Services Design Statement (SDS) Cancer Care Upgrades – Mechanical and Medical Gas Services

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Project:	Milton Ulladulla Hospital – Cancer Care upgrades	**Project No:** 301351690	
Project Address:	Milton Ulladulla Hospital - 106 Princes Hwy, Milton NSW 2538 Australia	**Revision No:** B	
Date:	25/03/2025		

Stantec Australia has provided the following design documentation for certification purposes. All documents are to be reviewed by the BCA Certifier for compliance to the satisfaction of the BCA Certifier.

- Mechanical & Medical Gases Services Design Report dated 18/12/2024
    - 301351690-STN-XX-XXX-BR-ME-000001
- Mechanical and Medical Gas Services Specifications dated 18/12/2024
    - 301351690-STN-XX-XXX-SP-ME-000001
    - 301351690-STN-XX-XXX-SP-MG-000001
- Mechanical and Medical Gas Services Drawings dated 18/12/2024
    - 301351690-STN-01-000-DR-ME-000001 – COVER SHEET
    - 301351690-STN-01-000-DR-ME-000002 - LEGEND AND NOTES
    - 301351690-STN-ZZ-100-DG-ME-210012 - CANCER CARE HVAC LAYOUT - OPTION 1
    - 301351690-STN-ZZ-100-DG-ME-210022 - CANCER CARE HVAC LAYOUT - OPTION 2
    - 301351690-STN-ZZ-100-DG-ME-310012 - CANCER CARE PIPEWORK LAYOUT - OPTION 1
    - 301351690-STN-ZZ-100-DG-ME-310022 - CANCER CARE PIPEWORK LAYOUT - OPTION 2
    - 301351690-STN-00-000-DG-MG-040001 - COVER SHEET
    - 301351690STN-01-000-DR-MG-000002 - LEGEND AND NOTES
    - 301351690-STN-ZZ-100-DG-MG-410002 - CANCER CARE EXPANSION MEDICAL GAS LAYOUT
- Medical Gas Services Drawings dated 17/01/2025 (Revision C02)
    - 301351690-STN-01-000-DR-ME-000001 – COVER SHEET
    - 301351690-STN-01-000-DR-ME-000002 - LEGEND AND NOTES
    - 301351690-STN-ZZ-100-DG-ME-210012 - CANCER CARE HVAC LAYOUT - OPTION 1
    - 301351690-STN-ZZ-100-DG-ME-210022 - CANCER CARE HVAC LAYOUT - OPTION 2
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- 301351690STN-01-000-DR-MG-000002 - LEGEND AND NOTES
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Stantec Australia confirms the Mechanical and Medical Gas Services design documentation have been checked and complies with:

- Relevant clauses of the National Construction Code (NCC) 2022, Volume One Building Code of Australia (BCA) Class 2 to 9 Buildings, as listed below:

NCC Clause	Description
C.3.15	Fire resistance Protection of Openings Openings for service installations
E.2.2b&c	Smoke Hazard Management General requirements Air Handling Systems
F4.5	Health and Amenity Light and Ventilation Ventilation of rooms
F4.11	Health and Amenity Light and Ventilation Carparks
F4.12	Health and Amenity Light and Ventilation Kitchen local exhaust ventilation
J3.5	Energy Efficiency Building Sealing Exhaust Fans
J3.7	Energy Efficiency Building Sealing Evaporative Coolers
J5	Energy Efficiency Air-conditioning and Ventilation Systems

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- Relevant Australian Standards, including the following:

Standard	Description
AS1530.4:2005	Fire-resistance tests on elements of construction
AS1668.1:2015	The use of ventilation and air conditioning in buildings; Fire and smoke control in multi-compartment buildings
AS 1668.2:2012	The use of ventilation and air conditioning in buildings; Part 2 Mechanical ventilation for acceptable indoor-air quality
AS1668.4:2012	The use of ventilation and air conditioning in buildings; Part 4 Natural ventilation of buildings
AS1677.2	Refrigerating Systems Safety Requirements for fixed applications
AS 3000	SAA Wiring Rules
AS3500	Plumbing and Drainage
AS1682	Fire Dampers
AS3666.1:2011	Air-handling and water systems of buildings — Microbial control
AS 4254.1&2: 2012	Ductwork for air handling systems in buildings.

