Environmental Monitoring Forms for EMoP
(January – March 2025)

1. Responses/Actions to Comments and Guidance from Government Authorities and the Public

Monitoring Item	Monitoring Results during Report Period
None during this monitoring period	None during this monitoring period

2. Monitoring in Pre-Construction Stage & Construction Stage

The Monitoring plans in pre-construction and construction stages are shown below.

2.1 Monitoring Program

For Contract Packages 1 to 4 (CP1 to 4)

Components	Parameters to be Monitored	Frequency/ Duration	Locations / Quantity**
(1) Water Quality (Surface water)	BOD, color, DO, TSS, fecal coliform, pH, oil and grease	Quarterly	• 1 point San Juan River (Downstream reach of Ylang-Ylang River) • 1 point Pond in Ligtong II, Rosario • 2 points Rio Grande River • 1 point Ylang-Ylang River • 1 point Maalimango Creek
(2) Water Quality (Marine Water)	Color, DO, fecal coliform, pH, TSS, oil and grease, COD	Quarterly	• 1 point Manila Bay
(3) Riverbed Sediment	Cd, T-Cr, T-Hg, Se, Ba, and As and Pb	One time immediately before dredging/ excavation	• 6 points San Juan Diversion Channel • 9 points Rio Grande River • 5 points Ylang-ylang River • 2 points Maalimango Creek
(4) Ambient Air Quality	Total Suspended Particulates (TSP), PM10, CO, NO^2 and SO^2	Quarterly (24-hrs)	• 2 points San Juan Diversion Channel • 2 points Rio Grande River • 2 points Ylang-ylang River • 1 point Maalimango Creek • 1 point Maalimango Diversion II
(5) Ambient Noise	Noise level	Quarterly (24-hrs)	• 2 points San Juan Diversion Channel • 2 points Rio Grande River • 2 points Ylang-ylang River • 1 point Maalimango Creek • 1 point Maalimango Diversion II
(6) Vibration	Displacement velocity	Quarterly	• 2 points San Juan Diversion Channel • 2 points Rio Grande River • 2 points Ylang-ylang River • 1 point Maalimango Creek • 1 point Maalimango Diversion II
(7) Solid wastes*	Construction debris, papers, plastics, biodegradable waste	Daily (to be reported monthly by the Contractor)	• Construction site/ SW storage area
(8) Wastewater* (domestic)	TSS, BOD, pH, oil and grease	As necessary (to be monitored by the Contractor in relation to discharge permit pursuant to RA 9275, DAO2016-08)	• Construction areas in General Trias, Noveleta, Rosario, Kawit, and Imus

Components	Parameters to be Monitored	Frequency/ Duration	Locations / Quantity**
(9) Chemicals and Hazardous Substances*	Used oil, busted lamps, used paints, spent solvents	As necessary (to be monitored by the Contractor in relation to discharge permit pursuant to RA 6969, DAO 2013-22 and DAO 1992-29)	• Storage area/motor pool
(10) Terrestrial Flora*	Trees and mangroves to be affected (cut or earthball)	Anytime (tree cutting/ relocation is done)	• Along and within the project alignment and area.
(11) Terrestrial Fauna*	Inhabiting species	Anytime (unusual death is observed)	• Direct impact area and its marginal (or surrounding) area
(12) Traffic volume count*	Number of vehicles	Semi-annual	• 2 points residential areas along key delivery routes

Note) * Monitoring is to be done by consolidation of monitoring data to be gathered by the Construction Contractors. The Sub-Consultant shall conduct monthly data collection from the Contractors of each contract package.
** Monitoring locations are shown in the map attached hereinafter.

For Contract Package 5 (CP5):

Environmental Aspect	Parameter to be Monitored	Frequency	Locations / Quantity**
(1) Water Quality (Surface water)	BOD, chloride, color, DO, fecal coliform, nitrate, pH, phosphate, temperature, TSS, ammonia, oil & grease, surfactants	Quarterly	• 2 points San Rafael II and San Rafael III
(2) Ambient Air Quality	Total Suspended Particulates (TSP), PM10, CO, NO^2 and SO^2	Quarterly (24-hrs)	• 2 points residential area near the resettlement site
(3) Ambient Noise	Noise level	Quarterly (24-hrs)	• 2 points residential area near the resettlement site
(4) Solid wastes*	Construction debris, papers, plastics, biodegradable waste	Daily (to be reported monthly by the Contractor)	• Construction site/SW storage area
(5) Terrestrial Flora*	Trees and mangroves to be affected (cut or relocated)	Anytime (tree cutting/ relocation is done)	• Along and within the project alignment and area.
(6) Terrestrial Fauna*	Inhabiting species	Anytime (unusual death is observed)	• Direct impact area and its marginal (or surrounding) area

Note) * Monitoring is to be done by consolidation of monitoring data to be gathered by the Construction Contractors. The Sub-Consultant shall conduct monthly data collection from the Contractors of each contract package.
** Monitoring locations are shown in the map attached hereinafter.

