
**NORTH WEST REGIONAL HOSPITAL - DEPARTMENT
OF EMERGENCY MEDICINE UPGRADE AND CANCER
CARE CENTRE STAGE 1 DEVELOPMENT**

**SUBMISSION TO THE
PARLIAMENTARY STANDING
COMMITTEE ON PUBLIC WORKS**



June 2012

Executive Summary

Document Purpose

The purpose of this document is to inform the Parliamentary Standing Committee on Public Works of the need for this project and to explain the processes undertaken during the design phase to maximise the delivery of the desired outcomes and how the design of the works address the needs for the North West Regional Hospital and the broader North West Area Health Service to deliver health services to its local community.

Project Budget

The available project funding is \$16.5 Million for the North West Cancer Care Centre (NW CCC) Stage 1 and \$6.06 Million for the Department of Emergency Medicine (DEM) project.

Currently a supplementary \$16.5 Million bid for NW CCC Stage 2 has been conditionally approved, with the North West Area Health Service and DHHS resolving the details and hope to have the funding confirmed in the very near future.

The funding for the NW CCC Stage 1 comprises the following funding sources:

- the 2009/2010 Health and Hospital Fund – Regional Cancer Centres \$4.78 million
- the Tasmanian Government \$7.91 million
- other Australian Government funds of \$1.06 million
- and private donations of \$2.75 million

Funding for the NW CCC Stage 2 is from a supplementary bid with the Health and Hospitals Fund – Regional Cancer Centres of \$16.5 million. The funding for the DEM redevelopment project has been allocated from two separate National Health and Hospitals Network - National Partnership Agreements, such as

- the 2009 Taking Pressure off Public Hospitals of \$4.11 million
- the 2011 Improving Public Hospital Services of \$1.95 million

Current project cost planning details for the NW CCC and the DEM redevelopment can be delivered within the above allocated budgets.

Project Program

Design and tender documents are scheduled for completion end August 2012, with Contractors to be appointed end October 2012, subject to the required approvals and receipt of satisfactory tenders. The construction program will be undertaken with the DEM and Cancer Care Centre construction scheduled for completion December 2013.

General Project Scope

The NW CCC Stage 1 project scope encompasses the new build of the cancer centre over three levels situated near the current main entrance, a new main entrance / reception will be included in the project. Additionally the new build of the MRI facility will be co-located between the DEM and Medical Imaging area of the private medical centre.

Preliminary enabling works such as the relocation of the main hospital access road provides the space at the front of the hospital to enable integration of the centre with the current facility.

The construction of the new Cancer Care Centre will incorporate;

- 12 Chemotherapy Chairs
- MRI facilities
- Teaching and education facilities
- Clinical trial facilities
- Specific consulting rooms
- Palliative care
- Patient waiting area

The NW CCC Stage 2 project scope will deliver a ground floor construction of 889 m² and include

- Linac Bunker and control area
- Spare bunker and control area
- Simulator room
- Planning room
- Consulting rooms
- Patient waiting area
- Office space for physicists, engineers and radiation oncologist

The DEM project scope encompasses the redevelopment of 827 m² of existing floor space and extensions of 869 m² additional floor space.

Preliminary enabling works to create a new Ambulance Bay will be incorporated within the road relocation project, creating suitable ambulance access to the Emergency Department during the construction stages of the DEM redevelopment.

The redeveloped Department of Emergency Medicine facility will incorporate a significant expansion of available treatment spaces and an improved patient flow configuration. The expanded Department of Emergency Medicine will broadly incorporate;

- A relocated public waiting area with associated amenities space and adjoining paediatric waiting area, adjacent to a repositioned DEM reception
- A central clinical staff station with clear visibility through into the resuscitation and acute treatment bays
- A large reception / triage station with an adjoining triage treatment or interview room for maintaining patient privacy
- A reconfigured ambulance bay to house three vehicles, including the large bariatric ambulance
- Two enlarged resuscitation bays with improved facilities
- 11 acute treatment bays around the new centralised doctors and nurses station
- A brand new Acute Medical Unit (AMU) which will incorporate a Short Stay facility and Discharge area

- Two separate paediatric patient rooms
- A secure Mental Health room
- A pressurised treatment room for isolation purposes with an airlock and ensuite
- Four fast track observation bays just inside the Emergency Department
- Centralised drugs and utility spaces
- Specific DEM offices, change rooms and staff room

Design Approach

The planning approach that has been adopted is based on meeting current and predicted service requirements and with a significant expansion of existing services to accommodate steadily increasing numbers of patient emergency presentations and in providing local cancer care facilities for patients located in the North West region.

A full assessment of the existing building structure and services has been undertaken to identify those areas that require upgrading or replacement.

Consultation with the community and key stakeholders has been ongoing and will continue particularly once construction starts due to significant changes to access routes to the DEM and the main entrance.

Design consultation of the cancer centre has occurred with valued input from the Launceston General Hospital Holman Clinic team, with specific input into the schematic design phase of the Radiation oncology area inclusive of linear accelerator bunkers.

Design consultation for the Department of Emergency Medicine has occurred by engaging the Clinical Project Manager from the recently completed DEM redevelopment at the Mersey Community Hospital. This Manager had previously consulted with the RHH and LGH DEM's to ensure that the most up to date functional facility is available for the North West Regional Hospital.

Construction will occur in 5 stages in an effort to enable decanting, maintaining provision of services and minimise disruption around what is a critical operating area of the hospital.

The redevelopment of the existing building will be highly energy efficient in terms of its design thereby, reducing recurrent costs and providing a healthy and productive workplace.

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1. DOCUMENT PURPOSE

This submission to the Parliamentary Standing Committee on Public Works is presented on behalf of the Department of Health and Human Services (DHHS) and specifically the North West Area Health Service (NWAHS).

The purpose of this document is to inform the Parliamentary Standing Committee on Public Works of the need for the proposed project and how the design of the works will address this need.

This submission seeks approval for the construction of the new North West Cancer Care Centre (NW CCC) facility and the NWRH Department of Emergency Medicine (DEM) redevelopment in order to meet the growing emergency medical care needs of the North West regional community.

There is an acknowledged need for a more comprehensive cancer care facility in the North West of Tasmania where 22 per cent of the Tasmanian population live, the new centre will provide the much needed chemotherapy treatment space, specific paediatric treatment areas, consulting rooms, palliative care base, teaching and education facilities and a MRI scanner.

The new DEM facility will provide for current capacity, based on the guidelines from the Australasian College for Emergency Medicine, which is around 25,000 presentations per annum. The existing DEM has capacity for 12,000 presentations per annum. The additional features of Fast Track and Short Stay will improve the patient flow through the department, facilitating even greater throughput capacity in real terms.

The DEM redevelopment will meet the increased need for emergency medical care within the community and will better enable the NWRH to fulfil its role as the major acute care centre in the North West region.

The projects will be put to tender with a view to completion and occupation by December 2013.

Your consideration and approval of this redeveloped facility is sought in the accompanying Submission.

The document includes the following:

- Confirmation that the proposed investment in infrastructure is the most appropriate means to support improved health services delivery.
- Confirmation that the project is consistent with the Department's Strategic Asset Management Plan and Clinical Services' Plan.
- Confirmation that the project aligns with the State-wide Regional Cancer Care plan
- Evaluation of the suitability of the proposed Design.
- Discussion of 'value for money issues' relating to the design and construction of this project.

2. PROJECT DEFINITION

2.1 Primary Objectives

The North West Regional Hospital (NWRH) was until 2011 a privately owned site, leased by the State of Tasmania to provide acute level health services to the Burnie region. In 2011 the site was purchased in order to enable improved control and management of the delivery of necessary health services in the region, and provides the opportunity to undertake the level of redevelopment required for the hospital to meet the community's needs and to be sustainable into the future. The new Cancer Care Centre stage 1 will provide an extensive range of cancer care services including:

- Greater access to medical oncology treatment and consulting areas;
- Improved access to cancer care and support services for the NW region;
- An MRI facility and associated staff training facilities
- State-of-the-art video conferencing technology to allow local clinicians to discuss cases with other professionals across the state.
- A clinical information system to allow sharing of cancer patient information between the various treating health professionals
- The building is designed to accommodate future (Stage 2) radiotherapy and associated services
- Delivery of the highest quality, multi-professional health care service to the NW region
- Clinical trials services allowing patients to participate

The NW Cancer Care Centre Stage 2 will provide a comprehensive radiation oncology and support services that will transform cancer service delivery in the North West region. Radiation oncology will be integrated into other cancer prevention, treatment and palliative care services. This will allow the North West Cancer Care Centre to scan tumours and plan for their radiation therapy treatment as well as provide support services such as dieticians and social workers. Supporting infrastructure such as patient waiting areas, consulting rooms, stores and planning rooms will be provided in line with typical modern radiation therapy infrastructure.

The North West Regional Hospital has been operating well above capacity for some considerable time. The redevelopment of the Emergency Department is seen as a critical aspect of ensuring that the NWRH operates effectively into the future. Currently the Emergency Department is required to manage the appropriate treatment and management of over 25,000 presentations per annum, in facilities originally designed for only 12,000 presentations per annum.

The new DEM will provide:

- Enhanced Emergency Medicine access to care and services for the Burnie region and adjacent communities;
- Delivery of the highest quality, multi-professional Health Care services to the Burnie region and adjacent communities;

2.2 General Scope

The project consists of three significant and separately funded components. It incorporates the redevelopment of the existing Department of Emergency Medicine and extensions to existing building footprint to create a significantly larger DEM within the North West Regional Hospital, the construction of a new cancer centre inclusive of medical oncology area and associated MRI facility, the final stage, as yet unfunded by the Commonwealth is the construction of two Radiation therapy bunkers, linear accelerators and associated radiotherapy infrastructure on ground floor.

2.3 Site Assessment

The existing site is restrained and restricted by barriers on all four sides. To the immediate North is an extreme escarpment; the West is adjacent to the private hospital; to the East there is residential roads and housing; and the Southern boundary is the hospital access road. The NWAHS completed a site master planning exercise in 2010. The planners recommended relocating the access road which would enable the cancer centre to be built and fully integrated on the southern side of the existing hospital, with three levels to accommodate oncology radiation on the ground floor; level one would accommodate clinical administrative areas, education and teaching facilities; and level two is chemotherapy and support services.

The ideal location of the MRI was identified on a small parcel of land between the DEM and the Medical Imaging department of the privately owned medical centre. The small parcel of land is currently being acquired by crown law with the agreement of the private hospital owners.

The planning review of the existing Department of Emergency Medicine identified that its current location is the most appropriate site with emergency vehicle and patient access to the Hospital and its location relative to support areas such as theatres, ICU and planned relocation of pharmacy proposed in the as yet unfunded CCC Stage 2 bid.

2.4 New Facility Details

The Cancer Care Centre construction is based over three levels, the project is planned over 2 stages that being CCC Stage 1 and CCC Stage 2.

CCC Stage 1 includes the

- additional ground floor works of 648 m² allocated for
 - the new entrance and entrance canopy,
 - new foyer, reception / front of house and switch board facilities
 - Incorporation of wellness centre with design input from Cancer Council of Tasmania, as they will occupy this space.
 - New café area that links with a current courtyard
- Level one area of 1033 m² allocated for cancer centre and clinical administration areas inclusive of
 - Teaching and education facilities,
 - Relocation of library and inclusion of computer education area
 - Oncology case review centre – for multidisciplinary review of patients locally and via videoconference
 - Seminar and conference rooms which are currently not available within the hospital

- Level two area of 849 m² allocated for medical oncology and support services inclusive of
 - Chemotherapy treatment chairs
 - Specific paediatric treatment rooms
 - Isolation treatment area
 - Consulting rooms
 - Dedicated Oncology treatment room
 - Specific medication room
 - Centralised nurses station and work room
- MRI facility of 189m² is collocated next to the DEM and medical imaging area, consisting of
 - Secure MRI treatment room
 - Control and reporting rooms
 - Holding bay with dedicated anaesthetic area
 - Change and associated support areas

CCC Stage 2 is allocated for future works - radiation therapy and associated services with a nominal ground floor space of 678 m² plus an area of 296 m² for the linear accelerator bunkers and also including

- Control rooms for linacs
- Consulting rooms
- C.T simulator room
- Physic lab
- Fitting and support areas
- Change rooms
- Recovery areas
- Patient waiting areas

The DEM project scope encompasses the redevelopment and extensions to the existing building.

The redeveloped facility will incorporate a significant expansion of available treatment spaces and an improved patient flow configuration. The expanded Department of Emergency Medicine will broadly incorporate;

- A relocated public waiting area with associated amenities space and adjoining paediatric waiting area, adjacent to a repositioned DEM reception
- Incorporation of respiratory waiting room to be used in event of infectious outbreaks prior to being seen
- Upgraded ambulance bay to accommodate three ambulances, including the bariatric ambulance
- Two larger resuscitation bays and 11 acute treatment beds situated around a centrally located clinical staff station with good visibility of the resuscitation and acute bay areas
- A 12 bed Acute Medical Unit which will incorporate a Short Stay facility and discharge lounge

- Two separate paediatric patient rooms
- A secure Mental Health Treatment room
- A pressurised treatment room for isolation purposes with an airlock and ensuite
- Four fast track bays
- Specific DEM offices and staff facilities

The development works will be in full compliance with contemporary standards and building codes.

