



File reference: F18/1442-46

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DECISION UNDER THE AIRPORTS (PROTECTION OF AIRSPACE) REGULATIONS 1996

- Proposed Activity:** TC1 – Tower Crane Operations
- Location:** Randwick Hospital Campus Redevelopment
High Street, Randwick, NSW
- Coordinates:** E 337043, N 6245544
- Proponent:** Lendlease Building Pty Ltd

I refer to the application from Lendlease Building Pty Ltd (the Proponent), received by the Department of Infrastructure, Regional Development and Cities (the Department) on 3 October 2018 from Sydney Airport Company Limited (SACL). This application sought approval under the Airports (Protection of Airspace) Regulations 1996 (the Regulations) for the intrusion of a crane (TC1) at Randwick Hospital, High Street, Randwick (the site) into airspace which, under the Regulations, is prescribed airspace for Sydney Airport. TC2 is covered under a separate approval.

Under regulation 6(1), ‘prescribed airspace’ includes ‘the airspace above any part of either an Obstacle Limitation Surface (OLS) or Procedures for Air Navigation Services - Aircraft Operations (PANS-OPS) surface for the airport’.

The conical surface of the OLS above this site is at a height of 88 metres above the Australian Height Datum (AHD) and hence prescribed airspace above the site commences at 88 metres AHD. At a maximum height of 131 metres AHD, the crane will penetrate the OLS by up to 43 metres. The crane will infringe the approach surface by up to 27 metres when the crane is oriented towards the south or south-east.

Accordingly, the proposed operation of the crane would constitute a “controlled activity” under Section 182 of the *Airports Act 1996* (the Act). Section 183 of the Act specifies that controlled activities cannot be carried out without approval. Details of the penetration of prescribed airspace are provided in Table 1.

Table 1: Height and location of proposed activity at the site that will intrude into prescribed airspace for Sydney Airport.

Activity	MGA 94 Coordinates	Maximum height (AHD)	Penetration of prescribed airspace
Crane Operation	E 337043, N 6245544	131 metres	43 metres

The crane is to be used to construct a building which was approved by the Department on 16 October 2018 that will intrude into prescribed airspace for Sydney Airport.

Regulation 14 provides that a proposal to carry out a controlled activity must be approved unless carrying out the controlled activity would interfere with the safety, efficiency or regularity of existing or future air transport operations into or out of the airport concerned. Regulation 14(1)(b) provides that an approval may be granted subject to conditions.

Under the Regulations, the Secretary of the Department is empowered to make decisions in relation to the approval of controlled activities, and impose conditions on the approval. I am the Secretary's Delegate for the purposes of the Regulations.

Decision

In accordance with regulation 14, **I approve** the controlled activity for the intrusion of the crane (TC1) at Randwick Hospital, High Street, Randwick into prescribed airspace for Sydney Airport to a **maximum height of 131 metres AHD**.

In making my decision, I have taken into consideration the opinions of the Proponent, the Civil Aviation Safety Authority, Airservices Australia's advice number YSS-CA-014, airlines and SACL.

In accordance with regulation 14(1)(b), **I impose the following conditions on my approval:**

1. The crane (TC1) **must not exceed** a maximum height of **131 metres AHD**.
2. TC1 may engage in operations which will cause it to intrude into prescribed airspace **only** as follows:
 - **from 1 March 2020 to 31 January 2021.**
3. Separate approval **must be sought** under the Regulations for any **additional** construction equipment (i.e. cranes) required to construct the building. Additional construction cranes may be required to operate at a height significantly higher than that of the proposed controlled activity and consequently, may not be approved under the Regulations. Therefore, it is advisable that approval to operate additional construction equipment be obtained prior to any commitment to construct.
4. TC1 **must be lit** with medium intensity steady red lighting, at night at each end of the boom and on the top of the boom structure or counterweight frame. Obstacle lights are to be arranged to ensure the lighting can be observed in a 360° radius as per subsection 9.4.3 of the Manual of Standards - Part 139 Aerodromes (MOS). Characteristics for medium intensity lights are stated in subsection 9.4.7 of the MOS.
5. TC1 **must be lit** with medium intensity flashing white obstacle lighting during daylight hours; and at night at each end of the boom on the top of the boom structure or counterweight frame.

6. TC1 **must be** obstacle marked in alternating red and white bands of colour in accordance with subsection 8.10.2 of the MOS.
7. TC1 **must also be** lit with white light at night in accordance with NSW Health Infrastructure requirements which could include tubular white lights spaced along the boom and down pointing lights on the upper part of the tower column.
8. The Proponent **must provide** SACL with surveyed as installed details including the height of the taller crane (TC1 or TC2) after it is erected.
9. At least 48 hours prior to the crane being erected above 88 m AHD, Sydney Airport **must ensure** that a NOTAM has been issued regarding the taller (TC1 or TC2) crane's height and location in accordance with paragraph 7.1.4.3 of the MOS, and the NOTAM **must be** kept up to date as the crane is raised.
10. When TC1 is erected above 126.4 m AHD, Sydney Airport in conjunction with Airservices Australia **must implement the mitigation** described in the Airservices assessment of 2 May 2018.
11. The Proponent **must ensure** the obstacle lighting has a remote monitoring capability, or SACL is to monitor the ongoing availability of the obstacle lighting. For detailed requirements for the monitoring of obstacle lights within the aerodrome's OLS refer to subsection 9.4.10 of the MOS.
12. The Proponent **must ensure** obstacle lighting is maintained in serviceable condition and any outage immediately reported to the SACL
13. The Proponent **must advise** Airservices Australia **at least three business days** prior to the controlled activity commencing by emailing <ifp@airservicesaustralia.com> and quoting YSS-CA-014.
14. At the end of the project the Proponent **must notify** SACL of the dates and hours for the removal of TC1 and give a minimum of two business days notice.

Breaches of approval conditions are subject to significant penalties under Sections 185 and 187 of the Act.

Regarding recommendation 7 above, it is also recommended that the proponent liaise with NSW Health Infrastructure (consultant) to establish requirements and practicalities regarding lighting for the higher and lower cranes at the various stages of construction. Annex A is advice sent to CASA by a NSW Health Infrastructure Aviation Consultant.

It should be noted that the existing hospital helipad is approximately 200m to the closest crane (TC2) arc and the crane booms will be significantly higher than the existing hospital helipad. CASA is advised that the existing hospital helipad will be operational during construction.

The proponent should liaise with NSW Health Infrastructure (Aviation consultant) to ensure appropriate placement of obstacle lighting from a helicopter pilot perspective (including night vision aided) and compatibility with normal obstacle lighting requirements.

Yours sincerely



Sharyn Owen
Director, Airport Safeguarding
Aviation and Airports Division

16 October 2018



Australian Government

Department of Infrastructure, Regional Development and Cities

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TO Elliott Hicks Lendlease Building Pty Ltd elliott.hicks@lendlease.com	CC Airspace Protection Sydney Airport airspaceprotection@syd.com.au Civil Aviation Safety Authority airspace.protection@casa.gov.au Airservices Australia airport.developments@airservicesaustralia.com ifp@airservicesaustralia.com	FROM Flysafe Airspace Protection flysafe@infrastructure.gov.au
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DECISION UNDER THE AIRPORTS (PROTECTION OF AIRSPACE) REGULATIONS 1996

Proposed Activity: TC2 – Tower Crane Operations
Location: Randwick Hospital Campus Redevelopment
High Street, Randwick, NSW
Coordinates: E 337030, N 6245465
Proponent: Lendlease Building Pty Ltd

I refer to the application from Lendlease Building Pty Ltd (the Proponent), received by the Department of Infrastructure, Regional Development and Cities (the Department) on 3 October 2018 from Sydney Airport Company Limited (SACL). This application sought approval under the Airports (Protection of Airspace) Regulations 1996 (the Regulations) for the intrusion of a crane (TC2) at Randwick Hospital, High Street, Randwick (the site) into airspace which, under the Regulations, is prescribed airspace for Sydney Airport. TC1 is covered under a separate approval.

Under regulation 6(1), ‘prescribed airspace’ includes ‘the airspace above any part of either an Obstacle Limitation Surface (OLS) or Procedures for Air Navigation Services - Aircraft Operations (PANS-OPS) surface for the airport’.

The conical surface of the OLS above this site is at a height of 85 metres above the Australian Height Datum (AHD) and hence prescribed airspace above the site commences at 85 metres AHD. At a maximum height of 123.05 metres AHD, the crane will penetrate the OLS by up to 38.05 metres. The crane will infringe the approach surface by up to 12.8 metres during Stages 1 and 2, and up to 22 metres during Stage 3.

Accordingly, the proposed operation of the crane would constitute a “controlled activity” under Section 182 of the *Airports Act 1996* (the Act). Section 183 of the Act specifies that controlled activities cannot be carried out without approval. Details of the penetration of prescribed airspace are provided in Table 1.

Table 1: Height and location of proposed activity at the site that will intrude into prescribed airspace for Sydney Airport.

Activity	MGA 94 Coordinates	Maximum height (AHD)	Penetration of prescribed airspace
Crane Operation	E 337030, N 6245465	123.05 metres	38.05 metres

The crane is to be used to construct a building which was approved by the Department on 16 October 2018 that will intrude into prescribed airspace for Sydney Airport.

Regulation 14 provides that a proposal to carry out a controlled activity must be approved unless carrying out the controlled activity would interfere with the safety, efficiency or regularity of existing or future air transport operations into or out of the airport concerned. Regulation 14(1)(b) provides that an approval may be granted subject to conditions.

Under the Regulations, the Secretary of the Department is empowered to make decisions in relation to the approval of controlled activities, and impose conditions on the approval. I am the Secretary's Delegate for the purposes of the Regulations.

Decision

In accordance with regulation 14, **I approve** the controlled activity for the intrusion of a crane (TC2) at Randwick Hospital, High Street, Randwick into prescribed airspace for Sydney Airport to a **maximum height of 123.05 metres AHD**.

In making my decision, I have taken into consideration the opinions of the Proponent, the Civil Aviation Safety Authority, Airservices Australia's advice number YSS-CA-015 P2, airlines and SACL.

In accordance with regulation 14(1)(b), **I impose the following conditions on my approval:**

1. The crane (TC2) **must not exceed** a maximum height of **123.05 metres AHD**.
2. TC2 may engage in operations which will cause it to intrude into prescribed airspace **only** as follows: from **1 April 2020 to 30 November 2020**.
3. Separate approval **must be sought** under the Regulations for any **additional** construction equipment (i.e. cranes) required to construct the building. Additional construction cranes may be required to operate at a height significantly higher than that of the proposed controlled activity and consequently, may not be approved under the Regulations. Therefore, it is advisable that approval to operate additional construction equipment be obtained prior to any commitment to construct.
4. TC2 **must be** lit with medium intensity steady red lighting, at night at each end of the boom and on the top of the boom structure or counterweight frame. Obstacle lights are to be arranged to ensure the lighting can be observed in a 360° radius as per subsection 9.4.3 of the Manual of Standards - Part 139 Aerodromes (MOS). Characteristics for medium intensity lights are stated in subsection 9.4.7 of the MOS.
5. TC2 **must be** lit with medium intensity flashing white obstacle lighting during daylight hours; and at night at each end of the boom on the top of the boom structure or counterweight frame.

6. TC2 **must be** obstacle marked in alternating red and white bands of colour in accordance with subsection 8.10.2 of the MOS.
7. TC2 **must** also be lit with white light at night in accordance with NSW Health Infrastructure requirements which could include tubular white lights spaced along the boom and down pointing lights on the upper part of the tower column.
8. The Proponent **must provide** SACL with surveyed as installed details including the height of the taller crane (TC1 or TC2) after it is erected.
9. At least 48 hours prior to the crane being erected above 85 m AHD, Sydney Airport **must ensure** that a NOTAM has been issued regarding the taller (TC1 or TC2) crane's height and location in accordance with paragraph 7.1.4.3 of the MOS, and the NOTAM **must be** kept up to date as the crane is raised.
10. The Proponent **must ensure** the obstacle lighting has a remote monitoring capability, or SACL is to monitor the ongoing availability of the obstacle lighting. For detailed requirements for the monitoring of obstacle lights within the aerodrome's OLS refer to subsection 9.4.10 of the MOS.
11. The Proponent **must ensure** obstacle lighting is maintained in serviceable condition and any outage immediately reported to the SACL
12. The Proponent **must advise** Airservices Australia **at least** three business days prior to the controlled activity commencing by emailing <ifp@airservicesaustralia.com> and quoting YSS-CA-015 P2.
13. At the end of the project the Proponent **must notify** SACL of the dates and hours for the removal of TC2 and give a **minimum** of two business days notice.

Breaches of approval conditions are subject to significant penalties under Sections 185 and 187 of the Act.

Regarding recommendation 7 above, it is also recommended that the proponent liaise with NSW Health Infrastructure (consultant) to establish requirements and practicalities regarding lighting for the higher and lower cranes at the various stages of construction. Annex A is advice sent to CASA by a NSW Health Infrastructure Aviation Consultant.

It should be noted that the existing hospital helipad is approximately 200m to the closest crane (TC2) arc and the crane booms will be significantly higher than the existing hospital helipad. CASA is advised that the existing hospital helipad will be operational during construction.

The proponent should liaise with NSW Health Infrastructure (Aviation consultant) to ensure appropriate placement of obstacle lighting from a helicopter pilot perspective (including night vision aided) and compatibility with normal obstacle lighting requirements.

Yours sincerely



Sharyn Owen
Director, Airport Safeguarding
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