

**For information
on 23 June 2014**

Legislative Council Panel on Economic Development

**Updates on the Three-Runway System Project
at the Hong Kong International Airport**

The Airport Authority Hong Kong (AAHK) has prepared a paper at Annex to update the Panel on the progress of the Three-Runway System (3RS) project at the Hong Kong International Airport (HKIA).

2. The Government accords top priority to fostering Hong Kong's long-term economic development and is committed to strengthening Hong Kong's position as an international and regional aviation hub which contributes to the development in various sectors particularly the aviation, logistics and tourism sectors. The existing two-runway system at the airport is expected to reach its maximum capacity within the next few years. Various expansion plans are being carried out at HKIA (such as the Midfield Development Project to provide additional parking stands) to incrementally and temporarily provide more capacity to the HKIA. Further, the Government and AAHK are working together with the airlines to enable further growth in passenger and cargo volume at the HKIA and maximize the capacity of the existing two-runway system. These initiatives, however, will only bring marginal relief to the capacity constraint, and the timely implementation of the 3RS is still essential to cater for Hong Kong's long-term air traffic demand and maintain the competitiveness of HKIA amidst intensifying competition from other airports in the region.

3. The Government gave in-principle approval to AAHK in March 2012 to adopt for planning purpose the option of expanding HKIA into a 3RS. Since then, AAHK has embarked on the necessary planning work, namely, the statutory environmental impact assessment (EIA), the associated design details and the financial arrangements. AAHK has now completed the EIA Report which will be made available for public inspection for 30 days in accordance with the EIA Ordinance starting from 20 June 2014. In parallel, AAHK will continue to make its best efforts to accomplish the remaining planning work within 2014. AAHK is expected to report its findings to the Government upon the completion of the planning work for a final decision to be made on whether and how

the 3RS project should be implemented. Meanwhile, the Government will continue to assist and work closely with AAHK to take forward the 3RS planning work. The Panel will be kept informed of progress in a timely manner.

4. Both the Government and AAHK attach importance to addressing the environmental concerns arising from the operation of HKIA. Commitments as included in the EIA Report aside for alleviating the impacts relating to the 3RS project, AAHK will also implement measures to improve the environment particularly those relating to air quality and aircraft noise in the interim. Some of these include –

- (a) mandating the use of fixed ground power and pre-conditioned air systems by all airlines at frontal stands by the end of 2014 to reduce aircraft emissions;
- (b) replacing the saloon vehicle fleet on airside with electric vehicles by end of 2017;
- (c) installing a total of 290 charging stations for electric vehicles and electric ground support equipment by end of 2018; and
- (d) disallowing the landing and takeoff of aircrafts which are marginally compliant with the noise standards in Chapter 3 of Volume I, Part II of Annex 16 to the Convention on International Civil Aviation¹ at night (i.e. between 11:00 pm and 7:00 am the following day) from end of March 2014 and extending this measure to cover the whole day from late October 2014 to reduce aircraft noise.

Advice Sought

5. Members are invited to note the content of the paper.

Transport and Housing Bureau June 2014

¹ The Chapter sets out the noise standards adopted by the International Civil Aviation Organization in respect of aircraft, which have to be complied with by all aircraft landing and taking off in Hong Kong.

Updates on the Three-Runway System Project at the Hong Kong International Airport

Purpose

This paper provides information on the progress of the planning work in relation to the Three-Runway System (3RS) Project.

Background

2. Since opening in 1998, Hong Kong International Airport (HKIA) has experienced tremendous traffic growth. HKIA is now the world's busiest cargo airport, and the third largest international passenger airport. In 2013, HKIA handled about 60 million passengers, 4.13 million tonnes of cargo, and 372 000 air traffic movements; all doubled the traffic of that in 1998.

3. In terms of demand, the latest traffic forecasts show that by 2030, annual demand for passenger traffic will reach around 102.3 million, cargo at 8.9 million tonnes, and air traffic movements at 607 000. According to the latest projection, it is likely that the existing two runways would reach their full capacity of 420 000 air traffic movements per annum in a few years' time. Faster-than-forecast air traffic demand at HKIA aside, Hong Kong is facing intensifying competition from neighbouring airports in light of their committed / planned airport expansion plans. While various facilities upgrading / expansion plans are underway to meet the medium-term demand, there is an urgent need for 3RS to meet the long-term air traffic demand at HKIA and to maintain Hong Kong's status as an important regional and international aviation hub and economic competitiveness.