2.5 Additional & Future Works

The DEM redevelopment is the most critical project that is required on the site of the North West Regional Hospital. In addition to this project some enabling works have already been undertaken on the site and the NWRH has developed concept plans for additional works throughout the hospital.

The NWRH Road Relocation project commenced on the 19th March 2012 and will take 18 weeks to complete. The project provides the space at the main entrance for construction of the NW Cancer Care Centre.

The NWRH Car Park design and construct project commenced on 24/02/2012 the design process is well underway with construction of the additional 189 Car parks expected to commence August 2012. The construction of additional car parking will assist with resolving chronic car park issues across the entire campus and provide

- A portion of undercover parking
- designated undercover disabled car spaces
- increased security with improved lighting and closed circuit television monitoring
- Staff and government car parking areas

Additionally within the scope of this project an elevated Helipad will be included and provision of a bridge link into the cancer centre, this will provide direct access to the DEM for medical retrievals.

The Intensive Rehabilitation ward project (Sub Acute Unit) commenced in April 2012 with the design team progressing works for a new 18 bed ward to be constructed on the northern aspect of the building.

3. NEED FOR THE PROJECT

3.1 The Service

Stage 1 of the North West Cancer Care Centre will provide the following services

- High quality provision of medical oncology services to the growing needs of the North West area.
- Provision of high quality Magnetic Resonance Imaging (MRI) and associated services.
- The design will provide ease of access and optimal patient flow.
- Provision of improved patient waiting areas to enhance patient comfort and meet community expectations.
- Provision of dedicated paediatric oncology treatment areas.
- Provision of all cancer related consultative and support services in a purpose built consultation area with optimal design for patient flow.
- Provision of enhanced support services such as the Cancer Council of Tasmania's wellness centre.

On funding for Stage 2 of the Cancer Care Centre being obtained the additional services that will be available from the site include;

- Provision of linear accelerator for radiation oncology treatment services
- Provision of radiation oncology consultation services.
- Dedicated C.T. simulator for treatment simulation and initial setup and replanning during treatment.
- Dedicated radiation therapy planning area.
- Physic/Engineering Workshop area for repairs, testing and servicing.
- Design will provide optimal patient flow.

The North West Regional Hospital Emergency Department Redevelopment will provide the following services

- Adequate provision of emergency and acute health care to the increased and complex needs of the North West area
- Provision of an Emergency Department with structured and optimal design for patient flow.
- A 12 bed Acute Medical Unit to provide 4 - 24 hour observation and treatment to minimise representations and optimise patient length of stay in the Emergency Department.
- Provision of state of the art Resuscitation Bays to optimise emergency response and care provision to paediatric and adult category 1 and 2 patients.

- Provision of fast track services for Category 4 and 5 patients. This would improve waiting time indicators as well as physically separate lower acuity patients from those patients requiring more complex care.
- Provision of improved patient waiting areas to enhance patient comfort and meet community expectations. Waiting room will be divided into general and paediatric areas which can also be utilised as a respiratory waiting room, separately ventilated to accommodate infection control issues when required.

3.2 Existing Facility

Construction of the North West Regional Hospital was completed in 1995, and is a single level building with a large footprint. The building has northerly views over Bass Strait and internal courtyards distributing natural light. The hospital also borders extensive urban developments.

The Operating Theatre and Day Surgery redevelopment was completed in 2010 creating the capacity to increase both scheduled and emergency surgery for the region.

The Patient Accommodation complex construction onsite was completed in 2011, providing 6 two bedroom self contained units and 6 single units for clients, family and support persons to stay during, prior or post treatment at the NWRH.

The DEM was only designed to accommodate 12,000 presentations per annum. It is currently seeing in excess of 25,000 presentations.

Issues with the lack of available space in the DEM and its poor configuration have been raised since the mid 2000's, however changes of operator and ownership of the site, effectively stalled works. The purchase of the site in 2011 has enabled a site master plan to be developed in confidence of being able to implement without any ownership related constraints

The existing Department of Emergency Medicine provides a 24 hour, seven day a week emergency service, receiving and treating all categories of patients.

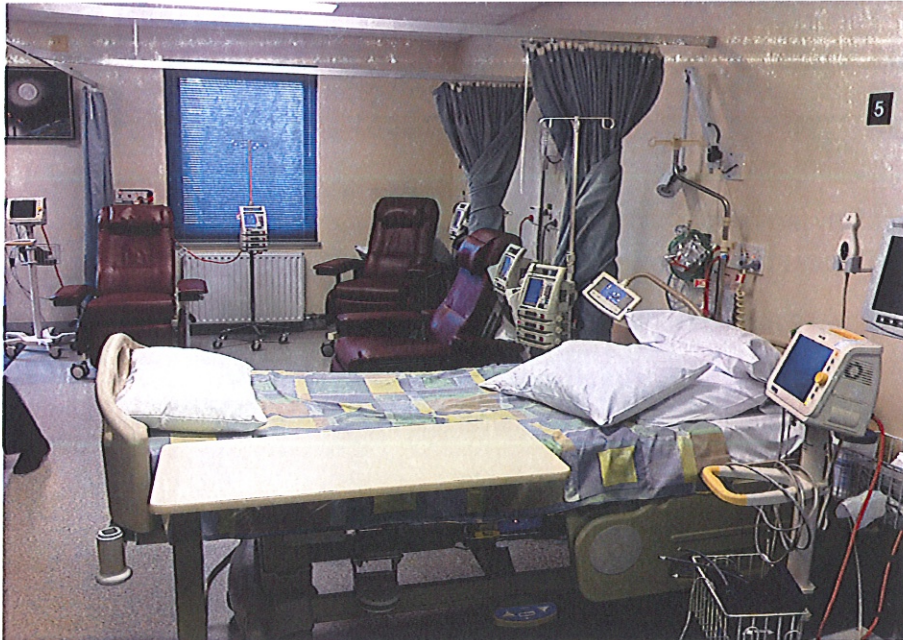
The hospital lacks clinical space and education areas to cater for the growing needs in contemporary health practices.

3.3 Limitations with the current facility

The current NWRH Oncology Department was not purposefully designed to treat medical oncology clients. This poor design does not optimise patient flow, is over crowded, and lacks space and privacy.

- No provision of medical services such as oxygen and suction to each chemotherapy treatment area
- Chemotherapy treatment areas are overcrowded, with lack of space and privacy
- Staff facilities are totally insufficient and lack privacy
- Insufficient storage areas of mobile medical units

- Insufficient storage for sterile and medical consumables
- Lacks a dedicated medication room
- There is no dedicated meeting room
- There is no MRI facility on the entire North West coast



The above photos clearly demonstrate the overcrowded medical oncology treatment area which lacks sufficient space and privacy.

With the configuration of the DEM having not changed since it was built, a number of deficiencies exist which have been identified within the project briefing sessions. These deficiencies include;

- Insufficient treatment bays exist based upon the number of presentations that currently present and are predicted to present in future. Associated with the lack of beds is a poorly configured space for staff observation purposes.
- There are no treatment areas that can be separated for paediatric patients which is recommended by the Australasian College for Emergency Medicine and the Australian College of Paediatrics.
- There is no secure Mental Health facility within the DEM.
- No negative pressure isolation facility for infectious patients is located within the DEM space.
- No Short Stay facility is provided which is recommended under the State Clinical Services Plan 2007 and is required to;
 - provide a space for longer stay (4 – 24 hours) emergency patients to monitor their conditions,
 - stabilise cardiac patients for retrieval and transfer
 - provide a space for retrieval patients
- The ambulance entry does not have a decontamination shower and change area which is required under current standards and guidelines.
- That the current configuration does not accommodate a “fast flow” processing facility for “minor” cases which present to the DEM and are currently blocking up essentially needed acute beds in the remainder of the DEM treatment areas.
- Waiting areas are very poorly configured with no separate spaces for paediatric patients. Reception is poorly configured; it is generally dysfunctional and has no confidentiality or private interview space.
- Staff facilities are totally insufficient with one toilet for the entire Department.



4. CONSULTATION AND GOVERNANCE

4.1 Preliminary Consultation

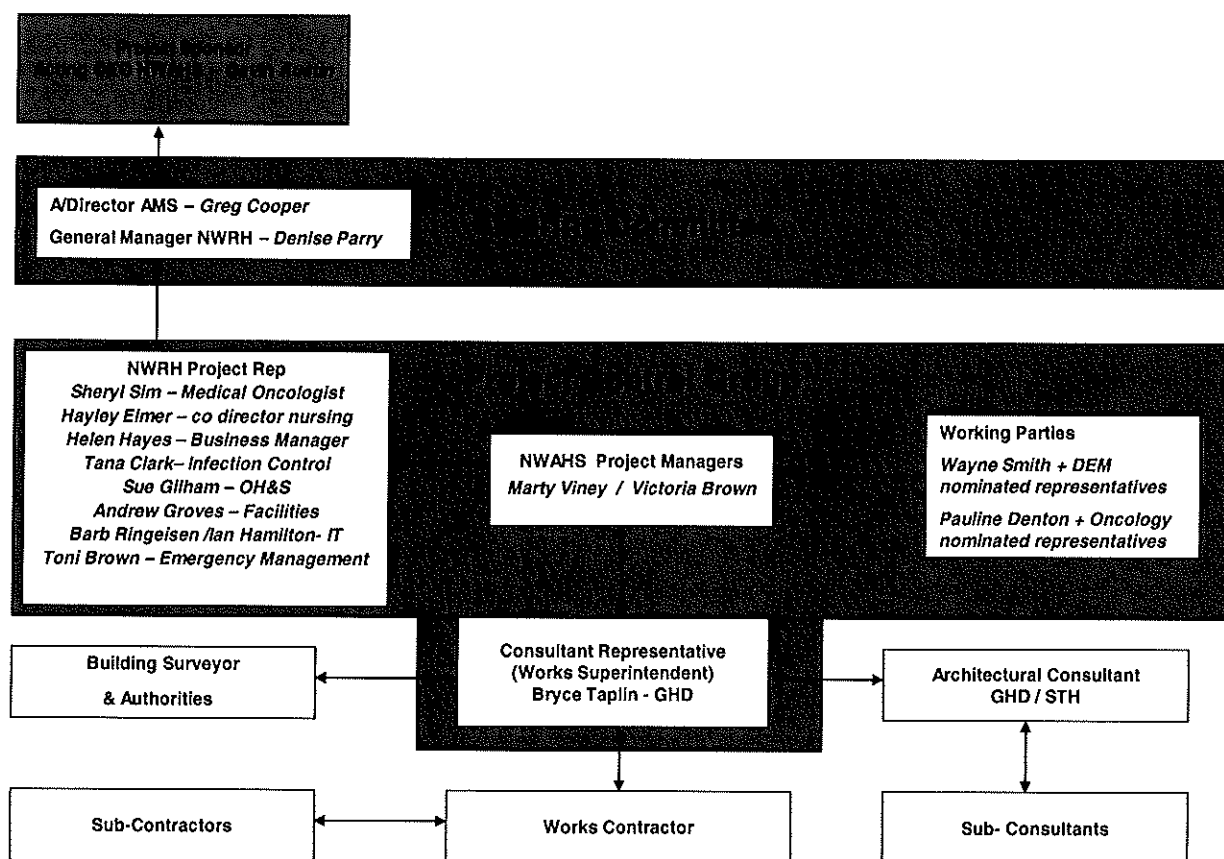
In formulating the draft for the Cancer Care Centre and Emergency Department redevelopment, the following stakeholders were consulted.

- Medical, Nursing, clerical and support staff at North West Regional Hospital
- TAS Ambulance
- Infection Control
- OHS
- Peer Review by Holman Clinic Specialists and Radiography specialists at LGH
- Peer Review by Emergency Specialists at MCH
- Review of the completed DEM redevelopments at the MCH (March 2012)
- Review of completed DEM redevelopments at the LGH (May 2012)
- Miscellaneous stakeholders affected by the Capital Works such as Imaging, Pathology and Women's Auxiliary
- Relevant and associated Standards and Guidelines
- An architect team specialising in Health was appointed to design the redevelopments.

4.2 Project Control Group

Detailed stakeholder consultation commenced immediately following appointment of the Project Architect – GHD and STH Architects. The following diagram illustrates the Project Control Group (PCG), Project Team and Consultant Team relationships.

Project Coordination/Governance Structure



Appendix 12.1 Project Management Structure

The Project Control Group and Project Team have been meeting on a regular basis to enable the project to evolve in line with the project timeline, the aim being to enable an adequate consultation phase while still allowing sufficient periods for documentation and procurement of the project. The Project Control Group oversees the progress of the project. The Project Manager and Project Team report to the PCG to enable the PCG to track progress, provide guidance and issue formal approvals at key milestone points of the project.

This approach was identified during the initial consultation phase to maintain the project momentum to effect tendering of the project by August 2012.

4.3 Consultation with Service Stakeholders

Consultation has continued to occur with all key services groups, other internal stakeholders and associated services.

