File: AERA/20010/Policy Matter/Dep./2015-16

Order No. 35/ 2017-18

सत्यमेव जयते

Airports Economic Regulatory Authority of India

In the matter of Determination of Useful life of Airport Assets.

12th January, 2018

AERA Building
Administrative Complex
Safdarjung Airport
New Delhi – 110 003.

1. Background

1.1 Normative Approach - Background

1.1.1 The Authority had issued its philosophy and framework for economic regulation of major airports vide its Order No. 13 of 2011 dated 12th January, 2011 (hereinafter called "Airport Order"). As indicated in Para 17.5.13 of the Airport Order, it had also indicated that it proposed to operationalize the regulatory philosophy and approach as decided in the Airport Order through detailed guidelines. The Authority had also stated that draft of the "Airports Economic Regulatory Authority of India (Terms and Conditions for determination of tariff for Airport Operators) Guidelines 2011" was being issued separately for stakeholders' consultation before it was finalized. Accordingly, the Authority issued a Consultation Paper on 2nd February, 2011, for the purpose of Airport Guidelines. After stakeholders' meeting thereon (held on 14th February, 2011), it had issued the Airport Guidelines vide its Order No. 14 of 2010-11 dated 28th February, 2011.

1.1.2 MoCA had indicated to the Authority to give its consideration to developing norms with respect to the following items. The Govt. had indicated that by so doing all the stakeholders' would be aware of the boundaries within which they have to operate:

1.1.2.1 Debt-Equity Ratio

1.1.2.2 Rate of return

1.1.2.3 Rate of Depreciation

1.1.2.4 Operating Expenditure

1.1.2.5 Procedure and norms for incurring additional capital expenditure.

1.1.3 In addition to the items mentioned above and based on the experience of the Authority in determining aeronautical tariffs of airports, the Authority has felt the need to also consider norms with respect to the following items.

1.1.3.1 Capital costs in Airport Projects

1.1.3.2 Asset allocation norm between aeronautical and non-aeronautical services.

1.1.3.3 Allocation of Operation and Maintenance expenditure between aeronautical and non-aeronautical services.

1.1.3.4 Estimation of Operations and Maintenance costs based on certain normative features like O&M costs per passenger.

1.1.3.5 Incentivisation of airport operator for increasing non-aeronautical revenues purely commensurable with the "efforts" of the Airport Operator.

1.2 Normative Consultation Paper and Normative Order issued so far

1.2.1 The Authority had, accordingly issued Consultation Paper CP.No. 05/2014-15 "Normative approach to Building blocks in Economic Regulation of Major Airports" on 12th June 2014 (Normative CP).

1.2.2 In the Normative CP, the Authority had specified as follows, on Depreciation and useful lives of assets.

"5.1. Different airport operators have adopted different rates of depreciation over different elements that go into the Regulatory Asset Base (RAB). There has been an opinion indicating that the rate of depreciation adopted by AAI are on the higher side. The Authority had an occasion to go into these questions while analyzing the tariff determination in respect of Chennai as well as Kolkata airports. For example, it noticed that the rate of depreciation that AAI has adopted for runway is 13% (broadly equating it to the depreciation rate of 11% applicable to plant and machinery). AAI takes the life of a road at 7.5 years and depreciation rate at around 13%. On the other hand, airport operator like BIAL has provided depreciation at 3.3% (corresponding to useful life of 33 years) for Apron etc. (equating it to RCC road). Though the Authority, by and large, has been of the considered view that it would be preferable to leave depreciation rates for different items to the Board of the airport companies, the Authority feels that such wide variation needs to be adequately addressed. The Planning Commission had also felt that some reasonable uniformity in this regard could be considered.

5.2. The Authority has noted the latest depreciation rate mentioned in the Companies Act, 2013 effective from 1st April 2014, according to which, only to take an example, of roads, the depreciation rate for the concrete road is given as 10 years. By and large, the private operators have been taking runway equivalent to concrete carpeted road RCC. Bringing into force of the new Companies' Act and the Schedule indicating depreciation rates thereon, the individual discretion of the airport operator to apply its rates of depreciation, in Authority's opinion, can be said to have been considerably reduced. The Authority notes for e.g., that the category of runway, taxiway, apron is not mentioned specifically in the Companies Act, 2013. It was also not so in the previous Companies Act, 1956.

....

5.3. The Authority has noted that the Schedule II (and particularly Part C thereof) of the Companies Act, 2013 indicates the useful life or residual value of any specified asset. Part B of Schedule II states that "The useful life or residual value of any specific asset, as notified for accounting purposes by a Regulatory Authority constituted under an Act of Parliament or by the Central Government shall be applied in calculating the depreciation to be provided for such asset irrespective of the requirements of this Schedule". After considerable deliberation, the Authority has separately initiated the process to

issue such notification as appropriate on the useful life or residual value of an asset specific to the requirements of an airport. Such assets may either not have been clearly mentioned in the Schedule II of the Companies Act or may justifiably have useful life different from that mentioned in the Companies Act. For example, the Authority has noted that AC No: 150/5320-6E, dated 30th September 2009 issued by FAA of USA, gives certain design standards in respect of Airport pavements as follows: "The FAA design standards for airport pavements use the 20 year structural design life criteria as a policy."

5.4. The Authority has been of the considered view that it would be preferable to have, as far as practicable, a broad year to year consistency in what depreciation is charged by the companies as certified by the relevant statutory auditors and what the Authority would take into account in its process of tariff determination. Issue of a notification will ensure this objective.

1.2.3 The Authority in its Order No. 8/2014-14 dated 10.06.2014, inter-alia, decided to lay down, to the extent required, the depreciation rates for airports, taking into account the provisions of the useful life of assets given in Schedule II of the Companies Act 2013 (Act 18 of 20130, assets that have not been clearly mentioned in the Schedule II of the Companies Act or that may have a useful life justifiably different than what is indicated in the Companies Act 2013 in the specific context of the airport sector.

1.2.4 The Authority had in its Consultation Paper no. 5/2014-15 dated 12.06.2014 in the matter of Normative Approach to Building Blocks in Economic Regulation of Major Airports, indicated the same view. Subsequently, in Consultation Paper no. 16/2014-15 dated 28.01.2015 the Authority had proposed to commission a study to determine appropriate rates of depreciation to be adopted for the regulatory purpose in line with the provision of the Companies Act 2013.

1.2.5 The Authority, for the purpose of tariff determination in the interim, had gone by the useful life of airport specific assets, particularly Runway, Taxiway and Apron as per the past practice, where airports had adopted different depreciation rates for these assets varying from 8 years to 30 years, as depreciation rates for these assets were not mentioned in the Companies Act, 1956. The Authority therefore decided to institute a study to identify the airport specific assets, which have not been covered in Part – C of Schedule-II of the Companies Act, 2013, and prescribe a useful life for these assets in line with the industry practice and accounting principles.

1.2.6 The Authority had also issued Order No. 7/ 20160-17 dated 6th June 2016 on Capital Costs relating to Major Airports. (Normative Order).

1.3 Consultation Paper on Asset Useful lives issued by the Authority

1.3.1 The Authority awarded the study to the Institute of Chartered Accountants of India (ICAI) on 7th September, 2015.

1.3.2 Terms of Reference of the study was:

" 2.1 To identify class of assets which can be considered as exclusively Airport Asset such as Runway, Taxiway, Apron etc., which would be covered primarily within the scope of this study and other class of assets which are used in Airport as well as several other industries like Escalators, Walkalators for which a differential treatment in case of Airport may be required.

2.2 To survey technical useful life assessment for these assets considering OEM life prescriptions, technical studies on life expectations considering their respective operating environment in India, technical studies on the subject by AAI if any, life prescription of similar assets by other sector specific regulators and other technical literature available on this subject.

2.3 To consider generally accepted accounting practices in India with regard to depreciation rates.

2.4 To study practices of Airports in different continents specifically Asian Airports and also consider prescription in this regard by ICAO. To address India specific issues while considering such international practices.

2.5 To consider current practices by Airports in India both the Airports under AAI as well as private Airports.

2.6 Analyzing and drawing reference from the aspects as above, recommend useful life for the specific Airport assets under the scope of study and the differential rates for other common assets in case of an Airport."

1.3.3 The Institute submitted its Report on 10.04.2017 and made a presentation to the Authority on 18.05.2017. The final report was issued on 10.04.2017 **(Annexure-II)**. After considering the study report, the Authority had issued a Consultation Paper No. 9/ 2017-18 dated 19th June 2017 seeking comments from stakeholders in the matter.

1.3.3.1 In the said Consultation Paper, the Authority had proposed the following:

a) **To determine useful lives for key Airport Assets under Part B of Schedule II to Companies Act, 2013 as stated in Part-I of Annexure-5.**

b) **To determine useful lives of key Airport specific Assets (not stated under Part-B of Schedule-II of Companies Act) as prescribed in Part-II of Annexure-5.**

c) **To propose that the written down value of the asset as on the date of effect shall be depreciated over the remaining useful life of asset.**

d) **To recommend minimum asset group and sub-group information to be maintained as detailed in Annexure-4.**

e) **In case the Airport operator decides, to specify useful life of any Asset other than that has been stated at Annexure-5, the Authority will consider it based on manufacturer's specifications & technical justifications.**

f) **As the residual value of most of the Airport Specific Asset is often insignificant, it is proposed to allow 100 % depreciation on the Asset over the useful life of the Asset.**

2. Comments received from Stakeholders

2.1.1 A Stakeholder Consultation meeting was held on 03.07.2017 to seek comments from the Stakeholders.

2.1.2 Further to the Stakeholder meeting, comments were received from the following stakeholders viz, Airports Authority of India (AAI), International Air Travellers Association (IATA), Bangalore International Airport Limited (BIAL), Mumbai International Airport Limited (MIAL), GMR Hyderabad International Airport Limited (HIAL), Delhi International Airport Limited (DIAL) and GMR Goa International Airport Limited (GGIAL).

2.1.3 Stakeholders comments were discussed with ICAI officials on 30th August, 2017. ICAI has confirmed the comments on the discussion on 28th December, 2017. The Authority has carefully reviewed the comments made by Stakeholders.

2.1.4 The comments made by different stakeholders segregated into categories/ areas, with Authority's analysis of the same and decision is stated below.

3. Stakeholder comments and Authority's analysis of Stakeholder comments

3.1 Comments on useful life considering the Lease / Concession period and Authority's analysis of the same

Stakeholder Comments

3.1.1 IATA has stated as follows:

"Related to amortisation in concession agreements, we suggest it is not in consumers interests for AERA to allow concessionaire to depreciate assets in line with their agreements if this results in a faster rate

of depreciation compared with the assets useful life. IATA suggests AERA considers other mechanisms are considered to avoid this scenario."

3.1.2 GMR Goa International Airport (GGIAL) has stated as follows regarding Lease/ concession period and useful life

"The airport concession to private airport operator has been awarded for limited period at the end of concession the transfer assets has to be surrendered back to the concessioning authority at the end of concession in line with the terms of the concession terms. Accordingly, with respect to the private airport operator the useful life of asset should be restricted for the term of concession agreement. Accordingly we suggest that the useful life of asset with respect to any asset should be restricted to the initial concession period".

3.1.3 HIAL has commented as follows:

"The airport concession to private airport operator has been awarded for limited period at the end of concession the transfer assets has to be surrendered back to the concessioning authority at the end of concession in line with the terms of the concession terms. Accordingly, with respect to the private airport operator the useful life of asset should be restricted for the term of concession agreement. Accordingly we suggest that the useful life of asset with respect to any asset should be restricted to the initial concession period."

3.1.4 MIAL has submitted as follows:

"Useful life does not take into account the following: i) Concession period of the concerned airport under respective Concession agreement - Authority should take into account only primary concession period of the concerned airport while determining the useful life of assets for that particular airport since useful life cannot be more than economic life. Economic life for any airport under concession cannot be more than primary concession period. We draw attention of the Authority to Para 1 of Part A of Schedule II of the Companies Act, which specifically mentions that useful life of an asset is the period over which an asset is expected to be available for use by entity, or the number of production of similar units expected to be obtained from the asset by an entity. Since any asset cannot be available to the Airport Operator for use beyond its Concession Period, it is necessary that useful life is capped with the period available under primary concession period. Please also refer to Table 4.5 of ICAO Airport Economic Manual (2013 edition) of Annexure 3 of Consultation Paper which clearly mentions that depreciation for leasehold buildings is to be provided over the period of the lease. We also draw your attention to the requirements under IND AS 16 and 17 which requires provision of depreciation over lease term relevant extract of which is attached as Appendix 1 for your ready reference."

