

# [With city” it’s positive and negative aspects and](https://assignbuster.com/with-city-its-positive-and-negative-aspects-and/)

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With theconstant migration of people to cities has resulted them to grow in size andexpand it’s services but due to this rapid growth many essentials have beenside-lined or neglected which has made these urban hubs prone to a lot ofissues but major being the limited green spaces and presence of urban heatisland. Even in the Paris accords there was an emphasis on the need forrestoration of natural habitats and prevent further deforestation (Davis, 20017). Many new techniques and methodshave been introduced and implemented with resounding success but in many cases, they have not been introduced in a large scale or are not relevant to thepresent context to have a major change or effect on the present conditions. This paper focus on the one such principal “ The Garden city” it’s positive andnegative aspects and opens the idea on integrating other methods with this coreidea. “ The sights and sounds of everyday life affects everyone” –Victor Hugo (F. J. Osborn) (pg1)GardenCity : the twentieth century marked the invention of Aeroplane and Garden city; One marked man the ability to fly and the other gave him a better dwellingspace.  (Howard)  (pg1).

It is an urban planningprincipal in which “ green belts” surround self-containedcommunities, these communities contain proportionate areas of agricultureresidences and industry.  Sir Ebenezer Howardwanted to combine both town and county in order to give the working class analternative to work in the agriculture sector. Hisidealised garden city would house 32, 000 people on a site of 6, 000 acres (2, 400ha), planned on a concentric pattern with open spaces, public parks and sixradial boulevards, 120 ft (37 m) wide, extending from thecentre.

(Goodall, 1987). Vertical gardens: A garden that grows vertically using supportsystems, rather than horizontally. vertical garden  can also be extended to even the plants thatgrown on a trellis or even a fence . This isn’t a modern concept as verticalgardens existed in ancient time with example of hanging gardens of Babylon tonarrow back yards of palaces covered in vines in the Mediterranean regiondating 2000 years back (Kohler 2008). Roof Gardens : When the roof of a building isconverted to a garden.

Besides thedecorative benefit, roof plantings may provide food, temperature control, hydrological benefits, architectural enhancement, habitats orcorridors for wildlife, recreational opportunities, and in large scale itmay even have ecological benefits (Louise2009)Vertical farming : The producing of foodand medicine based plants in vertically stacked layers, vertically inclinedsurfaces and/or integrated structures (such as in a skyscraper, used warehouse, or shipping container). The use of indoor farming techniques and controlled-environment agriculture (CEA) technology are the modern ideas ofvertical farming, where all environmental factors can be controlled. Thesefacilities utilize artificial control of light, environmental control (humidity, temperature, gases…) and fertigation.  Review : Garden City The author (F.

J. Osborn)praised ebinizerhoward’s unique combination proposal. Which included 8 points such as : Amenities : which gives the houses with private gardens, space for schools, parks , parkways and spaces for other functional uses. Town and country relationship : the defined town area issurrounded by a large reserved land for agriculture which enables a mutualbenefit for town and farm people. Unified Landownership : The entire site was to be put undertrust or quasi-public ownership. This would help secure the social element andmaking the planning controlled. This development was a social reform with emphasis on landmanagement and self-government. While ‘ Garden city’ experiment wasinitially started in  LetchworthGarden City and WelwynGarden City receiving both criticism and prise over the years.

For example, in a journal (Parham, SBoyfield, K R, GardenCity Perpectives, 2016) praises the idea and states that Garden Cities havedemonstrated very few negative connotations and associations. High profileinitiatives, such as the 2014 Wolfson Economics Prize co-ordinated by PolicyExchange. But according to author (Abel, C, 2010) who states that the gardencities build with Howard’s principal have faced automobile dependent, low-density suburbs of Australia’s major cities. Subject to extended droughts, shrinking farmlands and raging bushfires, the continent is particularlyvulnerable to the effects of climate change. Whilethe great many aspects of garden city were to improve the daily lives for thepeople in terms of environmentally and socially, But, it a cannot beimplemented in a modern perspective for various reasons due to theever-expanding cities and the slow decline of agricultural field due to rapidcity expansion and climate change.

Thescope of the garden city is very small as it handles only a population ofapproximately of thirty thousand over a large area which would be an economicburden. While the idea was to move people out of the cities it increased thedependency on automobiles which in turn negates its positive effects and thesmall population it handles do not have a drastic effect on the major urbancities which are affected by urban heat Island, air and sound pollution. Vertical Farming The author (peter, 2013)states that importance of vertical farming over modern day agriculture whichhas a lot of negative effects on the environment. he points most of his studythat based on the works of Prof Dickson Despommier, who introduced the conceptin 2009.

