

## Annex No.4 - Specification scope of work:

### A New Temporary Run-up Area, Prague Airport

**INTENTION OF THE CLIENT :** The Client is interested in the Supplier carrying out the complex performance of “A New Temporary Run-up Area, Prague Airport” in the form of **design and build** the new temporary run-up area in central airside part of Prague Airport.

It concerns

- (A) design works- elaboration of all project documentation levels for new temporary run-up area incl. design of jet blast deflectors (JBD) as specified in paragraph 3 below mentioned
- (B) engineering for obtaining planning permission and building permit as specified in paragraph 4 below mentioned,
- (C) construction of New run-up area and related structures (designed in Detail Design Documentation by the Supplier ) supply and installation of jet blast deflectors as specified in paragraph 5 below mentioned,

#### 1. Location of intention

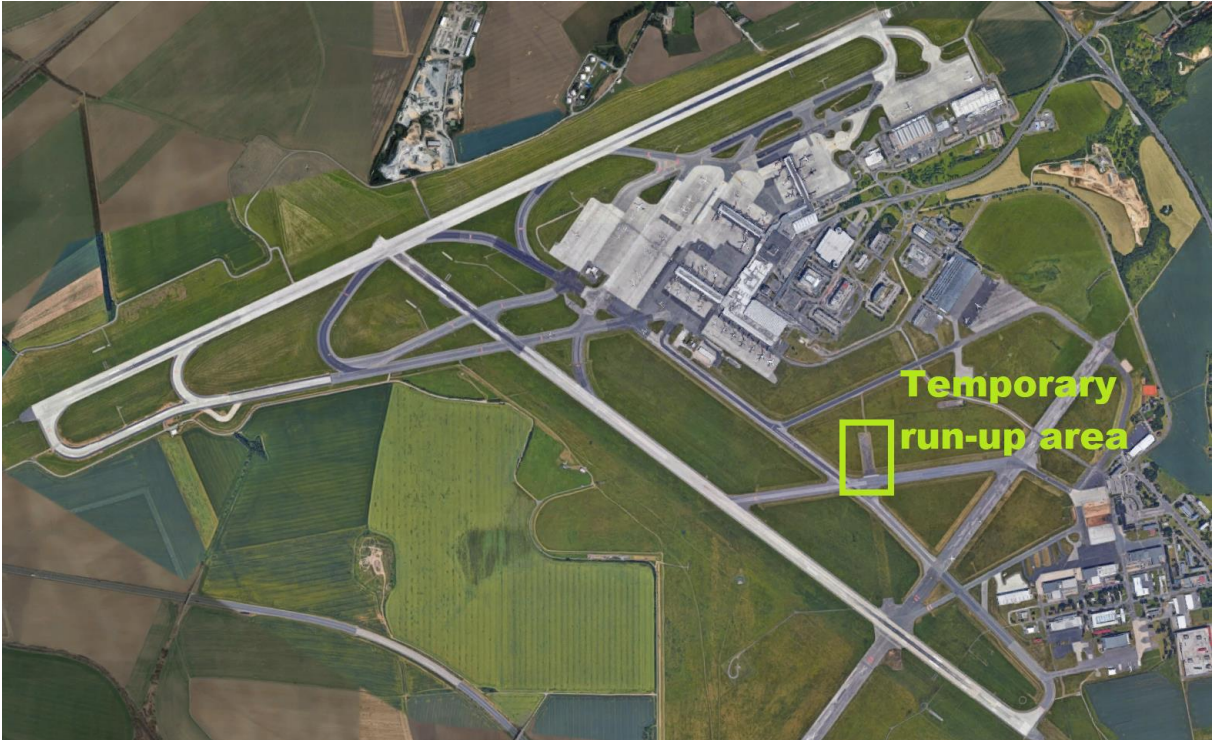
##### **Description of the operation:**

The areas for run-ups and aircraft engine tests in high power regimes are situated in following places of Prague airport: the stand adjacent to Hangar F, TWY P stand and Apron south stand. As a result of construction development projects in the Hangar F site, the operation of run-up area will be terminated. A new replacement will be placed in central part of airside nearby TWY L and TWY P crossing. The location can be seen in the Picture 1 – The overall current situation. New temporary run-up area will be intended for operating twinjets until code letter E (Airbus A330, Boeing B777-300ER). Design of new run-up area will require the reconstruction of the existing pavement - the current state of surface is evident in the Picture 2 - The current state of the pavement – (**design of pavement reconstruction is not part of this assignment**); the construction of lighting masts; construction of new utilities, construction of road for maintenance of run-up area, construction of fixed heavy duty jet blast deflector for full-power run-ups; design and construction foundations for this structure; and optionally the delivery and construction of blast screens on portable foundations. The need of side portable JBDs will be determined by designer of JBDs, if they will not be needed they will not be designed in project documentation. Correct height of fixed JBDs will be determined by designer of JBDs. A possible designed arrangement can be seen in the Picture 3 - Sketch of possible run-up area layout.

