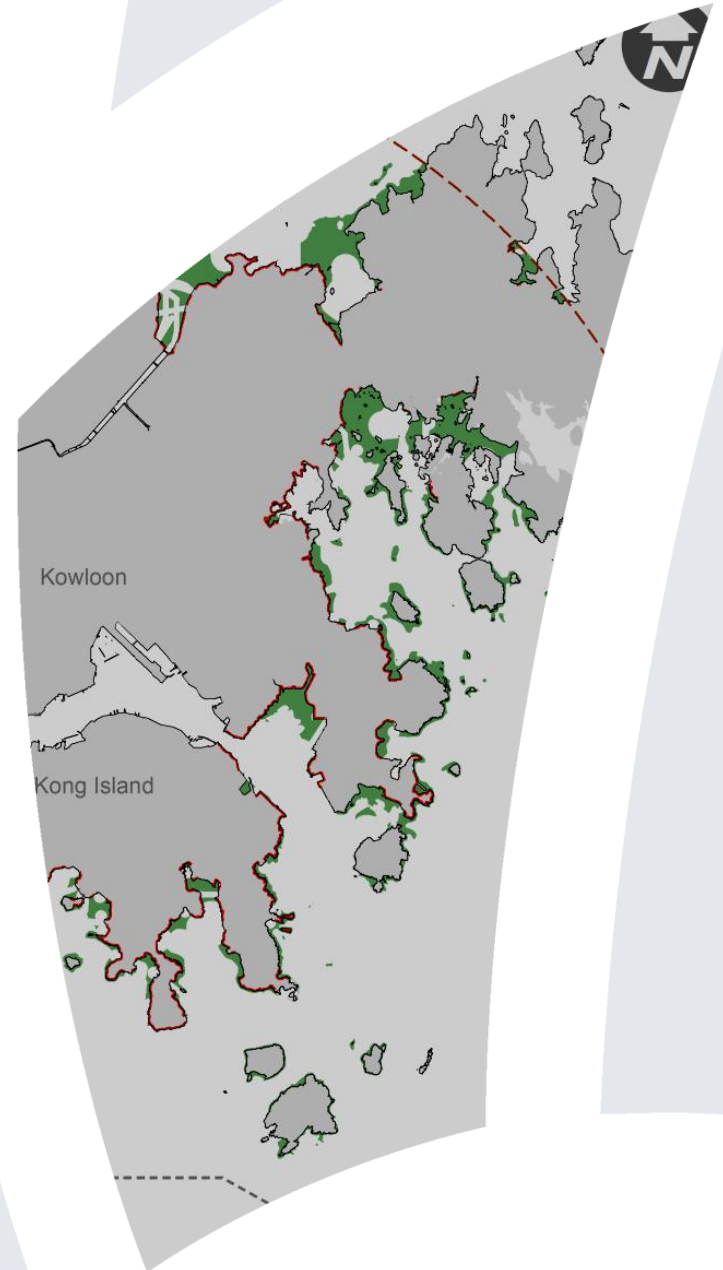


Local & International Planning Methods & Applications of MSP,

Marine Spatial Planning (MSP)
Hong Kong, Nov 2013

Richard D Colwill



Contents

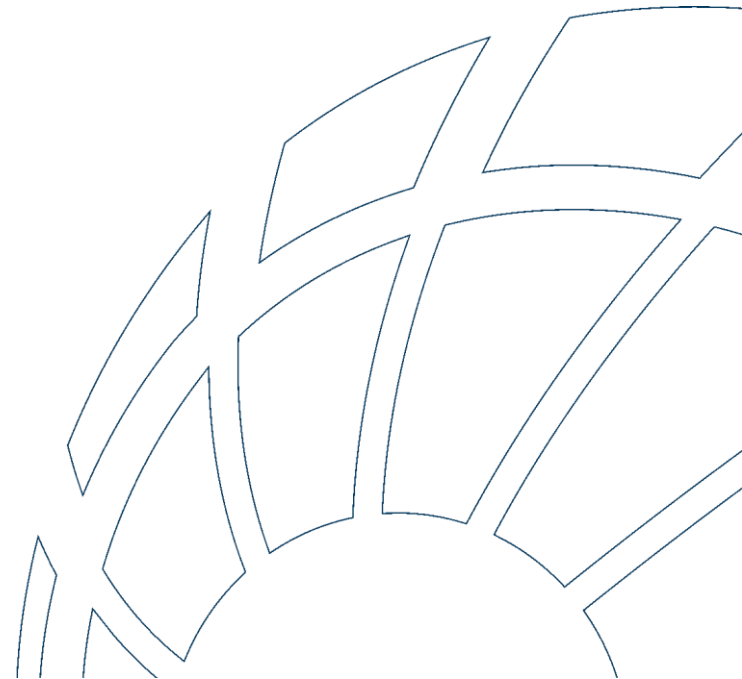
1) Introduction

2) Wind Farm Siting (International & Local)

3) Managing Development/Construction Impacts

4) What If - new marina siting?

5) Summary



BMT Asia Pacific

Our expertise spans Sea



A multidisciplinary consultancy, we specialise in environmental, economic, design & planning, logistics and risk management services.

BMT helps clients make critical decisions at every stage of development.



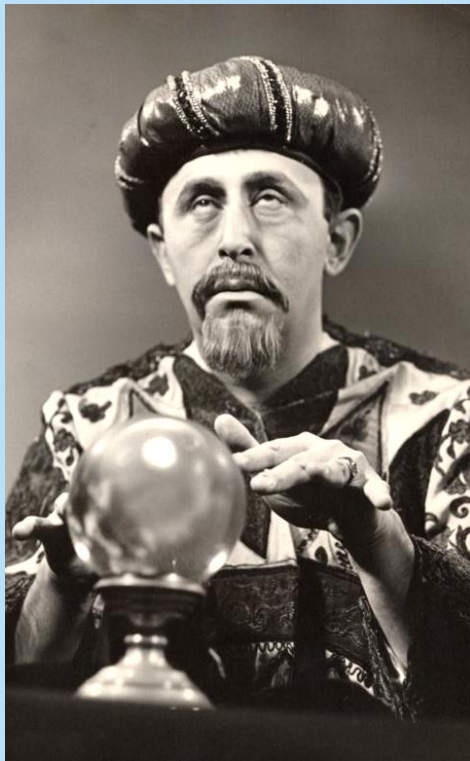
Land



& in Between

The Sea is not Empty.....we need Insight

(Insight = *The capacity to gain an accurate and deep intuitive understanding of a person or thing*). Who has an insight/interest in water..... from Government:



*If you can float a boat on it.....*Marine Dept'

*If you can play on it.....*Leisure & Cultural Services Dept'

*If there's fish in it*Agriculture & Fisheries Dept'

*If its got Env' value.....*Environmental Protection Dept'

*If you can drink it.....*Water Services Dept'

*If its dirty.....*Drainage Services Dept'

*If its still raining.....*Hong Kong Observatory

Just in Hong Kong

Multiple Parties:

- Government (as previously), and also:
- Local communities
- Interest Groups:
 - Commercial Users
 - Aqua culture
 - Local fishermen
 - Environment
 - Sports
 - Recreation
 - Other.....



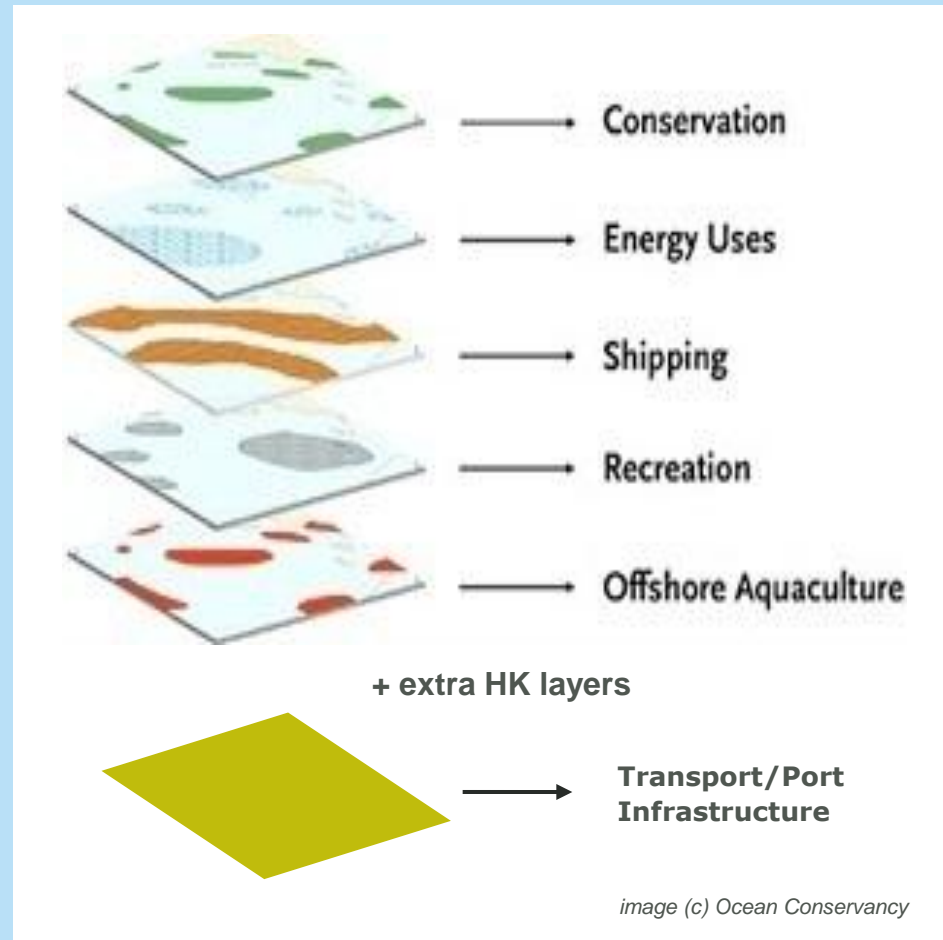
Managing the Pancake

Marine Spatial Planning (classically), includes a cool clear headed assessment of user interest, conflicts and priorities.

Of course in Hong Kong it is often on the basis of “Who got there 1st”, and is not always port led.

Regardless:

- *Seek data*
- *Consolidate information*
- *Create knowledge for decision making*



Contents

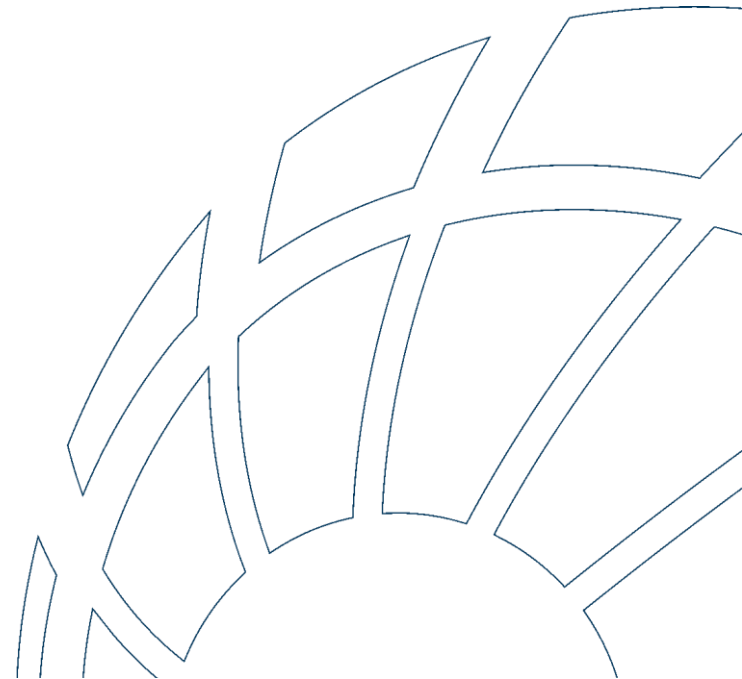
1) Introduction

2) Wind Farm Siting (International & Local)

3) Managing Development/Construction Impacts

4) What If - new marina siting?

5) Summary



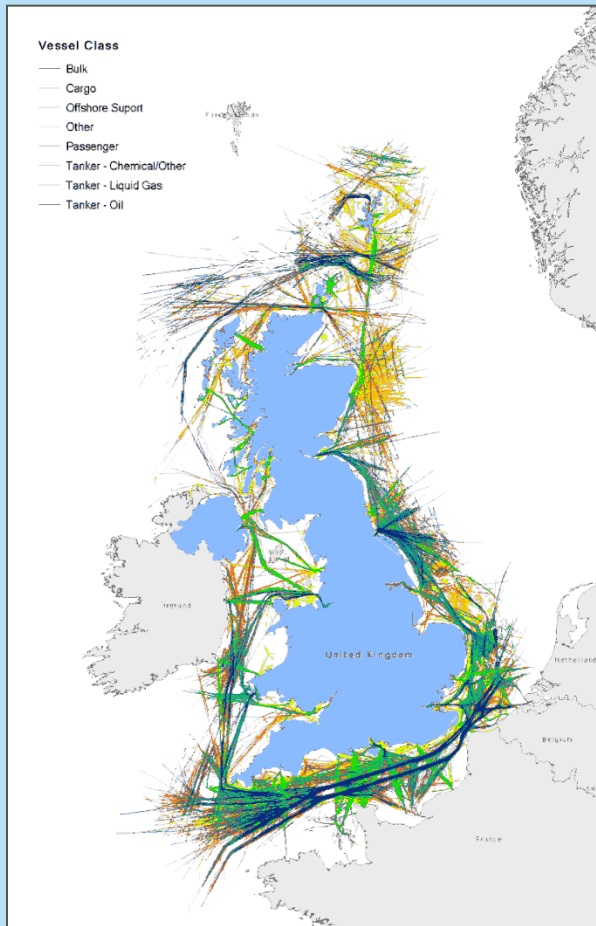
Offshore Wind Farms



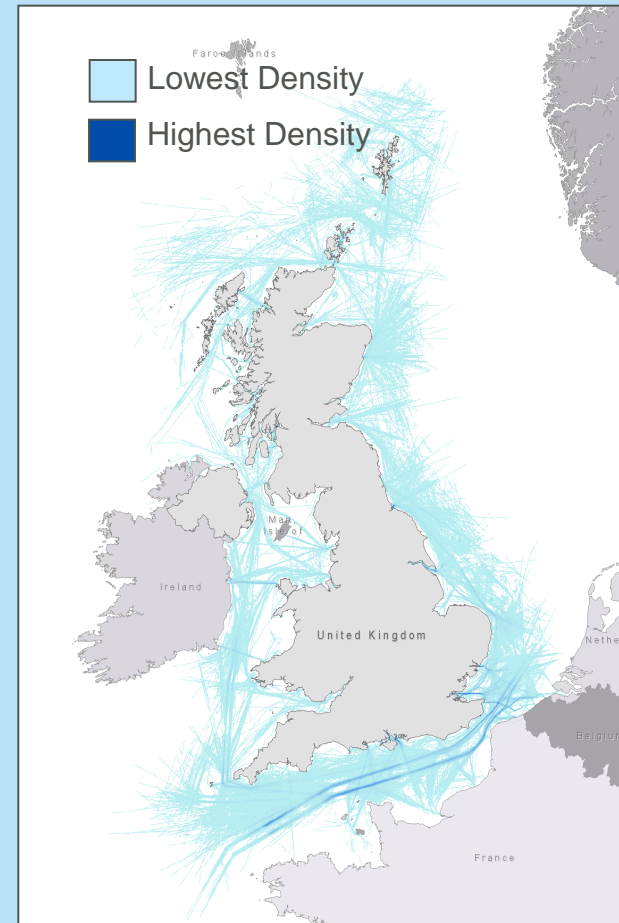
Coverage of wide area, with potential impacts on marine activity

Assessment for Round 3 Sites:

All UK Routes (August 2006)

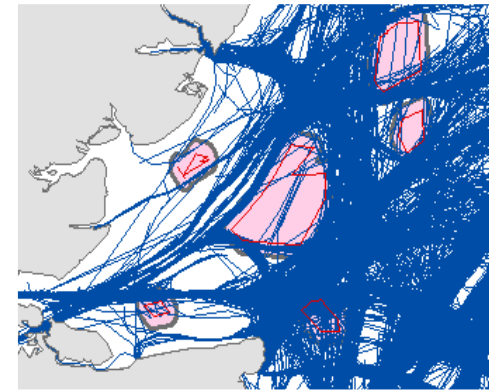
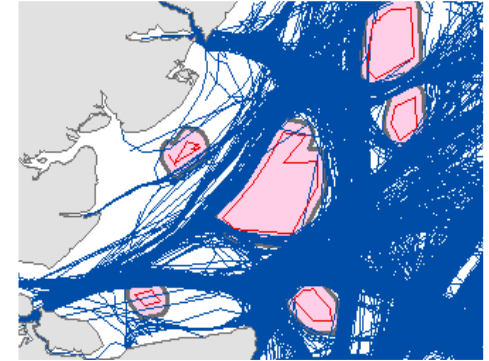
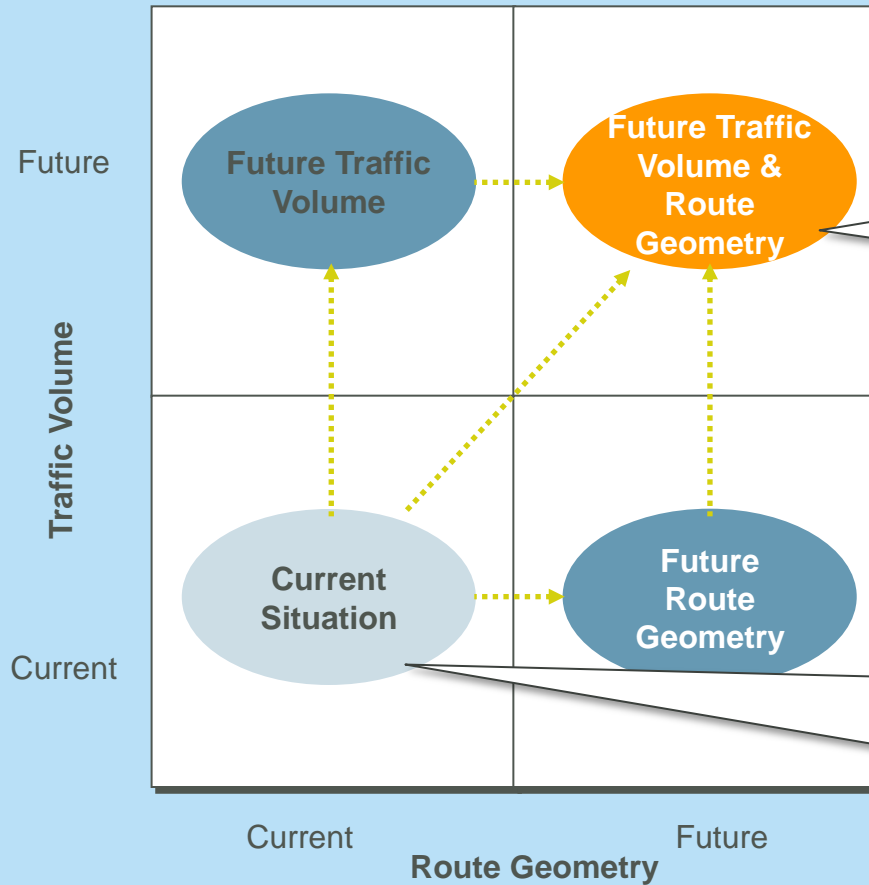


Traffic Density



Future Risk Review

Future Case Model Development



Future Sites for Development



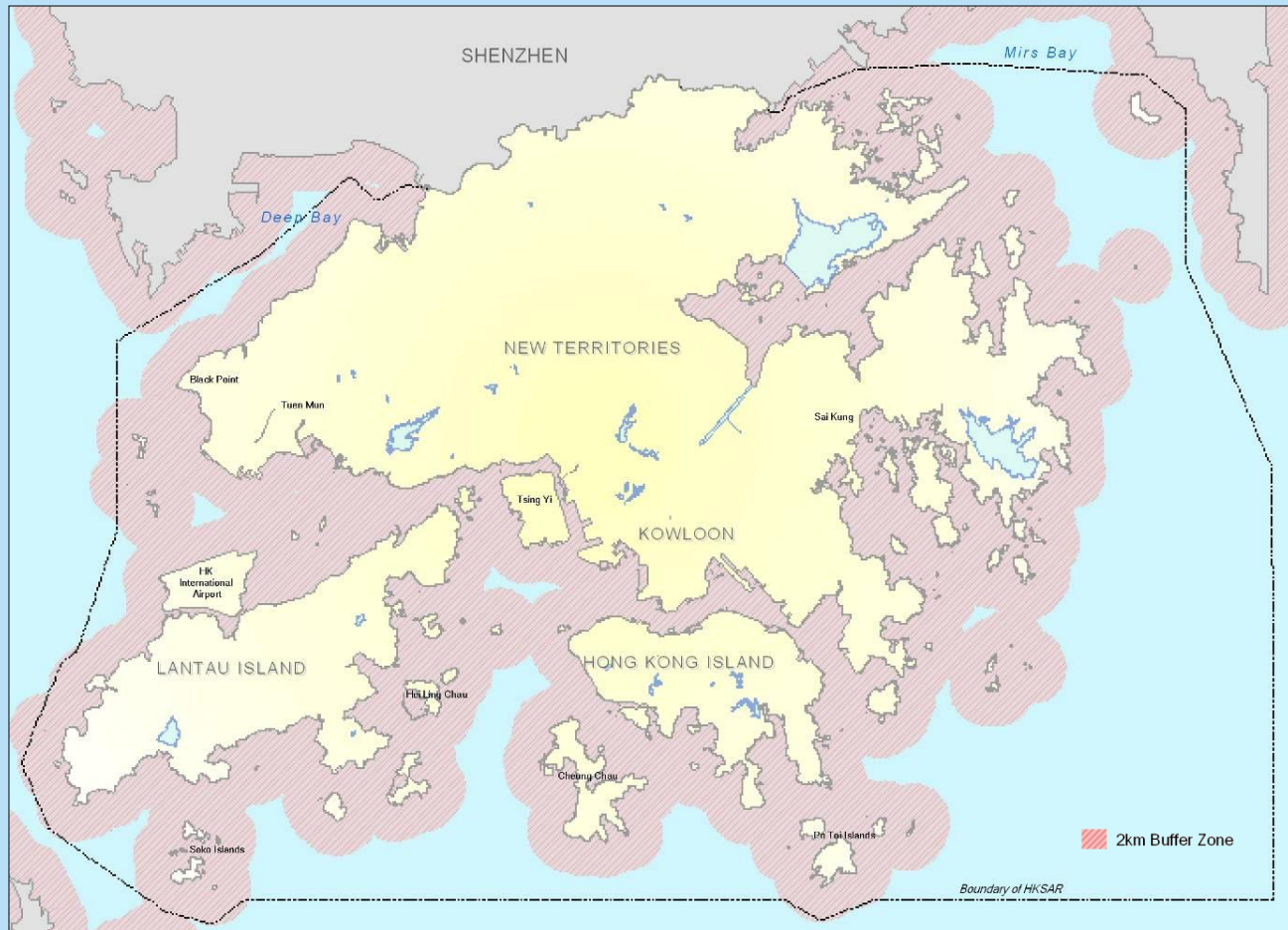
Assessment
ultimately assisted
Government in better
siting for major
developments.....

