
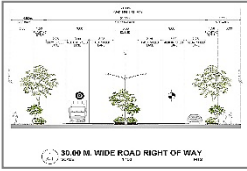
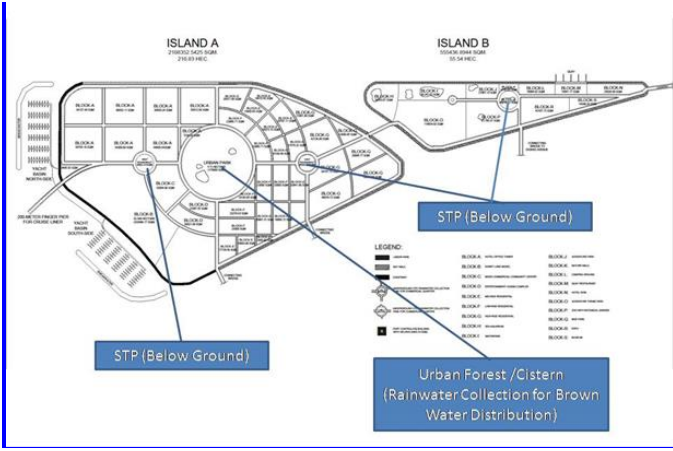
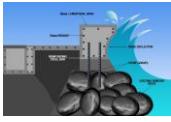


BUOD NG EIS PARA SA PUBLIKO

ES. 1.1. Fact Sheet ng Proyekto

| Table ES-1. Project Fact Sheet | | |
|--|--|---|
| Pangalan ng Proyekto | PROPOSED PASAY CITY HARBOR CENTER RECLAMATION PROJECT | |
| Lokasyon ng Proyekto | Katubigan ng Manila Bay sakop ng Teritoryo ng Lungsod ng Pasay | |
| Lawak ng Proyekto | 265 Ektarya | |
| Kategorya ng proyekto base sa EMB Memorandum Circular 2014-005 | Category A: Environmentally Critical Project (ECP) Major Reclamation Project ≥ 50 hectares | |
| Klasipikasyon ng Proyekto base sa EMB Memorandum Circular 2014-005 | 3.3 Reclamation and other land restoration project | |
| Buod ng mga Pangunahing Bahagi | Mga Bahagi | Laki/Lawak |
| | Island 1 | 210 Hectares |
| | Island 2 | 55 Hectares |
| | Tulay sa pagitan ng Islands 1 and 2 | 4 lanes 20 m W x 156 m L  |
| | Internal Road Network | 30 m wide Variable Lengths  |
| | Drainage System |  |
| | Storm Surge Protection | By design  |
| | daanan | Viaduct System Under Design |
| | Pantalan para sa Turismo | Under Design |
| | Theme Parks | Under Design |
| | Entertainment | Under Design |

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| Table ES-1. Project Fact Sheet | | |
|--|---|---|
| | Complex | |
| | Commercials | Under Design |
| | Others | Under Design |
| | Waste Water Treatment Systems | Construction Phase: OWS/Bilge System in Vessels Operations Phase: Modular System |
| Halaga ng Proyekto | Php 72 Billion | |
| Timeline ng Proyekto | Within approximately five (5) years | |
| Tagapagtaguyod | The Honourable Mayor Antonino G. Calixto | |
| Proponent Address and Contact Details | Address: F.B. Harrison St., Pasay City Office of the City Mayor: (02) 833-3729 | |
| EIA Preparer | TECHNOTRIX CONSULTANCY SERVICES, INC. | |
| Preparer Contact Person | Edgardo G. Alabastro, Ph.D. | |
| Preparer Address and Contact Details | Unit 305 FMSG Building, Balete Dr. QC 1101 Telephone No.: (02) 416-4625 Cellular No.: 09178255203 E-mail address: technotrixinc@gmail.com | |

ES 1.2. Maikling Background ng Proyekto

Ang Siyudad ng Pasay ay napagkalooban ng Environmental Compliance Certificate (ECC) **No. ECC-CO-1601-003** noong 2017-October-24 para sa pinaplanong 360 Hectare Reclamation Project. Ang lungsod ay nagpaplanong magsimula sa isang karagdagang proyekto sa pag-reclamation na may isang lugar na 265 ektarya.

Ang proyektong reclamation ay sumasakop sa 265 ektarya na kinasasangkutan ng dalawang (2) isla na may mga laki na 210 ektarya at 55 ektarya, ayon sa pagkakabanggit. Pare-pareho sa protocol ng Revised Procedural Manual (RPM), ang application ng Environmental Compliance Certificate (ECC) na inaapply ay para lamang sa pahalang na development (horizontal development). Ang operations phase ay mababase sa mga karapatdapat na requirements ng Philippine EIS System (PEISS).

Ang mga pribadong sector na magdedebelop ng (360 hectares) at (265 hectares) na proyekto ay magkabaibang korporasyon kaya't magkaibang ECC and kinakailangan ng bawat isa.

ES 1.2.1. Lokasyon at Hangganan

Ang proyekto, ay nahahati sa 2-isla, at matatagpuan sa kanluran ng Metro Manila, sa loob ng munisipal na tubig ng Pasay City at sa tabi ng Lungsod ng Maynila. Ito ay katabi ng Proposed 360 Hectare Pasay City Reclamation Project, na kamakailan ay nabigyan ng ECC.

Ang impact barangay ng Planong proyekto ay **Barangay 76 Zone 10**, makikita sa **Figure ES-1**.