Separate working parties of key internal stakeholders for both the Cancer Care Centre and DEM redevelopment meet on a regular basis to have input and review the design and documentation with project managers and health architects.

4.4 Design Approval

The Steering Committee, through the NWAHS Acting CEO Gavin Austin endorsed the project schematic design and provided Final sign off of the developed plans in April 2012 in consultation with all members of the Project User Group.

This consultative approach has resulted in a design that allows all of the desired outcomes to be resolved. A peer review of the schematic design was undertaken by the North West Regional Hospital individual working parties prior to the endorsement by the North West Area Health Service CEO.

5. ADDRESSING THE NEED

5.1 Design Philosophy

The NW Cancer Care Centre design solution optimises value for money across the project and minimise long term risks particularly where they will contribute to increased maintenance, energy and other recurrent costs.

- The architecture of the proposed facility is complimentary in scale and type of materials proposed with the current facility and adjacent buildings.
- The design will provide contemporary, functional and efficient facilities with a focus on the maintenance of amenity, security and low life cycle costs.
- All services and design are to be considered as contemporary, 'best practice' and be compatible with current and evolving service delivery needs. Consideration should be given to ensuring that all design elements are compatible with emerging trends in wireless technology and communications.
- Integration with other functions and areas of the hospital is of prime importance. The linkages to the existing hospital are important for staff and patients. For the transfer of inpatients if required, for the access to other clinical modalities – radiology, pathology, allied health, coffee shops, cafeteria, medical records etc.
- Importantly the Australasian Health Facility Guidelines are the primary reference standard for this project. Where departures from the Standard are deemed necessary they are to be scheduled and presented to the Project Manager for ratification by the Project Control Group.
- Creating a therapeutic environment for cancer patients and their carers is a priority in any design. Not only must the facility be non-threatening but it must also be reflective of the technology that will reassure them that they are receiving "state of the art" care. In a total sense they must be given a feeling of hope.
- Clearly defined access to the facility, reception and way finding are essential.
- There is the need for privacy yet retains the ability to communicate and be observed as necessary.
- The environment for staff in cancer care facilities is of extreme importance. The staff are highly specialized individuals but they are often under stress. Efficient and effective planning creating care of movement and minimization is essential.
- Efficient use of space and circulation will also make the patient experience less stressful, which in turn assists in the stress levels of staff.
- Just as patients and carers benefits from natural light so do staff. They must have pleasant staff room to retreat to. Somewhere private where they will not be interrupted and ideally where they have access to the outside.

In summary, the environment for all must be healing and uplifting.

The design philosophy for the Department of Emergency Medicine is focussed around a major redevelopment and expansion of the existing facility and is driven by adhering to the following principles:

- External presentation of extended areas to be complimentary to the existing façade treatment,
- Where possible retain / duplicate existing valued detail features to retain whole of complex context ,
- The design will continually evolve as documentation proceeds to ensure best functional solutions are achieved as DEM and other hospital representatives become more familiar with the planning / documentation process and intended required outcomes,
- A viable, efficient and safe Department of Emergency Medicine must be maintained for the duration of the redevelopment works, with a design for staged development that takes into consideration that the hospital will remain in operation for the duration of the project,
- Patient and practitioner privacy and respect to be a priority,
- Public and waiting areas to have a bright and restful presentation,
- Paediatric areas to be vibrant and child friendly,
- Specialist artworks components to be incorporated into building envelopment where possible and practical.

5.2 Building Proposal

The NW Cancer Care Centre building proposal is to construct a 3 level integrated cancer care facility in such a manner that patients and staff will be able to access services and amenities within the centre and the hospital. This includes access to and from medical imaging, in patient units, hotel services, allied health, ambulance transfers and general amenities such as a coffee shop.

To provide an integrated centre the proposal is to relocate the main entrance and construct a 3 level facility across the front of the hospital with vertical access at both ends.

The 3 level facility has been proposed with the chemotherapy facility on the top level to benefit from the available magnificent views. The 16 oncology treatment areas will be complemented with 6 consulting rooms and a procedure room.

The second level will accommodate Clinical and Cancer Centre administration, oncology case review conferencing facilities, a library and education facilities, plant will also be located on the level.

The ground floor will accommodate the radiotherapy services with space allowance for 2 linear accelerators. This will be to a future staged construction with an under-croft provided in the first instance under this project. The linear accelerators with their additional height requirement will be constructed outside the footprint.

The MRI facility will be incorporated within the DEM redevelopment zone physically but will be a secure area with client entry point from the NWRH main corridor.

The redevelopment of the DEM from a physical perspective includes the construction of nearly 869m² of additional floor area, through extending out towards the access road and the internal refurbishment of nearly 827m² of the existing DEM.

In respect of the DEM's physical location to other services its close relationship to Medical Imaging is ideal. The Theatres are located directly opposite the DEM, which is easily accessed across a central corridor for any emergency operations that may be required. The Intensive Care Unit is also located within close proximity.

The following details the physical response to overcoming the numerous deficiencies which exist within the current DEM:

Waiting and Reception

A discrete DEM waiting area of increased capacity has been provided through the extension to the footprint of the building. This waiting area incorporates a small separate paediatric waiting space. Public toilets are located in the waiting area foyer. A new reception / triage area which provides an improved level of confidentiality for patients and carers has been provided with improved security and layouts for reception staff.

Ambulance Bay

The existing ambulance bay has been expanded and redeveloped to provide increased capacity, a new decontamination shower facility and storage area.

Fast Flow Treatment

Patients who are assessed as lower level Category 4 and 5 now have a specific patient flow configuration to ensure they are not blocking the more critical DEM presentations or tying up acute bays.

Acute Medical Unit (AMU) incorporating a Short Stay Unit

A 12 bay AMU is designed to provide a level of extended stay in the Emergency Department for prolonged observation and treatment of patients that only require a stay of 4 – 24 hours typically, so do not require access to other wards in the Hospital and can be discharged upon completion of their short term stay. This space is configured with its own staff work station and patient amenities.

Emergency Department Treatment unit

This is the expanded main treatment area which assesses Category 1, 2 and 3 patients across 11 treatment bays, all of which are provided with a high level of privacy. A staff station is central to this area and support features including the drugs and utility rooms are in the central core. A 2 bed resuscitation bay is located at the end of the unit and has direct access from the ambulance bay for those emergency patients who need to bypass the standard admission routes. A new negative pressure treatment bay is incorporated within the main treatment zone. The 2 paediatric treatment rooms are located within this acute zone, but retain a sense of separation. The Mental Health room

is located strategically just inside the department and is easily observed through an observation window in the acute area.

Staff Areas

Expanded staff facilities complete the DEM redevelopment with the provision of separate male and female lockers / change rooms / toilets, expanded office space and an enlarged and relocated staff meal / rest room overlooking an internal courtyard.

5.3 Architecture & Interiors

The principal design solution has been developed from the combined needs of providing an expanded Department of Emergency Medicine (DEM) with a new Cancer Care Centre (CCC) and MRI for the people of North West Tasmania at the centrally located North West Regional Hospital while allowing for projected future requirements of the whole facility. Siting, integration and design have been developed from an intensive review and master-planning process.

Whilst the overall outcome is very much informed and constrained by the existing building, existing functions and the necessity to maintain existing service provision throughout construction, the specialist clinicians involved in both the solution and review processes have expressed satisfaction with the functionality and detail of the presented outcome.

Reference throughout the design process has been made to all relevant sections of the Australian Health Facility Guidelines.

The exterior will provide the clean lines expected of a contemporary medical facility. Materials and form have been selected to provide address and reassurance in a locally relevant way, acknowledging the site and existing form. Available views, both within and from the site have been highlighted for the benefit of all users.

The interior will provide a nurturing and healing environment, taking into account physical treatment of patients and the requirements of all staff for the wellbeing and comfort of both. This will be achieved through access to natural daylight, ease of orientation and way-finding, warm natural finishes, external views and relationship to the internal courtyards.

A whole of building approach has been taken. Both the interior and exterior finishes and form address the aesthetic while balancing the considerations of the various scales of the building, ESD requirements, Infection Control, way-finding, statutory requirements, ergonomics, DDA, maintenance and whole of life (WoL).

5.4 Design Process

The North West Regional Hospital (NWRH) was identified in the State Government's 'Tasmania's Health Plan' as the location of the NW regions centralised cancer, acute and trauma treatment services. A schematic master-plan (2010) was prepared by specialist Health Architects, Silver Thomas Handley, to identify the most appropriate method of accommodating and integrating all required services and facilities, expansions and upgrades into the existing hospital. The current CCC & DEM works have developed from within that original master-plan.

A consultant design team led by GHD (Architects & Engineers) and incorporating Silver Thomas Handley (Specialist Health Architects and Planners) and Engineering Services Tasmania (Services Engineers) were appointed for the combined Medical Oncology component of the CCC, the MRI and necessary Front of House works project in August 2011.

Schematic design commenced on the as commission project making continuous reference to and allowing for the future DEM and Radiation Oncology works from that date.

A formal confirmation extending the original commission to include the DEM was provided in November 2011.

A variation to provide schematic design for Radiation Oncology was also agreed so that the specialist clinicians could confirm general layout principals and space allocations.

Regular design meeting have been held with both CCC and DEM staff to develop the design.

A Likely Cost estimate for the CCC was prepared from sketch layouts in November 2011. A revised Likely Cost including the DEM and Radiation Oncology was completed in April 2012.

Formal sign off for the CCC & DEM schematic design, including the MRI and Front of House, was provided in March 2012 with formal sign off of the Radiation Oncology CCC schematic design provided in March 2012.

Design development for the project area is now well under way with 1:50 individual room plans of all health related areas almost complete enabling the detailed refinement of all areas as work progresses towards documentation.

Regular fortnightly Project Control Group meetings have ensured ongoing dialogue between regional and hospital management with clinical and other staff representatives and the documentation team.

5.5 Project Staging

The Main DEM redevelopment is intended to be constructed in 3 main stages (refer to attached staging drawing in Appendix B), which will enable the facility to operate at full capacity throughout the construction period.

Stage 1

Stage 1A will be the construction of a large portion of the slab for the extension of the DEM footprint and the slab for the MRI. It will also incorporate the new ambulance bay and emergency vehicle parking areas. These works are intended to be completed as part of the current car park project to accelerate the construction process, and allow completion of the MRI facility by the end of December 2012, which meets the benefactor / NWAHS CEO agreed timelines for the MRI facility to be operational.

Stage 1B is the envelope and fit out of the MRI facility, and includes works on the temporary main hospital entrance; slab, envelope and fit out. Additionally a small slab construction will provide for future access to the DEM.

The main DEM entrance will allow ambulance and pedestrian access to the operating DEM during this time.

Stage 2

Stage 2A is occupying of the new staging entrance for pedestrian access to main hospital facility.

Stage 2B is demolition of the current main entrance canopy to allow for Cancer Care Centre construction.

Stage 2C is the commencement of the Cancer Care Centre envelope construction, ground floor is left as an undercroft. Additionally works commence on main entrance / reception area, café and wellness centre.

Stage 2D involves new main entrance canopy construction and temporary fill of pavement of the linear accelerator bunker area to facilitate access to DEM

The new ambulance bay slab from Stage 1 can be used at this time to allow ambulance access into the operational DEM.

Stage 3

Stage 3A includes completion of fit out Level 2 (Oncology) and Level 1 of Cancer Care Centre, the wellness centre and portion of new main entrance fit out.

Stage 3B involves completion envelope and fit out of western part of DEM extension and demolition of the DEM ambulance canopy.

Stage 3C is the construction of slab for DEM extension (south) linking to ambulance bay slab.

During stage 3 temporary ambulance access to operational DEM via the Cancer Care Centre undercroft area. Pedestrian access to the hospital is still via new staging entrance.

Stage 4

The Level 2 Oncology component of the Cancer Care Centre is operational.

Stage 4A new main entrance/reception area operational, complete construction and fit out of the DEM south extension, and partial decant of current operational DEM into the completed DEM western extension.

Stage 4B is the commencement of the redevelopment of the current DEM. Several areas of decant occur at this stage to facilitate renovation. Additionally final seal of external pavement and construction of roof canopy to ambulance bay commence.

Pedestrian access to the hospital will now be via the new permanent main entrance.

Stage 5

Stage 5 is the redevelopment and complete fit out of the area to house the new Acute Medical Unit and fit out to the current DEM space.

5.6 Building Services Design

The following services to the NWRH will be upgraded as part of this project:

- New underground HV feed to the site transformers (by Aurora)
- New transformer (750kVA) in existing substation (by Aurora)
- New site Main Switchboard complete with both essential and non-essential chassis'.
- Upgrade the emergency generation to allow portable systems to operate in parallel to the existing site emergency generator.
- Provision of gas fired co-generation system to provide simultaneous emergency power and site heating to improve site power reliability and redundancy
- Provision of new natural gas supply to site (by Tasgas)
- Upgraded water supply to site from both ends
- New fire sprinkler and hydrant mains system
- New site fire detection and emergency intercom system.

Existing Services

As the redevelopment is only a portion of the existing building, the majority of existing services will be retained unless where they have achieved the end of their economic life, and this project is an enabler to replace those systems that require upgrade.

