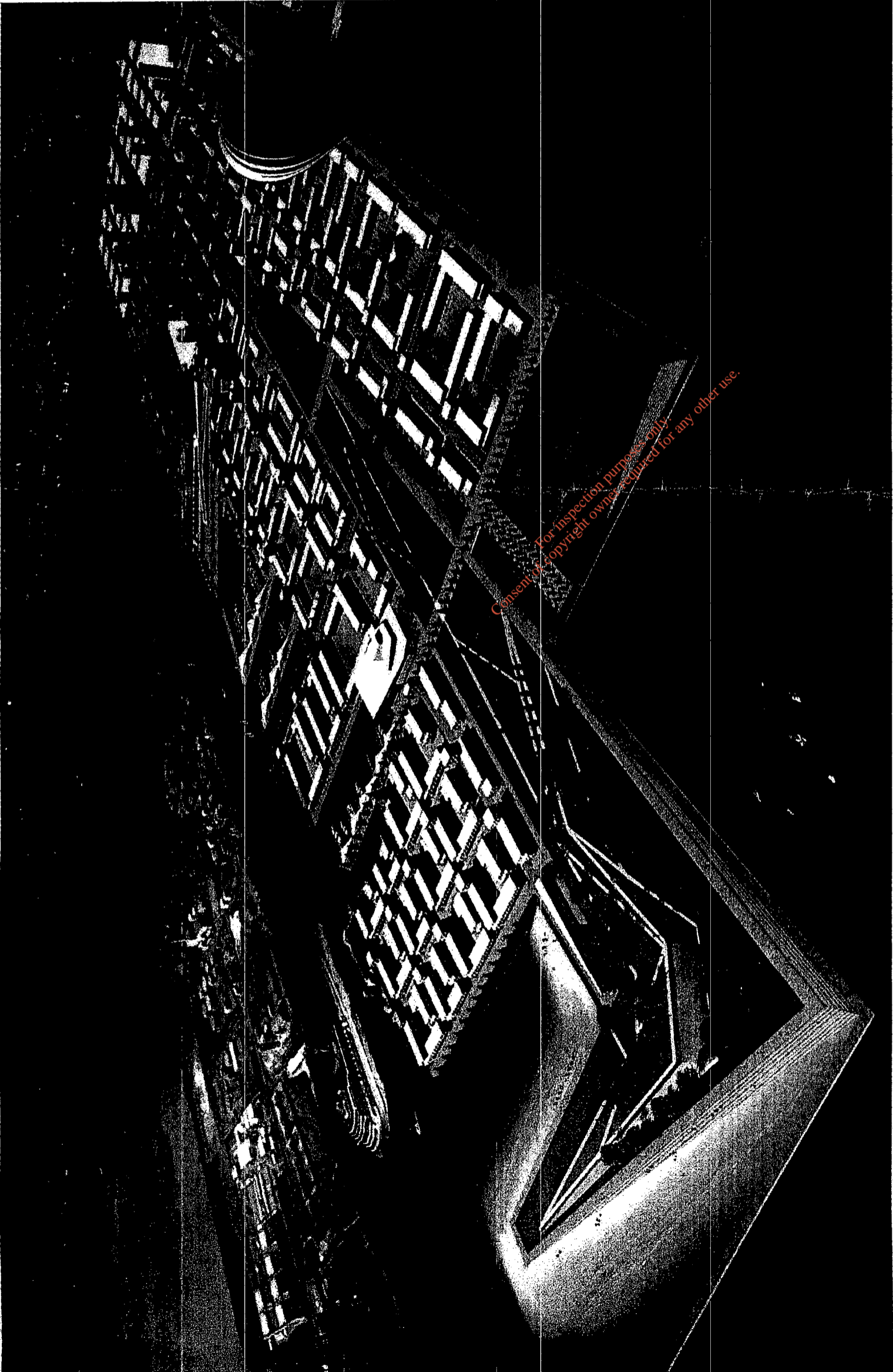


A TRULY WORLD CLASS CITY

Dublin is in the throes of an unprecedented urban expansion. To ensure it remains a truly world-class city it will have to carefully consider and craft a set of goals and design principles to guide its expansion over the next 25 years. This strategic development approach will have at its core the following goals:

- Target 2050 lifestyle
- Establish a new image for Dublin.
 - with iconic buildings and spaces
- Demand that new developments incorporate the highest standards of sustainable design
- The environment should be subject to minimal impact – improving water quality and biodiversity, drawing energy from renewable sources, and recycling all waste.
- Transit is key in tying it all together
 - expanding the Luas will foster convenient and safe public transit that is essential to reducing Dublin's dependence on the automobile, and fostering a cleared carbon free and sustainable environment.
- Recognize the immense value that a publicly accessible water's edge provides and locate activity on the water (amenity, retail, community, accommodation).



Consent: For inspection purposes only.
Copyright owner required for any other use.

OH Sub No. 51

Recd From: Marie Byron

Environmental Protection Agency
23 APR 2008
ORAL HEARING
RECEIVED

Environmental Protection Agency
23 APR 2008
ORAL HEARING
RECEIVED

A VISION FOR DUBLIN BAY DUBLIN: A WORLD-CLASS CITY

Vision

The phenomenon of global climate change is widely accepted in Dublin, by the public, by Dublin City Council and Dublin Port Company. If average sea water levels rise as a result of climate change, then flooding of large tracts of the city and port would seem inevitable unless preventative measures are taken.

An alternative to widespread implementation of the current approach – local-scale flood prevention and mitigation measures – would be a single flood prevention programme for the whole area, one involving construction of tidal exclusion barrage structures to protect the shoreline of the bay.

Such approaches have been suggested in the past as part of tidal energy proposals, but the construction of the large-scale developments envisioned were too environmentally damaging. Perhaps now the balance in the relationship between human and environmental protection must change in some coastal urban areas; the choice may

be to protect such urban areas or to allow their gradual destruction in a series of catastrophic events. Perhaps more imaginative schemes can be developed that will achieve tidal protection with lesser environmental impact and even compensate for negative impacts through environmental enhancements and achievements in sustainable development.

Dublin Bay is a key environmental resource and one greatly affected by human activity, past and present. Bull Island, the internationally recognized bird reserve and the designated inter-tidal areas closest to human activity around the bay, are valuable areas to the city. Any scheme to address climate change should also address the value of these areas.

