

Post Pandemic Architecture – Importance of Private Open Space

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Open space is not a luxury – It is a necessity for healthy existence

Quote by - **Allan Rackman**

Abstract:- The aim of this research is to focus on the importance of private open space in a residential building . In this new form of lifestyle , it is mandatory to change our daily habits , keep ourselves isolated whenever necessary , spending a large portion of time in disinfect our homes and belongings and lower the social and physical contacts to a minimum . But the fact is- we require certain level of social interaction , physical activities , work and finding new ways of spending good time in this challenging situation . All we need is new feasible solution for built environment for post pandemic era. Followed methodology is in such a way that from identifying the problem , shaping of aim , objectives and scope of work . Leading towards literature study and landing on analysis and finding ,the whole cumulative process helps to shape conclusion.

I. INTRODUCTION

Recently we have come across a scenario, where disease and architecture comes together and fear of pestilence controls what kind of spaces we should live in . As pandemic and our cumulative experiences of staying locked for months definitely influence the future of architectural approach . As in pandemic, it was advice able to be parked ourselves in our home , our dwelling is preferably a safer place. It also leads to breaking of outdoor world into social distanced zones.

Nature's solution play a vital role to boost nations recovery from current crisis. Adding ample open spaces where people live and work reduces the impact of corona virus. The availability of open space for fresh air , workout , mental calmness is beneficial for physical health as well as mental health . It is specially demanding for people living in apartments or any other such place without gardens or any kind of open space for enhancing the quality of life. Open space with vegetation along with water feature within the building generates breathing space for inmates.

II. ORIGIN OF PANDEMIC

At the end of 2019, Wuhan a rising business hub of china encountered by novel coronavirus . In first 50 days of breakout more than 1800 people were killed and 70000 people were affected . The virus was proclaimed to be a member of the B group of coronavirus. Chinese researchers titled this virus as Wuhan coronavirus or 2019 Novel coronavirus.

It was first spotted in Wuhan , China in December 2019 as the ongoing pandemic was triggered by severe acute respiratory syndrome coronavirus. It became a public health emergency of international concern in January 2020 and in march 2020 it was acknowledged as pandemic.

2.1 SPREAD OF PANDEMIC

Coronavirus (SARS-COV-2) spreads through a close communities from person to person .When infected person breathe out or cough , they throw out tiny droplets that contains the virus . These beads can go into the mouth or nose of other person living without virus , and make that person infected . This illness spreads most commonly by close contact within around 6 feet , with an infected person.

2.2 CHALLENGES IN PANDEMIC

Covid-19 is extremely affecting lives around the globe .Segregation , contact reduction along with economic shutdown urges a complete change to the psychosocial environment of affected children , adolescents and their families in a unusual way . Schools and colleges have been closed , social contacts strongly restricted and outdoor leisure activities cancelled.

External help by other family members and social support systems have fallen away . Beside all worries and anxieties associated to Covid-19 , the economic state has worsened with high rising level of unemployment . This has put a lot of constraint on children , adolescents and their families which could result in distress , mental health problems and violence.

2.3 CHANGE IN LIFESTYLE DURING PANDEMIC

First, Covid-19 has specified a massive lift to online learning around the world. Online education has got a major boost. Different organizations like educational , institutional and business etc has taken virtual interaction to an another level by offering online classes , coachings, meetings in an innovative way to retain their audience curved at these times of lockdown.

Second , people have become more hygiene responsive simultaneously started taking care of personal hygiene more seriously . The custom of washing hands , sanitizing things before use , that established as a compulsion - is becoming a habit.

Third , work from home is a major substitute that has become a part of everyone’s life . Many organizations has been practicing it with perfection Covid-19 has pulled it to another level.

III. WHAT IS PRIVATE OPEN SPACE ?

Private open space is a piece of land with a water body designed or amalgamated within an area and delegated to stay that way. These private open spaces may be in a form of garden , lawns tree – lines pathway to walk , courtyard , artificial pond etc . All though used as well landscape gardens , playground , swimming pool ,workout space , jogging track etc. Most of these spaces are furnished with a part of flora – carpet of grass , a few shrubs or full fledged trees. These pockets of open space with greenery add a pinch of reviving nature to our concrete jungle.

3.1 ADVANTAGES OF OPEN SPACES IN A RESIDENTIAL BUILDING –



FIGURE 1

➤ **HEALTH BENEFITS**

Open spaces have the elegant outcome of positive upliftment for both physical and mental health. Studies suggest that taking off just 20 mins. from busy schedule to connect with nature can immensely reduce stress. Passive relaxation like a walk along the tree-lined shaded pathways after having meal or leisurely barefoot on grass bed.

➤ **ECONOMIC BENEFITS**

Open spaces also have economic benefits too . With the passage of time , humans get modern day by day, but the affection for nature remains same . Well designed open

space with lots of greenery adds an aesthetic value to a property. The call for open spaces and the willingness to pay for such residences drives the price higher .