Details of systems that require major replacement or upgrade are outlined under each of the specific services.

Electrical Services including Fire Detection

The electrical systems for the new Cancer Centre will include power, data/communications, security and fire systems to current Australian Standards as outlined below.

The electrical systems within the DEM redevelopment are to be completely replaced along with major Data/Comm's, Security and Fire upgrades that will have benefits across the whole site.

The electrical backbone infrastructure used within this project will include the latest technologies, are to be fully expandable and will assist in future proofing at the North West Regional hospital.

The following systems are included in the new works:

- Complete installation in new areas and rewire of existing areas for all the essential and non-essential power and lighting including switchboards to Medical standards AS/NZS 2500, AS/NZS 3003 and a minimum of 100% spare capacity included for future expansion.
- New Data/Comm's node rooms, including an expansion of the existing main server and communications room, complete with a dual redundant fibre backbone connections.

- Full Cat 6 Data/communication cabling to all new areas included in this project and full wireless coverage as set out in the DHHS wireless report.
- All new lighting to meet the requirements of AS/NZS 1680.2.5
- New IP Nursecall system and backbone integrated with the existing system with spare capacity for future roll out into other areas of the hospital.
- Fully integrated Honeywell IP Door Access control, Duress and CCTV systems.
- New Resus bays to include integrated Medical pendant systems with on board Medical protected power, Data, Nursecall, Medical Gasses, and surgical lighting.
- Integration with electronic patient records and patient interaction systems for Oncology Treatment areas
- New Paging, DECT and PA system.
- New main Fire Indication Panel and warden call system to AS1670.1, this also includes new fire detection and fire PA throughout this project. Fire panel to have 100% spare capacity and including integration to the existing Hospital fire systems.
- Emergency lighting and Exit lighting system to AS 2293.

Mechanical Services:

The new and extended areas of the DEM and the new cancer centre will be provided with new, flexible mechanical services to provide close temperature control and improved comfort levels, while striving to minimize the sites carbon footprint.

The following systems are included in the new works:

- Outdoor air heat/energy recovery ventilators for all areas.
- New central roof mounted chiller plant
- New hot water supply from co-generation systems with backup boilers providing redundancy
- Individual active beam terminal units with heating and cooling water coils supplied from new plant for most areas
- Fan-coil systems to high population concentrations, fed from central heating and cooling systems.
- Negative pressure isolation room with dedicated variable speed exhaust system.
- Exhaust systems for all toilet, change rooms, photo copiers and general areas requiring mechanical extraction.
- Stairwell pressurization systems
- Dedicated IT room air conditioning system.
- Fully integrated control from the existing site Honeywell BMS including site and specific energy, water and gas metering .

Medical Gases:

The following systems are included in the new works:

- New medical gas terminal outlets to all bed heads and pendants including extending the reticulation of nitrous oxide, medical oxygen, medical air and suction to/from the existing plant or cylinders.
- New isolation valves sets with pressure sensors and alarms to all areas.

Hydraulics

Generally the existing hospital infrastructure will be replaced and includes;

- Hot and cold water reticulation to all new fittings and fixtures.
- Provision of low consumption water fittings to minimise water consumption.
- Drainage from new waste fixtures.
- Alterations to stormwater to accommodate the new building extensions

Fire Sprinklers

A new fire sprinkler system will be established for the site consisting of:

- A new fire services main
- Connection of existing hydrant system to new main
- New fire sprinkler valve set at entrance
- Fire sprinklers to all new and existing works to the limit of the fire zone in which any upgrade works are undertaken to existing areas
- Capacity to increase the system throughout the remainder of the hospital Lifts over time.

Lifts

Two new lifts will be provided to service the cancer centre and also provide vertical patient transport from the future helipad area to the DEM.

6. PROJECT SCHEDULE & BUDGET

The construction program for the redevelopment of the Department of Emergency Medicine Project and construction of the new Cancer Care Centre will need to be conducted in a multi stage construction package, due to working on an existing operating site that must be maintained.

The current project status is that the initial design phases are completed and the design and tender documents are being progressed to tender.

<u>Summary Project Timeline</u>	
<u>Project Stage</u>	<u>Completed</u>
Consultant Engagement	August 2011
Design and Documentation	September 2011- July 2012
PSCPW Approval	June 2012
Works Tender Advertisement	August 2012
Contract Award	September 2012 (On approval from PSCPW)
Construction Commencement for the preliminary works (Road Relocation)	March 2012
Construction commencement for Stages 1	October 2012
Construction period – All Stages Note: not including future Stage 2 radiotherapy ground floor construction	October 2012 – December 2013

7. PROJECT COST

The NW Cancer Care Centre

The available total funding for the **NW Cancer Care Centre (Stage 1)** is \$16,500,000 which is made up of;

- \$4,780,000 in the 2009/2010 from the Health and Hospital Fund – Regional Cancer Centres
- \$7,910,000 from the Tasmanian Government
- \$1,060,000 from other Australian Government funds
- \$2,750,000 from private donations

The cost of the development is currently advised at:

DESCRIPTION	SUM
Building Works	\$8,276,000
MRI building	\$814,000
Subtotal of Construction Works	
Professional Fees & other fees	\$900,000
Art in Public Buildings	\$80,000
Loose Furniture and Equipment	\$452,000
Design Development Contingency	\$460,000
Construction Contingency	\$483,000
Post construction contingency	\$90,000
IT and Equipment	\$1,070,000
MRI	\$2,500,000
Radiographer training	\$1,500,000
Current unallocated (over budget)	(\$125,000)
TOTAL	\$16,500,000

Future committed commonwealth funding for the **NW Cancer Care Centre (stage 2 - Radiotherapy)** is \$16,500,000

The cost of the development is currently advised at:

DESCRIPTION	SUM
Building Works	\$7,855,000
Subtotal of Construction Works	\$7,855,000
Professional Fees & other fees	\$1,200,000
Loose Furniture and Equipment	\$815,000
Design Development Contingency	\$400,000
Construction Contingency	\$400,000
Post Construction contingency	\$50,000
IT and Equipment	\$700,000
Radiation Therapy Equipment	\$5,000,000
Art in public buildings	\$80,000
TOTAL	\$16,500,000

The NWRH DEM Redevelopment

The available total funding for the DEM redevelopment is \$6,060,000 which is made up from two separate National Health and Hospitals Network – National Partnership Agreements of;

- \$4,110,000 in 2009 Taking Pressure off Public Hospitals agreement
- \$1,950,000 in 2011 Improving Public Hospital Services agreement

The cost of the DEM redevelopment is currently advised at:

DESCRIPTION	SUM
Building Works	\$4,412,000
External Works including site preparation	\$0
Subtotal of Construction Works	
Professional Fees & other fees	\$480,000
Loose Furniture and Equipment	\$520,000
Design Development Contingency	\$220,000
Construction Contingency	\$232,000
Post construction contingency	\$45,000
IT and Equipment	\$350,000
Art in public buildings (Excluded as part of CCC Stage 1)	\$0
Current unallocated (over budget)	(\$199,000)
TOTAL	\$6,060,000

The current project costs are provided by the project Quantity Surveyor and are based on reasonable allowances for the complexity of the job and current market conditions. A competitive market currently exists, as a result may make available additional funds for remaining projects.

It is to be noted that the DEM and Cancer Centre Stage 2 projects will be going to tender as a combined package which brings additional economies of scale which will enable budget savings to be achieved in equipment and IT budgets for example.

Current over-budget issues on the combined DEM and Cancer Centre Stage 2 will be managed through consultants working through design and looking at cost savings, in addition it is noted that approximately \$150,000 of external works to the DEM and ambulance bay area will be funded through the current road realignment and Car-park funding as it is already nominated within that scope of works.

8. RECOMMENDATIONS

The Project Control Group and Project Team have carefully assessed and explored the options and solutions available and have determined that the design submitted delivers the project outputs as determined in the project functional brief. In addition, the design is consistent with the strategic long-term direction proposed for the site.

The current facilities are inadequate, inefficient and struggle to cope with the demand pressures for this growing community. The proposed development is a crucial element in the State's Provision of Health Care.

It is recommended that this submission be viewed favourably and in the spirit of the benefit it will provide to the local community. The proposed works will address the highest priority outputs that the North West Regional Hospital is required to deliver appropriate levels of health and community services.

APPENDIX A – PROPOSED SCHEMATIC DESIGN INCLUDING EXTERNAL AND INTERNAL ELEVATIONS

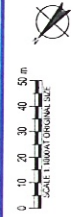


NOTE:
CONTOUR INTERVAL: 10m
EASING TOTAL FLOOR AREA:
1:1000

PROPOSED SITE PLAN

SHEET 1 OF 1000

U	ISSUE TO CLIENT	MM	BT	23/05/12
A	ISSUE TO DHHS MRN TENDER	MM	BT	17/05/12
Rev	Revisions	Drawn	Checked	Date
1	Revisions	Drawn	Checked	Date

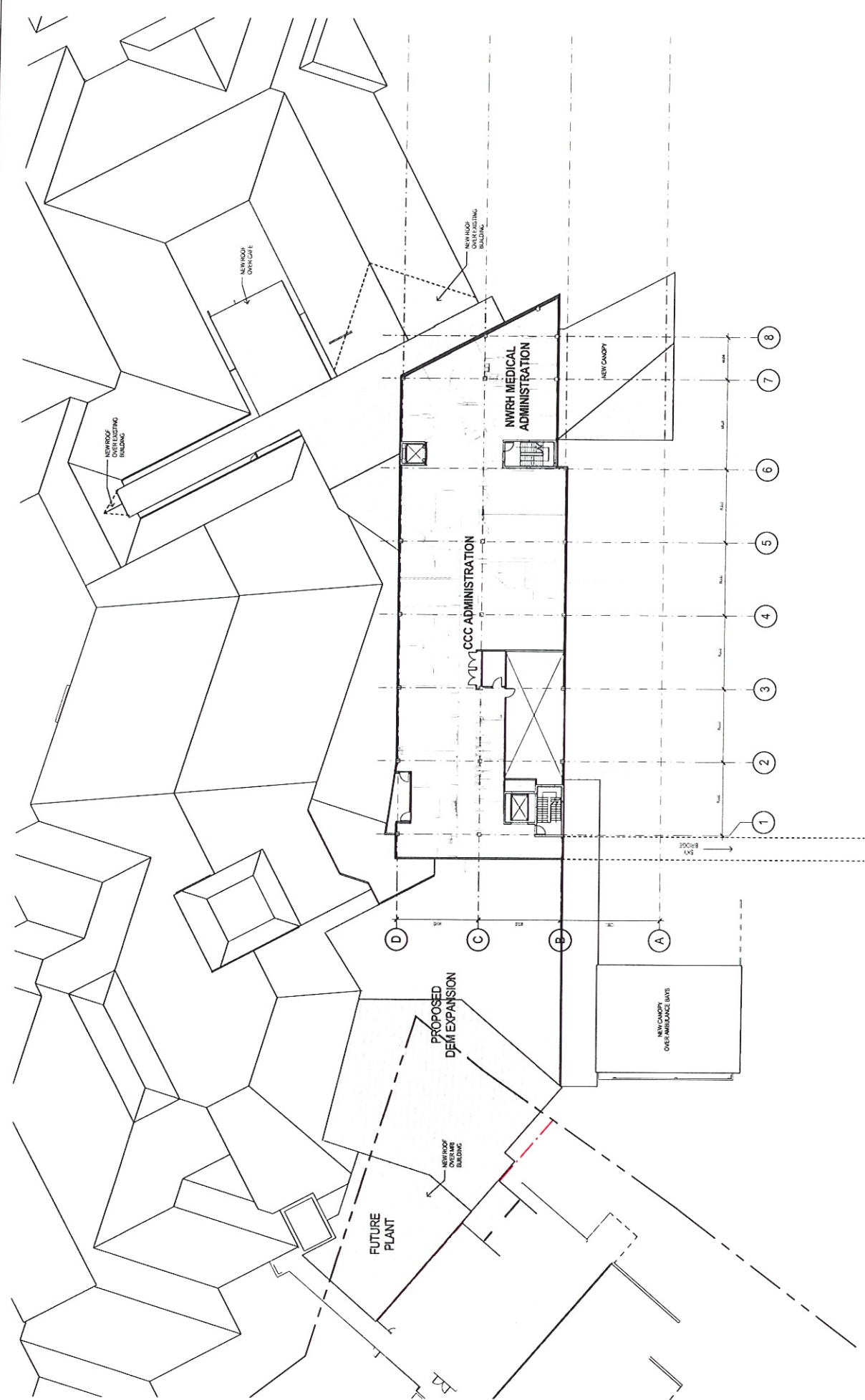


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Drawn: MUMFORD
Checked: MUMFORD
Approved: MUMFORD
Date: 17/05/12
Scale: 1:1000

PRELIMINARY
DEPT HEALTH & HUMAN SERVICE
DHHS - NWRH MRI BUILDING
MRN
PROPOSED SITE PLAN
Project Title: DHHS - NWRH MRI BUILDING
Project No: 32-16070-A005
Drawing No: A1
Rev: B