Authority's analysis

3.1.5 The Authority has carefully evaluated the comments provided by the Stakeholders and its analysis is proposed below.

3.1.6 The Authority has noted IATA's comments. The Authority has currently prescribed useful lives for different categories of assets. The Authority also notes that where the assets are to be used only over a concession period, the same also needs to be considered in evaluating the useful life of the asset.

3.1.7 Authority understands that the Concession agreements entered into by different Airport Operators provide for consideration payable when the concession is surrendered which includes compensating the Airport Operator for the assets transferred, if any and that these could be different across different airports. The Authority also understands that generally, the concession granted is for an initial period of 30 years with the renewal for next 30 years being the decision of the Airport Operator, after which it could be a mutual consent.

3.1.8 The Authority takes congnisance of the fact that where assets are developed/ constructed/ put to use, they should be depreciated over the available lease period or the useful life prescribed, whichever is less. Value to be depreciated should be determined after reducing any asset realisation value that the Operator may get, when the lease is surrendered.

3.1.9 For the purpose of identifying the balance useful life, the Authority decides that, the balance period remaining out of the initial lease period plus the first extension at the option of the Operator should be considered, unless any confirmed decision for non-renewal of lease is taken and recorded by the Airport Operator.

3.2 Comments on Useful life of Runway, Taxiway and Apron and Authority's analysis of the same

Stakeholder Comments

3.2.1 AAI has submitted that the Useful life of Runway/ Taxiway and Apron should be considered based on usage and has suggested useful life of 20 years, 25 years and 30 years based on usage.

3.2.2 IATA has commented as follows:

"Runways, taxiways, taxilanes, and aprons should all be considered in their own right and a clear differentiation made between resurfacing and other work. Further we recommend further analysis to review typical ranges for runway resurfacing, as 5 years is a very short space of time compared with

most well maintained runways. A typical busy hub airport will resurface its runways every 10-15 years."

3.2.3 BIAL has commented as follows:

"We would like to draw attention to ICAI's presentation in Annexure 2 with regard to "Analysis of Individual assets - Runway, Taxiway and Apron" wherein ICAI has rightfully noted that BIAL concession agreement has design and life specified as 20 years for Runway and Taxiway. We believe that design and cost of Runway and Taxiway has been done to cater to the life in line with the Concession Agreement and accordingly BIAL has been following the same life till now. The proposal now considers the life of Runway and Taxiway as 30 years. We believe that when the Concession Agreement specify the life as 20 years, changing the life of the asset to 30 years for the purpose of streamlining across all airports will be unjust. We request the Authorities to consider the life of Runway and Taxiway as 20 years specifically for BIAL in line with the Concession Agreement."

3.2.4 MIAL has submitted as follows:

Runway, Taxiway and Aprons - Authority in Part II of Annexure 5 has suggested useful life of 30 years for Runway, Taxiway and Aprons. MIAL has considered useful life of 20 years for Runways due to the following reasons:

M1AL assumed operations and development of CSIA from 3rd May 2006 and took control of AAI's existing assets including Runways. Since Runways were originally constructed by AAI and MIAL has only done the strengthening and substantial restoration works of these runways, it has considered useful life of 20 years.

Besides above, various reports and data relied upon by ICAI as mentioned below, also justify useful life of Runways (even new Runways) as 20 years only instead of 30 years proposed by the Authority since Runways are considered as Flexible Pavements against Apron which are considered as Rigid Pavements (concrete)

1. ICAO Airports Economic Manual (2013 edition) has suggested useful life of Runways and Taxiways in the range of 15-30 years. ii.UK government - CAA in "A guide to Airfield Pavement design and evaluation - Design and Maintenance Guide (February 2011)" recommends that structural design life be 20-30 years. The upper end of this range being for concrete pavements and the lower end for flexible pavements. iii. US Department of Federal Aviation Administration in its Advisory circular AC No. 150/53206E has stated that Pavement and other facilities built to FAA standards are designed to last at least 20 years. iv FAA Airport Compliance Manual - Order 5190 B - 2009 also states that Pavement and other facilities built to FAA standard are designed to last at least 20 years. v,

Aerodrome Design Manual Part 3 (2003 edition) states that pavement designed in accordance to these standards are intended to provide a structural life of 20 years. VI. Concession Agreement of BIAL also states that design life of flexible pavement is 20 years. vii. ICAI itself in para 6.2.18 of its Report mentioned that useful life of 20 years can be considered for Flexible Pavements (Runway and Taxiway) and 30 years for Rigid Pavements (Apron)

viii. Authority has also mentioned in para 2.2.5 (B) (i) that in view of the international prescriptions on standards of design life, the practice followed by certain airports in Asia and other parts of the world, useful life of 10-15 years for Runways and Taxiways surfaces and 30 years for Runways and Taxiways bases can be prescribed which means Authority should provide useful life for Runways and Taxiways either as average of 10 to 30 years or provide different useful lives for bases and surfaces but providing useful life of 30 years for both i.e., bases and surfaces would be incorrect and inappropriate.

Authority's analysis

3.2.5 Authority has carefully evaluated the comments provided by the Stakeholders.

3.2.6 Authority notes that the useful life of the Airfield pavements viz Runway, Taxiway and Apron are dependent on various factors including design intent. The rate provided by the Authority was a normative rate considering the various factors.

3.2.7 On reviewing the comments from certain stakeholders, the Authority decides that while the rate prescribed will remain as given in the Consultation Paper, if there is a different rate adopted by the Airport Operator, between 20 to 30 years, the same should be justified and backed up by suitable technical certification which will be critically examined by the Authority and a view taken on the same, on a case-to-case basis.

3.2.8 Authority notes IATA comments on resurfacing costs. Authority has proposed treatments which are different for different kinds of expenditure which is incurred on a runway as part of Annex-5. As for resurfacing - while the actual timing of runway resurfacing could vary, the Authority has proposed for the cost to be amortised over 5 years as a standardised norm. The Authority understands that as the resurfacing is only to bring back the wear and tear of the past years it would be appropriate to write this off in the year of incurring expenditure, as per the principles of accounting. For the purpose of tariff computations, however, the Authority decides that resurfacing cost will be amortised over a period of 5 years. Authority notes that the cost considered for tariff computation and cost accounted in P&L could vary on this account.

3.3 Comments on the manner of consideration of land development cost and Authority's analysis of the same

Stakeholder Comments

3.3.1 IATA has commented as follows:

"Where a concession agreement is in place and the land is not owned by the operator, we query why land that Is leased is able to be depreciated and suggest this is not an eligible category to consider - as ICAO states the land itself should not be allowable as an item to be depreciated since unlike other assets it does not deteriorate and its useful life is not limited."

3.3.2 BIAL has submitted as follows:

"Land development cost is not a separate identifiable asset. It is a stage of construction within the overall asset construction activity. When the building / runway/ other asset standing on such developed land is fully depreciated within 30/20 years and needs replacement, carrying only the land development cost in the books till the end of lease period would not be justified. More so, in case of BIAL, for the existing assets, the bifurcation of land development cost was not available, since the same was not a requirement under erstwhile Companies Act 1956. Hence, we request the Authorities to consider to treat this as a part of the asset with which the activity is associated such as Buildings/ runway/ taxiway etc. and thereby no separate asset category to be introduced."

3.3.3 GGIAL and HIAL have submitted as follows:

In order to eliminate ambiguity the Land Development Cost should be defined in the referred consultation paper. The Land development cost should mainly consist pre development works.

The land development cost in case of specific asset is part and parcel of the main asset viz.terminal building, runway etc. In many cases the composite contracts have been awarded hence it' s get difficult to segregate the cost pertaining to land development pertaining to specific asset. Also the useful life of land development can't be different than the main asset.

Accordingly we suggest that the land development cost i.e. pre development work should be depreciated uptill useful life of asset or initial concession period whichever is less.

3.3.4 DIAL has commented as follows:

As per clause 2.2.5(A) the land development cost shall be depreciated for the balance lease period and the total lease to be considered shall be a minimum of 60 years. However, as per Ann-5, the land development cost can be amortised over the lease period. Since there is no lease period defined at Ann-5, we believe that the land development cost will be depreciated over the lease period of the Airport. Accordingly we believe that land development cost will be depreciated in accordance with

Ann-5 and not as per clause 2.2.5(A). Kindly confirm our understanding is correct. Also, in case of existing airport the land development cost already has been incurred and capitalised in the respective assets. At this juncture it is not feasible to bifurcate the land development cost, hence it is suggested that the treatment of asset for land development cost in case of existing asset should not be changed.

Authority's analysis

3.3.5 Authority has carefully evaluated the comments provided by the Stakeholders.

3.3.6 Authority notes IATA comments on not providing for an amortisation on land developed. The Authority notes that cost is incurred on land development by the Airport Operators. Manner of compensating for cost of land is being evaluated by the Authority and a separate consultation paper will be issued for the same.

3.3.7 Authority notes that "Land development" activity (For example filling a pit, levelling the field etc), will be of a permanent nature not necessitating any replacement or change after a certain period of time, and hence the same can be treated as a different line item. Since there is a cost incurred in land development activity, the same is proposed to be compensated through depreciation over a period of time. The Authority notes that this may not be available as a separate cost in the financial records, for all such past works carried out and hence this will be applicable for all capitalisations done from the effective date of this Order. It is clarified that land development cost will be amortised over the total lease period with minimum period as mentioned in the CP.

3.4 Comments on Useful life of Terminal Building/ Utility Buildings/ Other Buildings and Authority's analysis of the same

Stakeholder Comments

3.4.1 BIAL has commented as follows:

*"We would like to draw reference to Parra 2.2.5 of Consultation Paper wherein Part-C Building and Roads, Companies Act 2013 rates for different types of buildings has been specified as RCC frame structure/ Other than RCC frame structure/ factory buildings etc. In the final rates proposed under Annexure-5, the useful lives have been specified as 30/60 years. As the Terminal Building, even though RCC frame structure, because of 24*7 usage for 365 days and due to high wear and tear, we request the Authorities to consider the Terminal Buildings to be equated to Factory Building with life of 30 years in line with Companies Act 2013."*

3.4.2 GGIAL has submitted as follows:

"In the abovementioned consultation paper Authority has proposed useful life of 60 years for the building with RCC Frame Structure. However, keeping in mind the airport operations which is 24X7 365 days in a year, building has got higher wear and tear and hence the said structure needs to be treated as factory building and should be depredated as per the rate prescribed by Companies Act for factory building.

Accordingly we suggest that the useful life of asset with respect to building with RCC structure should be lower of 30 years or the residual period of initial concession term."

3.4.3 HIAL has commented as follows:

In the abovementioned consultation paper Authority has proposed useful life of 60 years for the building with RCC Frame Structure. However, keeping in mind the airport operations which is 24X7 365 days in a year, building has got higher wear and tear and hence the said structure needs to be treated as factory building and should be depredated as per the rate prescribed by Companies Act for factory building.

Accordingly we suggest that the useful life of asset with respect to building with RCC structure should be lower of 30 years or the residual period of initial concession term.

Authority's analysis

3.4.4 Authority has carefully evaluated the comments provided by the Stakeholders.

3.4.5 Authority notes that Ann-5 has included provision to consider Terminal Buildings at a useful life of 30/60 years, which is in line with BIAL/ GGIAL/ HIAL's submissions.

3.5 Comments on Useful life of Equipment and Authority's analysis on the same

Stakeholder Comments

3.5.1 AAI has commented that AAI will consider different useful life based on Technical justification and manufacturer's specification.