4. With the Executive Council's in-principle approval given in March 2012 for the Airport Authority Hong Kong (AAHK) to adopt 3RS as the future development option for HKIA for planning purpose, AAHK has proceeded with the relevant planning work, namely, the statutory environmental impact assessment (EIA), the associated design details and the financial arrangements. The AAHK is expected to report to the Government after the completion of the planning work and a final decision on whether to proceed with the implementation of the 3RS will

be made.

5. The 3RS project broadly comprises the following major works:

- (a) formation of approximately 650 hectares of land;
- (b) construction of the Third Runway and the Third Runway Concourse (TRC);
- (c) construction of apron, taxiways, areas for airport support facilities and utilities;
- (d) expansion of Terminal 2 (T2) and construction of associated road network;
- (e) provision of a new Automated People Mover System and maintenance depot; and
- (f) provision of a new Baggage Handling System to serve T2 and TRC.

6. The layout of the 3RS is at Appendix A.

Tentative Programme for the 3RS Project

7. AAHK submitted the EIA Report on 3RS to Environmental Protection Department on 17 April 2014 and the Report will be made available for public inspection between mid-June 2014 and mid-July 2014 for 30 days in accordance with the EIA Ordinance. Thereafter, the Advisory Council on the Environment will be consulted over a period of 60 days. If everything goes well, AAHK expects that the EIA process could complete within 2014. Subject to the necessary Government approvals, the completion of all statutory procedures and the availability of the necessary resources, the current plan is to commence construction of the 3RS in 2016 for commissioning in 2023 to provide capacity sufficient to meet traffic demand at least up to 2030.

Statutory EIA

8. The 3RS EIA Study is conducted in a comprehensive and professional manner, covering 12 environmental aspects including aircraft noise, air quality, marine ecology and fisheries, Chinese White Dolphins (CWD) and health impacts arising from aircraft noise and emission. AAHK has engaged a host of local and overseas consultants and experts to conduct the EIA. With the implementation of various mitigation measures as committed in the EIA Report, all environmental concerns and potential impacts arising from 3RS project will be mitigated, compensated or minimized in full compliance with the Study Brief requirements.

9. The key mitigation and enhancement commitments as set out in the EIA Report include:

9.1 Aircraft noise

- (a) Putting South Runway on standby mode at night, where possible, to minimise aircraft noise impact on North Lantau. With 3RS in place, noise impact on North Lantau will be significantly improved and no new noise sensitive receivers will be affected;
- (b) Implementing a preferential runway use programme when wind conditions allow such that more flights would fly over the sea instead of over the urban areas at night time; and
- (c) AAHK will consider implementing incentive / charging scheme to encourage airlines switching to quieter aircraft.

9.2 Air quality

- (a) Undertaking measures to minimise potential air quality impact, including the ban of use of Auxiliary Power Units for all aircraft frontal stands by the end of 2014 and the replacement of all saloon vehicles to electric vehicles by the end of 2017; and
- (b) Providing the cleanest diesel and gasoline at the airfield.

9.3 Marine ecology and fisheries, and CWD

- (a) The use of non-dredge method for land formation; including the adoption of deep cement mixing for improving ground conditions for the contaminated mud pit area;
- (b) designation of approximately 2 400 hectares of a new marine park to connect HKIA Approach Areas and the existing and planned marine parks at Sha Chau / Lung Kwu Chau (SCLKC) and Brothers Island. The total combined area of marine protected area will be around 5 200 hectares in Hong Kong western waters linking major habitats of CWD;
- (c) Route diversion of high speed ferries (HSFs) operating at SkyPier to travel along Urmston Road instead. In addition, a speed limit of 15 knot would be observed by these SkyPier HSFs if they are navigating close to the waters north of SCLKC Marine Park; and
- (d) The implementation of the Fisheries Enhancement Strategy with associated funding to assist fishermen in better coping with changes to their fishing activities resulting from 3RS project and to enhance fisheries resources in Hong Kong western waters. A Marine Ecology Enhancement Strategy with associated funding is also proposed to focus specifically on enhancing marine ecology (including health and survivability of the CWD) in North Lantau waters.