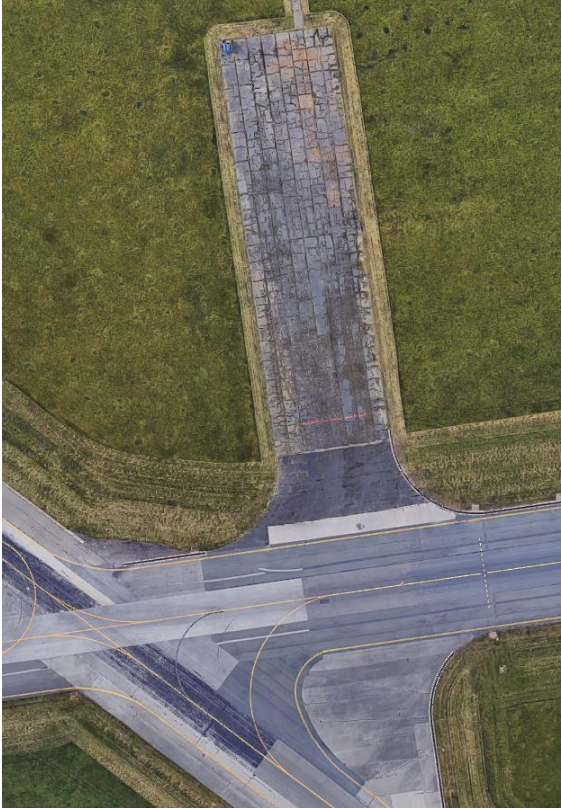
##### **General circumstances that must be respected:**

- During design works there must be specified scope of activities related to construction of structures (e.g. description of air traffic flows, consideration of air traffic flows)
- The intention must be designed in conformity with Czech technical standards, Czech general technical requirements for construction, procedures and regulations of the Prague Airport
- Airport zones of protection must be respected as well as opinions and statements of Prague Airport, Ministry of Environment of the Czech Republic, Civil Aviation Authority of the Czech Republic, Air Traffic Control of the Czech Republic, Prague fire brigade, Prague sanitary station and all other public authorities that may be concerned by intention of construction.
- During the project preparation, the designer will take into account the influences affecting the safety of operation in the immediate vicinity of the site

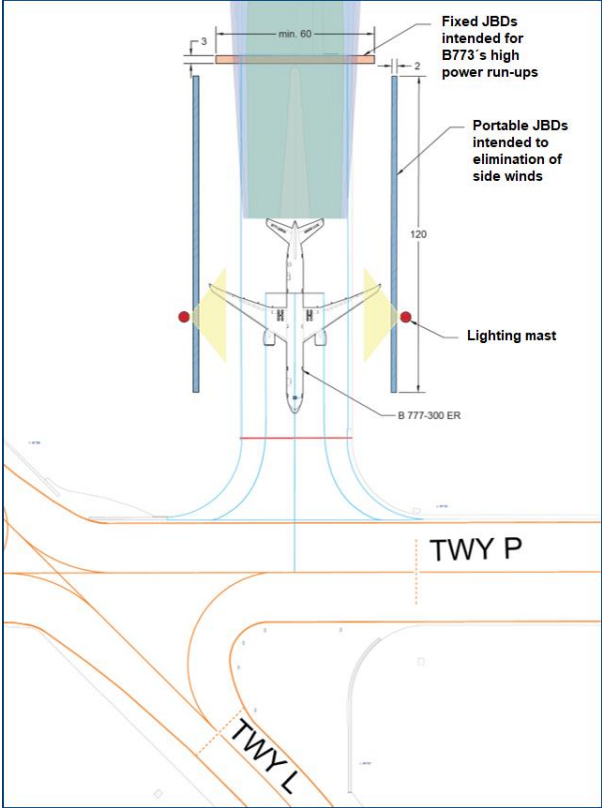
Picture 1 - The overall current situation



