香港特別行政区政府
环境保护署

Conference on Environmental Impact Assessment for the Construction of a Beautiful China cum 7th China Environmental Assessment Forum

面向美丽中国建设的环境影响评价学术会议暨第七届中国环境影响评价学术研讨会

Environmental Outcomes of Waste-to-Energy Project EIA

转废为能設施的环境影响评估成果

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Presentation Outline
大纲

1. Background of WtE in Hong Kong
   香港转废為能設施的背景资料

2. Environmental Outcome from the EIA Process
   环境影响评估的成果

3. Engaging the Public for a Successful EIA Process
   公众参与有助顺利完成环评程序

What is Waste-to-Energy (WtE) 转废为能

- Also known as Energy-from-Waste
- 以废物产生能源

- Process to produce electricity directly through combustion, or produce a combustible fuel, such as methane
- 从废物中获得电能或热能，或燃料(如甲烷)

- Combustible Municipal Solid Waste (MSW) —not coal— as fuel to boiler
- 给锅炉加热的燃料，是燃烧都市废物，而非燃煤

- Reduce the amount of waste dumped in landfill
- 减少了倾倒在堆填区的废物数量

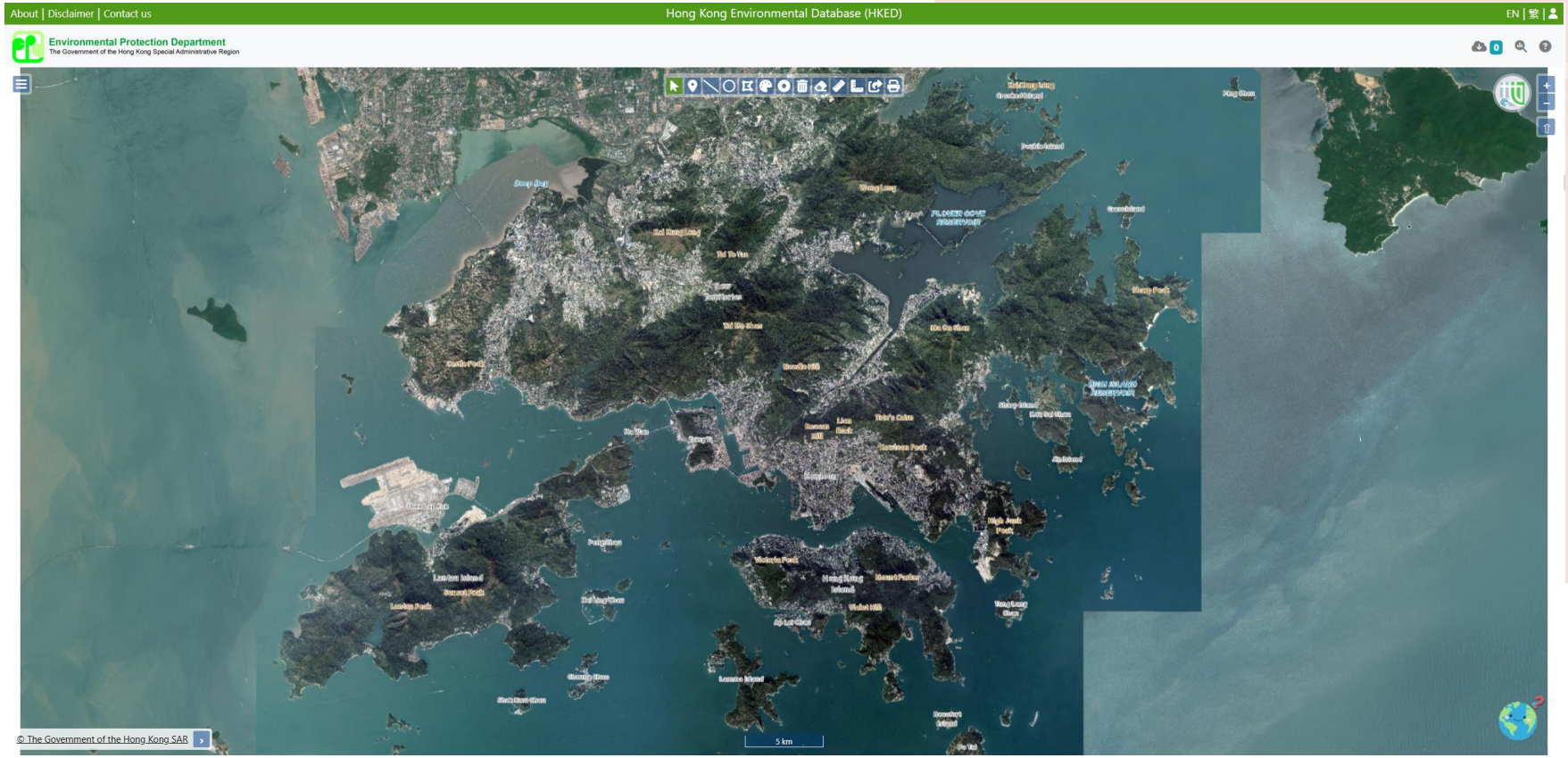
- Reduce the cost of landfill disposal
- 减少处理废物的费用