2.2 Monitoring Results

2.2.1 Water Quality

(1) Environmental Standards

a. Water Body Classification and its Intended Beneficial Use

Classification	Intended Beneficial Use
Freshwater	
Class AA	Public Water Supply Class I – Intended primarily for waters having watersheds, which are uninhabited and/or otherwise declared as protected areas, and which require only approved disinfection to meet the latest PNSDW.
Class A	Public Water Supply Class II – Intended as sources of water supply requiring conventional treatment (coagulation, sedimentation, filtration and disinfection) to meet the latest PNSDW

Classification	Intended Beneficial Use
Freshwater	
Class B	Recreational Water Class I – Intended for primary contact recreation (bathing, swimming, etc.)
Class C	1. Fishery Water for the propagation and growth of fish and other aquatic resources. 2. Recreational Water Class II – For boating, fishing, or similar activities 3. For agriculture, irrigation, and livestock watering
Class D	Navigable Waters
Marine Water	
Class SA	1. Protected Waters – Waters designated as national or local marine parks, reserves, sanctuaries, and other areas established by law (Presidential Proclamation 1801 and other existing laws), and/or declared as such by appropriate government agency, LGUs, etc. 2. Fishery Water Class I – Suitable for shellfish harvesting for direct human consumption
Class SB	1. Fishery Water Class II – Waters suitable for commercial propagation of shellfish and intended as spawning areas for milkfish (*Chanos chanos*) and similar species 2. Tourist Zones – For ecotourism and recreational activities 3. Recreational Water Class I – Intended for primary contact recreation (bathing, swimming, skin diving, etc.)
Class SC	1. Fishery Water Class III – For the propagation and growth of fish and other aquatic resources and intended for commercial and sustenance fishing 2. Recreational Water Class II – For boating, fishing, or similar activities 3. Marshy and/or mangrove areas declared as fish and wildlife sanctuaries
Class SD	Navigable waters

Source: DAO No. 2016-08.

b. Water Body Classification of the Rivers/Creek within the Project Area

Name of Water Body	Classification based on DENR	Classification for Evaluation of this Project
San Juan River	C	C
Rio Grande River	C	C
Ylang-Ylang River	C	C
Maalimango Creek	unclassified	C
Manila Bay	SB	SB

c. Water Quality Guidelines for Primary and Secondary Parameters

Parameter	Unit	DAO 2016-08		DAO 2021-19*	
		Class C	Class SB	Class C	Class SB
1. BOD	mg/L	7	n/a	-	-
2. Chloride	mg/L	7	n/a	-	-
3. Color	TCU	75	50	-	-
4. Dissolved Oxygen **	mg/L	5	6	-	-
5. Fecal coliform	MPN/100mL	200	100	200	100
6. pH (Range)	-	6.5-9.0	7.0-8.5	-	-
7. Nitrate	mg/L	7	100	-	-
8. Temperature	°C	25-31	26-30		
9. Phosphate	mg/L	0.5	0.5	0.025	0.2
10. Total Suspended Solids	mg/L	80	50	-	-
11. Ammonia	mg/L	0.05	0.05	0.06	0.06
12. Oil and grease	mg/L	2	2	-	-
13. Surfactants (MBAS)	mg/L	1.5	0.3	-	-

Notes) -: No recommended values, MPN/100mL: Most Probable Number per 100 milliliter, TCU: True Color Unit

*: The updated guidelines values for fecal coliform, phosphate and ammonia as stated in DAO 2021-19 shall be used for comparison with the water quality results.

** Samples shall be taken from 9:00 AM to 4:00 PM.

(2) Monitoring Results

a. Surface Water Quality

For CP1-CP4 – January - March 2025

No.	Parameters	Unit	Water Quality Guidelines (Class C)	Stations				
				SW-1	SW-2	SW-4	SW-5	SW-6
PRIMARY								
1	Biochemical Oxygen Demand (BOD)*	mg/L	7	-	-	-	-	-
2	Color (True)	CU	75	10	20	15	20	30
3	Dissolved Oxygen (DO)	mg/L	5(min)	6.73	6.15	5.60	5.62	5.78
4	Fecal Coliform	MPN/ 100mL	200	<1.8	<1.8	<1.8	<1.8	<1.8
5	pH	-	6.5-9.0	8.17	8.32	8.49	8.46	8.46
6	Total Suspended Solids (TSS)	mg/L	80	27	7	13	22	17
SECONDARY								
1	Oil and Grease	mg/L	2	<1.0	<1.0	<1.0	<1.0	<1.0

Notes: Red Mark means exceedance with Water Quality Guideline as per DAO 2016-08/ DAO 2021-19.
Date of monitoring (waster sampling): February 04, 2025
* Analysis of BOD was mistaken and now being reanalyzed.

For CP5 – January - March, 2025

No.	Parameters	Unit	Water Quality Guidelines (Class C)	Stations	
				SW-1	SW-2
PRIMARY					
1	Biochemical Oxygen Demand (BOD)	mg/L	7	13	22
2	Color (True)	CU	75	10	15
3	Dissolved Oxygen (DO)	mg/L	5(min)	5.64	5.64
4	Fecal Coliform	MPN/ 100mL	200	<1.8	<1.8
5	pH	-	6.5-9.0	7.85	8.47
6	Total Suspended Solids (TSS)	mg/L	80	27	125
7	Chloride	mg/L	350	18,954	16,078
8	Nitrate	mg/L	7	0.12	0.25
9	Ammonia	mg/L	0.06	<0.20	<0.20
10	Phosphate	mg/L	0.025	<0.20	<0.20
SECONDARY					
1	Surfactant	mg/L	1.5	0.37	0.87
2	Oil and Grease	mg/L	2	<1.0	<1.0

Notes: Red Mark means exceedance with Water Quality Guideline as per DAO 2016-08/DAO 2021-19.
Date of monitoring (waster sampling): February 04, 2025

b. Marine Water (Manila Bay) – January - March, 2025

No.	Parameters	Unit	Water Quality Guidelines (Class SB)	Stations
				MW-1
PRIMARY				
1	Chemical Oxygen Demand (COD)*	mg/L	-	604
2	Color (True)	CU	50	10
3	Dissolved Oxygen (DO)	mg/L	-	7.82
4	Fecal Coliform	MPN/ 100mL	100	<1.8
5	pH	-	7.8-8.5	8.45
6	Total Suspended Solids (TSS)	mg/L	50	5

