

Environmental and Social Data Sheet

Overview

Project Name:	NEW HERAKLION INTERNATIONAL AIRPORT PPP
Project Number:	20140625
Country:	Greece
Project Description:	The project consists of the design, financing, construction, operation and maintenance of the New Heraklion International Airport at Kasteli on the island of Crete under on a 35-year Concession Agreement. The project also includes the construction of the landside access in the form of an 18km dual-lane motorway and a 6km three-lane road, which will be handed over after construction to the State. The existing civil airport in downtown Heraklion will be closed when the new airport becomes operational and the area will be redeveloped for other uses.
EIA required:	Yes
Project included in Carbon Footprint Exercise ¹ :	Yes

Environmental and Social Assessment

Project Background

Heraklion Airport (HER) is the most important of the three civilian airports in Crete. It is the second busiest airport in Greece after Athens and has witnessed sustained traffic growth since 2012, reaching 8.1 million passengers in 2018. It faces heavy congestion at peak times and the Greek Government decided to build a greenfield airport close to Kasteli to be expanded. The chosen solution involves the airport's relocation.

The project consists of the design, financing, construction, operation and maintenance of the New Heraklion International Airport at Kasteli on the island of Crete. The project also includes the construction of the landside access in the form of an 18km four-lane motorway (two lanes in each direction with a Jersey barrier median) and a 6km two-lane road, which will be handed over after construction to the State. The existing civil airport in downtown Heraklion will be closed when the new airport becomes operational and the area will be redeveloped for other uses. The redevelopment is also part of the Bank's project.

The 35-year concession is a Public Private Partnership named International Airport of Heraklion Crete S.A. (IAHC). The Greek State has a 45.9% share in IAHC, GEK Terna 32.6% and GMR Airports 21.6%. GEK Terna is a large Greek conglomerate, listed on the Athens Stock Exchange. Its construction branch, Terna, is one of the leading contractors in Greece. GMR Airports is an Indian airport operator that handles above 90 million passengers per year in the airports under its management.

¹ Only projects that meet the scope of the Pilot Exercise, as defined in the EIB draft Carbon Footprint Methodologies, are included, provided estimated emissions exceed the methodology thresholds: above 20,000 tons CO₂e/year absolute (gross) or 20,000 tons CO₂e/year relative (net) – both increases and savings.

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Environmental Assessment

The project falls under Annex I of the EIA Directive.

The Competent Authority responsible for the environmental permitting of this project is the Greek Ministry of Environment and Energy. It has planning approval authority and is responsible for enforcing the national environmental legislation and for environmental decisions, inter alia by co-ordinating legal requirements with other authorities.

A full Environmental Impact Assessment (EIA) study for the new airport in Kasteli was carried out in 2009 and includes a separate study for the road access. The EIA was approved through the award of an Environmental Terms Approval (ETA) by the Competent Authority through a Joint Ministerial Decision under ref. number oik.143779/28-08-2009 on the approval of the *Environmental Terms for Kasteli New Airport in Irakleion Prefecture and its road connection to Crete North Road Axis and Irakleio – Martha Road*.

The EIA identifies the closest Natura 2000 Network sites (comprising both Habitats and Birds Directives). These are located about 5 km to the East of the Kasteli site. Minimal impact is expected as these sites are located in mountain regions and will not be overflowed. The closest Natura 2000 site that is aligned with the runway orientation is located about 20 km to the south, also in a mountain site. Nonetheless, a declaration that these protected sites will not be affected will be requested from the Competent Authority. The scope will include both the physical infrastructure as well as the air navigation approach routes.

Regarding the Water Framework Directive the project is not expected to reduce the quality of the water or groundwater of the site of the new airport and the access roads, provided that the mitigation measures included in the EIA are implemented.

The ETA is valid until 31st December 2019 and its renewal process by the preferred bidder is already underway. In this context, the preferred bidder submitted an EIA in July 2017 for the extension of the existing ETA awarded in 2009. The Competent Authority has concluded that no public consultation is needed for the amendment of the existing ETA.

