Sydney International Container Terminals Pty. Limited
Level 19, 3rd Tower
Market Street
Sydney NSW 2000, Australia
Tel: (61 2) 8270 8000
Fax: (61 2) 8270 8007
www.hph.com.au

7 May 2013

PCU044152

NSW Department of Planning

Major Infrastructure Assessments

Level 7, 23 – 33 Bridge Street

Sydney NSW 2000

Attn: Ingrid Ilas

Dear Mr Ingrid,

RE: PORT BOTANY EXPANSION – SECTION 75W MODIFICATION OF CONDITION C2.22

Further to the granting of approval of MOD-60-9-2008 approved 21st September 2008, Sydney International Container terminal Limited (SICTL) is seeking modification to conditions C2.22 for the operations phase of the Port Botany Expansion under Section 75W of the Environment Planning & Assessment Act 1979 (EP&A Act).

The reason for the modification is set out below.

Condition C2.22

"The Applicant shall ensure that all operation equipment is below the obstacle limitation surface in consultation with Air Services Australia."

Further to the Mod-60-9-2008 where the applicant was granted a change to ensure all construction equipment is below the obstacle limitation surface, unless otherwise permitted by approval under the Airports Act 1996. SICTL is seeking to bring the terminal operations general requirement Condition 2.22 the equivalent operations phase condition into line with this earlier approval. SICTL is currently liaising with Sydney Airports Corporation Limited (SACL) to allow for a small 55mm penetration of the obstacle limit surface (OLS) by the operation cranes operating close to the Parallel Runway that will penetrate the OLS in a similar manner to the construction phase. Penetrations of the OLS are permitted subject to approval under the Airport Act 1996 under Part 12 – Protection of Airspace around Airports, Division 4 Protection of Prescribed airspace. SICTL is currently seeking such approval.

It is recommended that the condition be amended to:

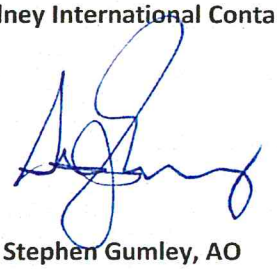
"The applicant shall ensure that all operation equipment is below the obstacle limit surface, unless otherwise permitted by approval under the Airports Act 1996."

We would appreciate your prompt assessment of this modification to enable operation to progress. Should you require further information do not hesitate to contact me on (02)8268 8000.

Yours sincerely,

For and on behalf of

Sydney International Container Terminal Pty Ltd



Dr. Stephen Gumley, AO

Chief Executive Officer

Enclosed:

- Application to modify development consent 75W
- Owners Consent Letter from Sydney Ports Corporation dated 1 May 2013
- Communications with SACL
- SICTL Quay Crane Operations Report

HPH

Sydney International
Container Terminals

SICTL Quay Crane Operations

Document ID: HPA-QC-01

CURRENT REVISION

Document: SICTL Quay Crane Operations

Document ID: HPA-QC-01

Revision No: 0

Date: 20 March 2013

Prepared By: Karl McCarthy

REVISION HISTORY

Revision	Date	Description	Prepared By	Approved By
A	18/3/13	Original issue for SICTL management review	KM	
0	20/3/13	Minor amendments from draft. Final issue.	KM	BM

COPYRIGHT

TABLE OF CONTENTS

1 BACKGROUND

1.1 COMPANY PROFILE

Sydney International Container Terminals Limited (SICTL) is a member of Hutchison Port Holdings (HPH) Group, a subsidiary of the multinational conglomerate Hutchison Whampoa Limited. HPH is the world's leading port investor, developer, and operator, holding interests in 52 Ports comprising of 269 operational berths in 26 countries, including container terminals operating in 6 of the 10 busiest Ports in the world in 2011. HPH handled a total throughput of 75.1 million TEU's (twenty foot equivalent units) during 2011.

HPA includes the following business units:

- Sydney International Container Terminals (SICTL)
- Brisbane Container Terminals (BCT)
- Hutchison Logistics Australia (HLA).

1.2 SYDNEY INTERNATIONAL CONTAINER TERMINALS (SICTL)

Port Botany is the State's premier port and Australia's second largest international container port. The new SICTL terminal is an integral part of the Port's expansion program, which is needed to ensure this major port continues to meet the growing demand for container traffic in the years ahead. The introduction of SICTL as the third container operator into the port is creating greater competition.

The SICTL terminal is due to begin operations in 2013 and when fully operational will have a total capacity of more than 1 million TEU's per annum. The terminal will operate four shipping berths with a 1,300 metre quay.

Its new Post Panamax Quay cranes can span 18 container rows, ultimately being capable of handling ships carrying 8,000 TEU's.

SICTL will employ the latest container terminal operations technology, nGen, developed by Hutchison Port Holdings, to track and manage the movement of containers through the terminal. It will also operate automatic stacking cranes being introduced into the port for the first time. Use of the cranes provides greater on-site container capacity to manage peak demands, improved security, and greater employee safety.

Importantly, the terminal will be connected by a dedicated rail freight service to Hutchison Logistics Australia's (HLA) intermodal terminal at Enfield, 18 kilometres south west of the port. This will reduce the reliance on road transport and help overcome road congestion issues near the port. The main Features of the Port Botany Terminal are as follows:

- Area – 45 hectares reclaimed land
- Quay Line - 1300 metres
- Berths - 4
- Depth alongside – 16.4 metres
- Rail sidings 2 x 750 metres, able to expand to 4 railway sidings
- Capacity 1 Million+ TEU's (at full operation)

- Cranes Post Panamax Quay Cranes, Automated Stacking Cranes
- On site empty container storage facility.

