste) should be stored on-site in appropriate containers with cover prior to collection by a local recycler for subsequent	generation of general refuse to avoid odour, pest and visual nuisance		construction site	Ordinance	v
		General refuse generated on-site should be properly stored in enclosed bins or compaction units separately from construction and chemical wastes. All recyclable materials (separated from the general waste) should be stored on-site in appropriate containers with cover prior to collection by a local recycler for subsequent reuse and recycling. Residual, non-recyclable, general waste should be stored in	generation of general refuse to avoid odour, pest and visual nuisance		construction site	Ordinance	v
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		General refuse generated on-site should be properly stored in enclosed bins or compaction units separately from construction and chemical wastes. All recyclable materials (separated from the general waste) should be stored on-site in appropriate containers with cover prior to collection by a local recycler for subsequent reuse and recycling. Residual, non-recyclable, general waste should be stored in appropriate containers to avoid odour. Regular collection should be arranged by an approved waste collector in purpose-built vehicles that minimise environmental impacts	generation of general refuse to avoid odour, pest and visual nuisance		construction	Ordinance	v
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		General refuse generated on-site should be properly stored in enclosed bins or compaction units separately from construction and chemical wastes. All recyclable materials (separated from the general waste) should be stored on-site in appropriate containers with cover prior to collection by a local recycler for subsequent reuse and recycling. Residual, non-recyclable, general waste should be stored in appropriate containers to avoid odour. Regular collection should be arranged by an approved waste collector in purpose-built vehicles that minimise environmental impacts during transportation Reputable waste collector should be employed by the Contractor to remove general refuse from the site, separately from construction and chemical wastes, on a daily basis to minimise odour, pest and litter impacts. Burning of refuse on construction sites is	generation of general refuse to avoid odour, pest and visual nuisance		construction site	Ordinance	v
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		General refuse generated on-site should be properly stored in enclosed bins or compaction units separately from construction and chemical wastes. All recyclable materials (separated from the general waste) should be stored on-site in appropriate containers with cover prior to collection by a local recycler for subsequent reuse and recycling. Residual, non-recyclable, general waste should be stored in appropriate containers to avoid odour. Regular collection should be arranged by an approved waste collector in purpose-built vehicles that minimise environmental impacts during transportation Reputable waste collector should be employed by the Contractor to remove general refuse from the site, separately from construction and chemical wastes, on a daily basis to minimise odour, pest and litter impacts. Burning of refuse on construction sites is prohibited by law.	generation of general refuse to avoid odour, pest and visual nuisance		construction site	Ordinance	v
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EIA	EM&A	Recommended Precautionary/Mitigation Measures	Objectives of the	Who to	Location of	What	
Ref.	Log	(to be implemented when the trigger level is exceeded, where necessary)	Recommended	implement	the measures	requirement or	
	Ref		Measures & Main	the		standards for the	
			Concerns to	measures?		measures to	
			address			achieve?	
S6	WM3	General Refuse (Cont'd)	Minimise	Contractor	Entire	Waste Disposal	\checkmark
		Office waste paper should recycled if the volume warrant collection by recyclers.	generation of		construction	Ordinance	
		Participation in community waste paper recycling programme should be considered by	general refuse to		site		
		the Contractor, including waste paper, aluminium cans, plastic bottles, waste batteries,	avoid odour, pest				
		etc.	and visual				
			nuicanco				