Some other major mitigation measures as committed in the EIA Report are set out in Appendix B.

Communication and Engagement Programme

10. AAHK has been implementing an extensive communication and engagement plan to engage relevant stakeholder groups and lobby the general support for the 3RS project since 2008 when AAHK started working on the Hong Kong International Airport Master Plan 2030 (MP2030). Over the years particularly during the EIA period, AAHK has reached out to promote the 3RS project and conducted regular 3RS briefings as well as airport visits for business and aviation sectors, community leaders, resident groups, professional and industry organisations, Members of the Legislative and District Councils, green

groups, school and academic sector and the media.

11. In order to gauge views on the EIA, AAHK has established five Community Liaison Groups covering the five districts more affected by HKIA operation (i.e. Islands, Tuen Mun, Tsuen Wan, Kwai Tsing and Shatin) to regularly meet with respective District Councillors and community / resident leaders to update them on AAHK's work on the EIA and to address issues of their concern. AAHK has also set up four Technical Briefing Groups comprising members of relevant professionals, experts and academia to establish dialogue and seek advice on EIA-specific issues covering aircraft noise, air quality, marine ecology and fisheries, and CWD. Regular briefings have also been arranged for green groups to update them on the EIA progress. All these activities have proved to be useful and effective in engaging the views and concerns of the various stakeholders. In addition to the above, two sessions of public forum were held in August 2013 to update the general public on the preliminary findings of the EIA and gauge their views. The public forum attracted some 800 participants and the majority of them expressed support for the 3RS project. Details of the engagement activities are at Appendix C.

12. AAHK will continue to proactively engage the stakeholders to build understanding and address their concerns in relation to the 3RS project during the EIA process. Among the host of ongoing engagement activities, a public forum will be held on 28 June 2014 to update the public on the 3RS project as well as the findings of the EIA Report. Meanwhile, AAHK has also set up a hotline and a dedicated website¹ in regard to the EIA Report. AAHK will also make available copies of the full EIA Report at the District Office of the five districts more affected by HKIA operation (namely Islands, Tsuen Wan, Kwai Tsing, Tuen Mun and Shatin) for public reference. A few sets of the EIA Report will also be kept at the Library of LegCo for Members' reference.

Financing Arrangement

13. According to MP2030, the cost of 3RS was estimated to be around \$136.2 billion in money-of-the-day prices. AAHK has appointed an independent financial adviser to conduct a financial study to recommend viable financial arrangement options for the 3RS project. The study is aimed for completion by end 2014.

