

## Update on the waste storage project

5 April - Gillian Hirth

Late last year, it was announced to all staff that ARPANSA would take ownership of approximately 210 drums of low-level radioactive waste. At this time, it was expected that the initial delivery of 72 drums would be completed by March 2018, however less urgency in the timing of the project has meant that this is now expected in late April at the earliest.

To date, there have been a variety of communication pieces with staff, including an update on ISAAC and at the Staff Consultative Forum (SCF), consultations with the Office of the CEO, People and Culture, Agency Security and ARPANSA Work Health and Safety.

We are now at a stage where the Executive Group (EG) has approved our proposed direction, including location of a new waste store area within the Yallambie site to store the waste pending permanent disposal and to accept the initial delivery of 72 drums.

We will be holding a talkshop on 19th April to provide you with further information on the project. In the meantime, we have put together a set of frequently asked questions below for your information. We will continue to provide you with regular updates as the project progresses.

### Frequently Asked Questions

#### Why are we expanding our Radioactive Waste holdings?

From the late 1920's to the 1970's the Commonwealth Radiation Laboratory (CRL) operated on a site at the University of Melbourne. The activities that were conducted at the CRL during this long period of time resulted in contamination of the building, which has subsequently become a 'legacy site'. The Commonwealth (represented by ARPANSA) is accepting responsibility for the waste produced from remediation of this legacy site. Approximately 210 drums containing soil and building material contaminated with radium-226 require storage in a radioactive waste store that is licenced and managed appropriately.

While the contamination resulted from activities undertaken by ARPANSA's predecessor, it is appropriate and international best practice for ARPANSA to take responsibility for the waste produced from the remediation of this legacy site, and to implement appropriate storage arrangements for this waste. We expect other organisations to take care of their legacies, so this applies to us as well – we should lead by example.

#### What considerations were made in regard to different locations for storage?

Several options have been considered in a situation, weakness, opportunity and threat analysis and presented to the EG. Construction of a new waste storage area within ARPANSA's Yallambie building is the preferred option, and is also a safe option. This option, and others have also been discussed with Regulatory Services Branch. The area to be refurbished currently houses the **s 47E - operations** in the **s 47E - operations** part of the building.

The initial tranche of 72 drums of the waste will be temporarily stored in the **s 47E - operations** to the rear of the Yallambie premises. These will be received late in April at the earliest, and will be transferred to the new facility within the main building once constructed and the remainder of the drums can be received.

A risk assessment for the storage of the initial tranche of 72 drums has been completed. The initial 72 drums includes the lowest activity drums from the site remediation. These drums will be added to the RHSB Source Licence S0002 Inventory and reported in our quarterly report to the regulator.

## What stage is the project currently at?

To date the EG has approved the:

- Proposed approach to waste management, including location of the new waste storage area.
- Transportation costs for initial tranche of 72 drums.
- Commissioning of the design of the new waste storage area.

Once the design is completed and tender bids are received and reviewed the EG will be asked to approve commencement of work on construction associated with the new waste storage area.

## How does ARPANSA regulate itself?

ARPANSA is currently licenced under RHSB Source Licence S0002 to store radioactive waste in the form of obsolete sealed or unsealed sources that are awaiting disposal. The Yallambie building currently stores approximately 60 drums of predominantly low-level waste with some small quantities of intermediate-level waste in two waste storage areas in the basement. The majority of the waste is from the original clean-up of the CRL building and includes radium-226, cobalt-60 and other various medical radioisotopes, as well as some waste from activities conducted at Maralinga.

In terms of activity, the additional 210 drums of low-level waste equates to only s 47C - operational of the total activity of ARPANSA's currently stored waste in four times the volume. The Radiation Safety Officer will manage the waste as a part of the current RHSB Source Licence S0002 inventory.

In self-regulation, ARPANSA requests a third party to review the documentation and reasoning behind the licence. A third party also participates in all regulatory inspections of our activities. We have a current agreement with s 47G - business to provide such third-party review.

## What is going to happen with the waste in the end?

The waste holdings that ARPANSA has acquired will be temporarily and safely housed in the Yallambie waste stores until the National Radioactive Waste Management Facility (NRWMF) is established and operational. The waste will be then be repackaged to meet the NRWMF waste acceptance criteria and transported to the NRWMF for disposal.

## What is next in the project?

A talkshop is planned for April 19th to update staff on the current status and allow the opportunity to ask questions before the first tranche of drums is delivered. Invitations will be issued shortly following the posting of this article.

A building designer has

been engaged and the design is to be completed by the end of April. The tender process is expected to be completed by end of May.

Further updates will be provided to staff as we progress through the process.

If you would like any further information or have any concerns, please attend the talkshop – there will be plenty of time for questions and comments. Feel free to come and have a chat with [Marcus Grzechnik](#) x2292.



# Business Case

## ARPANSA-PM-TMP-002

### General details

General	
Project number (if known):	PRO-0025
Idea/Project name:	Waste Storage Area
Proposer/Project Manager:	Marcus Grzechnik
Project Owner:	Gillian Hirth
Section:	MERS/RHS
Start date:	Already initiated
End date:	December 2018
Duration:	

### Executive summary

Summary of business case
<p>Between the late 1920's to the 1970's, the Commonwealth Radiation Laboratory (CRL) existed on a site at University of Melbourne (UoM). The activities that were conducted at the CRL during this time resulted in legacy contamination. Because of this the Commonwealth (represented by ARPANSA) is accepting responsibility for the waste produced from remediation of the site. Approximately 210 drums containing soil and building material contaminated with radium-226 require storage in a licenced radioactive waste storage facility.</p> <p>While the activities were carried out by a predecessor to ARPANSA, it is considered good practice that ARPANSA take care of the legacy. ARPANSA expects other organisations to take care of their legacy waste, as such we should lead by example.</p> <p>The drums of legacy low-level radioactive waste are to be transferred to the Yallambie site from Melbourne University. Several options have been considered in a SWOT analysis (attached), where the construction of an area to store the waste within the ARPANSA building is the preferred option.</p>

Recommendations – what would you like the EG to approve?
<p>The EG previously approved;</p> <ul style="list-style-type: none"><li>- The proposed direction, including where the legacy waste should be located (within ARPANSA's facility)</li><li>- The transportation costs for the initial tranche of 72 drums (approximately s 47G - bus</li><li>- Commissioning of the design for the proposed storage area s 47G - business</li></ul>

The EG will be asked to approve the budget for the building cost following design completion and receipt of the tender bids. Based on the design, we expect the costs to be circa \$250K.

## Background

Why are we doing this project? What problem are we trying to solve? What is the current state? Try to summarise in five dot points.

- ARPANSA has accepted responsibility for the management of legacy waste generated during the remediation of a UoM building currently under remediation.
- The UoM site was once operated by the Commonwealth as the Commonwealth Radiation Laboratory (CRL) from the late 1920's to the 1970's. The activities that were conducted at the CRL during this time resulted in legacy contamination. Because of this the Commonwealth (represented by ARPANSA) is accepting responsibility for the waste produced from remediation of the site.
- Approximately 210 drums containing soil and building material contaminated with radium-226 require storage in a licenced radioactive waste storage facility.
- ARPANSA's licensed waste storage area has limited capacity for accepting more waste, however parts of the Yallambie site are under-used and may be adapted for low-level waste storage. A SWOT Analysis (available on request) has been used to identify the preferred option, that has been approved by the EG.
- The first tranche of 72 drums will be stored onsite (as soon as April 2018) as an expansion to the current source licence until the new storage area is completed, pending regulatory approvals.

## Scope

The work that needs to be accomplished to deliver a product, service or result with the specified features and functions.

Work to deliver a safe and secure area for appropriate storage of the legacy radioactive waste includes:

- Design of storage area
- Tender process
- Building works
- Regulatory approvals

Transportation and storage of drums

## Timing

How long will each stage of the project take to complete?

Planning:	Complete
Execution:	The first tranche of 72 drums will arrive at Yallambie during April 2018. The Designer was engaged late-March. Design completion by mid-May. Tender process will mean a builder is engaged in June.
Closure:	It is expected that the project will be closed by end of 2018 at the latest.

## Funding

How much will the project cost – from costing tool, updated from project proposal phase if any new information is known

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Design - s 47G - business

Relocation of Linac Chiller - \$30K (aligns with Linac project)

Building - \$250K

Transportation – 2 shipments @ \$5K each.

**How will these costs be funded – does this project require additional funding from what has been approved in branch budgets?**

Funding for capital will come from RHS 2017/18 budget (up to \$250K).

Smaller costs, such as drums, transport and design, have not been budgeted for in 2017/18 (spent under RSO cost centre).

## Work health & safety

**Are there WHS implications for our people of either doing or not doing this project? Discuss with WHS advisor.**

WH&S adviser has been consulted during this project.

There are no radiological dose implications from the drums (zero dose rate), and radon will be managed in accordance with best-practice.

Transportation will be undertaken with a registered and experienced transport company.

## Security

**Are there any security implications with this project? Discuss with Agency Security Adviser**

Security implications have been discussed and advice incorporated into design of the storage area.

## Risk

**What are the risks of doing or not doing the project?**

The major risks to the Agency are;

- Reputational – ARPANSA must store its radioactive waste safely and securely in accordance with the relevant regulations and also to meet international best practice. It would be reputationally damaging to the Agency to do otherwise. There is some risk that the acceptance of this waste will be perceived badly by the immediate neighbours (see Communication activities below).
- Cost – This is an unbudgeted activity with potential for high costs.

The SWOT analysis has identified these risks, and several options have been excluded due to the potential reputational effect. Costs are still being determined and will be communicated regularly to the EG as more information becomes available.

## Legislation

**Are there any legislative requirements to consider? If yes, please describe.**

The ARPANSA Act and Regulations must be met as regulatory requirements will need to be satisfied.

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## People

**What is the change (define the difference between current and future state)?**

The additional radioactive waste will initially be managed as a part of the Yallambie source licence (S0002). The newly constructed storage area will undergo appropriate regulatory scrutiny.

**What is the Change Impact (define the impact the change will have, noting there may be multiple impacts for each change)?**

The radioactive waste will need to be managed while in storage at the Yallambie facility in accordance with regulatory requirements.

Communications have been coordinated in liaison with P&C (see below).

**Capability – do we have the capability required to deliver on this project? If not, what is the plan for obtaining it?**

Yes

**Capacity – do we have the available capacity to deliver on this project? If not, what is the plan for obtaining it**

Yes

## Engagement

**Communications plan**

### Consultation

Consultations have been held with the Staff Consultative Forum (SCF), OCEO (on Communications), groups impacted by Linac downtime, Agency Security and ARPANSA WHS. A lengthy discussion was held at the SMC on communication externally (see next paragraph). These consultations are ongoing.

### Communication activities

There are no community awareness opportunities relating to this item.

Consultation with the OCEO Communications team and the SMC have determined that this activity can be considered to be 'business as usual'. As such, external communications are not recommended.

Communications with staff have been held via ISAAC, with several staff taking the opportunity to discuss the project one-to-one. No staff have expressed discomfort with the proposal at this stage.

Staff communication is ongoing, and has been coordinated in liaison with P&C.