1.3 PROJECT PHASING

This SICTL project will be constructed in 3 phases.

Phase 1 consists of 650m of wharf which contains two berths. These two berths will be serviced by 4 quay cranes. Phase 1 also includes the construction of 3 blocks of Automatic Stacking Cranes (ASC's) as well as operation and maintenance buildings. Phase 1 is expected to be complete by the end of 2013.

Phase 2 will consist of a further 3 ASC's. Timing of construction is dependent on demand but it is expected that this work will be complete by 2015.

Phase 3 will consist of a further 650m of quay containing 2 berths and associated quay cranes. Up to 7 ASC's may also be added in Phase 3 depending on demand. Phase 2 will also include an expansion of rail capabilities with the addition of 2 additional rail sidings.

2 INTRODUCTION

2.1 SICTL QUAY CRANE DESIGN

Upon award of the new Terminal 3 lease from Sydney Ports in 2009, SICTL immediately began planning for construction of the required infrastructure. The first deliverables to be designed and procured were the quay cranes (QC's). Due to the lengthy construction and delivery periods involved it was prudent for SICTL to begin fabrication as soon as possible.

The design was constrained by the Environmental Impact Assessment (EIS) for the project. The EIS and subsequent planning approval set limits on the operating height of the SICTL QC's. The QC's were designed and subsequently procured based on the constraints outlined in the EIS.

2.2 QUAY CRANE REVIEW

The planned date for QC arrival in Port Botany is 4th June 2013. As a due diligence exercise, Hutchison Ports Australia has undertaken a complete review of the QC design and fabrication in relation to the EIS requirements before the final shipment date. The review has highlighted a discrepancy in the EIS upon which the QC design is based. Subsequently, the SICTL QC's have been fabricated 55mm too high. The result is a 55mm protrusion into the Obstacle Limitation Surface (OLS) at the adjacent Sydney Airport.

2.3 REPORT SCOPE

The scope of this report is to outline the exact requirements for the QC's in relation to federal air space, outline the non-conformance in terms of the SICTL QC's, outline the operational conditions of the SICTL QC's and supply all relevant information in support of an application to the airport operator to carry out a controlled activity.

3 DEFINITIONS

- HPH Hutchison Port Holdings
- HPA Hutchison Ports Australia
- SICTL Sydney International Container Terminals Limited
- SACL Sydney Airport Corporation Limited
- ASA Air Services Australia
- CASA Civil Aviation Safety Authority
- FDoT Federal Department of Transport
- OLS Obstacle Limitation Surface
- PANS-OPS Procedures for Air Navigational Services—Aircraft Operations surface
- QC Quay Crane
- ASC Automatic Stacking Crane
- EIS Environmental Impact Statement
- MCoA Ministers Conditions of Approval
- TEU Twenty-foot Equivalent Unit
- CD Chart Datum
- AHD Australian Height Datum
- GDA94 Geocentric Datum of Australia 1994

4 FEDERAL AIRSPACE PROTECTION

4.1 BACKGROUND

Obstructions in the vicinity of an airport have the potential to create air safety hazards and to seriously limit the scope of aviation operations into and out of the airport. The effects of individual obstacles may be relatively minor, but together a number of obstacles may seriously limit runway utilisation, cause airspace congestion, and reduce the effective handling capacity of the airport.

While the most critical areas of concern are the immediate approach and take-off areas, it is equally true that objects up to and beyond 20 kilometres from the airport and apparently unrelated to the runway alignment can cause problems for pilots approaching or departing an airport.

4.2 THE LAW

Part 12 of the Airports Act 1996 and the Airports (Protection of Airspace) Regulations 1996 establish a framework for the protection of airspace at and around airports.

The Airports Act 1996 defines any activity resulting in an intrusion into an airport's protected airspace to be a "controlled activity", and requires that controlled activities cannot be carried out without approval.

The Regulations provide for the Department of Infrastructure and Transport or the airport operator to approve applications to carry out controlled activities, and to impose conditions on an approval.

Carrying out a controlled activity without approval is an offence under Section 183 of the Airports Act 1996, and is punishable by a fine of up to 250 penalty units. It is an offence under Section 185 of the Act to contravene any conditions imposed on an approval. Under Section 186 of the Act it is an offence not to give information to the airport operator that is relevant to a proposed controlled activity.

4.3 PROTECTED AIRSPACE

International standards have been adopted which define two sets of invisible surfaces above the ground around an airport. The airspace above these surfaces forms the airport's protected airspace. These two surfaces are the:

- Obstacle Limitation Surface (OLS); and
- Procedures for Air Navigational Services—Aircraft Operations (PANS-OPS) surface

The OLS is generally the lowest surface and is designed to provide protection for aircraft flying into or out of the airport when the pilot is flying by sight. CASA have set the OLS at the Port Botany site as 51m AHD. The PANS-OPS surface is generally above the OLS and is designed to safeguard an aircraft from collision with obstacles when the aircraft's flight may be guided solely by instruments, in conditions of poor visibility.