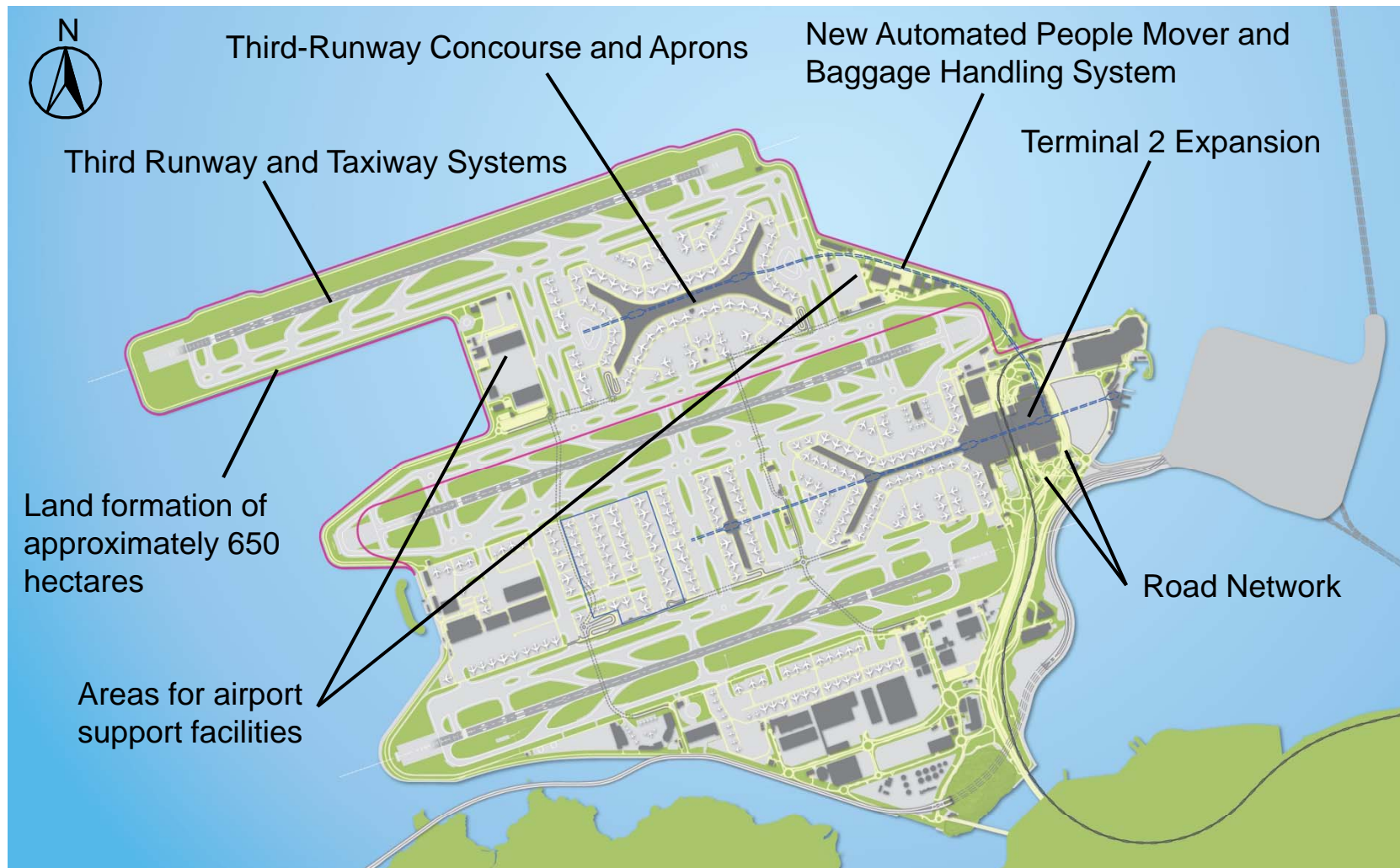
¹ The dedicated website for 3RS EIA is at http://www.threerunwaysystem.com/en/Commitment/Environmental_impact_assessment.aspx

Way Forward

14. Upon completion of the EIA process and the financial study by end 2014, AAHK will report to the Government, together with recommendations on the financial arrangement for the 3RS project, for a decision on whether and how the project should be taken forward.

**Airport Authority Hong Kong
June 2014**

Layout of Three-Runway System



June 2014

**Other Major Mitigation Measures Committed in
Three-Runway System Environmental Impact Assessment Report**

Aircraft noise

- (1) Preferential use of the new arrival flight path over water from West Lamma Channel (i.e. Track 6) during night-time to minimize noise impact to more densely populated areas
- (2) Proposing noise mitigation measure in the form of a noise enclosure to alleviate the noise impacts from aircraft engine run-up facilities

Marine ecology

- (1) Establishment of a 24-hour Dolphin Exclusion Zone around active reclamation works area during construction period to ensure cessation of works if dolphins are sighted inside the works area
- (2) Acoustic decoupling of air compressors and other noisy equipment on barges via rubber mounting to minimize disturbance to CWDs
- (3) Employment of horizontal directional drilling (HDD) method and water jetting method for placement of pipelines and undersea cables respectively to minimize disturbance to CWDs and other marine ecological resources

Water quality

- (1) Deployment of double layer silt curtains around marine construction works activities to minimize suspended solids release into adjacent waters

Terrestrial ecology

- (1) Protection of breeding/roosting ardeids (e.g. egrets) at Sheung Sha Chau by scheduling all HDD construction works outside the breeding season and not allowing night-time construction work during all seasons

