PUNJAB URBAN PLANNING AND DEVELOPMENT AUTHORITY
S.C.O 10-11-12, SECTOR 17-B CHANDIGARH

No. PUDA-ACA (Projects)/ 2003/1515 **Dated: 22-04-03**

To

1. Chief Town Planner,
   Punjab,
   Chandigarh.
2. Additional Chief Administrator (F & A) ,
   Punjab Urban Planning and Development Authority.
   Chandigarh.
3. Additional Chief Administrator ,
   Punjab Urban Planning and Development Authority.
   Mohali, Patiala, Jalandhar, Ludhiana, Bathinda.
4. Senior Town Planner,
   Punjab Urban Planning and Development Authority.
   Mohali.

Subject :- Selection of site for the setting-up of new urban estate – Guidelines for selection of the sites.

In continuation of this letter No. PUDA-ACA (Projects)/ 2003/ 1574-97 dated 08-04-2003 on the subject cited above.

Please find endorsed here with a copy of he guidelines if the selection of site for setting up of new urban estates in Punjab

Additional Chief Administrator (Projects.)

ਪਿੱਠਅੰਕਣ ਨੰ: 1060-64 ਸੀਟੀਪੀ (ਪਬ)/ਐਸ. ਪੀ.-28 ਮਿਤੀ 8.5.07

ਇਸਦਾ ਇੱਕ ਉਤਾਰਾ ਸੀਨੀਅਰ ਨਗਰ ਯੋਜਨਾਕਾਰ, ਅਮ੍ਰਿਤਸਰ/ ਪਟਿਆਲਾ/ ਜਲੰਧਰ/ ਲੁਧਿਆਣਾ ਅਤੇ ਐਸ. ਏ. ਐਸ. ਨਗਰ ਨੂੰ ਵਿਸ਼ੇ ਤਹਿਤ ਪ੍ਰਾਪਤ ਗਾਈਡ ਲਾਈਨਜ਼ ਭੇਜ ਕੇ ਬੇਨਤੀ ਕੀਤੀ ਜਾਂਦੀ ਹੈ ਕਿ ਇਹ ਗਾਈਡ ਲਾਈਨਜ਼ ਆਪਣੇ ਅਧੀਨ ਪੈਂਦੇ ਜਿਲਾ ਨਗਰ ਯੋਜਨਾਕਾਰਾਂ ਦੇ ਧਿਆਨ ਵਿਚ ਲਿਆਉਣ ਦੀ ਖੇਚਲ ਕੀਤੀ ਜਾਵੇ।

ਸਹੀ/-
ਸੀਨੀਅਰ ਨਗਰ ਯੋਜਨਾਕਾਰ (ਸ.ਮੁ),
ਵਾ. ਮੁੱਖ ਨਗਰ ਯੋਜਨਾਕਾਰ।

Subject:- New Urban Estates-Guidelines for selection of sites.

1. Number of Urban Estates have been set up in the past in the State of Punjab by the Department of Housing & Urban Development. Based on recent demand survey by PUDA, number of Urban Estates are in the process of being established. Despite the fact that quality of site has enormous bearing on the quality, cost-effectiveness, success and failure of Urban Estates, the issue of selection of site for Urban Estates has not been addressed in its entirety with the result number of problems related to their development have been encountered. It is important that site selection needs to be carried out with much more focus if the cost of the developed land is to be minimised and Planning & Development process optimised. A low-lying site would not only create problems in its development and disposal but would increase the cost of the developed land in the process. In addition it makes the urban estate quite unattractive. Similarly if the site selected is close to the industrial units, it would have adverse impact on its development and quality of life for the inhabitants. A site which has number of built up structures would result in prolonged litigation and may delay the project due to opposition of the owners of buildings besides in creasing its cost. Similarly a site having High Tension Lines (HTL) running over it not only leads to wastage of land while planning because of **no construction zone** to be provided but its shifting can be very expensive. A site having less accessibility may prove to be unattractive and difficult to sell. Similarly a site having small and marginal land-owners may pose problems in acquisition due to stiff resistance posed by the land owners. Any physical feature, like existence of large number of trees, a canal etc. can have an adverse impact on the development of the area and may not be cost-effective. A detailed analysis of existing site conditions in terms of its load bearing capacity, level of ground water, existence of water supply/disposal mains can impact the cost of the developed land.
2. Cost of raw land would be another major factor which needs consideration while selecting site for the new urban estate. However, land use proposed in the Master Plan would be relevant for selection. Assessing trends of future growth city development would be relevant to select a site so as to integrate the proposed development with the future growth of the city.
3. Keeping in view the above factors it is felt that necessary guidelines needs to be made available to the field officers involved in he process which should form the basis while selecting sites for new urban estates. It is not that these factors have been ignored earlier or they have not been considered but it will be more appropriate to put them in a format so that objectivity in the site selection process could be brought in. Accordingly, it is suggested that site selection mechanism should be considered under following broad heads:

    (A) Physical
    (B) Social
    (C) Economic
    (D) Environmental

Under each of these broad heads following factors need to be considered so as to bring more objectivity in the site selection process.

(A) Physical

(a) Natural

(i) Slope

Site with gentle slope should be preferred so as to ensure that drainage of waste water, sullage is easier. Site with undulating and sharp slopes* should be

avoided. Sites requiring earth filling should be avoided in order to lower down the cost of the project.

(ii) Soil Characteristics

Soil should be of good quality for urbanisable purposes with good load bearing capacity. Site having soil of low grade load- bearing capacity or low water absorption capacity should be avoided. Agriculturally productive soil should be avoided as far as possible.

(iii) Level and quality of under ground water

Site having higher water table should be avoided in order to minimise cost of construction and damage to building constructed besides incurring higher cost in terms of laying under ground services. Site having good quality underground water should be preferred in order to minimise transportation of potable water.

(iv) Floodability

All sites having history or track record of flooding are to be avoided. It can damage the project at any stage.

(v) Existing trees

Sites having large number of trees spread over large areas should be avoided. However, existence of cluster of trees which could be adjusted in the planning would be welcome. Nature of trees are also to be ascertained and trees which are not valuable or do not require adjustment should not be considered as a negative point of the site.

(vi) High Tension lines

All sites having HTL should be avoided as far as possible due to their developmental implications. However, electric lines upto 66 KV capacity could be re-aligned. If the H.T.Lines can be taken out of the site then such site should not be ignored provided site is otherwise appropriate for the project. Sites having more than one HTLs should never be selected irrespective of the merits of the site.

(vii) Buildings existing in the site.

Site having number of structures existing within it should be given a low priority. Quality and number of structures should be given due consideration while examining the merit of the site. If number of good constructions abutting on the main road exist then such site should be ignored.

(viii) Location along Railway lines

If railway lines pass along the site it should be avoided due to traffic, noise and **no building zone** to be provided along such lines. In no case sites having railway lines passing through it should be selected.

(ix) Location along Scheduled Roads/bye-passes

Nature of roads abutting the site should be given due consideration. As far as possible, sites along the bye-passes should be avoided because of 100 meters **no building zone** to be left which can adversely affect the saleable proportion of land. However, if site along bye-pass is to be selected then its impact on the project must be studied in detail in terms of salability and profitability. Projects having large area which are able to absorb, use the area along the bye-pass and where **no building zone** forms a small part of the total project area, then location of site along bye-pass could also be considered. However, in such cases the impact of bye-passes could be minimised by having less frontage along such bye-

pass with more depth of the site. Sites on scheduled roads could be considered for selection and if such sites are within municipal limits then it should be taken as a plus point of the site.

(x) Air Funnel

Sites under air-funnel should be avoided as far as possible because of height restrictions on buildings and noise pollution which is caused when aircraft's fly in the air-funnel.

(xi) Proximity to defence installation

Sites which fall within -900 meters of defence installations and covered under the Govt. of India notification should never be selected and are to be invariably avoided.

(xii) Legal restrictions

Legal restrictions like restrictions due to Periphery Control Act, Land Preservation Act, Indian Forest Act, Controlled Area restrictions should be given due considerations while selecting the site in order to avoid subsequent problems in implementing the project.

(b) Available Infrastructures

(i) Water supply
(ii) Sullage disposal
(iii) Electrical mains
(iv) Storm water

While evaluating the different sites, detailed analysis of existing infrastructures should be made critically. Site close to water source should be preferred or a site having sullage mains close-by should be given more weightage which would reduce the cost of development. Similarly a natural water course would facilitate the disposal of storm water and reduced its development cost. Existence of Electrical main can be helpful in reducing the cost of laying down such mains. Impact of such infrastructure on the overall project cost should be critically evaluated and it should be given due weightage when all other points are equal.

