

COST IMPACT on The Gazette published by MOEF, dt 9th Decemeber 2016 on Integration of Environmental Conditions in Building Bye-laws

** ESTIMATED COST UNDER STANDARD SITE CONDITIONS

Medium	Category			Additional Cost Impact (Rs./sqft on Saleable Area)**
	5000 to 20000 sqm	20000 to 50000 sqm	50000 to 150000 sqm	
Topography & Natural Drainage	Natural Drain to be maintain to allow free flow of water	Natural Drain to be maintain to allow free flow of water	Natural Drain to be maintain to allow free flow of water	nil
	No construction on Wet land, water bodies, etc	No construction on Wet land, water bodies, etc	No construction on Wet land, water bodies, etc	nil
	Sustainable Urban Drainage systems are allowed for maintaining drainage pattern	Sustainable Urban Drainage systems are allowed for maintaining drainage pattern	Sustainable Urban Drainage systems are allowed for maintaining drainage pattern	Rs. 5-10/- per sft
Water Conservation, RWH, Ground Water Recharge	Use of Water Efficient Appliances & Fittings	Use of Water Efficient Appliances & Fittings	Use of Water Efficient Appliances & Fittings	Rs. 2/- per sft
	Follow local RWH byw-laws	Follow local RWH byw-laws	Follow local RWH byw-laws	Rs. 5-6/- per sft
	RWH plan to be design for min 1 recharge bore per 5000 sqm	RWH plan to be design for min 1 recharge bore per 5000 sqm	RWH plan to be design for min 1 recharge bore per 5000 sqm	(including design and recharge bore, collector, & filter charges)
	Promote Storage & Reuse of Rain water	Promote Storage & Reuse of Rain water	Promote Storage & Reuse of Rain water	
	Ground Water NOT to be withdrawn with permission of competent authority	Ground Water NOT to be withdrawn with permission of competent authority	Ground Water NOT to be withdrawn with permission of competent authority	Local water Tanker charges to be applicable
	All recharge to be limited to shallow aquifers	All recharge to be limited to shallow aquifers	All recharge to be limited to shallow aquifers	nil
	-	20% of open space required by bye laws to be pervious	20% of open space required by bye laws to be pervious	nil
Waste Management	Solid Waste (separate dry & wet bins to be provided to each unit) disposal to be done at the ground level	Solid Waste (separate dry & wet bins to be provided to each unit) disposal to be done at the ground level	Solid Waste (separate dry & wet bins to be provided to each unit) disposal to be done at the ground level	Rs. 7-10/- per sft including Garbage chute
	Onsite treatment system to be installed where no municipal sewage network is available	100% onsite sewage treatment to be installed	100% onsite sewage treatment to be installed	Rs. 9000- 12000/- per apartment
	Excess effluent to be treated as per CPCB norms	Excess effluent to be treated as per CPCB norms	Excess effluent to be treated as per CPCB norms	
	Sludge collection & disposal as per CPHEEO norms, 2013	Sludge collection & disposal as per CPHEEO norms, 2014	Sludge collection & disposal as per CPHEEO norms, 2015	as applicable
	SWM Rules 2016, e-waste Rules & Plastic waste management Rules 2016 to be followed	SWM Rules 2016, e-waste Rules & Plastic waste management Rules 2016 to be followed	SWM Rules 2016, e-waste Rules & Plastic waste management Rules 2016 to be followed	as applicable
	x	non-biodegradable waste to be handed over to authorised dealers	non-biodegradable waste to be handed over to authorised dealers	nil
	x	OWC to be installed @ 0.3kg per person per day	OWC to be installed @ 0.3kg per person per day	Rs. 1600 per kg of installed capacity
Energy	Outdoor & common lighting on LED	Outdoor & common lighting on LED	Outdoor & common lighting on LED	35% increase in capital cost over normal CFL lights
	Renewable Energy of 1% of connected load to be installed	Renewable Energy of 1% of connected load to be installed	Renewable Energy of 1% of connected load to be installed	Rs. 80,000 - 100,000 per KVA
	Solar water heating to be 20% of hot water demand	Solar water heating to be 20% of hot water demand	Solar water heating to be 20% of hot water demand	Rs. 90 to 120/- per litre of installed capacity including plumbing
	Walls, windows & Roof u-values as per ECBC specs	Walls, windows & Roof u-values as per ECBC specs	Walls, windows & Roof u-values as per ECBC specs	Rs. 5-7/- per sft
	Solar passive design to minimise energy consumption to be incorporated	Solar passive design to minimise energy consumption to be incorporated	Solar passive design to minimise energy consumption to be incorporated	nil
	x	20% construction material to be environment friendly (eg flyash bricks, hollow bricks, compressed earth blocks, etc)	20% construction material to be environment friendly (eg flyash bricks, hollow bricks, compressed earth blocks, etc)	nil
Air Quality & Noise	Smoke, Dust & other air pollution preventive measures to be followed screens for under construction buildings	Smoke, Dust & other air pollution preventive measures to be followed screens for under construction buildings	Smoke, Dust & other air pollution preventive measures to be followed screens for under construction buildings	Rs 8-10/- per sft for following these norms
	plastic cover for vehicles bring in loose materials to site	plastic cover for vehicles bring in loose materials to site	plastic cover for vehicles bring in loose materials to site	
	wet jet to be provided for grinding and cutting	wet jet to be provided for grinding and cutting	wet jet to be provided for grinding and cutting	
	IAQ norms to be followed as per NBC	IAQ norms to be followed as per NBC	IAQ norms to be followed as per NBC	nil
	Construction & Demolition Waste Rules 216 t0 be followed	Construction & Demolition Waste Rules 216 t0 be followed	Construction & Demolition Waste Rules 216 t0 be followed	nil
	Location of DG and ht of exhaust pipe to be as per CPCB norms	Location of DG and ht of exhaust pipe to be as per CPCB norms	Location of DG and ht of exhaust pipe to be as per CPCB norms	nil
Green Cover	1 tree per 80sqm of land to be planted	2 tree per 80sqm of land to be planted	3 tree per 80sqm of land to be planted	
	1:3 re-plantation ratio to be adopted for cutting trees	1:3 re-plantation ratio to be adopted for cutting trees	1:3 re-plantation ratio to be adopted for cutting trees	no extra cost considered
Top Soil Conservation	x	Top Soil upto depth on 20cm from the areas of the building to be stockpiled and reapplied for plantation of proposed vegetation	Top Soil upto depth on 20cm from the areas of the building to be stockpiled and reapplied for plantation of proposed vegetation	Rs. 2-3/- per sft of Saleable area
Transport	x	Comprehensive mobility plan for motorised, non-motorised, public and private networks	Comprehensive mobility plan for motorised, non-motorised, public and private networks	nil
		Proper segregation of vehicular and pedestrian traffic	Proper segregation of vehicular and pedestrian traffic	nil
		Traffic calming measures	Traffic calming measures	Rs. 2-3/- per sft
		properly designed entry and exit points	properly designed entry and exit points	nil
		parking norms as per local regulation	parking norms as per local regulation	nil

Environment Management Plan	x	x	A EMP to be prepared and implemented for all above points	Rs. 50,000 - 75,000/- per month for human resources and consumables for monitoring EMP
			A dedicated EMP cell to be formed with functions and responsibilities	
			Cell to ensure proper running and maintenance of all Env infrastructure and that it meets Environment standards	
			Record keeping of environment monitoring and related infra	

Note: These costs are indicative and may vary from location to location. Please check these costs in your own city / state.

Regards,

Shantilal Kataria
Chairman - Environment Committee
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