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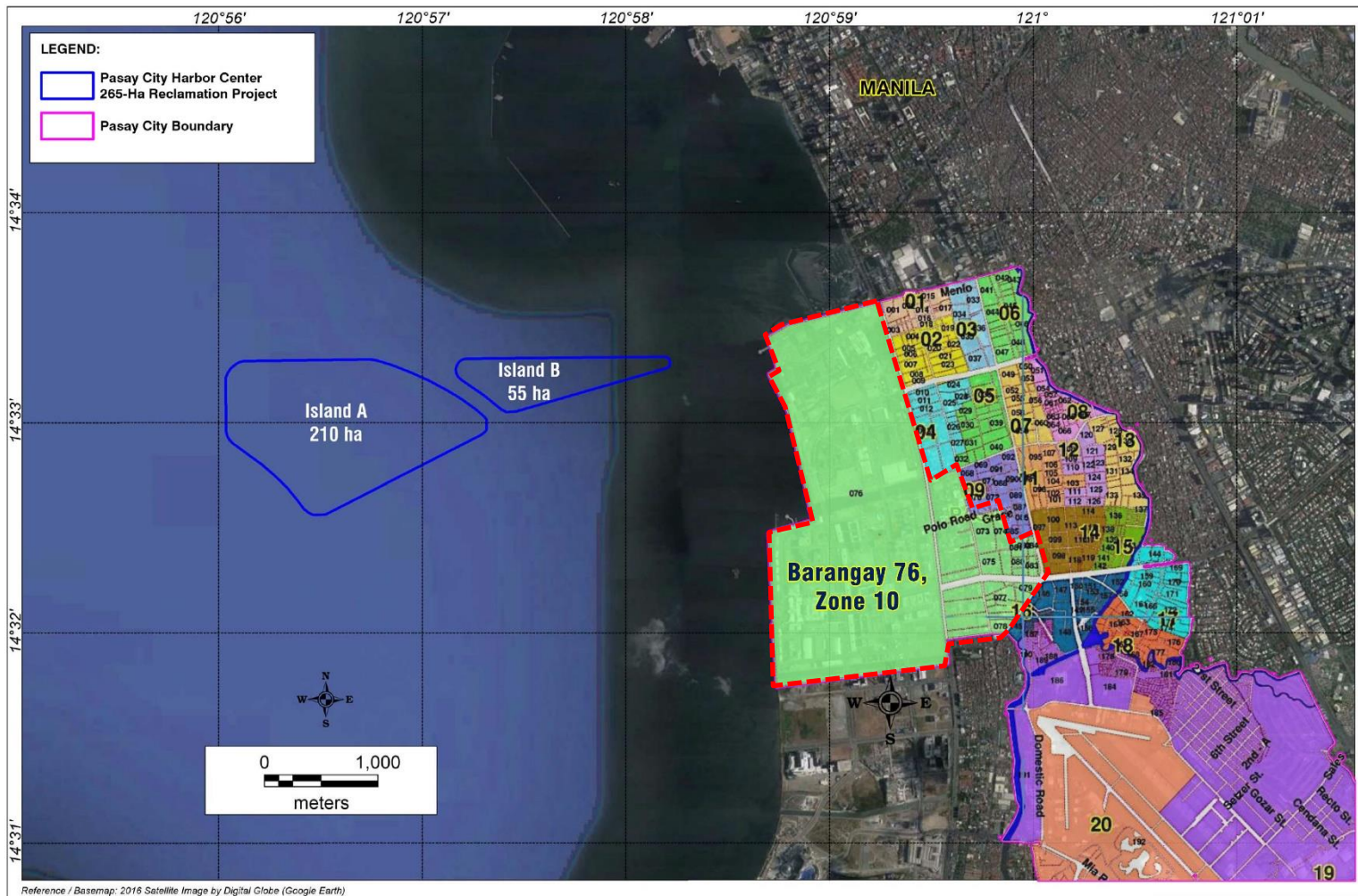
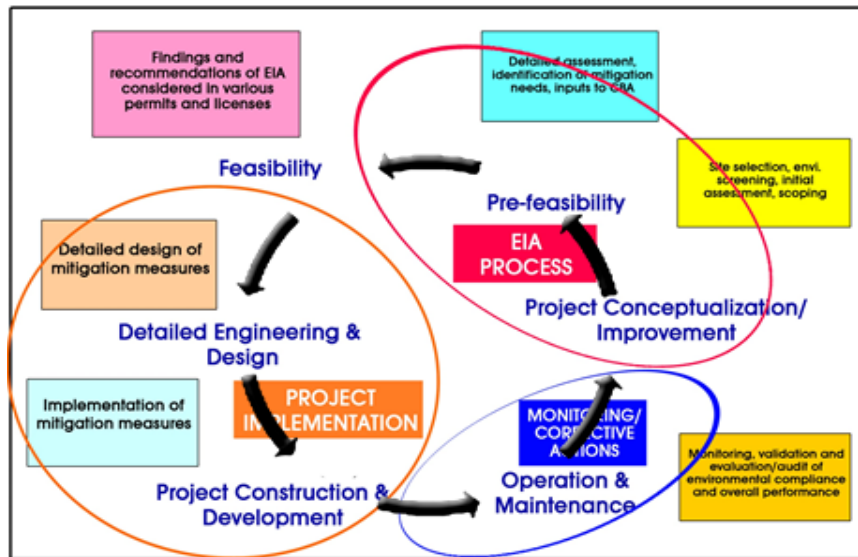


Figure ES-1. Mapa ng Barangay Boundaries na Nagpapahiwatig ng Ipinanukalang Proyekto vis-à-vis Impact Barangay

ES 1.3. Proseso ng Dokumentasyon sa paghahanda para EIA

Ang EIA Report para sa Proposed Reclamation Project ay inihanda at nakasunod ayon sa basic principle ng Philippine EIS System (PEISS), i.e. na ang **EIA/ECC ay planning tool at hindi permit**, substantiated hereunder.

- The Revised Procedural Manual (DAO 03-30) stipulates this basic paradigm (of a planning tool), shown in **Figure ES-2**.



(Reference: Revised Procedural Manual for DENR Administrative Order No. 30 Series of 2003 (DAO 03-30))

Figure ES-2. Chart Showing the Planning Tool Concept Based on DAO 03 30

b. Ang Pampublikong Anunsyo sa isang pangunahing pang-araw-araw na pahayagan ng Dating DENR Kalihim J.L. Atienza na nagsasabing ang konsepto ng Pagpapalano ng Tool ng isang ECC, na ipinapakita sa ibaba. (Reference is also made to <https://litoatienza.wordpress.com/2009/11/26/due-process-is-a-requirement-of-good-governance-secretary-lito-atienza/>)

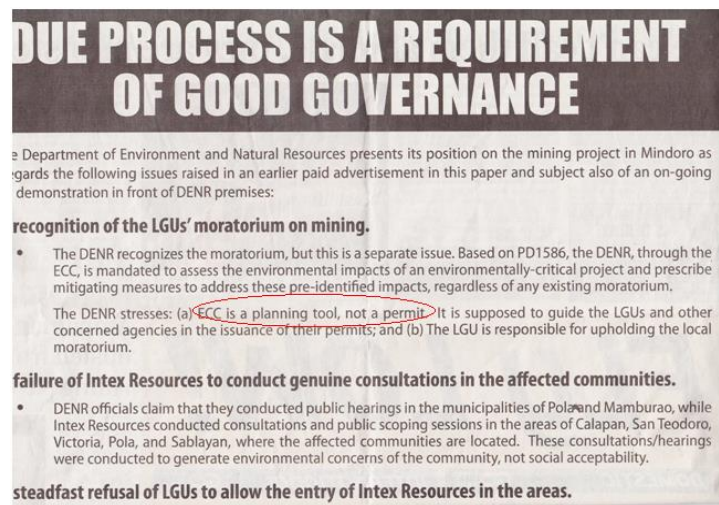


Figure ES-3. Verbatim excerpts from an ECC granted by EMB Region IV-A.

c. Sa isang ECC na ipinagkaloob ng EMB Rehiyon IV-A, partikular na nakasaad na ang isang ECC ay isang Planning Tool, na ipinapakita sa verbatim sa ibaba

:

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This is to certify, further, that in issuing this **CERTIFICATE**, it should be understood that the same is a **PLANNING TOOL** and **NOT A PERMIT**. Hence, the proponent shall secure pertinent **PERMITS/CLEARANCES** from all concerned government agencies (i.e. HLURB, NWRB, LGUs, DOH, DOLE, DTI, DPWH, MGB, DOT, PMRB, DENR, DOE, ERC, DOTC, DOST, etc.) prior to the implementation of the project to be submitted to this Office within sixty (60) working days upon receipt thereof; otherwise this Office shall be constrained to take appropriate legal action.

Issued at EMB CALABARZON Region this **May 27, 2016**.

- d. Moreover, the details of a project are established post-ECC, as stipulated in **page 10 of the Revised Procedural Manual**, quoted verbatim below:

- iii) *During the project's **Detailed Engineering Design (DED)** stage, which is post-ECC, the generic measures identified during the EIA study at the FS stage will now be detailed based on the project facility design and operational specifications. Additional baseline monitoring may also be required prior to construction or implementation of the project to provide a more substantive basis for defining the environmental management and monitoring plans.*

Ang paggamit ng paradaym na ang isang ECC ay isang tool sa pagpapalano ay higit pang inilarawan sa Figure 3.1 kung saan ay inilarawan na bago ang pagpapatupad ng proyekto na maaari lamang magsimula sa pag-secure ng isang Paunawa upang Magpatuloy mula sa Philippine Reclamation Authority, ilang mga clearances ay kailangang ma-secure na nangangailangan ng isang ECC bilang input para sa paggawa ng desisyon ng iba't ibang ahensya sa pagbibigay ng mga clearances na ito

Ang Proseso ng Public Participation na nakasaad sa DAO 2017-15 ay naobserbahan at iniulat sa Seksyon ES.7.