3.5.2 MIAL has commented as follows:

"Authority has mentioned in the remark column "As per Companies Act" but it has not taken into account the following provisions of the Schedule 11 of the Companies Act, 2013:

(i) Schedule II has two distinct categories as Plant & Machinery (Item No. IV) and Electrical Installations and Equipment (Item No. XIV) - Schedule-II provides a useful life of 15 years for general category of Plant and Machinery with a provision for Extra shift depreciation while for Electrical Installation and Equipment it provides for a useful life of 10 years. Authority has clubbed items like Generators and Power Equipments etc. (such as transformers, sub-stations, HT and LT Panels, switch

gears and distribution system etc.) which are part of Electrical Installations and Equipments with other items of Plant & Machinery. Since there is a specific category for Electrical Installations and Equipment these items should not be clubbed with general category of Plant and Machinery. We therefore request the Authority to move items such as Generators and Power Equipment etc. (such as transformers, sub-stations, TIT and LT panels, switch gears and distribution system etc.) from general category of Plant & Machinery to Electrical Fittings (Item No. 17) and change the nomenclature of Item No. 17 to Electrical Installations and Equipments in line with the Schedule IT of the Companies Act, 2013.

*(ii) Note 6 to the Schedule IT provides for extra shift depreciation for all items of Plant & Machinery, other than continuous process plant, covered under (IV)(i)(a) of the Schedule depending upon whether asset is used for double or triple shift. We request Authority to provide for extra shift depreciation, as prescribed under the Companies Act, for the airports which are required to be operated on 24*7 basis for 365 days in a year.*

It may be pertinent to note that MIAL has already provided depreciation in its books of accounts as detailed above under point (i) and (ii) and on the same basis tariff for 2nd control period were determined by the Authority."

Authority's analysis

3.5.3 Authority has carefully evaluated the comments provided by the Stakeholders.

3.5.4 Authority has noted AAI comments. The Authority notes that AAI has proposed to consider a different useful life than that prescribed in Annex-5, part 1. These would be in deviation from the rates prescribed by the Authority. The Authority does not consider it generally necessary for a different useful life to be used. However, if there is a different rate adopted by the Airport Operator, the same should be justified and backed up by suitable technical certification which will be critically examined by the Authority and a view taken on the same from time to time.

3.5.5 Authority has reviewed MIAL's comments. The Authority notes that the assets would need to be classified as provided under the Companies Act under Plant & Machinery under Item IV or Electrical Installation under Item XIV. Nomenclature and classification will be made in line with Companies Act 2013. There will be no extra shift depreciation as the rates considered by the Authority are based on the operation of the assets at the Airport. Any excess depreciation claimed will be adjusted while truing up.

3.6 Comments on useful life of Computers and Servers and Authority's analysis of the same

Stakeholder Comments

3.6.1 GGIAL and DIAL have submitted as follows:

"At point 15 of annexure 5 the computers/servers, Authority should separately define end user devices, such as, desktops, laptops, etc. and the useful life of these asset should be kept three year in line with the Companies Act."

3.6.2 MIAL has submitted as follows:

"Computer I Servers - Schedule II has two distinct categories i.e. Server, Networks and End user devises such as desktop, laptops etc. with different useful lives. Authority has however combined both Computer and Servers with same useful life of 6 years. Further Authority has separately provided useful life of 5 years for intangible assets such as software which is specifically not mentioned in the Schedule II and therefore was being amortised over 6 years, on the lines of Servers and Networks.

We request the Authority to provide useful life for End user devises such as desktops, laptops etc. as 3 years in accordance with the Schedule II instead of clubbing the same with the Server and Networks considering the fact that useful life of these devises are much shorter due to higher obsolescence vis-a-vis servers and networks."

3.6.3 HIAL has submitted as follows:

"Based on our experience, we have observed that bulk of the equipment which comprise of IT and embedded software hence it gets depreciated in 3-6 years span in line with depreciation rate prescribed by Companies Act. In view of the foregoing, it is proposed that the Authority may consider the useful life of said assets in line with Companies Act."

Authority's analysis

3.6.4 Authority has carefully evaluated the comments provided by the Stakeholders.

3.6.5 Authority notes that the rates prescribed by the Authority for Computers and allied IT equipments will be aligned with the Companies Act 2013.

3.7 Comments on useful life of Furniture and Fixtures and Authority's analysis of the same

Stakeholder Comments

3.7.1 GGIAL and DIAL have submitted as follows:

"In case of point 13 of annexure 5 the useful life of furniture & fixtures has been considered for five years. As per Companies Act the useful life of F&F is ten years. Authority may reconsider the same."

Authority's analysis

3.7.2 Authority has carefully evaluated the comments provided by the Stakeholders.

3.7.3 Authority notes that Furniture & Fixtures in Airports are used by many passengers and users and could have a higher wear and tear. Hence the Authority had proposed a lower useful life for Furnitures. Considering all factors, the Authority decides to adopt 7 years as useful life for Passenger Furniture and Fixtures and 3 years for trolleys.

3.8 Comments on manner of considering the balance useful life and its depreciation and Authority's analysis of the same

Stakeholder Comments

3.8.1 BIAL has submitted as follows:

"In cases where the useful life of the asset is already completed, entire written down value needs to be depreciated in one year. This depreciation would be over and above normal depreciation which needs to be charged off to Profit and Loss statement. We request the Authorities to consider such one-time depreciation impact in MYTP submissions already done by BIAL."

3.8.2 HIAL has commented as follows:

"Authorities are also requested to give suitable allowance arising out of change in depreciation rate either as a one time impact in the Profit & Loss Account or provision for higher rate of depreciation depending upon residual period of life of assets."

Authority's analysis

3.8.3 Authority has carefully evaluated the comments provided by the Stakeholders.

3.8.4 The Authority understands that, as per Companies Act, the Airport Operator would need to write down the value of assets if the useful life of the asset is already completed. This would be appropriately considered by the Authority for tariff determination. Accounting treatment would be guided by applicable laws and standards

3.8.5 The Authority will include a specific mention in the chart of prescribed useful lives that *"where asset carrying value is required to be reduced to NIL, due to expiry of useful life, the said value will be included in Depreciation for the purpose of computation of ARR"*

3.9 Comments on effective date of the Order and Authority's analysis of the same

Stakeholder Comments

3.9.1 BIAL has stated as follows:

"Many of the Airport Operators including BIAL had completed their audit for the financial year ended 31st March 2017 under the new Indian Accounting Standard and get the accounts adopted by the respective board. Any amendment of useful lives with retrospective effect would require the accounts to be recast as per the new IND AS standard. Hence, we request the Authorities to make and notify the amendments effective 1 April 2017 so that necessary adjustments can be made in the current financial year 2017-18."

3.9.2 HIAL has submitted as follows:

"As per point 3.1.4 Authority has proposed to make it effective from 1st April 2016. As the control period in case of GHIAL is already started from 1st April 2016, hence it is suggested that the new depreciation rates should be made effective from 1st April 2021 i.e. third control period."

3.9.3 DIAL has submitted as follows:

"As per point 3.1.4 Authority has proposed to make it effective from 1st April 2016. In case of DIAL and MIAL the second control period starts from 1st April 2014 and also Authority has already issued orders for both the airports. Hence it should be made effective from 1st April 2019, i.e. third control period."

3.9.4 MIAL has submitted as follows:

"Authority has proposed to make the order effective 1st April 2016. However, it may be noted that it will not be possible to implement Authority's order retrospectively for FY 16-17 as accounts for that year have already been duly audited and signed. Further as per part B of Schedule II, useful life or residual value of any specific asset, as notified for accounting purposes by a Regulatory Authority shall be applied in calculating the depreciation to be provided irrespective of the requirement of the Schedule II, hence we requests the Authority to implement the order from FY 19-20 only since Authority has already determined tariffs for MIAL for 2nd Control Period up to FY 19."

Authority's analysis

3.9.5 Authority has carefully evaluated the comments provided by the Stakeholders.

3.9.6 Authority notes the concerns expressed by Stakeholders on the effective date being a past date. The Authority decides to make the effective date as the Financial Year commencing from 1st April 2018. Making the rates effective from the beginning of a control period, which is different for different Airports would delay the implementation process. The revised depreciation will have to be recomputed while truing up for the second control period.

3.10 Other General comments and Authority's analysis

Stakeholder Comments

3.10.1 IATA has submitted as follows:

"IATA recommends the development of ranges for all airport assets corresponding to an asset's useful life taking into account well documented and proven industry norms from sources such as ICAO, including those already listed in the corresponding Companies Act. Having robust ranges in place is important as the useful life of assets will vary from airport to airport depending on a number of variables between projects. For example, the useful life of baggage systems can vary depending on the type of system, level of automation, intensity of use and type i.e, complicated system with In-built transfers at major hub airports will have a very different requirement to small-medium sized airports with origin and destination traffic."

Another example Is airfield infrastructure where the FAA highlights the design life of an asset is determined by a number of factors such as the condition of sub-surface, aircraft loads, volumes and peak hour traffic that need to be considered. Specific to airfield infrastructure, IATA strongly recommends further work to determine ranges for the useful life of assets in more detail, as at present there is Insufficient guidance to support informed decision making in this area.

A range is a useful starting point as the basis for more detailed consultation with Users, in order to demonstrate and justify to users exactly why a particular useful life for an asset has been selected, taking into account site specific variables, and other critical elements such as whole life costings, operating and maintenance costs. Consultation with Users to seek their views and feedback as those funding capital developments is critical, as part of a Business case process to review the costs and benefits of major project's, and it's return on Investment so informed investment decisions can be taken.

A good rule of thumb as a starting point when considering Business Cases is to ensure investment results in lower operating costs (for both airport and airlines) - otherwise why invest? Another principle we recommend is to aligned amortisation with an assets useful life, to ensure assets are not depreciated artificially and too quickly that is not in Users or consumers Interests, and could result In overinflated airport charges.

We would specifically recommend airport specific ranges are developed for Baggage Handling Systems as a key component of an airport terminal, and would also highlight other specific areas for further work including aircraft piers

Another recommendation applied by regulators such as the UK CAA is to ensure assets should not start to be depreciated until they come into operational use. Construction completion or similar definitions such as "practical completion" used in the industry are not sufficient - the beneficial use of assets must be delivered for Users, in-line with the outcomes defined in the Business Case. IATA suggests In keeping with international best practice, that Users of the assets are jointly responsible for signing off their operational use. Examples of regulatory mechanisms that apply this approach include the UK CAA, through the "capital triggers" mechanism.

3.10.2 MIAL has submitted as follows:

"Before we provide specific comments on each of the proposal, we would like to highlight the fact that airport development projects are highly capital intensive in nature and continuously require capital for upgradation of the facilities and infrastructure. Therefore it is essential that airports are able to generate adequate cash flows to meet increasing requirement of capital for investment. If cash flows are not adequate, airports will have to borrow more funds for which higher charges will have to be recovered from the users. It may be noted that NPV of cash flows to an airport operator, over the useful life of an asset, remains same irrespective of rate of depreciation and therefore it will be very important for the Authority to strike right balance between the need for adequate cash flows for debt servicing and investment needs vis-a-vis user charges so that airports are able to service its debt and meet funding requirement for investments."

Authority's analysis

3.10.3 Authority has carefully evaluated the comments provided by the Stakeholders.

3.10.4 Authority notes IATA's concern to align amortisation with an asset's useful life. The purpose of prescribing a certain useful life is to ensure that the depreciation charge which is a component of ARR is on a standardized basis across different Airport Operators. The Authority is of the view that, the design intent or the proposed life of the asset could be specifically indicated to the Airport users during the consultation process.

3.10.5 Authority may evaluate on a case to case, at the time of tariff determination, instances of assets that are not put to Operational use.

3.10.6 Authority has noted IATA's comments to make specific ranges for different asset categories. While a range for useful life is relevant for assets such as building, access road etc. 'range' is not required for office equipment or electrical installations. The Authority notes that the useful lives are currently being prescribed, as a standard value, to bring in uniformity in the manner of consideration of depreciation in ARR computation.

3.10.7 Authority has noted MIAL's comment on investments and balancing of cash flows. Authority notes that the useful lives are currently being prescribed, as a standard value, to bring in uniformity in the manner of consideration of depreciation in ARR computation.

3.11 Comment on other assets and Authority's analysis of the same

Stakeholder Comments

3.11.1 BIAL has submitted as follows:

"Generally approach roads to Airport outside the Boundary wall is also built by Airport Operators. There is no mention of such roads in Annex-5. In case of BIAL, the Government was not able to make ready proper connectivity to Airport, BIAL built at its own cost the Trumpet Flyover on National highway to connect to the Airport which is in the nature of "Bridges". As per the draft agreement in place, the term of trumpet flyover is for a period of 20 years. Hence BIAL is depreciating the same with life of 20 years. Hence we request the Authorities to propose life of 20 years for Trumpet flyover which is specific to BIAL."