4.4 CONTROLLED ACTIVITIES

Any activity that infringes an airport's protected airspace is called a controlled activity, and requires approval before it can be carried out. Controlled activities include the following:

- Permanent structures, such as buildings, intruding into the protected airspace
- Temporary structures such as cranes intruding into the protected airspace
- Any activities causing intrusions into the protected airspace through glare from artificial light or reflected sunlight, air turbulence from stacks or vents, smoke, dust, steam or other gases or particulate matter.

The Regulations differentiate between short-term (less than 3 months) and long-term controlled activities. The Regulations provide for the airport operator to approve short-term controlled activities, excluding PANS-OPS infringements, and for the Department to approve long-term controlled activities, or short-term controlled activities referred to it by the airport operator, including short-term infringements of the PANS-OPS surface. However, long term intrusions of the PANS-OPS surface are prohibited.

4.5 CONTROLLED ACTIVITY APPLICATION

Applications to carry out a controlled activity are to be made to the airport operator in writing. The information required in the application must include:

1. A description of the proposed controlled activity (building construction, crane operation etc.)
2. Its precise location (street directory grid references are suitable)
3. If the controlled activity consists of the erection of a building or structure:

a. the proposed maximum height of the structure above the Australian Height Datum (including any antennae or towers), and
b. the proposed maximum height of any temporary structure or equipment (e.g. cranes) intended to be used in the erection of the structure

4. The purpose of the controlled activity.

4.6 APPLICATION ASSESSMENT

The airport operator will conduct the initial assessment of the application in terms of:

- Whether the activity results in an intrusion into the OLS or PANS-OPS surface
- The extent of the intrusion
- The precise location of the development or activity.

The airport operator is required to invite the following organisations to assess or comment on an application:

- The Civil Aviation Safety Authority (CASA)'for an assessment of the impact on aviation safety
- Air Services Australia for assessments of proposals resulting in a penetration of the PANS-OPS surface or temporary redirection of flight paths
- The local council authority responsible for building approvals
- The Department of Defence in the case of joint-user airports.

For short term controlled activities, comments are only required from CASA and Air Services.

4.7 APPROVAL PROCESS

The approval process varies depending on the type of controlled activity:

- Short-term controlled activities can be approved/refused by the airport operator after consultation with CASA and Air Services, or referred by the airport to the Department for a decision;
- Long-term controlled activities penetrating the OLS are referred by the airport to the Department for a decision after consultation with CASA, Air Services and the relevant building authority;
- Long-term controlled activities penetrating the PANS-OPS airspace are not permitted, and the airport operator can notify the refusal of such controlled activities.

The Regulations require any decision by the airport operator to be made in the interests of the safety, efficiency, or regularity of existing or future air transport operations into or out of the airport.

An approval may be subject to conditions specified by the airport operator. These conditions may concern how the controlled activity is carried out (e.g. hours of operation of a crane), or may require the building or structure to be marked or lit in a certain way. These conditions must also be in the interests of the safety, efficiency, or regularity of existing or future air transport operations.

The Regulations set the following timeframes for the approval of controlled activities:

- A decision on short term controlled activities is required to be made within 21 days of the airport operator receiving the application, unless the application is referred to the Department for a decision
- A decision on long term controlled activities is required to be made by the Department within 28 days of the Department's receipt of the application.
- If the airport operator, CASA, Air Services or the Department requires further information in respect of individual applications, the decision is to be made within 21 days (for short-term intrusions) or 28 days (for long-term intrusions) of the extra information being provided by the applicant.

5 QC HEIGHT REVIEW

5.1 CHART DATUM (CD)

Chart low water datum is the baseline for the purposes of defining Australia's maritime boundaries in compliance with the UN Convention on the Law of the Sea. Lowest Astronomical Tide (LAT) is the lowest tide level which can be predicted to occur under average meteorological conditions and under any combination of astronomical conditions. LAT is commonly referred to as Chart Datum.

5.2 AUSTRALIAN HEIGHT DATUM (AHD)

Australian Height Datum is a geodetic datum for altitude measurement in Australia. In 1971 the mean sea level for 1966-1968 was assigned the value of 0.000m on the Australian Height Datum at thirty tide gauges around the coast of Australia. The resulting datum surface, with minor modifications in two metropolitan areas, has been termed the Australian Height Datum (AHD) and was adopted by the National Mapping Council as the datum to which all vertical control for mapping (and other surveying functions) is referred.

5.3 CD V'S AHD IN SYDNEY

From the above it is clear that CD is based on lowest astronomical tide and AHD is based on mean sea level. Tide levels are dependent on the locations latitude and longitude. Therefore, depending on one's location the difference between CD and AHD will vary. In Sydney, the relationship is referenced to the tide gauge at Fort Denison. At Fort Denison, CD is 0.925m below AHD. An OLS of 51m AHD therefore equates to 51.925 CD. It is noted that Figure 30.1 of the EIS incorrectly states that the OLS at Port Botany is 52m CD.