ES 1.3.1. Uri ng Dokumento para sa ECC Application at Mga Generic na Nilalaman

Ang Environmental Impact Statement (EIS) Report ay ang pinaka-angkop na dokumento para sa Konstruksiyon / Reclamation Phase ng proyekto. Ang iba pang mga proyektong reklamasyon na ipinagkalooban ng Environmental Compliance Certificate (ECCs) ay ginamit din ang format ng isang EIS Document.

Para sa Operations Phase ang Programmatic EIS (PEISS) ay option.

ES 1.4. EIA Team (Proponent & Preparer Team members, module of involvement, expertise)

Ang listahan ng mga EIA Preparers ay nakatala sa ibaba.

Table ES-2. Listahan ng EIA Preparers

| Team Member | Module | Company | Registration No. |
|-----------------------------|--|---------------------------------------|------------------|
| Edgardo G. Alabastro, Ph.D. | Team Leader | Technotrix Consultancy Services, Inc. | IPCO-257 |
| Nadia P. Conde | Project Coordinator | Technotrix Consultancy Services, Inc. | IPCO-102 |
| Dr. Felixberto Roquia | Sociology | Technotrix Consultancy Services, Inc. | IPCO-028 |
| Benjamin Francisco | Marine and Fresh Water Ecology (Team Leader) | Technotrix Consultancy Services, Inc. | IPCO-038 |
| Engr. Emerson B. Darroles | Oceanography | Technotrix Consultancy Services, Inc. | -- |
| Jose Rene Villegas | Marine Team | Technotrix Consultancy Services, Inc. | -- |
| Michael Chester Francisco | Fisheries | Technotrix Consultancy Services, Inc. | IPCO-040 |
| Nazario Sabello | Air Quality | Technotrix Consultancy Services, Inc. | IPCO-240 |

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| Team Member | Module | Company | Registration No. |
|--|-------------------------|--|------------------|
| Jean Ravelo | Geology | Technotrix Consultancy Services, Inc. | -- |
| Maria. Catherine Rontos | Technical Assistant | Technotrix Consultancy Services, Inc. | IPCO-037 |
| Angelie Faye Nicolas | Research | Technotrix Consultancy Services, Inc. | IPCO-259 |
| Kathlene Andrea Efe | Research | Technotrix Consultancy Services, Inc. | IPCO-258 |
| Proponent's External Expertise/EIS Resource Persons | | | |
| Carlo D. Dayanghirang MSc Quaternary Geology | EGGAR | DCCD Engineering Corporation | - |
| Dr. Proscoro Ervin Mundo | Initial Master Plan | Independent Consultant | - |
| Carlo D. Dayanghirang MSc Quaternary Geology | Geotechnical Studies | DCCD Engineering Corporation with Geotechnics Philippines, Inc. | - |
| Eric Huang | Reclamation Methodology | China Harbour Engineering Corporation | - |
| Bruce Hao | Reclamation Methodology | China Harbour Engineering Corporation | - |
| Atty. Miguel Barreto | Legal | Libra Law Office | - |
| Atty. Alexis Medina | Legal | Libra Law Office | - |

ES. 1.5. Iskidyul ng Aktibidad para EIA

Ang mga sumusunod ay ang mga aktibidad na isinasagawa para sa pag-aaral ng EIA:

Table ES-3. EIA Study Schedule and Public Participation Activities

| ACTIVITY | DATE | AREAS COVERED |
|---|-----------------------------|--|
| Master Planning | October 2016-July 2017 | Land form |
| Feasibility Study | October 2016-July 2017 | Project Site and Impact Areas |
| Hydrography and Bathymetry | 10-13 February 2017 | Project Site and Immediate Vicinity |
| Secondary Data Researches | January to March 2018 | City of Pasay |
| Primary Baseline Data for Air Air Dispersion Modeling for Metro Manila | 2013 2014-2016 | Barangay 76 Zone 10 and other immediate vicinities |
| Primary Baseline Data for Noise | 2013 | Barangay 76 Zone 10 and other immediate vicinities |
| Marine Study | December 2017 | Proposed Project site and immediate vicinity |
| Water Sampling and Laboratory Tests | December 2017 | Proposed Project site |
| Engineering Geological and Geohazard Assessment Report (EGGAR) | January 2018 to April 2018 | Proposed Project site and immediate vicinity |
| Geotechnical Survey (Drilling) | January 2018 to April 2018 | Project Site |
| Geotechnical Studies | January 2018 to April 2018 | Project Site |
| PUBLIC PARTICIPATION ACTIVITIES UNDERTAKEN | | |
| Initial Perception Survey | January 31 to March 6, 2018 | Barangay 76 Zone 10 |
| Information, Education and Communication (IEC) | 30 January 2018 | Attendees: Barangay 76 Zone 10 officials and a number of residents |
| Focus Group Discussion | 10 April 2018 | Attendees: <ul style="list-style-type: none"> Philippine Navy Metropolitan Manila Development Authority Philippine Ports Authority DENR-MBCO National Commission for Culture and the Arts Philippine Reclamation Authority National Economic Development Authority |

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| ACTIVITY | DATE | AREAS COVERED |
|----------------|---------------|--|
| | | <ul style="list-style-type: none"> • Senate of the Philippines • PHIVOLCS • DPWH-NCR • Philippine Coast Guard • Cultural Center of the Philippines • National Museum • Manila Goldcoast Development Corporation • Maricaban Market Vendors • Emma Homeowners • Serra's Center • Family Touch • Prime Movers • Institute of Environmental Planners |
| Public Scoping | 30 April 2018 | <p>Attendees:</p> <p>Barangays</p> <ul style="list-style-type: none"> • Barangay 135 • Barangay 7-2 • Barangay 76-10 • Barangay 10 Z-4 • Barangay 01-01 • Barangay 05-02 • Barangay 135-13 <p>Government Offices</p> <ul style="list-style-type: none"> • Councilor Advincula • Philippine Ports Authority • Office of Senator Villar • Department of Tourism • Pasay City Engineering Office • Pasay City Planning and Development Office • City Council of Pasay • City Environmental and Natural Resources Office of Paranaque • Office of Councilor Pee Wee Aguilar of Las Piñas • EMB Central Office • Manila-LGU • Philippine Navy • DPWH-NCR • MMDA • Senate of the Philippines • Cultural Center of the Philippines • DENR-MBCO • EMB-MBO • Philippine Reclamation Authority • EMB-NCR • GSIS • Brgy. Captain Rosemarie |

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| ACTIVITY | DATE | AREAS COVERED |
|-------------------|-----------------------------------|---|
| | | <p>San Miguel (Host brgy.)</p> <p>Private Office</p> <ul style="list-style-type: none"> • Ulticon Builders Inc. • Manila Goldcoast Development Corporation • Technotrix Consultancy Services Inc. • Libra Law • PECABAR • Harbour Square • Anchor Land Holdings, Inc., <p>NGOs/POs</p> <ul style="list-style-type: none"> • Save Freedom Island Movement (SFIM) • Serras Center • Maricaban Market Vendors Association Inc., • Emma Homeowners • Family In Touch Malibay • Earth Island Institute • Society for the Conservation of the Philippines Wetlands, Inc., |
| Technical Scoping | 15 May 2018 (See Annex 1) | Not Applicable |
| Perception Survey | 31 Jan to 06 March 2018 | Barangay 76 Zone 10 |