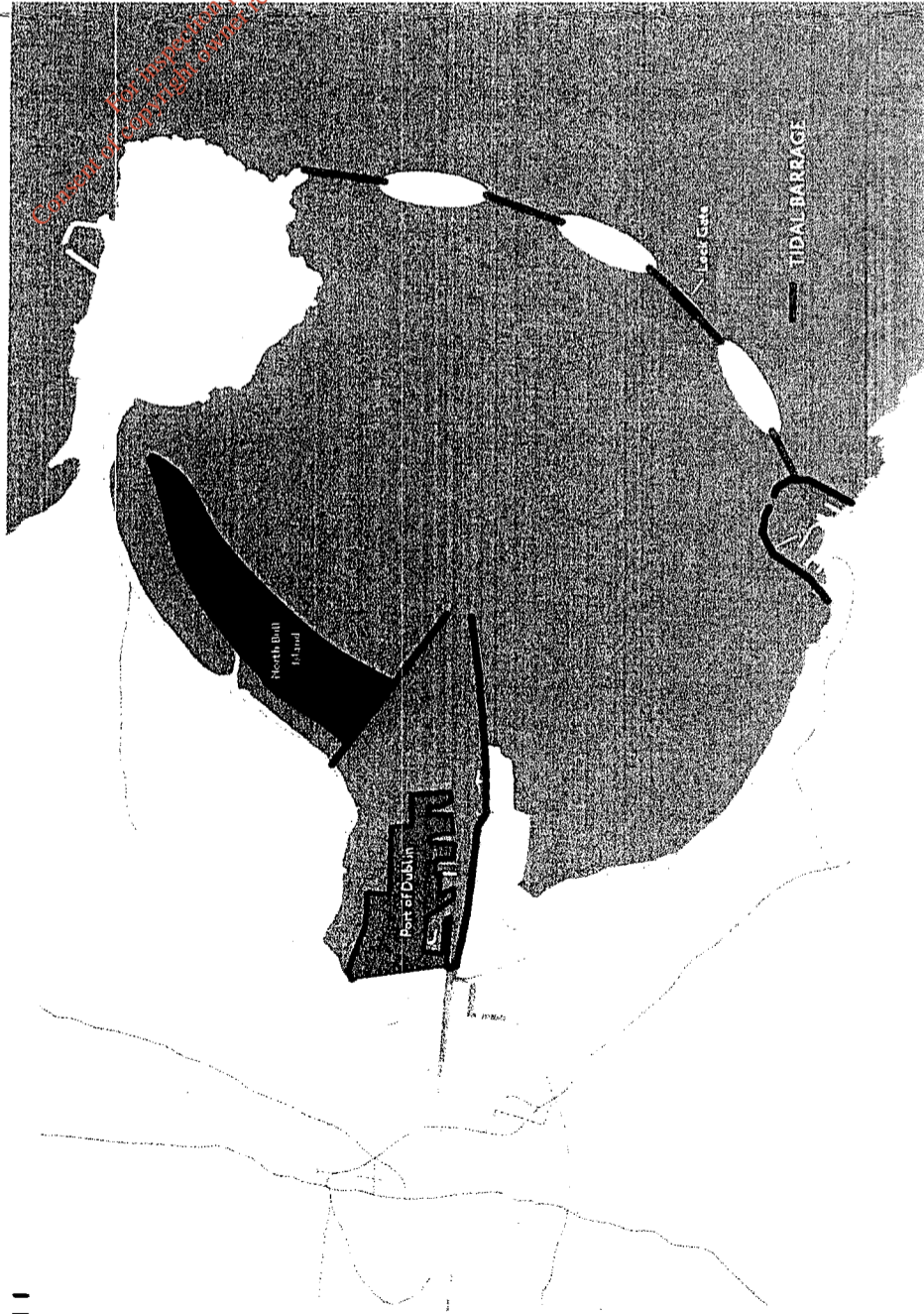
Perhaps such a scheme should also address other issues related to climate change – those of water resources (which many think will become an increasing problem in east Ireland as the rainfall reduces)

and reduction of carbon emissions through the use of alternative energy; perhaps such a scheme could also address other key issues in Dublin such as transport and better disposal of effluent from the Ringsend wastewater treatment plant and cooling water from power stations.