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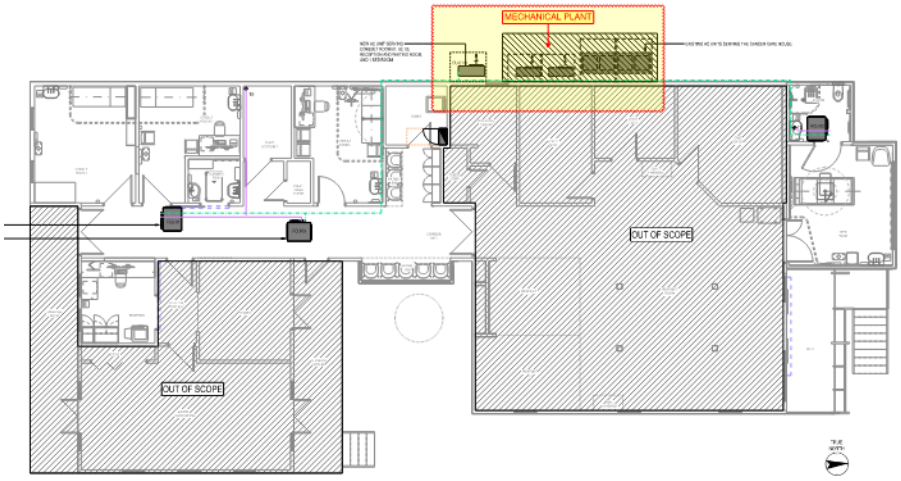
Stantec Australia has issued the following Services Design Statement for the Mechanical and Medical Gas services to assist Health Infrastructure NSW in preparing a REF for the Milton-Ulladulla Hospital Cancer Care upgrade, including the following:

- Services required
- Capacities available or needed
- Connections needed
- Broader Headworks
- Any mitigation measures needed
- Acoustic treatment required

The Mechanical and Medical gas **Services Design Statement** has been prepared by Stantec at the request of **Gilda Barakat Project Director at Johnstaff** for the development of the ***Milton Ulladulla Hospital upgrades within the Cancer Care.***

Mechanical Services	Description
Services Required	• Variable Refrigerant Flow (VRF) to serve the cancer care. • Fan Coil Units (FCU's) to serve the new room within the cancer care. • Outside Air Fan (OAF) to serve the FCU's in fresh air. • Exhaust Air Fan (EAF) to serve the Cleaner's room. • Roof Cowl Mounted fan (RC) to serve the new ensuite room. • Electrical switch boards for Mechanical services Option 2: Potential plant replacement required Option 2 involves replacing the existing AC unit serving the refurbished area. The current plant is located at the back of the cancer care facility, see figure 1 below.  **Figure 1: Cancer Care facility**

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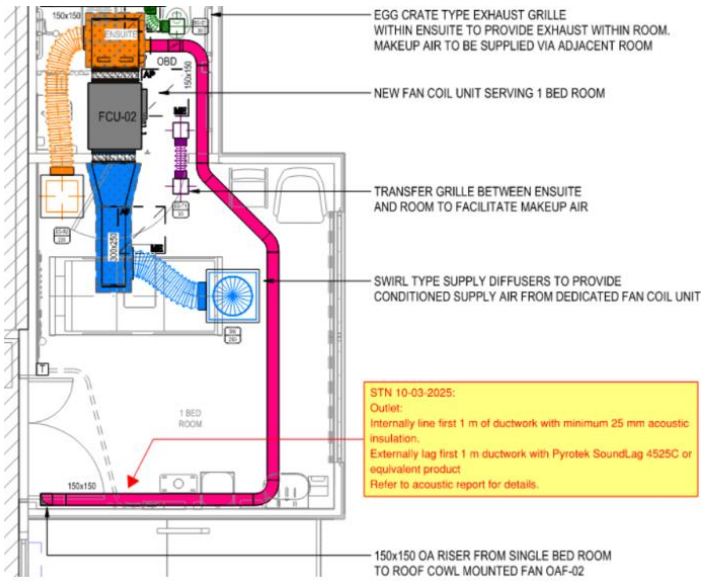
Capacities needed	• The mechanical services capacities will be driven by the heat load of the building.
Connections needed	• Electrical supply connection for new Mechanical Switch Boards.
Broader Headworks	• Conducting a detailed assessment of the new and existing HVAC system to determine its capacity, layout, and compatibility with the layout of the cancer care. • Developing a comprehensive plan for the installation and integration of the new Ventilation connections and equipment. • Ensuring adequate capacity and reliability of existing system to meet the operational demands of the HVAC system in general. • The refrigerant pipework reticulation shall be configured to accommodate the new layout and Mechanical services as required.
Any mitigation measures needed	• The positioning of the Fan coil units within the rooms could potentially increase the difficulty of accessing and controlling maintenance procedures, thereby elevating the risk of operational disruptions or inefficiencies. • Lack of as-built documentation.
Acoustic treatment required	• The following acoustic treatments are required for the new 1 bedroom and consult room 3. <u>New 1 BEDROOM:</u> 