5.4 SICTL QC'S

SICTL has commissioned Bureau Veritas to undertake a third party survey of the as built QC's at the ZPMC fabrication yard in China. Appendix A of this report contains the survey report generated by Bureau Veritas. The SICTL QC's have a maximum height to the top of portal of 47.95m at water side and 48.245m at land side. The top of rail on the waterside is to be 4.03m CD and the top of rail on the landside is to be 3.73m CD. Therefore, once in position, the theoretical height of the QC at waterside will be 51.98m CD (47.95m + 4.03m CD) and the theoretical height of the QC at landside will be 51.975m CD (48.245m + 3.73m CD). For ease of reference let's assume that the theoretical maximum height of the SICTL QC's will

be 51.98m CD. As discussed above, CD is 0.925m below AHD in Sydney. Therefore, 51.98m CD corresponds to 51.055m AHD (51.98 – 0.925m).

A graphical representation of these Dimensions is included in Figure 1.

5.5 REVIEW SUMMARY

The OLS in Sydney is 51m AHD. Based on the information to hand, it therefore appears that the highest point on the structure of the SICTL QC's may breach the OLS during normal operating conditions by approximately 55mm (51.055 – 51m).

5.6 REQUIRED ACTION

Any activity that infringes an airport's protected airspace is called a controlled activity, and requires approval before it can be carried out. Long-term controlled activities penetrating the OLS are referred by the airport to the Department for a decision after consultation with CASA, Air Services and the relevant building authority. A decision on long term controlled activities is required to be made by the Department within 28 days of the Department's receipt of the application.

SICTL are therefore required to submit an application for a controlled activity to allow the QC's operate above the OLS in their normal operating state. The application

- Detailed drawings referenced to AHD
- A QC survey report validating the QC height
- Plan drawings outlining the movement envelope of the QC's. The quadrant corners are to be referenced to MGA94.
- Details of warning lights / beacons on top of the QC's
- Details of any lightning rods to be mounted on the QC's

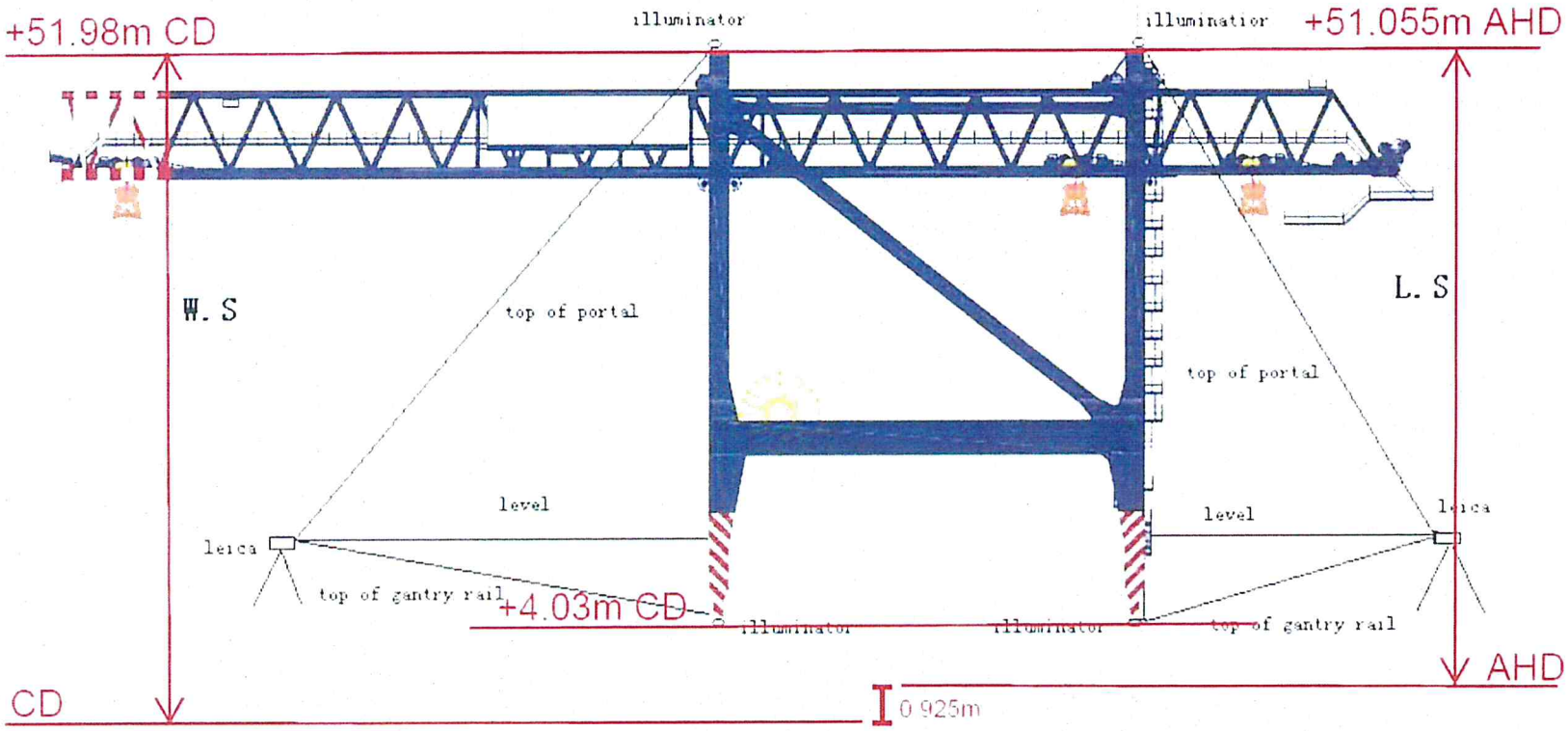


Figure 1 – Graphical Representation of Actual QC Heights

6 MOVEMENT ENVELOPE

6.1 GEOCENTRIC DATUM OF AUSTRALIA 1994 (GDA94)

GDA94 is the official geodetic datum adopted nationally across Australia on 1 January 2000. It replaced the Australian Geodetic Datum 1966 (AGD66) used in Victoria. Coordinates in GDA94 are expressed as geographical coordinates (latitude and longitude) or Cartesian coordinates (X, Y, and Z).