SET OUT PLAN - LEVEL 1
SCALE 1:200

PRELIMINARY

DEPT. HEALTH & HUMAN SERVICES
DHS - NVRH CANCER CARE CENTRE

FIRST FLOOR BASE BUILDING GA PLAN

Drawing No: 32-16070-A111

Rev: B

Client: DHS
Project: First Floor Base Building GA Plan
Title: First Floor Base Building GA Plan

Designer: D. THOMSON
Design Check: [Blank]
Drafting: [Blank]
Project Director: [Blank]
Date: [Blank]
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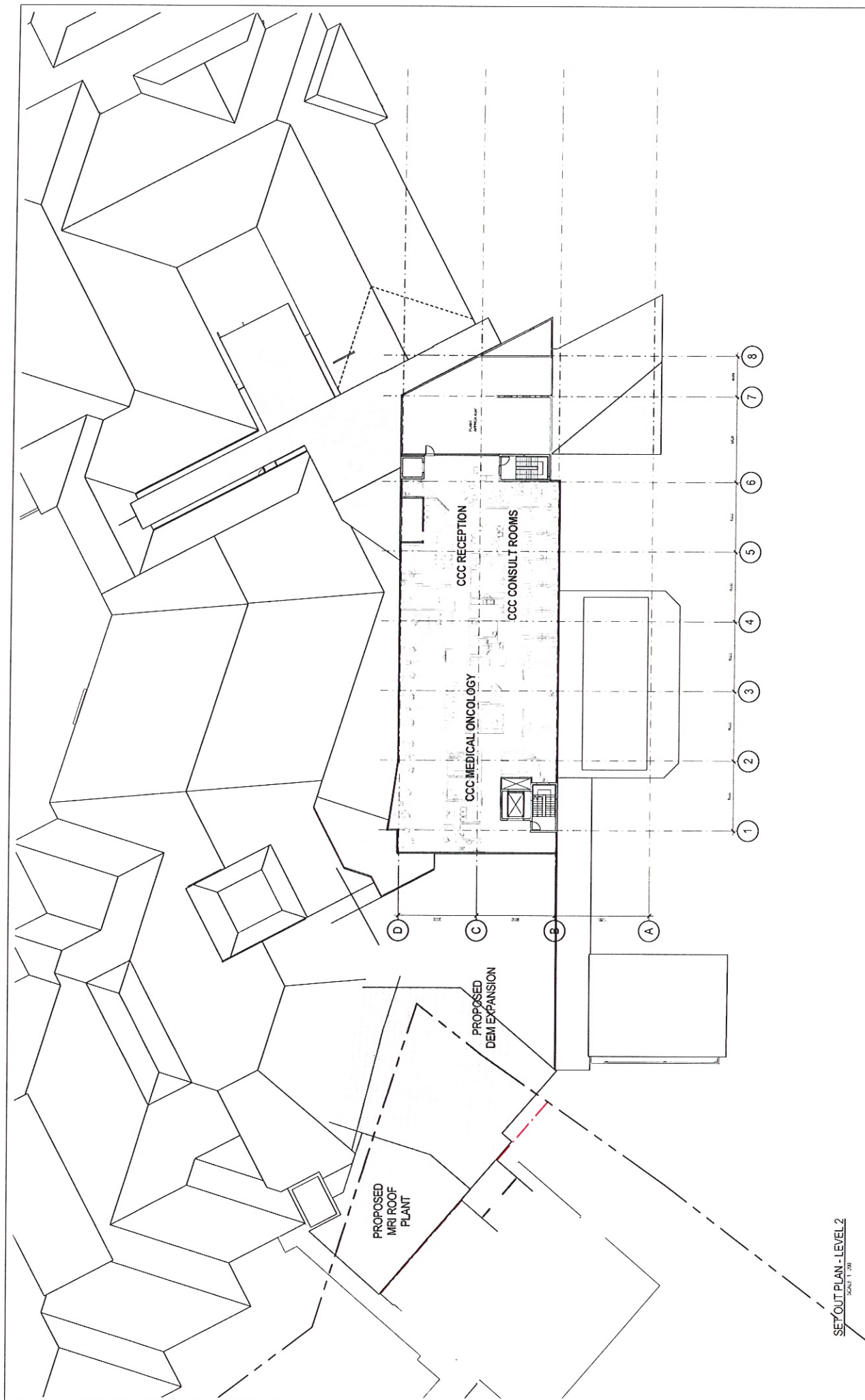
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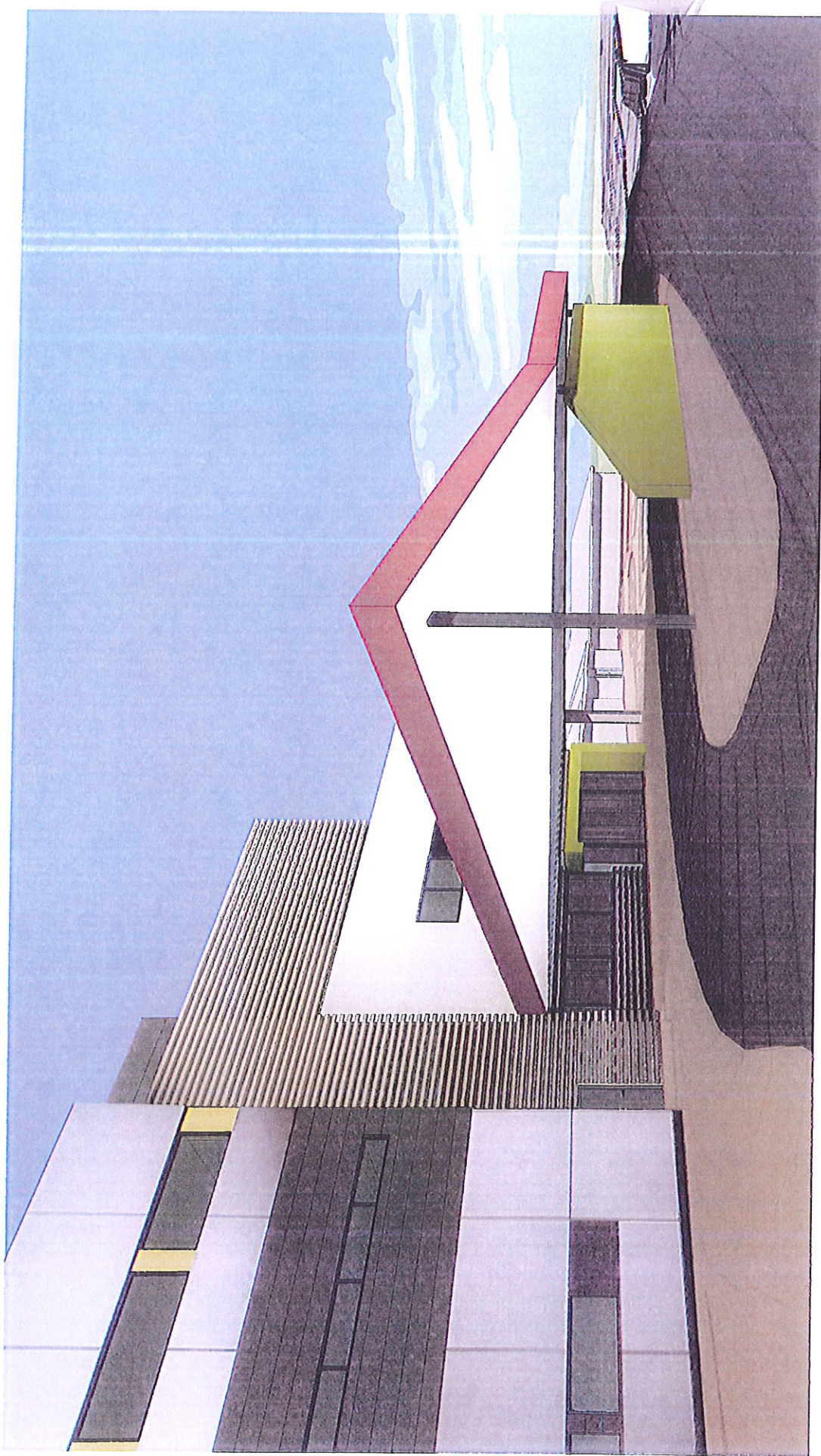
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2	Issue to DHS - PSC/MW	11.04.12	LL	BT	



SETOUT PLAN - LEVEL 2
SCALE 1:200

PRELIMINARY

<p>DEPT. HEALTH & HUMAN SERVICES DHHS - NWRH CANCER CARE CENTRE</p>	<p>Client: DEPT. HEALTH & HUMAN SERVICES Project: DHHS - NWRH CANCER CARE CENTRE Title: SECOND FLOOR BASE BUILDING GA PLAN</p>	<p>Design: D. HONGSON Design Check: D. HONGSON Drawn: L. EDWARDS Drafting Check: L. EDWARDS</p>	<p>DO NOT SCALE Contributors of Note: The document may only be used by the client for the purpose of the project. It is not to be used for any other purpose.</p>	<p>GHID Clients/People/Performance GHID Consulting Group Pty Ltd 10/11 Stirling Street, Melbourne VIC 3000 T: 03 9432 7900 F: 03 9432 7901 E: info@ghid.com.au W: www.ghid.com.au</p>	<p>silver thomas hanley ARCHITECTURE CONSULTANTS 10/11 Stirling Street, Melbourne VIC 3000 T: 03 9432 7900 F: 03 9432 7901 E: info@sthanley.com.au W: www.sthanley.com.au</p>	<p>0 2000 4000 6000 8000 10000mm SCALE 1:200 AT ORIGINAL SIZE</p>	<p>Issue No: 00000001/03.04.04 Date: 24.02.12 Project: 11.04.12 Author: J. HONGSON Checked: L. EDWARDS Drawn: L. EDWARDS</p>	<p>Issue No: 00000001/03.04.04 Date: 24.02.12 Project: 11.04.12 Author: J. HONGSON Checked: L. EDWARDS Drawn: L. EDWARDS</p>	<p>Issue No: 00000001/03.04.04 Date: 24.02.12 Project: 11.04.12 Author: J. HONGSON Checked: L. EDWARDS Drawn: L. EDWARDS</p>
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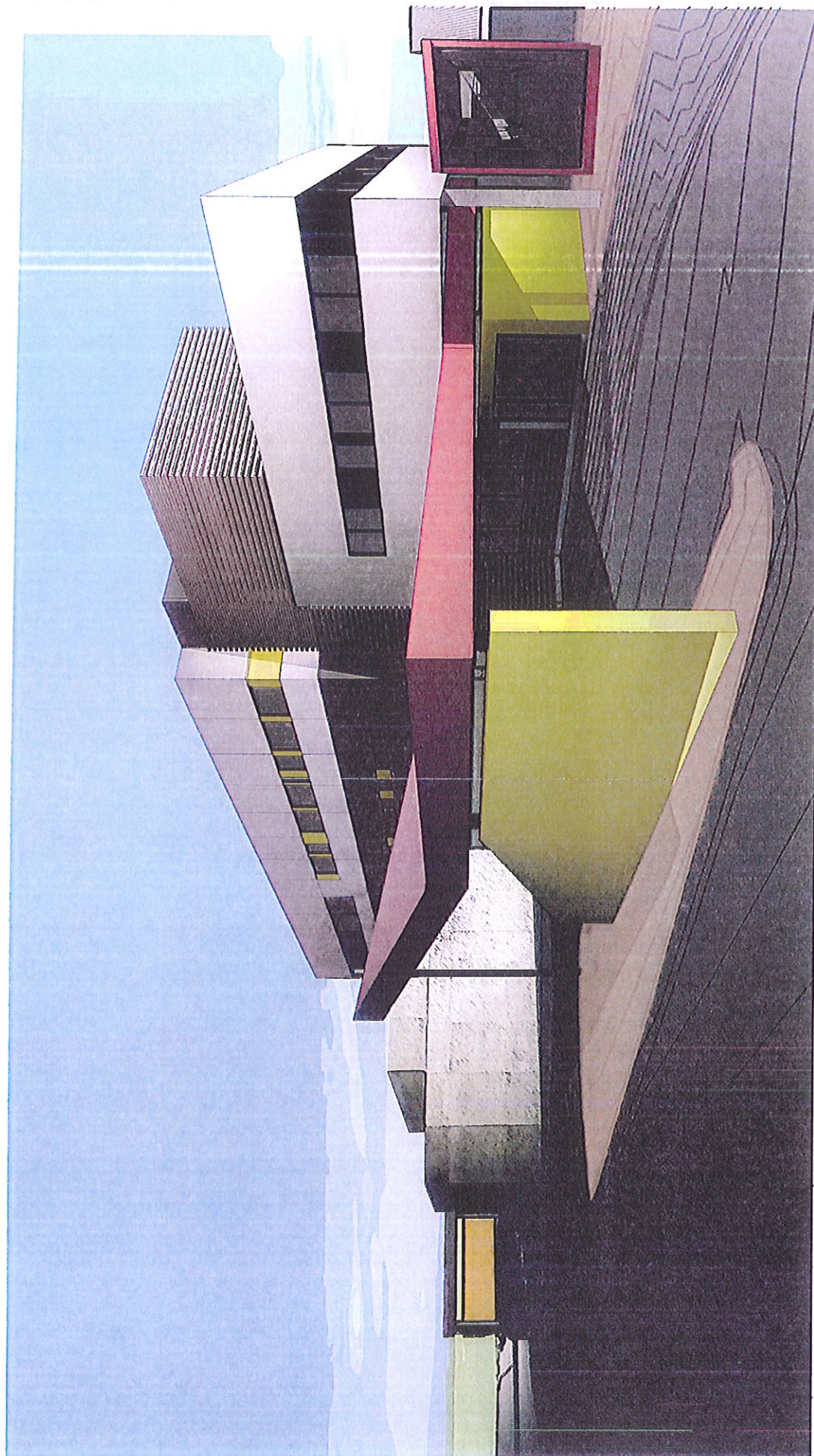
EXTERNAL PERSPECTIVE