- Make use of the energy in the waste, rather than burying it in a landfill, where it remains unused
- 转废为能可充分利用废物中的能源，而不是将废物堆填而不加利用

WtE in Hong Kong 转废为能

- ~ 11,000 tonnes of MSW per day
- Total land area of Hong Kong ~ 1,114 km²
- Mountainous topography

- 每日在堆填区弃置的都市固体废物总量接近11,000公吨
- 香港土地面积约为1,1114 平方公里
- 地形多山



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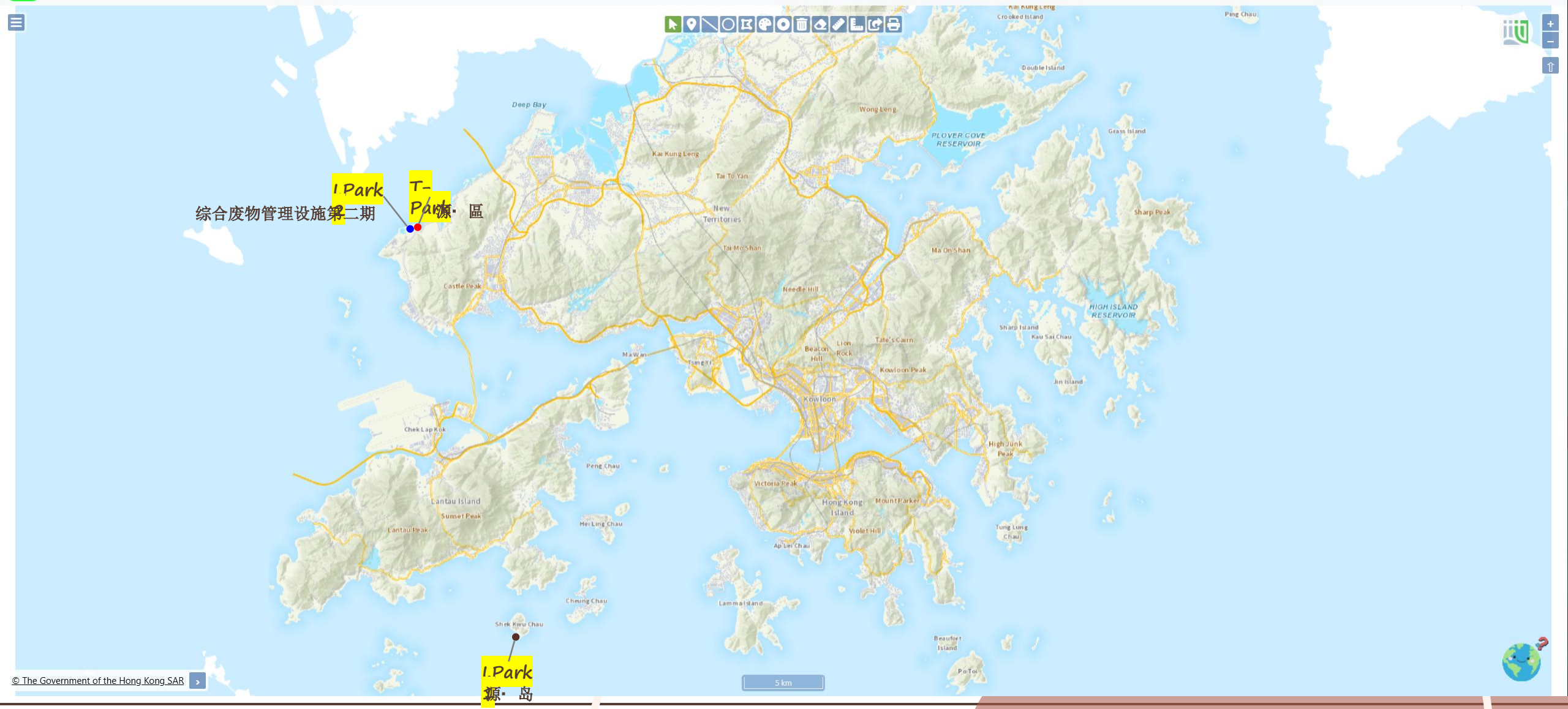