No.	Parameters	Unit	Water Quality Guidelines (Class SB)	Stations
				MW-1
SECONDARY				
1	Oil and Grease	mg/L	2	<1.0

Notes: Red Mark means exceedance with Water Quality Guideline as per DAO 2016-08/DAO 2021-19.
* COD value is extremely high, the reason for which is not clear at the moment. It is shown as a reference here.
Date of monitoring (waster sampling): February 04, 2025

2.2.2 Air Quality

(1) Environmental Standards

Pollutant	Short Term [a]			Long Term [b]		
	µg/NCM	ppm	Averaging Time	µg/NCM	ppm	Averaging Time
Suspended Particulate Matter [c]- TSP	230 [d]		24 hours	90		1 year [e]
Particulate Matter (PM)10	150 [f]		24 hours	60		1 year [e]
Sulfur Dioxide [c]	180	0.07	24 hours	80	0.03	1 year
Nitrogen Dioxide	150	0.08	24 hours	--	--	--
Carbon Monoxide	35	30	1 hour			
	10	9	8 hours			

Notes)
1. Pursuant to Section 12 of Republic Act 8749, the initial set of National Ambient Air Quality Guideline Values (NAAQGV) necessary to protect public health and safety and general welfare shall be as follows:
   [a] Maximum limits represented by ninety-eight percentile (98%) values not to exceed more than once a year.
   [b] Arithmetic mean
   [c] SO_2 and Suspended Particulate are sampled once every six days when using the manual methods. A minimum number of twelve sampling days per quarter or forty-eight sampling days each year is required for these methods. Daily sampling may be done in the future once continuous analyzers are procured and become available.
   [d] Limits for Total Suspended Particulate Matter with mass median diameter less than 25-50 µm.
   [e] Annual Geometric Mean.
   [f] Provisional limits for Suspended Particulate Matter with mass median diameter less than 10 µm and below until sufficient monitoring data are gathered to base a proper guideline.
2. The applicable methods for sampling and measurement of the above pollutants are as follows:
   TSP - High Volume – Gravimetric, USEPA 40 CFR, Part 50, Appendix B
   PM10 - High Volume with 10-micron particle-size inlet; Gravimetric, USEPA 40 CFR, Part 50, Appendix J
   Sulfur Dioxide – Gas Bubbler and Pararosaniline Method (West and Gaeke Method), or Flame Photometric Detector, USEPA 40 CFR, Part 50, Appendix A
   Nitrogen Dioxide – Gas Bubbler Griess-Saltzman, or Chemiluminescence Method, USEPA 40 CFR, Part 50, Appendix F
   Carbon Monoxide – Non- dispersive Infra-red Spectrophotometry (NDIR), USEPA 40 CFR, Part 50, Appendix C
3. An analyzer based on the principles and methods cited above will be considered a reference method only if it has been designated as a reference method in accordance with 40 CFR, Part 53.
4. Other equivalent methods approved by the Department may be adopted.

(2) Monitoring Results

For CP1 to CP4 – January - March, 2025

Parameter	Unit	NAAQGV*	Monitoring Results						
			AQ1	AQ2	AQ3*	AQ5	AQ6	AQ7	AQ8
TSP	µg/NCM	**230**	64.58	55.30	113.81	113.81	157.38	110.11	42.01
PM_{10}	µg/NCM	**150**	34.69	22.59	39.68	39.68	65.32	69.05	20.42
SO_2	µg/NCM	**180**	0.92	0.47	0.89	0.89	0.90	0.45	0.74
NO_2	µg/NCM	**150**	0.73	0.58	0.70	0.70	0.40	2.50	0.56
CO	ppm	**9**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Note) Red Mark means exceedance with National Ambient Air Quality Guideline Values (NAAQGV).
The monitoring location and date of monitoring for ambient air quality and ambient noise level is as follows:
AQ1 was conducted on February 2 – 3, 2025,
AQ2 was conducted on February 1 – 2, 2025,
AQ3 was conducted on February 6 – 7, 2025,
AQ5 was conducted on February 4 – 5, 2025,
AQ6 was conducted on February 5 – 6, 2025,
AQ7 was conducted on February 3 – 4, 2025,
AQ8 was conducted on February 7 – 8, 2025.

For CP5 – January - March, 2025

Parameter	Unit	NAAQGV*	Monitoring Results	
			AQ1	AQ2
TSP	µg/NCM	**230**	55.30	31.03
PM_{10}	µg/NCM	**150**	22.59	19.16
SO_2	µg/NCM	**180**	0.47	0.89
NO_2	µg/NCM	**150**	0.58	0.70
CO	ppm	**9**	<0.5	<0.5

Note) Red Mark means exceedance with National Ambient Air Quality Guideline Values (NAAQGV).
The monitoring location and date of monitoring for ambient air quality and ambient noise level is as follows:
AQ1 was conducted on February 9 - 10, 2025,
AQ2 was conducted on February 8 - 9, 2025.