A Talkshop will be given to update staff on the current status before the first tranche of drums is delivered.

**Behavioural change management plan**

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The storage area will be safe and secure and appropriately labelled for staff. No behavioural change will be required.

Management of the waste will be undertaken by the RSO consistent with current source licensing.

### Consultation/collaboration

Have we consulted with all of the relevant people?

See above (communication).

Are there any opportunities to work with other parts of the agency?

Collaboration has been undertaken with RHS (MERS & RPS) and the RSO.

### Interdependencies

Pre-project completion interdependencies – are we waiting for another project to be completed before this project can begin?

No.

Consideration needs to be given to the timing of the Linac project.

Post-project completion interdependencies – does another project rely on the successful completion of this project?

No.

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Australian Radiation Protection  
and Nuclear Safety Agency



# Expansion of ARPANSA's waste holdings – an update

Dr Marcus Grzechnik  
Dr Gillian Hirth

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# Lifelines



- EG/SMC & History – GH
- WH&S & RSO – PT
- Building – AC
- Regulatory – LC
- Radiation Management – SL (Maralinga)

# Outline



- History
- The Waste & Regulation
- Options Considered
- Current Status
- Timelines

# Q&A



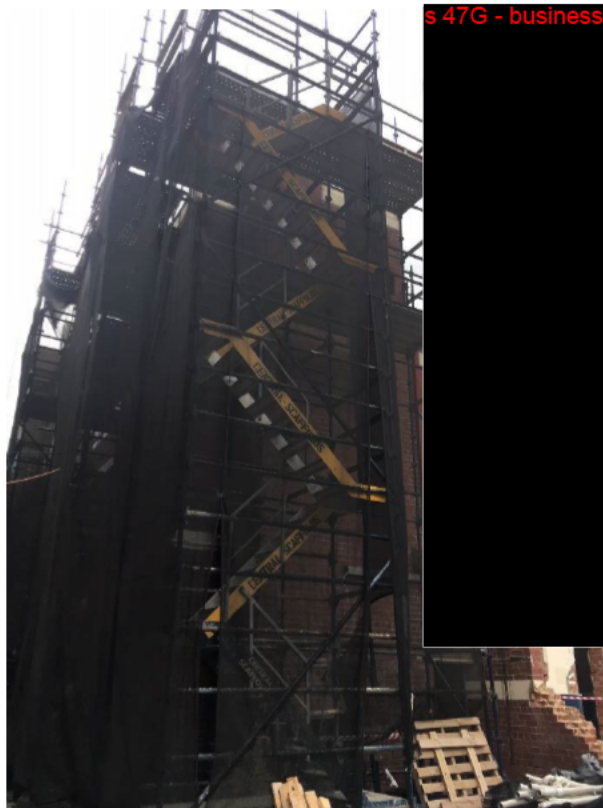


# History

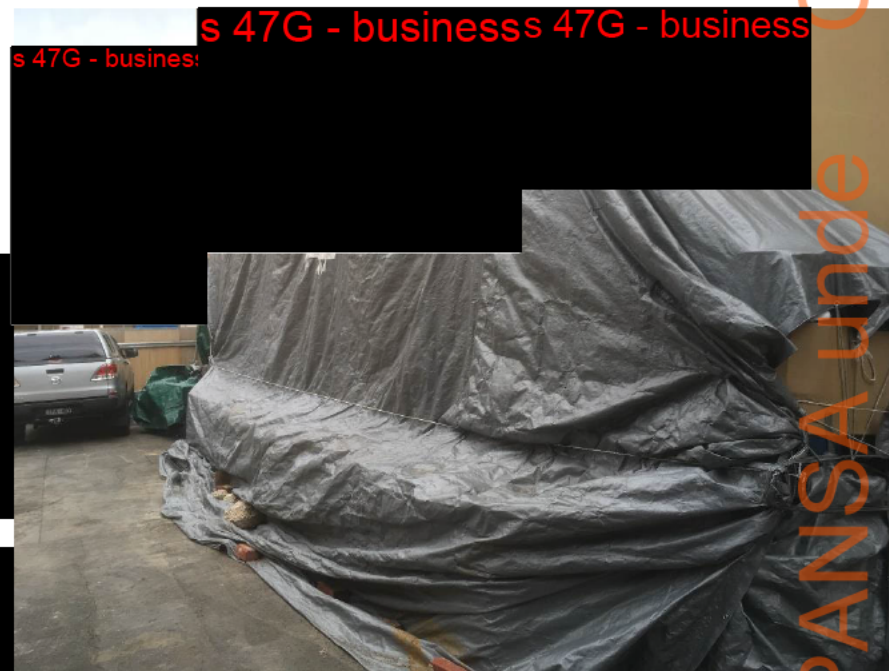
- CRL/CXRL/ARL buildings located on UoM site
- Buildings demolished and site remediated during 2017/18 – Ra-226 contamination
- ARPANSA has agreed to take responsibility of Commonwealth legacy by;
  - Taking ownership of the waste (building materials & soil)
  - Providing financial support



# Remediation Status



# What are we dealing with?

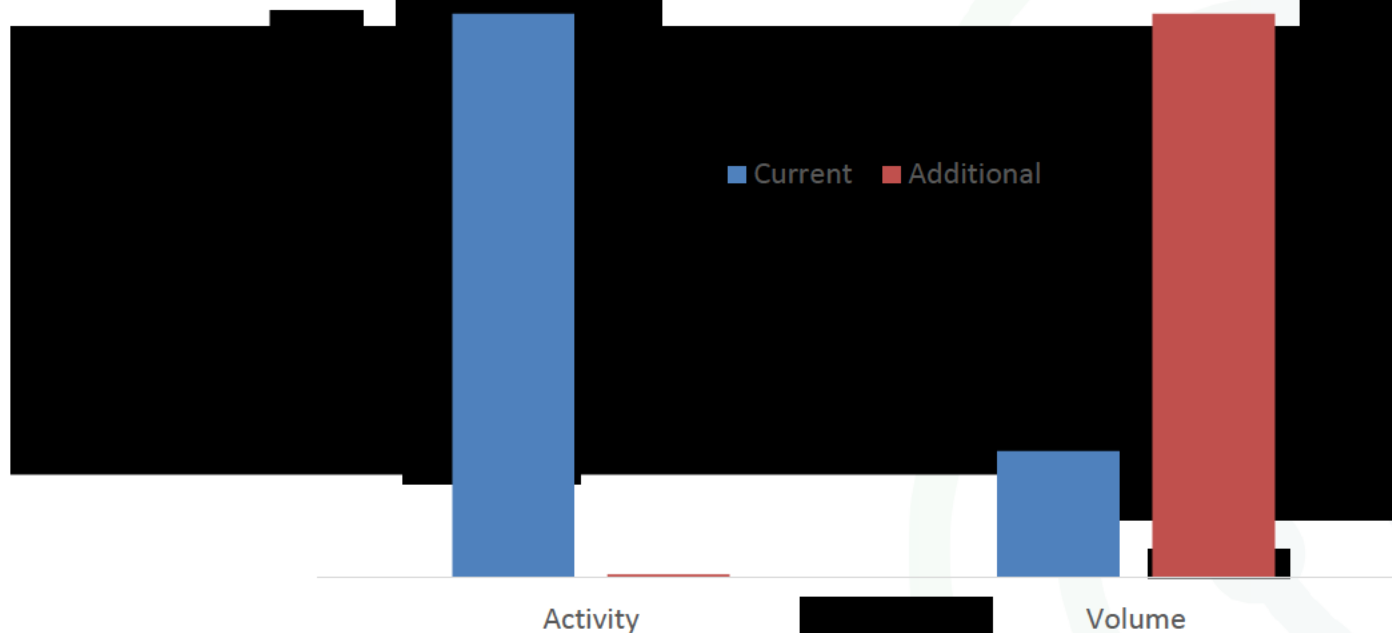


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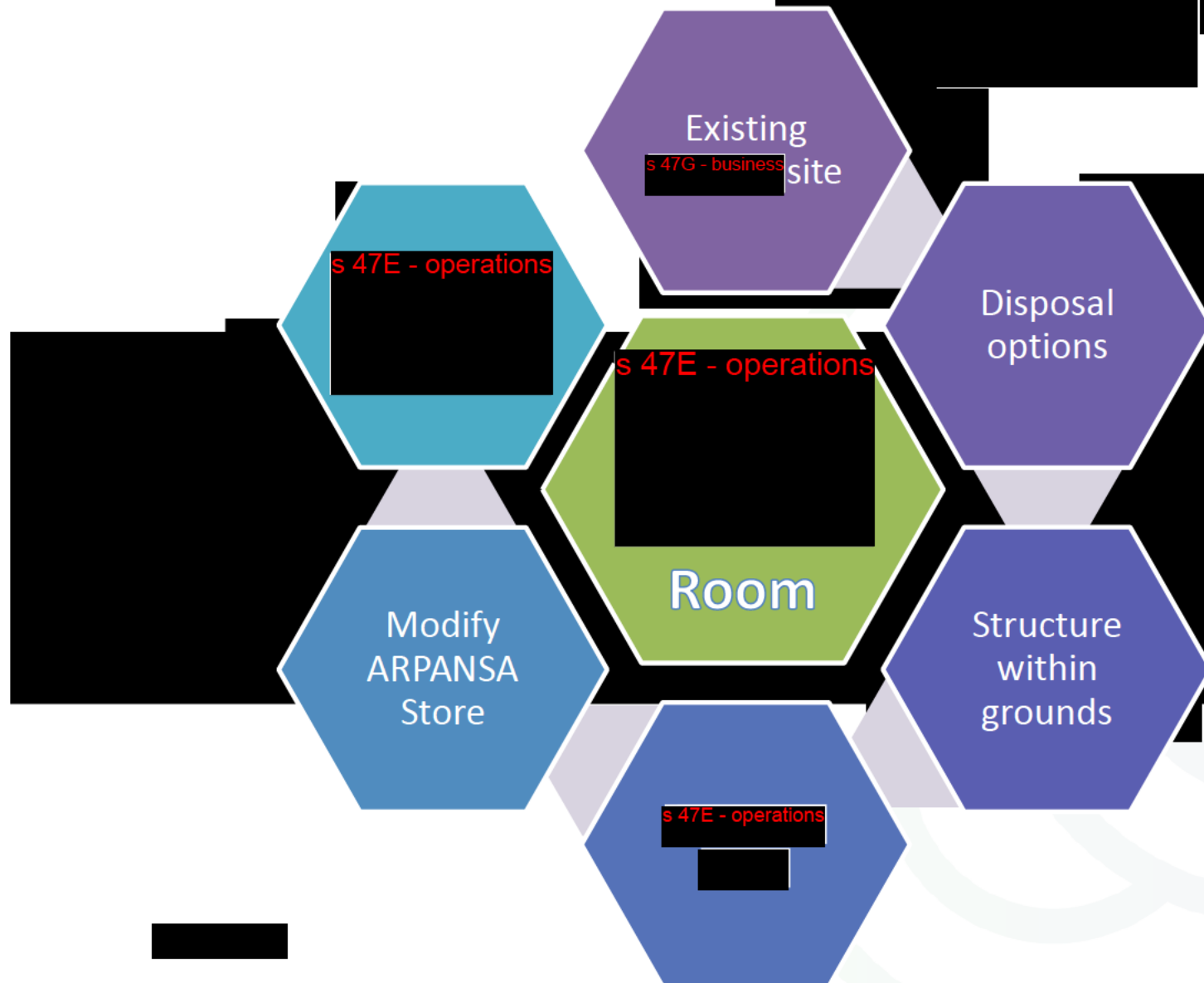
# How much & how dangerous?