.....
....but ongoing value
in co-ordinating
across boundaries?

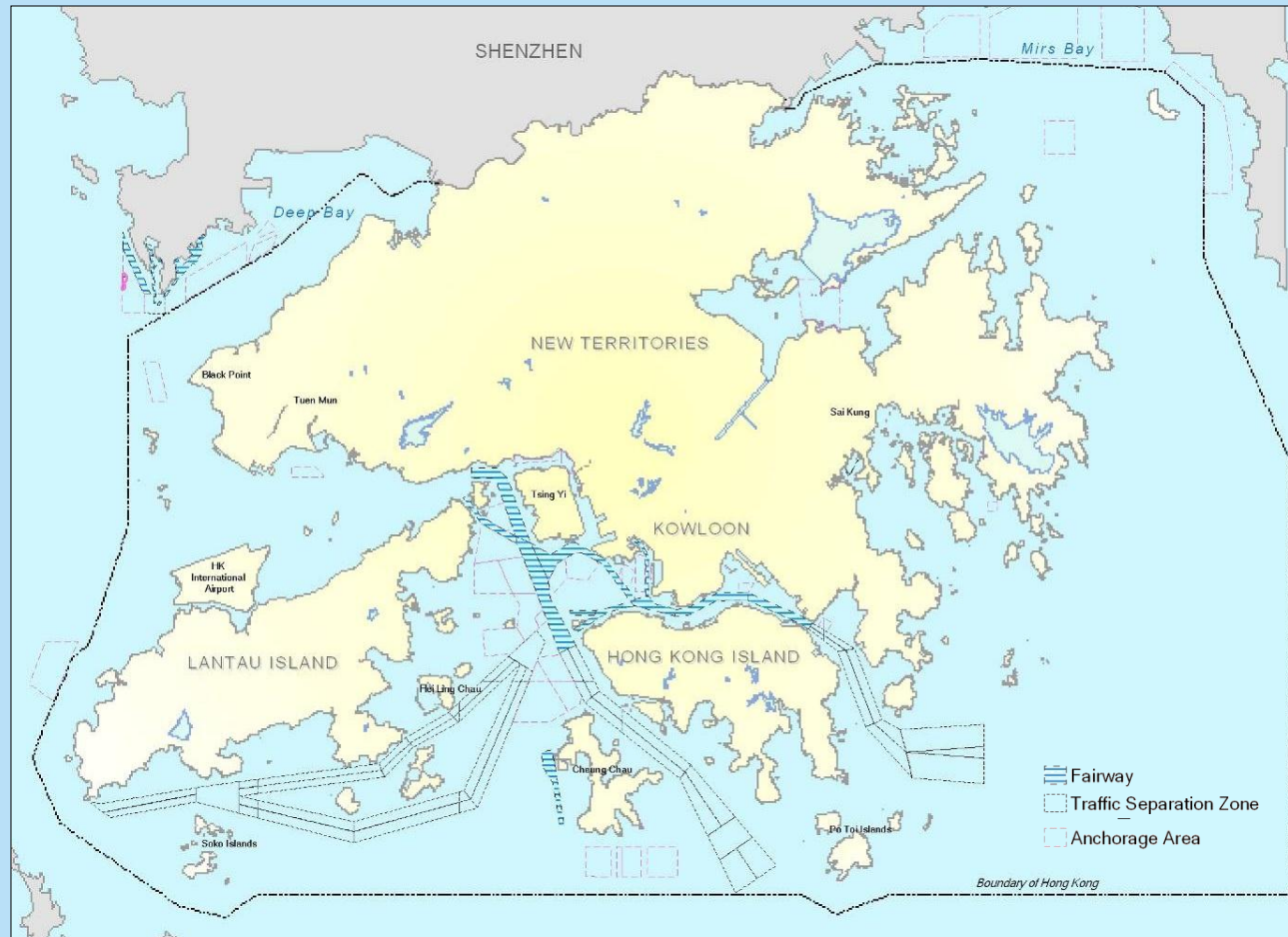
Offshore Wind Farm Siting in HK



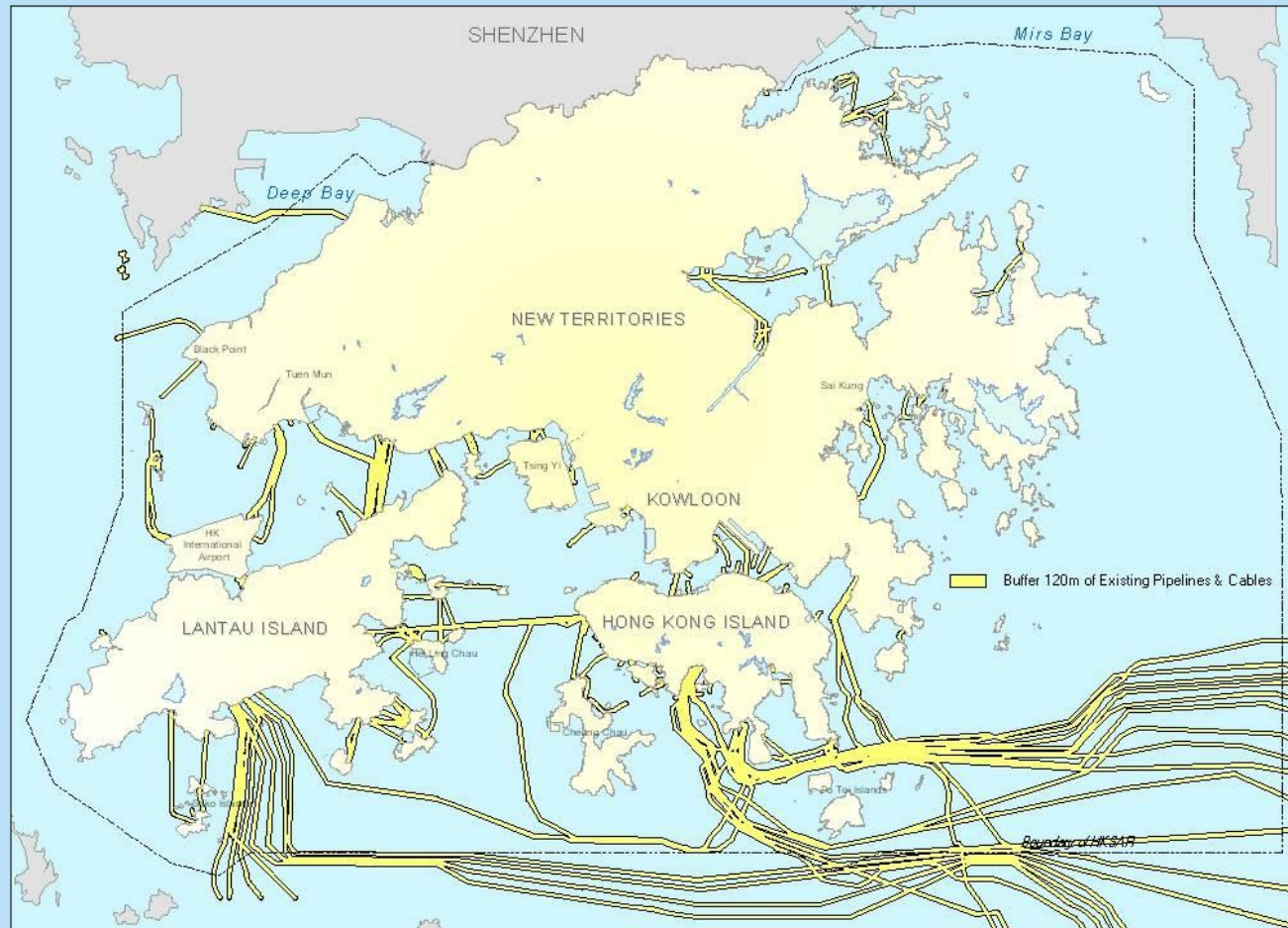
Marine Env' – Coastline Exclusion Zone



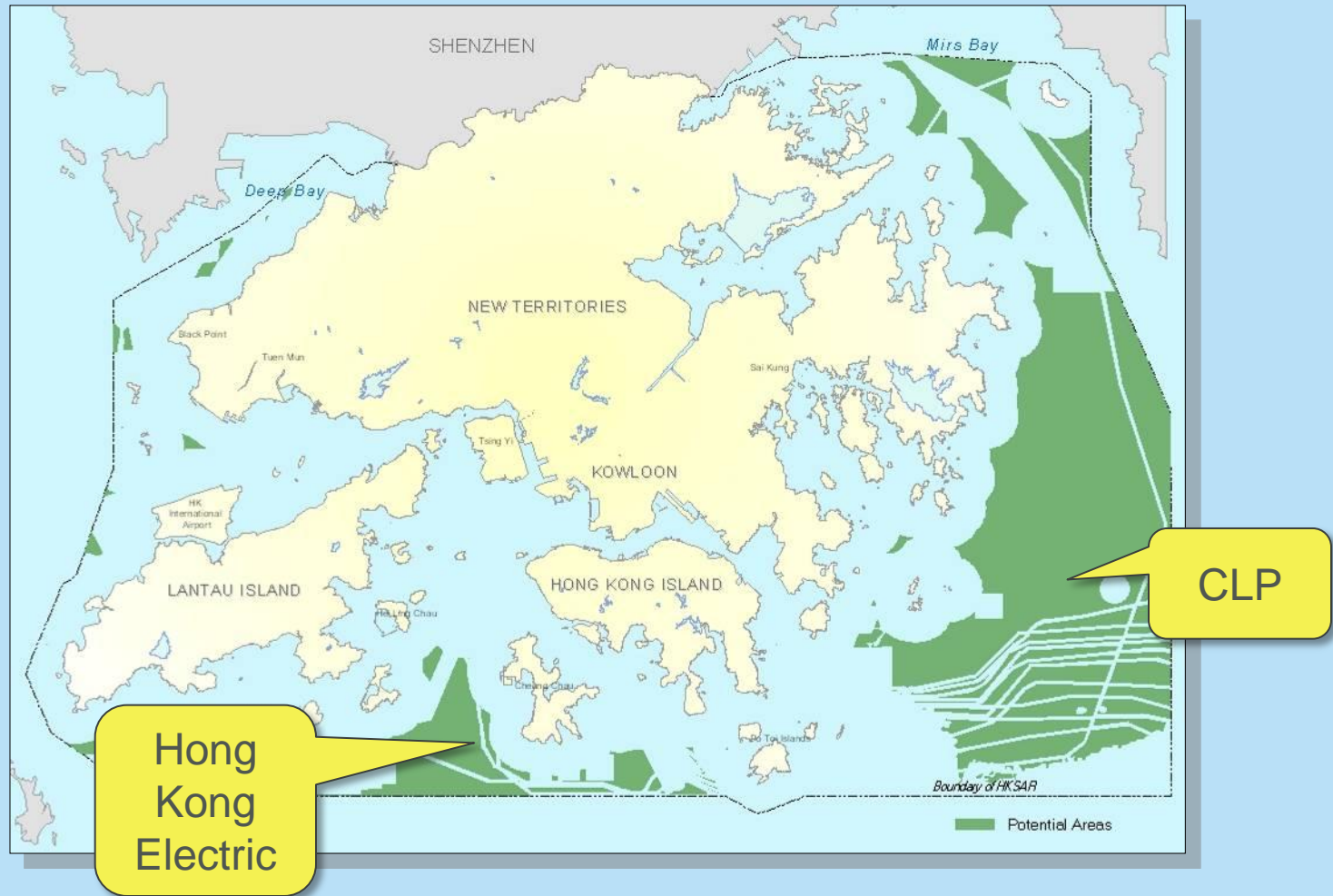
Anchorage, Fairways & Channels



Subsea Infrastructure



Potential Areas



Contents

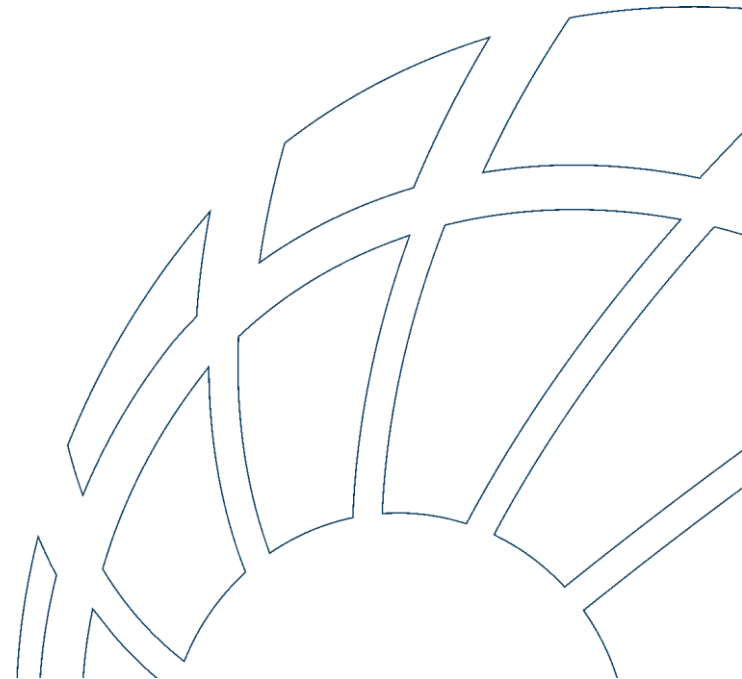
1) Introduction

2) Wind Farm Siting (International & Local)

3) Managing Development/Construction Impacts

4) What If - new marina siting?

5) Summary



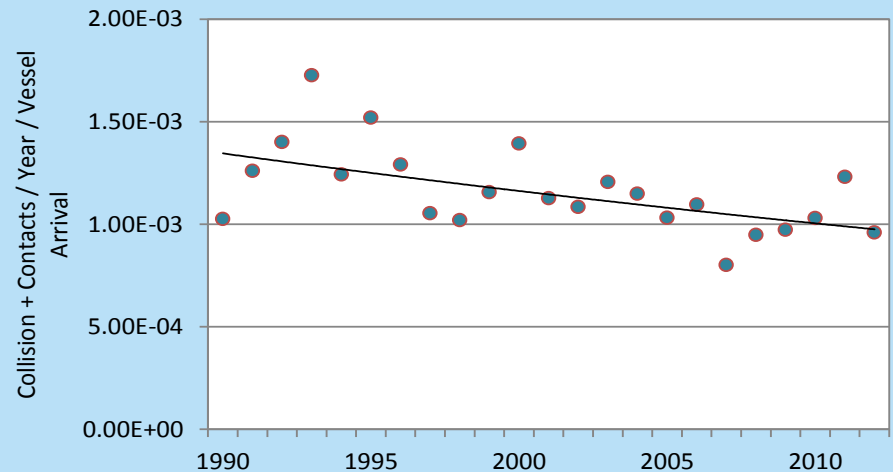