2.2.3 Noise and Vibration

(1) Environmental Standards

a. Noise Standards for General Areas

Time	Class				
	AA	A	B	C	D
Daytime (0900-1800Hr)	50	55	65	70	75
Evening (1800-2200Hr)	45	50	60	65	70
Nighttime (2200-0500Hr)	40	45	55	60	65
Morning (0500-0900Hr)	45	50	60	65	70

Class AA – a section of contiguous area which requires quietness, such as areas within 100 meters from school sites, nursery schools, hospitals and special homes for the aged.
Class A – a section or contiguous area which is primarily used for residential purposes.
Class B – a section or contiguous area which is primarily a commercial area.
Class C – a section primarily zoned or used as light industrial area.
Class D – a section which is primarily reserved, zoned or used as a heavy industrial area
Correction factor:
• Areas directly fronting or facing a four-lane road: +5 dBA
• Areas directly fronting or facing a four-lane or wider road : +10 dBA

Source: National Pollution Control Commission (NPCC) - Memorandum Circular (MC) No.002 of 1980.

b. Noise Standards for Construction Activities

Class	Description	Standard (dBA)
1	Work which requires pile drivers (excluding manual type), file extractions, reverting hammers or combination thereof. It does not include pile drivers used in combination with earth augers.	90
2	Work which requires rock drills, or similar equipment like jack hammers or pavement breakers.	85
3	Work which requires air compressor (limited to those compressors which use power other hand electric motors with a rated output of 15 KW or more). Air compressors powering rock drills, jack hammers, pavement breakers are excluded.	75
4	Operation involving batching plant (limited to those with a mixer capacity of 0.5 or more cubic meters) and/or asphalt plants (limited o those with mixer capacity of 200kg or more). Batching plants for the making of mortar are excluded.	75

Source: National Pollution Control Commission (NPCC) - Memorandum Circular (MC) No.002 of 1980.

c. Vibration Standards

Currently, there are no established standards or guidelines in the Philippines for ground vibration displacement velocity. However, under the Project, a maximum allowable peak value of 2.5 mm/s for ground vibration displacement velocity is utilized. This threshold is aimed at preventing adverse effects on residential and sensitive structures such as hospitals and schools in most scenarios.

(2) Monitoring Results

a. Noise

For CP1 to CP4 – January March, 2025

Station (Class)	Date of Monitoring	Unit	Morning	Daytime	Evening	Nighttime
AQ1 (Class A)	February 2 – 3, 2025	dBA	52.1	54.0	56.8	49.6
AQ2 (Class AA)	February 1 – 2, 2025	dBA	60.0	61.1	62.6	50.2
AQ3 (Class A)*	February 6 – 7, 2025	dBA	56.3	55.9	55.3	50.6
AQ5 (Class A)	February 4 – 5, 2025	dBA	55.0	58.0	58.4	49.4
AQ6 (Class A)	February 5 – 6, 2025	dBA	53.9	56.3	51.7	46.8
AQ7 (Class A)	February 3 – 4, 2025	dBA	63.5	64.6	65.5	57.9
AQ8 (Class A)	February 7 – 8, 2025	dBA	56.0	56.9	56.0	48.3
Noise Standards (Class A)		dBA	**50**	**55**	**50**	**45**
Noise Standards (Class AA)		dBA	**45**	**50**	**45**	**40**

Notes) Red mark means exceedance of the standard stipulated in the NPCC MC 1980-002.

For CP5 – January – March, 2025

Station (Class)	Date of Monitoring	Unit	Morning	Daytime	Evening	Nighttime
AQ1 (Class A)	February 9 – 10, 2025	dBA	48.0	51.4	48.1	45.3
AQ2 (Class AA)	February 8 – 9, 2025	dBA	49.7	52.6	52.0	48.1
Noise Standards (Class A)		dBA	**50**	**55**	**50**	**45**
Noise Standards (Class AA)		dBA	**45**	**50**	**45**	**40**

Notes) Red mark means exceedance of the standard stipulated in the NPCC MC 1980-002.

b. Vibration (Monitored only for CP1 to CP4)

For CP1 to CP4 – January - March, 2025

Station	Date of Monitoring	Displacement Velocity (mm/s)			
		Min		Max	
		Baseline (2022)	Feb. – Mar. 2025	Baseline (2022)	Feb. – Mar. 2025
AQ1	March 11, 2025 – morning & afternoon	0.4	0.0	0.6	0.1
AQ2	February 28, 2025 – morning & afternoon	0.5	1.0	0.8	2.7
AQ3	March 11, 2025 – morning & afternoon	0.4	0.2	0.6	0.6
AQ5	February 28, 2025 – morning & afternoon	0.8	0.2	1.4	0.9
AQ6	February 28, 2025 – morning & afternoon	0.3	0.4	0.5	1.3
AQ7	March 11, 2025 – morning & afternoon	0.7	0.5	1.2	1.0
AQ8	March 11, 2025 – morning & afternoon	0.6	0.2	0.9	0.6
Maximum Allowable Peak Velocity for Ground Vibration: 2.5 mm/s.					

2.2.4 Riverbed Sediment Quality (Result of TCLP Test)

DAO 2013-22 is applied

Classification of Hazardous Waste (DAO No. 22 series of 2013)

Parameter	Regulatory Limit (mg/L)
1. Selenium	> 1.0
2. Arsenic	> 1.0
3. Barium	> 70
4. Cadmium	> 0.3
5. Lead	> 1.0
6. Chromium	> 5.0
7. Mercury	> 0.1

Results of TCLP Tests: Monitoring of riverbed sediment quality was not conducted in this period.