"Upon issuance of useful lives by Authority, Airport Operators will be obliged to follow depreciation rates as per Authority's Order and no other rates will be allowed. Commercial Buildings being capital expenditure in nature needs to be depreciated over the useful life of the asset. It may be excluded by the Authority in tariff determination as it is not part of RAB. However, commercial buildings also have a definite useful life and it cannot remain in the books of account for ever. Hence we request the Authority to state that in case of Non-RAB assets, depreciation policy of the company should be allowed to be adopted."

"BIAL has treated certain expenditure in connection with drafting of Concession Agreements and amortizing the same over the Concession period. There is no mention of such assets in Annex-5. Request the Authorities to include these expenditure as this is specific to BIAL."

"We understand that due care has been taken to include all possible assets under Annexure 5 Part II. However, we feel that there might be assets which does not fit into any of the Asset Categories for which useful life is proposed by Authority. Even though mentioned under Para 3.1.6 (e) of the Consultation Paper, we request the Authority include a specific clause in Annexure V that "for any other asset not specified in the list, the operators can adopt useful lives/ rates specified in Part C of Schedule II of The Companies Act 2013 or useful lives determined based on technical evaluation."

3.11.2 MIAL has submitted as follows:

Component accounting as required under Companies Act, 2013 - We draw attention of the Authority to the Schedule II of Companies Act which requires that where cost of a part of the asset is significant to total cost of the asset and useful life of that part is different from the useful life of the remaining asset, useful life of that significant part shall be determined separately (refer note 4 to the Schedule II).

In the case of airport terminal building there are various items such as Glass works and facades, canopies, wall and column cladding, planters and landscaping etc. which have useful lives (5 to 15 years) significantly different from civil works (30 years) and hence Authority should either provide different useful lives for such components or flexibility to decide on a case to case basis while determining aeronautical tariffs. MIAL has already complied with this statutory requirement and accordingly provided depreciation in its books of accounts at different rates for different components as mentioned above.

Authority should also provide specifically that useful life being proposed for this category is only for the civil works related to these buildings. We wish to draw your attention to the para 7.3.2 of ICAI Report where in it has referred to Civil Works only of the Terminal Building under this category and has not referred to other components of the Terminal Building.

Authority's analysis

3.11.3 Authority has carefully evaluated the comments provided by the Stakeholders.

3.11.4 Authority notes BIAL's submission on specific assets and its request to include a statement on assets not considered as part of the prescribed useful life. Authority also notes BIAL's comment on commercial buildings being not part of RAB.

3.11.5 Authority notes that these are specific assets that could be created in different airports, based on the specific requirements. Such specific assets would have to be individually evaluated technically for their useful life and depreciated for which technical justification should be submitted to the Authority. Also, the Authority will add a statement that "For assets not forming part of RAB, depreciation shall be charged based on Companies Act/ Technical evaluation of useful lives"

3.11.6 The Authority notes MIAL's submission on the Companies Act requirement for key components of the asset to be evaluated differently for the significant value components of the asset. Authority is of the view that this is to be complied with by the Airport Operators.

Decision No. 1 Regarding useful lives

1.a. To determine useful lives for key Airport Assets under Part B of Schedule II to Companies Act 2013.

1.b. To determine useful lives of key Airport Assets as prescribed in Annexure enclosed.

1.c. To consider effective date of the Order as 1st April 2018

1.d. To propose that the carrying amount of the asset as on the date of effect shall be depreciated over the remaining useful life of asset.

1.e. To recommend minimum asset group and sub-group information to be maintained as detailed in Para 7.3.2 of ICAI study report.

4. Order

4.1.1 In exercise of powers conferred by Section 13 (1) (a) of the AERA Act 2008 and under Part B of Schedule II to Companies Act, 2013 as stated in Part-I of Annexure-5, the Authority determines useful lives for key Airport Assets as detailed in **Annexure - I**. This order may be incorporated and read at a part of the guidelines for tariff determination for airport operators issued by the Authority vide its Order no. 13/2010-11 dated 12.01.2011.

4.1.2 These will be effective from Accounting year commencing from 1st April 2018.

By the Order of and in the Name of the Authority

(Puja Jindal)
Secretary

To

All Airport Operators at Major Airports (as per list attached).

Copy to:-

Secretary, Ministry of Civil Aviation, Rajiv Gandhi Bhawan, New Delhi – 110003 – For information

LIST OF AIRPORT OPERATORS AT MAJOR AIRPORTS

1. **Dr. Guru Prasad Mahopatra,**
   IAS, Chairman,
   Airports Authority of India,
   Rajiv Gandhi Bhawan,
   New Delhi.

2. **Shri V.J. Kurian, IAS,**
   Managing Director,
   Cochin International Airport Pvt. Ltd. (CIAL),
   Ndedumbassery, Kochi Airport P.O.,
   Ernakulam – 683 111,
   Kerala.

3. **Shri K Narayana Rao,**
   Director,
   Delhi International Airport Pvt. Ltd. (DIAL),
   New Udan Bhawan, Opp. Terminal 3,
   IGI Airport, New Delhi – 110 037.

4. **Shri S.G.K Kishore,**
   Chief Executive Officer,
   GMR Hyderabad International Airport Pvt. Ltd. (HIAL),
   GMR Aero Towers, 4th Floor,
   Rajiv Gandhi International Airport,
   Shamshabad, Hyderabad – 500 409.

5. **Shri Sanjiv Bhargava,**
   Vice President – Regulatory,
   Mumbai International Airport Ltd (MIAL),
   CSI Airport, 1st floor Terminal 1B,
   Santacruz (E), Mumbai- 400 059

6. **Shri Hari K Marar,**
   Executive Director & President,
   Bangalore International Airport Pvt. Ltd. (BIAL),
   Alpha-2, Administration Block,
   Bengaluru International Airport,
   Devanahalli, Bangalore – 560 300.

7. **Shri Sunil Dutt,**
   Chief Executive Officer,
   Chandigarh International Airport Ltd.
   New Civil Air Terminal Village,
   Jureri, Mohali – 140306
   Punjab.

8. **Shri Jayakrishnan Sivadasa Kurup,**
Chief Financial Officer,
Kannur International Airport Ltd.,
"Parvathy", T.C. 36/1,
N.H. Bypass, Chacka,
Thiruvananthapuram, Kerala – 695024

9. **Shri Vishwas M Patil,**
Chairman and Managing Director,
MIHAN India Limited,
1st Floor, Old Terminal Building,
Dr. Babasaheb Ambedkar International Airport,
Nagpur, Maharashtra-440005

Annexure - I

USEFUL LIFE OF ASSESTS
(Effective from 01.04.2018)

S. No.	Asset Category	Useful Life (in Yrs)	Deprecation Rate (%)	Remarks
1	Cost of Land Acquisition	-	No depreciation	To be added to Land cost in the Owners books
2	Land Development Cost			Own Land - To be added to Land cost Leased Land - Cost to be amortised over the lease period ***(See Note 6)***
3	Terminal Building (including VIP Terminal, Bus Terminal, Haj Terminal)	30/ 60	3.33/ 1.67	Either 30 years or 60 years as evaluated by the Airport Operator
4	Building In Operational Area	30/ 60	3.33/ 1.67	
5	Utility Building	30/ 60	3.33/ 1.67	
6	Commercial Building			Not Part of RAB. Depreciation can be accounted in books as per useful life determined by the Airport Operator
7	Cargo Complex	30/ 60	3.33/ 1.67	As per Companies Act
8	Residential Building	30/ 60	3.33/ 1.67	As per Companies Act
9	Main Access Roads, Roads in Operational area, Boundary wall, Security fencing	05/ 10	20/ 10	As per Companies Act
10	Baggage Handling System/ Escalators/ Elevators/ Travellite/ HVAC Equipments/ Cargo ASRS / ETV Equipment	15	6.67	As per Companies Act
11	X-Ray Machine, RT Set, DFMD, HHMD, Security Equipment	15	6.67	As per Companies Act
12	Office Equipment	05	20	As per Companies Act
13	Furniture & Fixtures - Other than trolleys	7	14.29	
14	Furniture & Fixtures - Trolleys	3	33.33	
15	Cargo Equipment, Dollies, PPT	15	6.67	As per Companies Act
16	Computers - End User Devices	3	33.33	For items as defined under Companies Act
17	Computers - Servers and Networks	06	16.67	As per Companies Act
18	CUTE Equipment	06	16.67	
19	Electrical Installation and Equipments - Electrical fittings, including Runway lighting system Gen-set/ Power Equipment	10	10	As per Companies Act
20	Flight Information System, AOCC Equipment	10	10	As per Companies Act
21	Light Motor Vehicles and Heavy Motor Vehicles	08	12.50	As per Companies Act
22	Crash Fire Tenders, Other Fire Equipment including Pumps, Sprinkers	15	6.67	As per Companies Act
23	Intangible assets - Computer Software			As per Useful lifes estimated by the Airport Operator supported by Technical Justifications

24	Runway, Taxiway, Apron	30	3.33	**Extension of Runway** Cost to be kept separately. Depreciation to be charged on the useful life of the extended area. **Upgradation of the Runway** : The cost should be depreciated over the balance period of the useful life of the existing runway. **Resurfacing & Runway:** The cost of resurfacing & runway leading to restoration of original PCN value would be amortized over 05 years for the purpose of Tariff computations, while accounting of such costs could be done on the basis of applicable accounting principles and standards. ***(Also Refer Note 5)***
25	Hanger	30/ 60	3.33/ 1.67	As per Companies Act

Notes:	
1	The above rates shall be effective from Accounting periods commencing on / after 1st April 2018
2	From the date this Schedule comes into effect, the book value of the asset as on that date (a) shall be depreciated over the remaining useful life of the asset as per thisSchedule; (b) after retaining the residual value, shall be recognised in the opening balance of retained earnings where the remaining useful life of an asset is nil.
3	Useful life specified is for whole of the asset. Where cost of a part of the asset is significant to total cost of the asset and useful life of that part is different from the useful life of the remaining asset, useful life of that significant part shall be determined separately.
4	Where assets are developed/ constructed/ put to use, they should be depreciated over the available lease period or the useful life prescribed, whichever is less. Value to be depreciated should be determined after reducing any asset realisation value that the Operator may get, when the lease is surrendered. For the purpose of identifying the balance useful life, balance period remaining out of the initial lease period plus the first extension at the option of the Operator should be considered, unless confirmed decision for non-renewal of lease is taken and recorded by the Airport Operator.
5	Runway/ Taxiway - If there is a different rate adopted by the Airport Operator, between 20 to 30 years, the same should be justified and backed up by suitable technical certification which will be critically examined by the Authority and a view taken on the same.
6	Land Development Costs - Separate cost may not be available in the financial records, for all such past works carried out in the past which have been already capitalised as of the date of the Order and hence this will be applicable for all capitalisations to be done from the effective date of this Order.
7	Specific assets, other than those listed above, could be created in different airports, based on the specific requirements. Such specific assets would have to be individually evaluated technically for its useful life and depreciated for which technical justification should be submitted to the Authority.
8	For assets not forming part of RAB, depreciation shall be charged based on Companies Act/ Technical evaluation of useful lives
9	The Depreciation rate shall be applied on Straight Line Method.

Annexure-II

Report on Study of Useful Life and Depreciation rates for Airport Assets

By

The Corporate Laws & Corporate Governance Committee

Of

The Institute of Chartered Accountants of India

The Corporate Laws & Corporate Governance Committee of ICAI

THE INSTITUTE OF CHARTERED ACCOUNTANTS OF INDIA

(Set up under an Act of Parliament)

Preamble

The Airports Economic Regulatory Authority of India (AERA) is the economic regulator for Airports constituted under Airports Economic Regulatory Authority Act, 2008. The Authority in its several orders has observed that in the Schedule-II of the Companies Act, 2013, useful lives of several tangible assets have been mentioned, but it does not refer to airport specific assets, particularly Runway, Taxiway and Apron. In absence of any further clarity on the subject, the Authority, for the purpose of tariff determination in the interim, has gone by the useful life of these assets as per the past practice, where airports had adopted different depreciation rates for these assets varying from 8 years to 30 years, as depreciation rates for these assets were also not mentioned in the Companies Act, 1956.