➤ **SOCIAL BENEFITS**

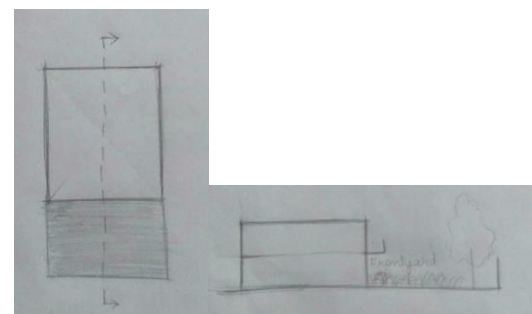
Well , all open space encourages more and more social interaction among the residents. It becomes center stage among the people when it comes to built social relationship whether it would be listening stories by grandparents , playing with siblings or spending time with parents , along with safety and security . Another beneficial activity is community farming within individual dwelling . Gardening and physically working with plants and soil is very relaxing

➤ **ENVIRONMENTAL BENEFITS**

Carving more open space is one of a way to promote greenery and protect natural environment , which proves beneficial for human in improving quality of life . Trees and shade attract birds which gives the calming scenic views to our eyes .Greenery , even in small doses improves air quality of a space . As pollution level keeps rising ,this become essential factor for better health.

3.2 TYPES OF OPEN SPACE

3.2.1 Building with Front yard

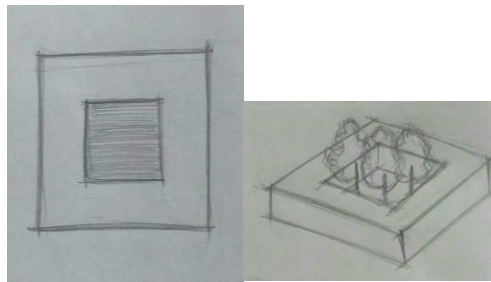


Plan Section
FIGURE 2- Building with Front yard

Front yard is green open space in front of built block consisting of trees, shrubs, plants, walking area (paving), parking area etc. It is used for different outdoor activities by the residents . It provides exposure of sunlight, fresh air and nature , also allows it to enter into the building simultaneously the indoor spaces can also be enlighten by natural light and fresh air , which provides healthy impact on residents health.

In the hard time of covid-19 pandemic this plays an important role. As everyone was asked to stay in their home. It is very difficult for all to live without any kind of social interaction , without going to work place , without going to morning /evening walk /gym /or any other physical health center . It is more difficult for children to locked in bounded area. Their physical & mental health affects the most .It is a semipublic – semiprivate type of space, which gives you the interaction with outside world like views of streets and neighboring space. Feels you like you are almost on the street .

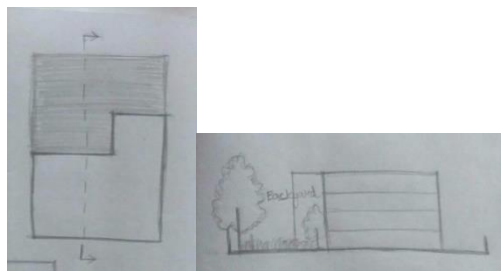
3.2.2 Building with court yard



Plan View
FIGURE 3 – Building with courtyard

Courtyard is an open space in a building which is surrounded by building mass from all four sides. It is a private type of space used by residents for recreational purposes. It is helpful to bring sunlight and fresh air into the building. As in a pandemic, where the whole world is suffering, the need for open space to breathe increases. Advantages of a courtyard are that it scatters natural light and air in all its peripheral space by which more and more parts of the residence get it all. It proves to be the best place for social interaction of home mates. A courtyard provides the ability to have a permanent fresh healthy air quality through natural ventilation which is also provided to its surrounding rooms.

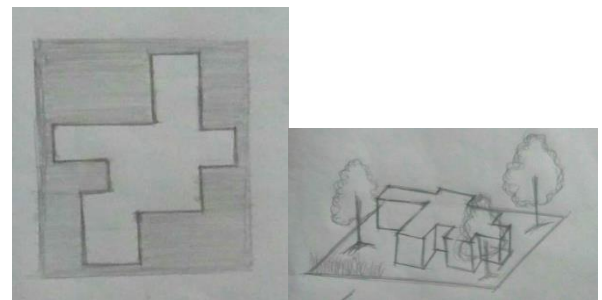
3.2.3 Building with Backyard



Plan Section
FIGURE 4 - Building with backyard

Backyard is a type of open space located at the back of a building mass in a plot. It is a private space used by residents. It functions the same as a front yard in terms of natural light and air. If it lies in the south direction, it can be effectively used as a kitchen garden, where anyone can grow vegetables and fruits for their own, which proves to be good for health without any harmful chemicals. Exposure to sun also disinfects surfaces/spaces. One of the recalled aspects in COVID-19 was that we used to keep things out to kill germs. Used for workouts which hinder in a pandemic due to the shut down of gyms.