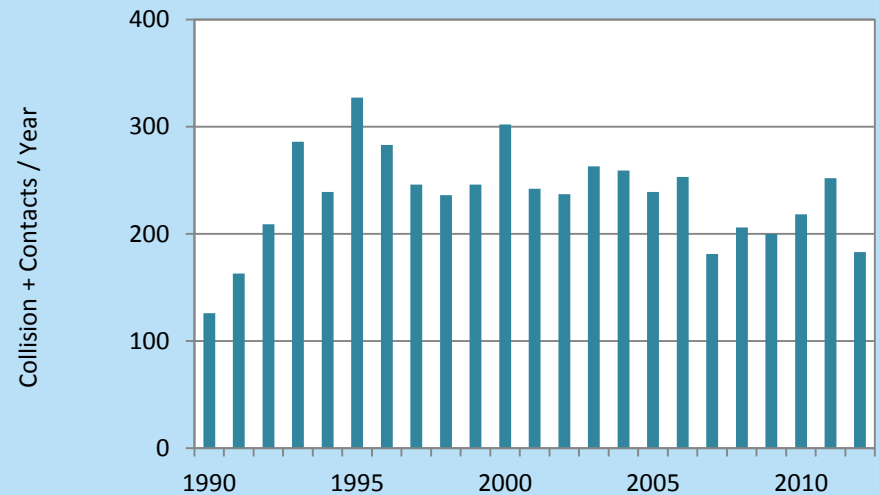
Marine Traffic Impact Assessments (MTIA)

MTIA Requirements

- Hazard Identification
- Risk Assessment
- Development of Mitigation Measures

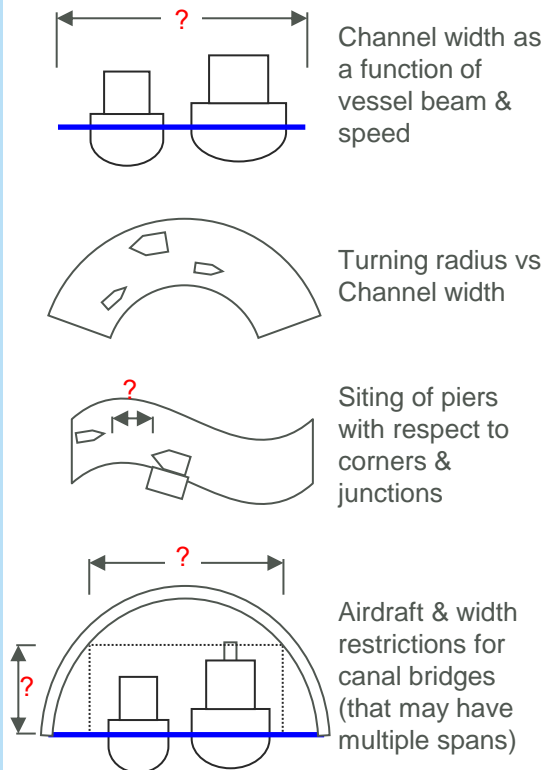
Scope:

- New Container Terminals
- Reclamations
- Viaducts
- Construction & Barging

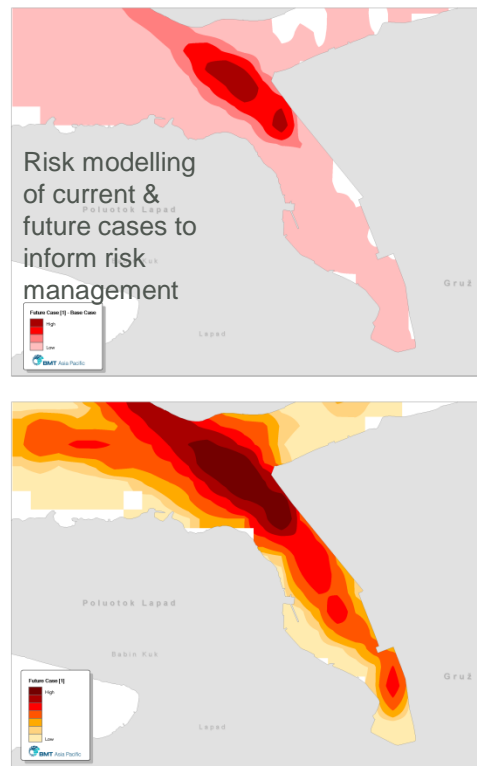


MTIA – Key Questions

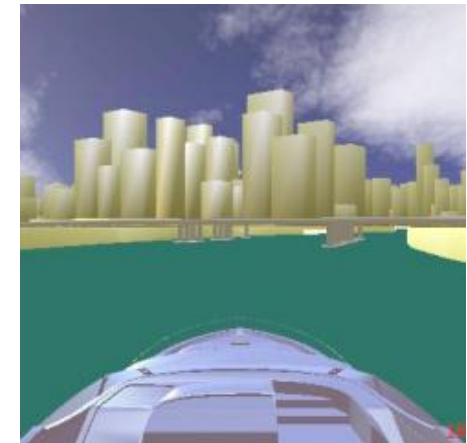
Is it Feasible?



Is it Safe?



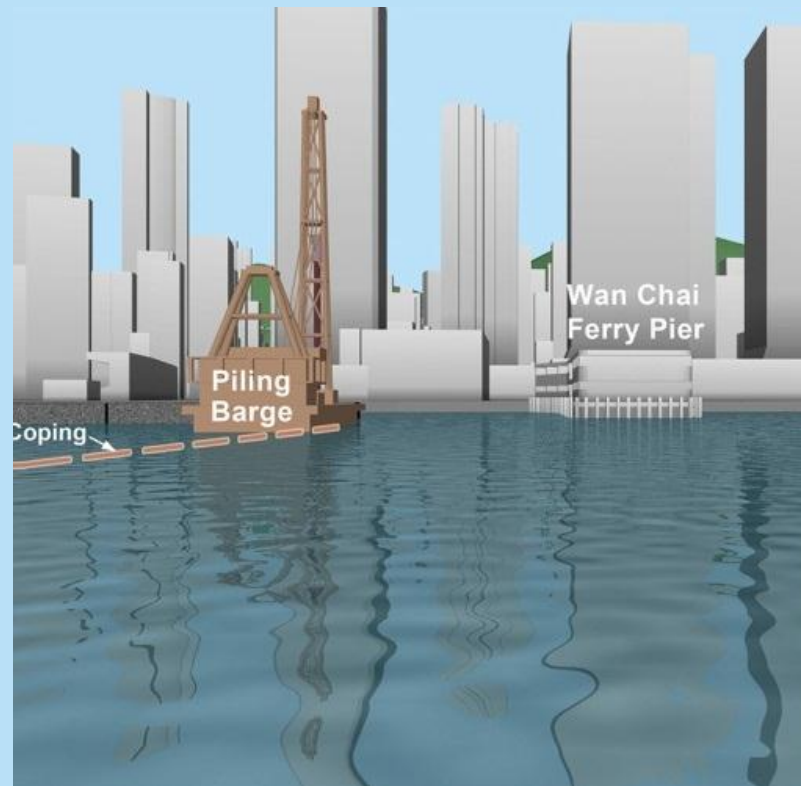
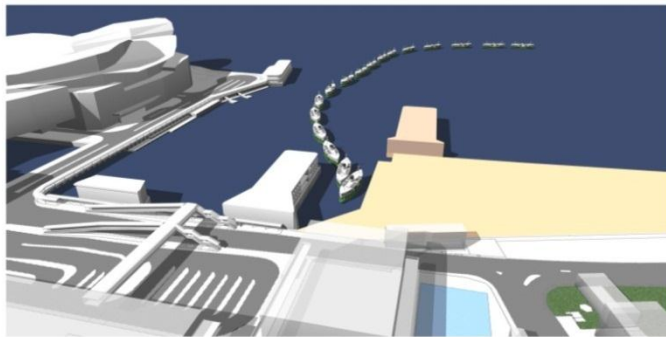
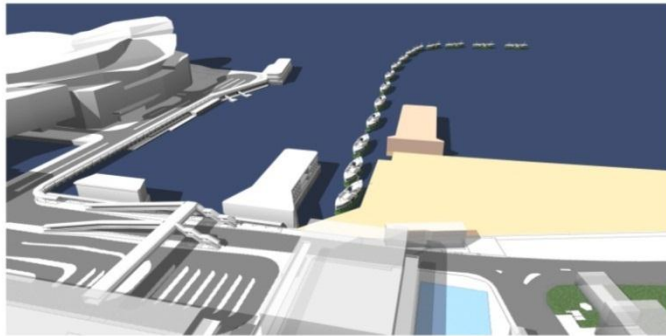
Can you do it Better?