However, the Authority felt that in order to have a consistency in its regulatory approach, the depreciation rates for airport specific assets, needs to be specified and notified in terms of the provisions of the Schedule-II of the Companies Act, 2013. The Authority, has therefore decided to institute a study to identify the airport specific assets, which have not been covered in Part-C of Schedule-II of the Companies Act, 2013, and prescribe a useful life for these assets in line with the industry practice and accounting principles.

In view of this, the Authority requested the Institute of Chartered Accountants of India to conduct a Study on prescribing useful life of Airport specific assets in line with the industry practice and accounting principles.

The Corporate Laws & Corporate Governance Committee of the Institute of Chartered Accountants of India had undertaken this Study. ICAI is research and educational institute and undertook this study as a part of Research.

This Research for AERA does not prohibit the Institute to take up any other assignment or render any advice or opinion relating to any work/ project assigned by any other Authority.

CONTENTS

1. Overview 4
2. Terms of Reference 6
3. List of Information sources 6
4. Price Regulated structures in India – Trends in other regulators 7
5. Analysis of assets classified as Airport Assets 11
6. Review of Key Asset Groups 14
7. Other matters for consideration 31
8. Conclusions 33

1. Overview

1.1 The Airports Economic Regulatory Authority of India (Authority/ AERA) was established under "The Airports Economic Regulatory Authority of India Act, 2008" (the "AERA Act") to perform the functions in respect of major airports, inter alia:

1.1.1 to determine the tariff for the aeronautical services;

1.1.2 to determine the amount of the development fees in respect of major airports;

1.1.3 to determine the amount of the passengers service fee levied under rule 88 of the Aircraft Rules, 1937 made under the Aircraft Act, 1934; and

1.1.4 to monitor the set performance standards relating to quality, continuity and reliability of service as may be specified by the Central Government or any authority authorized by it in this behalf.

1.2 As per Section 2 (a) of the AERA Act, any service provided, inter alia,

1.2.1 for the landing, housing or parking of an aircraft or any other ground facility offered in connection with aircraft operations at an airport;

1.2.2 for ground safety services at an airport;

1.2.3 for ground handling services relating to aircraft, passengers and cargo at an airport;

1.2.4 for the cargo facility at an airport; and

1.2.5 for supplying fuel to the aircraft at an airport, are aeronautical services and the tariff for such aeronautical services at a major airport is to be determined by this Authority in terms of Section 13(1)(a) of the Act.

1.3 The Authority is determining aeronautical tariffs in accordance with the policy guidance provided by the legislature under the provisions of the AERA Act. The Authority is required to adhere to this legislative policy guidance in discharge of its functions in respect of the major airports. These functions are indicated in Section 13 (1) of the AERA Act:

1.3.1 Determination of the tariff for the aeronautical services;

1.3.2 Determination of the amount of the development fees including User Development Fee,

1.3.3 Determination of the amount of the passenger service fee levied under rule 88 of the Aircraft Rules, 1937 made under Aircraft Act, 1934; and

1.3.4 Monitoring the set performance standards relating to quality, continuity and reliability of service as may be specified by the Central Government or any Authority authorised by it in this behalf.

1.4 Further to the specification of functions to be performed by the Authority, the legislature also provides policy guidance on the factors, which are to be considered by the Authority in performing those functions. Under Section 13 (1) (a) of the AERA Act, the legislature requires the Authority to determine tariff for the aeronautical services taking into consideration the following factors:

1.4.1 the capital expenditure incurred and timely investment in improvement of airport facilities;

1.4.2 the service provided, its quality and other relevant factors;

1.4.3 the cost for improving efficiency;

1.4.4 economic and viable operation of major airports;

1.4.5 revenue received from services other than the aeronautical services;

1.4.6 concession offered by the Central Government in any agreement or memorandum of understanding or otherwise;

1.4.7 any other factor which may be relevant for the purposes of the Act.

1.5 Value of net assets (Regulatory Asset Base) and depreciation charged are two critical components, among others which influence the determination of compensation to be paid to the Airport Operator and consequently the tariff on Airport users – Airlines, Passengers and others.

1.6 Part B Schedule II of Companies Act 2013 had prescribed that:

The useful life or residual value of any specific asset, as notified for accounting purposes by a Regulatory Authority constituted under an Act of Parliament or by the Central Government shall be applied in calculating the depreciation to be provided to such asset irrespective of the requirements of this schedule.

1.7 In this backdrop, in order to ensure uniformity in consideration for tariff proposals and tariff orders, AERA proposes to carry out a study on the useful life of various assets used in the Airport.

1.8 AERA has engaged Institute of Chartered Accountants of India (ICAI) to carry out the study and present the findings to the Authority for consideration.

1.9 This report lists down the methodology, approach and findings of the study carried out by the ICAI.

2. Terms of Reference

Terms of Reference for the engagement were as follows:

2.1 To identify class of assets which can be considered as exclusively Airport Asset such as Runway, Taxiway, Apron etc., which would be covered primarily within the scope of this study and other class of assets which are used in Airport as well as several other industries like Escalators, Walkalators for which a differential treatment in case of Airport may be required.

2.2 To survey technical useful life assessment for these assets considering OEM life prescriptions, technical studies on life expectations considering their respective operating environment in India, technical studies on the subject by AAI if any, life prescription of similar assets by other sector specific regulators and other technical literature available on this subject.

2.3 To consider generally accepted accounting practices in India with regard to depreciation rates.

2.4 To study practices of Airports in different continents specifically Asian Airports and also consider prescription in this regard by ICAO. To address India specific issues while considering such international practices.

2.5 To consider current practices by Airports in India both the Airports under AAI as well as private Airports.

2.6 Analyzing and drawing reference from the aspects as above, recommend useful life for the specific Airport assets under the scope of study and the differential rates for other common assets in case of an Airport.

PS: ICAI accepts the study except the point related to Conflict of Interest (Para 5 of your letter dated 7th September, 2015) as ICAI is research and educational institute and undertaking this study as a part of Research.

3. List of Information sources

Following is a list of information sources considered for the purpose of this study

Relevant prescriptions of other tariff regulators in India	CERC Regulations dated 21st February 2014
ICAO guidelines	Airports Economic Manual 9562, 2013 edition
	Aerodrome Design Manual 9157, Part 3

Other International guidelines available	A guide to Airfield Pavement design and evaluation - Design and Maintenance Guide – UK
	U.S. Department of Transportation Federal Aviation Administration – AC No. 150/5320-6E
	FAA Airport Compliance Manual – Order 5190.B - 2009
Financial statements of Airports (From public domain)	Financial Statement of DIAL
	Financial Statement of HIAL
	Financial Statements of certain airports in Asia and other parts of the world (as available from public domain)
Information provided by AERA	AAI Technical Study report
	Fixed Asset Registers of BIAL, MIAL, HIAL, DIAL, AAI-Ahmedabad
	Financial Statements of BIAL, CIAL
Agreements by Government with Private Airports	Concession Agreement with BIAL
	Concession Agreement with HIAL
	OMDA Agreement with DIAL
	OMDA Agreement with MIAL

4. Price Regulated structures in India – Trends in other regulators

4.1 Price regulated entities in India include Power Projects, Ports, Toll roads.

4.2 Among the price regulated entities, CERC has issued specific guidelines on the useful lives of key Power project specific assets which is used by the regulated entities for accounting and tariff determination purposes (Refer Appendix 1 – CERC notification dated 21st February 2014)

4.3 Extract of the useful life definition given in the above guidelines is as below.

(67) **'Useful life'** in relation to a unit of a generating station and transmission system from the COD shall mean the following, namely:

(a)	Coal/Lignite based thermal generating station	25 years
(b)	Gas/Liquid fuel based thermal generating station	25 years
(c)	AC and DC sub-station	25 years
(d)	Gas Insulated Substation (GIS)	25 years
(d)	Hydro generating station including pumped Storage hydro generating stations	35 years
(e)	Transmission line (including HVAC & HVDC)	35 years
(f)	Communication system	15 years

4.4 Schedule of rates to be used for depreciation and salvage value is prescribed in Appendix II to the regulation as below:

Appendix-II

Depreciation Schedule

Sr. No.	Asset Particulars	Depreciation Rate (Salvage Value=10%)
		SLM
A	Land under full ownership	0.00%
B	Land under lease	
(a)	for investment in the land	3.34%
(b)	For cost of clearing the site	3.34%
(c)	Land for reservoir in case of hydro generating station	3.34%
C	Assets purchased new	
a.	Pl & Machinery in generating stations	
(i)	Hydro electric	5.28%
(ii)	Steam electric NHRB & waste heat recovery boilers	5.28%
(iii)	Diesel electric and gas plant	5.28%
b.	Cooling towers & circulating water systems	5.28%
c.	Hydraulic works forming part of the Hydro-generating stations	
(i)	Dams, Spillways, Weirs, Canals, Reinforced concrete flumes and siphons	5.28%
(ii)	Reinforced concrete pipelines and surge tanks, steel pipelines, sluice gates, steel surge tanks, hydraulic control valves and hydraulic works	5.28%
d.	Building & Civil Engineering works	
(i)	Offices and showrooms	3.34%
(ii)	Containing thermo-electric generating plant	3.34%
(iii)	Containing hydro-electric generating plant	3.34%
(iv)	Temporary erections such as wooden structures	100.00%
(v)	Roads other than Kutcha roads	3.34%
(vi)	Others	3.34%
e.	Transformers, Kiosk, sub-station equipment & other fixed apparatus (including plant	
(i)	Transformers including foundations having rating of 100 KVA and over	5.28%
(ii)	Others	5.28%

f.	Switchgear including cable connections	5.28%
g.	Lightning arrestor	
(i)	Station type	5.28%
(ii)	Pole type	5.28%
(iii)	Synchronous condenser	5.28%
h.	Batteries	5.28%
(i)	Underground cable including joint boxes and disconnected boxes	5.28%
(ii)	Cable duct system	5.28%
i.	Overhead lines including cable support	
(i)	Lines on fabricated steel operating at terminal voltages higher than 66 KV	5.28%
(ii)	Lines on steel supports operating at terminal voltages higher than 13.2 KV but not exceeding 66 KV	5.28%
(iii)	Lines on steel on reinforced concrete support	5.28%
(iv)	Lines on treated wood support	5.28%
j.	Meters	5.28%
k.	Self propelled vehicles	9.50%
l.	Air Conditioning Plants	
(i)	Static	5.28%
(ii)	Portable	9.50%
m.(i)	Office furniture and furnishing	6.33%
(ii)	Office equipment	6.33%
(iii)	Internal wiring including fittings and apparatus	6.33%
(iv)	Street Light fittings	5.28%
n.	Apparatus let on hire	
(i)	Other than motors	9.50%
(ii)	Motors	6.33%
o.	Communication equipment	
(i)	Radio and high frequency carrier system	6.33%
(ii)	Telephone lines and telephones	6.33%
p.	I. T Equipment including software	15.00%
q.	Any other assets not covered above	5.28%

5. Analysis of assets classified as Airport Assets

5.1 Assets used in Airport comprises of assets specific to airports, common assets (used in other industries too), which could have a different useful life in Airports based on its usageand common assets used in many other industries with similar useful life as in Airports.