The airport construction is expected to begin in late 2019 and take five years, after which the current airport will be closed and the area redeveloped for other uses, including both the civilian and military sites.

The new airport will increase the operational capacity from the current 5 million passengers per annum (mppa) to about 10 mppa. Most importantly, it will provide an adequate comfort to passengers during peak times. The capacity of the airport at opening day is sufficient to accommodate demand until the late 2020's, according to the Promoters' traffic forecast. The ultimate capacity of the airport is in excess of 15 mppa and will be sufficient to accommodate demand until the end of the concession in 2054.

Environmental impacts

The implementation of the project implies impacts during construction and during operation. Construction impacts of the project are significant in magnitude, localized, temporary and can be to some extent mitigated. In this context, five types of impacts have been identified: air

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emissions, ground emissions, noise emissions, treatment and disposal of construction materials and handling and usage of equipment.

A number of mitigation measures have been put forward in the EIA such as: i) drafting of an Environmental and Social Management Plan (ESMP), that will detail the measures to minimise the impacts during construction and that will be monitored independently; ii) the management and correct transport and treatment of excavated materials, aggregates and construction material within restricted sites in order to avoid dust formation, spillage and damage to the existing road networks; iii) implementation and monitoring of Health and Safety regulations within the site for all workers and equipment (including subcontractors). Due to its localized nature, most of the impacts of the project are restricted to the site of the new airport and to the future road accesses. These areas will not be accessible to the public at large.

The impacts during operation are significant in magnitude, localized, permanent and partially mitigable. In this context, four types of impacts have been identified: air emissions, ground emissions, noise emissions and impacts from operations. The overall impact is of significant magnitude as it will affect the surrounding areas of the new airport. Similarly, to construction impacts, operational impacts will occur almost exclusively within the airport site in airside areas.

During operations a number of mitigation measures can be put in place to minimise the impact of the noise, the most important impact identified. The noise footprint from airport activities, including aircraft and land-based activities will be monitored on a regular basis. Monitoring will be carried out through a system consisting of fixed and mobile measuring stations with a minimum of one fixed and two mobile stations. Noise measurements will be made available to the public and a study on noise mitigation measures will be published within 12 months of start of operations. The outcome of the monitoring will determine what operational mitigation measures are to be implemented. Amongst the noise mitigation measures with wider implementation in the aviation industry are: continuous descent approach, one engine taxiing, landing with displaced runway threshold, etc..

In general terms, the positive impact over the city of Heraklion, including the expected redevelopment of the site of the old airport, where about 170,000 people live, is likely to offset the negative impact in the Kasteli area. There are currently no noise monitoring stations at the current airport site. Nonetheless between the years 2013 – 2015, seventeen Strategic Noise Maps (SNMs) & relevant Noise Action Plans (NAPs) were developed for 17 agglomerations in Greece including Heraklion.

Heraklion's noise map shows that the "*population exposed per aircraft noise index*" in downtown Heraklion is as follows: noise contour above 60 decibels (A) at night L_{night} affects 2,293 households corresponding to 9,137 inhabitants. During the day the noise contour L_{den} above 70dB(A) affects 1,357 households and 5,511 inhabitants. These are the noise limits set out in the Greek legislation and the EU directive relating to the assessment and management of environmental noise. For comparison, the village of Kasteli has 1,491 inhabitants and the municipal unit, which includes the city of Kasteli and all neighbouring villages, has a population of 4,753 inhabitants, according to the 2011 census.

EIB Carbon Footprint Exercise

The estimation of the carbon footprint follows the methodology defined in the EIB Project Carbon Footprint Methodologies (Version 11, December 2018) and is therefore subject to the specific considerations and caveats included in this document.

In line with this methodology, the absolute and relative emissions of the project are as follows:

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- i) absolute emissions: 37,500 t CO₂e/year
- ii) relative emissions: 7,907 t CO₂e/year

In following with standard carbon footprinting methodology, the measure of relative emissions excludes the effects of any carbon offsetting schemes that may apply to the project. In this case, the schemes that most commonly apply are the EU Emissions Trading Scheme (ETS) and the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) of the United Nations (UN). This means that a project where ETS and/or CORSIA may apply shows the same relative footprint measure as if neither ETS nor CORSIA applied. The resulting relative carbon footprint is therefore incompatible with cost-benefit analysis.