2.2.5 Terrestrial Flora

- For CP1-CP4:
    - For CP1 – A Tree Cutting Permit (with reference DENR-RIVA-PENRO-CAVITE-05072024-04_Extended) was released on March 14, 2025, with 90 days extension period.
        - The Contractor paid for forest charges to the DENR-PENRO Cavite and seedlings replacement cost to the forest nursery operator. The replacement seedlings are assorted indigenous seedlings.
        - The Earth-Balling Permit is under evaluation of the permit and licensing section at the DENR Regional office and the Biodiversity Management Bureau (BMB), in accordance with the latest BMB memorandum dated March 4, 2024, regarding Earth-Balling and Transplanting Permit Requests from DENR Regional Offices.
        - Status: Pending upon submission of a copy of any land acquisition documents.
    - For CP2 – The application for a Tree Cutting Permit was already forwarded to the DENR-PENRO Cavite.
    - For CP3 – An advance copy of Tree Cutting Permit (with reference DENR-RIVA-PENRO-CAV-05042023-07_Extended) was released on April 02, 2025. The Contractor paid for forest charges to the DENR-PENRO Cavite and seedlings replacement cost to the forest nursery operator. The replacement seedlings are assorted indigenous seedlings.
    - For CP4 – No Objection Letter from the concerned LGU (Rosario) to proceed with the application.
- For CP5:
    - The project successfully fulfilled the DENR-PENRO's requirement for replacing seedlings, offsetting the impact on mangrove trees within the project site.

Summary of Monitoring Results for this Monitoring Period, January – March 2025

Monitoring Item	Monitoring Results during Report Period
Quarterly monitoring conducted by the Consultants for the project areas for Contract Packages 1 to 4 (CP-1 to 4) and Contract Package 5 (CP5) including the following parameters: • Water quality (surface water (river water) and marine water),	**Water Quality** Surface water quality for Contract Packages 1 – 4: • Monitoring was conducted at five (5) stations. One station (SW-3) was not allowed to monitor by the mayor of General Trias City.

Monitoring Item	Monitoring Results during Report Period
• Air quality, • Noise and vibration, and • Terrestrial flora.	• All the monitored parameters conformed to guideline values stipulated in DAO 2016-08/ DAO 2021-19 except for BOD. Regarding BOD, laboratory analysis was failed and now being re-analyzed. The results will be presented in the next period. Surface water quality for Contract Package 5: • Monitoring was conducted at two (2) stations near the project area. • BOD, Chloride, Ammonia and Phosphate did not meet the quality guideline value at all stations. TSS did not meet at SW-2. Other parameters met the quality guideline value at all stations. • The BOD levels exceeded the set standard of 7 mg/L across all established water quality management areas along the river. The elevated BOD concentrations can be attributed to the following: a) organic waste originating from domestic household activities, which are associated with population density, the extent of agricultural land, and the presence of community livestock, b) industrial and commercial waste, and c) rainfall events, which can carry pollutants into the river. The high BOD levels are not related to the project activities, as there are no wastewater discharges from the project contract packages at this stage. • High chloride concentrations were observed at two downstream monitoring stations, with levels exceeding the standard of 350 mg/L by several multiples. These elevated chloride levels are influenced by direct contact with seawater intrusion, particularly during high tide events, as seawater has a naturally high chloride concentration. Chloride levels near resettlement areas are similarly impacted by these tidal effects. • Regarding Ammonia and Phosphate, MDL (Method Detection Limit) level is higher than respective guideline values this time, so the accurate evaluation cannot be done. Marine water: • Monitoring was conducted at one (1) station established near the planned river month of San Juan Diversion Channel in Malina Bay. • All the monitored parameters conformed to guideline values stipulated in DAO 2016-08/ DAO 2021-19. **Air Quality** Contract Packages 1 – 4: • Monitoring was conducted at seven (7) stations. One station (AQ4) was not allowed to monitor by the mayor of General Trias City.

Monitoring Item	Monitoring Results during Report Period
	• All monitoring stations are within the set standard values. Contract Package 5: • Monitoring was conducted at two (2) stations. • All monitoring stations are within the set standard values. **Noise Level** Contract Packages 1 – 4: • Monitoring was conducted at the same locations as air quality. • Almost all of the monitoring results exceeded the standard values of ambient noise levels. • Ground monitoring has revealed that elevated ambient noise levels at some stations are caused by various factors, including passing vehicles with honking and engine noise, loud motorcycles, residential activities, and nearby animals such as dogs and chickens. Contract Packages 5: • Monitoring was conducted at the same locations as air quality. • Monitoring results at AQ1 conformed to standard values while those at AQ2 exceeded the standard values. **Vibration** • Vibration (displacement velocity) was monitored for CP1 to 4 at (7) stations. One station (AQ4) was not allowed to monitor by the mayor of General Trias City. • All the monitoring results are within the maximum allowable peak velocity for the ground except for AQ2. **Terrestrial Flora** • For CP1-CP4: • For CP1 – A Tree Cutting Permit (with reference DENR-RIVA-PENRO-CAVITE-05072024-04_Extended) was released on March 14, 2025, with 90 days extension period. The replacement seedlings are assorted indigenous seedlings. • The Earth-Balling Permit is under evaluation of the permit and licensing section at the DENR Regional office and the Biodiversity Management Bureau (BMB), in accordance with the latest BMB memorandum dated March 4, 2024, regarding Earth-Balling and Transplanting Permit Requests from DENR Regional Offices. • Status: Pending upon submission of a copy of any land acquisition documents.