Waste management

- (1) Reuse of materials such as all rock armour demolished from the existing northern seawall in 3RS reclamation

Landscape and visual impact

- (1) Planting of native coastal plants along the new land formation edge
- (2) Installation of lighting units in a directional manner to minimize unnecessary light spill and glare
- (3) Provision of vertical greening, green roofs, road verge planting and peripheral screen planting as far as possible at locations within the project site boundary

Airport Authority Hong Kong Stakeholder Engagement Activities

Overview

From late 2008 to mid-June 2014, Airport Authority Hong Kong (AAHK) organised and took part in a total of 1 046 engagement activities with a wide spectrum of stakeholder groups to explain the airport's long-term development plan. Such activities included meetings, briefings, seminars, discussion forums, exhibitions and airport visits. AAHK has also kept stakeholders, including the general public, informed through a number of communication channels including a dedicated website, exhibitions, videos, mass media and printed materials.

2. During the Environmental Impact Assessment (EIA) process, AAHK has intensified its efforts to engage stakeholders in order to foster better mutual understanding, address concerns, and incorporate opinions into the final EIA report as much as practically feasible. Of the 1 046 engagement activities completed since AAHK started developing Hong Kong International Airport Master Plan 2030 (MP2030) at the end of 2008, 570 were carried out during the EIA process.

3. Among the various engagement initiatives that were held during the EIA phase, AAHK has set up four Technical Briefing Groups (TBGs) and five Community Liaison Groups (CLGs) (details are set out in paragraphs 6 and 7). In addition, AAHK has organised public forums, one-on-one and roundtable meetings with green groups, media workshops, and airport visits and briefings for students, residents, professional bodies and opinion leaders.

4. Important stakeholder groups included:

- a. Universities, secondary, primary schools and education sector
- b. Political parties, district councils and resident groups
- c. Professional bodies, industry and business associations, business partners
- d. Media
- e. Green groups
- f. Academia, think tanks and opinion leaders
- g. Fishermen groups
- h. Consultative bodies
- i. General public

Key Stakeholders and Activities during EIA Study Period

Setting up of dedicated engagement platforms

5. Three focus groups comprising stakeholders from various background were set up to facilitate exchanges and provide updates on the progress of the EIA. AAHK also held regular meetings for these groups, which included:

- a. TBGs
- b. CLGs
- c. Airport Infrastructure, Planning and Development Users Working Group

Technical Briefing Groups

6. Four TBGs were formed, comprising a total of 28 members from industry and academia with technical expertise in four specific environmental aspects: noise, air quality, marine ecology (including Chinese White Dolphin) and fisheries. Three rounds of TBG meetings were held during the EIA period. Field trips and airport visits on environmental aspects and airport operations were also arranged. The members of the TBGs were briefed on the major progress of the EIA in related aspects and consulted on views/advice on all practicable mitigation measures to address the relevant environmental concerns. The TBG meeting materials can be found at:

<http://www.threerunwaysystem.com/en/Engagement/Meetings.aspx>.

Community Liaison Groups

7. CLGs serve as interactive platforms for District Councillors and other community leaders to exchange views on the airport's development, plus a range of environmental subjects including aircraft noise and air quality which are of particular concerns to the community. Five CLGs have been formed for HKIA's neighbouring districts: Islands, Kwai Tsing, Shatin, Tsuen Wan and Tuen Mun. All relevant District Council members, and members from the relevant Area Committees / resident committees were invited to join the CLGs which comprised a total of over 150 members. Three rounds of CLG meetings were held to explain various aspects of the EIA and to listen to members' views directly. In addition, airport visits were organised to enhance members' understanding on airport operations and environmental efforts. During these visits, members had the opportunity to tour operations that are of

their particular concern, e.g. checking out aircraft noise level at the runways with noise measurement equipment. The CLG meeting materials can be found at:

<http://www.threerunwaysystem.com/en/Engagement/Meetings.aspx>.

Airport Infrastructure, Planning and Development (AIPD) Users Working Group

8. The group comprises working-level representatives of major relevant airport business partners, such as airlines, ground services, cargo operators, caterers, marine trade operators, etc.. Its meetings are designed to provide a forum for updates and discussions on airport planning and development, including the progress of the 3RS project and EIA. Three meetings were held during the EIA period.