Develop procedures for management of operation/ waterspace and assets required to deliver safe navigation.

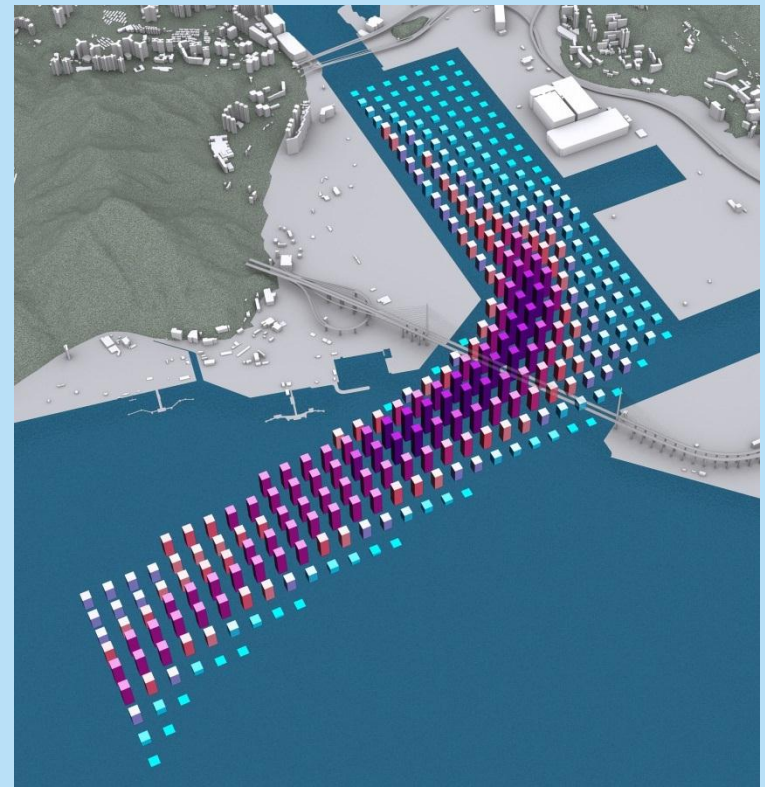
Star Ferry Navigation

Review of access limits during adjacent reclamation works with navigation sim'



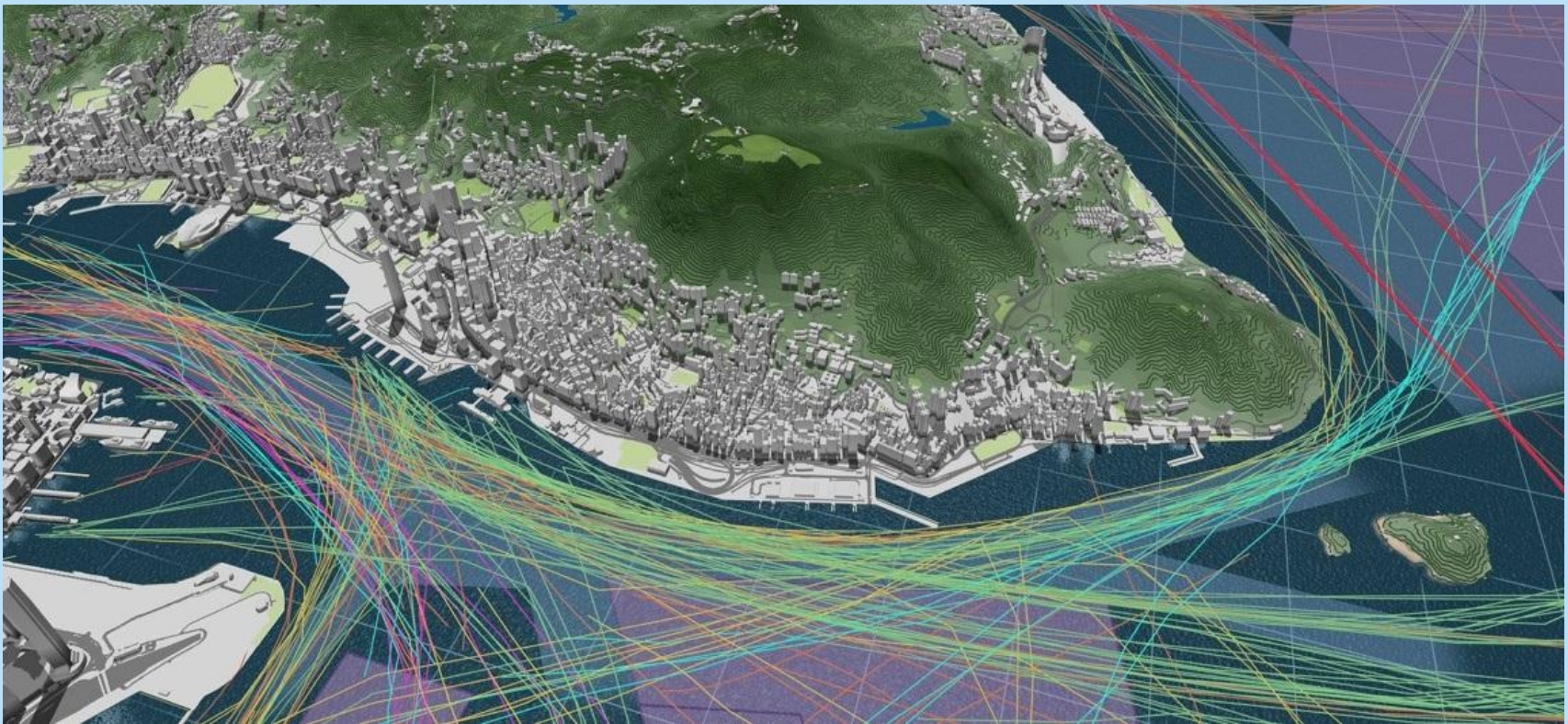
Kwai Chung – Dredging Management

Analysis of Container Ship tracks to map risk & assist planning of dredging works



Reclamation & Harbour Works Impacts

Marine traffic simulation of impact on traffic flows for permanent/temporary works



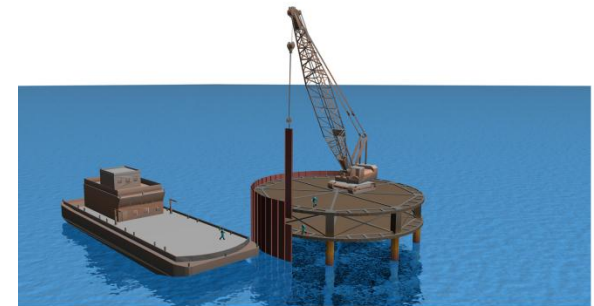
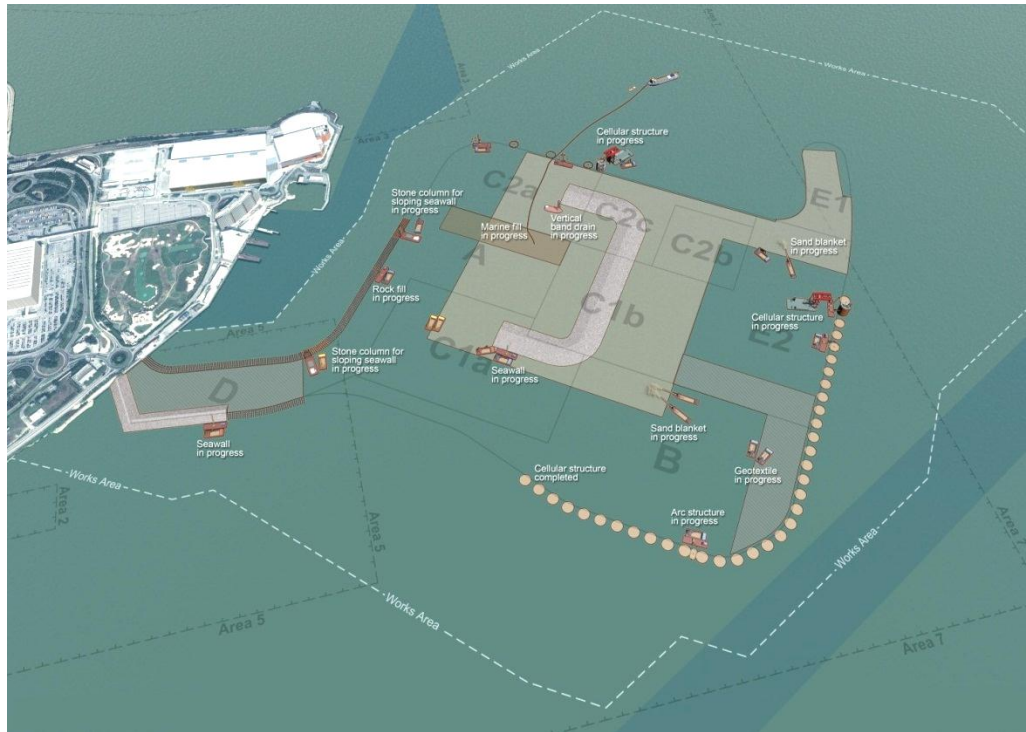
Tunnel Construction Impacts (IMT or bored)

Review of impacts on stakeholders from Immersed Tube Tunnel (IMT)