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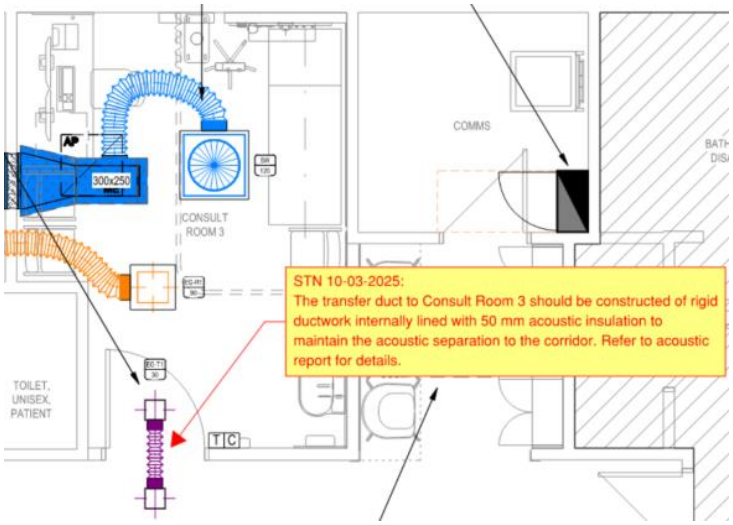
New CONSULTROOM 3:



Refer to the Acoustic Design Report for additional details and acoustic data.

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Medical Gas Services	Description
Services Required	• The following medical gases are going to be installed: Oxygen (O2), Suction (SU/SC). • Medical Services Panels with the following outlets: O2, SU, • Medical Gas Alarm Panel • Medical Gas Valve Box Note: Medical Air will not be provided in the cancer care area. This is a deviation from the AusHFG requirements. Design departure agreed with LHD during the design phase.
Capacities needed	• Existing medical gas enabling the connection of the following gases and their respective outlet quantities and requirements (Flow rate, pressure and O2%): x2 O2 (oxygen); x2 SU (Suction).
Connections needed	• Connection of the new medical gas services required (Oxygen (O2, Suction (SU) on the existing medical gas connected to the current medical gas plant. • Stantec propose to connect the new medical gases to the existing medical gas where feasible.

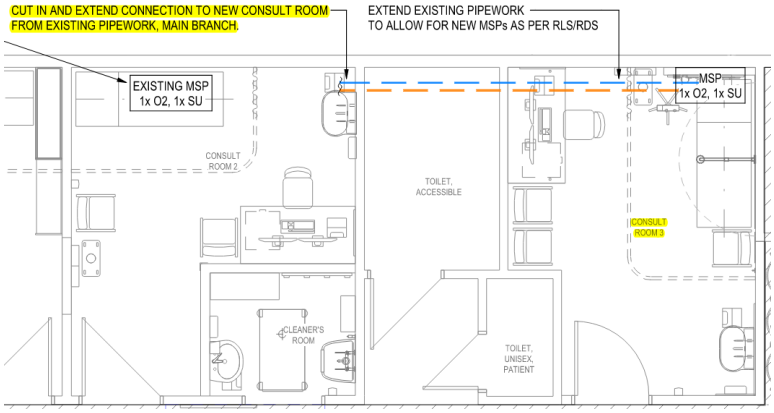

Figure 2: Connection needed Consult Room 03

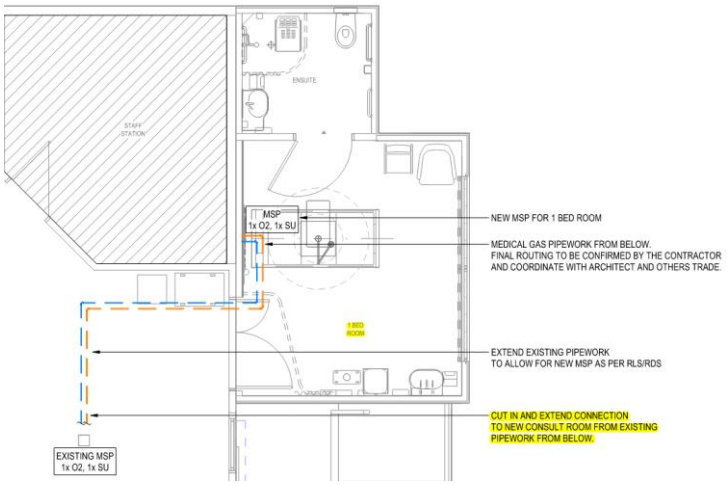

Figure 2: Connection needed Single bedroom

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Broader Headworks	• Conducting a detailed assessment of the existing medical gas system to determine its capacity, layout, and compatibility with the new room of the cancer care. • Developing a comprehensive plan for the installation and integration of the new medical gas connections and equipment. • Ensuring adequate capacity and reliability of the existing system to meet the operational demands of the new room of the cancer care upgrades and medical gas system. • The new pipework shall be configured to accommodate the new layout and medical gas services panels as required.
Any mitigation measures needed	• Disruption of the medical gas supply due to extension/altering of the existing system. • The capacity of existing medical gas systems serving the new and existing rooms of the cancer care needs to be confirmed. • Reuse of existing systems requiring recommissioning. • Lack of as-built documentation.

We trust that the above is sufficient for your present requirements. Should you require any further information, please do not hesitate to contact the undersigned.

Tommy Seidl

Mechanical Engineer
Stantec Australia Pty Ltd

Signature: 

Date: 25th of March 2025