(c) Land use pattern as per Master plan/Development Plan

(i) Pattern of city growth (direction thereof)
(ii) Possibility of future expansion.

It will be appropriate to select a site having a land use pattern in consonance with the one prescribed in the Master Plan/Development Plan or any plan prepared by Deptt. of Town & Country Planning. It would ensure that site would be integrated with other development which would take place in the surrounding areas. It would be better to select the site in the direction in which city is growing because then it will be helpful in faster development of Urban Estate and easier to sell the sites. In addition it should also be seen that what is the possibility of future expansion of the site so that if the project is to be expanded later on , sufficient vacant area becomes available without much problems of construction etc. All sites located in the congested area should be avoided and all sites having non-conforming land use should be given low priority.

(d) Accessibility to site

Site should have sufficient level of accessibility available. It would be better if more than one linkage is available. Its proximity to transport nodes like Bus stand, Railway Stations or Commercial hubs should be given due consideration which would help in

making the site attractive. A wide road should be welcome. Further scope of widening of the road should also be considered along with the status of such road in the Master Plan. In addition if the road is scheduled road/bye-pass then the considerations as enumerated in para (ix) above should be duly taken note of.

(B) Social

(i) Land ownership pattern
(ii) Size of Land holdings
(iii) Number of people likely to be affected.
(iv) Target group for whom planning is to be undertaken.
(v) Quality of development in the surroundings of the site.

A detailed analysis of the revenue data should be made which should include the study of land ownership pattern,size of land holdings and number of persons likely to be affected. Sites having large land holding should be preferred, whereas if land holdings is small then it should be considered as a negative point. This would mean, if number of persons affected are smaller, It would be an advantage whereas large number of land owners are likely to create problems in acquisition of land. In addition we should consider which are the target groups for the project. If target group is of higher income group, then a site which is near the most developed area needs to be considered favorably because such people having high paying capacity would like to be located near the developed area. Quality of development around the site should be given due consideration in site selection process. A bad surroundings should be avoided and good development should be welcome. All sites having non-conforming development should be avoided. Preference for conforming uses will be helpful in making the project successful.

C) Economic

(i) Land cost/Acre.
(ii) Cost of development
(iii) Likely price which would be fetched in the area.

Land having higher costs should be generally avoided because it will adversely impact the cost of developed land. In case of sites having same merits then site with low land cost should be given preference. In addition cost of development should also be given due to consideration. It should be viewed both in the context of internal development cost as well external development cost. Site having comparatively low overall cost of development should be preferred because it would not only make the project cost-effective but would help in making available developed plots at most competitive rates. In this context factors enumerated in para (b) above should be given due consideration.

(D) Environmental

(i) Freedom of site from pollution both within & outside
(ii) Freedom from industrial set up.

So far environmental concerns have not been fully addressed in the site selection process. This needs to be included as a part of overall exercise of site selection. A site which has sources of pollution within or in the surrounding area should not be preferred. Location close to industrial area should be avoided. Site located close to water bodies carrying sullage or industrial waste should be kept on the least priority. Land which was used as site for dumping garbage or was kept as landfil should be ignored because of likely source of pollution existing underneath. A site used for dumping chemical waste or sullage should not be considered for housing or other projects. A site in the windward direction of industrial growth should invariably be avoided in order to save the residents from industrial smoke or fumes. A site having good tree cover or forest area in the close vicinity with natural features like unpolluted water body, small hillocks , a river –font should be a welcome sign and such site should be preferred

(4) Based on above criteria different sites should be evaluated. For proper evaluation, a system of weightage is proposed to be adopted as per scale given below. Each site should be evaluated on a matrix of total weightage of 100 based on the above factors. The weightage proposed to be allocated is as under :-

Sr. NO;	Criteria	Weightage
1.	Physical	45%
2.	Social	15%
3.	Economic	25%
4.	Environmental	15%
5.	Total.	100 %

Site securing the highest marks should be preferred for selection . This would help in ensuring better planning and development besides optimum utilization of land which would make project more cost effective. It would also ensure better returns, both in social and economic terms from the project besides its speedier implementation.