ES 1.6. EIA Methodologies

Table ES – 4. EIA Methodology

| Module / Section | Baseline | Methodology |
|--------------------------|---|--|
| LAND | | |
| Land Use Classification | Secondary data: The Comprehensive Land Use Plan (CLUP) of Pasay City. | Assessment of compatibility of the proposed project in the land use classification, Manila Bay Coastal Strategy, Consistency with the PRA Implementing Rules and Regulations, Relation to the PRA Master Plan for Manila Bay |
| Geology | <p>Secondary data: Geologic, seismic, liquefaction, slope hazard maps and evaluation based on government data and maps.</p> <p>Primary data: Borehole drilling/geotechnical studies. Soil Investigation</p> | <p>Identify and assess project impact in terms of the changed in topography including existing hazard as maybe aggravated</p> <p>EggAR used as primary reference</p> |
| Pedology | Primary data: Geotechnical Studies | Describe the physical properties and erodibility potential of the soil, ongoing erosion processes and assess the erosional impacts of the project. |
| WATER | | |
| Hydrology / Hydrogeology | Secondary data: Existing drainage system. Historical flooding | Identify and assess project impact on the change in drainage morphology, |

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| Module / Section | Baseline | Methodology |
|--------------------------------|--|--|
| | occurrences | local drainage and resulting effects of flooding |
| Marine Water Quality | Primary data: Standard Methods for Water Quality Sampling and Monitoring. Water Body Classification: DENR Class SB Parameters Considered: pH, BOD5, COD, DO, Oil and Grease, TSS, Heavy Metals, Fecal / Total Coliform, Nitrates / Phosphates | Assess impacts on siltation of surface and coastal marine waters |
| Oceanography | Primary data: | |
| Marine | Primary data: Abundance / density / distribution of ecologically and economically important species, mangroves, benthism plantons, coral reefs, algae, seaweeds, sea grasses Presence of pollution indicator | Transect, manta tow and spot dives surveys, marine resource characterization (e.g. city/municipal and commercial fisheries data), Key informant interview. |
| AIR | | |
| Ambient Air Quality | Primary data: Ambient air quality sampling and testing. DENR Classification Ambient Air and Noise Classification: Class B – Commercial Area Parameters Considered: TSP, PM10, Sox, NOx | Methodology: Standard Methods for Ambient Air Quality Sampling and Monitoring |
| Ambient Noise Quality | Primary data: Noise Meter | |
| Contribution in terms of GHG | Data in Greenhouse gasses | Estimate of projected greenhouse gasses (GHG) |
| PEOPLE | | |
| Demographic Profile / Baseline | Primary data: Conduct of Public Perception Survey, Public Scoping Secondary data: Comprehensive Land Use Plan of Pasay City | |

ES 1.7. Aktibidad para sa Pampublikong Partisipasyon

DAO 2017-15 para sa Public Participation ay mahigpit na sinusunod.

ES 1.7.1 Buod nang mga Katanungan at Suhestiyon sa Public Participation Activities

1. Unang IEC with Stakeholders

Table ES -5. Talaan ng mga Isyu at Concern noong IEC Activity (30 January 2018)

| NAME/AFFILIATION | ISSUES/CONCERNS | RESPONSE |
|---------------------------|---|--|
| Kagawad Danilo San Miguel | When will the project start? We hope we are still here when it materializes. | We are still on the planning stage. No definite year or date has been set for the start of the construction. |

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| NAME/AFFILIATION | ISSUES/CONCERNS | RESPONSE |
|---------------------------|--|--|
| Kagawad Jean Roxas | What are the possible negative impacts of the project? You only discussed the positive ones. | As an EIA Consultant, we are trying to avoid any negative impacts on all of our projects, that is why, we are conducting a thorough study in all aspects to avoid the negative impacts. In cases where impacts cannot be avoided, we make sure that the proponent will apply proper mitigating measures. |
| Kagawad Danilo San Miguel | What are the planned developments after the reclamation? Malls, condos, etc? | The proposed reclamation is for mixed-used development. To date, no definite plan yet. |
| Kagawad Danilo San Miguel | Isn't the proposed area too shallow? | Initial study shows that the proposed area is suitable for reclamation. The proposed site is adjacent to the existing 360 hectare reclamation project. |
| Kagawad Danilo San Miguel | Where is the exact location? Near Sofitel? | Nearest site onshore is Sofitel |

2. Focus Group Discussion

Table ES -6. Talaan ng mga Isyu at Concerns noong FGD Activity (10 April 2018)

| Issues/Suggestions Raised by Stakeholder | Issues and Concerns | Response |
|---|---|--|
| Ronald Ray. Taperla of National Economic Development Authority (NEDA) | Are issues on climate change included in the EIS? | Yes, climate change issues will be included in the study. |
| Alnie Hayudino of National Commission of Culture and Arts (NCAA) | Access route from existing reclaimed areas | We are still starting and we will have our studies. There will also be inter-island bridge and we will include both in the report. |
| Giovanni G. Bautista of National Museum of the Philippines | Virtual Underwater Heritage concerns RA 1066, which requires archaeological assessment. | EIA Preparer: As a preparer, we commit to conduct this survey. Mayor Calixto: Sunken vessels nationwide are owned by the government. National Steel Corp (NASCO) has the record. I did not see any sunken vessel within this area but if there is, PPA will ask to remove it. For the past 70 years in Pasay, no ship wreck has been found because Pasay waters is shallow. I was personally involved in NASCO's search for sunken vessels, cargoes etc. We can ask assistance from NASCO for data. |
| Giovanni G. Bautista of National Museum of the Philippines | We would like to search for historical artifacts, etc., as this was a trading area in the past. | EIA Preparer: We will do it but will be limited to impact areas |
| Daniel Jose Buhay of PHILVOCS | Did you consider tsunami effects? | We have Section 2.1 Land and it includes seismicity, tsunami sea level rise, etc., We also have an Engineering, Geological And Geohazard Assessment Report (EGGAR) |
| Mark Angelo V. Cagampan of Manila Bay Coordinating Office (MBCO) | When you will apply for the Area Clearance? Is the proposed project included in the existing Comprehensive Land Use Plan | Atty. Madrona, City Legal of Pasay: Yes, we are happy to say that the proposed project is included in our CLUP. The HLURB approved our CLUP last year. |

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| Issues/Suggestions Raised by Stakeholder | Issues and Concerns | Response |
|--|--|---|
| | (CLUP) of the City of Pasay? | With regards to Area Clearance, everything should be clear. We will apply for both Area Clearance and ECC. The process is chicken and egg. In our past experience, after we were done with our ECC, we embarked on the process of acquiring the Area Clearance. Thus, rest assured that we will apply for both. |
| Fr. Soc Montaelto of Our Lady of Sorrows Church | Pasay is the Philippines' Las Vegas. They are creating a sin city of so many casinos around. With the proposed project, we should not create more casinos. Duterte actually said no casino in Boracay. I hope you will not create another casino in Pasay. Developments are good but there are problems with casino addiction. | Mayor Calixto: The new developed casinos are in Paranaque. No casinos were built here in Pasay since after the time of Mayor Cuneta. I myself have not approved any casino project in the past. I will remember your concern that no new additional casinos in Pasay should be developed. |
| Ronald Ray Taperla of National Economic Development Authority (NEDA) | Target Date for NEDA endorsement? | Atty. Madrona, City Legal of Pasay: It may take 1 to 2 years depending on what we accomplish. We can't say the exact timeframe for the clearances from agencies pursuant to NEDA requirements. |

