



Irish Air Line Pilots' Association

IALPA Safety & Technical
8th September 2022

By email : info@aviationreg.ie

Commission for Aviation Regulation.
3rd Floor,
6 Earlsfort Terrace
Dublin 2,
D02 W773

Re: "Submission on Draft Decision on an Interim Review of the 2019 Determination (CP3/2022)"

Introduction:

Irish Air Line Pilots Association (IALPA) Safety & Technical (S&T) welcomes the opportunity to make a submission to the Commission for Aviation Regulation (CAR) draft termination CP3/2022.

CAR and the Irish Aviation Authority (IAA) Safety Regulation Division (SRD) are aware that S&T are an independent and professional body, long established within IALPA. Members of S&T Committee are also members of many other international committees, this leads to the enhancement and dissemination of knowledge relating to all aspects of safety within the industry.

However, we are naturally dismayed that the Dublin Airport Authority (DAA) again choose not to seek our input nor recognize S&T as an Airport Stakeholder during the consultation stage of CP3/2022. This on-going DAA policy of exclusion is contrary to international best practice and not in the interest of aviation safety. At this late stage we hope to influence the outcome of the CP3/2022 process in a positive way for all concerned.

In this submission there are similarities with our previous submission (29/3/18) to CAR's Second interim Review of the 2014 Determination. We therefore suggest CAR review our Mar 2018 submission first in order to have a holistic recap on S&T's current position.

S&T respectfully continue to offer our experience and exposure to worldwide aerodrome infrastructures. We endeavour to recommend what we believe would suit the Dublin Airport Layout given our vast international operational experience. For starters all existing Runways and zones for future runway requirements identified by CEPA have to be protected.

We encourage CAR to allow DAA to respond to our submission and thereafter allow maximum funding flexibility across what may become a revised final Core Capital CIP Airside programme.

In doing so we strive to ensure that the DAA has access to badly needed funds and our support to advance the best practical and sustainable economic solution to the Long term DAA Airfield Masterplan.

A DAA policy of upgrading ageing and jaded piers, with particular renewed compaction of the 1970's Pier 3 facilities may not be in passenger's best interest. There is nothing appealing to Pier 3 existing sewage pipework nor the maze to T2.

Rather than squander more passenger charges on refurbishments, It's time to progress new Piers 2 & 3.

The DAA are naturally disappointed with the proposed CAR price cap. We propose an interim flat rate of €10 per passenger for the maximum permitted 32mppa in order to just get things moving to fund Core projects to 2026.

We acknowledge that CAR does not micro manage the DAA, nor influences what is presented by the DAA in its CIP. CAR does however protect passenger's interests, as demonstrated by withholding funding for CIP projects.

The DAA is a Commercial semi state and custodian of the States premier Gateway. The DAA naturally consults stakeholders, however ultimately the DAA should not allow a perception that transient base airline executives can dictate the long term Airport Masterplan via a majority CIP weighted voting rights system.

Therefore, in our view the airfield campus should not be carved up to suit perceived entitled patches, certainly not at the expense of thwarting Terminal expansion or the legitimate interest of long term established users e.g. MRO/ Cargo/ Customs entities.

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1.0 Executive Summary:

CP3/2022 shall, with or without Ministerial Direction determine the very fabric of Irelands premier Gateway.

The DAA have demonstrated a willingness to engage in DBOT (Design Build Operate Transfer) infrastructure e.g. The 99 year Aura T2 Airport Hotel lease giveback.

Were the Metrolink project to proceed, the Government (DAA shareholder) is also open to considering a partial PPP (Public Private Partnership).

At this late stage we would encourage Minister Ryan (having considered the 2018 CEPA Airports Capacity Report) to give direction to the DAA Board to either:

1) Proceed with base airlines requirement for a €2.9bn CIP yielding undoubted Eastern Apron stand and terminal compaction that diminishes competition to 40mppa.

Or

2) Consider an Alternative PPP/ DBOT Pier, eliminating Eastern Campus congestion, which promotes competition, and thus enables expansion of existing Terminal footprints.

AND

3) That the DAA ensure that the Metrolink tunnel does not restrict airport expansion between Piers 3 & 4 and any hangar replacement/relocation programme.

We wish to offer the opportunity to demonstrate to CAR or indeed DAA Board members, a Simulator session to fully demonstrate the challenges Pilots encounter within the Low Visibility Procedure (LVP) environment.

2.0 Current Airport Capacity Issues.

2.1 The 32mppa Airport cap.

No doubt emboldened by the apparent success of their (DAA) “*Relevant action*” application to FCC (to overturn “*erroneous*” Planning Conditions /restrictions associated with the Northern Runway).

We note a pause in an additional FCC “*Relevant action*” request, i.e. to increase the current overall Airport capacity cap from 32mppa to 40mppa.

A third party has questioned CAR’s role to date – in allowing DAA revenue generation above the 32mppa Cap. CAR transitioning from Commission to a Regulatory body may require it to now address/conform to collective state regulators (ABP cap) rulings.

The 32mppa Cap was both breached and unchallenged in 2019. In 2020 an ABP Order ABP-305458-19 rejected a DAA request to consider the notional 3mppa (associated with the T2 Transfer facility). In addition CAR can review ABP Inspectors Section 146A Report 27/07/18 at FCC Planning File F06A/1248.

Both terminals coped at 32mppa but were stretched at 35mppa. However both airfield and aircraft stands were strained and deficient at both limits.

It is of concern to S&T that the 2022 temporary external Terminal 1 canopies will become the Summer Norm.

When at 40mppa (and with no obvious apparent increase in T1 and T2 main terminal footprints) it is our view that:

- 1) After an almost €3bn CIP spend, passenger compaction both airside and landside shall prevail.
- 2) During peak summer periods check in queueing may extend outside terminals.
- 3) Sections of the Eastern Campus F- Inner taxiways will be chronically congested.

We repeat our Call for the appointment of an overall Dublin Airport planning TSAR and an eventual DAA policy of relocation Wide Bodied (WB) aircraft from the Eastern Campus.

2.2 Airport Surface Access.

We share TII, CAR's and CEPA concerns on surface access to the Airport Campus.

In August 2018 CEPA's "Review of Future Capacity Needs at Irelands State Airports" report contained overwhelming Caveats "**again setting aside issues of surface access**". An additional CEPA's Executive summary caveat on Page 3, appropriate to CP3/2022 states "**Note: the additional capacity needs shown should be interpreted as an indicator of the degree of shortfall in capacity compared to the current facility, not a recommendation of what should be built**".

In order to proceed with a capacity increase "Relevant action" to 40mppa. We anticipate the following surface access planning and financial challenges which FCC and DAA may have to overcome within the next decade.

