Qatari Diar - Lusail City

Storm Water Guidelines

Introduction:

This guideline is to advise Lusail developers/owners about the requirements for the provision of surface water and ground water management within Lusail city by setting out the criteria that each developer, "subject to the plot category", is required to follow, for the provision of a managed drainage system for the disposal of surface & ground water within the plot boundaries.

Design of Levels and Drainage:

- All development proposals will be expected to integrate seamlessly into the levels of their surroundings and meet relevant Authority standards and permits. Site and context levels must be carefully checked and referenced.
- At grade levels within the plots must be designed to integrate well with external levels, especially side-walk and street levels without the requirement for steps and ramps.
- All plot generated surface water run-off, storm drainage and roof drainage must be disposed off within the site boundaries and not directed into adjacent roads or properties or beach, or into the sanitary sewer system.
- The plot developer must manage his/her own storm water from the plot by having a storm water holding tank provided within the plot.
- It should be noted that the tank will have to be pumped out after the rainfall has finished, restoring the flood protection of the property.
- Ashghal drainage affairs design guidelines volume 3 & volume 8 to be followed.
- The minimum setback for underground tanks to be considered is 1.5 meter from the plot limits.

Category A - Single Residential Development (E.g. Al Khuzama, Al Nafel, Qetaifan Islands South, Huzoom Lusail)

- Holding tanks design follows design parameters in compliance with Qatar Sewerage and Drainage Design Manual (QSDDM). The tank shall be sized to accommodate for (1 in 10 years, for 24hrs duration) in compliance with QSDDM volume 3.

Category B – Building / Tower Blocks (All Lusail Districts)

- Holding tanks design follows design parameters in compliance with Qatar Sewerage and Drainage Design Manual (QSDDM). The tank shall be sized to accommodate for (1 in 25 years, for 24hrs duration) in compliance with QSDDM volume 3.

Table 1.5.4 - Intensity-Frequency-Duration (IDF) values recommended for use throughout Qatar

Duration (mins)	Return Period (years)					
	2	5	10	25	50	100
5	56.1	67.8	78.2	94.4	108.9	125.7
10	44.8	54.1	62.4	75.3	86.9	100.2
15	37.6	45.4	52.3	63.2	72.9	84.1
20	32.5	39.3	45.3	54.7	63.1	72.8
30	25.9	31.3	36.1	43.6	50.3	58.1
45	20.2	24.4	28.1	34.0	39.2	45.2
60	16.7	20.2	23.3	28.1	32.4	37.4
2hrs	10.3	12.4	14.3	17.3	19.9	23.0
3hrs	7.6	9.2	10.6	12.8	14.8	17.0
6hrs	4.5	5.4	6.3	7.6	8.7	10.1
12hrs	2.6	3.2	3.7	4.4	5.1	5.9
24hrs	1.5	1.9	2.1	2.6	3.0	3.4

Source : QSDDM Volume 3