

## ANNEX 10

### Analysis and Prioritisation of Proposed Safer Settlement Sites

The system used to analyse and prioritise sites is based on previous models developed under the ADB-funded Development of Poor Urban Communities Sector Project (DPUCSP) and the Metro Manila Basic Urban Services for the Poor Project (MMUSP). It applies filters—legal, technical, environmental, and social—to rank and prioritise candidate sites that have been pre-selected by the LGU according to readiness for development into socialised housing. The MMUSP model is particularly applicable because it was designed specifically for sites in a highly urban setting. Both DPUCSP and MMUSP models have been used to rank and prioritise sites proposed for socialised housing involving HUDCC, the Development Bank of the Philippines, ADB, and Cities Alliance.

The model applied uses a two-tiered screening system for the 5 candidate sites proposed by the City of Taguig.

For the legal screening, a rating system is used to distinguish sites which are LGU-owned with title in its name; with no adverse claims and no liens; and zoned for socialised housing or earmarked for such a purpose through a city council resolution. A site with these characteristics is given an AAA rating and has the best chance of being successfully developed right away. A site with a CCC rating has lesser chance of being developed without hitches.

For the technical, environmental, and social screening, a numerical rating of 0 to 3 is used, where the desired score is 3. Weights have also been assigned to each parameter. A higher weight denotes how essential a parameter is to considering a site ready for development. The higher the weighted total scores for a site, the higher its readiness for project development. The candidate sites and the results of their analysis and prioritisation are further discussed below.

#### Candidate Sites of Taguig City for the Safer Settlements Component:

##### Site 1: Novelty Site

The proposed site in Novelty is a 1.3 hectare property located within the Mañalac Industrial Estate in Brgy. Bagumbayan. It is bounded on the north by a paint repacking facility, on the west and south by warehouses, and on the east by the Joseph Sitt Street facing the Joseph Sitt Village. The site is a gently sloping outcrop of tuff bedrock several meters above sea and lake levels. Novelty used to be a garments factory and is currently covered by demolition debris. The present land use classification is industrial although the LGU is proposing to convert the site into a socialised housing area. Along its eastern perimeter, a satellite market and tricycle terminal was established to service residents of Joseph Sitt Village, a residential area that slopes down to Mauling Creek.

### **Sites 2 & 3: Laura Drive (North and South)**

The site is approximately 1.34 hectares distributed into two parcels of land, Laura Drive North and Laura Drive South. The land is owned by the City of Taguig. A parcel of land that separates the north and the south is owned by a private individual. The site is zoned for general residential use but not specifically for socialised housing.

Construction of a three-storey building by the Gawad Kalinga is ongoing. However, a portion of the South Laura Drive site is still occupied by ISFs. The site has access to power, water supply and telecommunication lines. However, no identified outfall for drainage was observed. An existing drainage traversing the Gawad Kalinga building under construction drains to the South Laura Drive.

### **Site 4: Inland Lakeshore**

The Inland Lakeshore Area, an 8-kilometer strip of land with approximately 150 to 200 meters in width, is behind the earth dike that protects Taguig City from Laguna de Bay. The land is vast, with an estimated area of 8 hectares, and is presumed to be owned by the LLDA. Behind the dike, is a 7-kilometer stretch of land, approximately 100 to 200 meters wide, is currently occupied by a number of informal settler families. Some small-scale development by private sectors are scattered in the area, with poor planning and regulation.

The area is susceptible to flooding. If developed for socialised housing, the area will need up to 2-meter backfill in selected locations. The geotechnical investigation suggests that the sub-soil is capable of bearing the foundations of 2-storey buildings but taller buildings would probably require soil compaction to be undertaken to improve the structural strength of the subsoil and increase its bearing capacity. The site can possibly accommodate up to 2000 dwelling units in 2-storey buildings.