5.2 A listing of key assets used in Airports has been made. This has been further segregated as those which could be considered as specific to Airports and those which may have a specific relevance to the Airports. This is summarized as below:

S	Asset Description	Airport Specific?	Special Consideration for Airport?	Remarks
1	Civil works – Runway	✓	-	
2	Civil works – Taxiway	✓	-	
3	Civil works – Apron	✓	-	
4	Civil works - Terminal Building	-	✓	Considering material value and usage,may need a specific review
5	Civil works – Roads	-	✓	
6	Boundary Wall/ Security fence	x	x	
7	Landscaping	x	x	
8	Check-in counters	✓	x	Can consider as part of Furniture / Fittings as any other counters
9	P&M – X-Ray Machines	-	✓	Based on usage pattern at Airport may need a specific

S	Asset Description	Airport Specific?	Special Consideration for Airport?	Remarks
10	P&M – Baggage scanning /handling systems	-	✓	review
11	P&M – Security Equipment	-	✓	
12	P&M – Escalators/ Elevators	x	x	
13	P&M – Air conditioning system	x	x	
14	P&M – Power house related equipment	x	x	
15	P&M – Water Management related	x	x	
16	P&M - Airport Communicati on system – CUTE etc.	x	x	
17	P&M – Access Control system	x	x	
18	Trolleys	✓	x	Can consider as part of Furniture / Fittings
19	Plumbing works	x	x	

S	Asset Description	Airport Specific?	Special Consideration for Airport?	Remarks
20	Airfield lighting	x	x	Can consider equal to Electrical/ lighting installations
21	Electrical Installations	x	x	
22	Furniture & Fittings	x	x	
23	Computers	x	x	
24	Vehicles – Crash Fire Tenders/ ARFF	x	-	
25	Vehicles - General	x	x	
26	Intangible assets – Airport specific	x	x	
27	Software	x	x	
28	Aerobridges system	x	x	
29.	Fire fighting/ Fire alarm system	x	x	
30.	Land improvement works	x	✓	

5.4 From the above analysis it is summarized that the following assets / asset categories need a specific review:

- Land development activities
- Airfield works – Runway, Taxiway and Apron
- Buildings and Roads
- Specific Equipments – Aerobridges, Baggage Handling and Security equipments

6. Review of Key Asset Groups

6.1 Improvements to Land

6.1.1 Land development activities in relation to Airports comprise of preparing and leveling the land to be fit for further development activities relating to Airside works, Buildings, Roads etc.

6.1.2 In India, Airports have been constructed on lands owned by the Airport Operators (Ex. AAI Airports, Cochin Airport etc.) or lands which have been given on lease by Government (acquired by Government / Government agencies) wherein the land lease term generally runs co-terminus with theConcession Agreement which gives the right of Airport Development to the Airport Operator.

6.1.3 Land development activities carried out before further construction works are done, are permanent in nature and do not need to be altered/ changed in any time in future and do not have a determinate useful life

6.1.4 Where Land is owned by the company, these are generally to be treated as part of the Land value and is not to be depreciated.

6.1.5 In cases where the development activities are carried out on land which is leased to the Airport Operator, the development charges are generally to be charged off over the period of the lease rentals.

6.1.6 Term of lease, as noted from the Concession agreements / OMDA is as below:

6.1.7 Extract of agreement with BIAL is as below. From the below extract, it is clear that the Concession agreement is for a period of 30 years from start of Airport, extendable for another 30 years at the option of BIAL and extendable at the end of 60 years based on mutual discussions and acceptance.

13.7.1 Unless terminated earlier in accordance with Article 4.3.1, Article 13.4, or by mutual agreement between the Parties in writing, this Agreement shall continue in full force and effect from its commencement in accordance with Article 4 until the thirtieth (30th) anniversary of the Airport Opening Date whereupon the term of the Agreement shall at the option of BIAL be extended for a further period of thirty (30) years, provided that the following Articles of this Agreement shall have no further force and effect from the thirtieth (30th) anniversary of the Airport Opening Date: 5.1.2

(Obligations of GoI), 5.5 (Existing Airport), 7.7 (Commissioning), 8.17.2 (Minimum Disruption), 10.2 (Airport Charges), and 15.5 (Change in Law).
BIAL may at any time prior to the twenty-seventh (27th) anniversary of the Airport Opening Date, exercise the aforesaid option of extending the term of this Concession Agreement by another thirty (30) years. In the event of BIAL not exercising its option of extending the term of this Concession Agreement, then the Concession Agreement shall expire on the thirtieth (30th) anniversary of the Airport Opening Date and GoI or its nominee shall acquire all of BIAL's rights, title and interests in and to the Airport in the manner set forth in Article 13.5 on payment on the Transfer Date to BIAL the aggregate of:
(i) one hundred per cent (100%) of the par value of the issued, subscribed and paid-up share capital of BIAL; and
(ii) one hundred per cent (100%) of the Debt.

13.7.2 In the event of extension of the term of this Agreement under Article 13.7.1, the Parties shall commencing from the expiry of the fifty-fifth (55th) anniversary of the Airport Opening Date, initiate dialogue to extend the term of this Agreement on mutually acceptable terms and conditions. If the Parties are unable to agree upon the revised terms and condition of extension of the Airport by the expiry of the fifty-seventh (57th) anniversary of the Airport Opening Date, then, save as provided in Article 13.7.3 below, the Agreement shall expire on the sixtieth (60th) anniversary of the Airport Opening Date and GoI or its nominee shall acquire all of BIAL's rights, title and interests in and to the Airport in the manner set forth in Article 13.5 on payment on the Transfer Date to BIAL of one hundred per cent (100%) of the Debt.

13.7.3 If BIAL and GoI are unable to agree terms for the renewal of this Agreement by the expiry of the fifty-seventh (57th) anniversary of the Airport Opening Date GoI shall be entitled to commence discussions with third parties provided that GoI shall not enter into a concession agreement in respect of the Airport with a third party on more favourable terms than those offered to BIAL.

6.1.8 Extract of agreement with HIAL is as below. From the below extract, it is clear that the Concession agreement is for a period of 30 years from start of Airport, extendable for another 30 years at the option of HIAL and extendable at the end of 60 years based on mutual discussions and acceptance.

13.7 Term

13.7.1 Unless terminated earlier in accordance with Article 4.3.1, Article 13.4, or by mutual agreement between the Parties in writing, this Agreement shall continue in full force and effect from its commencement in accordance with Article 4 until the thirtieth (30th) anniversary of the Airport Opening Date whereupon the term of the Agreement shall at the option of HIAL be extended for a further period of thirty (30) years, provided that the following Articles of this Agreement shall have no further force and effect from the thirtieth (30th) anniversary of the Airport Opening Date: 5.1.2 (Obligations of GoI), 5.5 (Existing Airport), 7.7 (Commissioning), 8.17.2 (Minimum Disruption), 10.2 (Airport Charges), and 15.5 (Change in Law). HIAL may at any time prior to the twenty-seventh (27th) anniversary of the Airport Opening Date, exercise the aforesaid option of extending the term of this Concession Agreement by

another thirty (30) years. In the event of HIAL not exercising its option of extending the term of this Concession Agreement, then the Concession Agreement shall expire on the thirtieth (30th) anniversary of the Airport Opening Date and GoI or its nominee shall acquire all of HIAL's rights, title and interests in and to the Airport in the manner set forth in Article 13.5 on payment on the Transfer Date to HIAL the aggregate of (a) and (b):

(a) the lowest of the following:

i) one hundred per cent (100%) of the par value of the equity; or

ii) 100% of the equity of HIAL subscribed and paid-up on the Transfer Date; or

iii) the Net Worth of the Company;

(b) one hundred per cent (100%) of the Debt.

less any proceeds from insurance claims, including political risk insurance, if any, raised by HIAL, Sponsor and Lenders in respect of claims made in respect of the Airport before the expiry of the term.

13.7.2 In the event of extension of the term of this Agreement under Article 13.7.1, the Parties shall commencing from the expiry of the fifty-fifth (55th) anniversary of the Airport Opening Date, initiate dialogue to extend the term of this Agreement on mutually acceptable terms and conditions. If the Parties are unable to agree upon the revised terms and condition of extension of the Airport by the expiry of the fifty-seventh (57th) anniversary of the Airport Opening Date, then, save as provided in Article 13.7.3 below, the Agreement shall expire on the sixtieth (60th) anniversary of the Airport Opening Date and GoI or its nominee shall acquire all of HIAL's rights, title and interests in and to the Airport in the manner set forth in Article 13.5 on payment on the Transfer Date to HIAL one hundred per cent (100%) of the Debt less any proceeds from insurance claims, including political risk insurance, if any, received by HIAL, Sponsor and Lenders after the expiry of the term in respect of claims made in respect of the Airport before the expiry of the term.

13.7.3 If HIAL and GoI are unable to agree terms for the renewal of this Agreement by the expiry of the fifty-seventh (57th) anniversary of the Airport Opening Date GoI shall be entitled to commence discussions with third parties provided that GoI shall not enter into a concession agreement in respect of the Airport with a third party on more favourable terms than those offered to HIAL.

6.1.9 Extract of agreement with DIAL is as below. From the below extract, it is clear that the Concession agreement is for a period of 30 years from start of Airport, extendable for another 30 years at the option of DIAL.

18.1 Term and Expiry

(a) Unless terminated earlier in accordance with Article 17.3 or Article 16.1.5, or by mutual agreement between the Parties in writing, this Agreement shall continue in full force and effect from commencement of the Effective Date (except for Chapters 1, 3, 7, 15, 17 and Articles 4.3, 5.2(b)(i), 5.4, 8.3.5, 8.4.2, 8.5.9, 11.1.1, 13.1(b), 20.3.7 which will be binding on the Parties as from the date of execution hereof) until the 30th anniversary of the Effective Date.

(b) *Prior to the expiry of 30 years from Effective Date, JVC shall have the right to extend the Term hereof by a written notice for an additional term of 30 years on the same terms and conditions as contained herein subject to the following:*

(i) *No JVC Event of Default, has occurred during the preceding five (5) years of the 25th year from the Effective Date; and*

(ii) *such right of extension being exercised prior to the 25th anniversary from the Effective Date, but not earlier than six (6) months from the 25th anniversary from the Effective Date. Provided however, if JVC Event of Default or any other default by JVC triggering levy of liquidated damages occurs at any time from time of exercise by JVC of right of extension until 30th anniversary of the Effective Date then JVC right of extension of an additional term of 30 years shall lapse unless otherwise agreed by AAI.*

(c) *In the event this Agreement in not extended by an additional period of 30 years in the manner provided hereinabove, then the Agreement shall expire on the 30th anniversary of the Effective Date and AAI or its nominee shall acquire all of JVC's rights, title and interests in and to the Transfer Assets in the manner set forth in Article 19 on payment within 6 (six) months of Transfer Date to JVC of:*

(i) *120% of the subscribed and paid-up value of the Equity share capital of the JVC relatable to the Transfer Assets, as determined in accordance with Article 19.6; and*

(ii) *100% of the Debt relatable to Transfer Assets, as determined in accordance with Article 19.6.*

In addition, AAI shall have the right but not the obligation to acquire all of JVC's rights, title and interests in and to all or any of the Non-Transfer Assets in the manner set out in Article 19, on payment within 6(six) months of Transfer Date the Net Present Value of such Non-Transfer Assets, as determined in accordance with Article 19.6.

(d) *In the event this Agreement is extended by an additional period of 30 years in the manner provided hereinabove, and this Agreement is not terminated prior thereto, then the Agreement shall expire on the 60th anniversary of the Effective Date and AAI or its nominee shall acquire all of JVC's rights, title and interests in and to the Transfer Assets in the manner set forth in Article 19 on payment within 6 (six) months of Transfer Date to JVC of 100% of the Debt relatable to Transfer Assets as determined in accordance with Article 19.6.*

In addition, AAI shall have the right but not the obligation to acquire all of JVC's rights, title and interests in and to all or any of the Non-Transfer Assets in the manner set out in Article 19, on payment within 6 (six) months of Transfer Date the Net Present Value of such Non-Transfer Assets, as determined in accordance with Article 19.6.

(e) *The total duration of the validity of this Agreement from the Effective Date for an initial period of 30 years, and if extended by an additional period of 30 years, then such 60 years, unless terminated earlier in accordance with the terms hereof, shall be the Term hereof.*

6.1.10 Extract of agreement with MIAL is as below. From the below extract, it is clear that the Concession agreement is for a period of 30 years from start of Airport, extendable for another 30 years at the option of MIAL.

18.1 Term and Expiry

(a) Unless terminated earlier in accordance with Article 17.3 or Article 16.1.5,or by mutual agreement between the Parties in writing, this Agreementshall continue in full force and effect from commencement of the Effective Date (except for Chapters 1, 3, 7, 15, 17 and Articles 4.3, 5.2(b)(i), 5.4,8.3.5, 8.4.2, 8.5.9, 11.1.1, 13.1(b), 20.3.7 which will be binding on the Parties as from the date of execution hereof) until the 30th anniversary ofthe Effective Date.