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Ref.	Log Ref	(to be implemented when the trigger level is exceeded, where	Recommended	implement	the measures	standards for the measures	
		necessary)	Measures & Main	the		to achieve?	
			Concerns to	measures?			
			address				
LFG							
Within	NENT Lan	dfill Extension					
S7	LFG1	Special LFG precautions should be taken due to close proximity	To minimise the risk	Contractor	Entire	Landfill Gas Hazard	\checkmark
		of NENT landfill extension site to existing landfill to avoid	of LFG hazards to		construction	Assessment Guidance Note	
		potential hazards of LFG exposure (ignition, explosion,	personnel in		site	(EPD/TR8/97)	
		asphyxiation, toxicity).	construction site				
S7	LFG2	Prominent safety warning signs should be erected on-site to alert				F&IU (Confined Spaces)	\checkmark
		all personnel and visitors of LFG hazards during excavation				Regulations	
		WORKS.					
S/	LFG3	No smoking or burning should be permitted on-site.				Code of Practice on Safety	Ý
S7	LFG4	Prominent 'No smoking' and 'No Naked Flames' signs should be					\checkmark
		erected on-site.				Commed Spaces	
S7	LFG5	No worker should be allowed to work alone at any time in					\checkmark
	. = 0.0	excavated trenches or confined areas on-site.					
S/	LFG6	Adequate fire fighting equipment should be provided on-site.					√
S7	LFG7	Construction equipment should be equipped with vertical					\checkmark
		exhaust at least 0.6m above ground installed with spark					
		arrestors.					
S/	LFG8	Electrical motors and extension cords should be explosion-proof					\checkmark
07	1500	and intrinsically safe for use on-site.					
57	LFG9	Permit to work' system should be implemented.					V
S7	LFG10	Welding, flame-cutting or other hot works should be conducted					\checkmark
		only under Permit to Work system following clear safety					
		requirements, gas monitoring procedures and presence of					
67		Qualitieu persons to supervise trie works. For piping accombly or conduit construction, all values and contained.	To minimico the risk	Contractor	Entiro	Landfill Cap Hazard	
51	LFGII	For piping assembly of conduit construction, all valves and seals	of LEC bazarda to	Contractor			v
		accumulation and migration of LEG. If installation of large	nersonnel in		site	(FPD/TR8/97)	
		diameter pipes (diameter >600mm) is required the pipe ends	construction site				
		should be sealed on one side during installation Forced				F&IU (Confined Spaces)	
		ventilation is required prior to operation of installed pipeline.				Regulations	
		Forced ventilation should also be required for works inside					
		trenches deeper than 1m.				Code of Practice on Safety	
S7	LFG12	Frequency and location of LFG monitoring within excavation				and Health at Work in	\checkmark
		area should be determined prior to commencement of works.				Confined Spaces	
		LFG monitoring in excavations should be conducted at no more					
		than 10mm from exposed ground surface.					

EIA	EM&A	Recommended Precautionary/Mitigation Measures	Objectives of the	Who to	Location of	What requirement or	Status
Ref.	Log Ref	(to be implemented when the trigger level is exceeded, where	Recommended	implement	the measures	standards for the measures	
		necessary)	Measures & Main	the		to achieve?	
			Concerns to	measures?			
			address				
LFG							
Within	NENT Lan	dfill Extension					
S7	LFG13	For excavation works, LFG monitoring should be conducted (1)	To minimise the risk	Contractor	Entire	Landfill Gas Hazard	\checkmark
		at ground surface prior to excavation, (2) immediately before	of LFG hazards to		construction	Assessment Guidance Note	
		workers entering excavations, (3) at the beginning of each half-	personnel in		site	(EPD/TR8/97)	
		day work, and (4) periodically throughout the working day when	construction site				
		workers are in the excavation.				F&IU (Confined Spaces)	
S7	LFG14	Any cracks on ground level encountered on-site should be				Regulations	\checkmark
		monitored for LFG periodically. Appropriate action should be					
		taken in accordance with the action plan in Table 7.6 of EIA				Code of Practice on Safety	
		Report.				and Health at Work in	
S7	LFG15	LFG precautionary measures involved in excavation and piping				Confined Spaces	\checkmark
		works should be provided in accordance with LFG Guidance					
		Note and included in Safety Plan of construction phase.					
		Temporary offices or buildings should be located where free LFG					
		has been proven or raised clear of ground at a separation					
		distance of at least 500mm.					
S7	LFG16	For large development such as NENT landfill extension, a Safety					\checkmark
		Officer trained in the use of gas detection equipment and LFG-					
		related hazards should be present on-site throughout the					
		groundwork phase. The Safety Officer should be provided with					
		an intrinsically safe portable instrument appropriately calibrated					
		and capable of measuring the following gases:					
		•CH ₄ : 0-100% and LEL: 0-100%/v					
		•CO ₂ : 0-100%					
		•O2: 0-21%					
S7	LFG17	Periodically during groundwork construction, the works area					\checkmark
		should be monitored for CH_4 CO_2 and O_2 using appropriately					
		calibrated portable gas detection equipment. The monitoring					
		rrequency and areas should be established prior to					
		commencement of groundwork either by Safety Officer or					
		appropriately qualified person. Routine monitoring should be					
		carried out in all excavations, manholes,					
		created by temporary storage of building materials on-site. All					
		measurements in excavations should be made with monitoring					
		tube located not more than 10mm from exposed ground surface.					