WtE in Hong Kong
香港的转废為能設施

T.PARK 源· 區

- EIA report approved in Feb 2009
- 环评于2009年2月获批准

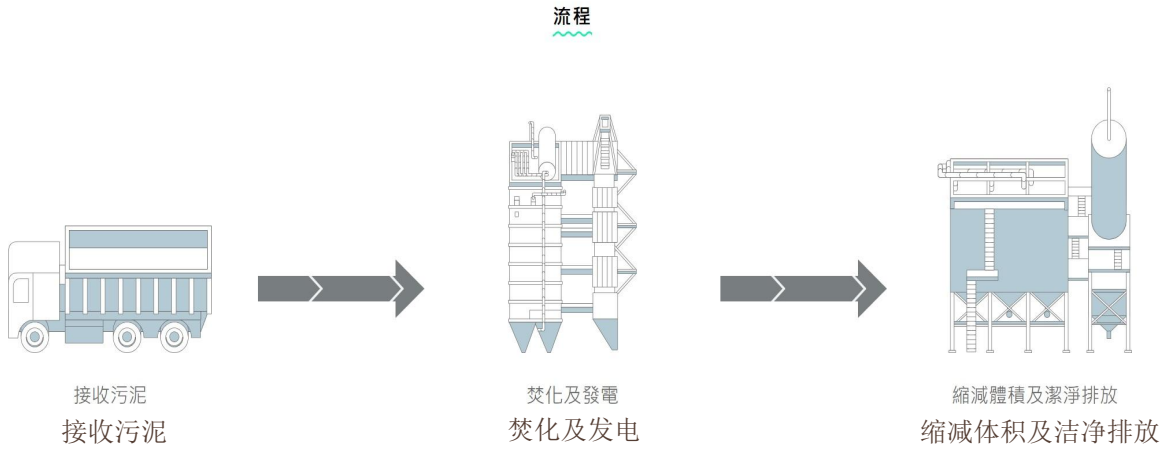
- EP issued in Mar 2009
- 环境许可证于2009年3月发出

- Construction commenced in Oct 2010
- 2010年10月展开建造工程

- Operation commenced in 2016
- 2016开始营办

- ~3 million cubic meters of sewage, resulting in ~1,200 tonnes of sludge every day
- 香港每日产生近300万立方米的污水，因而产生约1,200 公吨的污泥

- T.PARK can handle a max. capacity of 2,000 tonnes of sludge per day
- 源· 区每天可以处理高达2,000公吨污泥