- ✓ The Government as shareholder has yet to publicly respond to or advise if it has given the DAA Board direction in response to the "2018 CEPA Irish State Airports Capacity report"?
- ✓ FCC may have to fund its required 2019 "South Fingal Transport Study" enhancements either through additional rates or levied through CAR approved? Passenger charges.
- ✓ There is no provision/funding commitment from Government in the "National Development Plan 2021-2030" nor the "Project Ireland 2040 Building Irelands Future" national planning framework documents - to improve Dublin Airport Surface Access issues.
- ✓ The DAA may also have to await a Government decision on Metrolink and also secure a successful Metrolink Contract signature prior to being permitted to cater for 40mppa+.
- ✓ The NTA and TII in conjunction with DCC and FCC may have to fund, solve and rectify the identified current deficient and alternative Airport surface access options.
- ✓ The Swords QBC, walking and cycling projects may have to be operational.
- ✓ Finally ABP shall ultimately determine if the imposed 32mppa CAP can be increased to allow for, initially T2 phase 2 expansion.

If the above is problematic the government should consider halting Dublin Airport Hub expansion at the comfortable 32mppa limit and instead promote regional airport development.

2.3 S&T proposed 2023-2026 CIP focus.

Rather than see the DAA get bogged down in protracted Airport access planning woes. S&T sees the 2023-26 CIP and the next one as an ideal opportunity to rapidly commence spending the €2.9bn on:

- 1) Construction of a **three cell** R16/34 underpass incorporating a future proof APM (Automatic people mover) cell.
- 2) Prepare the Airfield and new Aprons for future passenger expansion by finally removing all known taxiway restrictions outlined in the IAA AIP.
- 3) Promote an additional Runway 10R line up outlined in FCC FS5/036/21.
- 4) Extend Runway 28L landing distance from 2637m to 3000m to cater for an immediate return emergency overweight landings. CIP 15.6.012.
- 5) A reassessment of CAR's refusal to *CIP 15.6.013 "Additional Line-up points on Runway 10R-28L"*. (The Dual LVP line up to Runway 28L from new F-Outer and existing Z and B1 to a newly realigned E1 perpendicular to R28L).
- 6) To maximize the Western Aprons untapped potential for passenger operations, we ask the DAA to reconsider CAR's previous funding approval to construct Apron 5M and Taxiway "Whiskey".
- 7) Promote the initial phase of a mid-airfield Bulk fuel Tank Storage facility, initially for Western campus bowser top ups.
- 8) Bring R16/34 back to industry operational standard by converting LVP taxiway lights to runway centreline lights.
- 9) Promote the demolition of MRO facilities in sequence by relocating same commencing just west of Hangar 6.
- 10) In this CIP to 2026 the relocation of required facilities e.g. MRO/ Cargo/Customs has to be prioritized ahead of increasing the existing 32m passenger CAP limit.
- 11) The DAA should consider an immediate Pier 2 replacement with a redeveloped enhanced Pier 1&2 immigration centre. The combined immigration hall should cater for Piers 1&2, the North Apron, West Apron Overflow injection, therefore comfortably facilitating the summer schedules late evening wave return.
- 12) The DAA should advance concepts for stakeholder consultation during 2023 on how a new Pier 3 will dovetail with the R16/34 underpass exit design, F- inner taxiway and future integration / operability with T1 & T2 arrivals and departure passengers.
- 13) Given Apron 5H/Metrolink planning issues, the DAA has a responsibility to ensure that - The TII (in its Railway Order Planning application) must assure ABP that the Metrolink tunnel shall never restrict DAA's Terminal expansion / redevelopment, Hangar relocation and any future APM operations serving the Western Campus from a centralised passenger T1&T2 processing/immigration facility between Piers 3 &4.

3.0 North Apron Hub Group.

3.1 Hangars – To protect the MRO industry.

In response to Base airlines requirements, heretofore the DAA have naturally focused on passenger related infrastructure.

S&T endorse CAR's justified stance to protect Dublin Airports MRO business as outlined in the National Aviation Policy.

We remind all parties that extensive passenger Pier development (East of Pier 1) was discounted by the DAA when options for a T2 location were investigated.

We are unaware of a DAA MRO long term policy but we respectfully recommend a suitable DAA MRO replacement Masterplan Objective:

- ✓ The MRO Building line shall aligned no further than the front of Hangar 6 with a replacement programme commencing West of Hangar 6 as Hangars East of Pier 1 are demolished in sequence 1,2,3 etc.

The Hangar replacement program affords the DAA a unique opportunity to install a vast solar array farm on the roofs of the new eco-friendly modern Hangar facilities. Funding for these hangars could be a DBOT Lease/giveback.

DAA requirements on its lands has to take priority over Metrolink tunnel alignment/requirements.

We note a prospective 3rd Party interest for a Code C Hangar requirement. Surely this can be facilitated within the Hangar replacement programme with the now omitted "7000sqm of open hangar" to be ultimately designated as a general aviation/ Business Jet parking area.

3.2 North Apron Module 1.

The North Apron Module is currently premature and should be deferred until MRO Hangars are replaced.

Whilst Airlines may strive for an elongated Pier 1 heading east, we suggest that the DAA consider an accelerated Pier 2 replacement by summer 2025 (i.e. before finishing the disruptive Eastern Campus underpass exit between existing Piers 2&3 in the winter schedule Q4 2025/Q1 2026)

3.3 Apron 5H.

S&T made an Observation to FCC in relation to this project. The DAAs agent was adamant that it was a like for like swop with the dislocated Light Aircraft Apron "Charlie" with "no intensification". The agent stated Apron 5H movements of 24 per day.

If the DAA have plans for intensive Apron 5H passenger operations then this cul-de-sac may also restrict / back up with waiting traffic on DS,D,DN. (Thus disrupting existing smooth operations on Pier 1 North stands and Apron 5 G operations.)

In relation to Module 1 we note on Page 119 of the DAA 2020CIP+ that "All contact gates are also arranged to accommodate remote bus operations, providing remote Apron 5G and 5H flexibility – negating the requirement for the development of the PBZ (pre-boarding zone). Contact gates are also arranged to accommodate remote bus operations, providing remote apron"

Note to CAR:

With the closure of the R16 surface crossing we note that some Apron 5G stands have recently been reconfigured to facilitate G650 Business Jet operations.

Ideally Apron 5G NBE stands should fully complement Pier 1 NBE passenger operations.

Bussing from T1, the OCTB or from Gates 114-120 (the western end of Pier 1) to 5G is preferable to Bussing from as yet unbuilt Module 1 to Apron 5H.

S&T proposed Western Apron overflow NBE stands are more than sufficient to capture T1 & T2 requirements via the underpass. Apron 5H should ideally be used for NBE and WB storage/standby aircraft.