6.2 WHARF DETAILS

SICTL are constructing approximately 650m of quay crane rail in Phase 1 which will limit the operating envelope of the QC's. However, by Phase 3 the operating length of rail will be approximately 1300m. The operating area forms a rectangle that the QC's will move within. The co-ordinates of the movement envelope, referenced to GDA94 are as follows:

Reference	Easting	Northing
Seaward South	333897.804	6239578.839
Seaward North	333604.824	6240826.428
Landward South	333931.905	6239586.781
Landward North	333638.892	6240834.439

Table 1 – Wharf Envelope Coordinates

A graphical representation of these coordinates is outlined in Figure 2.

Note that the envelope shown in Figure 2 represents the envelope of the zone that penetrates the OLS only. The crane boom, which is under the OLS, is not included in the envelope.

7 OBSTACLE LIGHTING

7.1 INTRODUCTION

It is important for pilot recognition and interpretation of aerodrome lighting systems, that standard configurations and colours be used. The pilot always views the aerodrome lighting systems in perspective, never in plan, and has to interpret the guidance provided, while travelling at high speed, often with only a limited segment of the lighting visible. As time will be limited to see and react to visual aids, particularly in the lower visibilities, simplicity of pattern, in addition to standardisation, is extremely important.

Australian pilot training gives pilots familiarity with Australian standard lighting systems, but not with those systems that are not Australian standard. It is important therefore that lighting in the vicinity of an aerodrome is endorsed and approved by CASA.