WtE in Hong Kong
香港的转废為能設施

I.PARK 1源· 岛

- EIA report approved and EP issued in Jan 2012
- 2012年1月批准环评及发出环境许可证

- Expected to commence operation in 2025
- 预计于二o二五年启用

- Max. treatment capacity ~ 3,000 tonnes of MSW per day
- 最高处理量达每日3,000公吨的都市固体废物

WtE in Hong Kong
香港的转废为能設施

I.PARK 2综合废物管理设施第二期

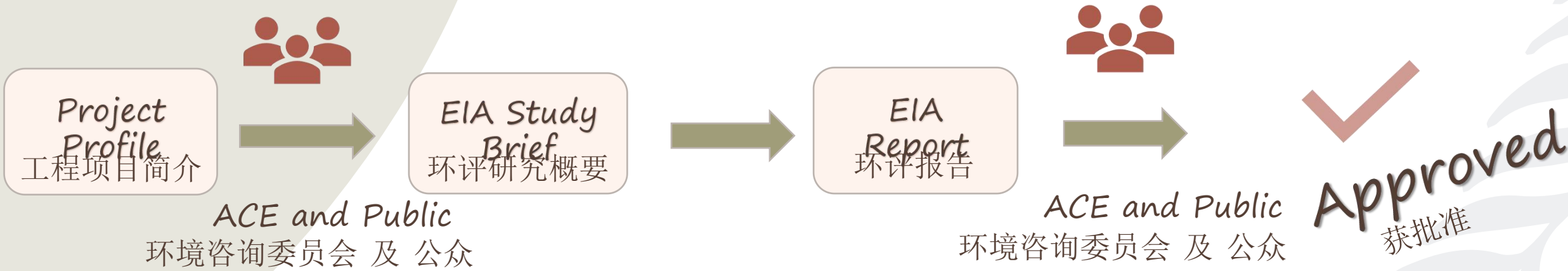
- EIA report approved and EP issued in Dec 2024
- 于2024年12月批准环评及发出环境许可证

- Tentatively to commence construction in 2026 for operation in 2030s
- 计划于2026年展开建造工程，2030年代初投入服务

- Max. treatment capacity ~ 6,000 tonnes of MSW per day
- 最高处理量达每日6,000公吨的都市固体废物

2-Stage Public Involvement

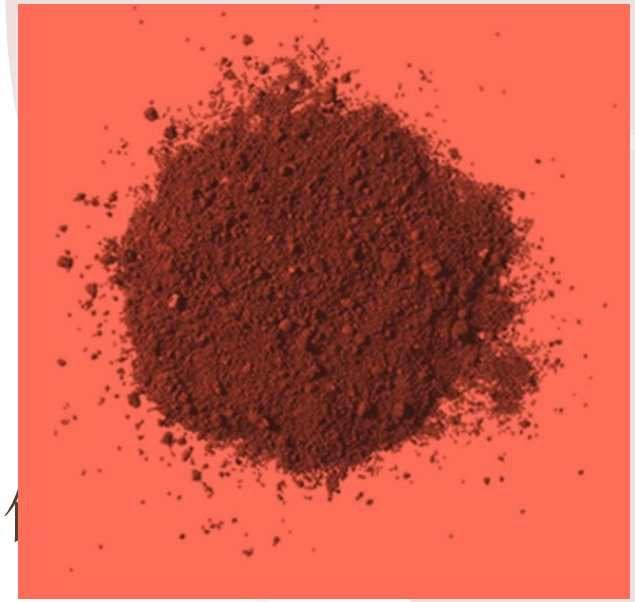
两个阶段的公众参与



WtE vs Landfill

转废為能設施 与 堆填区

- Reduction of Waste Volume 减少废弃物量
- Extend Life Span of Landfill 延长堆填区的寿命
- Reduce Greenhouse Gas Emissions 减少温室气
- Surplus Electricity Export 输出剩余电力
- Community Facilities 社区设施

