



(HKED Website)

Information Sheet on Hong Kong Environmental Database (HKED)

Introduction of HKED

- Environmental Assessment Division of the Environmental Protection Department (EPD), the authority under the Environmental Impact Assessment (EIA) Ordinance, has developed the **Hong Kong Environmental Database¹ (HKED)** (i.e. an enhanced analytical platform with the application of geographic information system (GIS) and 3-D visualization of environmental data), aiming at enhancing the effectiveness and quality of environmental assessment and planning in a smart way.

Key Features

- Launched in December 2022, the HKED is the first of its kind in Hong Kong encompassing the data related to environment and ecology, including findings and information from previously approved EIA reports, government departments and other academic researches for the use of stakeholders. It primarily consists of the following elements:-
 - (i) **Metadata Management** – The HKED hosts a wide range of environmental and ecological baseline data relevant to EIA studies. These includes data on air quality, traffic noise, water quality, hydrology, land contamination, habitat maps, fisheries, and simulated baseline information for the next few decades. As of January 2025, the HKED contains over 150 spatial datasets, providing comprehensive support for EIA studies. A brief summary of these datasets is provided in **Annex 1**.
 - (ii) **Analytical and Visualization Tools** – Designed to enhance the usability of its data, the HKED features a suit of analytical and visualization tools, enabling stakeholders to gain deeper insights into environmental and ecological data, facilitating better decision-making for EIA studies and other planning processes. More descriptions of these tools are provided in **Annex 2**.
 - (iii) **Modelling Tools** – The HKED offers online modeling tools to further enhance its functionality. These tools enable users to conduct environmental

¹ Hong Kong Environmental Database was previously known as Centralised Environmental Database.

assessments and scenario analyses directly on the platform, covering key areas such as air quality, traffic noise and construction noise. By integrating modeling capabilities, the HKED is capable of providing a seamless, efficient, and user-friendly experience for analyzing environmental data, supporting more informed decision-making for EIA studies.

Benefits of Using HKED

- The HKED enhances efficiency, quality and accessibility in environmental assessment and planning, bring benefits to the EIA stakeholders and the wider community:

(i) Access to verified data to enhance the quality of EIA reports

The data in the HKED is mainly verified and provided by the EPD or other relevant government departments, ensuring data quality and reliability. EIA consultants can directly search for and use existing datasets, such as the locations of sensitive receivers, water pollution load inventories and habitat information, for modeling and surveys, ensuring accurate data input during the assessment process, thereby improving the overall quality of EIA reports.

(ii) Shorten the EIA process by 3-4 Months

The HKED leverages smart technology and comprehensive data systems to support the preparation of EIA reports, helping EIA consultants save at least one month of baseline data collection time. Additionally, EIA consultants can directly download the data necessary for building assessment models, such as simulated baseline air quality data for the coming decades or the latest hydrodynamic and water quality models. This further reduces modeling and simulation time by 2 to 3 months, while improving the accuracy and efficiency of assessments.

(iii) Strengthen early-stage analysis to improve EIA Study Efficiency

The database provides preliminary environmental analysis and visualization tools such as 3D modeling, assisting project proponents and consultants in quickly understanding the potential environmental constraints of a project during the early planning stages through design drawings. It also facilitates the comparison of different design options, thereby identifying the design with minimal environmental impacts. The HKED includes additional modeling tools, such as online traffic noise and air quality assessment tools, further streamlining the EIA process and enhancing efficiency.

(iv) **Provide educational and research resources to promote environmental education**

The HKED serves as a valuable platform for academia and the public, fostering research, learning, and awareness of environmental protection issues. It promotes the popularization and deepening of environmental education.

Usage Overview and Future Development

- General environmental data in the database is publicly accessible, with approximately 2,000 visitors browsing the data each month on average. Advanced analytical tools, modeling tools, and technical datasets required for EIA studies are restricted to specific project proponents and their consultants who are pre-registered with the EPD. Over the past year, around 150 registered users have utilized the database's technical datasets and online tools to support research for more than 80 EIA and planning projects.
- The EPD will continue to update and enrich the database while exploring the integration of artificial intelligence (AI) technology to support EIA studies. In collaboration with the Hong Kong Generative AI Research Centre (HKGAI), the EPD plans to develop and incorporate a new AI application into the HKED, aiming to further enhance the efficiency of the EIA process and the quality of studies by combining the rich data in the database with large language models such as DeepSeek and HKGAI.