Should the effects of these two schemes be taken into account, the relative carbon footprint of the project would be -3,347 t CO₂e/year.

Social Assessment

There are significant adverse social impacts related to the project as it is being implemented at a greenfield location with agricultural use and dispersed urbanisation.

However, the negative social impact in the vicinity of the new airport is likely to be compensated by the positive impact of the redevelopment of the site of the current airport, which will benefit the city of Heraklion as a whole.

The creation of temporary construction jobs and additional permanent jobs will have a positive economic and social impact on the surrounding area. The project provides additional airport capacity without which there would be congestion, imposing external costs across users.

Public Consultation and Stakeholder Engagement

Public consultation has been undertaken in accordance with Greek and European legislation during the EIA carried out in 2009. During the ongoing process of the renewal of the Environmental Terms Approval, which started in 2017 the Competent Authority has decided that no public consultation was required.

Other Environmental and Social Aspects

The Concession Agreement between the Greek State and the PPP mandates that the Terminal building must be certified with LEED Silver standard. Under LEED 2009, there are 100 possible base points distributed across six credit categories: "Sustainable Sites", "Water Efficiency", "Energy and Atmosphere", "Materials and Resources", "Indoor Environmental Quality", and "Innovation in Design". LEED certified buildings are intended to use resources more efficiently when compared to conventional buildings simply built to code.

Conclusions and Recommendations

Given the above, the following environmental conditions are to be applied.

Disbursement conditions

- Prior to first disbursement, the Promoter shall submit to the Bank a signed copy of the Form A or similar duly completed by the Natura 2000 Competent Authority;
- Prior to first disbursement, the Promoter shall submit to the Bank the decision of the Competent Authority on the EIA for the award of the amended Environmental Terms Approval (ETA);
- Prior to each of the four disbursements the conditions listed below have to be satisfied and verified by the Bank:
 - Prior to 1st Disbursement: (up to EUR 70 million):
 - Not earlier than 11 months from Concession Commencement Date (CCD);
 - State Aid Clearance to be provided by the European Commission;
 - Approval of the amended Environmental Impact Assessment and of the respective Environmental Terms by the Competent Authority;
 - Authorisation of access to the project site and relevant access rights as per the Concession Agreement;
 - Approval of Airport Master Plan and Time Schedule as per the Concession Agreement;
 - Meeting of 1st and 2nd Partial project Deadlines;
 - Meting Milestone 1 of the Road Map of the Redevelopment (RMR) of the Heraklion site (see details below).
 - Prior to 2nd Disbursement (up to EUR 30 million)
 - Not earlier than 24 months from CCD;
 - Approval of the Airspace architecture as per the Concession Agreement;
 - Evidence of progress of Works in accordance with the Initial Time Schedule (including partial deadlines) or possible delays that do not jeopardise completion with a delay of more than 6 months;
 - Meting Milestone 2 of the Road Map of the Redevelopment (RMR) of the Heraklion site (see details below).
 - 3rd Disbursement (up to EUR 40 million)
 - Not earlier than 36 months from CCD;
 - Evidence of progress of Works in accordance with the Initial Time Schedule (including partial deadlines) or possible delays do not jeopardise completion with a delay of more than 6 months;
 - Agreement on airport Transfer Schedule and Process;
 - Meting Milestone 3 of the Road Map of the Redevelopment (RMR) of the Heraklion site (see details below).
 - 4th Disbursement (up to EUR 40 million)

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- Not earlier than 48 months from CCD;
- Evidence of progress of Works in accordance with the Initial Time Schedule (including partial deadlines) or possible delays do not jeopardise completion with a delay of more than 6 months;
- Meting Milestone 4, 5 and 6 of the Road Map of the Redevelopment (RMR) of the Heraklion site (see details below).