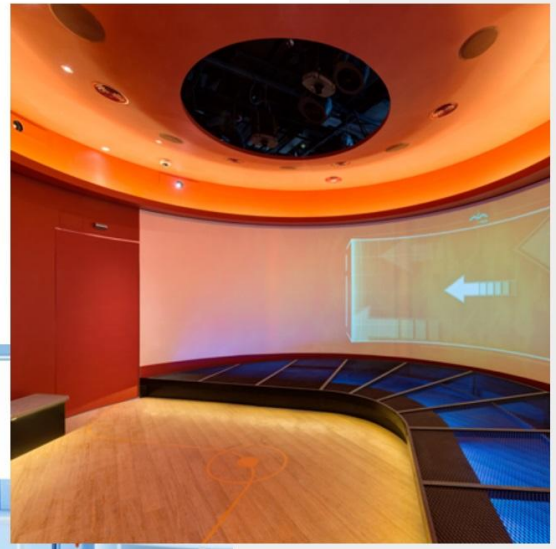


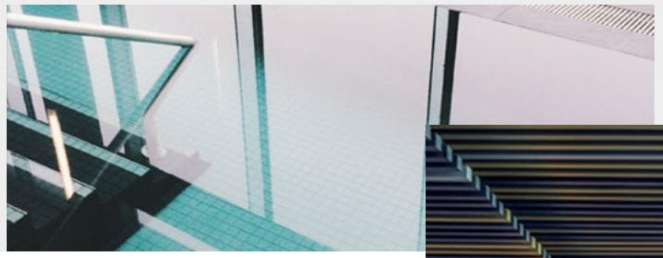
Ash and Residues
灰烬和残余物

源 · 馆
访客可以在这个展览厅透过一系列创新和互动的展品，认识污泥处理的过程。

T · HALL

An exhibition hall where visitors can learn about the sludge treatment process through a range of innovative and interactive exhibits.





T · SPA

Supported by the heat energy recovered from the sludge incineration process, the 3 spa pools indicating hot, ambient and cool temperatures offer seamless sea view of Deep Bay, a perfect place to relax and refresh.

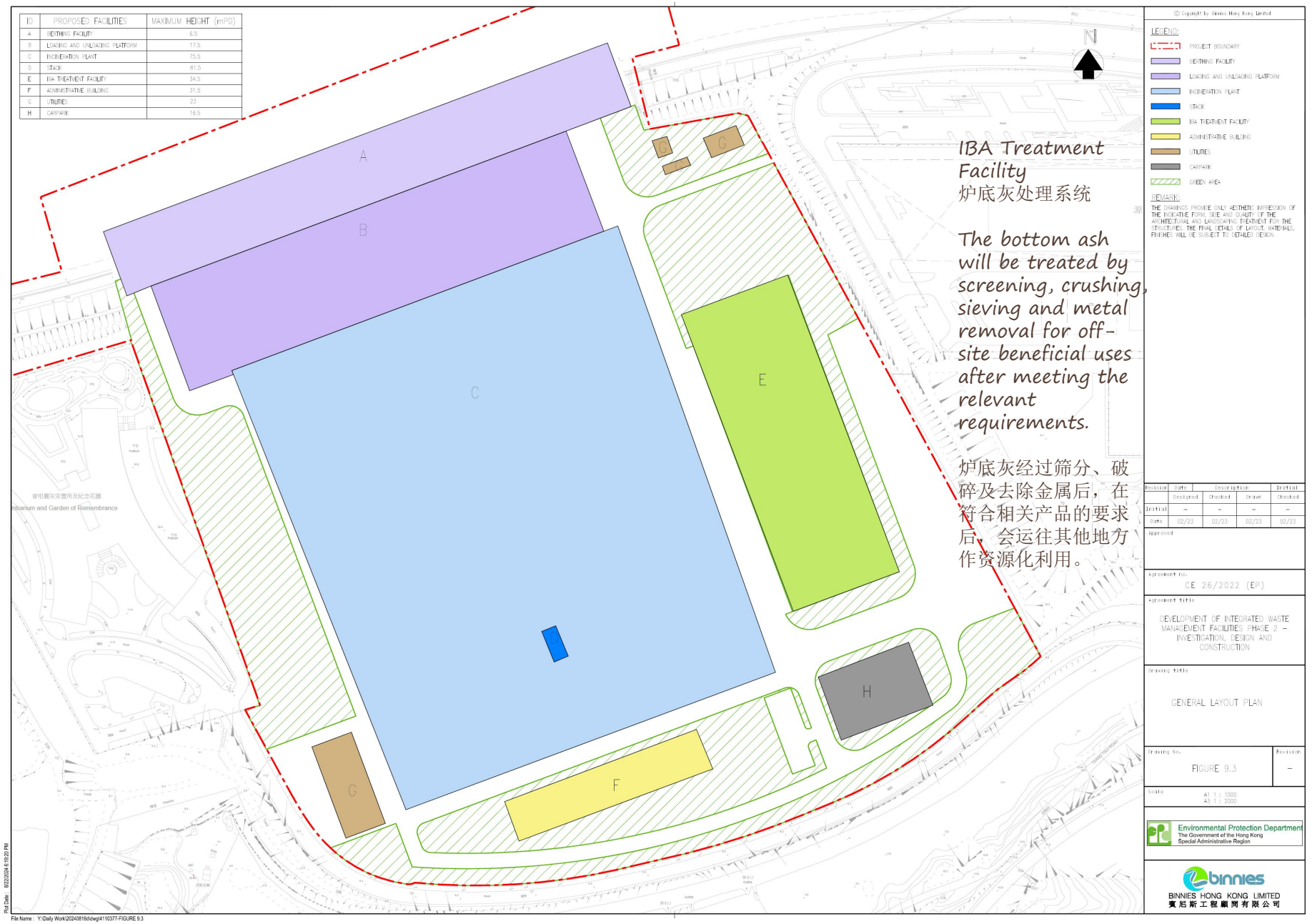
源 · 泉
焚化过程中产生的热能可以为设施内的水疗池水加热。置身热水、温水和冷水的水疗池内，可以眺望后海湾一望无际的海景，是舒缓和放松身心的最佳地点。