Monitoring Item	Monitoring Results during Report Period

	• For CP2 – The application for a Tree Cutting Permit was already forwarded to the DENR-PENRO Cavite.
	• For CP3 – An advance copy of Tree Cutting Permit (with reference DENR-RIVA-PENRO-CAV-05042023-07_Extended) was released on April 02, 2025. The replacement seedlings are assorted indigenous seedlings.
	• For CP4 – No Objection Letter from the concerned LGU (Rosario) to proceed with the application.
	• For CP5:
	  • The project successfully fulfilled the DENR-PENRO's requirement for replacing seedlings, offsetting the impact on mangrove trees within the project site.
	  • The project successfully fulfilled the DENR-PENRO's requirement for replacing seedlings, offsetting the impact on mangrove trees within the project site.

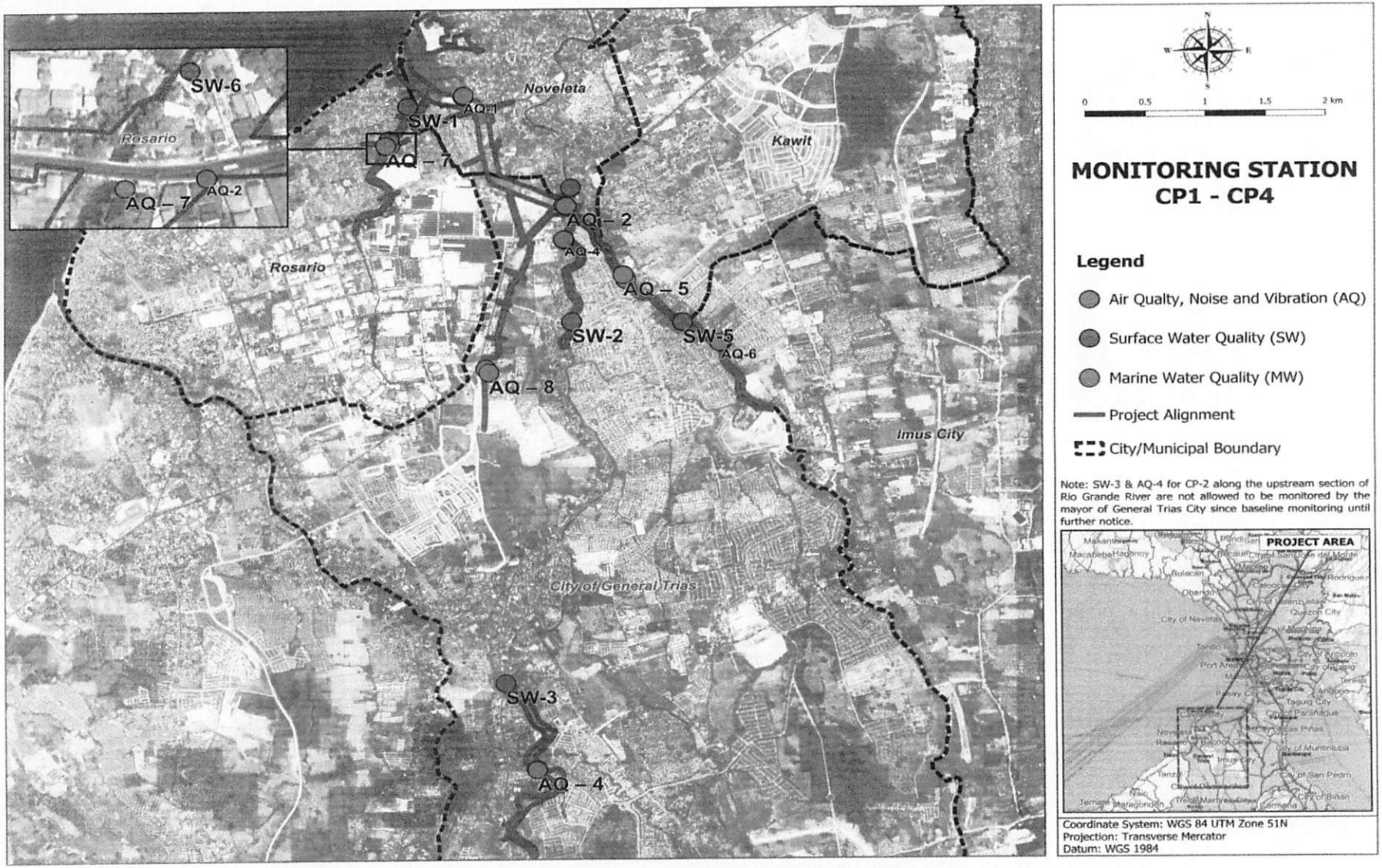

Figure 1 Location Map of Monitoring Stations for CP-1 to 4

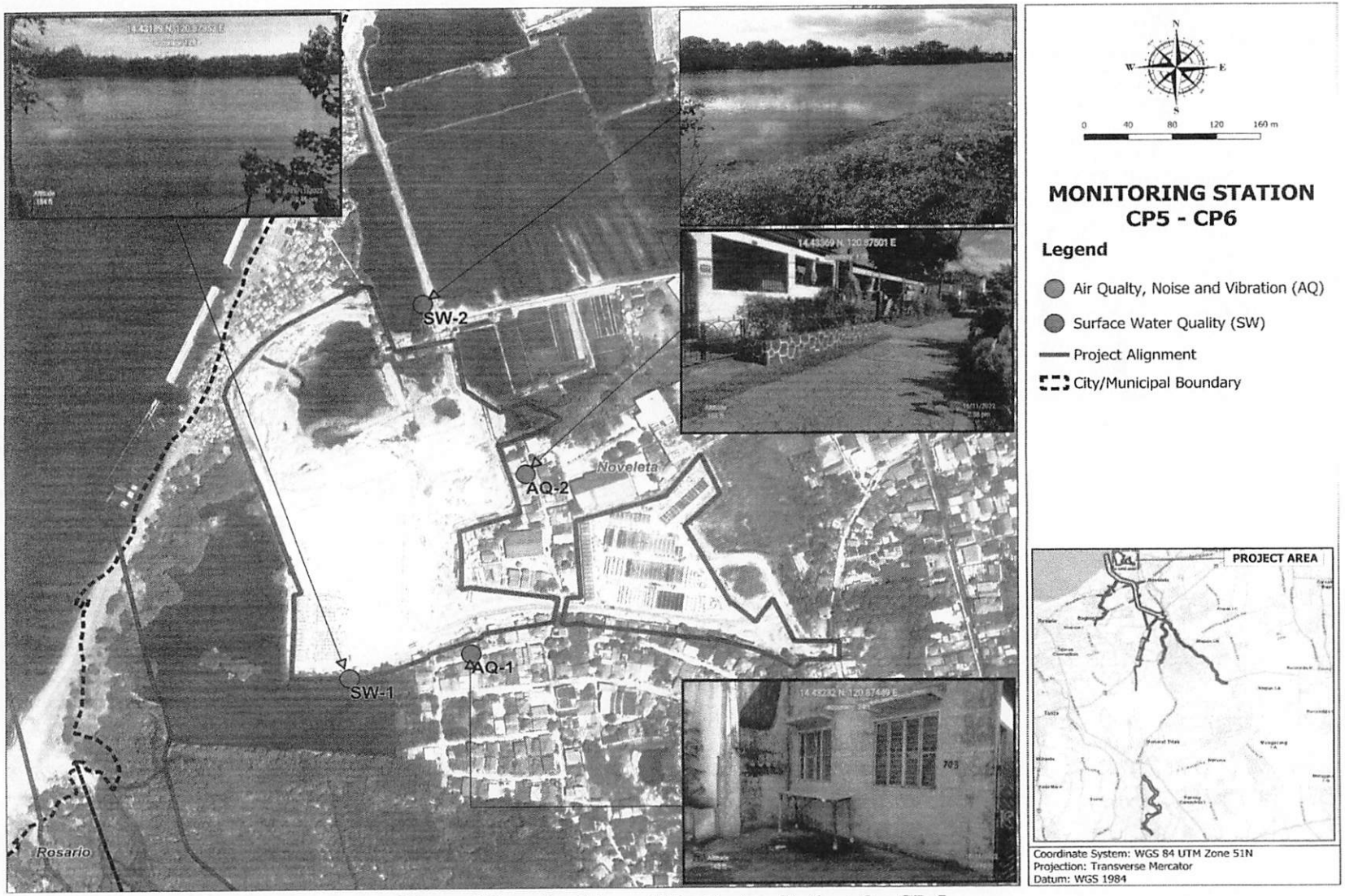

Figure 2 Location Map of Monitoring Stations for CP-5

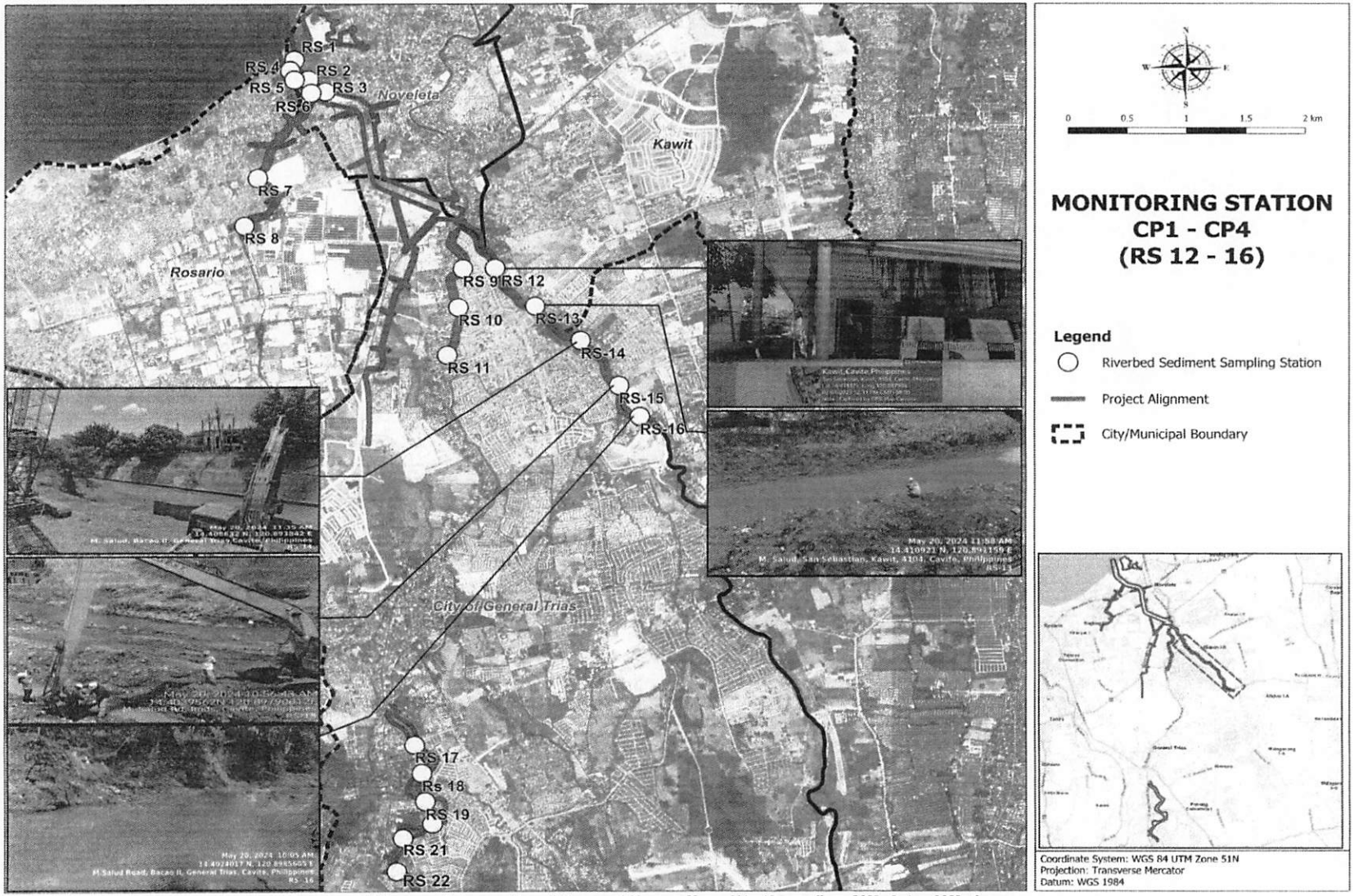

Figure 3 Location Map of Sampling Stations for CP-1 to CP-4

RAP Implementation Monitoring Form
For Cavite Industrial Area Flood Risk Management Project

1. General Information

a. RAP Implementation Monitoring Results: as per Approved RAP Report on March 28, 2025
b. Date of Preparing This form *March 2025*
c. Person Preparing This form
Name:
Position:
Department/Organizations:

2. Scale of Land Acquisition and Resettlement

❖ ***Please fill in the table below with updated figures after finalization of RAP during DED stage***

2.1 Project Affected Households (PAHs) and Project Affected Persons (PAPs)