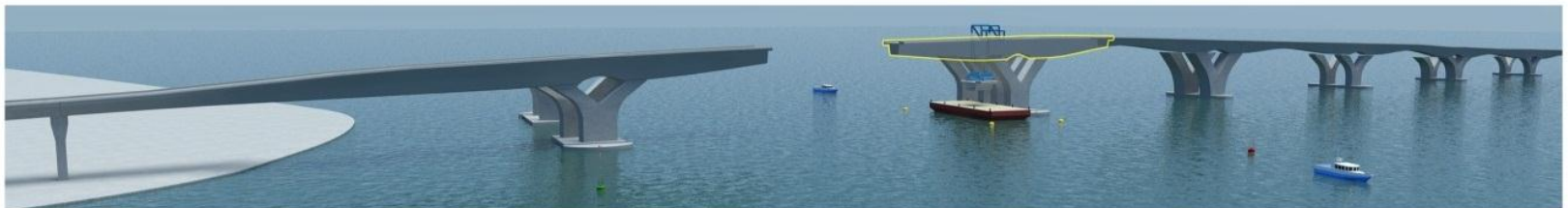
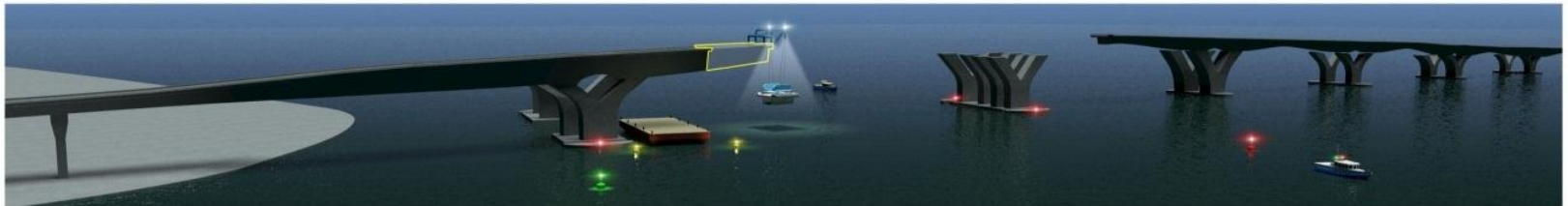
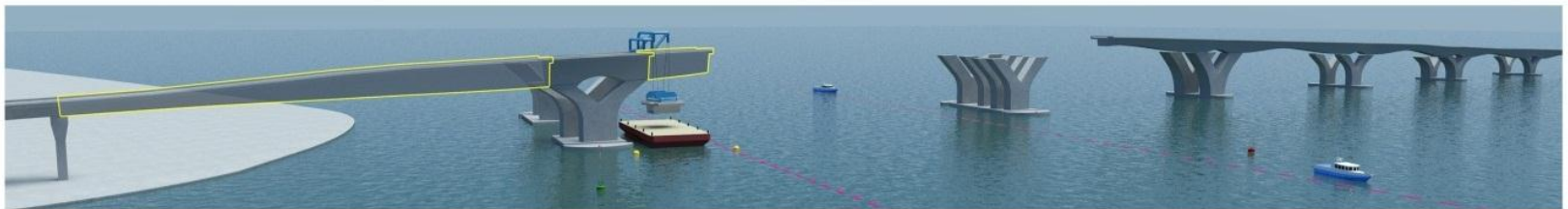
Marine Works Planning Support

Review of access limits during adjacent reclamation works with 3D modelling



Works Phasing

Modelling of works stage to permit project team & regulator review of impacts



Contents

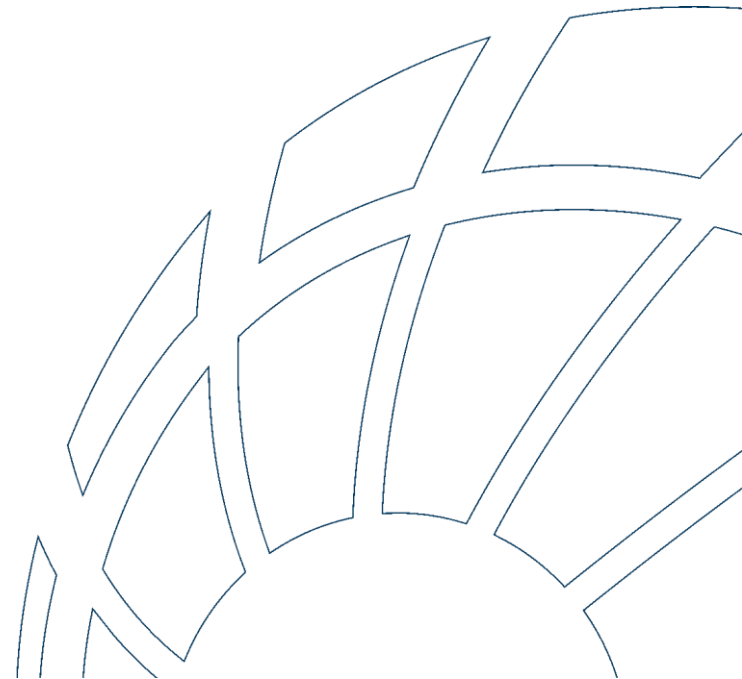
1) Introduction

2) Wind Farm Siting (International & Local)

3) Managing Development/Construction Impacts

4) What If - new marina siting?

5) Summary



Marina / Marine Leisure Opportunities

Just Imagine.....

- Public Marina sites
- Waterborne Leisure
- Youth recreation
- Outward Bound centres
- Houseboats

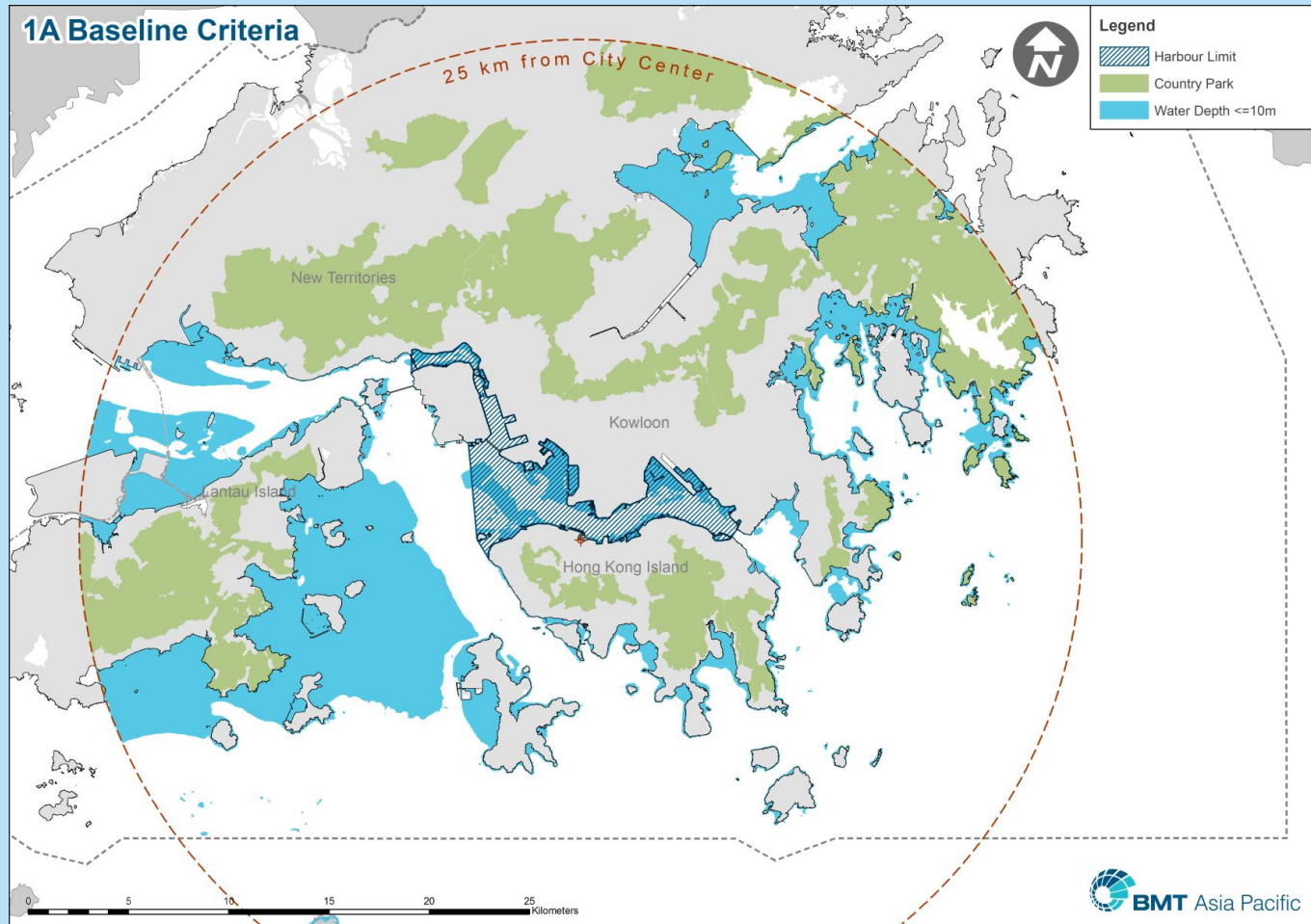


Assuming the future Harbourfront Authority will address needs within Harbour limits.....

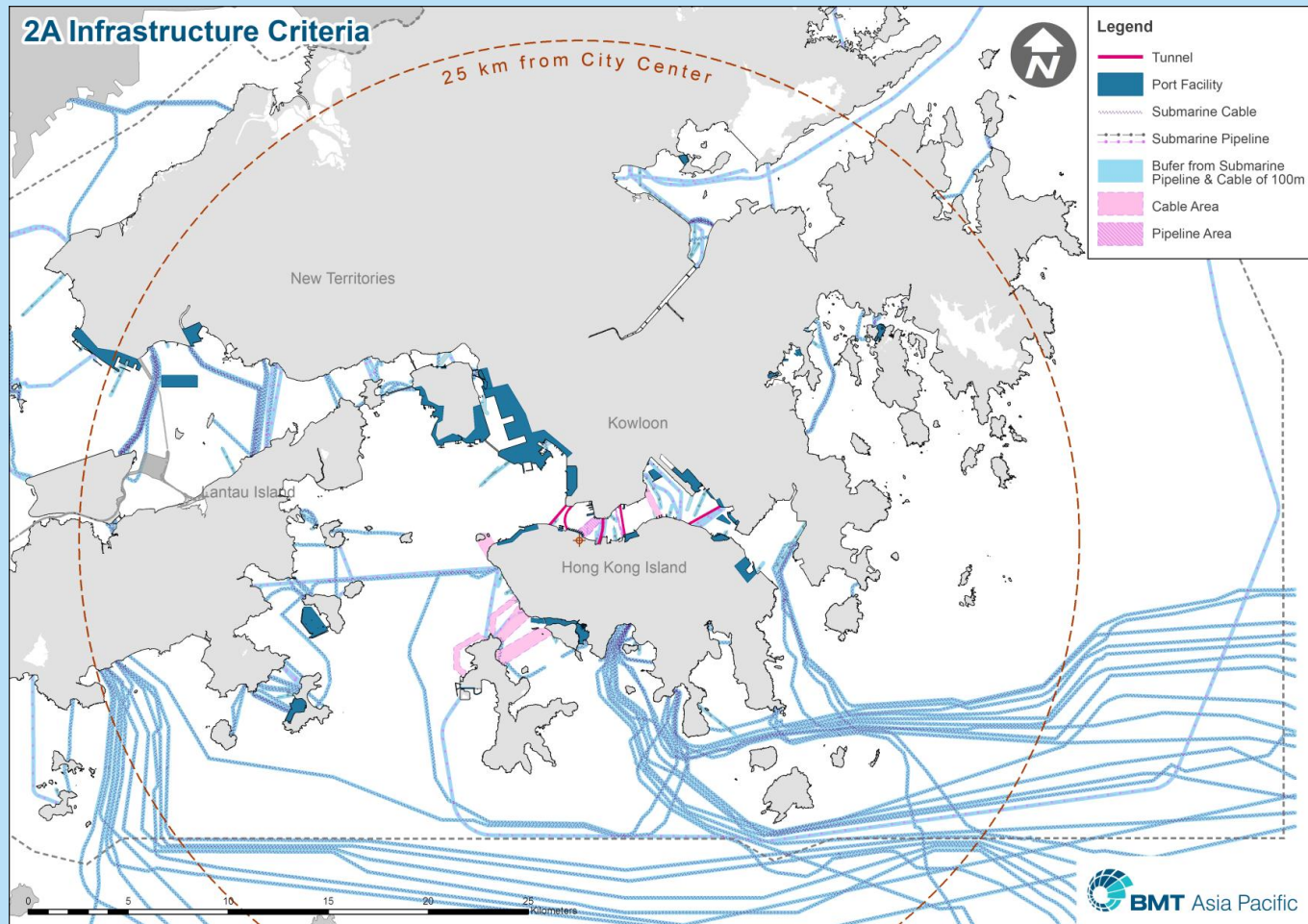
which future Hong Kong sites could be viable? GIS Site Search based primarily on AVOIDANCE.