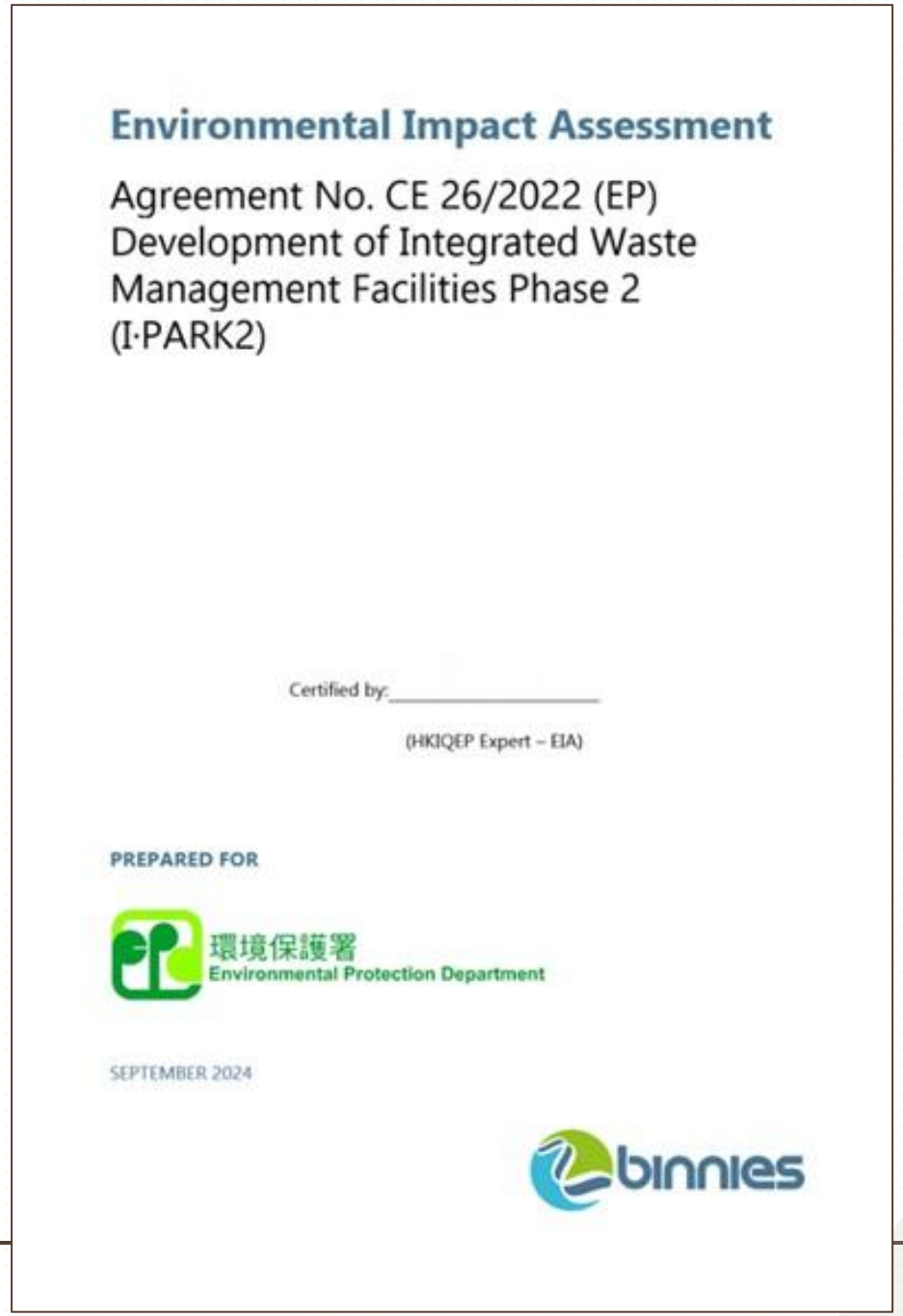
I.PARK2 will provide community facilities that combine environmental education, leisure and recreation elements.

