

## ST LEONARDS HEALTH ORGANISATIONS RELOCATION (SHOR) PROJECT – AVIATION ASSESSMENT

Reference: A. Meeting 20 December 2016  
 B. SHOR Project Overview Standard Description 171020

### Introduction

This Aviation report supports a State Significant Development Application (SSDA) submitted to the Department of Planning and Environment pursuant to Part 4 of the Environmental Planning and Assessment Act 1979 (EP&A Act) for the St Leonards Health Organisations Relocation (SHOR) Project at the Royal North Shore Hospital (RNSH).

The SSD Application relates to the Concept Plan Approval for the Royal North Shore Hospital, St Leonards which was approved in April 2007 (MP 06\_0051). This application is SSD by way of Ministerial declaration pursuant to Section 89(C) of the EP&A Act, the order for which was published on 13 October 2017.

### Methodology

AviPro was requested to conduct a desktop analysis of the aviation issues (safety and otherwise) of the proposed SHOR development on continued and subsequent helicopter operations into and from the elevated helicopter landing site (HLS) at the Royal North Shore Hospital.

The initial draft report was submitted on 20 December 2016.

### The Proposed Development

The location of the proposed development is illustrated on [Figure 1](#).



**Figure 1:** Site diagram of the planned SHOR construction and the main approach/departure flight path.

Figure 1 depicts the SHOR site and the existing approach/departure flight path from/to the south west. Given the height of the new build at RL126 is lower than the current HLS height of RL 128.6, any obstruction issues would be minimal to none once the final construction is completed and supporting cranes removed.

Figure 2 shows a more detailed location of the SHOR site.

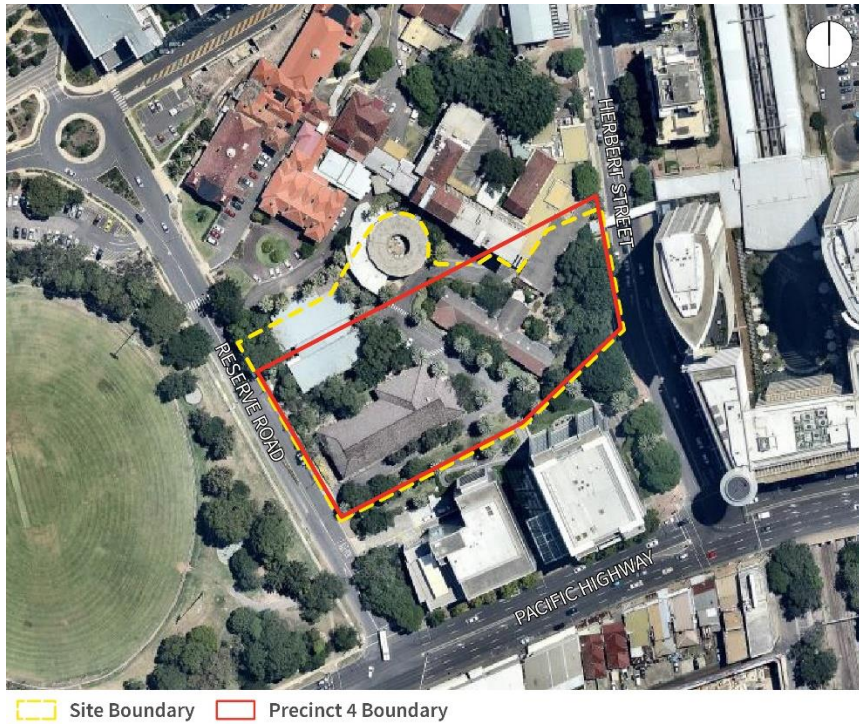


Figure 2: Detailed SHOR site diagram

The following figures illustrate the current unobstructed flight path (Figure 3) and the flight path with a depiction of the final building (Figure 4).

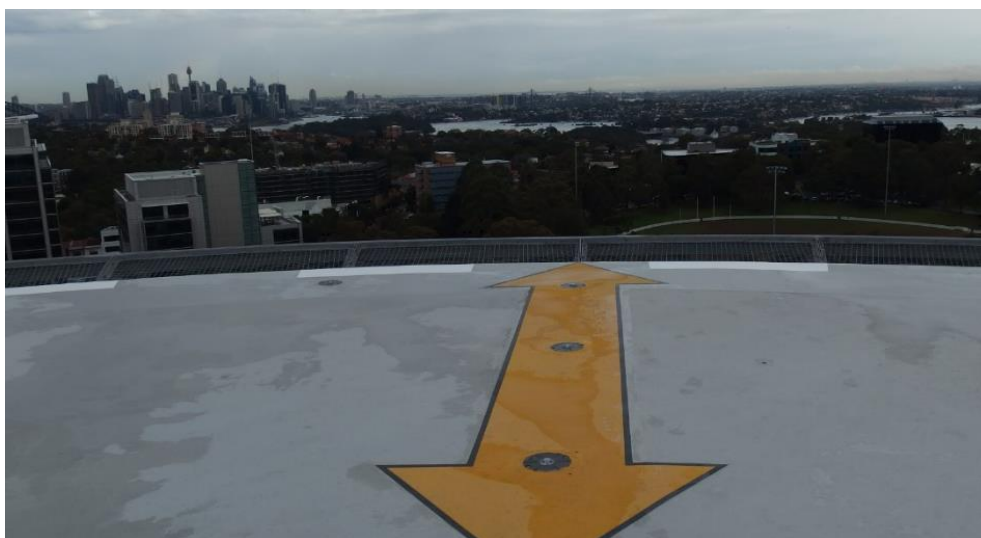


Figure 3: Looking out the departure path of 188°T

Figure 4 below also shows the departure path from the centre of the HLS and the depiction of the new building. Whilst below the HLS deck itself, low intensity red obstruction lights will need to be positioned on the SHOR building.



Figure 4: Looking out the departure path of 188°T with 'SHOR' illustrated (estimated)

**Tower cranes during construction**

The use of tower cranes during construction will impact the VFR approach/departure flight path to the HLS. Figure 5 illustrates the potential placement of the tower cranes that minimises impact on the flight path. Regardless of the final position, an Aviation Management Plan will need to be developed whereby the builder observes procedures and a site discipline for rubbish that may be picked up in the rotorwash of an approaching helicopter.

The tower cranes should be white/red in colour had have red low intensity obstruction lights on the extremities and highest points.



Figure 5: Illustration of 'ideal' tower crane arcs.

### **Operations during the Construction**

Flight operations into and from the HLS will be possible during the construction of the SHOR building. As illustrated in [Figure 5](#), the main approach and departure path is just wide of the planned crane arcs. Helicopter pilots will be advised of the crane positions and the cranes will be illuminated at night with low intensity red lights.

### **Conclusion**

The Royal North Shore Hospital HLS is higher than the planned SHOR building. This should markedly reduce the obstruction risk of the completed structure on helicopter approach/departure operations. The SHOR will however, require low intensity red obstruction lighting to be positioned on each upper corner.

During construction, crane towers will present an obstruction to the normal flight operations into the Hospital HLS. They will need to be marked and illuminated and an Aviation Management Plan will need to be developed.

The operational information regarding the cranes will be distributed to the helicopter operators through NSW Ambulance and will be recorded on the [www.helipads.org.au](http://www.helipads.org.au) site used by NSW helicopter operators.

A handwritten signature in black ink, appearing to read "Steve Graham".

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