Municipality	Total					
	No. of PAHs			No. of PAPs		
	Formal	Informal[1]	Total	Formal	Informal	Total
General Trias	91	129	220	415	493	908
Kawit	12	9	21	46	34	80
Noveleta	113	743	856	380	2,655	3,035
Imus		1	1	0	1	1
Rosario	26	122	148	104	459	563
Total	242	1,004	1,246	945	3,642	4,587

2.2 Total Areas to be Acquired

Total	**Details**
Total areas: 592,803.55 Sq.M.	Residential: 236,074.43 Sq.M. Commercial: 19,946 Sq.M. Agricultural: 167,643.75 Sq.M

[1] Informal PAHs and PAPs include Renters, Rent-free,Refused/Absentees, caretakers and those who did not provide any information during the interview.

	Private Cemetery[2]: 1,327.37 Industrial: 68,153 Sq.M. Other[3]:99,659 Sq.M

3. Monitoring Results

3.1 Progress of Land Acquisition and Resettlement

(1) Summary of Progress: Number

As of (d/m/y)	Number of PAHs Receiving All Compensation / Subsidy for Loss of Land (HH)	Number of PAHs Receiving All Compensation / Subsidy for Loss of Structure (HH)	Number of PAHs Receiving All Compensation / Subsidy for Loss of Improvement (HH)	Number of PAHs Receiving All Compensation / Subsidy for Loss of Crop/Tree/Perennial (HH)	Number of PAHs Receiving All Compensation / Subsidy for Loss of Income (HH)	Number of PAHs Receiving All Inconvenience Allowance (HH)	Number of PAHs Move Out Current Place (HH)	Number of ISFs Moving into Resettlement Site (HH)	Land Area Already Acquired (m^2)
NO ACTIVITY YET									

(2) Summary of Progress: Percentage