**Road Map for the Redevelopment (RMR) of the Heraklion site:
Description of milestones of the**

- The economic viability of the project depends on the timely and successful development of the current airport site. The Bank sets as a condition the adherence to a roadmap for the development of the existing site. A roadmap to be agreed by all interested parties will have the following critical milestones:
 - **Milestone 1: Recognition of redevelopment:** there should be reference to show that the existing airport area will no longer be used as a civil nor military airport and be redeveloped as an integrated part of the City of Heraklion and its greater urban area. This reference should indicate that the redevelopment is under the agenda of the Greek Government and the respected/related authorities. The reference can be a declaration, law (for example, the ratification law of New Heraklion Airport - only if there is a reference to redevelopment), official letter, memorandum of understanding, strategic document, plan, programme, study, etc. ;
 - **Milestone 2: Establishment of ownership structure and re-distribution of rights:** It is the Bank's understanding that the land of the existing airport site belongs to Greek State i.e. ultimately to the Ministry of Finance (MoF). Currently the land use is shared between the Ministry of Defence (MoD) and Hellenic Civil Aviation Authority (HCAA) that belongs to the Ministry of Infrastructure and Transportation. The MoD has the right to use around 85% of the total area of the site, which reflects the initial arrangements during the early years of the airport operation. The MoD has stopped any military activity since 2015. The existing site shall be free from any operational use of the airport facilities (both civil and military). The Ministry of Defence may continue to use some of the administrative facilities and services in the area, which shall not exceed 15 % of the total floor area and should not impose limitations that would in essence reverse the intention to re-develop the area as noted in above step;
 - **Milestone 3: Creation of governance structure and defining strategic orientation:** It is expected that there will be a body, either to be established or to be designated responsible for the redevelopment of the existing site. This body can be any public institution, public agency, or state owned enterprise. The body is expected to be affiliated to the central government. The basic rules and principals for the redevelopment to guide further development plans and programmes needs to be described at this stage. The strategic orientation includes

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strategic goals for the redevelopment and conceptual land use decisions. It is expected that the creation/designation of responsible body and definition of strategic orientation will be hand in hand;

- **Milestone 4: Planning and Programming:** Integrated Urban Development Plan and/or Master Plan together with Implementation Plans (implementation plans may be prepared later stages before the implementation stage) need to be drafted. In this step, land use as well as zoning of functions should be prepared. Planning stage is expected to be inclusive and participatory decision-making procedures are expected to be implemented;
- **Milestone 5: Environmental and Social Compliance:** Either together with the previous step or separately, strategic environmental assessment and environmental impact assessment should be prepared for the re-development project;
- **Milestone 6: Finding an investor:** Finding and investor (under any suitable/optimal form of Public-Private co-operation) or allocating the necessary public resources (if a purely public procurement and implementation method is selected) to realize the strategic orientation. This may require international tender processes. The decision about the investor may require government ratification. Investor may be found earlier and in that case, the preparation of planning documents may be directly linked to investor;

Undertakings

- The Promoter shall ensure that an adequate Environmental and Social Management Plan(s) (ESMP) is implemented and monitored by an independent and certified body acceptable by the Bank during the construction of the project, and will notify the Bank of any unexpected environmental impacts or incidents during the works;
- The Promoter shall ensure that the all reports drafted by the Independent Engineer are sent in due time to the Bank in English language. The Bank shall approve the progress reports related to the construction works;
- Road Safety Audits shall be performed in accordance with the principles of the Road Safety Directive 2008/96/EC and provided to the Bank together with a report by the promoter, highlighting which measures suggested by the audit have not been undertaken together with the justification for such exclusion;
- An operation and maintenance plan for the road access network, acceptable to the Bank, shall be submitted before the completion of roads' construction, including (but not limited to) the responsible organization's/ authority's structure and budgetary commitments for routine, heavy maintenance and renewals.

Subject to the above conditions and undertakings being met, the environmental and social impacts of the Project are expected to be minor and the Project is considered to be acceptable for EIB financing.