Technical Support and Enquiry

- The HKED is accessible (<https://hkcd.epd.gov.hk/>) on both computers and mobile devices using common web browser such as Chrome and FireFox. To provide the best browsing experience, it is recommended to open the HKED using computers.
- For registration, please complete the registration form (https://hkcd.epd.gov.hk/map/AppForm/HKED_Registration_Form.pdf) or scan the following QR code:



(HKED Registration Form)

- The EPD has also set up a one-stop service hotline to provide technical support and response to enquiries related to HKED. Details are as follows:

Tel: 2835 2630

Email: hked_helpdesk@epd.gov.hk

Annex 1 – Brief Summary of Datasets of HKED (as of March 2025)

Major Data Type	Description
General	<ul style="list-style-type: none"> District boundary of Hong Kong
Environmental Impact Assessment	<ul style="list-style-type: none"> Applications and sensitive areas under the EIA Ordinance Other relevant planning information including Outline Zoning Plans
Air	<ul style="list-style-type: none"> PATH² background concentrations for air quality impact assessment Air pollution sources inventory
Noise	<ul style="list-style-type: none"> GIS information for noise impact assessment
Water	<ul style="list-style-type: none"> Pollution load inventory for water quality modelling Water sensitive receivers*
Ecology	<ul style="list-style-type: none"> Habitat maps Ecological baseline survey information*
Fisheries	<ul style="list-style-type: none"> Port survey results
Hazard	<ul style="list-style-type: none"> Locations of PHIs and associated consultation zones*
Waste and land contamination	<ul style="list-style-type: none"> Geochemical atlas of areas with exceedance of RBRG levels*

* For registered users only.


² "Pollutants in the Atmosphere and their Transport over Hong Kong" ("PATH")

Annex 2 – Analytical and Visualization Tools of HKED

Interactive Dashboard — Environmental Monitoring

- The HKED features interactive dashboards that allows users to track, monitor, and visualize environmental data with filters. For example, users can access and analyze marine mammal monitoring records, water quality monitoring results, and other key environmental datasets, enabling better oversight and decision-making.