### **Site 5: Dumlao Site**

The proposed site in Dumlao is a 1.1 hectare interior lot located within the previously-agricultural area of Brgy. Bagumbayan. It is bounded on the north by the Sta. Teresa Elementary School and on the rest by subdivisions and residential structures. The site is generally flat and covered with wild plant growth. It has become susceptible to flooding due to the unplanned development of adjacent residential areas. Stormwater finds its way to the Dumlao property since it is the least developed among the properties within the area. The present land use classification is residential and the LGU intends to develop the area for socialised housing.

### **Site 6: Habitat Bagumbayan**

The site is about 1.8 hectares located in Brgy. Bagumbayan, a property owned by the LGU. The area is zoned for residential use, but not specifically for socialised housing. The site has potential for neighbourhood level mixed use type of development, with available power, water supply and telecommunications lines through the existing socialised housing buildings of Habitat for Humanity.

However, no outfall for drainage lines was observed. The area is possibly lower than the M. L. Quezon Road but higher than the Dumlao property, and will require detailed drainage study.

There is a good access to public transport and key community facilities, such as public elementary and secondary schools. There were a number of informal settlers sighted within the site boundaries.

SITE SELECTION PARAMETERS	Site 1		Site 2		Site 3		
	NOVELTY		NORTH LAURA DRIVE		SOUTH LAURA DRIVE		
Site Area (hectare)	13,859 sqm (1.35has)		9,144 sqm (0.91 has)		4,232sqm (0.40has)		
Location							
<b>I. LEGAL STATUS</b>	<i>Rating Scale</i>		<i>Rating</i>		<i>Rating</i>		
<b>1.1 Status and Proof of Land Ownership</b>							
a) LGU owned with title in its name	<b>A</b>						
b) NG-owned with title, proclaimed for socialised housing or conveyed to LGU	<b>B</b>	LGU-owned or administered by transfer of title		LGU-owned or administered by transfer of title		LGU-owned or administered by transfer of title	
c) LGU-owned or administered but transfer of title pending	<b>C</b>	pending (subject to verification of Legal consultant)	<b>C</b>	pending (subject to verification of Legal consultant)	<b>C</b>	pending (subject to verification of Legal consultant)	
d) NG-owned with title, for proclamation	<b>D</b>						
e) Public land, untitled for proclamation	<b>E</b>						
f) Private land, titled for acquisition	<b>F</b>						
g) Private land, untitled for acquisition	<b>G</b>						
<b>1.2 Adverse Claims or Liens</b>							
a) No adverse claim, no liens	<b>A</b>			No adverse claims, no liens.			
b) With adverse claim, but no credible proof	<b>B</b>			Construction of 3-storey GK building ongoing.			
c) With adverse claim or contested ownership, with credible proof of claim	<b>C</b>	With adverse claim but no credible proof (subject to verification of Legal consultant)	<b>B</b>	Ocular inspection revealed presence of makeshift and semi-permanent structures in the area.	<b>A</b>	No adverse claims, no liens. Ocular inspection revealed presence of makeshift and semi-permanent structures in the area.	
d) With adverse claim or contested ownership filed in court And/or annotated on title	<b>D</b>						
<b>1.3 Zoning Status</b>							
a) Zoned for socialised housing or is earmarked for such purpose through SP	<b>A</b>	Zoned for an industrial area (steps needed to allow for socialised housing whether reclassification or locational clearance subject to verification of Legal consultant)		Zoned for General Residential Zone 1 but not specifically for socialised housing; may need SP resolution to make it binding (subject to verification of Legal consultant)		Zoned for General Residential Zone 1 but not specifically for socialised housing; may need SP resolution to make it binding (subject to verification of Legal consultant)	
b) Zoned for residential use but not specifically for socialised housing	<b>B</b>		<b>C</b>		<b>B</b>		
c) Zoned for other uses e.g. commercial or industrial	<b>C</b>						
d) Zoned for socialised housing but earmarked for another entity	<b>D</b>						
<b>II. PHYSICAL/ENVIRONMENTAL/SOCIAL FEATURES</b>							
<b>2.1 Presence of Hazards (Weight = 5)</b>							
a) Not applicable	3						
b) Prone to liquefaction	0	There are environmental risks due to land use (i.e. factories) and contaminated soils heavy metals.		Construction of GK building ongoing.		Stormwater from North Laura Drive drains to the site. Would require off site drainage solutions. Prone to liquefaction; proximity to fault lines to be verified.	
c) Adjacent to landfills, polluted areas	0			Drainage traverses the building and drains to South Laura Drive.			
d) Proximity to hazardous installations	0		0		0	0	
e) Prone to landslides	0	However, there are mitigating measures that could be applied to ensure safety of residents.		Also prone to liquefaction; proximity to fault lines to be verified.			
f) Adjacent to primary power lines (within ___kms)	0						
g) Proximity to fault lines (within 5 meters)	0						
h) High incidence of flooding	0						
i) Other environmental risks	0						
<b>2.2 Accessibility (Weight = 5)</b>		Short walking	10	Accessible	5	Accessible	10

SITE SELECTION PARAMETERS		Site 1		Site 2		Site 3			
		NOVELTY		NORTH LAURA DRIVE		SOUTH LAURA DRIVE			
a)	Through lot with access to public transport and a major road	3	distance to Sta. Maria St. which is a public transport route.		through North Laura Drive along tricycle routes.		through South Laura Drive along tricycle routes.		
b)	Inside lot with access to public transport and a major road	2	Fronting the site is a tricycle terminal.						
c)	Interior lot with access to public transport and a major road	1							
d)	No access; necessitates ROW acquisition	0							
<b>2.3 Presence of Informal Settlers/PAPs (Weight = 5)</b>			PAPs in the form of market vendors (talipapa) occupy a portion of the sidewalk directly in front of the site: tenure from 7 to 10 years and number about 23.						
a)	Open/Vacant	3							
b)	With projected affected persons (PAPs)	2		10	No. of informal settlers for LGU verification	5	No. of informal settlers for LGU verification		
c)	IS cover less than 50% of the total area	1					0		
d)	IS cover more than 50% of the total area	0							
<b>2.4 Terrain Conditions (Weight = 4)</b>			Detailed topographic map (contour interval at least 0.5m) of site and adjacent areas esp along southern boundary.		Relatively flat but soil capacity recommends up to 2 storeys only, otherwise expensive soil treatment is required.		Relatively flat but soil capacity recommends up to 2 storeys only, otherwise expensive soil treatment is required.		
a)	Relatively flat (0-5%)	3		8		12	12		
b)	Gradual (6 to 14%)	2							
c)	Rolling (more than 15%)	1							
<b>2.5 Site Elevation (Weight = 4)</b>			Site must be cleared from concrete debris; hauling of debris has cost implications.		Site is possibly lower than the MLQ Road but higher than Dumlao property. Would require detailed drainage study.		Site is possibly lower than the MLQ Road but higher than Dumlao property. Would require detailed drainage study.		
a)	Site is at the level of the main road or slightly higher	3		12		8	8		
b)	Site is lower than the main road by less than 0.2 meters	2							
c)	Site is lower than the main road by more than 0.2 meters	1							
<b>2.6 Presence of Utilities (Weight = 4)</b>			Available power, water supply and telecommunications however water pressure is sufficient for higher floor levels say 3 to 4 storeys. Off-site development for drainage necessary and needs further investigation.		Available power, water supply and telecommunications however no identified outfall for drainage lines. Off-site development for drainage necessary and needs further investigation.		Available power, water supply and telecommunications however no identified outfall for drainage lines. Off-site development for drainage necessary and needs further investigation.		
a)	Has access to all key utilities (power, water and sewerage)	3		8		8	8		
b)	Has access to all key utilities but with deficiencies	2							
c)	Does not have access to all key utilities	1							
d)	Has no access at all	0							
<b>2.7 Proximity to Community Facilities (Weight = 3)</b>			Good access to public transport makes it accessible to key community facilities.		Good access to public transport makes it accessible to key community facilities.		Good access to public transport makes it accessible to key community facilities.		
a)	Accessible to community facilities (e.g. schools, health)	3		9		9	9		
b)	Has access to at least one community facility	2							
c)	Has no access at all	1							
<b>2.8 Potential for Mixed Use Development (Weight = 3)</b>			Presence of talipapa, tricycle terminal along site boundary and proliferation of neighbourhood shops and services in the immediate vicinity indicate high potential.		Site has potential for neighbourhood level mixed use type of development.		Site has potential for neighbourhood level mixed use type of development.		
a)	High potential (crossroads/along major commercial area)	3		9		6	6		
b)	Medium potential (growing commercial area)	2							
c)	Low potential ("isolated")	1							
d)	Zero potential due to other extenuating circumstances	0							
				<b>CBC</b>	<b>66</b>	<b>CAB</b>	<b>53</b>	<b>CBB</b>	<b>53</b>

SITE SELECTION PARAMETERS		Site 4	Site 5	Site 6
		INLAND LAKESHORE	DUMLAO PROPERTY	HABITAT BAGUMBAYAN PROPERTY
Site Area (hectare)		(16 km - length/150-200m deep)	11,551 sqm (1.15 has)	17,679 sqm (1.76has)
Location				
<b>I. LEGAL STATUS</b>	<i>Rating Scale</i>		<i>Rating</i>	<i>Rating</i>
<b>1.1 Status and Proof of Land Ownership</b>				
a) LGU owned with title in its name	<b>A</b>		Full payment due Oct 2013. (Total acquisition cost = about P28M)	
b) NG-owned with title, proclaimed for socialised housing or conveyed to LGU	<b>B</b>		Payment release is subject to transfer of the title in the name of the City. Of the P4.5M annual release to the landowner, about P700T thereof shall be deposited to the trust fund to cover refund to previous buyers.	
c) LGU-owned or administered but transfer of title pending	<b>C</b>			
d) NG-owned with title, for proclamation	<b>D</b>	Area reserved for public parks, playground and other public uses (Ordinance No. 17-2002)		
e) Public land, untitled for proclamation	<b>E</b>			LGU owned with title in its name (TCT no. 12858)
f) Private land, titled for acquisition	<b>F</b>			
g) Private land, untitled for acquisition	<b>G</b>			
<b>1.2 Adverse Claims or Liens</b>				
a) No adverse claim, no liens	<b>A</b>	With adverse claim but no credible proof.		No adverse claim subject to verification of legal consultant.
b) With adverse claim, but no credible proof	<b>B</b>	Ocular inspection revealed presence of makeshift and semi-permanent structures in the area.		
c) With adverse claim or contested ownership, with credible proof of claim	<b>C</b>		No adverse claim; no liens	Ocular inspection revealed presence of makeshift and semi-permanent structures in the area.
d) With adverse claim or contested ownership filed in court and/or annotated on title	<b>D</b>			
<b>1.3 Zoning Status</b>				
a) Zoned for socialised housing or is earmarked for such purpose through SP	<b>A</b>		Zoned for General Residential Zone 1 but not specifically for socialised housing; may need SP resolution to make it binding (subject to verification of Legal consultant)	Zoned for General Residential Zone 1 but not specifically for socialised housing; may need SP resolution to make it binding (subject to verification of Legal consultant)
b) Zoned for residential use but not specifically for socialised housing	<b>B</b>	Zoned as general residential zone 1 (high density)		
c) Zoned for other uses e.g. commercial or industrial	<b>C</b>			
d) Zoned for socialised housing but earmarked for another entity	<b>D</b>			
<b>II. PHYSICAL/ENVIRONMENTAL/SOCIAL FEATURES</b>				
<b>2.1 Presence of Hazards (Weight = 5)</b>				
a) Not applicable	3	Possible vulnerability to liquefaction; adjacent to primary power lines and high incidence of flooding due to water catchment feature of the area.	Formerly an agricultural land, site is currently vacant and has become a natural water impounding area indicating vulnerability to liquefaction and flooding. Would require off site drainage	
b) Prone to liquefaction	0			
c) Adjacent to landfills, polluted areas	0			
d) Proximity to hazardous installations	0			Proximity to fault lines to be verified
e) Prone to landslides	0			
f) Adjacent to primary power lines (within ___kms)	0			
g) Proximity to fault lines (within 5 meters)	0			