3. Public Scoping

Ang Public Scoping na hinihimok ng EIAMD ay isinagawa noong ika-30 ng Abril 2018 sa Cuneta Astrodome, Pasay City; Ang kumpletong ulat nito ay isinumite sa EIAMD noong ika-2 ng Mayo 2018. Kabilang sa mga inanyayahan ay mga Opisyal ng LGU, Opisina ng Gobyerno, Non-Government Organisasyon (NGO) / People's Organization (PO), Pribadong Opisina at Barangay. Ang Kabuuang imbitado ay 94 na stakeholder, 41 ng mga na-imbata ang nakadalo sa nasabing pagtitipon habang 53 ang hindi nakadalo sa paanyaya. Mula sa 41 na dumalo, 17% ay mula sa iba't ibang mga barangay ng Pasay, 53% ay mula sa iba't ibang tanggapan ng gobyerno, 14.63% ay mula sa iba't ibang pribadong tanggapan at 17% ay mula sa NGO / POs sektor (Tingnan ang Talaan ES-3). Ang mga isyu at concern ay nakasulat sa Table ES-8 habang sa Annex 2.0 ang kumpletong ulat sa Pamublikong Scoping.

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Table ES-7. Issues and Concerns Raised during the Public Scoping Activity (30 April 2018)

| EIA Module | Sector or Representative Who Raised the Issue/ Suggestion | Issues/Suggestions Raised by Stakeholder | Proponent's Response |
|-------------------|--|---|---|
| LUPA | Representative from Philippine Reclamation Authority (PRA) | Issue on boundary of Manila and Pasay, the City Ordinance affected the boundary of the City of Manila | Atty. Madrona (City Legal of Pasay): We assure ourselves that we have legal basis to assure our municipal waters. We also inform the PRA about it and our municipal waters is included it in our Comprehensive Land Use Plan (CLUP). |
| | Mr. Paul of Save Island Movement | Will the reclamation project help the rehabilitation of Manila Bay? | Mayor Calixto (Pasay City Mayor): 25% will be set to the rehabilitation of Manila Bay. Our aim before there was no reclamation is to increase our earnings from more than 1 billion pesos but when there was reclamation our aim is 5 billion. Thus, this increase can help and can do a lot for Manila Bay. |
| | Representative from Manila Bay Coordination Office (MBCO) | We stand on the issuance of ECC and Area Clearance. There are Executive Orders (EOs) and DAOs that needs to secure Area Clearance before ECC. | Atty. Madrona: Actually we applied for Area Clearance and I that believe we are complying. |
| | Representative from Earth Island Institute | It was mentioned that there are environmental impacts identified, is the data be accessible particularly impacts on your filling materials? | Mr. Santiago (DENR-EIA): We will still have our Public Hearing, there will be posting in the newspaper under DAO 2017-15. The draft EIS wherein the identified impacts is included is accessible in the website during that time. After Public Hearing the full documentation is also posted in the DENR website and your issues and concerns raised should be included in the report which you can access in the website. |
| | | Separate marine study of San Nicholas Shoal, there are livelihood for fishers in Cavite and other adjacent city such as Las Piñas. | Dr. Alabastro (EIA Preparer): San Nicholas Shoal is applying for an ECC. Whatever project, the filling materials for a proposed reclamation will undergo to process. |
| | Representative from Philippine Navy | Distance of island to the shoreline? | Dr. Alabastro: Approximately 1.1 km. |

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| EIA Module | Sector or Representative Who Raised the Issue/ Suggestion | Issues/Suggestions Raised by Stakeholder | Proponent's Response |
|------------|---|---|--|
| | | <p>The Navy, CCP and PICC areas before are property of the Philippine Navy. Now only the Manila Yacht Club. Our issue is on the notice for the navigational safety of our ships and vessels.</p> <p>Sooner or later we will have our submarines and you will need to extract and transport your filling matters, maybe we can have our MOA?</p> | <p>Mayor Calixto: We will have our MOA and this MOA will be a great help to our project. With regards to the passage and duct of vessels, I believe this is not part of Pasay, The waters of Pasay is shallow. I will coordinate with our City Administrator to get the necessary information from you.</p> |
| | Representative from Senate of the Philippines | What will be the effect of the Proposed Project to Las Piñas-Paranaque wetlands which is included in the RAMSAR. | |
| | Representative from Philippine Ports Authority (PPA) | <p>The proposed project will not extend to the City of Manila but will this obstruct vessels?</p> <p>Port Zone delineation and Route of ships and permits to be acquired.</p> | <p>Mayor Calixto: Rest assured that we will get the necessary permits from PPA. We will look into all aspects in order not to affect our adjacent city.</p> |

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| EIA Module | Sector or Representative Who Raised the Issue/ Suggestion | Issues/Suggestions Raised by Stakeholder | Proponent's Response |
|------------|--|--|--|
| TUBIG | Representative from Society for the Conservation of Philippines Wetlands | There is a Mandamus to clean-up the Manila Bay. I would to suggest to have a comprehensive baseline data because if the rehabilitation will be successful, the Manila Bay will be productive. | <p>Mayor Calixto: The City of Pasay is also preparing for programs such a livelihood programs to further utilize the Manila Bay as a source of income and not to destroy, that is why we want to comply.</p> <p>Dr. Alabastro (EIA Preparer): As EIA Preparer we will have in-depth study for Marine ecology.</p> |
| | Representative from the Senate of the Philippines | In the previous years we experienced flooding in our area considering that our vicinity is not surrounded by informal settlers. What will happen more if the 360 Pasay reclamation and Proposed 265 project will be erected, flooding is an social problem/ | Mayor Calixto: Sometimes drainage system is the cause of flooding due to siltation. Maybe our City Engineer needs to inspect the drainage in your area to ensure the continuous flow of water so as not to cause flood. |
| TAO | Representative from Department of Tourism | The City Mayor has a very active congruence. The City is one of the destination for tourism and # 1 in MICE because the city has their own convention facilities, CCP etc., We will abide to the development market, inclusive growth and sustainability and we would like to develop a larger and stable income and with that thank you Pasay City! | Mayor Calixto: There is a big improvement in Pasay City Government. The city is considered as "Best Improved City" in the country and so this year we are planning to put a tourism police because of number of tourist destinations such as the Mall of Asa (MOA), hotels, MOA Arena, bus terminals and airport. After this reclamation project, Pasay City will be #1. When I started my term in 2010 the budget of Pasay City grew over the years hence we give monthly financial assistance to number of beneficiaries and we can give more assistance because of the reclamation project. This will be a great help and Pasay City becoming as World Class area. |

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|------------|--|---|---|
| IBA PA | Representative from Society for the Conservation of Philippines Wetlands | For PRA or MBCO, what is the threshold of reclamation in Manila Bay | Mr. Santiago (DENR-EIA): For the threshold in Manila Bay, there are certain laws who can apply for the project and the Programmatic Environmental Impact Statement (PEISS) was raised and this differs because of the memorandum of PRA. |
| | | Who will be the developer for the Proposed Project? Is it the City of Pasay or Private Developer? | Atty. Madrona: The reclamation project will be develop by the City of Pasay together with our joint venture partner. Dr. Alabastro: The second phase which is the operations phase is not covered by this ECC application. |
| | Representative form DENR- EMB NCR | How will you set-up your monitoring? For instance wastewater pollution, will it be directly go to a STP? Will each locator have separate STP? | Atty. Madrona: It will be the jurisdiction of Pasay City because the proponent of the project is the LGU hence the LGU will hire third party service provider and this third party will hire other service providers and we will assess this third party contractor. |
| | | Who will manage the island? Is it the City Government? | Engr. Lagmay (CPDO head of Pasay): The monitoring is part of our framework in our 2014 CLUP, the timeframe is until 2022. We have a proposed framework and we will have a detailed master plan for effluent and STP. Dr. Alabastro: What we do is to include this and implement through the CLUP. We think that this is a sectionalized treatment and the project will have own wastewater treatment. Mayor Calixto: Actually this is included in the national laws hence we will have no problem. |

ES 1.8. EIA SUMMARY: Buod ng Mga Alternatibo at Impormasyong Pangkapaligiran

ES 1.8.1. Mga Alternatibo para sa Mga Pagpipilian sa Siting at Reclamation Methodology

Figure ES.4 naglalarawan ng balangkas para sa paggawa ng desisyon na may kaugnayan sa mga pagpipilian sa pamamaraan at pag-reclamation.