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EIA	EM&A	Recommended Precautionary/Mitigation Measures	Objectives of the	Who to	Location of the	What requirement or	Status
Ref.	Log	(to be implemented when the trigger level is exceeded, where	Recommended	implement the	measures	standards for the	
	Ref	necessary)	Measures & Main	measures?		measures to achieve?	
			Concerns to				
			address				
Within I	NENT Lan	dfill Extension (Cont'd)					
S7	LFG18	For excavations deeper than 1m, measurements should be	To minimise the	Contractor	Entire construction	Landfill Gas Hazard	\checkmark
		conducted:	risk of LFG		site	Assessment	
		At ground surface before excavation commences;	hazards to			Guidance Note	
		Immediately before any worker enters the excavation;	personnel in			(EPD/TR8/97)	
		• At the beginning of each working day for entire period the					
		excavation remains open; and				F&IU (Confined	
		• Periodically throughout the working day whilst workers are in				Spaces) Regulations	
		excavation.					
S7	LFG19	For excavations between 300mm and 1m, measurements should be				Code of Practice on	\checkmark
		conducted:				Safety and Health at	
		Directly after excavation has been completed; and				Spaces	
		Periodic all whilst excavation remains open.					
S7	LFG20	For excavations less than 300mm, monitoring may be omitted at the					\checkmark
		discretion of Safety Officer or appropriately gualified person.					

EIA	EM&A	Recommended Precautionary/Mitigation Measures	Objectives of the	Who to	Location of	What requirement or	Status
Ref.	Log	(to be implemented when the trigger level is exceeded, where	Recommended	implement	the measures	standards for the measures	
	Ref	necessary)	Measures & Main	the		to achieve?	
			Concerns to	measures?			
			address				
Lands	scape and \	/isual Phases					
S8	LV1	Advanced screening tree planting	To minimise the	Contractor	Entire	DEVB TC(W) No. 4/2020 -	Advanced screen tree
		Early planting using fast growing trees and tall shrubs at	impact on existing		construction	Tree Preservation	planting is under planning.
		strategic locations within site to block major view corridors	vegetation retained		site		
		to the site from the VSRs, and to locally screen haul roads,	by personnel in			DEVB TC(W)) No. 6/2015 -	
		excavation works and site preparation works.	construction			Maintenance of Vegetation	
		Roadside planter and shrub planting design in front of	To provide initiation			and Hard Landscape	
		Cheung Shan Temple.	on permanent			Features	
S8	LV2	Boundary Green Belt planting	landscape and				To be implemented during
		Considerable planting belts proposed around the site	visual mitigation			DEVB TC(W) No. 6/2011 -	operation phase
		perimeter and the construction of temporary soil bunds will	measures			Maintenance of Man-made	
		screen the landfill operations to a certain degree. Fast				Slopes and Emergency	
		growing and fire resistant plant species will be used.				Repair on Stability of Land	
S8	LV3	Temporary landscape treatment as green surface cover					Grass hydroseeding will be
		• For certain areas where landfilling operations would have					applied at Portion E3-2.
		to be suspended temporarily for periods of years, simple					
		temporary landscape treatment such as hydroseeding					
		should be considered. During construction and operational					
		phases, grass hydroseeding or synthetic covering material					
		of green colour should also be used as a temporary slope					
		cover if applicable.					
S8	LV4	Existing tree preservation					\checkmark
		Transplant existing trees and vegetation, which are					
		identified as ecologically significant in Ecological Impact					
		Assessment and as rare tree species recorded in the tree					
		survey, under circumstances where technically feasible.					
		For all affected trees, the principle of avoidance of tree					
		felling and tree transplanting of tree before felling should					
		apply whenever possible. A tree felling application should					
		be submitted to DEVB-GLTMS and be approved before					
		any trees are felled or transplanted.					