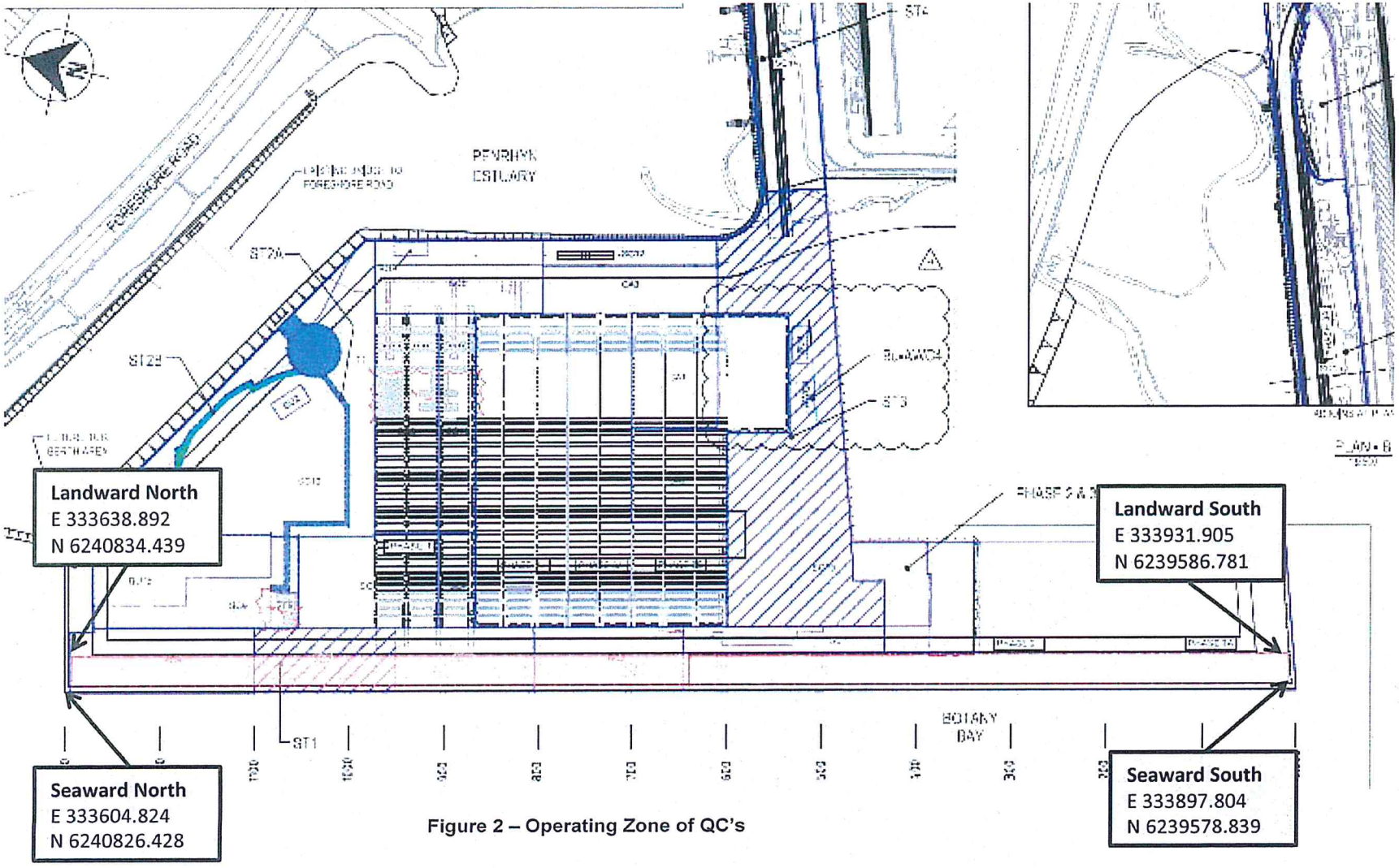


Figure 2 – Operating Zone of QC's

7.2 MINIMUM LIGHTING SYSTEM REQUIREMENTS

The Manual of Standards Part 139 – Aerodromes states "*at an aerodrome opened for night operations, at least the following facilities must be provided with appropriate lighting:*

a) *runways, taxiways and aprons intended for night use;*
b) *for taxiways used only by aeroplanes of code A or B — at least 1 such code A or B taxiway between the runway and the apron, with retro reflective markers permitted on the other code A or B taxiways;*
c) *at least one wind direction indicator;*
d) ***if an obstacle within the applicable OLS area of the aerodrome is determined by CASA as requiring obstacle lighting, the obstacle lighting.***"

Under the Civil Aviation Regulations, CASA may determine that an object or a proposed object which intrudes into navigable airspace requires, or will be required to be provided with, obstacle lighting. Responsibility for the provision and maintenance of obstacle lighting on a building or structure rests with the owner of the building or structure. Since the SICTL QC's are "within the applicable OLS" obstacle lighting is required.

7.3 TYPES OF OBSTACLE LIGHTING

Three types of lights are used for lighting obstacles. These are low intensity, medium intensity and high intensity lights, or a combination of such lights.

Low intensity obstacle lights are steady red lights and are to be used on non-extensive objects whose height above the surrounding ground is less than 45 m.

Medium intensity obstacle lights are to be used either alone or in combination with low intensity lights, where:

a) The object is an extensive one;
b) The top of the object is 45 m or more above the surrounding ground; or
c) CASA determines that early warning to pilots of the presence of the object is desirable.

There are three types of medium intensity obstacle lights:

a) Flashing white light. Likely to be unsuitable for use in environmentally sensitive locations, and near built-up areas. May be used in lieu of obstacle markings during the day to indicate temporary obstacles in the vicinity of an aerodrome, for example construction cranes, etc. and are not to be used in other applications without specific CASA agreement.
b) Flashing red light, also known as a hazard beacon. Is suitable for all applications, and is extensively used to mark terrain obstacles such as high ground.
c) Steady red light. May be used where there is opposition to the use of a flashing red light, for example in environmentally sensitive locations.

High intensity obstacle lights are flashing white lights used on obstacles that are in excess of 150 m in height. As high intensity obstacle lights have a significant environmental impact on people and animals, it is

necessary to consult with interested parties about their use. High intensity obstacle lights may also be used during the day, in lieu of obstacle markings, on obstacles that are in excess of 150 m in height, or are difficult to be seen from the air because of their skeletal nature, such as towers with overhead wires and cables spanning over roads, valleys, or waterways.

7.4 LOCATION OF OBSTACLE LIGHTING

The Manual of Standards Part 139 – Aerodromes states that one or more obstacle lights are to be located as close as practicable to the top of the object. The top lights are to be arranged so as to at least indicate the points or edges of the object highest above the obstacle limitation surface.

In the case of an extensive object or a group of closely spaced objects, top lights are to be displayed at least on the points or edges highest in relation to the obstacle limitation surfaces, so as to indicate the general definition and extent of the objects. If two or more edges are at the same height, the edge nearest the runway threshold is to be lit.

When the top of the obstacle is more than 45 m above the level of the surrounding ground, the top lights are to be medium intensity lights. Additional low intensity lights are to be provided at lower levels to indicate the full height of the structure. These additional lights are to be spaced as equally as possible, between the top lights and ground level or the level of tops of nearby buildings, as appropriate. The spacing between the lights is not to exceed 45 m.

7.5 SICTL LIGHTING REQUIREMENTS

The SICTL QC's are 55mm through the OLS and therefore require obstacle lights unless determined otherwise by CASA. It is therefore proposed that SICTL provide the following in order to meet the Manual of Standards Part 139 – Aerodromes requirements:

- Medium intensity lights at the top of each leg of the QC as shown indicatively on Figure 1 (items called "illuminators").
- The medium intensity lights shall be dual mode – capable of white flashing light and red flashing light.
- The daytime obstacle lighting shall be medium intensity, flashing white.
- The night-time obstacle lighting shall be medium intensity, flashing red.
- The medium intensity lights shall be as Clause 9.4.7 of the Aerodrome Manual of Standards.
- The lights shall automatically switch from white flashing to red flashing and vice-versa, dependent on background light conditions.
- Low intensity lights at the toe and heel of the crane boom. This will ensure the full extent of the cranes are highlighted and will also ensure that the maximum spacing of lights in the vertical plane is less than 45m as per the above requirements.
- The low intensity lights shall be as Clause 9.4.6 of the Aerodrome Manual of Standards.