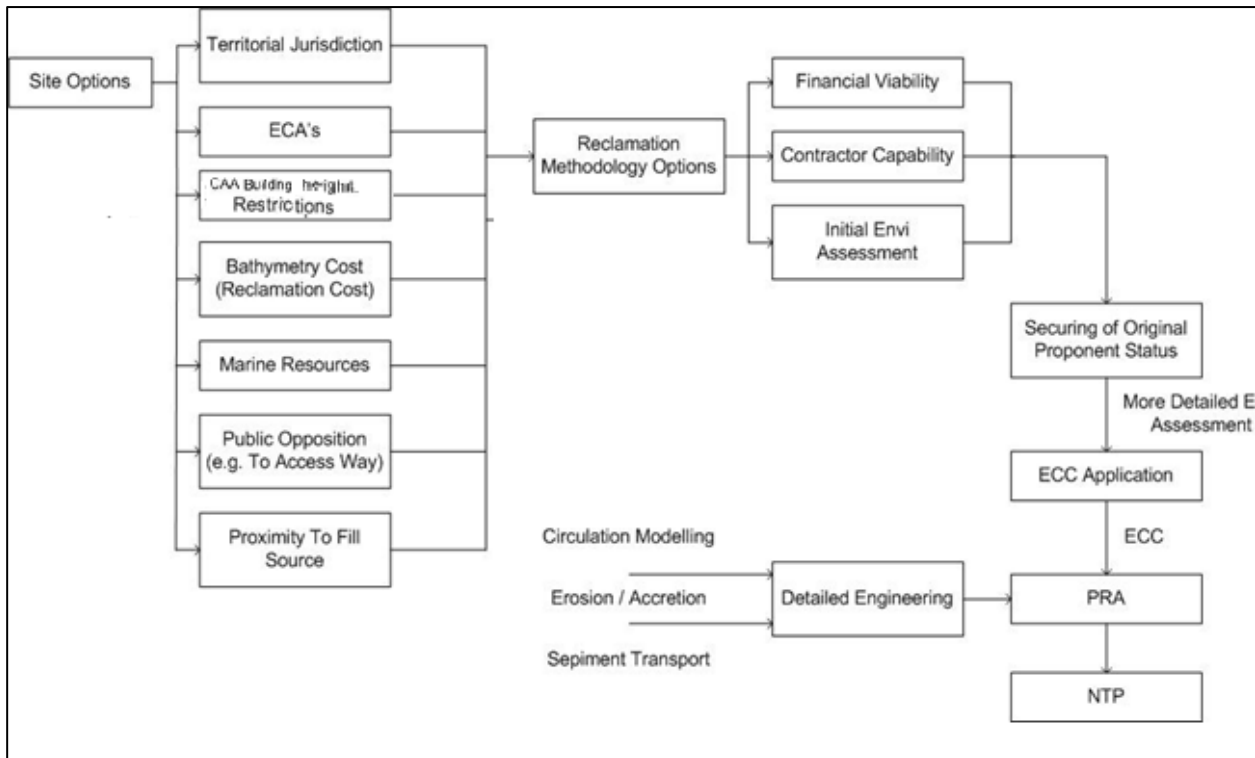


Figure ES-4. Illustration of the Framework for Siting and Reclamation Methodology Options

Tulad ng nakasulat sa itaas, pagkatapos ng isang pagpipilian sa site na nakapasa sa pamantayan (sa loob ng teritoryo ng hurisdiksyon ng LGU-Proponent, kawalan ng pagkakasalungat sa ECAs, pagkawala o mapangasiwaan ng makabuluhang mga mapagkukunan ng dagat, atbp), ang iba't ibang mga pamamaraan ng reklamasyon ay sinuri. Ang mga opsyon sa pamamaraan ay dapat pumasa sa pamantayan ng financial viability at dapat na katugma sa kakayahan ng Kontratista at higit pa, ay dapat na sumusunod sa mga pamantayan sa kapaligiran.

Sa huli, ang site at pamamaraan ay dapat pumasa sa mga kinakailangan ng PRA para sa pagbibigay ng Notice to Proceed (NTP).

Tables ES-8 and ES-9 summarize the various siting and configuration (number of islands) alternatives.

Table ES -8. Alternatibo para sa Siting

| | Advantages | Disadvantages | Environmental Impacts |
|-----------------------------|--|---------------|---------------------------|
| Alternative Siting 1 | | | |
| Land | Consistent w ECA criteria | Not relevant | Same for all Alternatives |
| | Flooding consideration- Not relevant | | Same for all alternatives |
| Water | Territorial Jurisdiction | Not relevant | Same for all alternatives |
| | Insignificant Marine Resources incl. mangroves | Not relevant | Same for all alternatives |

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| | Advantages | Disadvantages | Environmental Impacts |
|---------------------------------|--|--|--|
| | Water depths within 10 m. | | |
| Air | Not a major factor for the activities through horizontal development | | |
| People | Absence of Settlers | Not relevant | None (social impacts) |
| Other alternatives sites | | | |
| Land | Same as above | Same as above | Same for all alternatives |
| Water | Same as above except for water depths consideration | Same as above except water depths unacceptable | Greater impacts on silt dispersal and seabed disturbance |
| People | Same as for alternative 1 | | |

Yamang ang piniling opsyon ng site ay pumasa sa pamantayan, ang susunod na hakbang, na kung saan ay ang pagsusuri ng bilang ng mga isla, ay isinasagawa na.

Table ES -9. Criteria para sa Disenyo ng Isla

| | Advantages | Disadvantages | Environmental Impacts |
|---------------------------------|---|--|--|
| Alternative Siting 1 | | | |
| Land | Consistent w ECA criteria | Not relevant | Same for all Alternatives |
| | Flooding consideration- Not relevant | | Same for all alternatives |
| Water | Territorial Jurisdiction | Not relevant | Same for all alternatives |
| | Insignificant Marine Resources incl. mangroves Water depths within 10 m. | Not relevant | Same for all alternatives |
| Air | Not a major factor for the activities through horizontal development | | |
| People | Absence of Settlers | Not relevant | None (social impacts) |
| Other alternatives sites | | | |
| Land | Same as above | Same as above | Same for all alternatives |
| Water | Same as above except for water depths consideration | Same as above except water depths unacceptable | Greater impacts on silt dispersal and seabed disturbance |
| People | Same as for alternative 1 | | |

May kinalaman sa pagsasaayos:

- Ang pagsasaayos at ang site ay kailangang sumunod o naayon sa CLUP
- Ang pagsasaayos ay hindi dapat sumasalungat sa mga plano ng reklamasyon sa kasalukuyan at sa hinaharap na plano ng Lunsod
- Naaayon sa Boulevard 2000 Framework
- Sumusunod sa mga paghihigpit ng mga regulasyon ng Civil Aeronautics sa mga taas ng gusali
- Ang site at configuration ay dapat na katanggap-tanggap sa concerned entitiesng pamahalaan, hal. ang PPA na itatag sa panahon ng pag-secure ng mga Letters of No Objection (LONOs)
- Ang Master Plan at pagsasaayos ay dapat na magkasundo
- Sa partikular, ang disenyo ng viaduct ay naiimpluwensyahan din ng site at configuration na napili.