EIA Ref.	EM&A Log Ref	Recommended Precautionary/Mitigation Measures (to be implemented when the trigger level is exceeded, where necessary)	Objectives of the Recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	What requirement or standards for the measures to achieve?	Status			
Ecolog	Ecology Constraint Massures:									
Gener	$\begin{array}{c c c c c c c c c c c c c c c c c c c $									
510		Restriction of construction activities to the work areas that	10 minimise	Contractor	Enure		∼			
0.10	50	would be clearly demarcated.	environmental		construction	Persons (ProPECC),				
S10	E2	Reinstatement of the work areas immediately after completion	impacts and		site	Construction Site Drainage	\checkmark			
		of the works.	therefore potential			(PN1/94)				
S10	E3	Only well-maintained plant should be operated on-site and plant	ecological impacts				\checkmark			
		should be serviced regularly during the construction	within and near the			Code of Practice on the				
		programme.	construction site			Packaging, Labelling and				
S10	E4	Machines and plant (such as trucks, cranes) that may be in				Storage of Chemical Wastes,	\checkmark			
		intermittent use should be shut down between work periods or				EPD (1992)				
		should be throttled down to a minimum.								
S10	E5	Plant known to emit noise strongly in one direction, where				ETWB TC(W)) No. 33/2002	\checkmark			
		possible, be orientated so that the noise is directed away from				Management of Construction				
		nearby NSRs.				and Demolition Material				
S10	E6	Silencers or mufflers on construction equipment should be				Including Rock	To be implemented			
		properly fitted and maintained during the construction works.								
S10	E7	Mobile plant should be sited as far away from NSRs as possible				DEVB TC(W) No. 6/2010 Trip	\checkmark			
		and practicable.				Licket System for Disposal of				
S10	E8	Material stockpiles, site office and other structures should be				Construction and Demolition	\checkmark			
		effectively utilised, where practicable, to screen noise from on-				Materials				
		site construction activities.								
<u>810</u>	E 0	Lice of "quiet" plant and working methods				EIWBIC(W)No.19/2005	1			
510	E9	ose or quier plant and working methods.				Environmental Management	v			
S10	E10	Construction phase mitigation measures in the Practice Note				on Construction Sites	\checkmark			
		for Professional Persons on Construction Site Drainage.								

North East New Territories (NENT) Landfill Extension

Environ	mental Mi	tigation Implementation Schedule (EMIS) Construction Phase					
EIA Ref.	EM&Ā Log Ref	Recommended Precautionary/Mitigation Measures (to be implemented when the trigger level is exceeded, where necessary)	Objectives of the Recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	What requirement or standards for the measures to achieve?	Status
Ecolo	gy						
Gene	ral Protec	tion Measures:					
S10	E11	Design and set up of the temporary on-site drainage system will be undertaken by the contractor prior to the commencement of construction.	To minimise environmental impacts and therefore potential ecological impacts within and near the construction site	Contractor	Entire construction	WBTC No. 12/2002, Specifications Facilitating the Use of Recycled Aggregates WBTC Nos. 25/99,25/99A and 25/99C. Incorporation of Information on Construction and Demolition Material Management in Public Works Subcommittee Papers	\checkmark
S10	E12	Design and incorporation of silt/sediment traps in the permanent drainage channels to enhance deposition rates and regular removal of reposited silt and grit.					×
S10	E13	Minimization of surface excavation works during the rainy seasons (April to September), and in particular,control of silty surface runoff during storm events, especially for areas located near steep slopes.					To be implemented during rainy seasons
S10	E14	Regular inspection and maintenance of all drainage facilities and erosion and sediment control structures to ensure proper and efficient operation at all times and particularly following rainstorms.					×
S10	E15	Provision of oil interceptors in the drainage system downstream of any oil/fuel pollution sources					\checkmark