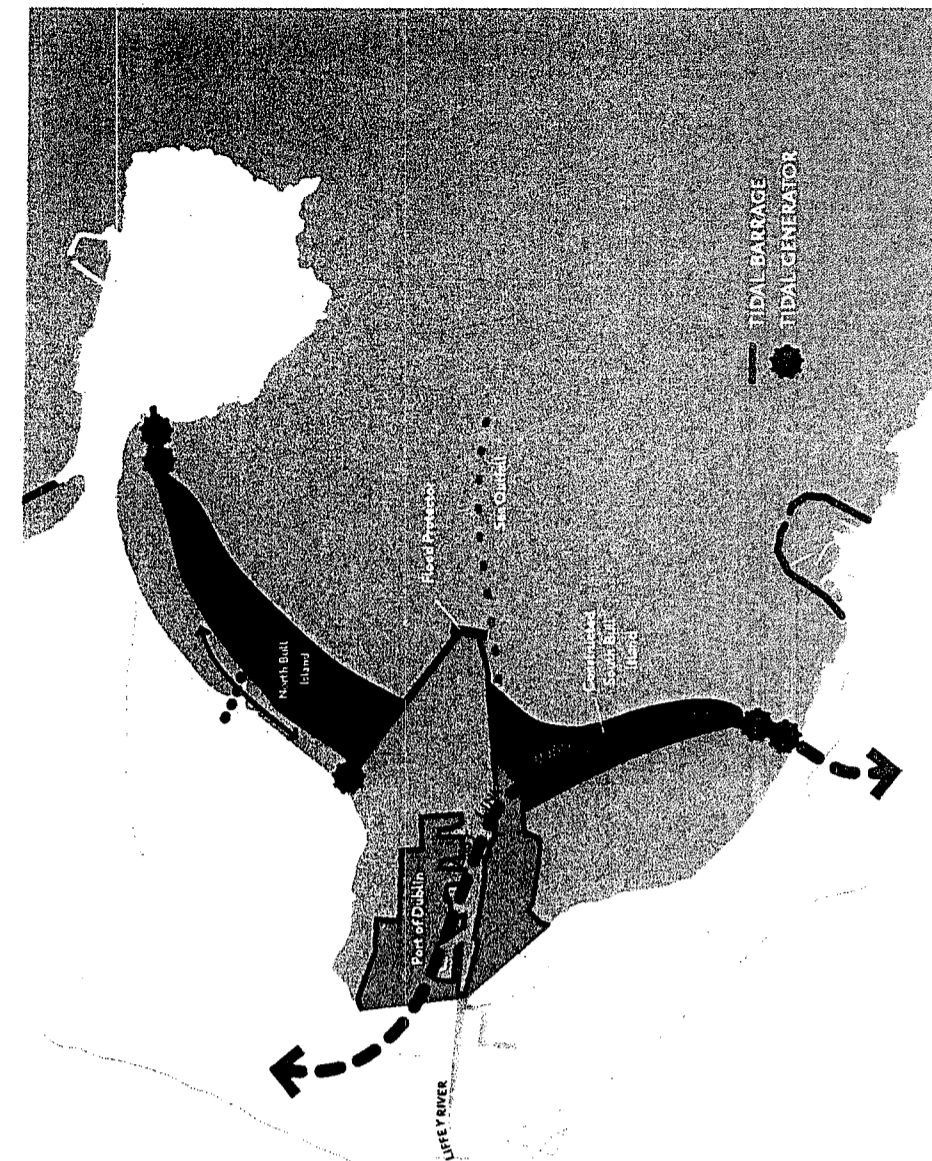
In this spirit, four alternative approaches have been imagined:

- The first envisages a tidal barrage structure from Dun Laoghaire to Howth, using the majority of the waters of the bay to generate tidal power. The intertidal areas would be largely maintained albeit with different periods of inundation. The structure could also be used as part of a road or rail link;
- The second envisages limited tidal energy but flood prevention of the city being provided by barrages between Howth and Bull Island and between the ends of the North and South Bull walls. A South Bull Island could be constructed some distance offshore with similar

OPTION 1



OPTION 2



For information purposes only. No liability can be accepted for any other use.

A VISION FOR DUBLIN BAY CONFRONTING CLIMATE CHANGE

functions as the North Bull Island. It could be used for environmental and recreational uses. Potential other uses include building key infrastructure in this location underneath the Island. Barrages and tidal generators would be installed between Booterstown and the South Bull Island and in a channel created in the inshore end of the Poolbeg peninsula (to maintain flow inshore of the South Bull Island); and,

- The third envisages barrages with generators between the shore and North and newly constructed South Bull Island. However, the

OPTION 3



- The fourth is a reduced version of either Option 2 or 3 and envisages flood prevention of the city being provided by barrages between Howth and Bull Island and between the ends of the North and South Bull walls. The planned S2S (Sutton to Sandycove) promenade and cycle-path could be built to provide flood protection for the south bay area, instead of a South Bull Island.

In each, flood protection would be provided for the whole area, transport links could be included, varying degrees of tidal power would be an integral element of the scheme, and wind energy could be added if thought appropriate.

In each, inter-tidal areas would be affected to a greater or lesser degree, but in mitigation a completely new reserve on the South Bull Island would be created.

Regardless of the approach ultimately adopted to prevent and mitigate large-scale flooding, rising sea levels are a significant factor considered in the context of the city's integrated economic, social and cultural vision. As this study is the first stage in the development of a strategic framework plan for the Dublin Bay area, it is therefore important to highlight the serious implications of the projected longer term climate change impacts.

AMAGER STRAND, COPENHAGEN, A RECENTLY CONSTRUCTED ARTIFICIAL ISLAND



**A VISION FOR DUBLIN BAY
CONFRONTING CLIMATE CHANGE**

Vision