- Currently 160, projecting up to 210 drums
- Surface contaminated objects Ra-226
- Total activity <40MBq (Cat 5.47E-06 source) – Low Level!

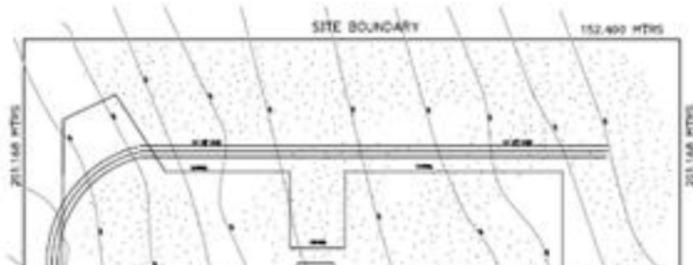


- Graded approach to regulation applied

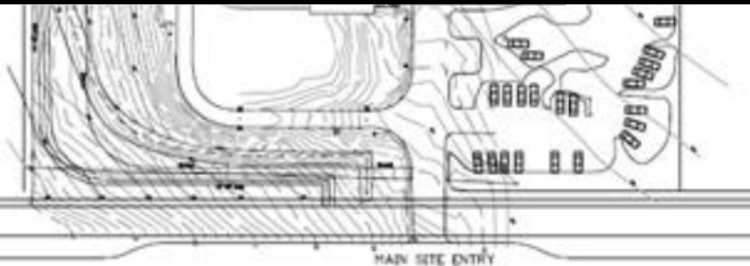
# Analysis of Options for Waste Store



# Proposed Storage Area



s 47E - operations



LOWER PLENTY ROAD

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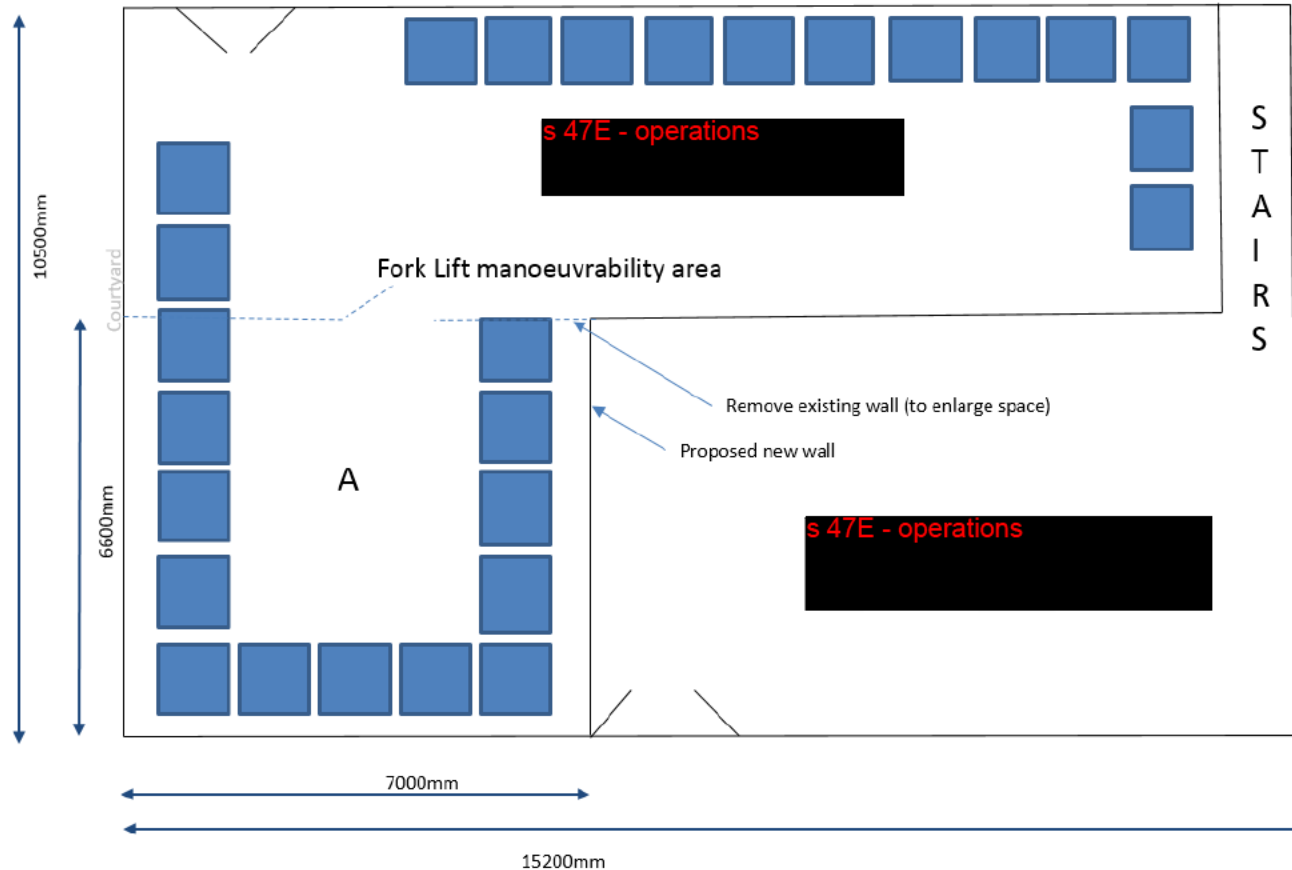
# Proposed Storage Area

s 47E - operations

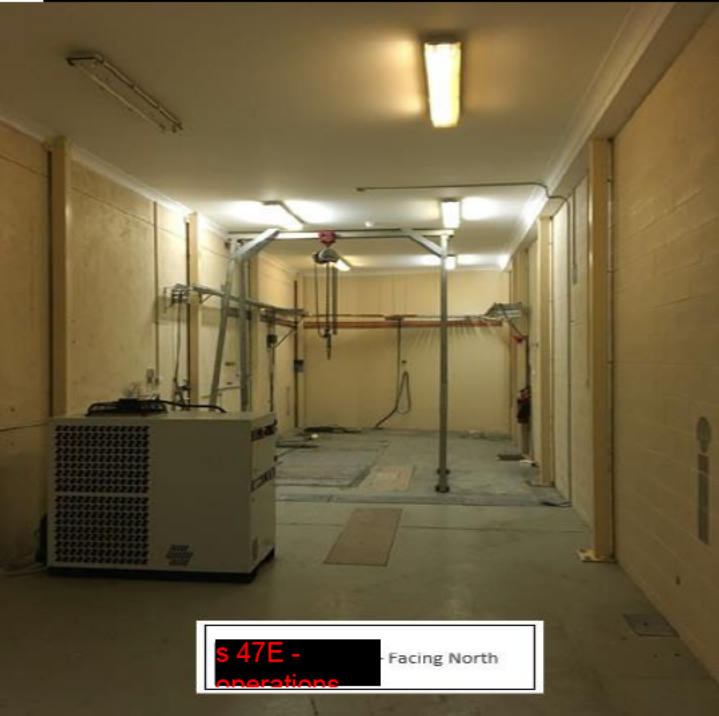
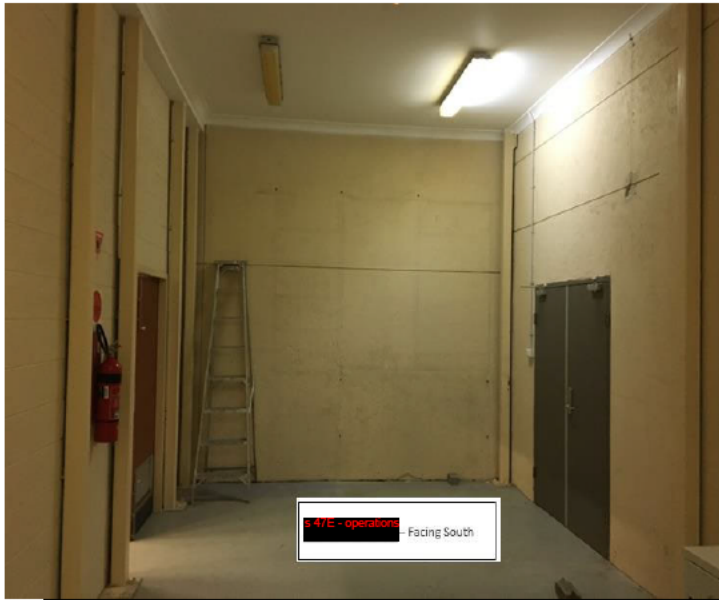
Layout

→ N

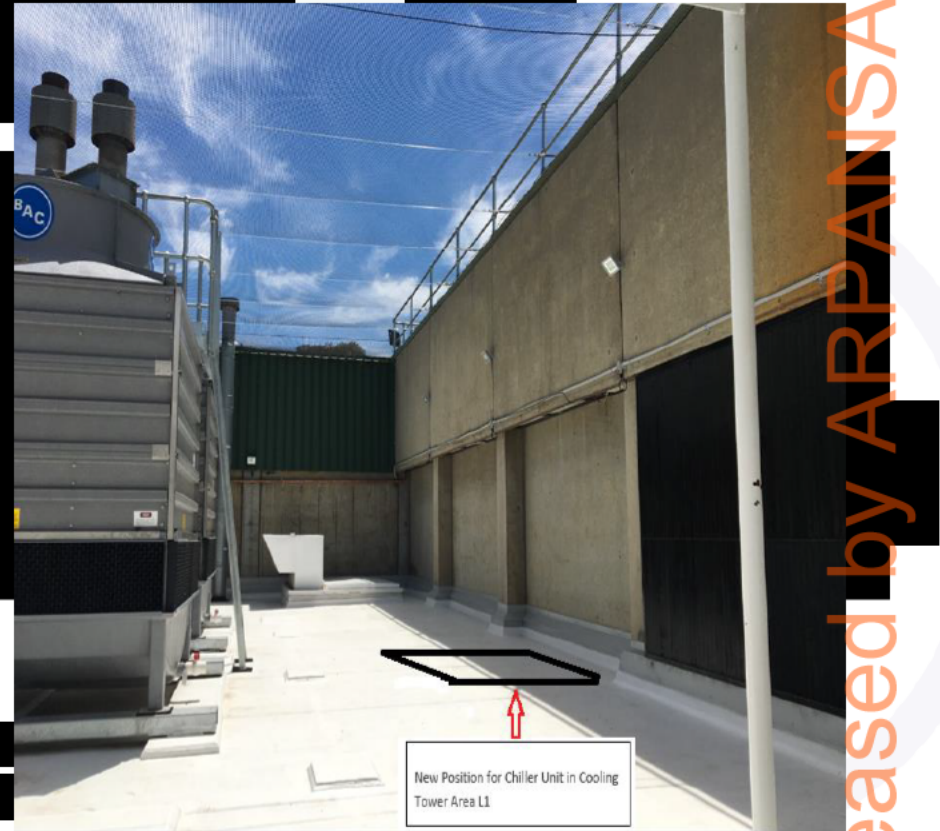
With the pallets arranged below approx. 210 drums can be stored stacked 2 high. With an additional 30 in area 'A' if needed.