8 LIGHTNING SYSTEM

8.1 SICTL LIGHTING REQUIREMENTS

Figure 3 outlines the proposed SICTL lightning protection on top of the QC's. There are two conductors mounted on top of each QC and the top of the conductor is approximately 1m above the frame. It is not practical to mount an obstacle light on top of the lightning conductor so it is considered that if obstacle lighting is required that it will be sufficient to mount the lighting on the top of the portal unless deemed otherwise by CASA. Please note that SICTL is currently investigating alternative lightning protection designs that would eliminate these conductors from the top of the portal frame.

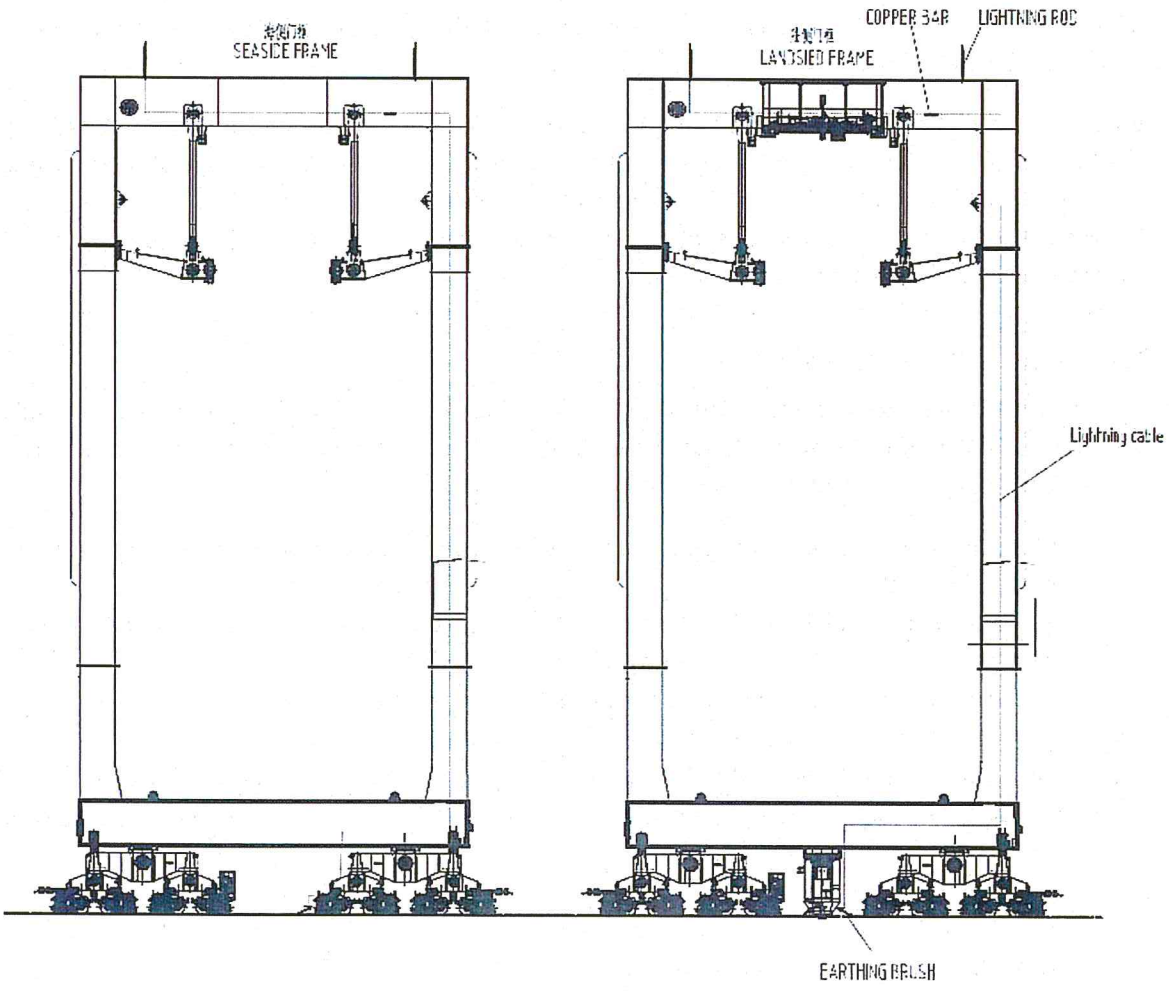


Figure 3 – SICTL Lightning Protection Arrangement

9 CONCLUSION

Upon survey is has been found that the SICTL QC's may penetrate the OLS. Approval is sought from SACL, ASA, and CASA for the operation of the SICTL QC's with this minor penetration of the OLS.