DEPT. HEALTH & HUMAN SERVICES

DHHS - NWRH CANCER CARE CENTRE



Date 05/16/12
Job No. 32-16070
Drawing A900



EXTERNAL PERSPECTIVE

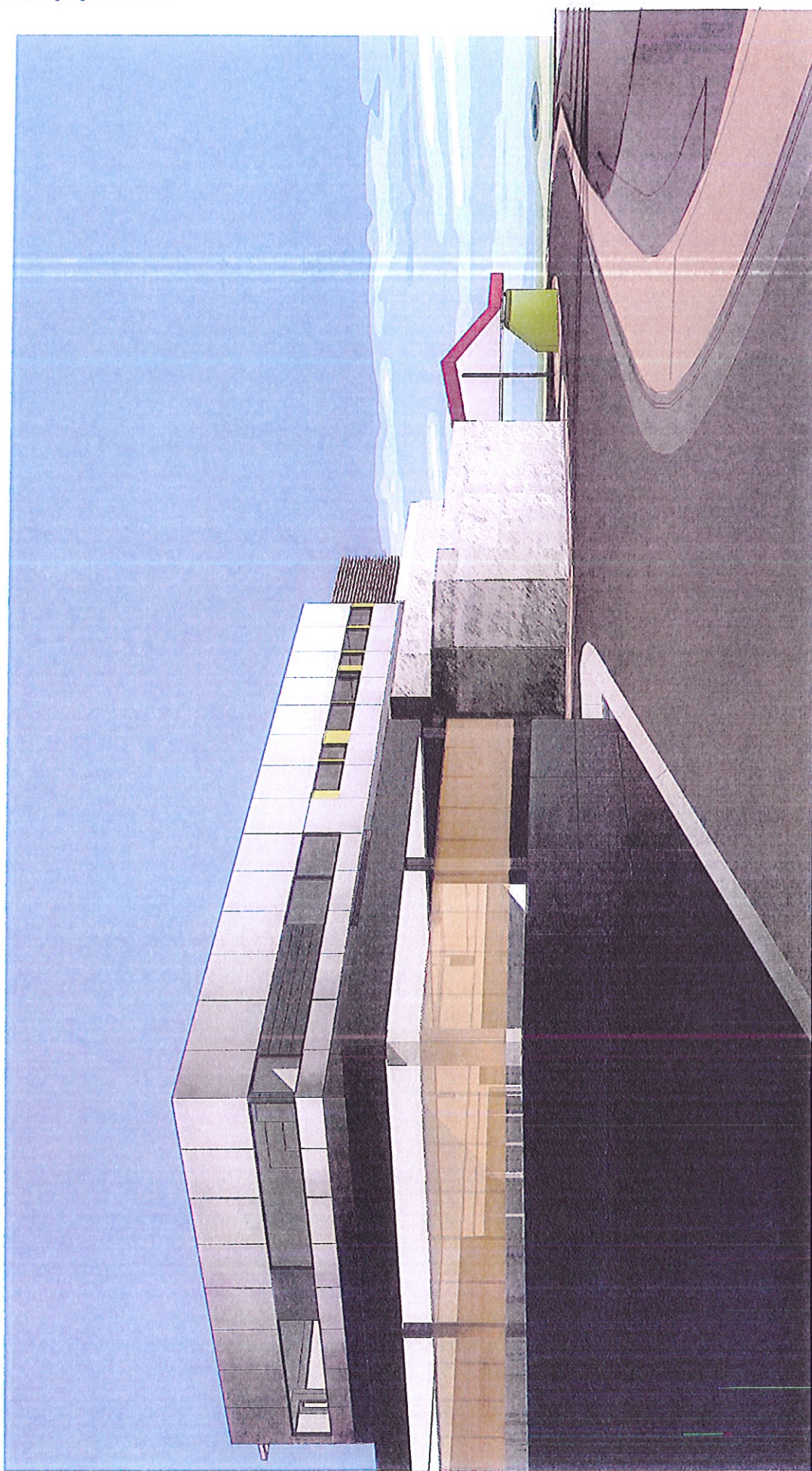
DEPT. HEALTH & HUMAN SERVICES

DHHS - NWRH CANCER CARE CENTRE



Date 05/16/12
Job No. 32-16070
Drawing A901





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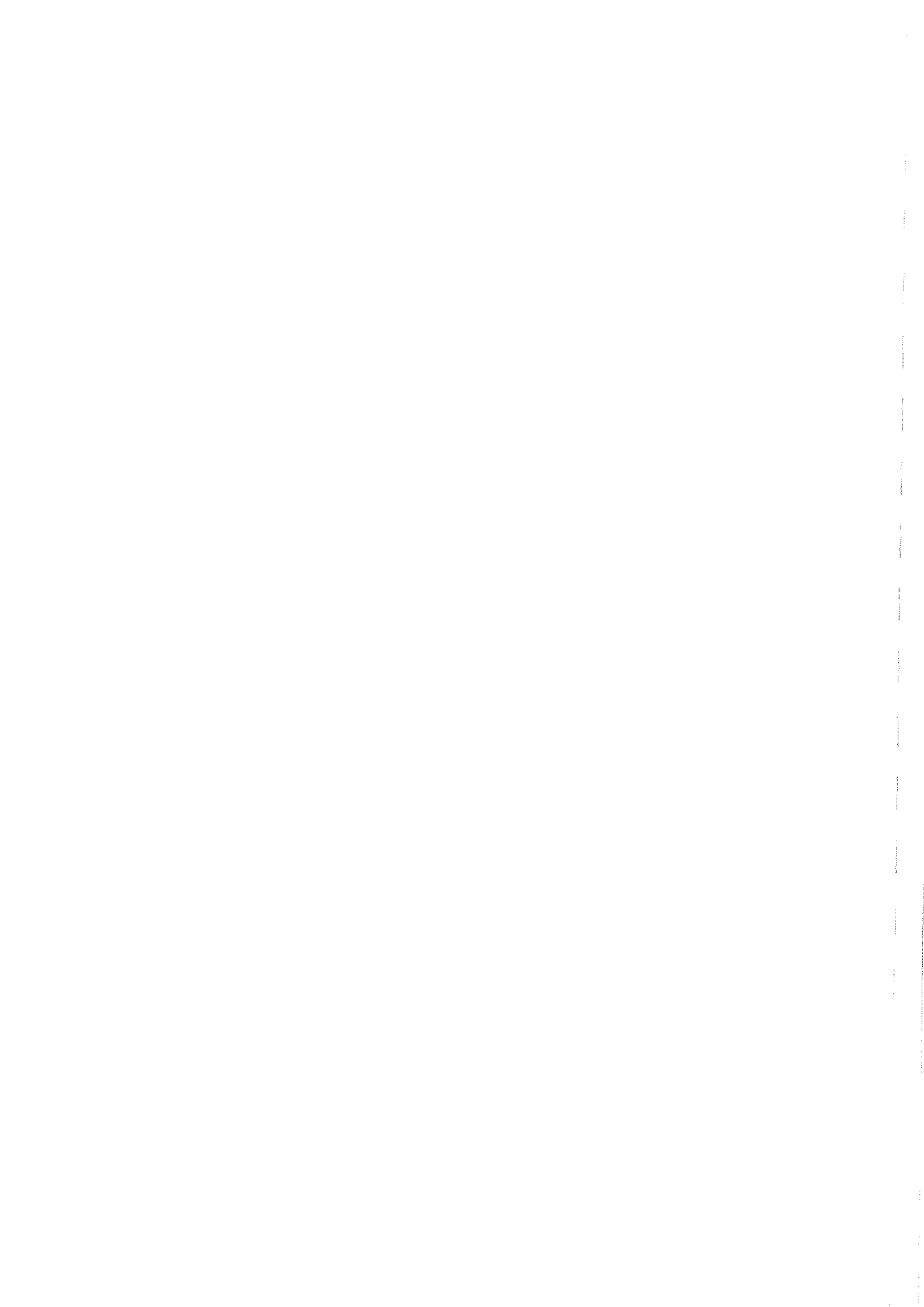
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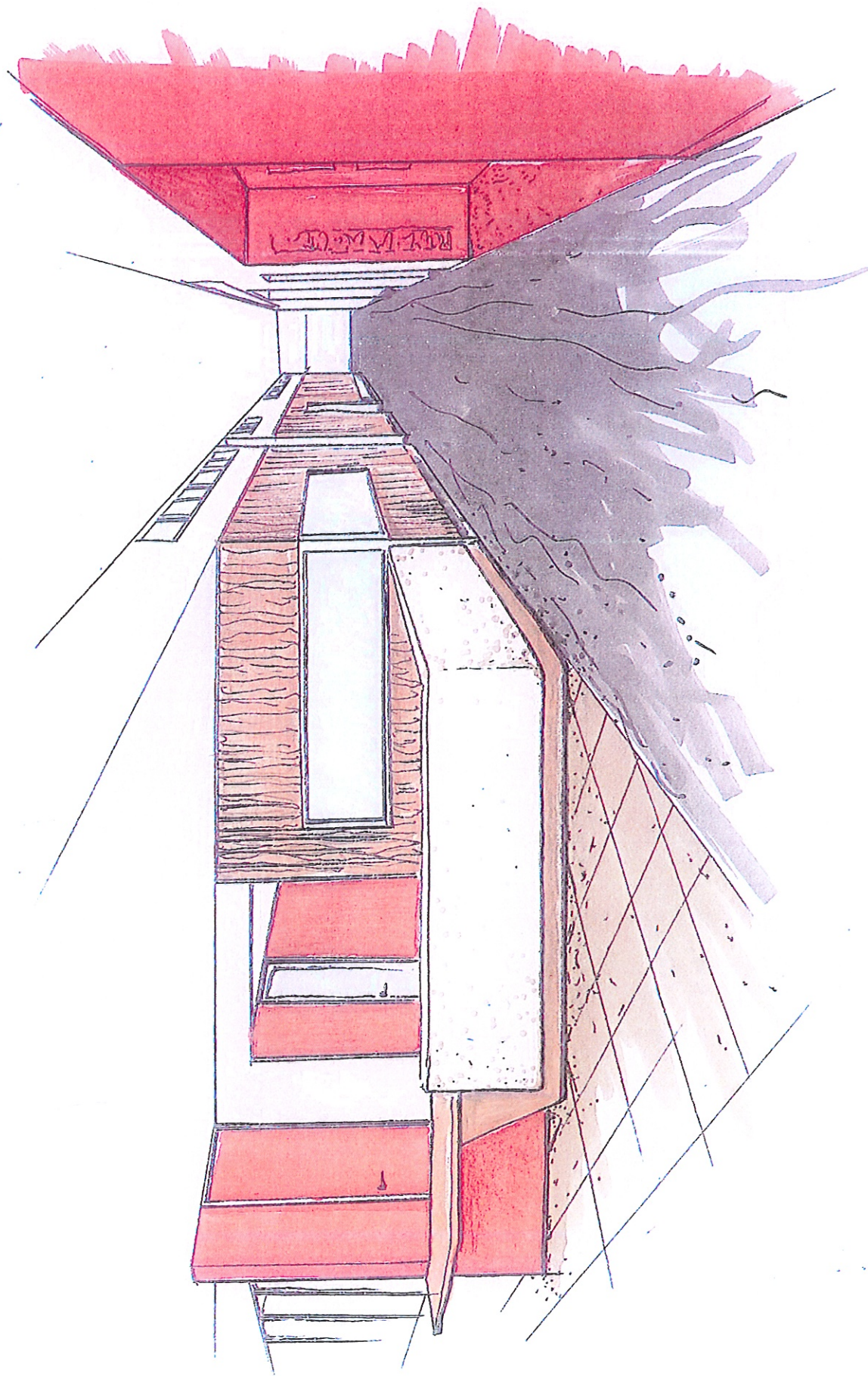
DHHS - NWRH CANCER CARE CENTRE