# Proposed Storage Area



# Relocation of Chiller Unit



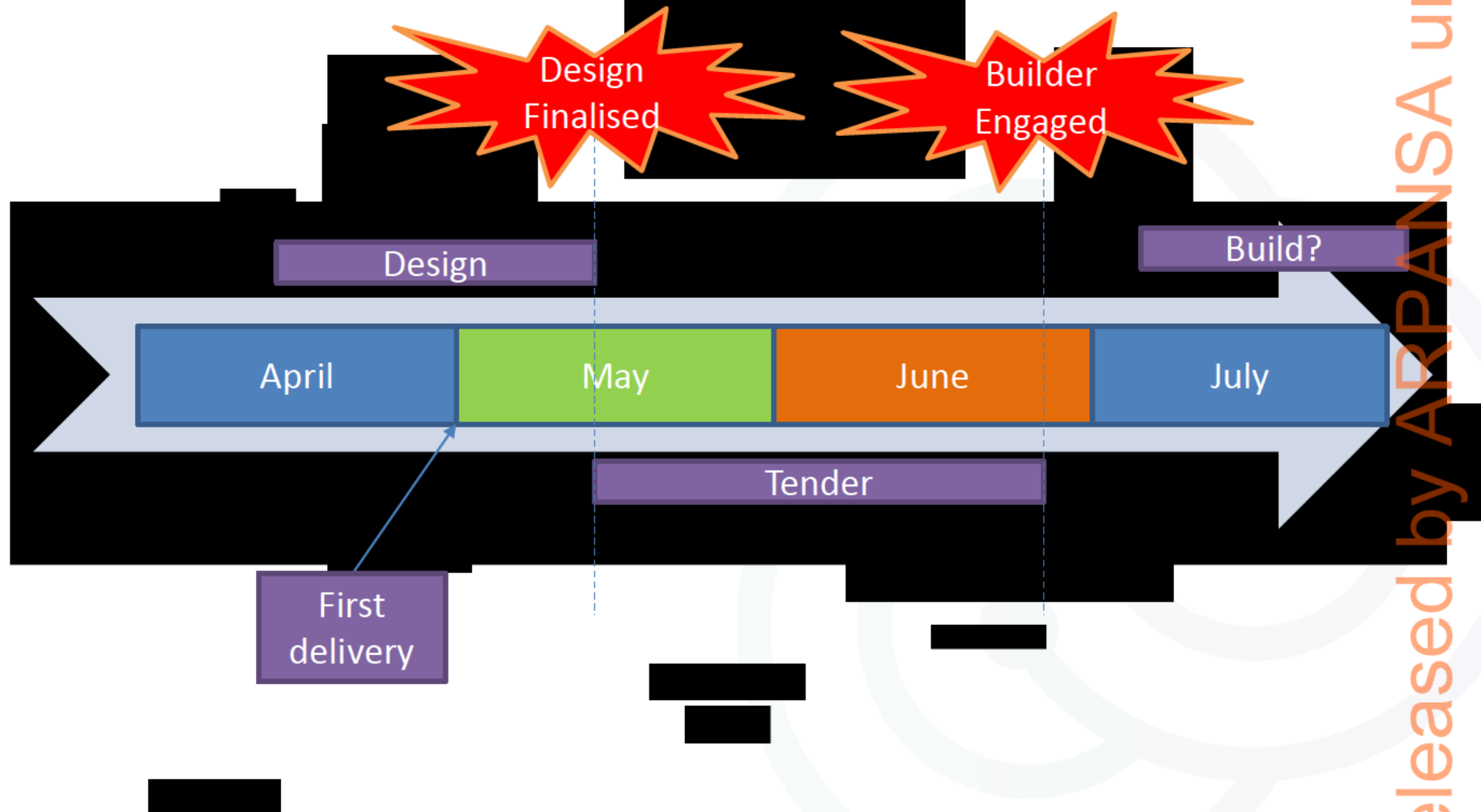
# Initial Delivery & Interim Storage

- Business hours deliveries over several days late-April
- Business as usual activity – no external comms
- 72 drums
- Others to follow after updated store complete





# Approximate Timelines



# Conclusions & Future

- Storage Project completed by end 2018. Ongoing management.
- Possible to reduce volume
- “Waste owners and producers are responsible for the appropriate management of their waste”
- Disposal in NRWMF



## Australian Radioactive Waste Management Framework

April 2018



# Q&A





## Executive Group

### Paper

**Title:** ARPANSA Waste Store Design Quotation and next steps.  
**Date:** 9 March 2018  
**Item no:** 2.7

#### Purpose:

For approval.

#### Issue

Approximately 210 drums of legacy low-level radioactive waste are to be transferred to the Yallambie site from Melbourne University (see *EG paper 2.5, 18 Jan 2018*). Approval is required to move forward with monetary spend for commissioning a designer at \$24,140+GST.

#### Background

Details on the project background and options considered were provided in *EG paper 2.5, 18 Jan 2018*.

#### Update

Since the late-January EG meeting;

- The SWOT analysis has been updated after a walkthrough of the Store with the RSO and RHS Branch Head (see Attachment 1). **s 47E - operations** option is now moving forward.
- Confirmation has been received that an initial tranche of 72 drums can be received for interim storage. These will be stored in the locked shed at the rear of the premises until a longer-term facility is completed (risk assessment to be undertaken). The expansion of RHS's current source inventory will be reported in the quarterly report.
- A letter of acceptance for the drums has been sent to Melbourne University for state regulatory processes (see Attachment 2).
- A quotation from A.S. Building consultants to undertake work on design has been received (see Attachment 3).
- A quotation for transport of first 72 drums has been received from **s 47G - business**. Additional costs if a pre-transport site visit is undertaken (preferred). Currently coordinating with ANSTO and ALARA regarding timings.
- Quotations are being sought from **s 47G - business** to assist in preparing the **s 47E - operations** at Yallambie for receipt of the waste (minor cost).

## Request for Approval

We request that the EG approves the proposed direction of the project and agrees to the spending of \$24140.00+GST on the design for the waste store.

### *Sensitivity:*

Sensitivities that have been identified include media, the public (immediate neighbours) and staff.

### *Legislation*

No legislative amendments are required.

### *Financial Implications*

There will be several costs during this project. All costs estimated below are subject to change.

- Design –approximately \$27K
- Relocation of Linac Chiller – at least \$30K
- Building works – approx. \$200 – 250K (tbc)
- Transportation (each shipment) – approx. \$5K

The complete relocation of the Linac control room is of the order of \$50K (to be confirmed)

### *Risk Analysis*

The major risks to the Agency are;

- Reputational – ARPANSA must store its waste safely in accordance with international best practice. It would be reputationally damaging to the Agency to do otherwise. There is some risk that the acceptance of this waste will be perceived badly by the immediate neighbours (see Communication activities below).
- Cost – This is an unbudgeted activity with potential for high costs.

The SWOT analysis has identified these risks, and several options have been excluded due to the potential reputational effect. Costs are still being determined and will be communicated regularly to the EG as more information becomes available.

### *Timing/Handling:*

Transport of initial tranche of drums will be confirmed after initial meeting. It is expected that this will happen near Easter (1<sup>st</sup> April), or soon after (week of 15<sup>th</sup> April).

If proceeding with the design is confirmed (as requested above), it may be possible to go out to tender soon after Easter with the aim to engage a builder by mid-May.

## Communication

### *Consultation*

Consultations have been held with the Staff Consultative Forum (SCF), OCEO (on Communications), groups impacted by Linac downtime, Agency Security and ARPANSA WHS. A lengthy discussion was held at the SMC on Communication externally (see next paragraph).

These consultations are ongoing.

### *Communication activities*

There are no community awareness opportunities relating to this item.

Consultation with the OCEO Communications team and the SMC have determined that this activity can be considered to be 'business as usual'. As such, external communications are not recommended.

Communications with Staff have been held via ISAAC, with several staff taking the opportunity to discuss the project one-to-one. No staff have expressed discomfort with the proposal at this stage.

Staff communication is ongoing.

## Recommendations

That the EG APPROVE:

Recommendation No.	Recommendation	Chair comments
R1:	the spending <span style="background-color: black; color: red;">\$ 47G - business</span> +GST on the design for the waste store	

## Contact

Author details		Clearance Branch or Office Head details:	
Name:	Marcus Grzechnik	Name:	Gillian Hirth
Position:	Director MERS	Position:	Chief Radiation Health Scientist
Branch/Office	RHS	Branch/Office:	RHS

Option	Strengths	Weaknesses	Opportunities	Threats	Assessment
<b>Use of an existing</b> <small>s 47E - operations</small>	<p>Construction not required</p> <p>Likely least expensive short-term option</p>	<p>Could be more expensive long-term</p> <p>Unpredictable</p> <p>ARPANSA does not have control of the waste</p> <p>Interim storage required while facilities are being upgraded</p> <p>Significant transport distances required.</p> <p>Dependent on <small>s 47E - operations</small> timeframes for negotiation agreements and obtaining other regulatory approvals.</p>	<p>Nil</p>	<p>Sites are currently not able to receive waste</p> <p>Waste could be returned at any time, and ongoing costs required</p> <p>Possible reputational damage if ARPANSA waste is held at a facility not considered international best practice</p>	<p>This was initially thought to be a good options, however upgrades of <small>s 47G - business</small> are currently required in order to store the waste</p> <p>This is not a preferred option</p>
<b>Structure within ARPANSA Grounds (e.g. <small>s 47E - operations</small> etc.)</b>	<p>Consolidation of most of ARPANSA waste to one area within site footprint.</p> <p>ARPANSA controls &amp; manages waste in accordance with IBP</p> <p>Good access for forklifts</p>	<p>Facility works to meet WHS and Security standards required (one off cost)</p> <p>Ventilation and monitoring more difficult (still possible, however)</p>	<p>Extra space can be factored in if waste increases or return of waste currently held at <small>s 47E - operations</small> is required.</p> <p>Opportunity to re-packing and reduce volume of waste</p>	<p>Reputational risk if not a best practice facility</p> <p>Reputational risk with ARPANSA neighbours</p> <p>Not considered secure enough by staff/neighbours</p>	<p>It is difficult to go past the security and reputational risk of this option</p> <p>This is not a preferred option</p>