Konklusyon:

- Ang isinasaalang-alang sa itaas, dalawang (2) –island configuration sa loob ng teritoryal na hurisdiksyon ng Lungsod ng Pasay ay itinuturing na ang pinakamainam na alternatibo / pagpipilian.
- Ang mga napiling alternatibo ay higit na susuriin ng PRA bago ito ibigay ng NTP para sa Proyekto.
- Maaaring mapapansin na para sa isang nakaraang proyekto na may ECC na ipinagkaloob para sa isang dalawang (2) island configuration, ang bilang ng mga isla ay nadagdagan at naging tatlong (3) batay sa detalyadong disenyo ng pag-aaral ng disenyo na isinagawa post ECC.

ES 1.8.2. Alternatives in Process Technology Selection

Figure ES-5 is an illustration of the process generally involved in reclamation works.

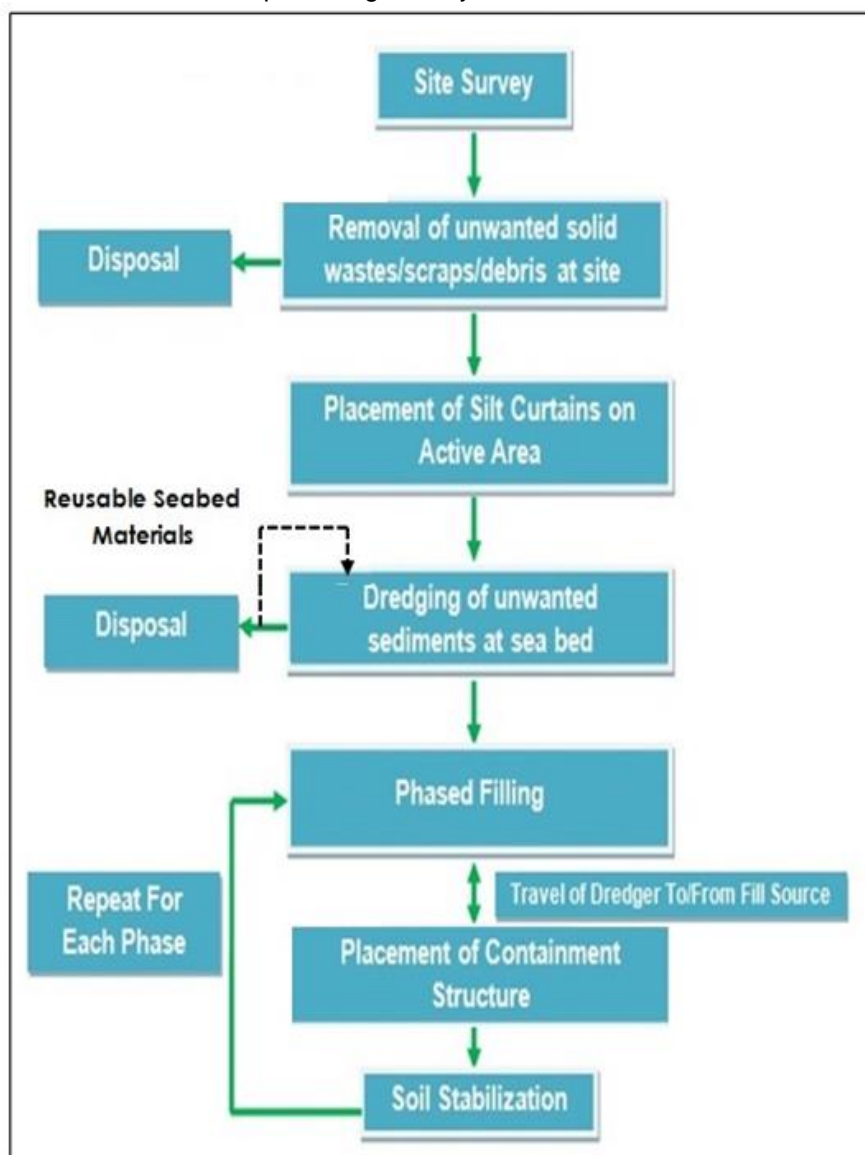


Figure ES-5. An Illustration of the Reclamation “Process”

(Tandaan: Ito ay kapareho ng Figure sa Seksyon 1) Ang opsyon para sa pamamaraan ng reklamasyon, na kung saan ay pagpapasya sa panahon ng pag-bid para sa reclamation

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work, ay sasailalim sa post ECC at gagabayan ng maraming mga kadahilanan kabilang ang:

- Compliances sa mga batas sa kapaligiran (hal. Availability ng onboard waste treatment system)
- Ang pag-minimize ng hindi ginustong mga materyales sa silong na itatapon para sa kung saan ang mga kontratista ay maaaring magkaroon ng tiyak na mga pamamaraan
- Mga paraan para sa paglalaglag ng mga materyales sa punan sa site ng proyekto at mga implikasyon ng bawat pamamaraan sa pag-alis ng silt sa dagat. (Ang mga halimbawa ng mga paraan ng paglalaglag ay: pagbubuga ng bahaghari gaya ng isinalarawan sa ibaba, at ilalim ng paglalaglag)
- Mga pamamaraan para sa pagpapapanatag ng lupa ng lupang nilikha

Isang larawan ng pamamaraan ng "bahaghari pamumulaklak"



Detailye sa methodology ay makikita sa **Section 1**.

Sa kabilang banda, ang mga pangunahing dahilan sa pagpili ng reclamation contractor ay ang gastos sa proyekto at timetable.

Key environmental impacts of technology options considered are as below:

Table ES-10. Key Environmental Impacts Of Technology Options Considered

| Technology Options | Environmental Considerations |
|---|----------------------------------|
| Cutter Dredger | Silt Dispersal greater than TSHD |
| TSHD | Lesser Silt Dispersal |
| Proprietary Technology on Reuse of seabed Materials | Lesser silt dispersals |

ES 1.8.3 Options considered for the source of water, power, fuel, etc.

Power and Water Supply

- **Power-** During the dredging/reclamation works, electrical power that will be required by sea craft and auxiliary equipment (e.g. pumps) will be sourced onboard these sea vessels.

During soil consolidation, which may take approximately 1 to 2 years, the minimal power requirements of the maintenance crew and for lighting on the reclaimed land will be sourced through MERALCO.

- **Water-** Water supply for the vessel/barge crews will also be onboard. No underground water extraction will be done. Internal sourcing by individual contractors for water can be tapped from the MWSS-designated concessionaire. The reclamation works are “dry” in nature.