Picture 2 - The current state of the pavement



Picture 3 - Sketch of possible run-up area layout



## 2. Utilities

It will be necessary to design new utilities in connection with design of new run-up area. Necessity of relocation/removing existing utilities cannot be excluded. Design works will include particularly (not only) following utilities:

- design of cable ducts
- design of relocation of utilities

## 3. Key outputs of design works

- Respecting all conditions mentioned above in paragraphs 1-3
- Fields of solutions: complex design of new run-up area, review of impacts on existing infrastructure and solved area including requirements for their modification, impacts to airport zones of protection, construction and economic demands, conditions of construction, lighting of the run-up area, fire protection
- Elaboration of :
  - Documentation for the issuance of a planning permission
  - Documentation for the issuance of a building permit documentation in detail of detail design documentation
  - production and workshop documentation in detail design documentation
  - Documentation of the actual structure realization
- All technical solutions must be in conformity with applicable regulations such as (not only): Czech technical standards, Czech laws, Czech government orders, Prague building regulations, Regulations of Civil Aviation Authority of the Czech Republic, Prague Airport technical standards
- This processed documentation will be coordinated and will follow up with another documentation dealing with the reconstruction of the existing stand surface which will include:
  - a) structure pavement design of run-up stand
  - b) surface drainage design

### **More detailed description of required outputs:**

Responsibility of manufacturer of JBDs (foreign supplier):

- \* Technical design of jet blast deflectors especially with regard to flow of exhaust gases of aircraft during run-ups (engineering drawings – ground plans, sections, views, technical details etc.; blast flow analysis, pressure trajectory analysis, jet blast velocity analysis, static design of JBDs, technical reports, instructions)
- \* Verification if side portable JBDs are necessary
- \* Swept path analysis and turning simulation for aircraft taxiing from taxiway to run-up stand

Responsibility of cooperating Czech partner:

- Static design of fixed JBD's foundation
- Design of paved surface under portable JBDs (only in case portable JBDs will be necessary)
- Design of road for maintenance and users of run-up area guided around JBDs (the access to the run-up area will be realized from the TWY M). The road should have been designed for vehicles, which are necessary for performing run-up tests, such as maintenance stairs, tow truck etc.
- Scope of sections as required by the client
- Design of lighting masts, stand lighting according to EASA requirements
- Design of lightning protection of building structures
- Design of fire protection of structures and run-up area, review of fire safety, proposal of appropriate measures
- Design of new utilities

- Addressing the impact of construction on existing infrastructure, connection to existing infrastructure, relocations of utilities etc.
- Solution of new run-up area in relation to Prague zoning plan, elaboration drawing of run-up area situation to Prague zoning plan
- Classification of designed structures into individual building objects and their economic valuation
- Determination of conditions of construction; construction stages according to the client's requirements
- Verification of the impact of the project on civil protection structures

#### 4. Engineering for obtaining planning permission and building permitting

This task will be in responsibility of cooperating Czech partner

- Engineering for planning permission (obtaining planning permit, negotiations with public authorities, managing permit proceedings) for A New Temporary Run-up Area
- Engineering for obtaining building permission (obtaining building permission, negotiations with public authorities, managing permit proceedings) for A New Temporary Run-up Area
- Contractor will represent client in administrative proceedings for a purpose of obtaining planning permission and building permit
- Obtaining all necessary permits, consents, statements as well as all other documents necessary for issue of planning permission and building permit
- Modification of project documentation according to conditions and comments of relevant building authority and public administrative bodies
- Contractor will take over planning permission as well as building permit and ensure confirmation of issue coming into legal force

#### 5. Construction of A New Temporary Run- up Area

- Delivery of JBD and assembly the structure
- Amount and types of JBDs will be delivered according to design works (Expected scope of delivery – 60 m of fixed JBDs)
- Manufacturer of JBDs will provide installation tutorial to local construction company and JBD structure must be erected under supervision of manufacturer of JBDs
- Construction of New temporary run up area and related structures will be done by local construction company
- Erection of JBD structure will be done on prepared foundation according to Detail design documentation
- Correct working of foundation will be in responsibility of structural engineer designer (design of size, reinforcement, concrete quality etc.) and construction company (quality of civil works according to Detail design documentation)
- Correct working of JBDs will be in responsibility of manufacturer of JBDs who will design JBD structure, supply JBDs and supervise installation of structure by local manpower. Manufacturer will confirm quality of assembly the structure and provide warranty