s 47E - operations	<p>Consolidation of most of ARPANSA waste to one area within building footprint.</p> <p>ARPANSA controls &amp; manages waste in accordance with IBP</p> <p>Already a security controlled area (will be upgraded appropriately)</p> <p>Good ramp and height access for forklifts</p> <p>Ventilation can be managed</p>	<p>Some verification of area of existing building and further building (walls) required</p> <p>Facility works to meet WHS and Security standards required one off cost)</p> <p>Relocation of s 47E - operations required (but was required anyway)</p>	<p>Opportunity to reclaim unused space within the building footprint</p> <p>Large enough for some expansion and stacking of drums</p> <p>Potential to be a best practice storage facility</p> <p>Opportunity to re-packing and reduce volume of waste</p>	<p>Use s 47E - operations not deemed appropriate by operators/staff</p> <p>Floor or walls not strong enough to accommodate racks and waste</p> <p>Possible unreasonable costs</p> <p>Tight timescale means that design, quote and building may not be completed when ARPANSA takes control of waste</p> <p>Reputational risk with ARPANSA neighbours</p>	<p>Reputationally sound option that re-claims building footprint</p> <p>Quotes to be sought, however the risk of time slippage is very real</p> <p>One of two preferred options</p>
<p><b>Basement cages – current holdings to be consolidated and stored elsewhere (e.g. offsite or in s 47E - operations)</b></p>	<p>Consolidation of most of ARPANSA waste to one area within building footprint.</p> <p>ARPANSA controls &amp; manages waste in accordance with IBP</p> <p>Ventilation can be managed (area is already</p>	<p>Possible Height restrictions for forklifts</p> <p>Not currently a secure area</p> <p>Possibly some extra security required</p> <p>Possible issues with long-term storage due to</p>	<p>Extra space can be factored in if waste increases or return of waste currently held at s 47E - operations</p> <p>Space for possible re-packing to reduce volume</p> <p>Possible reduction of s 47E - operations historic materials</p>	<p>If building works required impact on building of s 47E - operations possible</p> <p>If the Security arrangements are not considered adequate and costs blow out</p> <p>Inadequate support from 'owners' of materials in</p>	<p>Likely to be the lowest cost option. Extremely likely to be the only option that will meet the time limits imposed.</p> <p>Opportunities in storage of archives and utilising wasted building space</p> <p>Recommend to explore further</p>



<p>§ 47E - operations</p>	<p>ventilated to outside but secure)</p> <p>Low costs as no significant building required</p>	<p>weather exposure from outside</p> <p>Access to ducting required in longer term</p>	<p>Movement of this store to § 47E - operations could mean that paper and electronics may be stored</p>	<p>the cage to consolidate in time</p> <p>Reputational risk with ARPANSA neighbours</p> <p>Long-term storage may be an issue due to exposure to outside air and possible § 47E - operations</p>	<p>Most likely an option for short-term storage if building project delayed</p> <p><u>UPDATE: This area is too close to the § 47E - operations</u>  <u>be considered as a storage solution.</u></p>
<p><b>Claim ARPANSA Store for Waste Storage</b></p>	<p>Consolidation of most of ARPANSA waste to one area within building footprint.</p> <p>ARPANSA controls &amp; manages waste</p> <p>Large area. Space to manoeuvre forklifts.</p> <p>Easy access from the rear of the building (roller door).</p> <p>Ventilation can be managed</p> <p>Very little building may be required</p>	<p>Access for delivery of large equipment/cargo will be impacted and a suitable alternative might not be available.</p> <p>Current store equipment would need to be relocated, impacting on another (smaller) area</p> <p>Specialist areas of store would need to be co-located or re-located, including § 47E - operations</p> <p>Work may need to be undertaken on exterior of building § 47E - operations</p>	<p>Potential to consolidate all waste holdings into the one store.</p> <p>Extra space if waste increases or return of waste currently held at § 47E - operations</p> <p>Potentially could enhance ARPANSA's reputation in waste management</p>	<p>If there is not an alternative option for the store and large deliveries (e.g. PRMS)</p> <p>Threat to continuity of commercial activities</p> <p>Blowout in projected costs because increased building requirements</p> <p>Displacement of staff (staff are currently in store for a short proportion of the day)</p> <p>Reputational risk with ARPANSA neighbours</p> <p><u>Loss of functionality could have some H&amp;S risks. E.g.</u></p>	<p>The potential for a consolidated waste store is attractive, however there is a need to 'undo' an area that was purpose-built for its current function.</p> <p><u>There is no obvious alternative to the current store and its location in the building means that access to laboratories and commercial services is currently optimised.</u></p>

	<div>s 47E - operations</div>	<p>Height may not be sufficient for forklift (ventilation ducting <del>is</del> <u>and services are quite low, would restrict stacking</u>)</p> <p><div>s 47E - operations</div> <u>would require relocation</u></p>		<div>s 47E - operations</div> <u>would need to be transported via reception from the basement</u>	
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Australian Government  
Australian Radiation Protection  
and Nuclear Safety Agency



Ref No: D185599

16 February 2018

**s 47F - privacy**

Consultant, Infrastructure Services  
The University of Melbourne  
215 Grattan Street  
Carlton VIC 3053

**Re: Building 164 – Acceptance of Radioactive Material**

Dear **s 47F - privacy**

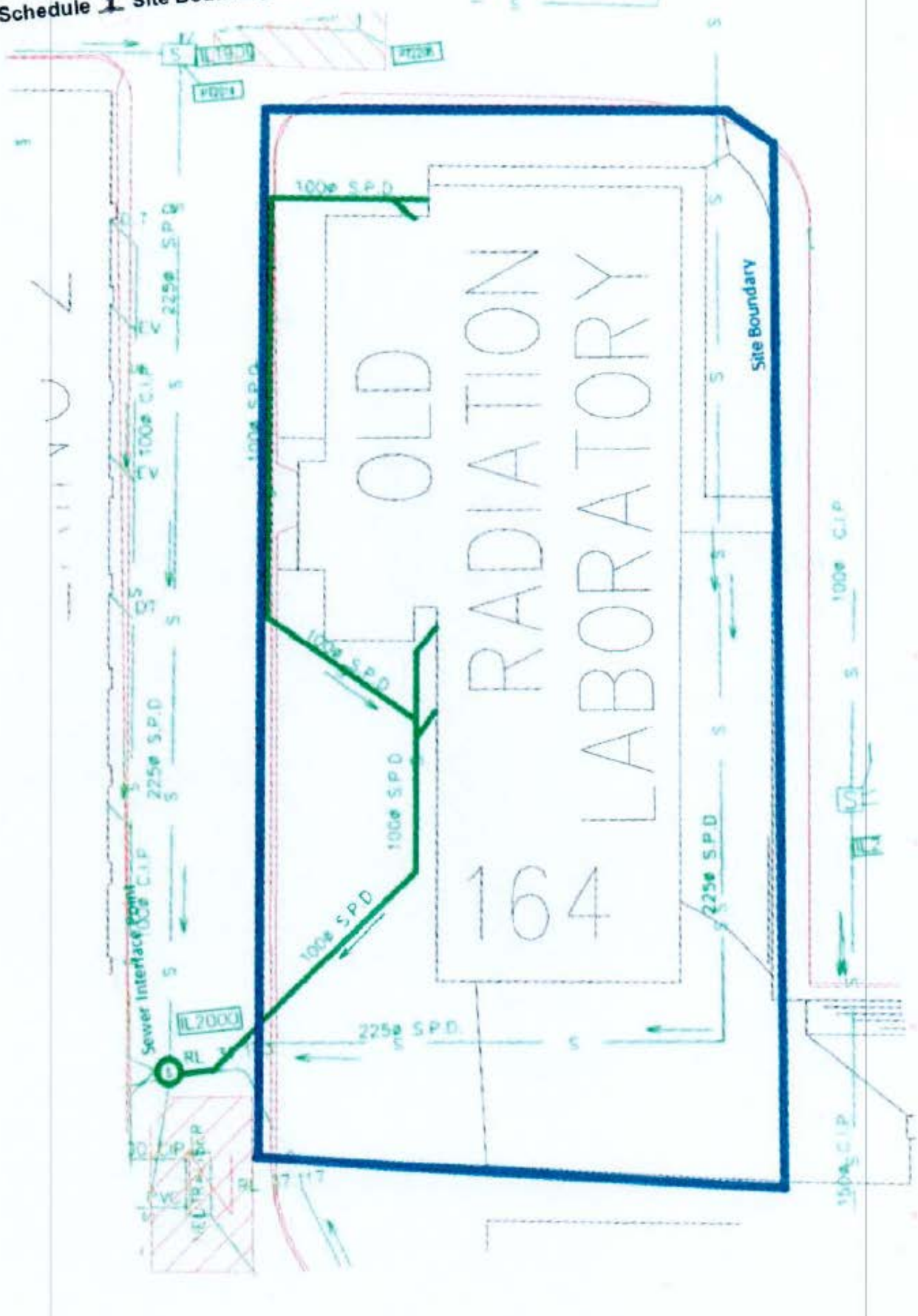
ARPANSA confirms that it will accept and remove Radioactive Material (any material that contains levels of radioactivity above the exemption limits defined by DHHS) associated with the Australian Radiation Laboratory and its predecessors and related to the demolition of Building 164 including clean-up and radiation clearance of the site and surrounding areas as shown on Schedule 1 (attached).

Please note that ARPANSA is unable to accept hazardous material other than Radioactive Material, such as asbestos.

Yours sincerely,

Dr Gillian Hirth  
Chief Radiation Health Scientist

Schedule 1 Site Boundary and Interface Points



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Australian Institute of Building Surveyors



**REGISTERED**  
Building Practitioner



building consultants

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7 February 2018

Andrew Clegg  
Facilities Manager  
ARPANSA  
C/o 619 Lower Plenty Road  
VIEWBANK VICTORIA 3084

Dear Andrew

**Re: Alterations & additions to an existing waste storage area**  
**At: No. 619 Lower Plenty Road VIEWBANK/YALLAMBIE**

Thank you for the invitation to provide the fee proposal for our professional building surveying, building design, engineering and consultancy services.

I advise that our proposal is as follows:

1. **The service offered:**

Consultation;  
Liaise and consulted with client, Draftsperson, engineers and Local Authority (Banyule Council);  
Obtain the property information from Council;  
Arrange to engage a draftsperson to prepare the working drawings;  
Arrange to engage the necessary engineering plans together with Certificate of Compliance-Design  
Arrange to engage a suitable qualified Energy Rater, if required;  
Arrange to engage a geotechnical Engineer for a soil report, if required;  
Carrying out site inspections and attend to site meeting, if required;  
Checking of application for compliance with the Building Act 1993 and Building Regulations 2006, Building Code of Australia 2016 and the relevant Australian Standards;;  
Issuing a building permit for the proposed building works;  
Carry out the mandatory Inspections;  
Issuing of an Occupancy Permit and/or the Certificate of Final Inspection upon completion;  
Provide copies of all relevant permit documents to applicant and the Council;  
General administrations, photocopying, postage/miscellaneous;

2. **Fees:**

3. **Disbursements/Exclusions:**

s 47G - business

**IMPORTANT:**

PLEASE READ NOTES BELOW WHICH FORMS PART OF OUR PROFESSIONAL BUILDING CONSULTANCY SERVICES ENGAGEMENT.