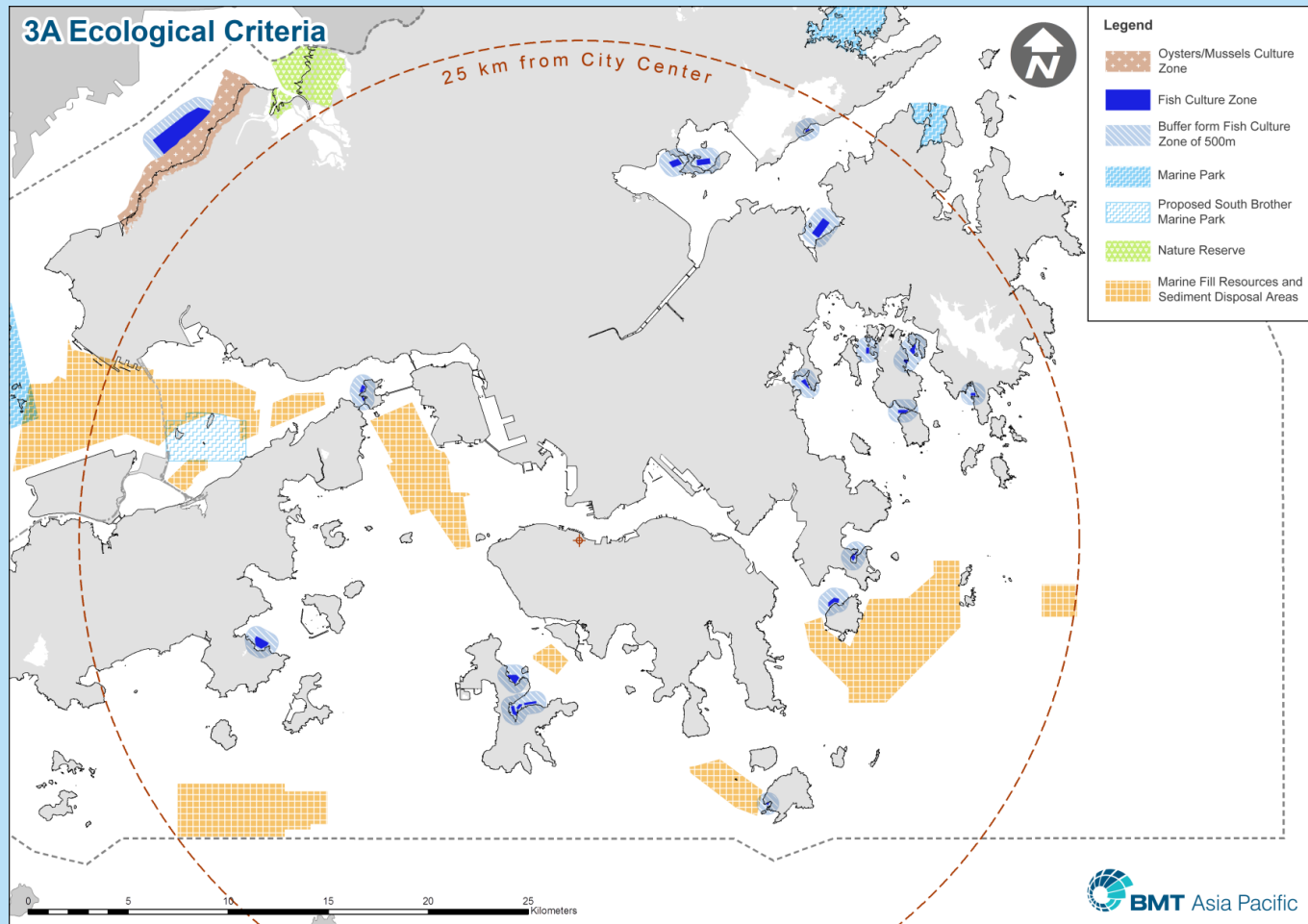
Near Central, not too deep or Country Park



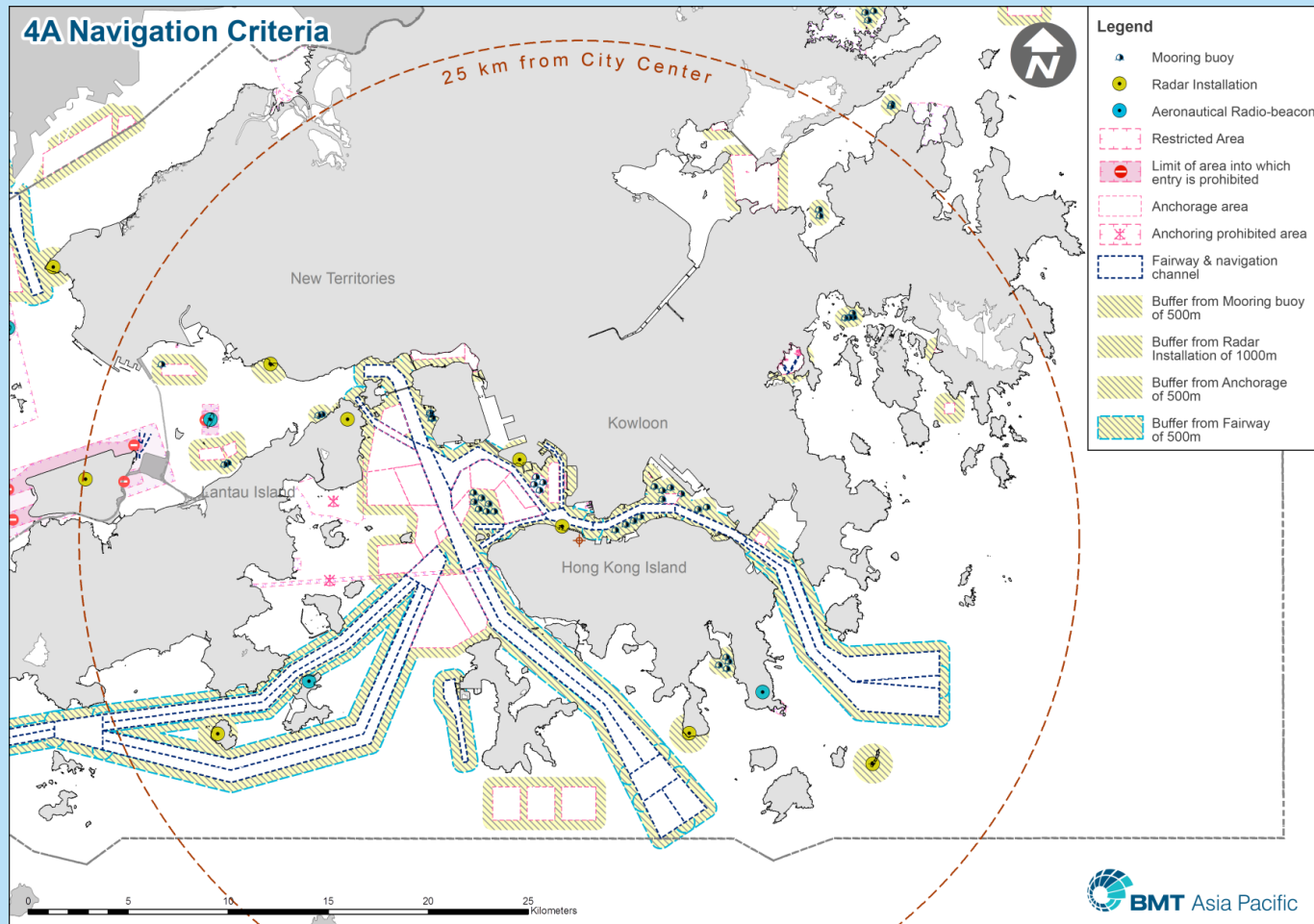
Avoid Dense Submarine utilities



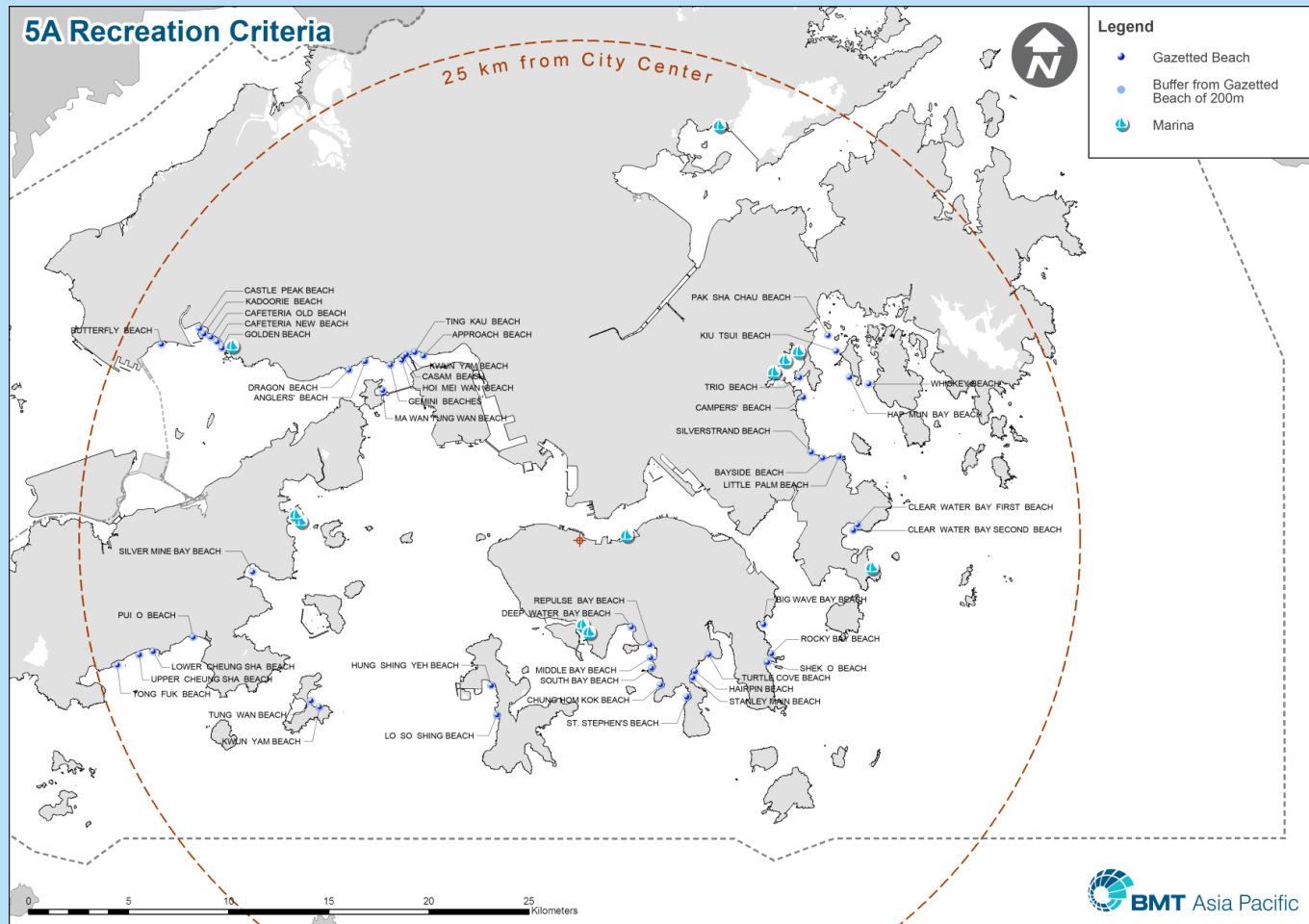
Avoid designated Ecological, Seabed users