Date 05/16/12
Job No. 32-16070
Drawing A902







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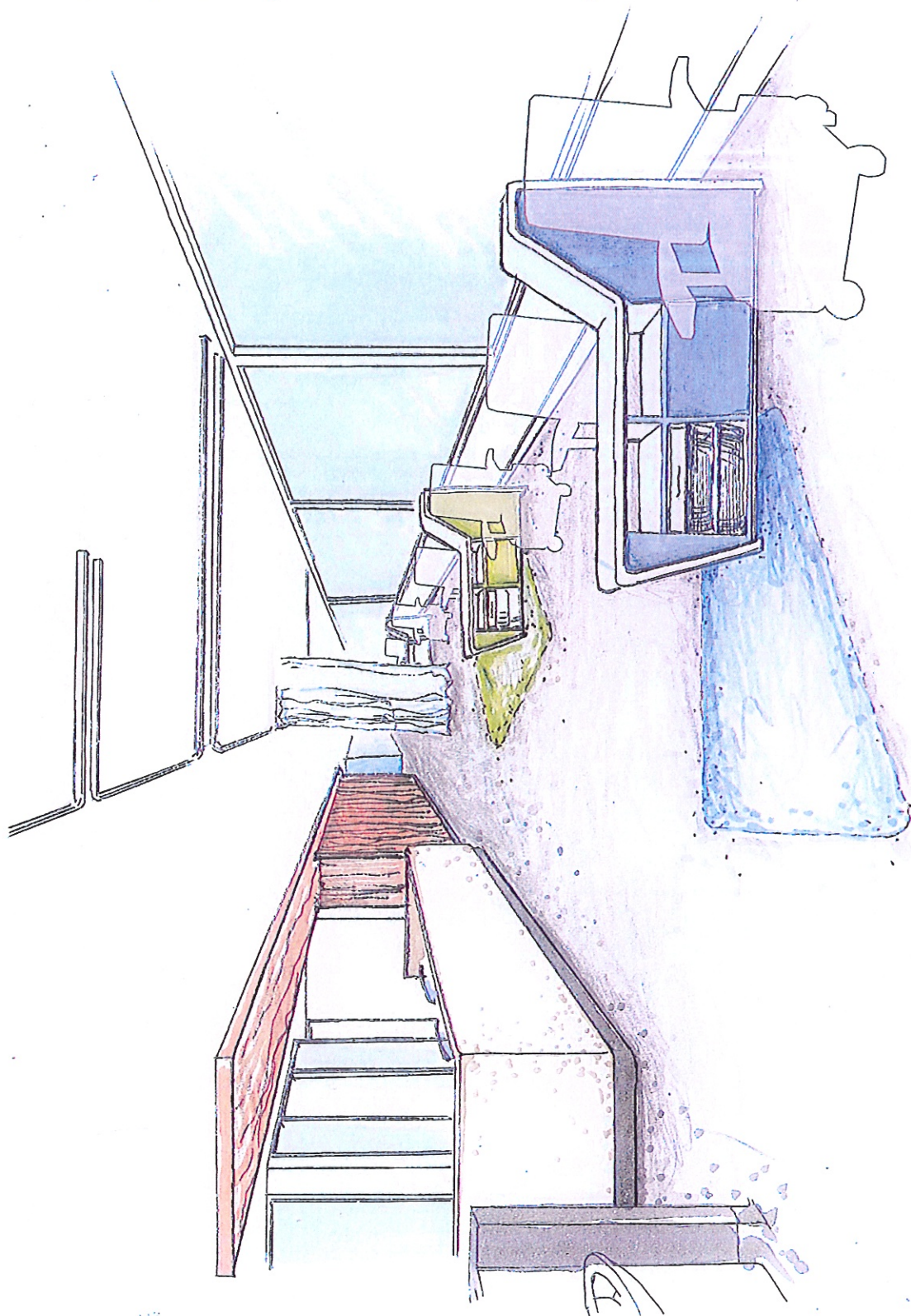
DEPT. HEALTH & HUMAN SERVICES

DHHS - NWRH CANCER CARE CENTRE



Date 05/28/12
Job No. 32-16070
Drawing A950





INTERNAL PERSPECTIVE

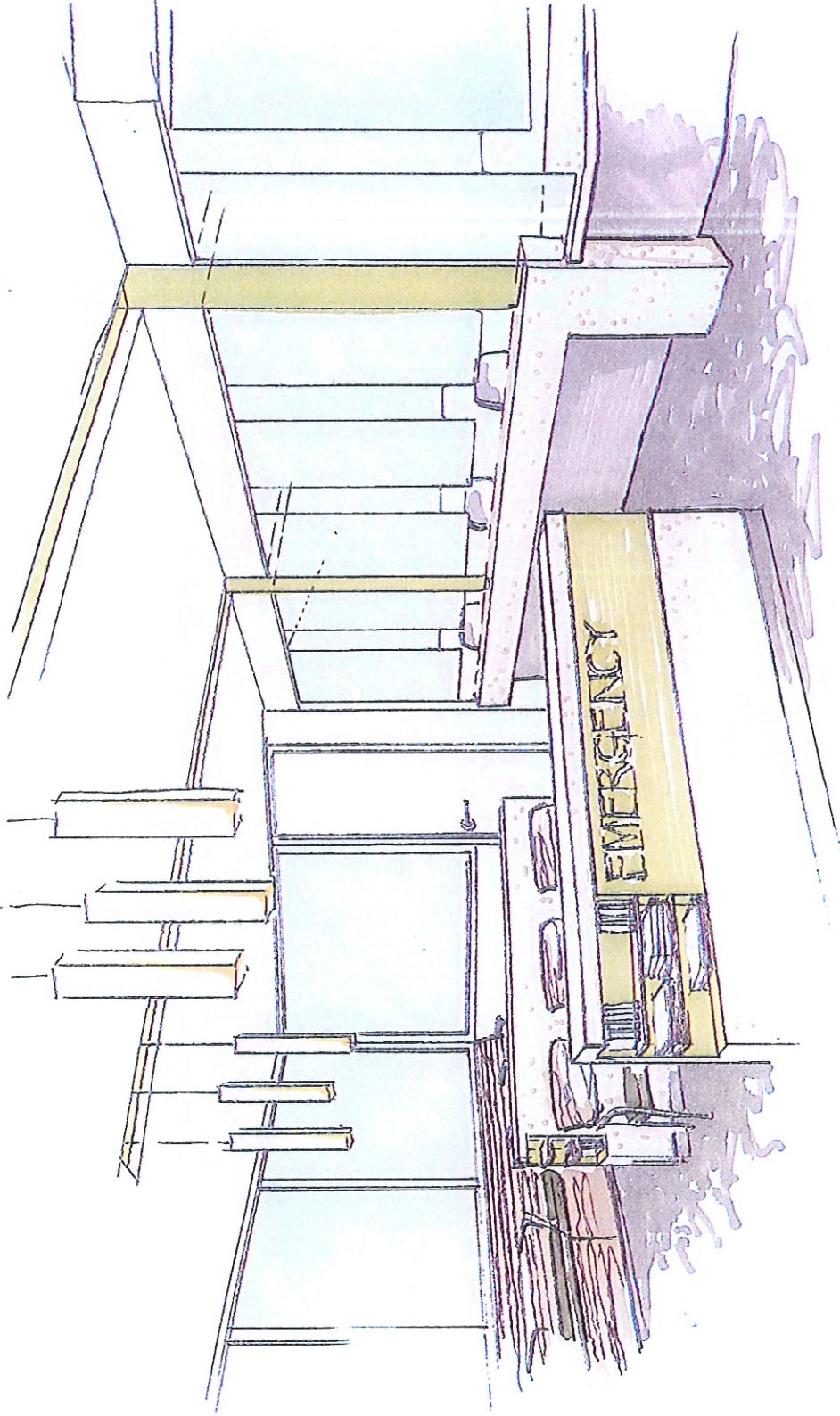
DEPT. HEALTH & HUMAN SERVICES

DHHS - NWRH CANCER CARE CENTRE



Date 05/28/12
Job No. 32-16070
Drawing A951





INTERNAL PERSPECTIVE

DEPT. HEALTH & HUMAN SERVICES

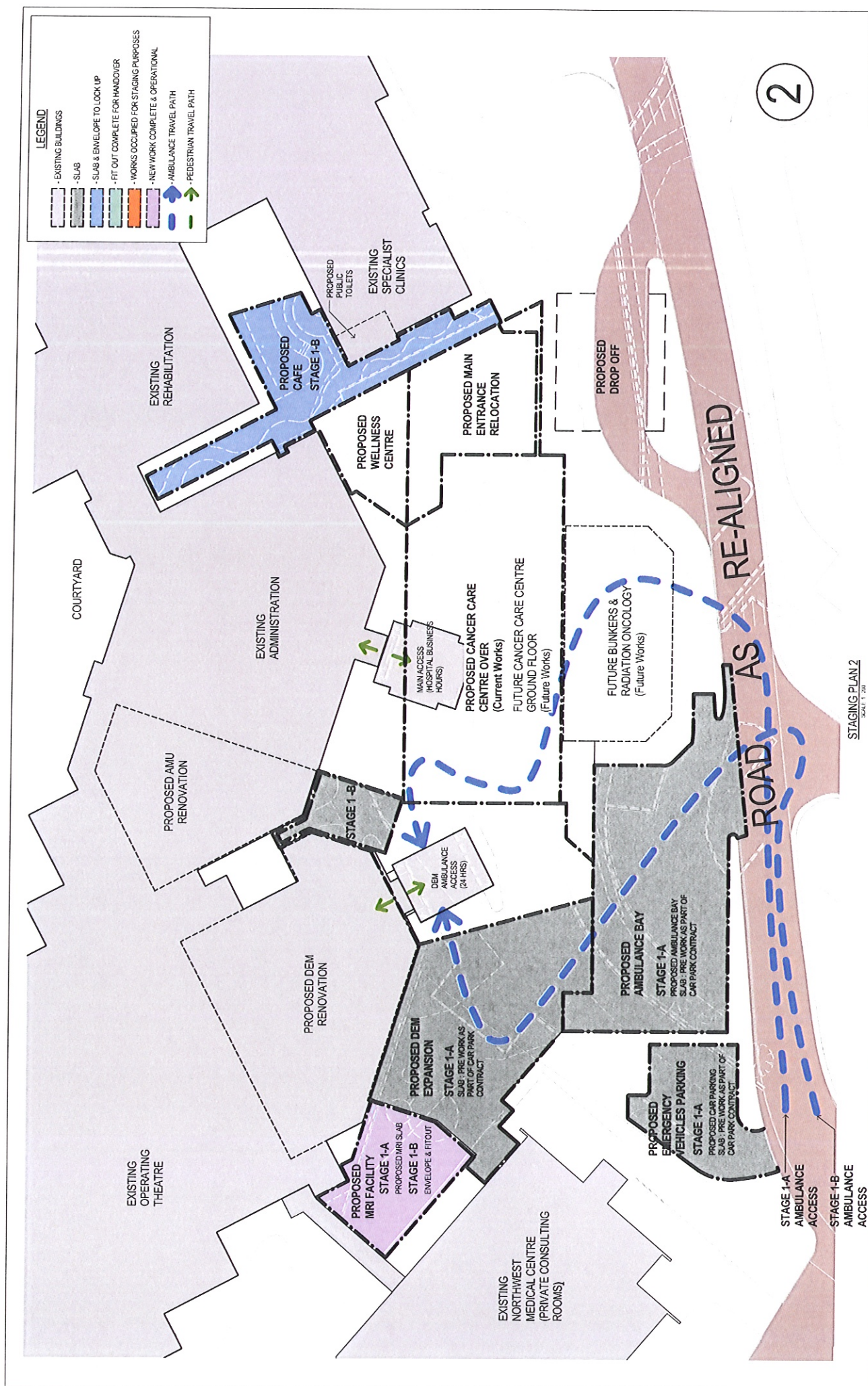
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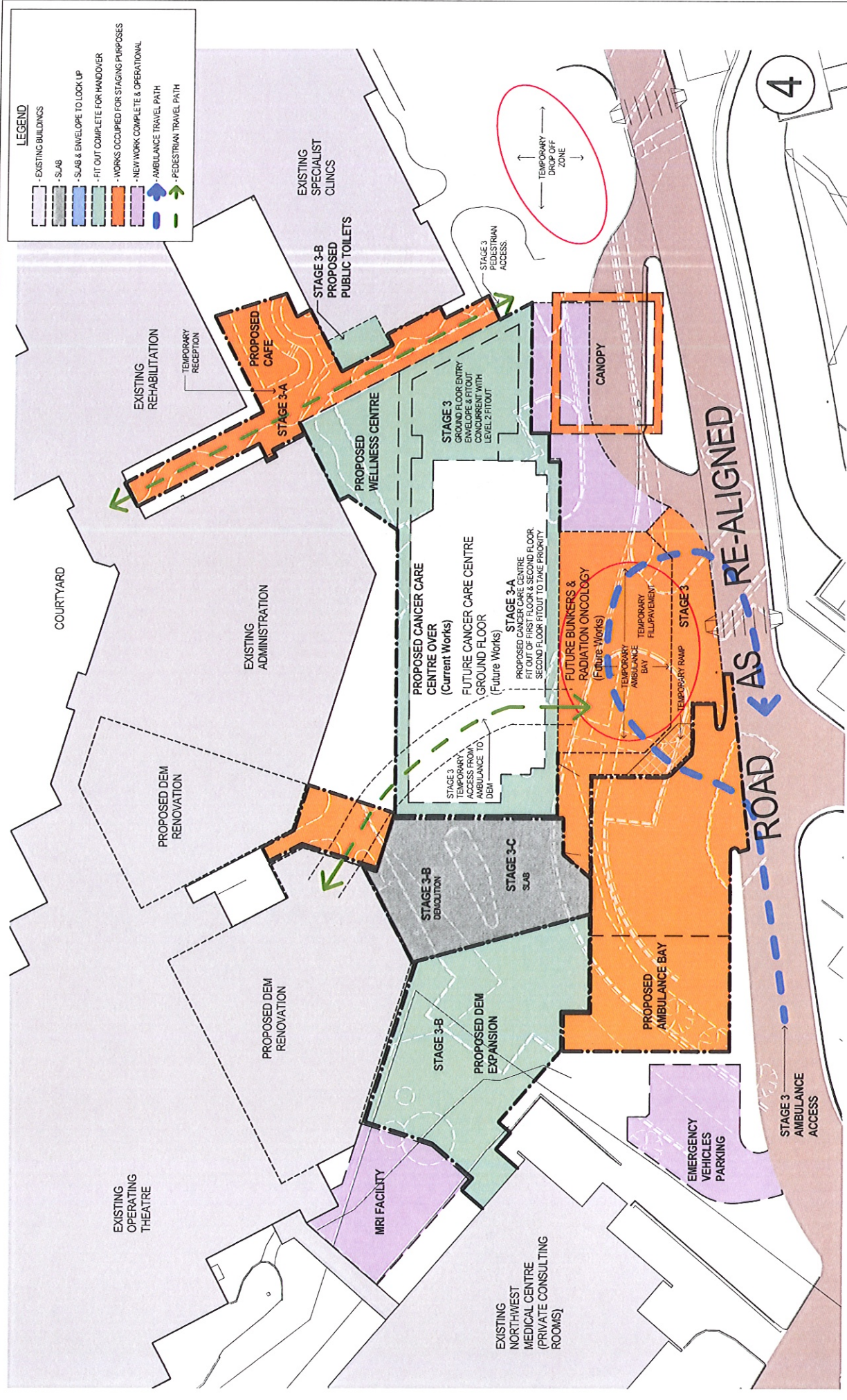