**NOTES:**

- This quotation remains valid for a period of 30 days from the date of this letter.
- Fees exclude authority fees and charges that may arise due to liaison and obtaining reports/consents from such authorities.

s 47G - business

- No allowance has been made for attending to the Building Appeal Board, V.C.A.T., and Court.

s 47G - business

- Please be advised that our building consultancy services will be commenced once this office receives an email and/or appointment letter with a full payment.
- Staging of building work and variations to documentation during the course of or subsequent to Building Planning Permit issue which result in the need for re-checking and/or new Permits will be subject to an additional fee.

s 47G - business

We wish to assure you that we will make every endeavour to assist you with your obligations under the Building Act in a prompt, professional and efficient manner.

Thank you for your enquiry and I trust this estimate is satisfactory and I look forward to working with you on this and future projects. Should you wish to discuss this proposal further, please do not hesitate in contacting the undersigned.

Yours sincerely

s 47F - privacy

**Manager – A.S. Building Consultants**



**From:** [Sarsha Collett](#) on behalf of [\\$ARPANSA PMAG](#)  
**To:** [Marcus Grzechnik](#)  
**Cc:** [\\$ARPANSA PMAG](#); [Gillian Hirth](#); [Andrew Clegg](#); [Julie Murray](#)  
**Subject:** PRO-0025 Waste Storage Area [SEC=UNCLASSIFIED]  
**Date:** Tuesday, 1 May 2018 3:46:12 PM  
**Attachments:** [image001.png](#)

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Dear Project Manager,

The Strategic Management Committee (SMC), together with the Project Management Advisory Group (PMAG), has completed their assessment of new project proposals for 2017-18.

I'm pleased to inform you that the **PRO-0025 Waste Storage Area** was **APPROVED** for funding in the 2017-18 budget allocation.

Your PMAG Partner and Branch Head will be in contact with you shortly to discuss specific feedback and next steps to progress your project.

I would like to take the opportunity to personally thank you for developing high-quality project documentation and participating in the new project approval process; both of which were well received by the SMC.

In 2018-19 PMAG will undertake a review of the new Project Management Framework and will be in contact with you in due course to seek your feedback about how we can further enhance project management practices at ARPANSA.

Kind regards,  
Sarsha

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**Sarsha Collett**  
**Chair, Project Management Advisory Group**

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**From:** [Andrew Clegg](#)  
**To:** s 47F - privacy  
**Cc:** [Marcus Grzechnik](#)  
**Subject:** A Frame in Old Linac Modulator Room - Disposal [SEC=UNCLASSIFIED]  
**Date:** Wednesday, 2 May 2018 12:24:17 PM

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Hi [REDACTED]

Can Comrez please remove and dispose of A Frame in Old Linac Modulator Room please. See below photo:



Thanks

**Andrew Clegg**

**Facilities Manager**

**Australian Radiation Protection and Nuclear Safety Agency**

619 Lower Plenty Road, Yallambie, VIC 3085, AUSTRALIA

**Mobile** 04 1864 5596

**email** [andrew.clegg@arpansa.gov.au](mailto:andrew.clegg@arpansa.gov.au)

<http://www.arpansa.gov.au>

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**From:** [Andrew Clegg](#)  
**To:** [Rose Tenuta](#)  
**Cc:** [Marcus Grzechnik](#); [Robyn Lawler](#)  
**Subject:** PO Request - Existing Linac Chiller Relocation to Roof [SEC=UNCLASSIFIED]  
**Date:** Thursday, 3 May 2018 8:51:33 AM

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Hi Rose

Can you please raise and print a PO Request for Branch Head Approval for this task?

Price: 476 - business + GST

Start: 7-05-2018 Finish 30-08-2018

Supplier: Comrez

CAPEX to be highlighted

Thanks

**Andrew Clegg**

**Facilities Manager**

**Australian Radiation Protection and Nuclear Safety Agency**

619 Lower Plenty Road, Yallambie, VIC 3085, AUSTRALIA

**Mobile** 04 1864 5596

**email** [andrew.clegg@arpansa.gov.au](mailto:andrew.clegg@arpansa.gov.au)

<http://www.arpansa.gov.au>

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**From:** [Andrew Clegg](#)  
**To:** [Marcus Grzechnik](#)  
**Subject:** FW: MTA Chiller relocation from Linac Modulator Room [SEC=UNCLASSIFIED]  
**Date:** Thursday, 3 May 2018 5:13:58 PM

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Will work on the PO Friday...

Cheers

AC

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**From:** s 47F - privacy  
**Sent:** Thursday, 3 May 2018 2:14 PM  
**To:** Andrew Clegg <[andrew.clegg@arpansa.gov.au](mailto:andrew.clegg@arpansa.gov.au)>  
**Subject:** MTA Chiller relocation from Linac Modulator Room

Hi Andrew

As discussed, the budget cost to relocate the pipework and equipment serving existing Linac, will be **\$22,500.00 Ex GST**.

The anticipated works will include

- Relocating 7.5kw MTA Chiller out of Linac Modulator Rm to enable room to be repurposed for other activities
- Crane movements to facilitate relocation
- Relocation of hydraulic and electrical services associated with move
- Pump down and rerouting of refrigerated pipework/ electricals associated Ceiling cassette unit presently serving existing unit, again to allow Modulator room to be repurposed
- Coring holes through Masonry for abovementioned works where necessary
- Flashing and make good on all external penetrations
- Recommissioning of equipment and reinstatement to normal operation.

Normal warranties apply to labour to ensure reinstated equipment operates as intended but things like circulating pump capacity are excluded from such warranties and will be priced separately if required

Hope this helps. If you have any queries please do not hesitate to call/ catch up to discuss

Regards

s 47F - privacy

Comrez Property Solutions  
PO Box 3071  
Strathmore  
Victoria 3041

s 47F - privacy

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**From:** [Jim Scott](#)  
**To:** [Loch Castle](#)  
**Subject:** RE: Melbourne Uni Waste [SEC=UNCLASSIFIED]  
**Date:** Monday, 7 May 2018 10:15:04 AM

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Hi Loch

That is great. Many thanks. I will provide some feedback to you after the SCF, but that is most likely to be tomorrow as I have a meeting at ANSTO this afternoon from 3.00 – 4.30 pm.

Regards  
Jim

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**From:** Loch Castle  
**Sent:** Monday, 7 May 2018 9:56 AM  
**To:** Jim Scott <Jim.Scott@arpansa.gov.au>  
**Subject:** RE: Melbourne Uni Waste [SEC=UNCLASSIFIED]

Hi Jim,

I can only comment on the regulatory aspects and engagements that we've had regarding this waste.

1. **Communication with the Regulator** On the 18<sup>th</sup> January, Yallambie staff advised Miranda of the inventory of the waste. This totalled 19MBq of <sup>226</sup>Ra. From a Safety perspective, this is a Group 1 quantity and from a Security perspective, this is considered a Cat **1** (i.e. no additional security is required).
2. **Risk Assessment** On the 30<sup>th</sup> January, Yallambie staff had a meeting with myself to discuss other legacy source characterisation issues and also provided advice regarding their intention to store the Melbourne Uni waste at Yallambie. At the time, I agreed with the Yallambie staff that this activity didn't have any significant implications for safety and agreed with their assessment that a Regulation 52 would apply.
3. **Hazards** Technically, from a non-point source perspective, the hazards are:
  - a. **Dose Rate** 0.5uSv.hr<sup>-1</sup> @ 1 meter. This is of the order of magnitude of background radiation. This of course does not take into consideration the attenuation that will be present due to the 6mm drum thickness and self-attenuation of the contaminated building materials, which would make the doses even lower. I suspect that the doses may be as low as 0.2uSv.hr<sup>-1</sup> at 1 meter. Given the location will be a **47E - operations** room, the risk is negligible to staff.
  - b. **Inhalation of Radon** Regarding the radon gas, it was described that the waste inventory would be ventilated and live radon monitoring would be installed. Noting that this waste represents less than 1% of the inventory of Yallambie's existing inventory, the contribution to background radon is likely to be minimal.
4. **Communication with Staff** In April 2018 Yallambie hosted a talk-shop to describe the

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inventory and the storage arrangements. I was present and advised staff that when there is significant implications for safety (something requiring approval by the CEO i.e. a decision) or when there is an inspection, that I would engage QLD Health independently. However, based on the questions that arose from staff directed to Yallambie leadership during this workshop, I recommended via telephone to Peter Taylor that he should consider putting this activity and the associated risk assessment through the Yallambie radiation safety committee for sign-off as we expect from other licence holders.

5. **Engagement of QLD Health** Because this activity does not have significant implications for safety, nor is it an inspection of activities performed at Yallambie, I have not engaged the QLD Regulator on this matter.

So, my overwhelming view is that there should be no change from our perspective.

Cheers,

Loch

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**From:** Jim Scott  
**Sent:** Monday, 7 May 2018 9:23 AM  
**To:** Loch Castle <[Loch.Castle@arpansa.gov.au](mailto:Loch.Castle@arpansa.gov.au)>  
**Subject:** Melbourne Uni Waste [SEC=UNCLASSIFIED]

Hi Loch

CML wants this to be discussed at today's SCF from 2-4 pm. Can you read and I will have a chat late.

Regards

Jim

**From:** [Andrew Clegg](#)  
**To:** [Marcus Grzechnik](#)  
**Cc:** [Leannnda Coote](#)  
**Subject:** FW: ARPANSA - Waste Store Design for our review and approval [SEC=UNCLASSIFIED]  
**Date:** Thursday, 10 May 2018 12:07:31 PM  
**Attachments:** [201808 - ARPANSA rev A.pdf](#)

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Hi Marcus,

Please review and lets discuss Friday if possible - to review and provide designers approval of high level plan to continue with detailed design and associated documentation to go to AusTender.

Regards

AC

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**From:** s 47F - privacy  
**Sent:** Thursday, 10 May 2018 9:47 AM  
**To:** Andrew Clegg <andrew.clegg@arpansa.gov.au>  
**Subject:** Fwd: ARPANSA

Hi Andrew

I hope that you are well, please find attached revised plans for your view and approval. I will contact you tomorrow to discussed further.

As always happy to discuss and answer any questions.