Ultimately S&T see this apron as a NBE CDF (Centralised De-icing facility) prior to R28R Departures we trust that the DAA shall install the Fluid recovery drainage pipework.

4.0 Mid Airfield Eastern Apron.

4.1 Foxtrot Inner (F-inner Taxiway)

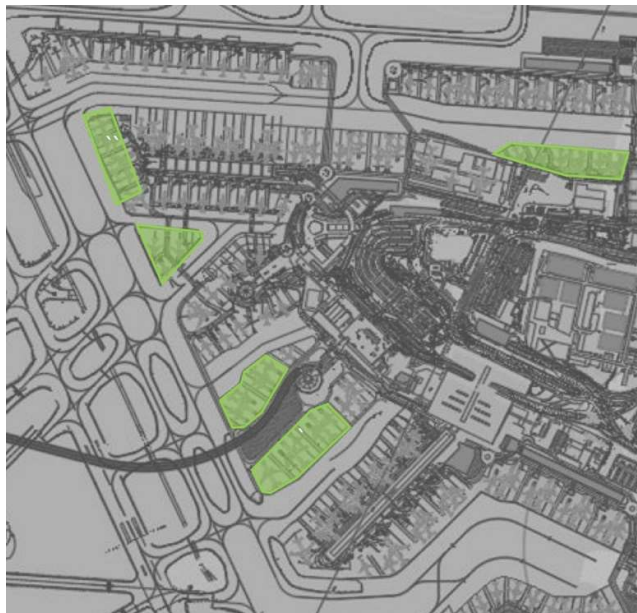


Fig1: The Proposed Eastern Underpass Exit with elongated Pier 2, 3, 4 cul-de-sacs.

With the introduction of the Northern Runway the initial PACE taxiway concept (to which we outlined our concerns to CAR) is now outdated.

PACE assumed R16 being subtly closed, hence LVP taxiway lights. However R16/34 is and shall be retained until it's replaced with another more favourable 2300m crosswind runway.

CAR has been made aware of the non-compliant Link taxiways outlined in PACE that are detrimental to ICAO core principle of protecting an Operational Runway and EAPPRI recommendation on these matters.

Dual runway 28/34 departures operations have also ceased permanently and the proposed runway 16/34 underpass exit design generates dilemmas for the DAA's F-Inner ultimate design width.

The apparent desire of the DAA to refurbish Pier 3's apron again in conjunction with the underpass, shall elongate the cul-de-sacs feeding Pier 2S, 3N&S & 4N.

Aircraft trying to access a multitude of stands have no option but to loiter on F-inner until aircraft exit and taxi onto F-Outer for a predominantly R28R departure.

When R16 is the operational runway the problem gets exacerbated starting with the conflict of Pier 3/4 cul-de-sac and aircraft vacating R16 who are allocated those parking stands.

We repeat what was said in our March 2018 Submission and now quote a section from *para "7.4.4 Pier Concept" (P134-135)* from the definitive reference manual "*Airport Design and Operation*" third Edition by the eminent Prof Antonin Kazda and Robert Caves.

"Piers generally involve aircraft having to taxi into cul-de-sacs to get to the stands. The Limited space leaves little extra room for aircraft handling.

There is usually only a small parking bay for equipment and service personnel under the piers. In the confined space, the effects of noise and exhaust fumes create poor working conditions for the staff.

*Any increase in aircraft size tends to result in congestion on the taxi lanes, particularly if they have only a single lane. **It is imperative to have dual lanes if there are more than 10 or 12 stands in the cul-de-sac. (S&T Emphasis).***

It's obvious from Fig 1 that the DAA have grossly exceed the 12 stand limit cul-de-sacs by a wide margin. Helios shall therefore have to re simulate the traffic gridlock flows from a restrictive F-Inner and the associated elongated cul-de-sacs serving Piers 2S, 3N&S & 4N. (North/South).

For these reasons (having considered a Pier 2 replacement) we call on the DAA to pause Pier 5 / South Apron design and concentrate on advanced options by Q4 2023 for a new Pier 3 design incorporating the Underpass and APM cell.

Why ultimately expand to 40/55mppa whilst not having addressed the age old chestnut of Piers 2&3 replacement requirement?

Our Concept is for Pier 2N NBE ops with Dual NBE taxi lanes between P1S and P2N. P2S to incorporate NBE and Mars stands to an eventual Dual Foxtrot "Option 1" as outlined in PACE document i.e. CODE E – CODE C (F-outer – F-inner). This Foxtrot design to become the permanent routing for R16 operations.

The Historical problem of WB aircraft being unable to Route from Hangar 6 to the South Apron can now be overcome

- a) When 28R is active: Routing; AT6 - C - F- Outer - N - Runway 16 – B2 to P4N and to the South apron via B1.
- b) When R16 is active: The historical problem may continue if ANI fail to sequence R16 departure queueing to the extremities of Taxiway November and back along R28R. However with the benefit of F-Outer eventually extending to Link 1, Code E can therefore tow under escort and route South to Pier 4.

We therefore ask the following question:

Shall the full extent of the proposed Dual Foxtrot Code E-E taxiway spine be permitted to thwart Pier 2 and Pier 3 full replacement potential just because the odd WB aircraft may have minor taxiway restrictions from Hangar 6 when R16 is the operational runway?

Dual Foxtrot Code E, Taxiway R widening and the proposed Z/B1 is for the DAA to determine within its evolving Masterplan for WB Operations.

4.2 Taxiway R widening Works. CIP.20.03.074.

This proposed Taxiway R was supposedly designed to be safe and efficient, “ultimately mitigating bottlenecks and delays to Runway 10R and 28L and traffic accessing or egressing from the South Apron”. If constructed Taxiway R eliminates the WB aircraft 404C stand.

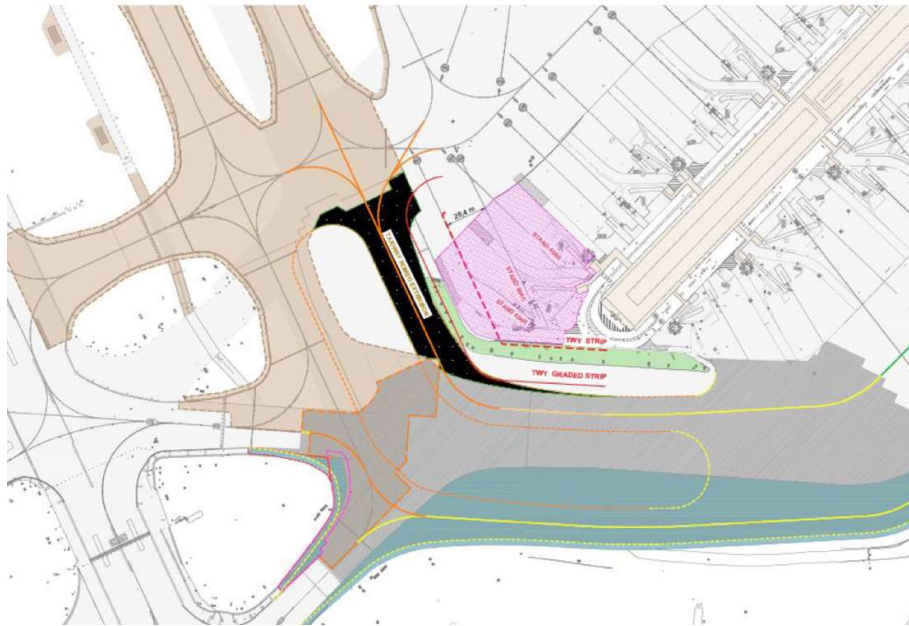


Fig 2: Taxiway R designed for smooth Dual Code E operations to/from North/South Aprons!

Presently, the WB 404C stand isn't parallel with the WB 403C stand. Therein lies the obvious conundrum, How to insert a new WB stand without breaching WTC (wing tip clearance) limits between a WB aircraft on 403C stand and a WB aircraft travelling on the propose Taxiway R and relocated Z?

Note to CAR:

Observe indicated red hatched WTC lines- a geometrically impossible pilot over centreline sweep. Were Taxiway R to be constructed we have now identified (from current drawings) a high collision risk which may have been undetected by the Airport regulator & DAA? i.e. when both WB Code E aircraft bypass each other at the head of Pier 4.

5.0 Mid Airfield.

5.1 Code E Engine Test Facility. CIP 20.03.079

“This facility will be designed to have a high usability factor, minimal operational constraint.....”

We trust that a WB CODE E fillet shall be placed on the R16 turn onto Taxiway Sierra in addition to the proposed Sierra – W1 turn. This proposal gives ANI (Air Navigation Ireland) additional taxiway options to access this site.

(Provision of an additional short WB Link taxiway from W1 to the Western Campus ensures long term ANI taxi routing flexibility).

5.2 West Apron Vehicle underpass – Pier 3. CIP.20.03.051.2

S&T note that the underpass project received the most feedback during stakeholder consultations. Extensive mid airfield disruptive earthworks and site clearance are necessary to reduce existing Pier compaction and to prepare for passenger expansion.

Presently Base carriers see no requirement for an underpass whilst Cargo Operators see this project as existential to their business. CAR and S&T correctly side with the Cargo Operators.

The IAA SRD withdrawal of the Runway 16/34 surface crossing accelerates the underpass requirement and thus our policy objective.

The current proposal is to construct a lone two cell underpass with no additional Apron works West of Runway 16/34.

As there is a long term DAA and S&T requirement to construct a satellite pier on the Western campus it naturally makes Engineering sense to avoid having to dig up the Airfield again to provide an additional APM Cell. Indeed FCC have this High speed Quality link as an Objective in the current Local Airport development plan.

Therefore S&T request that the DAA and CAR make provision for this 3rd Cell to be funded by passengers, hence our suggested €10 price cap and flexibility within the €3bn allocation. We also refer DAA consultants to ascertain the underpass design and APM built for Dock E in Zurich Airport.

5.3 Vehicle underpass and integration with Western Campus.

S&T have made no secret in our objection to elongated Eastern Campus apron cul-de-sac’s and our desired preference to develop the Western Campus.

We strive to encourage the DAA to ultimately relocate WB aircraft from the Eastern Campus. In doing so Eastern campus Piers can ultimately extend to meet a relocated new F-Inner (Code C) to the PACE F-Outer (Code E).

By relocating WB aircraft to the western campus, consideration should acknowledge that combined planned Eastern Campus WB / NBE stands may not be sufficient to meet future demand.

Were the CAR to allow maximum flexibility on allocation of Capital Projects and in order to ensure Base Carriers “buy in”, S&T have the following proposal to make called “West Apron Hub?”

6.0 Western Apron Hub Group.

6.1 West Apron Hub.

In order for Base carriers to reap immediate benefits from the underpass, S&T propose additional non disruptive airfield works i.e. New Taxiway “*Whiskey*” and remote West Apron 5M. These facilities shall ensure the interoperability and rotation of Cargo and Passenger operations on the existing Western Apron initially during daylight hours.

Cargo Operators are in the main Nocturnal operators with their aircraft lying idle on the Western Apron between 0700 – 1900hrs.

If the Cargo operation was moved to Apron 5M, then the western apron becomes fully available to base carriers and/or seasonal summer operators. This would free up additional existing pier/contact stands for base carriers. This summer overflow concept is used in Toronto’s (CYYZ) Mid Airfield Campus.

In addition to DUB transit stop refuelling, Base carriers & competitors could terminate (or indeed commence) some bussed B737Max & A321 XLR cleared and non-cleared US CBP operations from this secure sterile West Apron.

Base Operators also have the option to debus passengers. Clean/cater and address any inbound aircraft technical issues prior to any onward towing requirement to Eastern Campus contact stands for final flight plan fuel top up. [Catering * the Western Campus is closer to some catering facilities e.g. DNATA]

Therefore the deferred Apron 5M and Whiskey Taxiway (previously funded by CAR) should be seriously reconsidered by the DAA in order to gain “*buy in*” and dovetail with the opening of our recommended triple cell Runway 16/34 underpass.

7.0 South Apron Hub Group.

In response to CAR’s Draft Decision of the 2019 Determination, our Nov 2021 submission outlined our continued concerns in relation to the Runway 16/34 surface crossing and the PACE approved Dual CODE E by pass B1 – Z.

7.1 Dual Code E bypass at B1/Z.

The most important Aerodrome AGL taxiway lighting circuits are the runway holding LVP (Low Visibility Procedures) red stop bar.

Both pilots must have full frontal sight of the red stop bar in order to mitigate against a disastrous inadvertent runway incursion during LVP operations

Dublin has had an incident whereby an aircraft did indeed breach the R28L Cat II/ III Stop bar.

Under current planning statute, S&T are excluded from submitting comments to FCC on DAA “Exempt planning applications”.

We are firmly against the widening of the B1/Z taxiway because:

- 1) Currently B1/Z proposed redesign infringes the ICAO inner runway protection zone.
- 2) With the required Low Visibility Procedure (LVP) pilot over taxiway centreline technique, a WB aircraft is incapable (due taxi line curvature) of aligning perpendicular to the DAA's relocated R28L CAT I, II, III Stop bar.
 [Fig 4 Curvature: From the newly realigned B1 taxi line that subsequently curves between the Existing 28L CAT II/III hold and the proposed co-located 28L CAT I/II/III].
- 3) Vital LVP and visual situational awareness is lost because neither the stationary WB aircraft, nor the Taxiway E1 are aligned perpendicular to the R28L axis.
- 4) This proposed widening design merely compounds the loss of TCAS (Traffic Collision / Avoiding System) situational awareness of aircraft on E1 with aircraft on approach to land on R28L.
- 5) In order to educate CAR or indeed DAA Board members on the DAA management team's proposal we offer a Simulator session to fully demonstrate the challenges Pilots encounter within the LVP environment.



Fig 3: An A330-300 holding on taxiway E1 short of the existing CAT 1 hold.

[Note: MLG (main landing gear position just past the existing CAT II, III hold.)]

This A330 aircraft is 90 degrees to the red stop bar, but not the industry standard of being 90 degrees to the runway centreline axis.

However, what is extremely important is that in this instance both pilots have full forward vision and are thus capable of viewing the full critically illuminated red stop bar.

Unfortunately with the redesigned B1-E1 taxi line this critical alignment with the stop bar (shown in Fig 3 above) is impossible to replicate/execute.

- 6) FCC planners have endorsed the DAA design in Fig 4 below whereby the A330 in Fig 3 above is presumed to be able to alter its heading (Left 53 degrees) within its own footprint.

Effectively a pivotal turn on the spot.

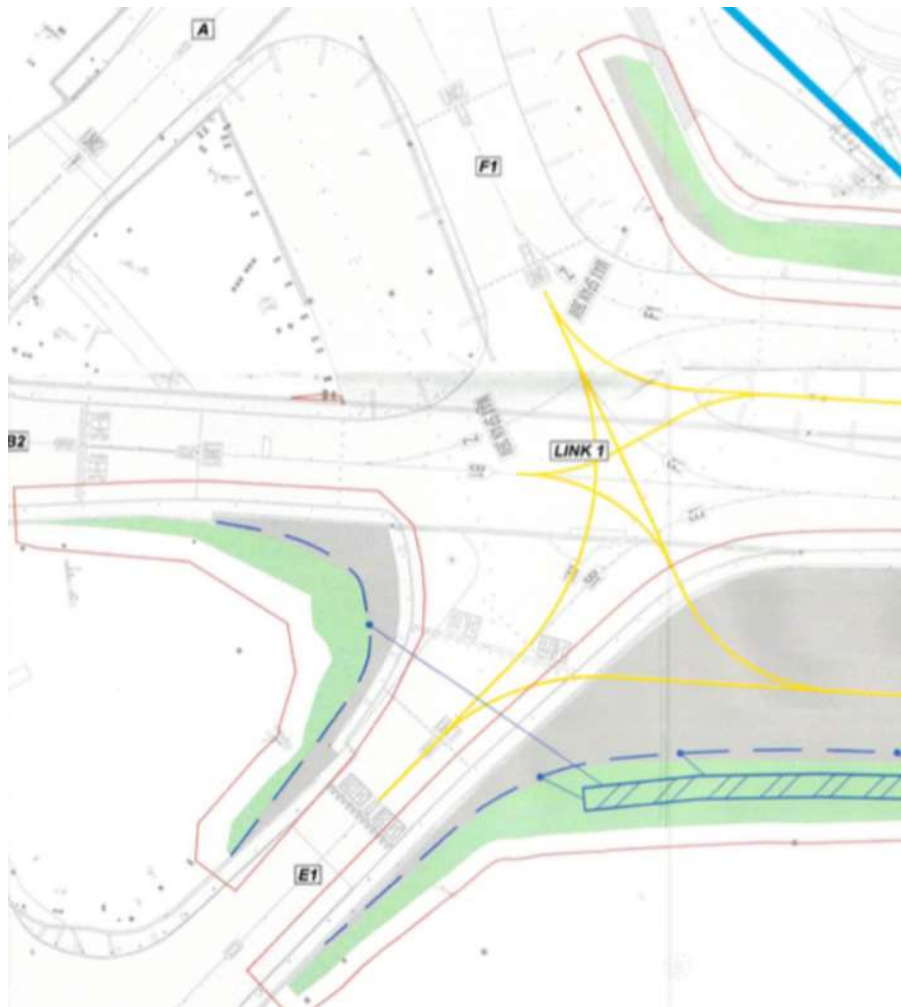


Fig 4: FCC approved LVP operations centreline taxiway B1 (in grey shaded area) to E1:

[A turn arc between the existing CAT II, III and CAT I hold positions. Note from Fig 3 the MLG (main landing gear position was just past the CAT II, III hold.)]

The IAA - SRD made no public comment on FCC “*exempt planning application*” file. However CAR has eluded to “*Conditional approval*” whilst SRD investigates recent S&T concerns.

We sought from SRD, but we’re denied (due regulated entity confidentially) access to:

- A) The DAA safety case associated with the B1/Z taxiway and
- B) The PACE Link taxiway project compromising the operational Runway 16/34. [Note The IAA are exempt from FOI requests].

Having outlined our objection to the widening of B1/Z, we await the outcome of an IAA final Safety Audit which could lead to a possible DAA- Dual Code E bypass Safety case Failure.

If this were the outcome it would be similar to our late input *that* thwarted the now aborted (transient airline executives) proposed R28L line up proposals from R16.

Were the IAA SRD to grant DAA approval to proceed with the widening of Z/ B1 then we can confidently say that runway 28L may well be the only LVP CAT I/II/III hold in EASA’s domain whereby both WB pilots aren’t aligned perpendicular (in order to see the full extent) with the critical LVP Red runway holding position stop bar.

It’s our position that when R28L is the only operational LVP departure runway, WB aircraft exiting the South Apron are safety compromised.

Ultimately though the IAA Regulator shall decide this DAA project proposal for all WB carriers.

Were dual Code C taxiways to remain then CAR’s previous funding approval for South Apron development (dependant on Dual Code E bypass being installed) may have to be reconsidered in passenger’s interests?

WB operations East of Pier 4 shall ultimately continue to restrict smooth apron functionality.

Note to CAR: Were the DAA to propose Z as the South Apron Exit Taxi line. The jet blast from a US Westcoast bound 237 tonnes plus WB aircraft turning the corner from Z and facing the upslope on E1 taxiway would naturally cause collateral damage to Pier 4.

If the proposed widening of B1- Z is not permitted by SRD then we request that CAR funding be diverted for CIP 15.06.013.

CAR previously refused funding on the pretext that R28R would be the main departure Runway. But what if R28R is closed for maintenance during LVP weather conditions?

When R28L is the only available LVP departure runway the ANI needs operational departure sequencing flexibility with these two line up options. E.g. for Alternative Left/right climb out departures. (Remember R16 LVP departures are NOT an option). This typical dual layout is industry standard at International Airports, just fund it CAR!

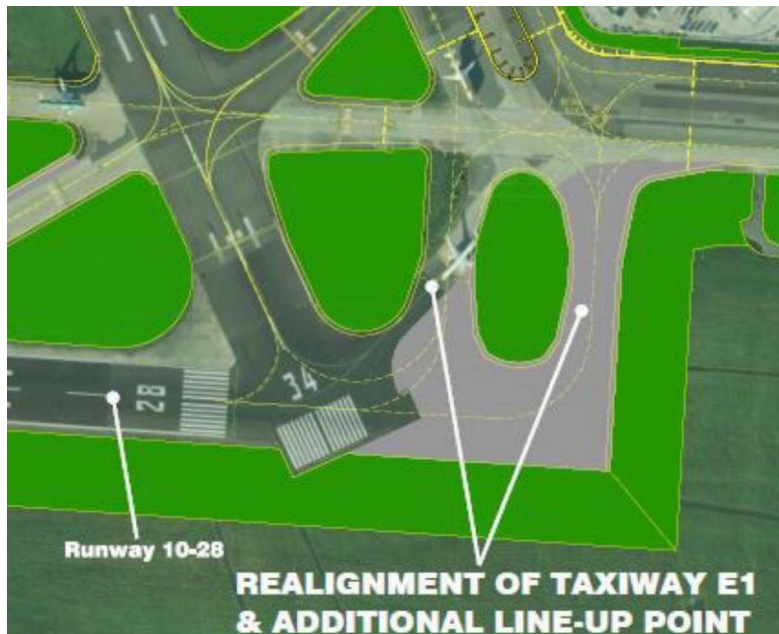


Fig 5: DAA proposed 2014 Dual R28L line ups CIP 15.06.013 refused by CAR

7.2 The South Apron

Those familiar with the December 2017 PACE (Programme for Airfield Campus Enhancement) document will be aware of the reluctance of the DAA to develop further into the South Apron cul-de-sac.

The South Apron has many variables/restrictions. Any Passenger related requirements / development would lead to widespread relocation of current facilities.

When a Base Airline produced their South Apron requirements in a 2018 EY DKM commissioned Report *“Economic Impact of the development of Dublin Airport as a hub”*, DAA reluctance /reservations were set aside since they are now obviously proceeding with the EY’s Pier 5 in deference to a requirement to eventually expand T2 Phase 2 Eastward by 77 metres at Apron level.

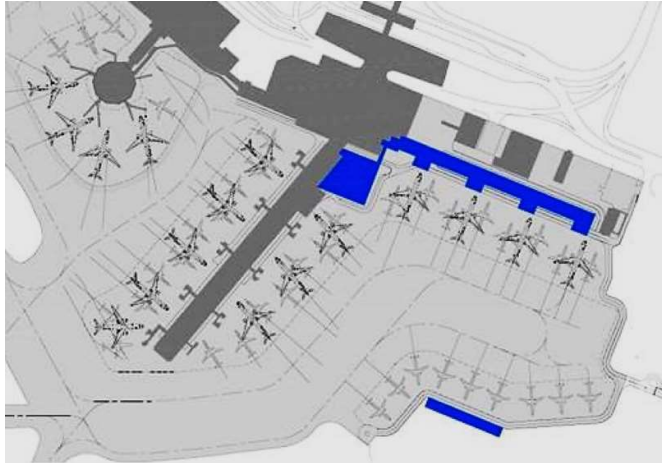


Fig 6: EY’s 2018 Sub-optimal single sided Proposed Pier 5 expansion eliminating T2 expansion?



Fig 7: DAA adopting EY Pier 5 in a “Refined South apron layout” CIP 2023-2026.

7.3 Pier 5.

A Base carrier has a stated requirement for additional WB aircraft stands. However, as we know Taxiway R eliminates 404C WB stand (unless the DAA can reproduce a WB replacement abeam 403C), whilst the extended CBP Eastern facility shall eliminates the 409C WB stand.

Therefore post construction, overall Piers 4 & EY Pier 5 shall have CAR approved net 2 WB contact stands, and the loss of 3 NBE Stands (404R/409R/410T) with a TBD remote South Apron stand capability.

If the South Apron remote stands fail to proceed the EY Pier 5 shall eventually have net 2 additional WB stands available for 1st wave TA arrivals with an overall reduced 1st wave Pier 4&5 NBE departure capability.

The proposed EY Pier 5 is acknowledged by everyone as a sub-optimal single sided Pier. It’s a relocated South Gates with enhanced integrated 4WB stand capabilities.

We note that the EY Pier 5 plan allegedly overcomes some of the T2 Bussing integration issues highlighted during a previous S&T presentation to CAR. However the EY footprint in Fig 6 & 7 obviously restrict T2 expansion.

The DAA confuse matters further by saying a solution is achieved by shunting their Pier 5 further into the South Apron which in itself causes reduced aircraft options / restrictions with the diminished notion of South Apron remote stands and consequences now for the 408 stands.

In essence the Pier 5 current design prevents T2 phase 2 expansion and thus long term competition.

CAR protects the public interest and we request that CAR condition Pier 5 development on a Ministerial and DAA Board Directive clearly stating that the DAA has no intention of every expanding T2 and that Pier 5 should proceed as per Fig 7.

S&T shall endeavour, in public interest, to ensure that Pier 5's footprint shall not impact on DAA T2 phase 2 development nor infringe upon a relocated sustainable heating station.

7.4 Customs Boarder Protection (CBP)/US Preclearance

"There has been numerous calls from one user to find solutions to expand the current US Preclearance facility to accommodate future growth. We have considered all available solutions that meet the objectives of the PACE programme and have found that the short-term solutions are an inefficient use of capital and we need to work towards a longer-term solution which will be identified as part of the master plan process." DAA December 2017 PACE Document.

Presently the US CBP and ground floor compaction of Pier 4 do not meet passenger's requirements. For instance there are insufficient seating at some boarding gates. Large queues snake down corridors and the pre-entry queue to security clearance is unacceptable.

Since the last CIP this current CBP facility now incorporates additional US bound NBE LR operations.

Were Pier 5 fail to proceed we propose that the DAA expand Pier 4 US CBP facilities West of Pier 4 to initially allow Bussing to the West Apron and eventual tie into the APM facility. The notion of using a refurbished Pier 3 for cleared passengers should be ditched. Of course there is nothing to stop Pier 3 use as non-cleared US flights.

7.5 Irish Customs & Cargo Facilities.

Pier 5 necessitates relocating existing Airline Cargo and Irish Customs facilities. It's apparent from the CIP and Fig 7 above that precise replacement facilities land & airside elude the DAA.

Customs are a vital State frontier port/airport service - therefore Pier 5 should possibly warrant an additional trigger, in that any relocated Cargo and Customs facilities should be built first.

Under the Local Area Development plan these facilities will ultimately move again to the Western Campus for dedicated Cargo operators and ultimately for "Belly Hold" WB Passenger Aircraft operations.

7.6 Remote South Gate stands.

The remote EY South Gate stands design apparently does not now meet a base carrier's original requirement.

Either bussing is problematic or there is an expectation that passengers shall walk to/from a South Gate remote stand PBZ via an elevated? Arrival/departure segregated passenger link.

As previously outlined Apron 5H PBZ is shelved in preference to bussing from Module 1 to aircraft steps. The Pier 5 updated design now incorporates bussing which remains the only option. Of course bussing gates aren't needed if remote stands are eliminated with Pier 5 shunting south to protect T2 Phase 2.

If 1st Wave bussing operations were to occur to the remote stands then this can only commence when Cabin crew arrive at the aircraft at STD-30mins.

Consequently the OTP target from these remote stands may naturally slip given the distance travelled, boarding and debussing operations and any PRM (passengers with reduced operations) passenger requirements at this exposed Apron.

S&T were not consulted on the existing DAA South Gates. Post Construction S&T tabulated (from IAA AIP data) the interoperability flaws associated with DAA South Gate stand compaction.

A Base carrier new A320 NEO aircraft cannot now (due wing tip clearance safety distances) occupy five South Apron stands (411R, 412,413,414,414T). No doubt a salutary costly lesson learnt having pushed the DAA to rapidly build South Gates.

We are on record requiring CAR to only fund an agreed B737/A321 NBE template stand. Going forward we trust CAR now belatedly accepts our recommendation.

The DAA may also be aware that if it indeed constructed a remote South Gate PBZ (Fig 6) then it may lie within the IAA SRD Inner Runway 28L protection zones and or public safety zone, which obviously becomes a problematic/limiting factor.

Therefore either a new South apron PBZ location currently eludes the DAA or they now shun the PBZ relocation concept and seek CAR funding for its construction.

Note to CAR: On 18/7/22 The DAA lodged F22A/0366 seeking permanent planning permission for South Gates PBZ citing uncertainty in relation to the planning process associated with Pier 5.

As such the DAA wishes to retain the PBZ option beyond its temporary 7 years approval which is due to expire in April 2024. When constructed CAR placed a 30yr lifespan on the PBZ.

Given the multitude of variables combined with CAR's and DAA's doubts on planning issues. S&T recommend that it may be prudent to pause all consultancy and design fees on the minutia internal detail of Pier 5/CBP design. The South aprons overall layout is still unclear.

As seen in the B1- widening exempt planning application, extensive attenuation of surface water was required.

Given South Aprons proximity to the Cuckoo Stream which flows into the sensitive Baldoyle SAC (special area of conservation) any South Apron remote stand expansion with de-icing run off will prove a horrendous challenge for a successful planning approval outcome.

The DAA is still pondering a long term De-icing policy whilst S&T have identified both NBE and WB CDF (Centralised De-icing Facilities) locations.

Note: Centralised De-icing Facilities are economical better for fluid run-off recovery than an Airfield campus wide recovery scheme.

7.7 What are the realistic South Apron and B1 /Z boundaries?

To save wasted time and energy it behoves the DAA to submit to the IAA the precise final definitive South Apron build line incorporating any PBZ obstacle heights.

Thereafter CAR (in passengers interests) should halt all South Apron funding and await SRD's deliberation and final arbitration on what can and cannot safely be built with respect to the B1 taxiway South Apron WB egress to the R28L LVP hold, Runways 28L arrival / 10R departure flight strip protection and public safety zones.

If revised ICAO inner runway protection zone rule changes are in the pipeline it's both sensible and financially prudent to await their formal adoption by EASA.

When this no build zone/exclusion decision is made by SRD. Crystal clear clarity is then required from the DAA on the exact ultimate overall DAA South Apron design incorporating decommissioned stands and all the known TBD (To be decided) issues (Cargo / Customs / GSE locations/ ULD Storage & relocation/ Apron Bussing Depot/Apron Snow Vehicles store/VCP's/Bonded road etc.)

When the above are known then we have an exacting revised Pier 5 and remote South Apron stands site footprint incorporating all aircraft stands dimensions and Defined Apron Stands red safety line boundaries*.

It's quite possible that due to additional Pier 5 shunting, jet blast and airspace restrictions that the proposed remote stands may never be built.

Note to CAR: *We do not wish a repeat of the non-compliant DAA aft aircraft service road that currently exists behind South Apron Stands 412-417.

7.8 South Apron Jet Blast issues:

CAR advised that the DAA have revised its taxiway design to mitigate jet blast and we noted an indicative scissors crossover between Z and B1 with both taxiways ending in a cul-de-sac.

Therefore prior to a planning application, precise details of all NBE/WB TRP & ESP (Tug Release point / Engine start positions) should be agreed in consultation with ANI Air Navigation Ireland and SRD. Amsterdam Schiphol being the most efficient reference standard.

Finally when this overall DAA, ANI & SRD analysis is complete we recommend.

- 1) Helios simulate the agreed South Apron design and carry out revised flows patterns allowing for realistic time to push off stand to taxi off from an ESP e.g. For an unrestricted WB it's currently 9.30 to 10 mins from 409C to taxi off from the only permitted WB engine start position on the South Apron i.e. ESP K.

8.0 Terminal CIP projects.

8.1 Terminal Expansion.

A 25% increase in passenger processing above the 32mppa Cap to 40mppa within both T1 and T2 existing footprints is compaction above their initial design limit. E.g. T2 was designed for 10mppa.

The DAA propose increasing a T2 base airline passenger processing with additional check in desks and check in kiosks to be located centrally on T2's footprint. This area is currently used for overflow queueing for Check in desks 29-56.

The proposed relocation of Airline customer service desks (under escalators) opposite these additional check in desk shall effectively clog the central space raising Safety/ crowd control issues.

This compaction philosophy at the central footprint location will also lead to heretofore unrestricted free flow access to restrooms.

Rather than increase passenger processing in T1 with disruptive floor strengthening etc. A more practical long term solution maybe to install bag drop self-check in Kiosks on mezzanine levels over both ends of T2 check in areas (1-12 & 45-56). Access could be gained to these levels with external escalator wings at both ends of T2.

S&T suggest medium-term passenger processing should ensure T2 process all Base carrier NBE and all WB passengers departing from Pier 3, 4, South Gates & Western Campus. Whilst T1 should process Piers 1, 2, North Apron 5G, & Module 1 & Apron 5H. This philosophy may ease pressure on T1 security screening processing and baggage hall belts.

Terminal 2 offers the best option for footprint expansion (East by 77m & West by ?m). T1's spirals restrict growth whilst T2 can naturally absorb additional passenger check in and security processing with ATR (automatic tray returns) lanes.

Therefore the DAA should review its existing T2 expansion design to cater for its 40mppa + scenarios. Whilst a Western expansion of T2 should consider a centralized T1/T2 transfer/security/passport control prior to APM feed to the West Campus Satellite WB Pier.

In relation to Terminal 1 it seems strange that an Airport Authority is housed within a Passenger Terminal.

S&T would suggest that T1 DAA and Cloghran House office staff consider (in addition to ANI staff?) relocate to the vacant modern DAC office block.

In doing so T1 is free (at a later CIP) to incorporate additional revenue streams with additional Retail / F&B / quiet zones and observation deck.

9.0 Transportation Issues.

9.1 Drop Off/Pick up Kerbs.

Whilst under 3rd party appeal to ABP we agree with CAR not to “*make an allowance for the Drop off / Pick up kerb access charging project*”.

It's possibly discriminatory in allowing paying citizens priority/ convenient access to the drop off Terminal Kerbs. The DAA propose an alternative option with limited reserved set down in the long term car park with onward Bus transfer to the Terminals.

This DAA Kerb charging proposal is possibly twofold:

- a) To naturally generate Kerbside revenue.
- b) To relocate both Terminals Front Doors to the Long term Car Park in order to reduce traffic volumes on the inner Airport Horseshoe road network. Thus providing a mitigating case to expand capacity to 40mppa?

We are aware that such kerb charging schemes are in place in other International Airport e.g. LHR, CDG however these Airports have extensive Airport Metro / Underground options.

9.2 Metrolink.

A NTA Metrolink Railway Order to ABP is expected in Q4 2022 or Q1 2023.

The DAA sought and were approved CAR funding for a Metrolink Co-ordinator at CIP 20.07.004.

At 6.13.5 in the DAA 2020+ Review they state “*Since the issue of the consultation Report, we have omitted several projects, namely Metro Development and interface.....*” See CIP.20.04.035.

Therefore we are unsure if the DAA have indeed availing of any direct Metrolink co-ordination with the TII in the period 2019-2022?

Ultimately it is the DAA's responsibility to protect and maintain future Terminal expansion, Hangar relocation, and the APM boarding/tunnel position between piers 3&4 with respect to the Metrolink Tunnel.

Any future DAA /Metro Development and interface issues with T1&T2 must also not impede road traffic / pedestrian free flow within the GTC (Ground Transport centre).

As can be seen below T1 passengers will constantly restrict smooth surface vehicular traffic access to the GTC.

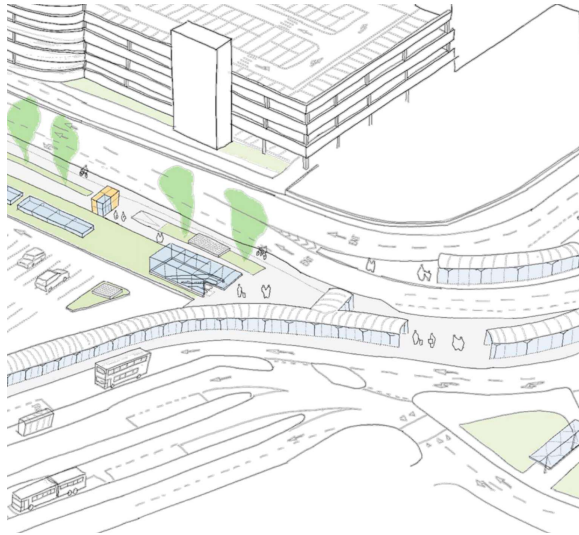


Fig 8: TII latest indicative Dublin Airport Metrolink exit

9.3 Passenger Comfort at exposed Aprons.

To protect passenger's interests at exposed Aprons we recommend that the airport authority fund (via a new Capex) a very substantial fleet of passenger steps similar to those used in FRA (Frankfurt Main).



Fig 9: All weather Passenger Steps at Frankfurt Main remote stands.

10.0 Planning Fee Issues.

10.1 Consultancy Fees

To protect passenger's interests we request that CAR consider setting up a separate tracker on all DAA external planning and consultancy fees.

CIP Projects that are built should naturally be included in the CAR passenger charge. However, consultancy and planning design fees associated with shelved projects should be clawed back from the DAA.

10.2 Extent of Passenger Liability for development Levies.

The general public are aware that FCC and the DAA have a natural symbiotic relationship. A €2.9bn DAA CIP development to 40mppa is both an envious and fortunate revenue stream for FCC.

On 13/7/22 FCC promulgated Order PF/1485/22. This order gave final planning approval for Apron 5H.

This final FCC planning hurdle followed DAA's payment undertaking of € 5,028,035 in respect of a Section 48 financial contribution as outlined in Condition 11 to F20A/0550.

Note to CAR: Apron 5H Development levy is currently under appeal to ABP: Ref 312476.

Earlier this year in the 2020+ CIP the DAA stated that they *"are currently negotiating reduced contributions fees but have included the additional costs in the update"*

We ask as a matter of policy, will CAR's airport passenger charge incorporate all airport related FCC development levies.

If so, going forward, passenger are on the hook for substantial FCC contributions. It is also worth noting that the DAA were conditioned to fund the forth traffic signal arm at the Airport roundabout in addition to contributions as part of planning approval for the DAC office blocks.

11.0 Conclusion.

The Airport is at a watershed. For a €2.9bn CIP spend (which exceeds the NCH development) we have neither political/public debate nor Government policy direction on Airport development.

This CIP3/2022 either gets it right or terribly wrong. Sadly deep down everyone knows which way it's going - compaction.

However S&T have shown on behalf of its members the logical way forward without fear or favour/allegiance to any Base Airline.

We thank CAR for the opportunity to comment on the Draft 03/2022 Determination. We are available to clarify any issue raised and shall always assist CAR /SRD/ and the DAA to nurture and develop the National Gateway in any way we can.

We wish to reiterate our offer to demonstrate to CAR or indeed DAA Board members of a simulator session to fully demonstrate the challenges pilots encounter within the Low Visibility Procedures environment.

Yours sincerely,

A handwritten signature in black ink, appearing to be 'David Morrissey', written over a horizontal line.

David Morrissey

Director Safety & Technical

Irish Air Line Pilots Association

cc: Department of Transport, Dublin Airport Authority, Irish Aviation Authority