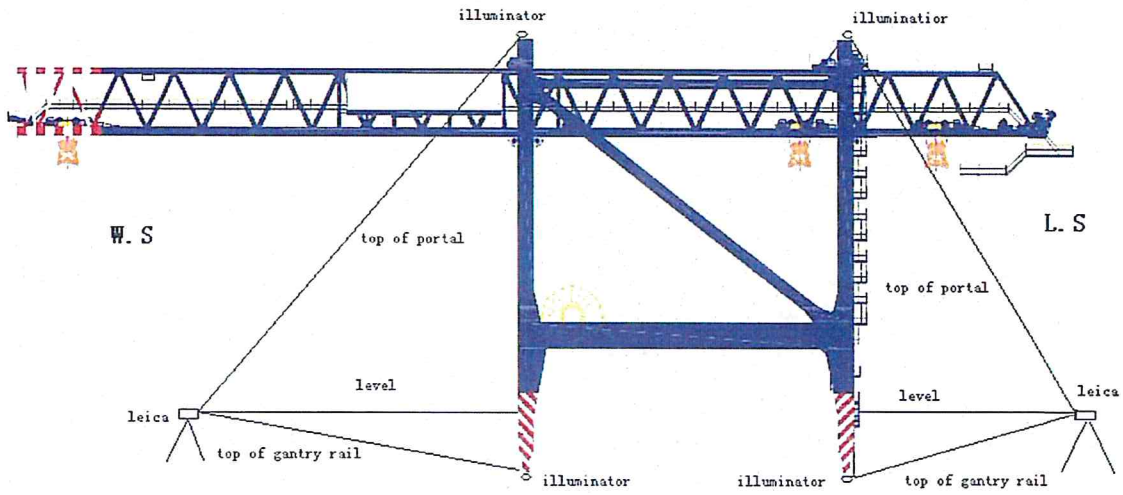
If required by CASA, the penetration is to be controlled with the installation of appropriate lighting in accordance with the lighting of obstacles provisions as described in the standards Part 139 Aerodromes Manual and approval is sought to operate the cranes under these conditions.

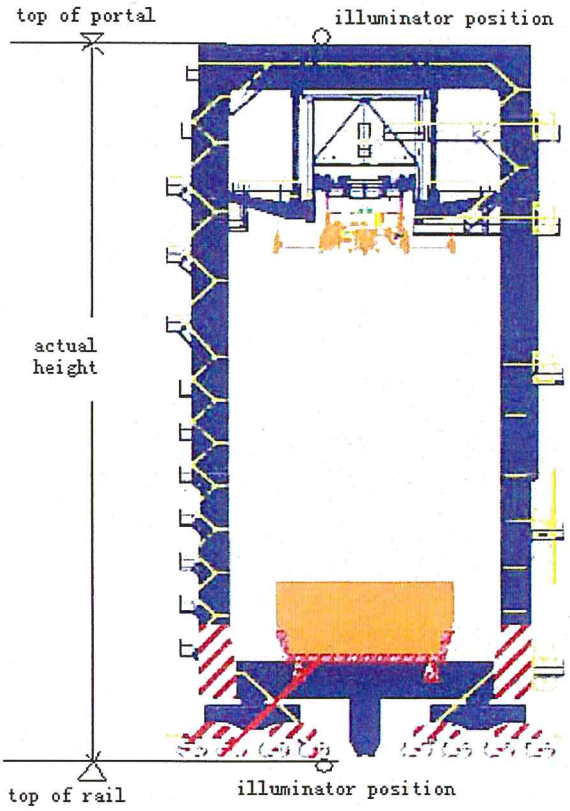
APPENDIX A – BUREAU VERITAS SURVEY REPORT

Industry & Facilities Division	
	Overall Height Measure Report for SICTL 4 QC
BV Job nr: TLE/C-11/033	

PROJECT: SICTL of Australia 4 QC	***Ref:***
BV Client: Sydney International Container Terminals Pty Limited(SICTL)	***Ref: TLE/C-11/033*** *(client to BV)*
Manufacturer: Shanghai Zhenhua Heavy Industries Co., Ltd. (ZPMC)	***P/o nr:ZP11-1661/ZP11-1715*** *(client to Manufacturer)*
Inspection requested by: Sydney International Container Terminals Pty Limited	

1. GA Drawing





These two photos show the inspect positions and illuminator position. It can get the distance from the level of Leica to the top of gantry rail and the other distance from the level of Leica to the highest point of portal beam. The actual overall height is plus these two distance. (Detail sees item 4. measure result).

2. Equipment used in measuring the height

Overall Height Measure Report for SICTL 4 QC

BV Job nr: TLE/C-11/033

Equipment name: Leica

Equipment type: TCRA1102

Equipment precision: 2″

Equipment calibration date: 2012.09.07

3. Procedure in measuring the height

No.1 step: Adjust the level of Leica;

No.2 step: Place the illuminator at suitable position and insure the two illuminators mounted at the same position from same leg side;

No.3 step: Read and record the digital which appear on the screen of Leica.

4. Measurement result in table form

Unit (mm)

Position / Crane No.	W.S				L.S				Date 2012	Note
	Top of Portal	Top of Gantry rail	Actual height	Theoretical	Top of Portal	Top of Gantry rail	Actual height	Theoretical		
1661-1#	46999.84	-949.56	47949.40	47940	46912.76	-1331.72	48244.50	48242	11.18	
1661-2#	46920.17	-1022.72	47942.89	47940	46952.74	-1282.47	48235.21	48242	11.27	
1715-1#	46846.32	-1077.65	47941.97	47940	48095.92	-145.31	48240.83	48242	11.06	
1715-2#	47184.19	-756.39	47940.58	47940	47057.75	-1183.13	48240.08	48242	12.21	

Issued by: ***Checked by:***

Name: Xuewei Signature: Name: Frank Gu Signature:

Date of issued: Feb.18, 2013

Inspection centre: BV Shanghai

Distribution: ☒ CLIENT ☐ MANUFACTURER ☐ ☐