As of (d/m/y)	Number of PAHs Receiving All Compensation / Subsidy for Loss of Land (%)	Number of PAHs Receiving All Compensation / Subsidy for Loss of Structure (%)	Number of PAHs Receiving All Compensation / Subsidy for Loss of Improvement (%)	Number of PAHs Receiving All Compensation / Subsidy for Loss of Crop/Tree/Perennial (%)	Number of PAHs Receiving All Compensation / Subsidy for Loss of Income (%)	Number of PAHs Receiving All Inconvenience Allowance (%)	Number of PAHs Move Out Current Place (%)	Number of ISFs Moving into Resettlement Site (%)	Land Area Already Acquired (%)

[2] Computation of the Public Cemetery is added to the agricultural land use computation. Love memorial (Private Cemetery) is added to the Residential land use computation.

[3] Other pertains to land use that are not specified or blank/ unknown in the Parcellary Masterslist.

(3) Detail List of Compensation and Assistance

❖ ***Fill in Annex: This format will not be disclosed.***

3.2 Livelihood Restoration Programs

No.		Name of Resettlement Site	Responsible Organization (NHA or Name of LGUs)	Program Name	Program Contents	Target Group of Program	Number of Participants
1						ISFs	TBD
2							
3							
4							
5							

3.3 Grievance Redress

No.	Date Grievance Raised (d/m/y)	Location Where Person/Entity Raising Grievance Lives	Name of LGUs (LIAC) Corresponding Grievance	Grievance Raised	Redress Action Taken and Result
1	NONE YET				As of (d/m/y) - Redress action: - Result: As of (d/m/y): - Redress action: - Result

					As of (d/m/y): - Redress action: - Result
2					As of (d/m/y) - Redress action: - Result: As of (d/m/y): - Redress action: - Result As of (d/m/y): - Redress action: - Result
3					As of (d/m/y) - Redress action: - Result: As of (d/m/y): - Redress action: - Result As of (d/m/y): - Redress action: - Result