(b) Prior to the expiry of 30 years from Effective Date, JVC shall have the right to extend the Term hereof by a written notice for an additional termof 30 years on the same terms and conditions as contained herein subject to the following:

(i) No JVC Event of Default, has occurred during the preceding five (5) years of the 25th year from the Effective Date; and

(ii) such right of extension being exercised prior to the 25th anniversary from the Effective Date, but not earlier than six (6) months fromthe 25th anniversary from the Effective Date.

Provided however, if JVC Event of Default or any other default by JVC triggering levy of liquidated damages occurs at any time from time ofexercise by JVC of right of extension until 30th anniversary of the Effective Date then JVC right of extension of an additional term of 30years shall lapse unless otherwise agreed by AAI.

(c) In the event this Agreement in not extended by an additional period of 30 years in the manner provided hereinabove, then the Agreement shall expire on the 30th anniversary of the Effective Date and AAI or its nominee shall acquire all of JVC's rights, title and interests in and to the Transfer Assets in the manner set forth in Article 19 on payment within 6 (six) months of Transfer Date to JVC of:

(i) 120% of the subscribed and paid-up value of the Equity share capital of the JVC relatable to the Transfer Assets, as determined inaccordance with Article 19.6; and

(ii) 100% of the Debt relatable to Transfer Assets, as determined in accordance with Article 19.6.

In addition, AAI shall have the right but not the obligation to acquire all of JVC's rights, title and interests in and to all or any of the Non-TransferAssets in the manner set out in Article 19, on payment within 6(six) months of Transfer Date the Net Present Value of such Non-Transfer Assets, as determined in accordance with Article 19.6.

(d) In the event this Agreement is extended by an additional period of 30 years in the manner provided hereinabove, and this Agreement is not terminated prior thereto, then the Agreement shall expire on the 60th anniversary of the Effective Date and AAI or its nominee shall acquire all of JVC's rights,title and interests in and to the Transfer Assets in the manner set forth in Article 19

on payment within 6 (six) months of Transfer Date to JVC of100% of the Debt relatable to Transfer Assets as determined in accordance with Article 19.6.

In addition, AAI shall have the right but not the obligation to acquire all of JVC's rights, title and interests in and to all or any of the Non-TransferAssets in the manner set out in Article 19, on payment within 6 (six) months of Transfer Date the Net Present Value of such Non-TransferAssets, as determined in accordance with Article 19.6.

(e) The total duration of the validity of this Agreement from the Effective Date for an initial period of 30 years, and if extended by an additionalperiod of 30 years, then such 60 years, unless terminated earlier in accordance with the terms hereof, shall be the Term hereof.

6.1.11 From the above agreements it can be seen that the term of the concession is for a minimum period of 30 years which is extendable by another 30 years at the option of the airport operator.

6.1.12 Hence, treatment of land development activities are summarized as follows:

a) **Land Development related costs should be identified and accounted as a separate line item under a sub-head of "Land Development" cost.**
b) **If the land is owned by the Airport Operator, Land development costs cannot be depreciated.**
c) **If the land is leased to the Airport Operator, Land development cost shall be depreciated over the balance period of lease term (total lease term to be considered shall be a minimum of 60 years). If a different total lease term is to be considered, the same should be justified based on applicable underlying agreements.**

6.2 Runway, Taxiway and Apron

6.2.1 Runway, Taxiway and Apron are key Airfield assets which are specific to the Airport Operations. There are no specific rates prescribed for this under Companies Act 2013.

6.2.2 Observations on review of the Concession agreements and other International Prescriptions on Pavement and their useful lives are as given below.

6.2.3 ICAO Airports Economic Manual (2013 edition) has the following prescriptions for Useful life / depreciation

Table 4-5. Depreciation and/or amortization

Examples of range of depreciation periods	
Buildings (freehold)	20–40 years
Buildings (leasehold)[4]	Over the period of the lease
Runways and taxiways	15–30 years
Aircraft parking areas	15–30 years
Furniture and fittings	10–15 years
Motor vehicles	4–10 years
Electronic equipment (including Telecommunication equipment)	7–15 years
General equipment	7–10 years
Computer equipment	5–10 years
Computer software	3–8 years

6.2.4 UK Government – CAA prescription in "A guide to Airfield Pavement design and evaluation – Design and Maintenance Guide (February 2011)" states that:

4.7 DESIGN LIFE
4.7.1. The design method and the frequencies of trafficking in Table 5 assume the aircraft movements are spread fairly evenly over the life of the pavement

4.7.2. In normal circumstances pavement deterioration is gradual, becoming noticeable over a period of a few years. This deterioration can be due to surface weathering or structural fatigue or both. In deciding on an appropriate structural design life, the following considerations should be kept in mind:

(i) The need to keep major maintenance work on airfield pavements to a long term cycle.
(ii) The likelihood of a change in aircraft use after a number of years.
(iii) Durability of pavement construction. Concrete pavements are more durable than blacktop pavements assuming both are constructed in accordance with Defence Estates' Specification. The surface serviceability of concrete should, with the aid of minor maintenance work, be adequate for 25-35 years. On the other hand bituminous surfacings, as a result of surface weathering, generally require maintenance work in the form of slurry sealing, the first coat being required after 7-10 years, and more substantial restoration work after 20-25 years. In the case of friction case resurfacing may be required after approximately 15 years.
(iv) The cost of rehabilitation. Concrete pavements generally cost more to rehabilitate than flexible pavements.

4.7.3. With these factors in mind it is recommended that the structural design life be 20-30 years. The upper end of this range being for concrete pavements and the lower end forflexible pavements.

4.7.4. The design method assumes an increasing degree of minor maintenance (e.g. crack sealing) in the last few years of a pavement's life. Where such maintenance cannot be tolerated, the engineer may wish to project a structural design life beyond the expected life of the surfacing.

6.2.5 US Department of Federation Aviation Administration in its Advisory circular AC No. 150/5320-6E has stated as follows:

... The determination of pavement thickness requirements is a complex engineering problem. Pavements are subject to a wide variety of loading and climatic effects. The design process involves a large number of interacting variables, which are often difficult to quantify. Despite considerable research on this subject, it has been impossible to arrive at a direct solution for thickness requirements. For this reason, pavement engineers must base pavement thickness on a theoretical analysis of load distribution through pavements and soils, the analysis of experimental pavement data, and a study of the performance of pavements under actual service conditions. The FAA developed the FAARFIELD program using failure models based on full-scale tests conducted from the 1940s until the present. ***Pavements designed and constructed in accordance with FAA standards are intended to provide a minimum structural life of 20 years that is free of major maintenance*** *if no major changes in forecast traffic are encountered. Rehabilitation of surface grades and renewal of skid-resistant properties may be needed before 20 years because of destructive climatic effects and the deteriorating effects of normal usage.*

b. Structural Design. The structural design of airport pavements consists of determining both the overall pavement thickness and the thickness of the component parts of the pavement. ***There are a number of factors that influence the thickness of pavement required to provide satisfactory service. These include the magnitude and character of the airplane loads to be supported, the volume of traffic, the concentration of traffic in certain areas, and the strength of the subgrade soil and quality of materials that make up the pavement structure.***

6.2.4 FAA Airport Compliance Manual – Order 5190.B – 2009 states that*"Grant agreements for development other than land purchase.* ***Pavement*** *and other facilities built to FAA standards are* ***designed to last at least 20 years...."***

6.2.6 Aerodrome Design Manual Part 3 (2003 edition) which lays down detailed guidance on Airport construction also has references to the FAA practice as below:

Pavement designed in accordance with these standards are intended to provide a structural life of 20 years that is free from major maintenance if no major changes in forecast traffic are encountered. It is likely that rehabilitation of surface grades and renewal of skid resistant

properties will be needed before 20 years owing to destructive climatic effects and deteriorating effects of normal usage.

6.2.7 From the above, it can be noted that Pavement construction depends on various factors considering the soil conditions, expected volume of traffic, design life planned etc. wherein as per International prescriptions, design life is expected to be about 20 – 30 years. Though such prescriptions exist, the material clearly establishes that the design life of the pavement construction is a function of numerous variables and as defined / determined in each airport's case.

6.2.8 Hence, it is important to evaluate the design life of the Airfield pavements constructed in India, based on any specific agreement/ guidelines, as largely, the agreements or guidelines would have directed the selection of various parameters which determine the design life of the pavement.

6.2.9 Concession Agreement with BIAL specifies the type of pavement to be used and the design life of the pavements, for each category, as below:

1.1.10 RUNWAY
The runway is designed to accept B 747 aircraft and the ICAO aerodrome reference code is 4E.

The characteristics of the runway specification are:

Runway length - 4000m
Runway width - 45m
width of runway plus light paved shoulders - 60m
pavement type - flexible
Pavement classification number - 80
Runway strip width - 300m
Stop-ways at each threshold - 60m x60m
Runway orientation - 09/27
Usability factor - >95%
Turning circle at 09end.

The longitudinal and transverse profile, slope changes, sight distance, distance between slope changes, pavement markings, signage and surface accuracy are designed in accordance with the Standards and Recommended practices stipulated in ICAO Annex 14. ***The design life for the flexible pavement is 20 years.***

1.1.11 TAXIWAYS
The characteristics of the taxiway specification are:
width - 25m (code F)

Width of taxiway plus shoulder - 45m
Separation distance between the centre line of runway and taxiway - 190m
taxiway centre line to taxiway centre line - 97.50m
pavement type - flexible
PCN - 80

The longitudinal and transverse profile, slope changes, sight distance, distance between slope changes, pavement markings, signage and surface accuracy shall be in accordance with the Standards and Recommended Practices stipulated in ICAO Annex 14. ***The design life for the flexible pavement is 20 years.***

1.1.12 APRON.

The dimension of the concrete apron is 611m x181.5m. This apron can accommodate 13 code C aircraft or 7 Code D / E aircraft. Isolation bay will be designed for B-747 and constructed in the first phase. The pavement type is rigid. The PCN is 80 and the ***design life is 30 years.*** *The width of the apron service road shall be 10m.*

6.2.10 From the above, it is understood that the design life of Runways and Taxiways is 20 years for the flexible pavement and the design life for Apron (Rigid Pavement) is 30 years.

6.2.11 Concession Agreement of HIAL specifies the category pavement and other specifications but do not specify the design life, as detailed below:

3. **Runway**

A single runway is proposed for the Initial Phase. The runway is designed for wide bodied aircrafts.

The runway in phase 1A is located in the southern section of the Site.

The characteristics of the runway specification are summarized below:

•	Runway length	4260m
•	Runway width	45m
•	Width of runway plus paved shoulders	60m
•	Pavement type	Flexible
•	Runway strip width	300m
•	Runway orientation	09/27
•	Usability factor	>95%
•	Turning circle at 09 and 27 ends	Yes

The Airport Site and layout design allows for a second parallel runway (future) in the northern part of the Site. A separation distance of 2600 m between the runways is planned. This distance allows for safe independent runway operation in accordance with ICAO guidelines and provides for optimum use of the area between the runways for terminal and other commercial developments.

4. **Taxiways**

The taxiway system proposed between the runway and the apron will enable aircraft to travel with minimum of delay and permit the runway to operate to its maximum capacity. In the Initial Phase the Airport taxiway system will include the following:

- Parallel single taxiway
  Length: 2860m, width: 44m (23m pavement + 2x10.5m shoulders)
  Separation distance between the centreline of runway and parallel taxiway 225 m
- Runway entry / exit taxiways
  4 numbers at 90 degree angles, located at the following distances measured from the 09R end (west): 1010m, 2000m, 3220m and 3880m
- Apron taxi lanes
  One each on cargo terminal, main passenger terminal and aircraft maintenance apron

The general characteristics of the taxiway specification, other than the parallel taxiway, are summarized below:

•	Width	23m
•	Width of taxiway plus paved shoulder	44m
•	Pavement type	Flexible

5. Apron

The aprons are rigid pavement and the layout is designed to reflect international standards.

The objectives of the apron design include:

- To minimise taxiing distance to / from the runway.
- To provide sufficient taxi lanes to avoid delays when entering and departing the aerobridge / contact stands.
- To provide airside roads and equipment parking areas to ensure that the ground handling support for aircraft is sufficient and efficient.
- To ensure that operations can be conducted safely.

3. **Runway**

A single runway is proposed for the Initial Phase. The runway is designed for wide bodied aircrafts.

The runway in phase 1A is located in the southern section of the Site.