He relocated the indoor farming to the urban environment. The focus goes towards the water where he states the growingneed for water for the growing population and nearly use of approximately 70%of fresh water of which most in either evaporated or run-off. The water used invertical farming on the other hand can be controlled using methods such as Hydroponicsand Aeroponics which can potentially conserve up to 95% of water whicheliminates agricultural runoff and it negative effects on both environment andhumans. He also states that due to the controlled environment the water lostthrough evaporation and transpiration can be claimed and reused. (peter, 2013)Another aspect of modern agriculture is the land requiredfor production. Based on studies (Groom, Meffee & Carroll, 2005) theplanets biodiversity and ecosystem have been severely effected this includesestuaries, wetlands, grasslands, tropical and temperate forests as these landshave been altered for cultivation purpose. These ecosystems can be graduallyrepaired with the help of vertical farming.

As translocating the foodproduction would relieve and give time for the mother nature to repair the land(Groom, Meffee & Carroll, 2005). This could intern help increasebiodiversity and carbon sequestration.  Another aspect of modern agriculture is the land requiredfor production. Based on studies (Groom, Meffee & Carroll, 2005) theplanets biodiversity and ecosystem have been severely effected this includesestuaries, wetlands, grasslands, tropical and temperate forests as these landshave been altered for cultivation purpose. These ecosystems can be graduallyrepaired with the help of vertical farming. As translocating the foodproduction would relieve and give time for the mother nature to repair the land(Groom, Meffee & Carroll, 2005). This could intern help increasebiodiversity and carbon sequestration.

Vertical faming occupies much less areaas it is stacked floors over one another instead of spreading horizontally. As Ebenezer Howard wanted to have an interactionbetween the town and farmlands. Vertical garden achieves the same. Inthe present scenario fossil fuel in consumed for transportation and storage.

Transportation for agricultural foods is source for pollution and greenhousegas emission. Vertical farming meets the needs of an increasing urbanization. Buildings used for farming can be placed anywhere while outdoor fields arestatic in location. By strategically placing vertical farms inside or in thenear vicinity of urban centres and cities, it would meet the need forlocalization of food production.

(peter, 2013). Green Roofs Green roofs are considered as one of the most effectiveresolution for several problems both in building and urban level related to theenvironment. In their research (Jaffal et al. (2012)) they state that greenroofs improve storm water management, reduce air and noise pollution, increaseanimal and vegetal biodiversity in cities and reduce carbon footprint. They further state that the longevity of the roofingmembranes is improved by green roofs as the thermal stress they are subjugatedto is limited. The paper further states that the building energy performance isgreatly impacted by green roofs through a series case studies and calculationsas roof gardens provide solar shading, thermal resistance andevapotranspiration. The paper also identifies the green roofs into two categories : effective (15-20 cm soilthickness) and intensive (15-20 cm thickness).

With the former being easier forretrofitting as additional strengthening is not required for the smaller load. Vertical Gardens Vertical gardens are useful tools in urban environments forthe mitigation of noise pollution.  Itcan be stated that many places in urban environments or even inside buildingsare reverberant or noisy. Thermal mass is used as a measure to maintaincomfortable and stable indoor. As a result acoustically hard materials such asmasonry wall and concrete are used in which sound absorption is lacking. However, these do not drastically decrease the noise and increase urban heatisland effect.

The paper also states that Vertical gardens also lead in thereduction of heat transfer between surrounding environment and a building basedon various other papers and studies. It further claims based on studies thatVolatile Organic Compounds in the air are filtered by the microbial activity ofroot systems, the leaves capture particulate matter and wellbeing andproductivity increases coupled up with decrease in stress levels when incontact with plants. To support their claims the paper shows the result ofexperiments done with 50 modules of garden spread across an area of 10. 125 m2. The author further states that based on required specific acoustic designersworking on vertical gardens should tune the thickness of the substrate. Forexample thinner substrate are more suitable if lower frequencies are not takeninto consideration; thicker substrate is more suitable if lower frequencies areessential. Another research (davis, 2015 ())  states that the vertical gardens can be usedas evaporate coolers. This is achieved through a mathematical model and laterexperimented with setup models.

While these elements affect a building and their surroundingthey do not have a large scale effect. While ebinizer howard’s garden city maynot be suitable to the present context it still addresses many issues we facetoday.