Kind regards

s 47F - privacy

**A. S. Building Consultants**

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Email sent using Optus Webmail

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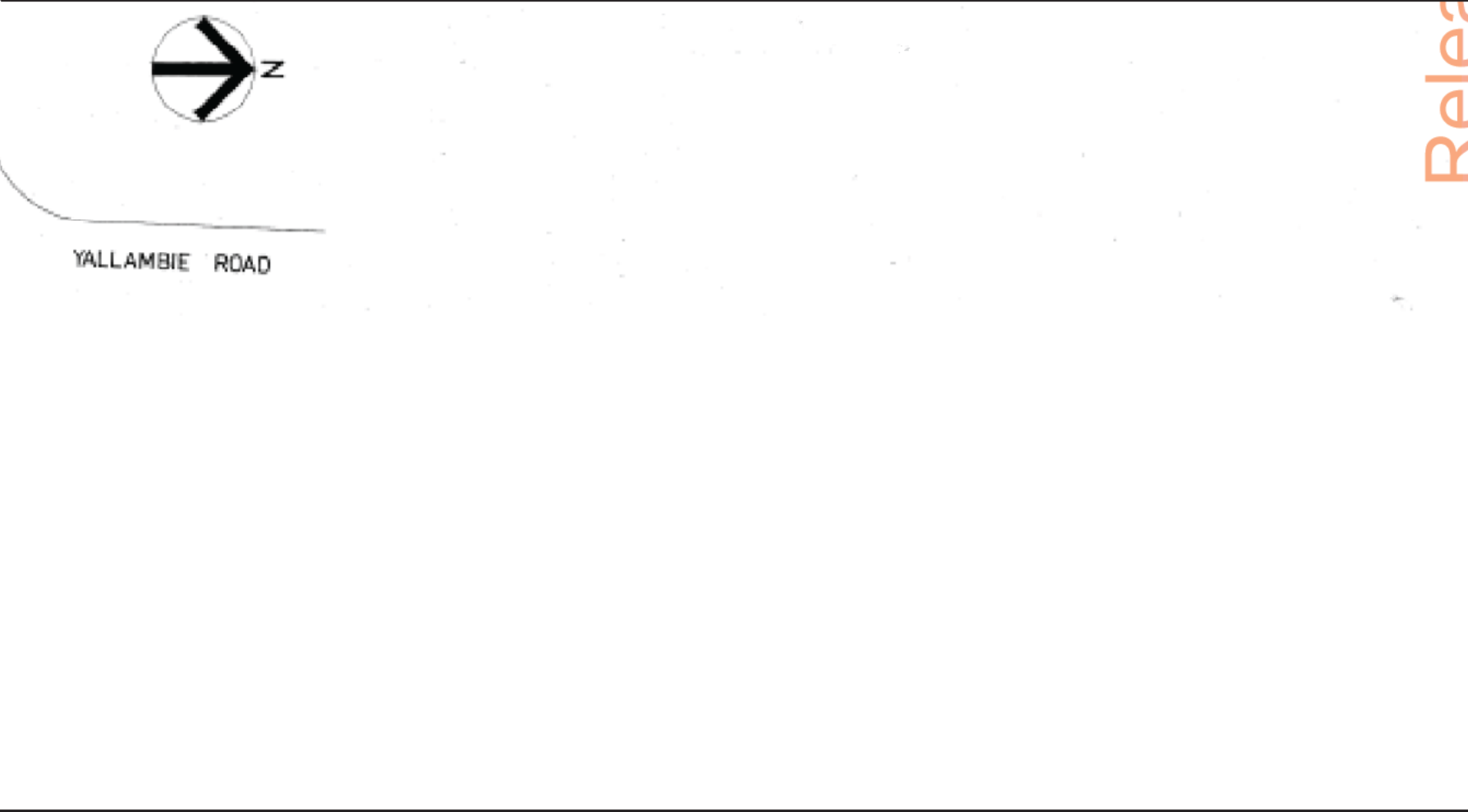
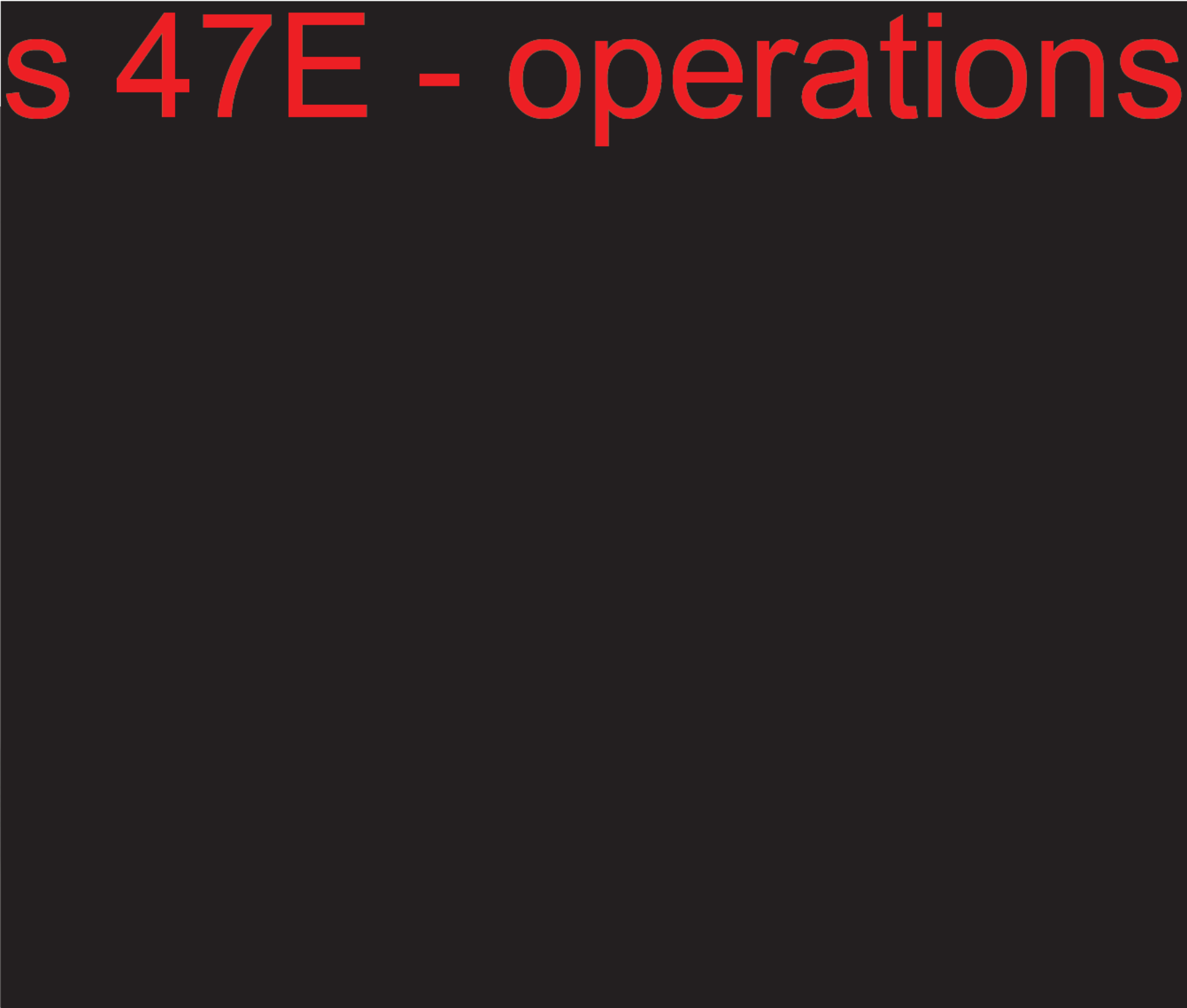


GENERAL NOTES:

- DO NOT SCALE DRAWINGS, USE WRITTEN DIMENSIONS ONLY, BUILDER TO VERIFY ALL LEVELS AND MEASUREMENTS PRIOR TO THE COMMENCEMENT OF ANY WORK, BUILDER TO CHECK PLANS AGAINST ON SITE CONDITIONS AND REPORT ANY DISCREPANCIES TO THE DRAFTSPERSON IMMEDIATELY.
- THE BUILDER IS TO ENSURE THAT NO PART OF THE STRUCTURE INCLUDING DRAINAGE AND FOOTINGS IS TO ENCR OACH OVER THE TITLE BOUNDARY
- SITE BOUNDARY TO BE VERIFIED PRIOR TO ANY WORKS COMMENCING, BUILDER / OWNER TO ENGAGE A SUITABLE QUALIFIED LAND SURVEYOR IF REQUIRED.
- SITE CLASSIFICATION, CLASS N/A OR AS PER THE SOIL REPORT IF UNDERTAKEN, THE DRAFTSPERSON IS TO BE IMMEDIATELY NOTIFIED IF THE SITE CLASSIFICATION OR THE FOUNDING DEPTH OF THE SOIL REPORT DIFFERS FROM THE ARCHITECTURAL PLANS.
- THE BUILDER AND/OR THE OWNER SHALL TAKE ALL STEPS NECESSARY TO ENSURE THAT THE STABILITY AND GENERAL WATER TIGHTNESS OF ALL NEW AND/OR EXISTING STRUCTURES DURING ALL BUILDING WORKS.
- ALL EXISTING CONDITIONS TO BE VERIFIED ON SITE PRIOR TO COMMENCEMENT OR ORDERING OF MATERIALS.
- ALL FOOTINGS TO COMPLY WITH AS 2870/1996
- ALL TIMBER FRAMING TO COMPLY WITH AS 1684/2006 PARTS 2, 3 & 4
- ALL STRUCTURAL TIMBERWORK SHALL CONFORM TO THE REQUIREMENTS OF AS1720S.A.A TIMBER ENGINEERING CODE AND AS 1684 S.A.A LIGHT TIMBER FRAMING CODE
- ALL ROOF FIXINGS AND TIE DOWNS ARE TO COMPLY WITH AS 1684 / 2006 PARTS 2, 3 & 4
- ALL WALLS AND ROOF BRACING IS TO COMPLY WITH AS 1684 / 2006 PARTS 2,3 & 4
- ALL WORKS ARE TO BE CARRIED OUT IN ACCORDANCE WITH THE BUILDING CODE OF AUSTRALIA, THE BUILDING REGULATIONS, THE BUILDING ACT AND ANY OTHER RELEVANT BY-LAWS, AUSTRALIAN STANDARDS, ACTS OR LOCAL COUNCIL REQUIREMENTS.
- ALL PLUMBING TO BE DONE BY REGISTERED PLUMBERS IN ACCORDANCE WITH AUSTRALIAN STANDARDS AND TO THE SATISFACTION OF THE LOCAL AUTHORITY, ALL JOINS TO BE WATER TIGHT.
- A LICENSED PLUMBER IS TO SEAL AND MAKE SURE ALL GAS AND WATER SUPPLIES TO THE AREA AFFECTED BY WORKS ON SITE
- A LICENSED ELECTRICIAN IS TO DISCONNECT AND MAKE SAFE ALL POWER SUPPLY TO THE AREA AFFECTED BY WORKS ON SITE
- PROVIDE THERMAL INSULATION AS PER THE REQUIREMENTS OF THE BUILDING CODE OF AUSTRALIA (PART 3.12 OF THE BUILDING CODE OF AUSTRALIA)
- ALL GLAZING TO COMPLY WITH AS 1288/2006
- STEPS - MAXIMUM RISER 190mm MINIMUM TREAD 250mm AS PER THE BUILDING CODE OF AUSTRALIA
- HANDRAILS TO BE A MINIMUM 865mm ABOVE THE NOSING OF TREADS AND 1000mm ABOVE THE LANDING WITH BALUSTRADES A MAXIMUM 125mm APART. MAXIMUM 125mm SPHERE BETWEEN TREADS.
- BALUSTRADES TO BE CONSTRUCTED IN ACCORDANCE WITH THE BUILDING CODE OF AUSTRALIA , AS1770.1 DEAD AND LIVE LOAD COMBINATIONS, AND AS/NZ1170.1-PERMANENT, IMPOSED AND OTHER ACTIONS. BALUSTRADES 4000mm AND GREATER ABOVE THE SURFACE BENEATH MUST NOT HAVE ANY PART THAT IS CLIMBABLE.
- CONCRETE STRENGTH TO BE A MINIMUM 20MPA IN 28 DAYS
- PROVIDE EMERGENCY LIFT UP HINGES TO THE TOILET DOORS WHERE THE DISTANCE TO THE THE DOOR FROM THE PAN IS LESS THAN 1200mm AS PER THE BUILDING CODE OF AUSTRALIA
- LIGHT AND VENTILATION IS TO COMPLY WITH THE REQUIREMENT S OF THE BUILDING CODE OF AUSTRALIA.
- ALL EXTERNAL STEEL WORKS SHALL BE HOT DIPPED GALVANIZED, INTERNAL STEEL WORK SHALL BE PRIMED WITH INORGANIC ZINC SILICATE COAT IN ACCORDANCE WITH AS3700/2001 AND AS PER THE BUILDING CODE OF AUSTRALIA
- THESE NOTES ARE NEITHER EXHAUSTIVE, NOR A SUBSTITUTE FOR THE REGULATIONS, STATUTORY REQUIREMENTS, BUILDING PRACTICE OR CONTRACTUAL OBLIGATIONS AND UNLESS EXPRESSLY STATED OTHERWISE ARE PROVIDED ONLY AS GUIDELINES. NO RESPONSIBILITY IS ACCEPTED FOR THERE USE.
- PROVIDE ROOF FLASHING AS PER THE BUILDING CODE OF AUSTRALIA
- AREAS ADJACENT TO FOOTINGS ARE TO BE GRADED AND DRAINED AWAY FROM THE BUILDING TO PREVENT PONDING OF WATER
- THE MINIMUM FALL OF A BOX GUTTER IS TO BE 1:100
- PROVIDE TERMITE PROTECTION IN ACCORDANCE WITH AS3660.1/2001 IF REQUIRED BY THE RELEVANT COUNCIL
- EXIT DOORS WHICH SWING AWAY FROM THE DIRECTION OF EXIT TRAVEL TO BE CAPABLE OF BEING HELD IN THE OPEN POSITION
- POWER OPERATED SLIDING DOORS SERVING AS EXITS ARE TO BE CAPABLE OF BEING OPENED BY HAND UNDER A FORCE NO MORE THAN 110N UPON MALFUNCTION OR FAILURE OF THE POWER SOURCE
- NON-SLIP FINISHES TO BE PROVIDED TO ALL STEPS, RAMPS AND LANDINGS
- SIGNS REQUIRED TO FIRE DOORS INDICATING "FIRE DOOR - DO NOT OBSTRUCT" IN 20mm HIGH LETTER IN A CONTRASTING COLOUR IN ACCORDANCE WITH CLAUSE D2.23. BCA 2009
- ALL PENETRATIONS THROUGH THE FIRE RATED MEMBERS TO BE SEALED USING FIRE COLLARS OR FIRE SEAL AS APPROPRIATE IN ACCORDANCE WITH CLAUSE C.3.15, BCA 2009
- DISABLES ACCESS, SANITARY FACILITIES AND SIGMA TO BE PROVIDED IN ACCORDANCE WITH AS1428.1
- EXHAUST AIR OUTLETS NOT TO BE LOCATED CLOSER THAN 6m TO FRESH AIR INLETS
- MECHANICAL VENTILATION SYSTEM TO COMPLY WITH AS1668.2-1991 & AS/NZS3666.1&2-2002
- MINIMUM 2400mm CEILING HEIGHT TO ALL NEW PORTIONS OF CEILING
- FIRE INDICES OF MATERIALS, LINING AND SURFACE FINISHES TO COMPLY WITH SPECIFICATION C1.10, BCA
- ELECTRICAL SWITCHBOARDS LOCATED IN THE PATH OF TRAVEL TO EXITS TO BE ENCLOSED IN NON-COMBUSTIBLE CONSTRUCTION OR A FIRE PROTECTIVE COVERING WITH WITH DOORWAYS OR OPENING SUITABLY SEALED AGAINST SMOKE SPREADING FROM THE ENCLOSURE
- EXIT DOORS WHICH SWING AGAINST THE DIRECTION OF EXIT TRAVEL TO BE CAPABLE OF BEING HELD IN THE OPEN POSITION