The characteristics of the runway specification are summarized below:

•	Runway length	4260m
•	Runway width	45m
•	Width of runway plus paved shoulders	60m
•	Pavement type	Flexible
•	Runway strip width	300m
•	Runway orientation	09/27
•	Usability factor	>95%
•	Turning circle at 09 and 27 ends.	Yes

The Airport Site and layout design allows for a second parallel runway (future) in the northern part of the Site. A separation distance of 2600 m between the runways is planned. This distance allows for safe independent runway operation in accordance with ICAO guidelines and provides for optimum use of the area between the runways for terminal and other commercial developments.

6.2.12 OMDA with DIAL and HIAL only specify that the requirements of DGCA/ICAO/IATA manuals have to be complied with and do not prescribe any other specific design life.

6.2.13 Trend of useful lives considered across different airports in India, based on the public data/ data provided by AERA is as follows:

Airport	Runway	Taxiway	Apron
DIAL	30	30	30
MIAL *	20/30	20/30	30

BIAL	20	20	30
HIAL	30	30	30
AAI	~ 8	~ 8	~ 8

** AERA submission for 1st Control period*

6.2.14 It can be seen from the above that most of the Airports have also adopted 20-30 years as the range of life for the Airside works except Airports Authority of India.

6.2.15 AAI, during 2007-08 had carried out a Technical assessment of the useful life of various assets (Refer Appendix II) and had defined the useful lives to be followed.

6.2.16 Report of the Committee constituted for the study on useful life states as follows:

2.2 Civil Assets

Minimum service life in r/o civil items like structures, runways, aprons etc. have been recommended by Department of Engg. Considering the specific requirement of AAI Airports involving rapid growth of air traffic, the requirement to upgrade the infrastructure continuously to cater to the requirement of world's standards as well as creating a capacity….

4.0 The computation of rates of depreciation

The assessment of depreciation rate involves study of each asset and its proportion in the total gross block. For a representative study Chennai international airport and Lucknow international airport have been considered….

5.0 The resultant rates….

5.2 Civil Assets

Runway/Taxiway/ Apron/ Roads/ Bridges/ Culverts 13%

6.2.17 Considering the above, it can be inferred that the useful life to be prescribed would depend on the design life planned at the time of construction of the pavement based on which the composition, thickness of each layer and other components of the pavement would have been planned and constructed.

6.2.18 Hence, it would be necessary to base the useful life based on the design life parameters considered for the Pavement construction. In view of the international prescriptions on

standards of design life as given above and the design life prescribed in Concession Agreement of BIAL, a minimum useful life of 20 years for Flexible Pavements (Runway and Taxiway) and 30 years for Rigid Pavements (Apron) could be prescribed.

6.2.19 It is also common for upgradations / repair works taking place on the pavement structures. There are also upgradation activities/ improvement activities keeping up the Runway in line with the changing business scenario (Code D to Code E etc.)

6.2.20 Wherever the Pavement structure is expanded in size (length/ width etc.) or upgraded for a different Pavement Classification Number (PCN) / different Code prescriptions of ICAO, these can be capitalized as part of the Fixed Assets. Regular repair works undertaken for upkeep/ maintenance which do not improve the life or the functional quality of the pavement shall be accounted as revenue expenditure.

6.3 Buildings and Roads

Buildings

6.3.1 Buildings have been defined in Schedule II to Companies Act 2013.

6.3.2 Prescription of Companies Act 2013 for Buildings is as follows:

I Buildings [NESD]	
(a) Buildings (other than factory buildings) RCC Frame Structure	60 Years
(b) Buildings (other than factory buildings) other than RCC Frame Structure	30 Years
(c) Factory buildings	-do-
(d) Fences, wells, tube wells	5 Years
(e) Others (including temporary structure, etc.)	3 Years

6.3.3 As the building's shell and core functions could be similar to that of other office/ commercial building complexes, reference can be made to Companies Act, 2013 for the useful life.

6.3.4 Trend of useful lives considered for Buildings by different Airport operators is as follows:

Company	# of Years
DIAL	Sch II
MIAL	30
BIAL	30
HIAL	30
CIAL	60

6.3.5 From the above, it can be noted that Sch II rates are being followed by the Airport Operators based on the structure of the building (RCC frame structure or otherwise).

6.3.6 Hence, **for buildings, Airport operators can continue to use the rates in Schedule II to Companies Act 2013.**

Roads

6.3.7 Useful lives for Roads has been defined as follows:

a) Carpeted Roads – RCC – 10 years
b) Carpeted Roads – Other than RCC – 5 years
c) Non-carpeted Roads – 3 years

6.3.8 Useful life of Roads considered by different Airport Operators is as below:

Airport	# of Years
DIAL	Revised - 10 (other than RCC)

Airport	# of Years
MIAL	30
BIAL	30
HIAL	Earlier - 61 Revised – 10 (other than RCC)
CIAL	RCC – 10; Other than RCC – 5

6.3.9 Reference is made to the *"NHAI Design guidance – Manual of Specifications and standards for six laning of National Highways"* which specifies the requirement as follows:

4.4 Pavement Design

4.4.1 Type of Pavement.

(i) Unless otherwise specified in Schedule-B, the concessionaire may adopt any type (flexible/rigid) pavement structure for new constructions.

(ii) The concessionaire shall submit proposal with regard to the type of pavement proposed for strengthening of the existing pavement to IE for review and comments and finalize the proposal taking into account comments of IE.

4.4.2 Design traffic

Pavement of the main highway shall be designed for the cumulative number of standard axles of 8.16 tonnes over the design life of 20 years for the concession period of 15 years and above and the design life of 15 years for the concession period of less than 15 years. Base year traffic, axle load distribution, and vehicle damage factor for design shall be determined on the basis of axle survey and investigation to be carried out by the concessionaire in accordance with section 3 of this Manual. The cumulative axle load for the purpose of design shall not be less than the number of standard axles obtained if the base year traffic is considered at a rate of growth, which is the highest of the following in the initial 5 years:

(a) 5% per annum for all vehicles

(b) Trend growth of various vehicle categories

(c) Projected Growth rate of revenue assessed in the concessionaire's cash flow

(d) Growth determined from secondary socio economic data and elasticity factors.

and then reduces by 2 (two) percentage points for every 5 year subject to a minimum rate of growth of 5 % at any period of time.

6.3.10 Design life of roads required have not been specified in the Concession Agreements or other standards in India. **Since there are defined useful lives in Companies Act, 2013, for roads, the Airport Operators could use the useful life specified in Schedule II; where there is a change in the useful life based on Schedule II prescriptions, from the existing / earlier useful life used by**

the Airport Operator, a technical justification on the reason for the change and the evaluation carried out may be submitted to the Authority.

6.4 Key Airport Equipments

6.4.1 Key Airport Equipments/ Other assets include Aerobridges, Baggage Handling Systems, Security Equipment which are material assets.

- *Other assets include Furniture, trolleys etc. which may not constitute a material portion of the total asset base (say 5% or more of the asset base)*

6.4.2 Trend of existing useful lives of these equipments, across different Airport Operators in India ranges between 7 and 15 years.

6.4.3 Useful life of the Plant and Machinery/ Equipments vary based on individual asset specifications, quality, design intent and the Original Equipment Manufacturer (OEM specifications). Considering the nature of some of the special equipments, it is possible that the useful lives could differ from the specific rates prescribed in the Companies Act, 2013.

6.4.4 Guidance to determine useful life for these assets should be based on

- Design intent
- OEM prescriptions
- Replacement plans

6.4.5 Useful life for specific equipments should be defined considering the Design intent, OEM prescriptions and Replacement plans and where these are different from the useful life specified for general Plant & Machinery under Companies Act 2013, these should be supported by detailed technical justification, documentation and evidences.

7. Other matters for consideration

7.1 Treatment for existing assets

7.1.1 In line with prescriptions under Schedule II to Companies Act, 2013, rates when applicable from the effective date, would be applicable to all assets existing and new. For existing assets, based on the rates prescribed, carrying value should be written off over the balance useful life. For new assets, the prescribed rates could be adopted.

7.2 Salvage Value

7.2.1 Schedule II of Companies Act's prescription on Residual value states as follows:

Ordinarily, the residual value of an asset is often insignificant but it should generally be not more than 5% of the original cost of the asset.

7.2.2 As rates are proposed to be prescribed only for a class of assets (and not entirely) and residual value estimation would vary on a case to case basis for each asset category, these could be left to the decision of the Airport Operator.

7.3 Asset categories and sub-categories

7.3.1 In order to ensure transparent information of costs across different asset categories and uniform comparison of data, categories of assets and sub-categories of assets could be defined, which will form the minimum level / grouping of assets to be maintained in the Fixed Asset Register.

7.3.2 Following is a broad grouping of asset categories and sub-categories of assets that can be maintained.

Asset Main Category	Asset Sub-category
CIVIL WORKS	Terminal Buildings (Each separately, if more than one, incl. VIP Terminal/ Haj Terminal)
	Airfield Buildings
	Office Buildings
	Utility Buildings
	Commercial Buildings
ROADS/ FENCES/ CULVERTS	Main access roads
	Other roads
	Landscaping
	Boundary/ Fencing
AIRSIDE CIVIL WORKS	Runway
	Taxiway
	Apron
PLANT & MACHINERY	Baggage Handling
	Security/ Safety Equipments
	Airport Communication
	Escalators/ Elevators
	IT Equipment

Asset Main Category	Asset Sub-category
	HVAC Equipment
	Power Equipment
	Water Equipment
	Commercial Equipment (By category)
	Aerobridges
COMPUTERS/ IT	Servers
	End use devices
OFFICE EQUIPMENT	
FURNITURE & FITTINGS	
ELECTRICAL FITTINGS	
VEHICLES	
INTANGIBLE ASSETS	

8. Conclusions

8.1 Land Development Activities

8.1.1 Land Development related costs should be identified and accounted as a separate line item under a sub-head of "Land Development" cost.

8.1.2 If the land is owned by the Airport Operator, Land development costs cannot be depreciated.

8.1.3 If the land is leased to the Airport Operator, Land development cost shall be depreciated over the balance period of lease term (total lease term to be considered shall be a minimum of 60 years). If a different total lease term is to be considered, the same should be justified based on applicable underlying agreements.

8.2 Runway/ Taxiway and Apron

8.2.1 The useful life should be based on the design life parameters considered for the Pavement construction. In view of the international prescriptions on standards of design life as given above, the practices followed by certain airports in Asia and other parts of the world, useful life of 10 – 15 years for Runways and Taxiways surfaces and 30 years for Runways and Taxiways bases can be prescribed considering that Runways and Taxiways surfaces requires higher

frequency of relaying than Runways and Taxiways bases. Further, useful life of 30 years for Rigid Pavements (Apron) can be prescribed.

8.2.2 Wherever the Pavement structure is expanded in size (length/ width etc.) or upgraded for a different Pavement Classification Number (PCN) / different Code prescriptions of ICAO, these can be capitalized as part of the Fixed Assets. Regular repair works undertaken for upkeep/ maintenance which do not improve the life or the functional quality of the pavement shall be accounted as revenue expenditure.

8.3 Buildings/ Roads

8.3.1 For buildings, Airport operators can continue to use the rates in Schedule II to Companies Act 2013.

8.3.2 Since there are defined useful lives in Companies Act, 2013, for roads, the Airport Operators could use the useful life specified in Schedule II; where there is a change in the useful life based on Schedule II prescriptions, from the existing / earlier useful life used by the Airport Operator, a technical justification on the reason for the change and the evaluation carried out may be submitted to the Authority.

8.4 Key Airport Equipments

8.4.1 Equipments used in Airports could include machinery/ equipments that are largely used only in Airports such as Aerobridges, Baggage Handling Systems etc and also those which could have other common uses. Viz Escalators, elevators etc.

8.4.2 However, Useful life of the Plant and Machinery / Equipments vary based on individual asset specifications, quality, design intent and the Original Equipment Manufacturer (OEM specifications). Considering the nature of some of the special equipments, useful lives could differ from the specific rates prescribed in the Companies Act, 2013.

8.4.3 Useful life for specific equipments should be defined considering the Design intent, OEM prescriptions and Replacement plans and where these are different from the useful life specified for general Plant & Machinery under Companies Act 2013, these should be supported by detailed technical justification, documentation and evidences.