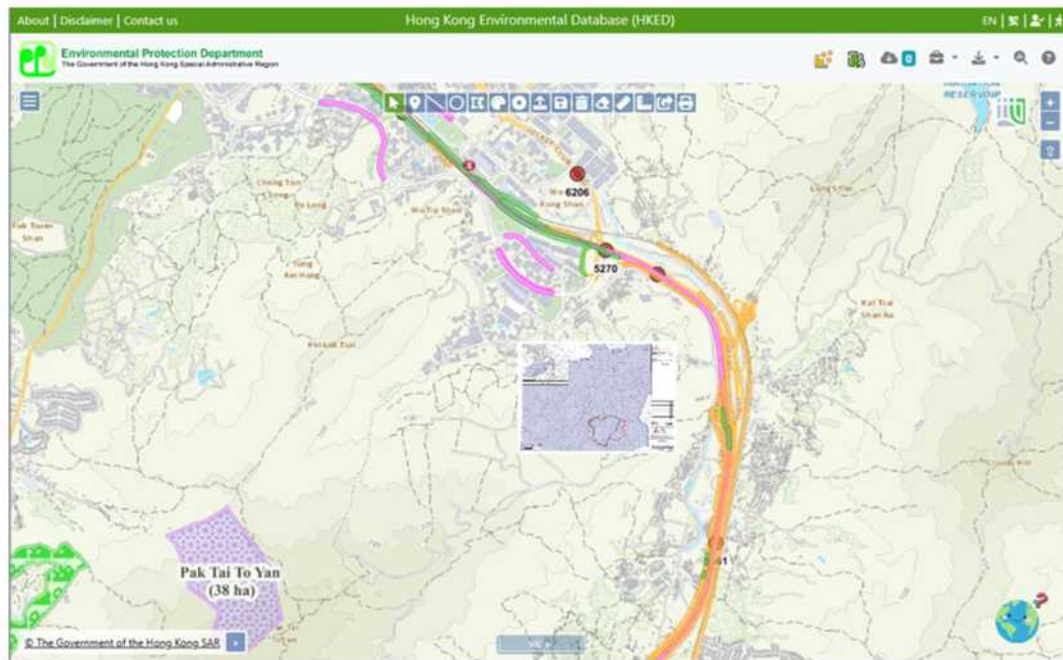
 Dashboard for marine mammal monitoring

“Workbench” — Geo-Referencing and Data Integration

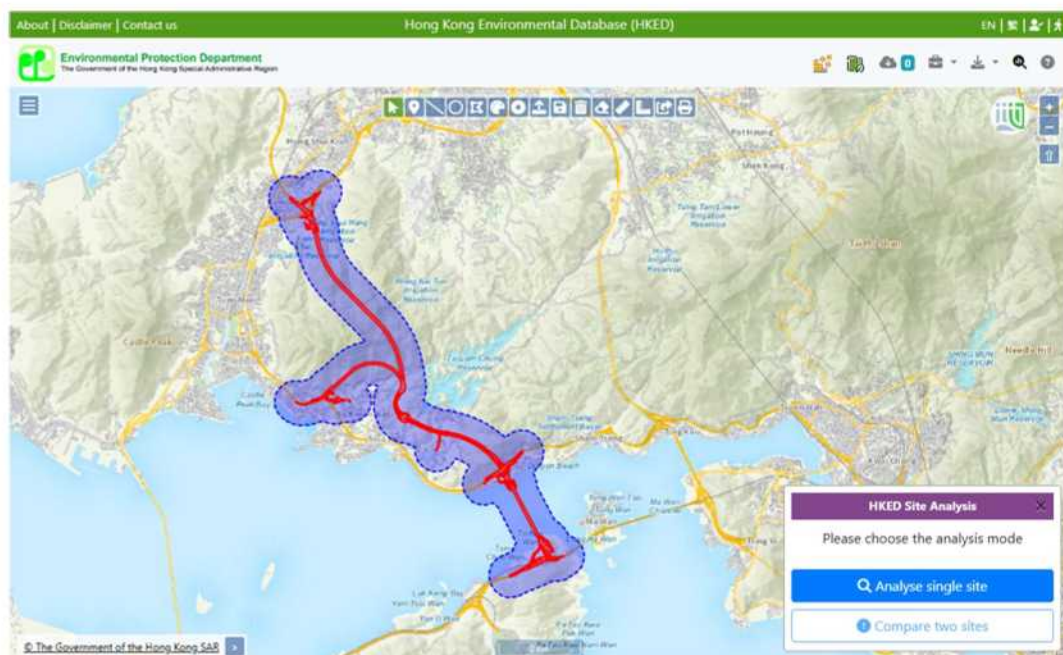
- The “Workbench” function enables users to geo-reference and upload design drawings directly to the HKED platform. By overlaying relevant data layers, users can easily identify potential environmental constraints related to their projects, facilitating early-stage planning and environmental assessment.

“Site Analysis” — Quick Environmental Assessments

- With the “Site Analysis” function, users can upload digital project boundaries, define buffer areas, and instantly identify environmental baseline information and potential constraints within the project and buffer zones. This feature allows project proponents to quickly compare different design options during early planning stages and select project designs with minimal environmental impacts.



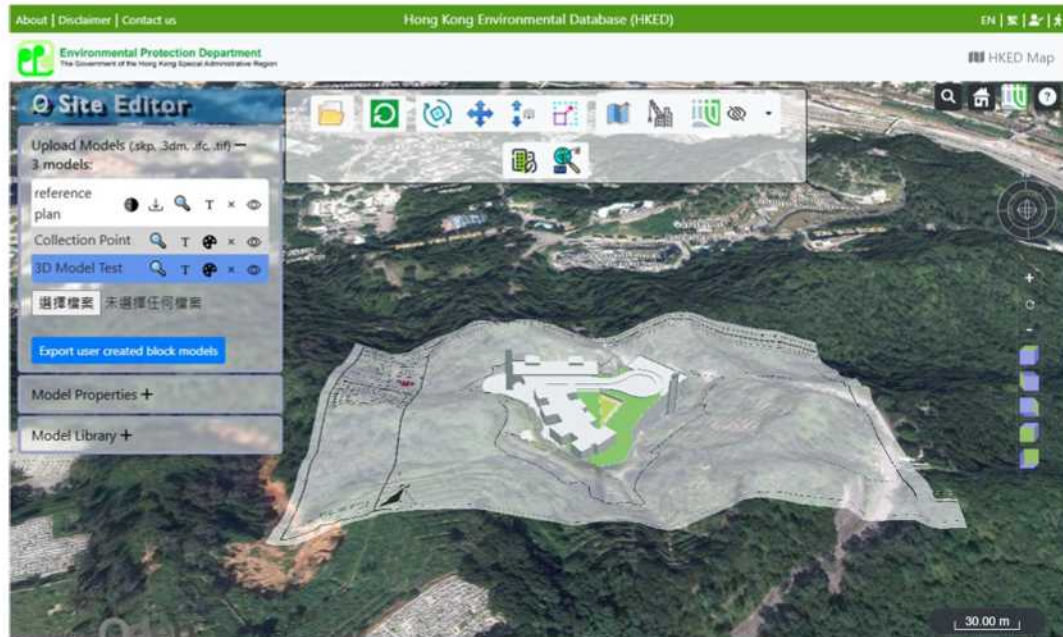
Overlay design drawing with “Workbench”



Identify potential environmental constraints with “Site Analysis”

“Site Editor” — 3D Modeling

- The “Site Editor” function enables users to transform 2D design drawings into 3D models quickly and efficiently. This helps stakeholders visualize project designs in a more tangible and intuitive way, improving communication and understanding of the project.



Build 3D model with “Site Editor”

Advanced 3D Visualization Tool

- The “3D Visualization” tool integrates spatial environmental data, 3D project models, landscapes, and photo-realistic elements into a single platform. This creates a highly detailed and realistic visualization of the project and its surrounding environment, supporting informed decision-making, enhances public outreach, and fosters better communication with stakeholders.



Realistic 3D visualization of project design

A Seamless, One-Stop Platform

- The HKED provides a comprehensive, one-stop solution for environmental assessment and planning. Users can seamlessly transition from identifying environmental constraints on a 2D map, to comparing and selecting design option with minimal environmental impact, to creating 3D visualizations of their projects and surrounding landscapes. For more details, please visit:

