

CITY AIRPORT DEVELOPMENT PROGRAMME
(CADP1) S73 APPLICATION

DESIGN DEVELOPMENT REPORT

DECEMBER 2022



LCY PLANNING LEADERSHIP AUTHORISATION

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ABOUT THIS REPORT

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GLOSSARY

Acronym	Meaning
CADP	City Airport Development Programme
CADP1	Current Scheme with Detailed Planning Permission
CADP2	Current scheme with Outline Planning Permission
CAH	City Aviation House
DATCT	Digital Air Traffic Control Tower
DfT	Department for Transport
EEC	East Energy Centre
EEP	Existing East Pier
ETE	East Terminal Extension
ETIF	East Temporary Immigration Facility
EWP	Existing West Pier
GIF	Goods-in Facility
LBN	London Borough of Newham
LCY	London City Airport
MPPA	Million Passengers per Annum
MTB	Main Terminal Building
NEP	New East Pier
PAX	Passenger(s)
TEGF	Temporary Eastern Gaterooms Facility
TGIF	Temporary Good-ins Facility
TIF	Temporary Immigration Facility
TOBB	Temporary Outbound Baggage Facility
WEC	West Energy Centre
WOWO	Walk On and Walk Off (aircraft access)
WTE	West Terminal Extension



1.0 INTRODUCTION

1.1 PURPOSE OF DOCUMENT

This document has been prepared by Pascall + Watson to accompany a Section 73 (S73) application to modify conditions attached to planning permission reference 13/01228/FUL (“CADP1 Planning Permission”) which was granted by the then joint Secretaries of State for Transport and Communities and Local Government on 26 July 2016. It describes the design related elements of the proposed modifications to conditions as well as outlining the limited proposed changes to the approved design. The design-related modifications are secured by way of amendments to the approved drawings (condition 2) and aircraft stand location (condition 12).

1.2 PREVIOUSLY CONSENTED SCHEME

The CADP1 Planning Permission secured consent for the detailed design of new terminal buildings, airfield infrastructure and surface access upgrades at London City Airport. This permission also included new operational controls including annual limits on the number of consented aircraft movements (111,000) and passengers (6.5 million). The scheme is intended to comprehensively improve the design of the airport and create a high-quality entrance point to Newham. It was strongly supported by the London Borough of Newham (LBN) and its Design Panel during the appeal process. The approved CADP1 scheme is made up of the following components:

- Facilitating works (temporary works to allow for construction to take place in an operational airport);
- Extensions to the existing terminal buildings: the West Terminal Extension (WTE) and the East Terminal Extension (ETE);
- New three storey east pier;
- Eight new aircraft stands and noise barrier;
- Parallel taxiway;
- Eastern Energy Centre (EEC) and Western Energy Centre (WEC);
- New Forecourt, pedestrian walkway, decked car park, upgrade to Hartmann Road and related surface access upgrades; and
- Outline consent for a new Hotel (granted separately under CADP2).

The scheme has been subject to a number of non-material design amendments (all approved by LBN) since the original consent was granted, as outlined below:

- 16/03797/NONMAT - WTE (Approved 9th Dec 16);
- 17/02865/NONMAT - Service yard; East Pier; Forecourt; Decked Car Park (Approved 23rd Aug 17);
- 18/01001/NONMAT - WEC & EEC (Approved 11th Apr 18);
- 18/02109/NONMAT - Decked Car Park (Approved 20th Jul 18);
- 18/02611/NONMAT - Terminal & Forecourt (Approved 8th Oct 18);
- 19/02621/NONMAT - RVP Pontoon & Dockside path (Approved 20th Dec 19); and
- 20/01200/NONMAT - Use of mobile ground power units instead of Fixed Electrical Power (10 Sept 2020).

Refer to *Figure 1.2.1* for the 2022 Site Plan

Refer to *Figures 1.2.2 to 1.2.5* for the terminal and forecourt images associated with the current consented scheme.

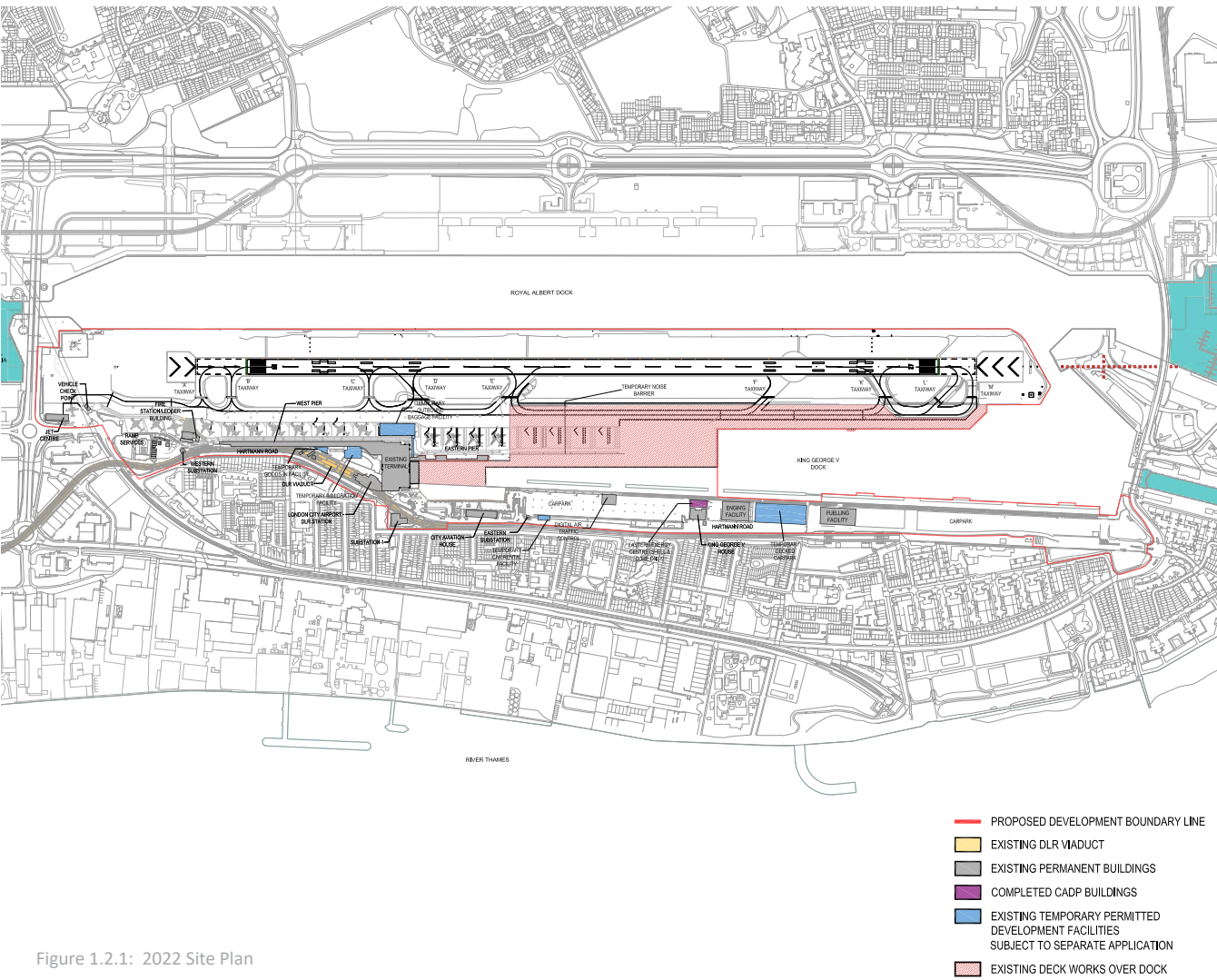




Figure 1.2.2: Visualisation of the consented scheme from the south-east.



Figure 1.2.3: Visualisation of the consented scheme from the south-west.



Figure 1.2.4: Visualisation of the consented scheme main entry area from the south-east.



Figure 1.2.5 Visualisation of the consented scheme WTE and service yard from the south-west.

1.3 DEVELOPMENT UPDATE

Construction of the CADP1 commenced in November 2017. Significant progress was made prior to the pause of construction following the onset of the Covid-19 pandemic in 2020. The vast majority of the new airfield infrastructure, including the new parallel taxiway, new aircraft stands and temporary noise barriers have been completed. The taxiway is fully operational along with four new aircraft stands. The new deck over King George V Dock which will support the ETE and NEP is also complete. When construction re-commences the next steps will be to build out the NEP and ETE on the new deck.

Prior to pausing construction works and ahead of building out the new terminal buildings and surface access upgrades, a number of temporary facilities were erected to support construction in what is a fully operational airport with significant constraints on build activities due to the nature of its operations. These temporary facilities were put into place to accommodate the continued operation of the airport during the construction programme and will be required to maintain levels of service and safe operations until the CADP1 works have been fully built out. The temporary facilities do not form part of the approved CADP1 works but were erected using Permitted Development rights following consultation with LBN. They include:

- Temporary Good-in Facility (GIF);
- Temporary Immigration Facility (TIF);
- Temporary Outbound Baggage Facility (TOBB);
- Temporary Car Rental Building; and
- Temporary Decked Carpark.

A separate application has been submitted alongside the S73 application to retain the temporary Permitted Development Facilities and erect a further Temporary Eastern Gateroom Facility and to keep these in situ until such time as the CADP1 works are complete.

Some separate temporary facilitating works were also permitted as part of CADP1 permission, including a temporary coaching facility, noise barriers and extended baggage facilities. These facilities were included in the CADP1 plans to allow for a two phase build, should the airport wish to pursue such an option. The facilitating works have not been built out to date but some minor changes are proposed to the access of one of these structures (coaching facility) to allow for the presence of other temporary facilities which have since been built out on the airfield under Permitted Development (and which are subject to the separate application).

1.4 EXPLANATION OF S73 PROPOSALS

The S73 application seeks permission to raise the existing passenger cap from 6.5 million to 9 million passengers per year and make other adjustments to the airports operating hours. This will allow the airport to make best use of its infrastructure as it meets increasing demand from passengers whilst recovery from the Covid-19 pandemic continues.

This report explains the minor changes to the design which are required and necessary to reflect adjustments to planning conditions. This includes minor changes to forecourt, minor changes to the Facilitating Works (access to the Coaching Facility) to allow for the presence of other facilities which have since been built out under Permitted Development and measures to allow more flexibility to park aircraft at the Jet Centre apron.

1.5 IMPACT OF PASSENGER LIMIT INCREASE ON PREVIOUSLY CONSENTED SCHEME

Forecast demand is not expected to alter the peak passenger capacity stated in the CADP1 scheme’s original forecast. The composition of passengers using the airport is expected to become proportionately more leisure oriented and with more journeys spread throughout the day and week, rather than being concentrated in the weekday mornings and evenings as they have in the past. This is explained further in the Need Case that accompanies the S73 application, which outlines that the approved terminal buildings can accommodate the forecast passenger growth due to the similar peak demand overall. Airport passenger facilities are designed to handle the busiest periods and because the Airport’s peak demand is not expected to change significantly from the CADP1 scheme’s original forecast, it is not necessary to extend or significantly modify the design of the approved passenger terminals.

The design of the consented CADP1 scheme is based on the typical peak hour passenger demand. This provides the flexibility for passenger growth outside of the previously forecast passenger peaks without the need for major redesign.

Areas such as security have been configured with the anticipation that equipment will change over time and therefore allow for this. The layout of the consented CADP1 scheme allows for the new generation screening machines to be accommodated. Conventional screening equipment is less efficient than the new generation screening machines and therefore the overall processing capacity of the security processing area will increase which supports passenger growth.

The consented Terminal Forecourt arrangement safeguarded for some additional future public car and black taxi standing bays which has meant that the changes to passenger demand and mode usage that are now anticipated, can be provided for without the need for significant redesign. Refer to *Section 2.1* for more detail.

The disposition and separation of functions within the WTE and ETE has facilitated phasing and allows the construction of the WTE and ETE separately from one another.

FACILITY	EXISTING (m2)	CONSENTED (m2)	PROPOSED
Overall Terminal (GEA)	<u>17,991</u> (OBB area included) (17,230 without OBB Enclosed Area)	<u>51,801</u> (OBB area included)	<u>As per consented scheme</u>
Terminal Building (GEA) (Existing Terminal footprint: includes West Pier, excludes Eastern Pier)	<u>15,455</u> (includes Pret-A-Manger kitchen cabin within existing Service Yard)	<u>15,395</u> (Pret-A-Manger kitchen cabin re-moved)	<u>As per consented scheme</u>
Proposed Western Terminal Extension (GEA)	<u>0</u>	<u>5,735</u>	<u>As per consented scheme</u>
Proposed Eastern Terminal Extension (GEA)	<u>1,775</u> (existing Eastern Pier)	<u>31,561</u> (includes Eastern Pier / OBB area and baggage accommodation, ground / first / second / roof plant areas within the building enclosure)	<u>As per consented scheme</u>
Total Landside Retail/F+B (A1-A4) Landside (Existing, Reconfigured & Proposed)	<u>924</u> (includes Pret-A-Manger kitchen, ticketing areas, chauffeur desk; also includes CAH canteen, central F+B catering kitchen etc.)	<u>2,301</u> (includes Storage, F+B kitchen and seating, chauffeur, car rental and ticketing)	<u>As per consented scheme</u>
Total Airside Retail/F+B (A1-A4) Airside (Existing, Reconfigured & Proposed)	<u>1,472</u> (includes F+B Kitchens)	<u>2,663</u> (includes storage & F+B seating.)	<u>As per consented scheme</u>
Terminal Landside Offices	<u>1,820</u> (includes 1,684 m2 from CAH)	<u>1,974</u> (Including 1,684 sq.m from CAH, which is assumed to be entirely demolished for this development)	<u>As per consented scheme</u>

Figure 1.5.1: CADP1 summary schedule of Terminal areas.

2.0 PROPOSED DESIGN CHANGES

2.1 FORECOURT

The consented Forecourt design (refer to *Figure 2.1.1*) has undergone minor improvements to accommodate the revised passenger demand of up to 9mppa and to reflect developments in the transport modal split that have been identified in the most recent passenger surveys (refer to *Figure 2.1.2*). These improvements involve some realignment of kerb lines and paint markings to accommodate additional public forecourt drop-off and black cab pick-up and drop-off. The bussing area has been slightly reconfigured to provide additional bays that safeguard for potential shuttle buses. The overall layout remains broadly the same as the consented scheme.

The update Forecourt design was tabled with TfL on 16 June 2022 and discussed in detail. In their formal response to the discussion, TfL highlighted the desire for bus routes to each have a dedicated stop as well as room for a bus stand. The proposal incorporates these requests, with capacity for the three local bus stands.

2.2 TERMINAL

The external design and appearance of the new and extended passenger terminals buildings remains as per the approved scheme. Changes to internal layouts of the terminal will evolve as passenger numbers grow and the CADP1 build progresses, however these were not fixed in the CADP1 planning permission, with the approved drawings confirming that internal layouts were for illustrative purposes only. Therefore no changes to the approved plans are required. These internal changes may include alterations to the security screening area to accommodate new generation cabin baggage screening machines and body scanners that are now required for implementation by 1st June 2024 by the DfT. There are also some minor changes to the internal layout of the existing terminal to maintain levels of service within the departures lounge and commercial areas ahead of the CADP1 build.

The layout of photovoltaics panels on the roofs of the MTB, ETE, WTE and NEP and across the airport site may need to be reconfigured over time to meet the energy demands and sustainability requirements as per the revised energy strategy and the Airport's zero carbon ambitions. Illustrative plans showing their potential positioning on the roof and elsewhere have previously been approved in accordance with CADP1 Condition 64. Any future changes could be delivered by further submissions under condition.

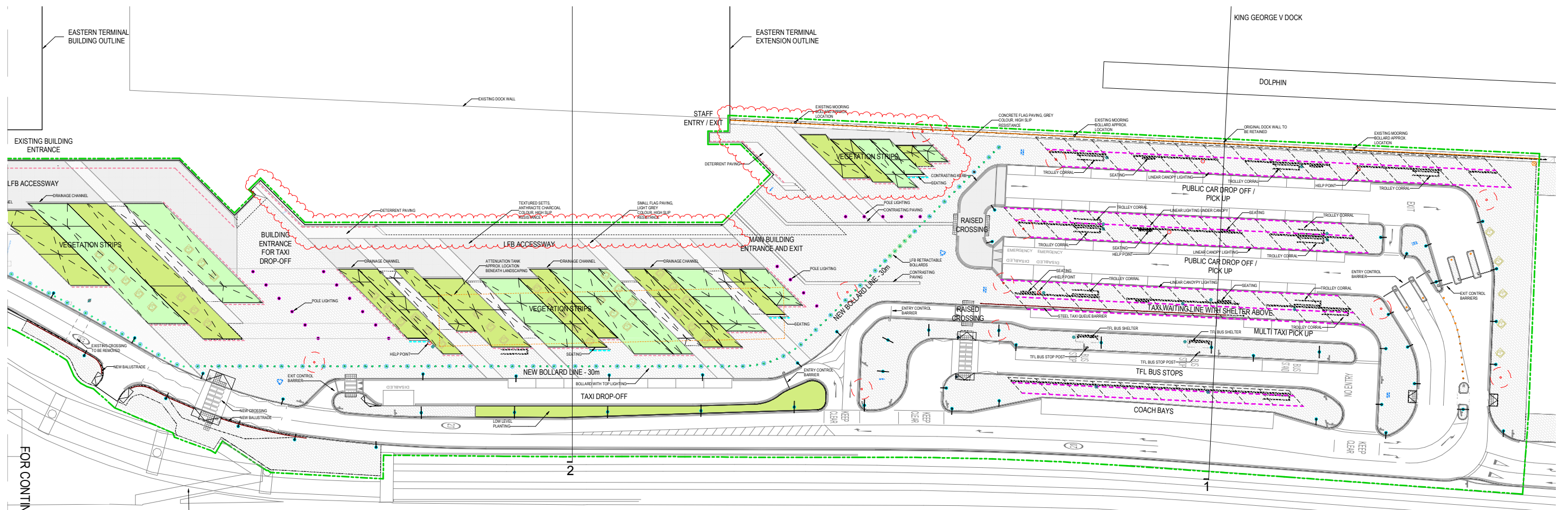


Figure 2.1.1: Consented Forecourt Layout

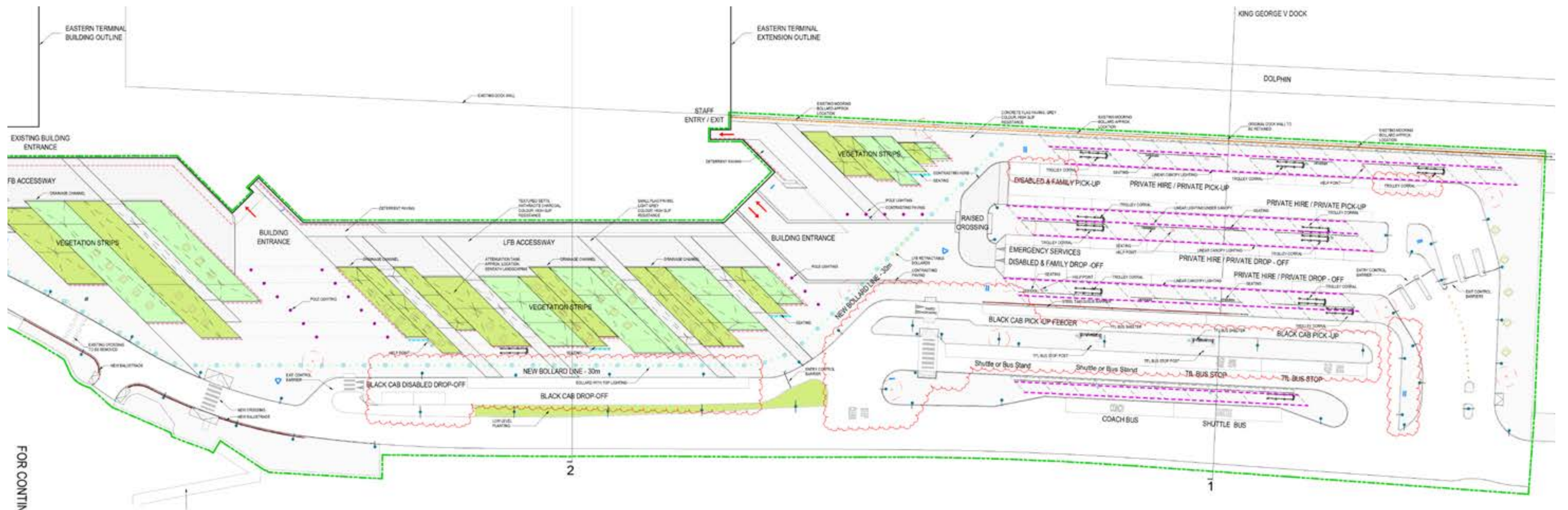


Figure 2.1.2: Proposed Forecourt Layout

2.3 FACILITATING WORKS

As explained in 1.3 the Facilitating Works (extended baggage; coaching facility and noise barrier) approved as part of the CADP1 permission remain unbuilt, primarily due to a single phased delivery of CADP1 that was being pursued prior to the pause of construction in 2020 due to the impacts of the Covid-19 pandemic. The temporary noise barrier in place on stands 25-28 was erected in accordance with details submitted under condition 6 of the CADP1 permission.

Some minor changes are proposed to the access of the coaching facility to allow for the presence of a Temporary Outbound Baggage (TOBB) facility built on stands 1 and 2 which was erected under Permitted Development Rights and is subject to the separate application for retention until the CADP1 works are complete.

The Coaching Facility was accessed via a link bridge at the first level of the Main Terminal Building (MTB) that facilitated the movement of departing passengers from the first level terminal airside lounge to the additional gaterrooms provided in the new temporary facility. Since this was proposed the TOBB has been erected. Baggage is conveyed to the new TOBB through an enclosed conveyor system that rises to the first level of the Terminal and blocks the proposed connection point for the link bridge that connects from the first level of the Existing East Pier (EEP) bridge to the Temporary Coaching Facility on stand 21. A new location has been proposed for the link bridge and is illustrated in the adjacent Figure 2.3.1.

The proposed bridge location is only visible from the airside terminal lounge and airfield apron areas and is very similar to the consented scheme link bridge in scale and appearance.

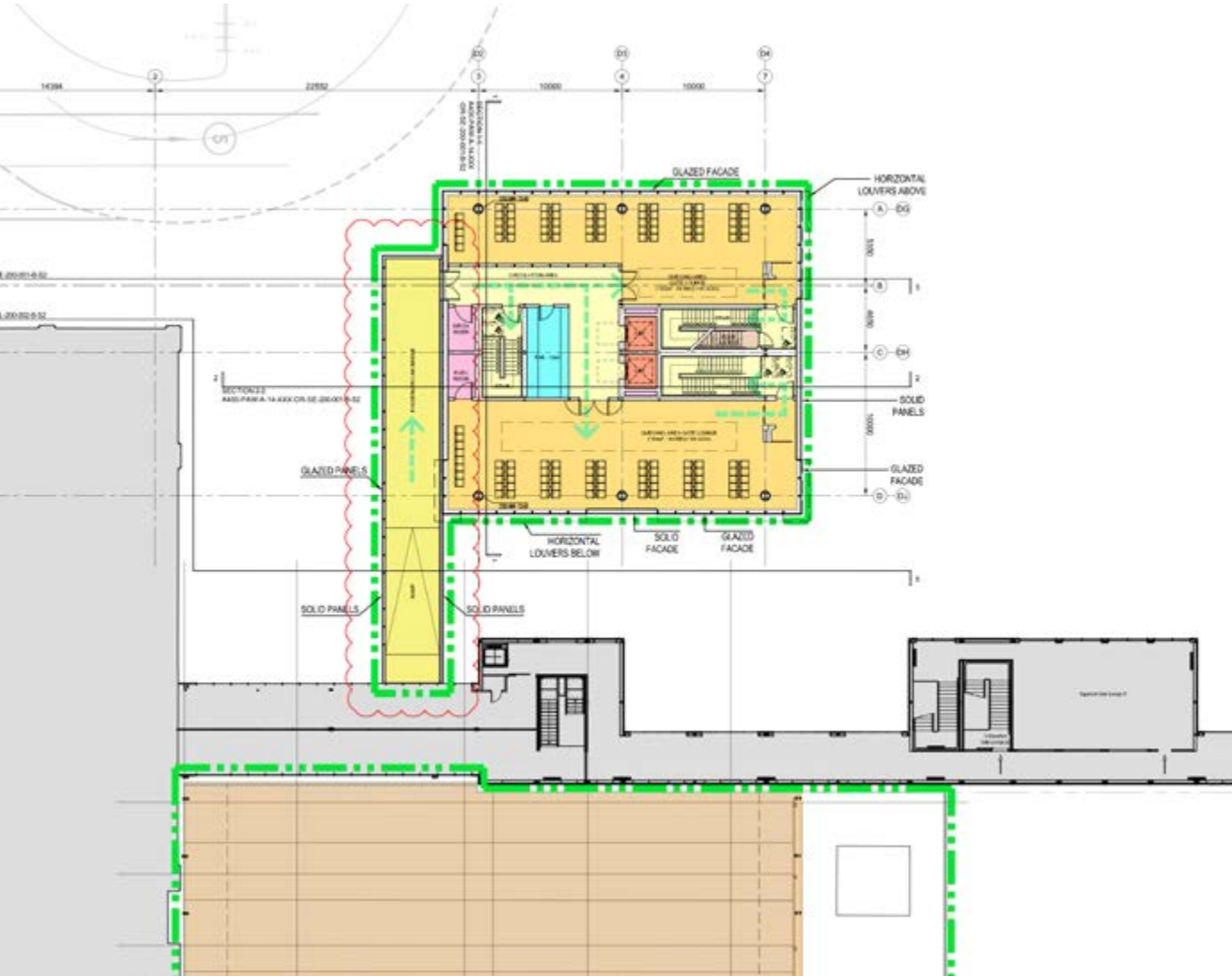


Figure 2.3.1: First Level plan illustrating the proposed bridge to the Temporary Coaching Facility.

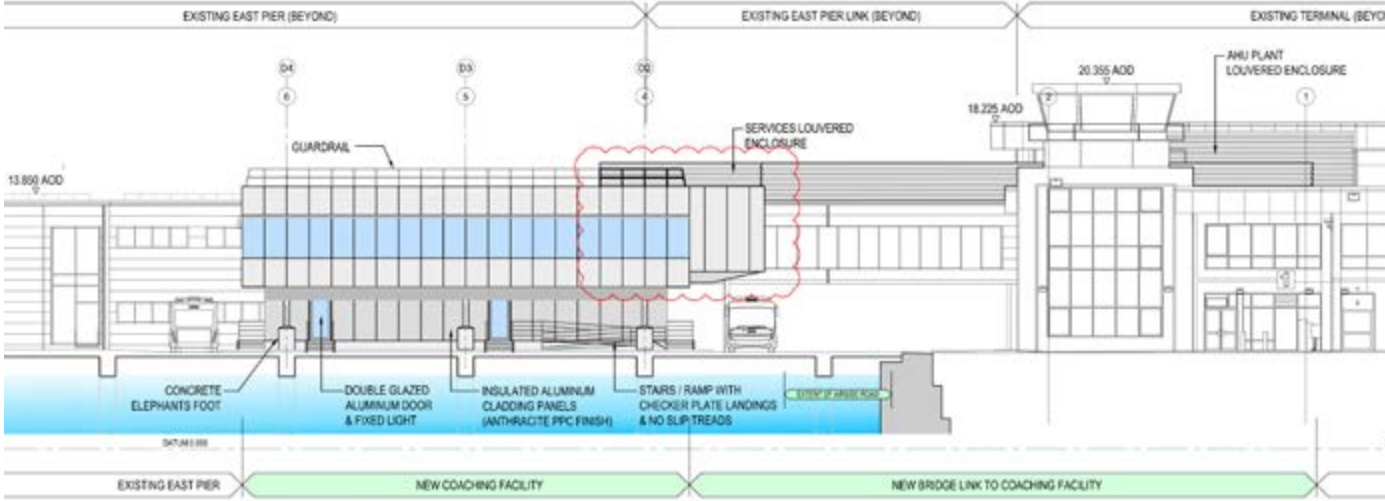


Figure 2.3.2: North elevation illustrating the proposed bridge to the Temporary Coaching Facility.

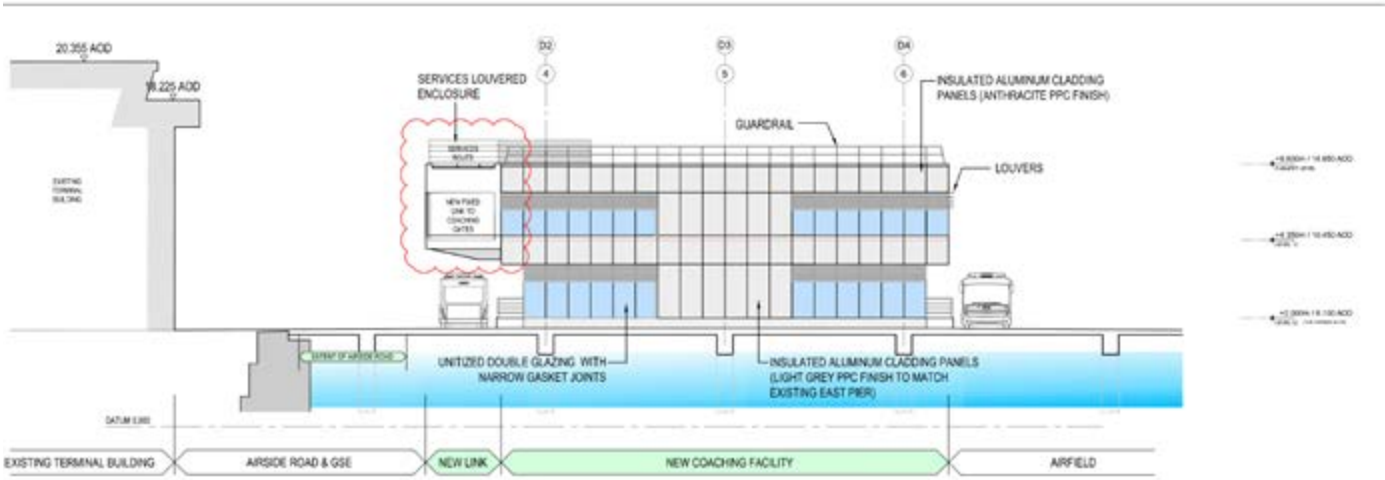


Figure 2.3.3: South elevation/section illustrating the proposed bridge to the Temporary Coaching Facility.

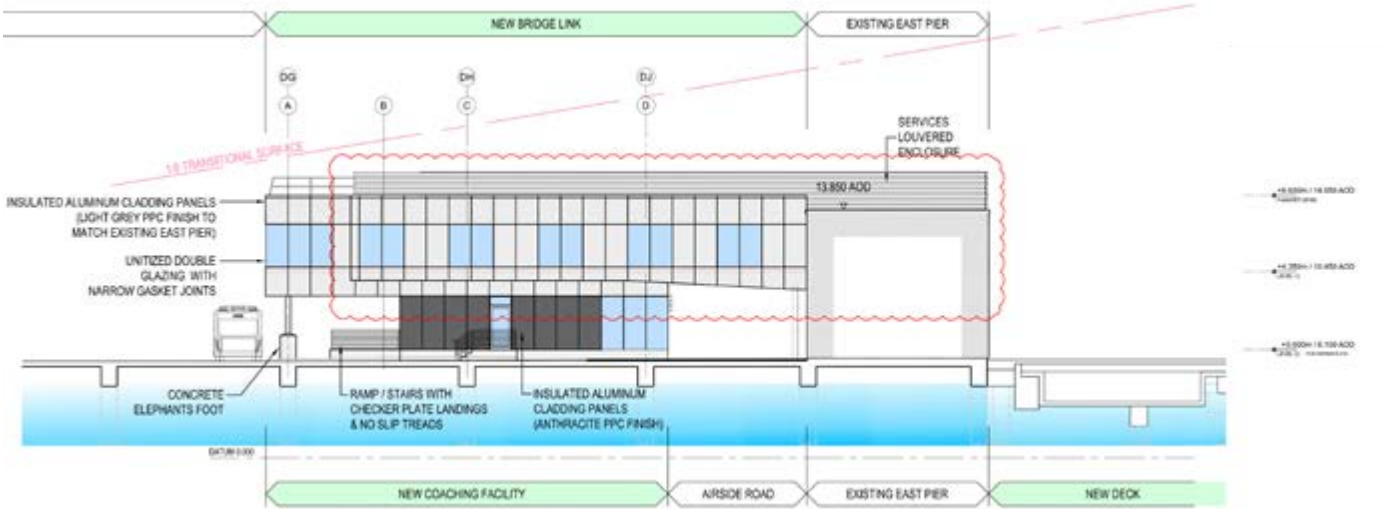


Figure 2.3.4: East elevation illustrating the proposed bridge to the Temporary Coaching Facility.

2.4 PROPOSED IMPROVEMENTS TO AIRCRAFT PARKING

The airfield stand layout will evolve during the CADP1 build to suit the interim terminal and passenger pier provision as well as rate of transition of the existing fleet to cleaner, quieter, new generation aircraft. Once the CADP1 build is complete, it is expected that 22 of the consented 25 stands will be occupied during the peak hour of operations. Of these 22 aircraft, 14 will be of a size that requires a large Code C stand.

As can be seen from need case accompanying the application, there will be a need for more stands for larger Code C aircraft than the 8 currently available. In the first instance, this requirement will be met through bringing into use the 4 additional stands (29-32) on the remainder of the already constructed East Apron area. When the peak requirement for more than 11 larger Code C aircraft is reached at c.7.6 mppa, this may require some minor re configuration of existing apron areas, making more efficient use of existing apron areas particularly in the west, to allow more larger Code C aircraft to be accommodated. This could be achieved through a combination of:

- Re configuration of the East Apron to nose-in parking, allowing additional larger Code C aircraft to be accommodated;
- Additional flexibility to park Code C aircraft on the existing Jet Centre Apron; and/or
- Adjustments to the existing stand layout at the western end of the Main Apron.

These re configuration works would not require any increase in the permissible number of aircraft stands (25) in the CADP1 permission or additional apron area.

Please refer to *Figure 2.4.1 (Plan P4 Rev.A)* with the relevant stand areas shown in yellow fill. The buffer stand is shown to the far left of the illustration (as highlighted in dashed red) at the site of the Airport's existing Jet Centre. The proposed change will require an amendment to Plan P4 referred to under CADP1 condition 12.

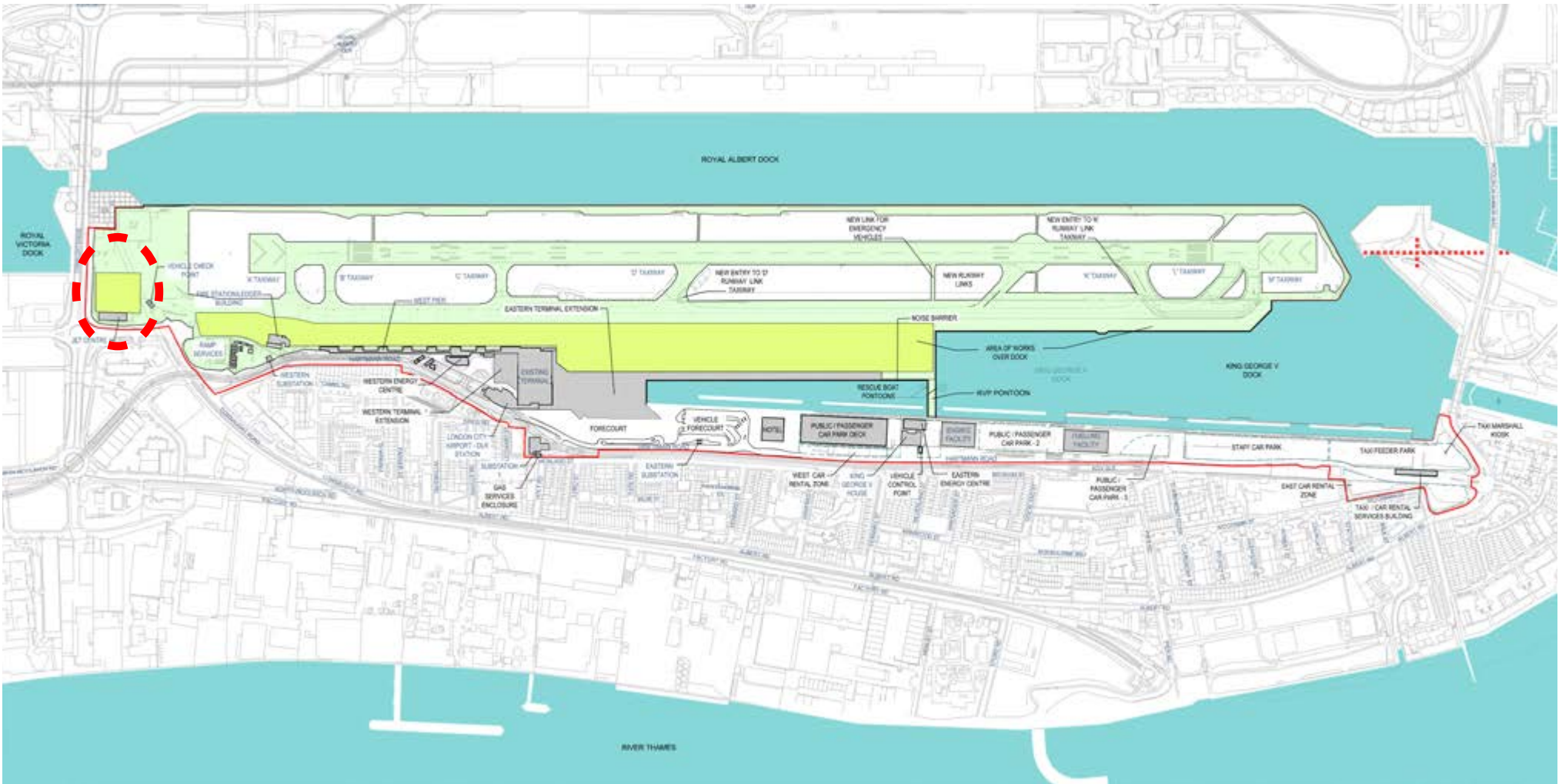


Figure 2.4.1: (Plan P4 Rev.A) Site plan showing location of stands for scheduled aircraft movements in yellow, with the buffer stand shown to the far left of the illustration as highlighted in dashed red.

3.0 FUTURE DEVELOPMENT OPPORTUNITY AT LCY

The development prospects outlined in this section of the report are not part of the current application. The existing Airport site south of KGV Dock extends to circa 7.2 Ha (circa 7.7ha including the Rymill Street site south of the KGV DLR station) including the section of Hartmann Road south of that land, and excluding the CADP2 Hotel site east of the CADP1 forecourt. This land is currently under-utilised, comprising surface level car parking, airport operational buildings and infrastructure and, during the construction of CADP1, construction logistics areas.

The consented CADP1 scheme includes a redevelopment of the lands south of KGV Dock that includes the following:

- Decked and surface level car parking;
- Taxi feeder park;
- Taxi/car rental services building;
- Car hire vehicle delivery and parking area;
- Dockside walkway between the Terminal and eastern gateway; and
- A viewing area with historic interpretation elements (north of the proposed Terminal Forecourt).

Additional to these elements within CADP1 is the Hotel on the east side of the Terminal Forecourt that is included within the CADP2 permission. The approved layout is shown on *Figure 3.0.3* and includes the retention of existing onsite development such as the existing Engineering Facility, Fuelling Facility and Digital Air Traffic Control Tower (DATCT) are retained. No changes are proposed to the previously approved 'Dockside' layout or the number of parking spaces as part of the S73 proposals, despite a 2.5mppa demand increase. This will continue to encourage passengers and staff to travel to and from the Airport by sustainable and public transport modes.

The Airport published a new master plan in 2020 which set out its longer term vision for the campus over the next 15 or so years. Subsequent to the publication of its master plan, the Airport also published a Sustainability Roadmap which sets out its ambitious plans to become London's first Net Zero emissions airport by 2030. Key to achieving the master plan and net zero ambitions will be a more comprehensive redevelopment of the 'Dockside' by making better use of the currently under-utilised lands.

Building on the transformation of the Royal Docks and the Newham Local Plan allocation for employment (logistic and transport) functions, the Airport consider that the Dockside has significant potential to make better use of land. By consolidating the limited and consented parking provision in CADP1 into a single multistorey car park incorporating car rental and taxis too, this would free up the majority of the Dockside, to provide for development such as:

- Infrastructure to support and accelerate the Airport's transition to Net Zero, while also supporting the aviation sectors carbon reduction plans (such as a Zero Emission Aviation Fuel Facility and/or potential photovoltaic arrays either in the KGV Dock or on new buildings);
- Employment opportunities for the wider industry to support the journey to net zero, including research and development, green technology and other airport related jobs;
- Education partnerships to train up local residents into the next generation of jobs in aviation and supporting industries;
- Logistics and Transport Hub including potential for cargo and green technologies as well as supporting office space; and
- Improved public realm, community facilities and pedestrian connectivity.

The Airport is a member of Project NAPKIN (New Aviation Propulsion Knowledge and Innovation Network) which along with Heathrow Airport, three universities and aviation industry leaders including Rolls Royce, have been exploring the feasibility of zero emission aircraft including the necessary infrastructure needed to ensure that it is successful. Consistent with the Government's *Jet Zero Strategy*, it is anticipated that airlines will increasingly use Sustainable Aviation Fuels (SAFs) with a mandatory target set across the industry of 10% SAFs by 2030. Initially these are expected to be blended with existing fuels and can therefore use established infrastructure. In the longer term, the aviation industry is expected to use sustainable energy with Project NAPKIN anticipating adoption of hydrogen power. London City Airport's characteristics and focus on smaller types of jet aircraft and European and regional destinations mean that airlines based at the Airport could be early adopters of the zero emission technologies. The medium to long-term timescales for zero emission aircraft mean that it is premature to make firm plans for zero emission infrastructure, not least because future commercial and technological progress is needed to better understand what infrastructure is needed. However, the Airport has identified lands to safeguard for future sustainable aviation infrastructure and shows the potential for hydrogen fuel facilities and potential associated delivery moorings onsite.

The illustrative masterplan also shows potential to deliver an education/innovation centre next to the King George V (KGV) Docklands Light Rail (DLR) Station. Given the Airport's developing expertise in sustainable aviation, there is a significant opportunity to partner with leading research and education institutions who specialise in aviation or work with London universities on knowledge development. This could be delivered alongside more traditional employment uses.

The Airport also own a site south of KGV DLR Station that it is currently under-utilised and could be used for a range of educational or community purposes with the potential to be better integrated with the LCY site and the DLR Station access.



Figure 3.0.1: Dockside Vision CGI viewing over Terminal and toward the north-east.



Figure 3.0.2: Dockside Vision CGI viewing toward the south-west.

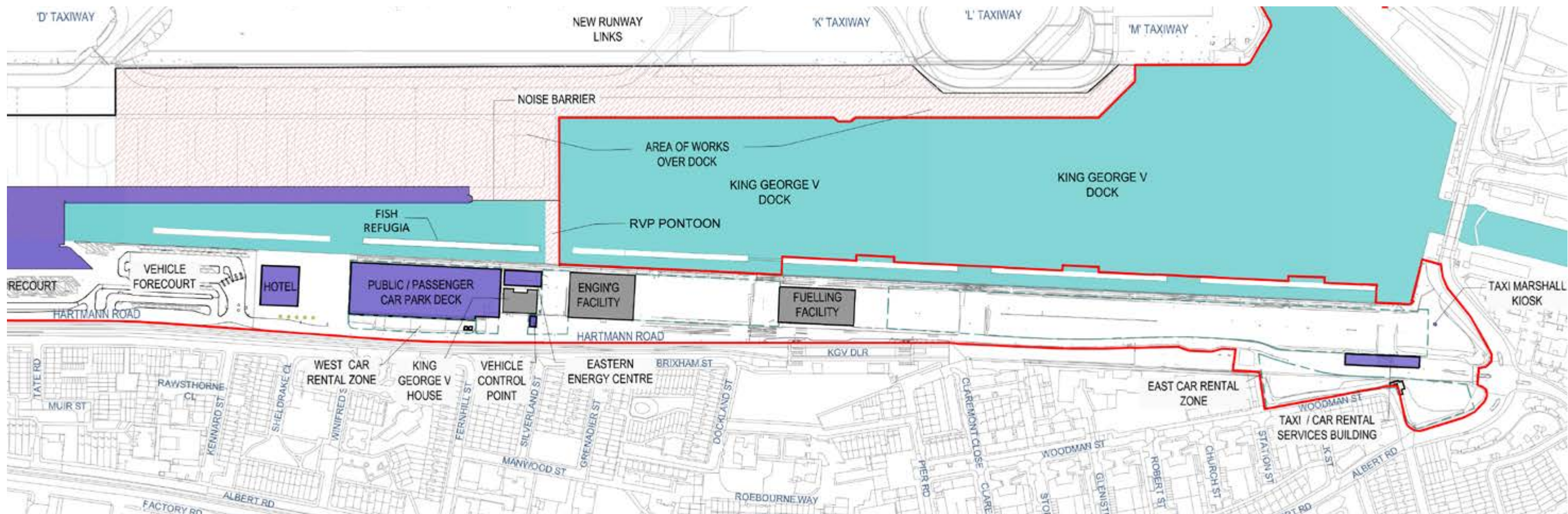


Figure 3.0.3: Consented CADP1 Site Plan

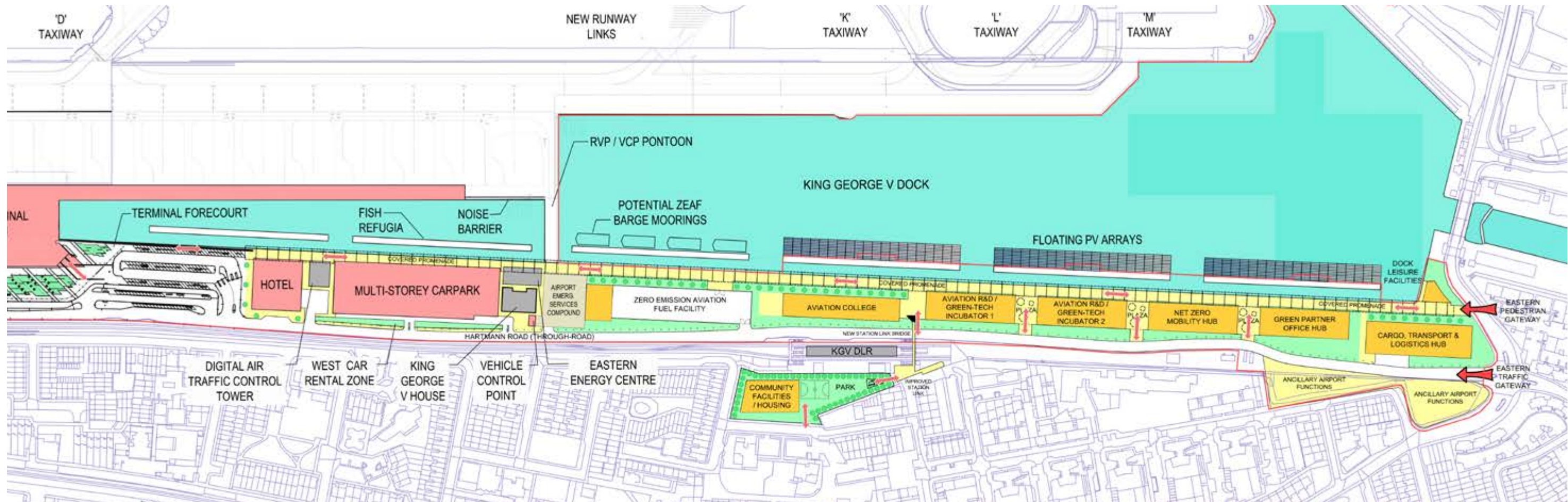


Figure 3.0.4: Illustrative Dockside Vision Masterplan