SITE SELECTION PARAMETERS		Site 4 INLAND LAKESHORE	Site 5 DUMLAO PROPERTY	Site 6 HABITAT BAGUMBAYAN PROPERTY
h)	High incidence of flooding	0	solutions. Soil boring test required; proximity to fault lines to be verified.	
i)	Other environmental risks	0		
<b>2.2 Accessibility (Weight = 5)</b>			Transport facilities such as tricycle terminals, pedestrian lanes have to be put in place to support increased population density in the area due to proposed socialised housing development.	Transport facilities such as tricycle terminals, pedestrian lanes have to be put in place to support increased population density in the area due to proposed socialised housing development.
a)	Through lot with access to public transport and a major road	3		
b)	Inside lot with access to public transport and a major road	2		
c)	Interior lot with access to public transport and a major road	1	Site along C-6 Road	5
d)	No access; necessitates ROW acquisition	0	15	5
<b>2.3 Presence of Informal Settlers/PAPs (Weight = 5)</b>				
a)	Open/Vacant	3	Informal settlers occupy sections of the entire stretch of the inland Lakeshore area to be verified by Social Housing and Resettlement Specialist	Informal settlers sighted within site boundaries; actual number to be verified by Social Housing and Resettlement Specialist
b)	With projected affected persons (PAPs)	2		
c)	IS cover less than 50% of the total area	1	0	5
d)	IS cover more than 50% of the total area	0		
<b>2.4 Terrain Conditions (Weight = 4)</b>				
a)	Relatively flat (0-5%)	3	Uneven topography due to indiscriminate and substandard backfilling activities with waterlogged portions.	Relatively flat; with site development and improvements (4 Habitat bldgs)
b)	Gradual (6 to 14%)	2	12	12
c)	Rolling (more than 15%)	1		
<b>2.5 Site Elevation (Weight = 4)</b>				
a)	Site is at the level of the main road or slightly higher	3		
b)	Site is lower than the main road by less than 0.2 meters	2	Requires massive backfilling works.	Site is possibly lower than the MLQ Road but higher than Dumlao property. Would require detailed drainage study.
c)	Site is lower than the main road by more than 0.2 meters	1	4	8
<b>2.6 Presence of Utilities (Weight = 4)</b>				
a)	Has access to all key utilities (power, water and sewerage)	3		
b)	Has access to all key utilities but with deficiencies	2	Requires extensive power and water distribution lines.	Power and water accessible through existing Habitat Building connections. Off-site development for drainage necessary and needs further investigation.
c)	Does not have access to all key utilities	1	4	8
d)	Has no access at all	0		
<b>2.7 Proximity to Community Facilities (Weight = 3)</b>				
a)	Accessible to community facilities (e.g. schools, health)	3	Good access to public transport makes it accessible to key community facilities. Bounded by national elementary and secondary	Good access to public transport makes it accessible to key community facilities. Near national elementary and secondary schools.
b)	Has access to at least one community facility	2	6	9
c)	Has no access at all	1		

SITE SELECTION PARAMETERS		<i>Site 4</i> INLAND LAKESHORE	<i>Site 5</i> DUMLAO PROPERTY schools.	<i>Site 6</i> HABITAT BAGUMBAYAN PROPERTY
<b>2.8 Potential for Mixed Use Development (Weight = 3)</b>		Potential for mixed use development by virtue of its location	0	6
a) High potential (crossroads/along major commercial area)	3	compromised by its high vulnerability to hazards.	Site has potential for neighbourhood level mixed use type of development.	6
b) Medium potential (growing commercial area)	2			
c) Low potential ("isolated")	1			
d) Zero potential due to other extenuating circumstances	0			