ES 1.8.4 Summary of Main Impacts and Residual Effects after Applying Mitigation

Table ES-11. Summary of Main Impacts, Mitigation and Residual Effects after Applying Mitigation

| Activity/ Resources Likely to be | Potential Impact | Options for Prevention or Mitigation* or Enhancement | Residual Effects |
|---|--|--|------------------|
| I. PRE-CONSTRUCTION PHASE-Potential disturbance of corals and marine ecology during the geotechnical survey of the seabed; mitigation is by avoidance through appropriate selection of test sites | | | |
| Survey Works The Water | Baseline works on geotechnical, marine survey and water quality essentially finished | | |
| II. CONSTRUCTION PHASE | | | |
| Dredging at Site The Land | Impacts on ECA | Not Relevant ECA distant from site | Nil |
| | Solid Waste Generation | Domestic garbage from construction crews segregated and collected onboard ship and disposed onshore per RA 9003. No garbage disposal to Manila Bay. Inventory of solid wastes, principally garbage through records of amount of garbage | Nil |
| Dredging At Site The Water | Disturbance of Marine Species | Avoidance of Works where there are corals | Nil |
| | Silt Dispersal | Methodology to Minimize Disposal of Unwanted Materials Use of Silt Curtains | Nil |

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| Activity/ Resources Likely to be | Potential Impact | Options for Prevention or Mitigation* or Enhancement | Residual Effects |
|---|--|--|--|
| Filling and Reclamation Works The Land | Inducement of natural hazards such as floods, subsidence, liquefaction, tsunami, storm surge, land subsidence | Reclamation Platform itself with wave deflector gives sheltering effect. Appropriate structure to be selected in DED stage. Current best option is the use of wave deflector for tsunamis/storm waves; soil compaction/stabilization for liquefaction & subsidence; sufficient drainage system & retention/storage areas for floodwaters, among others. Structural defense options are: seawalls at breakwaters, wave deflectors, other similar defenses such as revetment; angled bypass walls. Monitoring of ground level will be done during the period of soil stabilization (before vertical development) to determine quantitative surface movements with respect to both spatial and temporal rates. Design of evacuation routes Public education, awareness and preparedness campaign to include each of the known hazards. This will include evacuation drills, placing of signage, and establishing alert systems. This will be done in coordination with agencies like NDRRMC, | Nil to Minimal |
| Filling and Reclamation The Water | Soil Erosion | To prevent erosion on the seaward portion of the project, the construction of the seawalls shall be implemented in the initial phase of the reclamation. Consideration shall be given to forming a bund after the construction of the sea wall and placement of filter material, using selected granular material where possible, along the line of and immediately behind the sea wall. Such a bund assists in stabilizing the sea wall and its foundation if mud waves occur during | Nil |
| | Changes in Seabed properties | Reclamation technology to minimize seabed soil removal e.g. by maximum reuse of existing through surcharges derived from SNS; possible use of sand bag technology, etc. | Nil |
| | Perceived Permanent loss of 265 Hectare Manila Bay Water, Change in Bathymetry | | Permanent residual effect |
| | Change in water circulation | Final design and alignment of landform to be based on the mathematical modeling for the landform layout. Will include in modeling other approved projects | Minimized |
| | Disruption in water circulation pattern and coastal erosion and deposition | | Minimize |
| | Overall impact on whole Manila Bay circulation pattern and dispersion behaviours of existing outfalls and discharges | | Dependent on other reclamation projects in |
| | Inducement of Flooding | Project will not block or disturb existing drainage system | Nil |
| Transport of Fills | Degradation of marine water quality | Silt curtains and containment structures Pre-screening of filling materials; most possible | Nil |

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| Activity/ Resources Likely to be | Potential Impact | Options for Prevention or Mitigation* or Enhancement | Residual Effects |
|--|--|--|--|
| The Water | Threat to existence and/or loss of important local species and habitat | source is from Manila Bay (San Nicolas Shoal) itself | |
| | Potential Conflict with PPA | Relocation of anchorage Close coordination with PPA | Nil to Minimal If any issue, to be resolved |
| | Sea Level Rise | Elevated platform is a mitigating measure | Nil |
| | Potential accidents and damages to marine ecosystems during transport of dredging vessel | <ul style="list-style-type: none"> • Sea worthy vessels • Navigational Devices • Proper training • Avoid transport during inclement weather • Compliance with PCG and International regulations | Nil to Minimal |
| Horizontal Development | Fugitive Dust Generation from construction equipment and vehicles | Construction Methodology | Nil |
| Air | Increase of Ambient Air and Noise Quality | <ul style="list-style-type: none"> • Construction works distant from ESRs • Short term only • Sea is buffer zone itself to population onshore | Nil |
| | Emissions if power generating sets used and fossil fuel using equipment | Proper preventive maintenance of gensets; replace leaking valves, fittings, etc. | Nil |
| All phases of reclamation and dredging works | Essentially none- no settlers to be displaced because the area is uninhabited | | |
| | Livelihood and employment opportunity | Positive effects of the proposed project | Long term positive impacts |

ES 1.8.5. Mga panganib at kawalan ng katiyakan na may kaugnayan sa mga natuklasan at mga implikasyon para sa paggawa ng desisyon

Ang mga panganib at kawalan ng katiyakan na tinalakay sa Seksiyon 4 "Pagtatasa ng Mga Panganib sa Kapaligiran", at sa iba pang mga Seksyon (hal. Seksyon 1 na kinabibilangan ng mga talakayan sa mga baha, mga panganib sa pagyanig, pag-urong ng lupa, atbp.) Ay may kaugnayan sa mga panganib sa kaligtasan at potensyal sa pamamagitan ng Pagbabago ng Klima sapilitan-kabalaghan, ang huli na maaaring magresulta sa bagyo at baha. Ang pagtaas ng antas ng dagat kung saan ang pagbabago ng klima ay hindi isinasaalang-alang ng isang panganib / kawalan ng katiyakan sa Proyekto.

Ang mga peligro sa kaligtasan ay madaling hinarap at tinalakay sa Seksiyon 4 habang ang mga panganib ng met-ocean na sapilitan ng pagbabago ng klima ay mayroon o wala ang Proyekto.

Ang paggawa ng desisyon na isinalin sa kung magpapatuloy sa proyekto o hindi ay bahagyang naiimpluwensyahan ng mga panganib / kawalan ng katiyakan dahil:

- Ang Proponent ng Proyekto at ang mga miyembro ng Consortium lalo na ang magdedevelop na pribadong sektor at mapagkukunan ng pagpopondo ay hindi mapapinsala ang mga pamumuhunan at mga kalamidad sa kapaligiran na walang kinakailangang mga interbensiyon sa engineering.
- Ang mga panganib sa kapaligiran (mga mapagkukunan ng dagat, mga kagamitang panlupa, mga mapagkukunan ng lupa at mga tao) ay malinaw na naitala at natutugunan nang wasto sa pagbawas ng panukalang-batas na ganoon ang mga epekto ng pagpapasya sa paggawa ng desisyon.

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- Pagdating na ang EIS at ang application ng ECC ay lamang sa pamamagitan ng horizontal development na bahagi, ang mga panganib at kawalan ng katiyakan na maaaring maitala sa panahon ng Operations Phase ay malinaw na inilarawan sa panahon ng Proseso ng IES para sa Operations Phase.
- Gayundin mahalaga, ayon sa ipinahayag ng Lungsod ng Pasay City Mayor A.G. Calixto sa Public Scoping, ang Lunsod ay tumatanggap ng mga aralin at panghihikayat mula sa tagumpay ng proyektong pang-reclamation sa Pasay City.
- Hindi mai-minimize ang katotohanan na ang pagpopondo para sa laki ng proyektong ito ay sasailalim sa malapclose due diligence sa pamamagitan ng mga institusyong pinansiyal na kung saan ang analysis para sa uncertain risk. Ang proyekto ay maaari lamang ipatupad matapos maipasa ang angkop na due diligence.