Public Forums and Exhibition

9. In the course of the EIA study, AAHK held an exhibition and two public forum sessions to update the public on the progress of the EIA and the mitigation measures being considered. These were held at the Hong Kong Convention and Exhibition Centre in early August 2013. The exhibition and the public forum were opened for participation by the general public.

10. Approximately 1 000 visitors attended the exhibition from 1 to 4 August 2013, while some 800 participants attended the forum on 2 and 3 August 2013. The exhibition featured assessment methodologies, preliminary findings and mitigation directions for the key environmental aspects, plus information relating to all 12 environmental aspects specified in the Study Brief. The majority of the participants who spoke at the forum supported the 3RS project.

Media briefings

11. Nine media workshops and one press conference were organised to enhance journalists' understanding of the latest progress on the EIA and 3RS, in addition to over 30 media interviews, meetings and airport visits. AAHK also answered 27 enquiries related to the EIA and the 3RS project.

Green group briefings

12. Six roundtable meetings were held to explain the methodologies of various aspects of the EIA studies, their preliminary findings and potential mitigation measures, and to facilitate the exchange of views about the environmental issues related to the project. Individual and small group briefings were also arranged. These meetings enabled AAHK to incorporate views from the green groups during the study as much as practically feasible.

Fishermen group briefings

13. AAHK places utmost importance on the livelihoods of fishermen, who work in the surrounding waters of HKIA. Two briefings were held with the Hong Kong Fishermen Consortium and Hong Kong Fishery Alliance to update the fishermen groups on the progress of the EIA studies, and over 200 fishermen representatives attended in total. Another nine meetings with key fishermen representatives were also arranged.

Community briefings and airport visits

14. Talks and airport visits were arranged for approximately 1 100 members from 20 area committees and 29 resident groups living along the flight paths, including rural committees, owners' committees, incorporated owners and mutual aid committees. During these visits, AAHK provided the most current information about HKIA's operations, green initiatives and future development, as well as the progress of the EIA. Sessions where participants could safely experience aircraft noise were also arranged.

15. Two ongoing exhibitions at Terminal 1 and HKIA Tower, AAHK's office tower, were opened in October 2012. The exhibitions highlight HKIA's economic contributions, the survey results of MP2030, the 3RS development plan, the EIA process, the environmental aspects relating to the 3RS, and HKIA's green efforts.

Briefings for business partners and professional bodies

16. AAHK arranged 72 seminars, meetings and airport visits for approximately 3 100 participants from business chambers, industry associations, business partner groups and professional bodies to explain the airport's development plans and operations. During these sessions the

Airport Authority was also able to collect views from professionals working in areas such as engineering, aviation, environmental impact and logistics.

Workers' Unions

17. Five rounds of meetings were arranged with union representatives to listen to their views.

Other public engagement

18. To enhance students' understanding of the importance of our airport's development and economic growth of Hong Kong, AAHK arranged 233 briefings and airport visits for universities, secondary school and primary schools. AAHK also had 31 meetings with different academia, think tanks and opinion leaders to exchange views on the airport's operations, development plans as well as environmental and economic impacts on 3RS.

19. The table below summarises the key stakeholder engagement activities conducted by AAHK:

Completed activities				
	Pre-PCE (17.11.2008 – 1.6.2011)	PCE* (2.6.2011 – 2.9.2011)	Before start of EIA (September 2011 – May 2012)	Start of EIA process – 16.6.2014
	173	194	109	570
Total	1 046			

(* PCE – 3-month Public Consultation Exercise of MP2030

List of Stakeholder Engagement Activities

Stakeholder	Start of EIA process – 16.6.2014
Universities, secondary and primary schools, education sector	234
Political parties, district councils, resident groups	128
Professional bodies, industry and business association and business partners	72

Stakeholder	Start of EIA process – 16.6.2014
Media	41
Green groups	31
Academia, think tanks and opinion leaders	29
Technical briefing groups	12
Fisherman groups	11
Consultative bodies	8
General public	4
Total	570