Date 05/28/12
Job No. 32-16070
Drawing A953



APPENDIX B – PROPOSED STAGING DIAGRAM





STAGING PLAN 4
SHEET 1 OF 2

STAGE OF WORK 4

PRELIMINARY

DEPT. HEALTH & HUMAN SERVICES
DHHS - NWRH CANCER CARE CENTRE

STAGING PLAN 4 OF 7
STAGE OF WORK 4

Client: DEPT. HEALTH & HUMAN SERVICES
Physical: DHHS - NWRH CANCER CARE CENTRE
Title: STAGING PLAN 4 OF 7
Stage of Work 4

Design: A1
Drawing No: 32-16070-A028
Rev: B

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Legend

- EXISTING BUILDINGS
- SLAB
- SLAB & ENVELOPE TO LOOK UP
- FIT OUT COMPLETE FOR HANDOVER
- WORKS OCCUPIED FOR STAGING PURPOSES
- NEW WORK COMPLETE & OPERATIONAL
- AMBULANCE TRAVEL PATH
- PEDESTRIAN TRAVEL PATH

Scale

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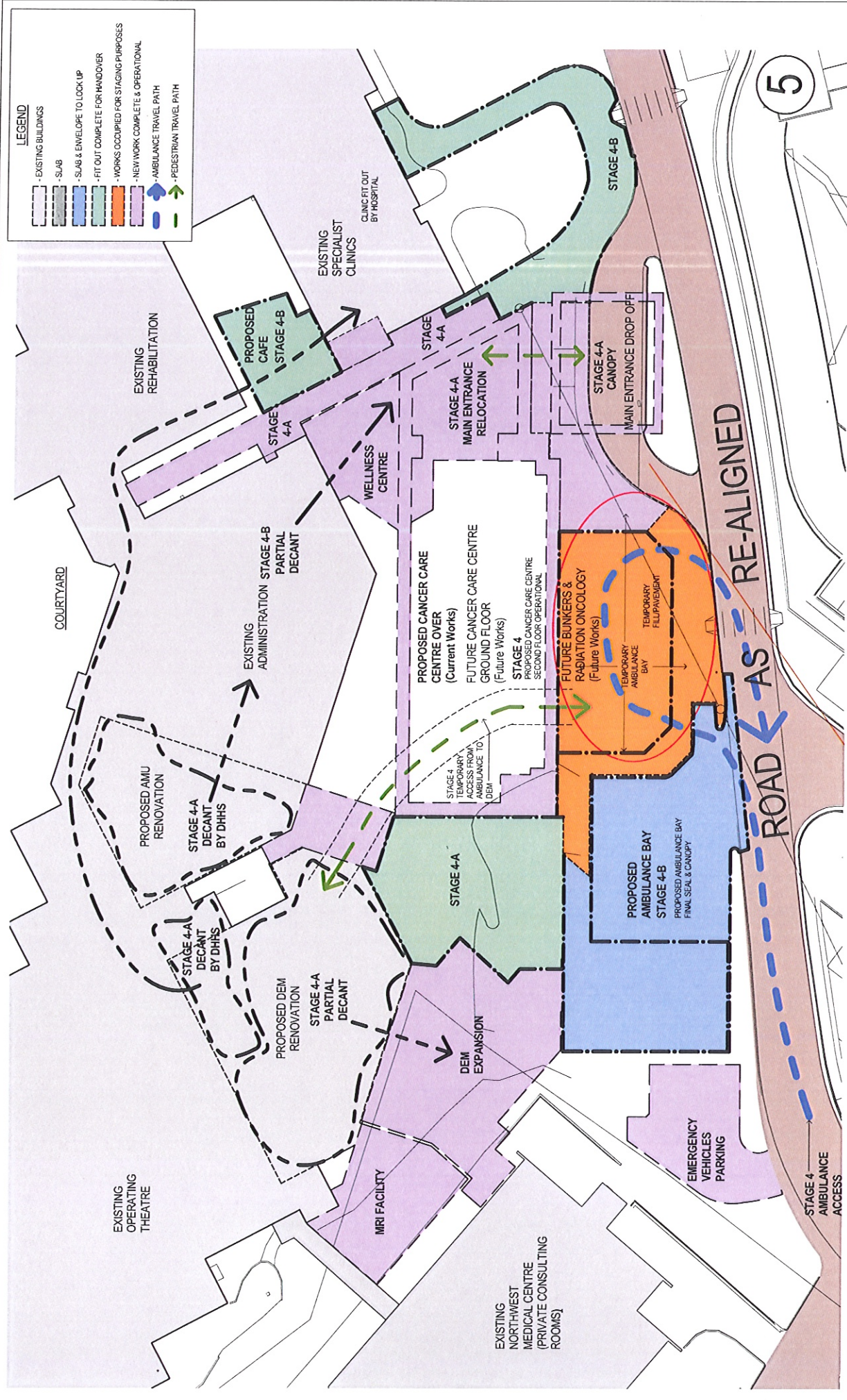
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Revisions

No.	Description	Date
1	Issue for tender	23/02/19
2	Issue for tender	21/03/19

Approval

Role	Name	Date
Author	Michael J. Hanley	23/02/19
Checker	Michael J. Hanley	23/02/19
Approver	Michael J. Hanley	23/02/19



STAGING PLAN 5
SHEET 1 OF 5

PRELIMINARY

DEPT. HEALTH & HUMAN SERVICES
DHHS - NWRH CANCER CARE CENTRE
STAGING PLAN 5 OF 7
STAGE OF WORK 5

Rev: B

Client: DEPT. HEALTH & HUMAN SERVICES
Physician: DHHS - NWRH CANCER CARE CENTRE
Title: STAGING PLAN 5 OF 7
Stage of Work: 5

Designer: D. THOMSON
Design: D. THOMSON
Check: D. THOMSON

Drawn: A. CHISHOLM
Drafting: A. CHISHOLM
Approved: A. CHISHOLM
Scale: 1:200

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0 200 400 600 800 1000m

SCALE: 1:200 (AS SHOWN)

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01	01	21.09.12
02	02	21.09.12

Author: [Name] / Designer: [Name] / Checker: [Name] / Date: [Date]

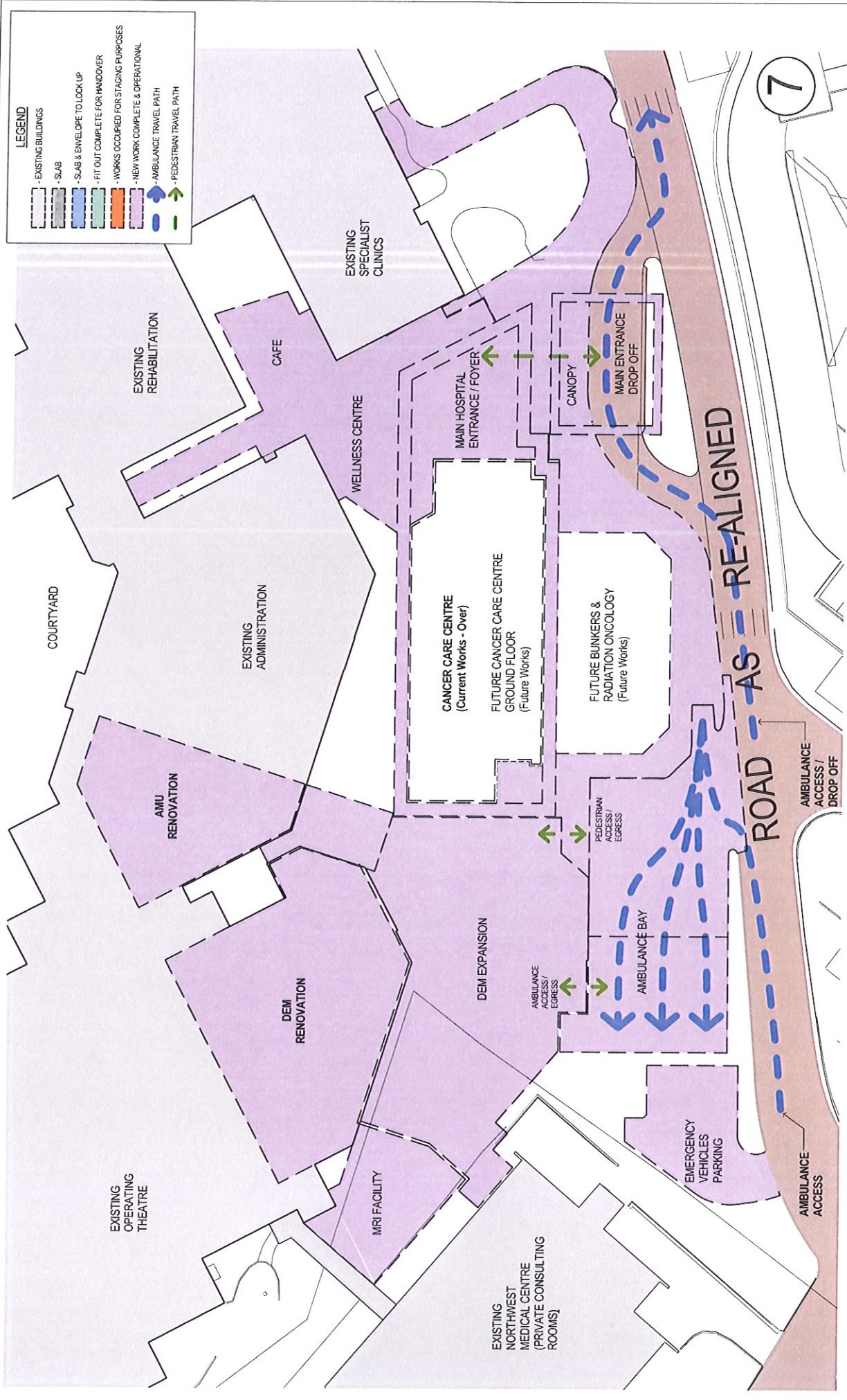
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1.3. GHd/STH/ISSUE TO GHd/STH

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LEGEND

- EXISTING BUILDINGS
- SLAB
- SLAB & ENVELOPE TO LOCK UP
- FIT OUT COMPLETE FOR HANDOVER
- WORKS OCCUPIED FOR STAGING PURPOSES
- NEW WORK COMPLETE & OPERATIONAL
- AMBULANCE TRAVEL PATH
- PEDESTRIAN TRAVEL PATH

STAGING PLAN 7 OF 7

SCALE 1:200

0 200 400 600 800 1000mm

DATE 12/06/2018

PRELIMINARY

DEPT. HEALTH & HUMAN SERVICES

DHHS - NWRH CANCER CARE CENTRE

STAGING PLAN 7 OF 7

STAGE OF WORK 7 - COMPLETE

Drawing No: 32-16070-A031

Rev: B

DO NOT SCALE

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CLIENTS/PEOPLE/PERFORMANCE

GHD

silver thomas hanley

CONULTANT

Design MAMULIK

Check MAMULIK

Drawn MAMULIK

Date 12/06/2018

Scale 1:200

