

Closing Statement – Pirooz Daneshmandi on behalf of the Grangegorman Residents Alliance.

In my statement to the hearing yesterday, I referred to the additional costs involved with high buildings and was taken aback by Mr. Mahon's statement that he was not aware of any additional costs involved with higher buildings; since this is a factor that has been acknowledged for many years.

The reference I made in my oral statement was informed by a book first published by Architectural Press in 2005 with a second edition in 2009 called 'Adapting Buildings and Cities for Climate Change' by Sue Roaf, David Crichton and Fergus Nicol. Dr. Sue Roaf is known for her studies on climate change. Some of her findings, which are well researched, are as follows:

- Higher Buildings are proportionately more expensive to build and operate: building costs increase per square metre because of increased structure and construction required to make them earthquake, fire- and weather-proof, in addition to more elaborate systems needed to operate the building – lifts, escalators, water pumping, heating systems. Lifts alone can account for between 5% and 15% of the running costs of a high building.
- Tall buildings by their very nature can use twice as much energy as equivalent low buildings – to raise people, goods, water etc.
- Tall buildings are colder in winter and hotter in summer than regular buildings and so require more heating and more cooling. This is particularly true of modern 'glass' towers. It is also very difficult to attach brise-soleil type structures to tall buildings that won't blow off.
- Exterior cleaning and maintenance of a high-rise building can be very costly and dangerous. With global warming causing higher wind speeds, insurance companies may refuse coverage to maintenance companies at certain high risk times of the year.
- High rise buildings almost always infringe on the solar rights of neighbouring buildings, making them less comfortable and increasing heating costs
- Once the width of a building increases beyond about 12m it is difficult to daylight.
- Irrespective of building depth, lower floors in high rise areas rarely get adequate daylight.

- High rise buildings create higher wind speeds at street level – studies by the Building Research Establishment found that wind speeds of 5 m/s were exceeded less than 5% of the time in areas of low rise, but were exceeded 20% of the time in areas with high rise buildings. The problem of wind speeds will only increase with global warming.
- If the Twin Towers had designed in sufficient escape stairs for the building, there would not have been enough office space left to make it commercially viable. It is increasingly recognised that in such cases, in tall buildings, everyone above the fire is likely to die. It is also impossible to maintain pressurised escape stairs when more than a few doors are opened into it at the same time. In catastrophic fires, explosions and black-outs, sprinkler systems and fire lifts can fail.

I suggest that all of these findings are applicable to the proposed development.

In relation to the expense of constructing high buildings, in fact, the highly regarded comprehensive study that was done on height in Dublin, the DEGW study 'Managing Intensification and Change' as far back as 2000 states quite clearly at pg.47 that the construction costs involved with high buildings:

“Can be 75% more expensive than low rise”

The findings of the DEGW study were so highly thought of, that it was Dublin City Council policy to have due regard to the criteria set out in the study regarding building heights in the city (Sec.15.6.0 of the '05 City Development Plan)

The section of the study relating to 'arguments against' high buildings starts at page 46 and states:

“From the thirteen towers of San Giminiano to the twin Petronas Towers in Kuala Lumpur, the desire for presence and domination is still a strong objective, which is often only achieved at the expense of good city form and environment. The arguments against high rise buildings (over say 50m) are more concerned with the functionality and future well being of the city.”

The study then lists the arguments against high rise buildings. The following are the ones that are pertinent in this case:

“Impact on existing character: Size, bulk and height of buildings can change the urban grain of areas and potentially have a negative omnipresent impact city-wide.

Effect on microclimate: Without careful consideration of block and street profiles in relation to the location of towers, over shadowing and down drafts can create adverse climate effects both locally and in a wider context.

Urban condition: The construction demands and length of building programme for a major high rise cluster has a more disruptive effect on the local neighbourhood. It often requires large number of deliveries and a high intensity of activity in a small area of the city.

Inflexibility of floor space: High rise buildings have traditionally been limited in form and floorplate configuration.

Phasing: Unlike a low rise building which can be constructed in phases, the high rise structure has to be built in one attempt.

Change of use:

Limited by the constraints on typical floor plates to expand upwards or outwards.”

It is indeed very surprising that the architects, of what would be the highest building in the country if constructed, had obviously NOT READ the single most important document relating to high buildings in Dublin.