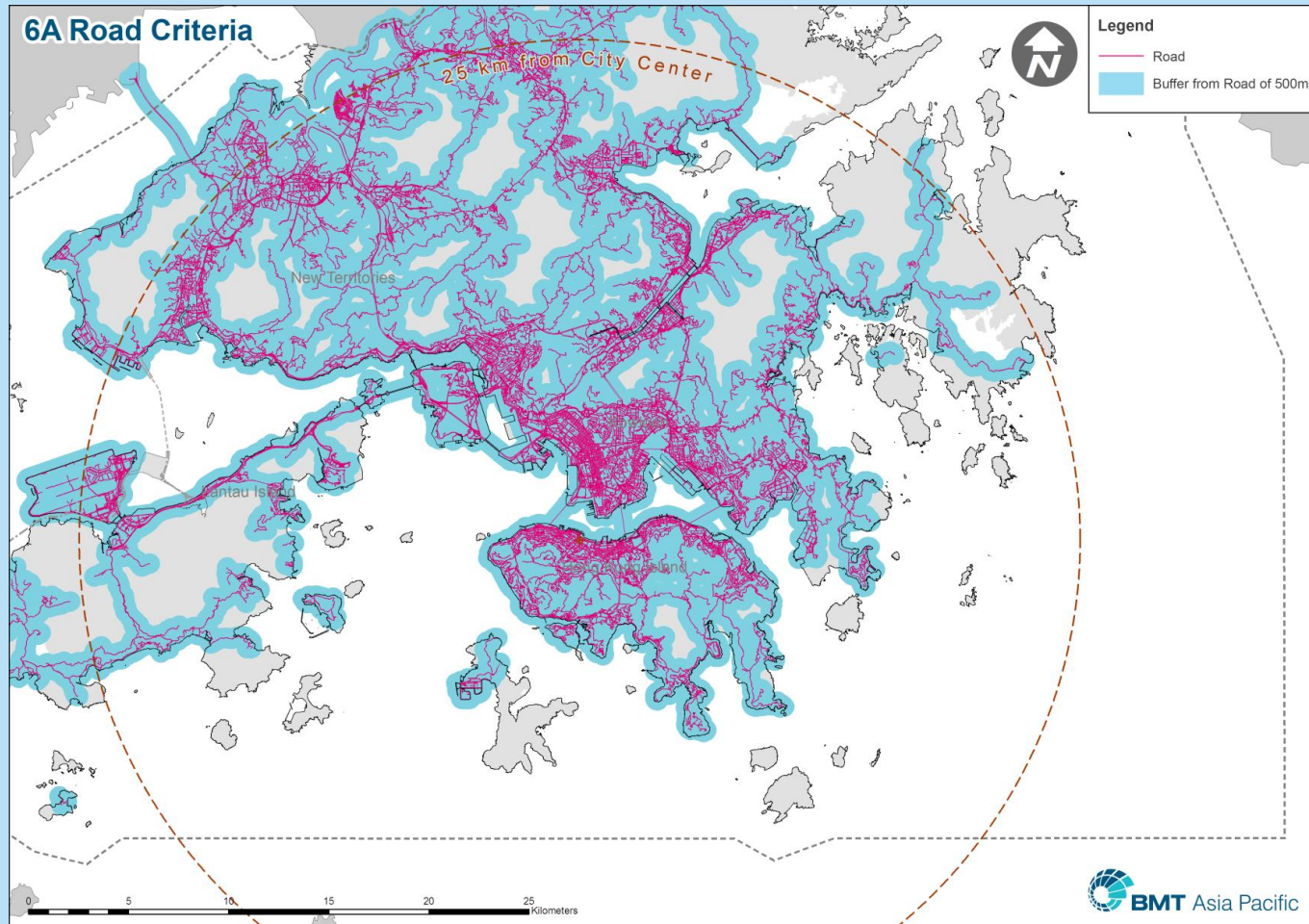
Avoid Commercial Shipping Infrastructure



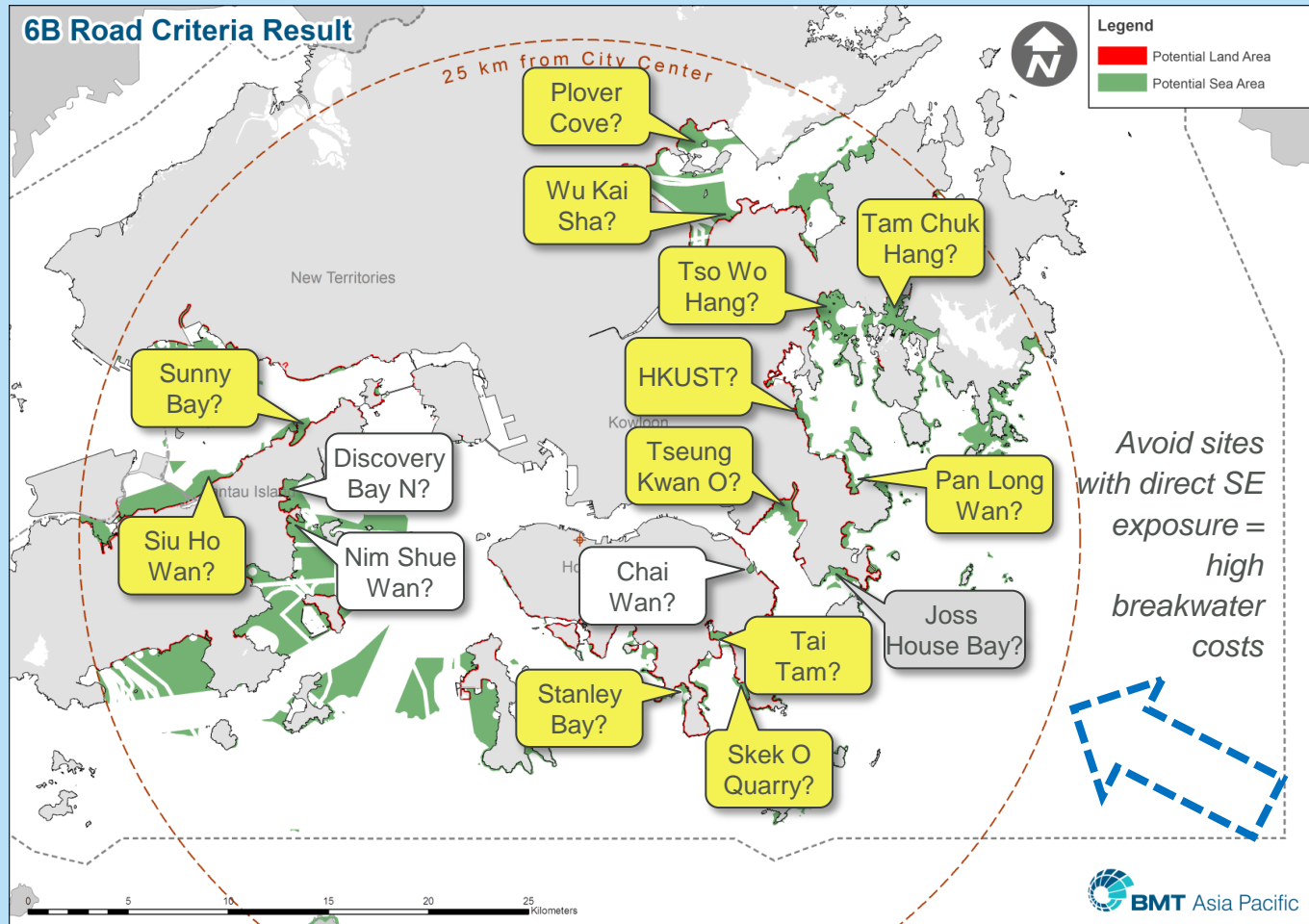
Avoid co-location with Existing Beaches



Be near (<500m) from existing Roads



What's left? with a focus on Eastern waters



Viability Opportunities?

Over a dozen sites, avoiding existing interests and constraints.

Marine Spatial Planning can identify the opportunities, and further detailed site review can assess specific constraints.

.....but the Hong Kong problem is less an issue of availability, finance or opportunity, but of **ownership?**



Contents

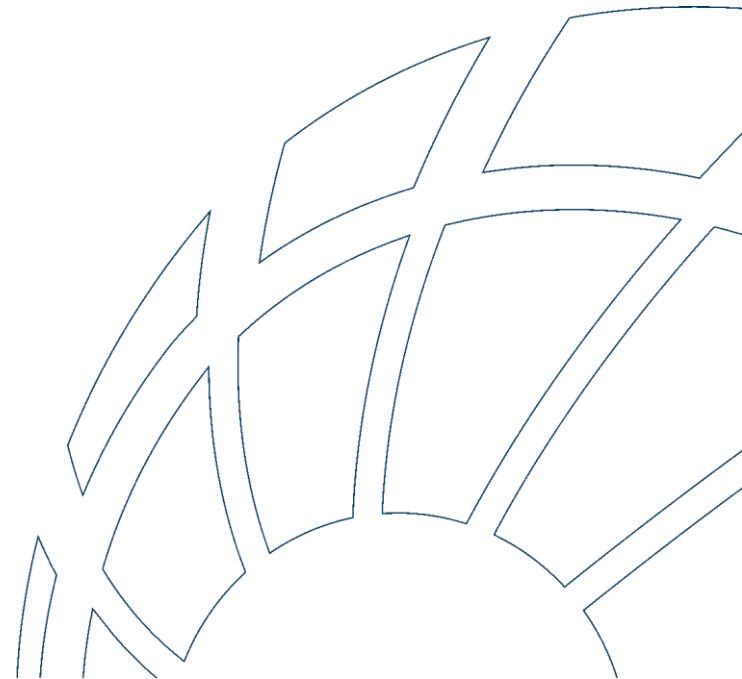
1) Introduction

2) Wind Farm Siting (International & Local)

3) Managing Development/Construction Impacts

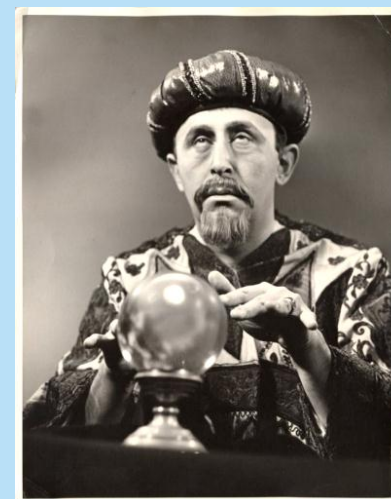
4) What If - new marina siting?

5) Summary



Summary

- Don't guess - seek real insight
- Data >> Information >> Knowledge for Decision Making
- Extensive marine traffic information exists to assist you plan on national or local levels
- Tools have been developed to ensure feasible, safe & Efficient navigation.....even in the middle of a marine building site
- Such tools can open opportunities for commercial & recreational development
- If developing in the waterask more!
- Ask BMT!



Thank You

Richard D Colwill

rdc@bmtasia.com.hk

BMT Asia Pacific

www.bmtasiapacific.com