Being in close proximity to the scenic spot of Lung Kwu Tan and Pak Nai, I.PARK2 can promote development of the area to create a synergy effect that benefits the local economy and tourism.

提供集环境教育、休闲和康乐于一身的小区设施，实践一址多用协同效应的理念，为市民提供崭新的康乐体验。

I·PARK2亦邻近龙鼓滩和白泥的旅游景点，可联动附近发展产生协同效应，带动当区经济及旅游业，吸引更多市民前往，为小区创造经济效益。


ID | PROPOSED FACILITIES | MAXIMUM HEIGHT (mPD)
A | BERTHING FACILITY | 6.5
B | LOADING AND UNLOADING PLATFORM | 17.5
C | INCINERATION PLANT | 75.5
D | STACK | 81.5
E | IBA TREATMENT FACILITY | 34.5
F | ADMINISTRATIVE BUILDING | 31.5
G | UTILITIES | 23
H | CARPARK | 16.5
IBA Treatment Facility
炉底灰处理系统
The bottom ash will be treated by screening, crushing, sieving and metal removal for off-site beneficial uses after meeting the relevant requirements.
炉底灰经过筛分、破碎及去除金属后，在符合相关产品的要求后，会运往其他地方作资源化利用。
LEGEND:
PROJECT BOUNDARY
BERTHING FACILITY
LOADING AND UNLOADING PLATFORM
INCINERATION PLANT
STACK
IBA TREATMENT FACILITY
ADMINISTRATIVE BUILDING
UTILITIES
CARPARK
GREEN AREA
REMARK:
THE DRAWINGS PROVIDE ONLY AESTHETIC IMPRESSION OF THE INDICATIVE FORM, SIZE AND QUALITY OF THE ARCHITECTURAL AND LANDSCAPING TREATMENT FOR THE STRUCTURES. THE FINAL DETAILS OF LAYOUT, MATERIALS, FINISHES WILL BE SUBJECT TO DETAILED DESIGN.
Agreement no.
CE 26/2022 (EP)
Agreement title
DEVELOPMENT OF INTEGRATED WASTE MANAGEMENT FACILITIES PHASE 2 – INVESTIGATION, DESIGN AND CONSTRUCTION
Drawing title
GENERAL LAYOUT PLAN
Drawing No.
FIGURE 9.3
Revision
–
Scale
A1 1 : 1000
A3 1 : 2000
Environmental Protection Department
The Government of the Hong Kong Special Administrative Region
BINNIES HONG KONG LIMITED
賓尼斯工程顧問有限公司