3.2.4 Building with open space all around



Plan View
FIGURE 5 -Building with open space all around

Having a building with open space all around is a good source of natural light in all spaces as it increases the surface area for opening and also exposure to interact with nature. Lush green gardens can be created, sitting space to focus on work, any water body to compliment with greenery as it develops a cozy environment to reduce stress / tension etc. Different recreational activities can take place at the same time. It also provides the combination of sun and shade at a time. At some part of land - it is sun where as on other part of land - it is shade, different activities can take place according to the conditions.

	Detach house	Semi detach house	Row housing	Multi storey housing	Apartment building
Front yard	Possible	Possible	May Possible	Not Possible	Not Possible
Courtyard	Possible	may Possible	May Possible	May or may not be Possible	Not Possible
Backyard	Possible	Possible	May Possible	Not Possible	Not Possible
Space all around	Possible	Three side Possible	Not Possible	Not Possible	Not Possible
Balcony	Possible	Possible	Possible	Possible	Possible
Terrace	Possible	Possible	Possible	Not Possible	Not Possible

(Note – Private open space available for single family .)

Table 1 - Possibility of private open space in different residential dwelling.

3.3IMPORTANCE OF PRIVATE OPEN SPACE IN PANDEMIC

An open space can be used for various recreational purposes like a Jogging , play area for kids and mini gardens in a home . A carefully crafted open space not only increases the aesthetic appeal of the building but also has numerous benefits to the residents mental and physical health. An open space used for various recreational purposes encourages the residents to perform various physical activities like exercise , morning walks and yoga that contribute to their well-being. It provides a healthy amount of ventilation to the residents , which helps them remain fresh. Kids can also use the open space for various outdoor activities , which keep them fit and have a positive impact on their growth. It is an essential element in residential layout including open space like balconies , lawns , courtyard , terraces and gardens etc . These spaces lay out a private space for residents to play , relax ,communicate , and enjoy natural constituent such as trees and vegetation which turn the atmosphere more attractive .

IV. ANALYSIS AND FINDINGS

Everything from scratch to having a well lit , ventilated airy room to set down indoor plants for a particular space , this little things now matter . A lot of small yet notable changes are directly influencing individuals yield . In the past , it was favoured to enclose outdoor space because it seems that space to be more worthy inside . That



will surely switch in a small space , it is mandatory to bring the outside in just to be free to stand on a balcony and breathe fresh air is being cherished now. The pandemic has changed our relationship with our homes, possibly permanently.

4.1 IMPORTANCE OF OPEN SPACE

Amidst bustling townships, concrete jungles, and virtual interactions, the tranquil effects of nature and open spaces are often forgotten. Meanwhile, due to the abundant lifestyle changes, stress has become an inevitable part of every person’s life. With people locked in their homes, the need for open spaces has taken centerstage. Terraces and balconies are valuable spaces in a house because it offers direct contact with the outside, as well as helps us to take our minds off things. Apart from cherishing good weather, a terrace maximizes the space of a house, if managed well, and even helps save energy. It can be used as a space to add a touch of greenery .

4.2 HOW OPEN SPACE USED IN PANDEMIC

People across the country have been using their balconies and terraces as an escape from the four walls of their houses while maintaining the social distancing protocol. These spaces have become the new ‘cool spot’ for various activities, which earlier mostly fell under the "outdoor" section. Daily life has been transformed for hundreds of millions of people as the coronavirus pandemic prompts unprecedented lockdowns.

View	Activity	Inferences
	Fitness enthusiasts really miss working out. But unlike many of us, some people did not let the lockdown stop them from doing their daily workout. They have their ways to train and keep themselves in shape.	In lockdown where gyms and other fitness centres were shut . People were finding new ways to keep themselves fit within their own private space. This indicates the need of openness among people .
	People like singing enthusiast , theatre artist ,musician etc did musical concert in their balconies to keep their and others spirit up .	Here balcony gave an opportunity to people for community interaction while maintaining social distancing .


	<p>Pets enjoy outing on terrace , plays with their care taker as they also feel depressed and bore same as we feels . They also need exposure toward natural beauty for happiness.</p>	<p>Not only humans are suffering but pets also get affected by this pandemic as they are also restricted to stay at home .They need some space to play ,sit , roam ,where they can see sunrise ,clear sky ,breathe fresh air which makes them happy and healthy .</p>
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Table 2 – Open space use for various activities in pandemic

V. CONCLUSION

➤ *Open space will become more dominant than floor space*

The lockdown in this pandemic has reinforced the requirement for private open space , it can be courtyard , lawn , balcony , terrace etc, or in other words simply an area to access natural environment and sunlight from inside . It is also known from studies that people with deficiency in vitamin D are more vulnerable to novel corona virus further required exposure of sunlight .

We can add plants to the house , which bring positively and helps to reduce stress level at certain extent . Not everyone can have a backyard or a garden , but atleast a balcony is mandatory now . I believe , if someone spend whole day locked in a particular space , at some point it gets depressing and need positive energy to overcome sadness . People are becoming more aware about lowering their carbon foot print on the planet . Including indoor plants , green walls , flower bed , etc has a extreme effect on occupant well – being .

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