空气质素

Air Quality

水质

Water Quality

生态

Ecology

Air Quality 空气质素

Advanced Incineration Technology and Air Pollution Control System
先进的焚烧技术及空气污染控制系统

SNCR and SCR to reduce NOx
选择性非催化还原和选择性催化还原技术，以减低氮氧化物的排放

Dry alkaline sorbent to reduce acidic gases
干式碱性吸附剂，以减少酸性气体

Dry sorbent (activated carbon) with bag filter to reduce dioxin and metals
干式吸附剂（活性碳），结合袋式过滤器，以减少二恶英和金属

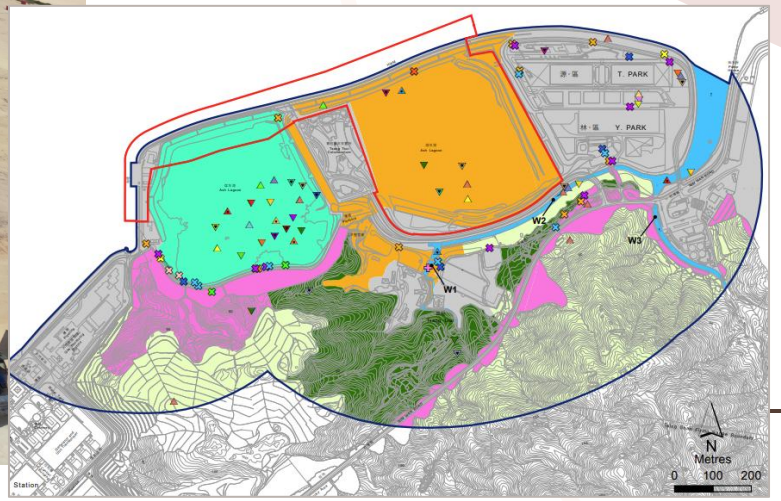
Bag filter(s) to reduce particulates
采用袋式过滤器以减少颗粒物

Stack Monitoring during the Incineration Process
进行烟囱监测

Project Site (工程项目工地): Wasteland (荒地), developed area(已发展土地) and ash lagoon(煤灰湖)

生境 Habitats

- 林地 Woodland
- 植林 Plantation
- 灌木林 Shrubland
- 已发展土地 Developed Area
- 荒地 Wasteland
- 煤灰湖 Ash Lagoon
- 水道 Watercourse



Air-cooled vs Seawater-cooling System
风冷系统 与 海水冷却系统

- Both are feasible 两者均为可行方案
- Air-cooled requires larger footprint 风冷需要较大的占地面积
- But no spent cooling water discharge 没有冷却水排放
- No water quality / marine ecological / fisheries impact 无水质 / 海洋生态 / 渔业影响
- ACE also recommends 环境咨询委员会亦建议

Engaging the Public for a Successful EIA Process
公众参与有助顺利完成环评程序

- Bring the Environmental Outcomes upfront 带出环境成果
- Public comments received during the EIA study brief application stage, addressed in the EIA 环境影响评估已考虑环评研究概要申请阶段时所收到的公众意见
- Among the public comments received, there are supportive view 收到的公众意见中，有表示支持
- ACE endorsed the EIA report 环咨会赞同环评报告
- Media Fact Sheet 传媒便览
- Community Liaison Group 社区联络小组
- Community Facilities in I.PARK2 社区设施

THANK YOU

谢谢

EIA documents for I.PARK2

I.PARK2环境影响评估文件

Link to Project EIA Information

项目环评资料连结