- GUARDRAILS ARE TO BE PROVIDED TO ROOF PLATFORM IF A PLATFORM EXCEEDS 300mm IN HEIGHT FROM EXISTING ROOF LINE. DESIGN, CONSTRUCTION AND INSTALLATION OF ACCESSWAY, LADDER AND FIXED PLATFORM IS TO BE IN ACCORDANCE WITH AS1657-1992
- ARTIFICIAL LIGHTING TO COMPLY WITH AS1680.0-1998
- ALL DOORWAYS TO HAVE A MINIMUM UNOBSTRUCTED HEIGHT OF 2m AND MINIMUM WIDTH NOT LESS THAN 750mm OR 850mm TO ALLOW FOR DISABLED ACCESS.
- EXIT SIGNS AND EMERGENCY LIGHTS TO COMPLY WITH AS2293.1-2005
- PORTABLE FIRE EXTINGUISHERS TO COMPLY WITH AS2444-2001, PROVIDE 3A 20B (E) DRY CHEMICAL PORTABLE FIRE EXTINGUISHER WITHIN 2m TO 20m OF ALL ELECTRICAL SWITCHBOARDS.
- FIRE HOSE REEL INSTALLATION TO COMPLY WITH AS1221 & AS2441-2005
- ALL EXIT DOORS AND DOORS IN THE PATH OF TRAVEL TO EXITS (INCLUDING ROLLER SHUTTER GRILLES) ARE TO BE CAPABLE OF BEING OPENED AT ALL TIMES FROM THE SIDE FACING A PERSON SEEKING EGRESS FROM THE BUILDING WITH A SINGLE HANDED DOWNWARD OR PUSHING ACTION ON A SINGLE DEVICE WITHOUT THE USE OF A KEY AND LOCATED BETWEEN 900mm AND 1200mm ABOVE FLOOR LEVEL IN ACCORDANCE WITH CLAUSE D2.21, BCA 2009.
- ALTERATIONS TO THE SPRINKLER SYSTEM WILL BE CARRIED OUT TO COMPLY WITH AS2118.1-1999
- ALTERATIONS TO THE SPRINKLER SYSTEM WILL BE DOCUMENTED, INSPECTED AND APPROVED AS COMPLYING WITH AS2118 BY THE FIRE PROTECTION INSPECTION SERVICE (OR OTHER APPROVED SPRINKLER INSPECTION AND TESTING SERVICE) AND THEIR WRITTEN APPROVAL PROVIDED TO THE RELEVANT BUILDING SURVEYOR ON COMPLETION OF THE WORKS.
- SEPARATING WALLS WHICH EXTEND UP TO THE ROOF COVERING MUST BE PACKED WITH A SUITABLE FIRE RESISTING MATERIAL
- SMOKE ALARMS ARE TO BE HARD-WIRED AND IN ACCORDANCE WITH AS3786-1993
- WET AREAS WITHIN BUILDING AREA REQUIRED TO BE WATERPROOF OR WATER RESISTANCE IN ACCORDANCE WITH CLAUSE F1.7 OF THE BUILDING CODE OF AUSTRALIA VOLUME ONE AND AS3740.
- ALL LIGHTING AND VENTILATION SHALL COMPLY WITH THE BUILDING CODE OF AUSTRALIA VOLUME ONE, PART F4 AND RELEVANT AUSTRALIAN STANDARDS
- PRECAUTION MUST BE TAKEN BEFORE AND DURING BUILDING WORK TO PROTECT THE SAFETY OF THE PUBLIC. FURTHERMORE: UNDER NO CIRCUMSTANCES OWNER AND/OR BUILDER SHOULD PLACE ANY MATERIALS UPON THE FOOTPATH, NATURE STRIP OR COUNCIL RESERVE DURING THE BUILDING WORKS.
- EMERGENCY LIGHTING AND EXIT SIGNS TO BE INSTALLED IN ACCORDANCE WITH THE BUILDING CODE OF AUSTRALIA VOLUME ONE AND AS 2293.1
- EXIT DOORS TO COMPLY WITH PART D2.21 OF THE BUILDING CODE OF AUSTRALIA VOLUME ONE
- ALL OF THE ELECTRICAL INSTALLATIONS SHALL COMPLY WITH AS/NZS 3013
- FIRE HYDRANTS TO BE INSTALLED IN ACCORDANCE WITH THE BUILDING CODE OF AUSTRALIA VOLUME ONE AND AS 2419.1
- ALL THE SERVICE PENETRATIONS AND CONTROL JOINT IN FIRE-RESISTANCE SEPARATION ELEMENTS SHALL COMPLY WITH AS 4072
- ALL DOORS TO SANITARY COMPARTMENTS TO BE FITTED WITH SELF-CLOSERS
- PROVIDE AN AUTOMATIC FIRE DETECTION AND ALARM SYSTEM COMPLYING WITH AS1670 AND MONITORED IN ACCORDANCE WITH CLAUSE 7 OF THE SPECIFICATION E2.2A
- UNLESS STATED OTHERWISE THE BUILDER SHALL: MAKE PROVISIONS FOR ALL NECESSARY WATERPROOFING AND/OR DRAINAGE TO EXPOSED ROOF AND SURFACE AREAS, INCLUDING BASEMENT RETAINING WALLS, TO THE COMPLETE APPROVAL OF THE BUILDING SURVEYOR
- UNLESS STATED OTHERWISE THE BUILDER SHALL: WHERE NECESSARY PROVIDES SUPPORT TO WALLS ADJACENT STRUCTURES BUILT ON THE BOUNDARY AND AVOID DAMAGE TO FOUNDATION TO THE SAME DUE TO EXCAVATION BENEATH FOOTINGS OR INGRESS IN WATER
- UNLESS STATED OTHERWISE THE BUILDER SHALL: PROVIDE MECHANICAL VENTILATION TO ALL OFFICES AND SANITARY COMPARTMENTS VIA OUTLETS IN ACCORDANCE WITH AS1688 S.A.A, MECHANICAL VENTILATION AND AIR CONDITIONING CODE 76 AIR CHANGES P/H TO AMENITIES
- IF A DOORWAY IN A FIREWALL IS FITTED WITH A SLIDING FIRE DOOR, WHICH IS OPEN, WHEN THE BUILDING IS IN USE - IT MUST BE HELD OPEN WITH AN ELECTROMAGNETIC DEVICE, WHICH WHEN DE-ACTIVATED SECONDS, AND MORE THAN 30 SECONDS, AFTER RELEASE, AND CONDITIONING CODE 6 AIR CHANGES P/H TO AMENITIES.
- IN THE EVENT OF POWER FAILURE TO THE DOOR - THE DOOR MUST FAIL SAFE IN THE CLOSED POSITION IN ACCORDANCE WITH (I); AND -AN AUDIBLE WARNING DEVICE MUST BE LOCATED NEAR THE DOORWAY AND A RED FLASHING WARNING LIGHT OF ADEQUATE INTENSITY ON EACH SIDE OF THE DOORWAY MUST BE ACTIVATED IN ACCORDANCE WITH (B); AND
- SIGNS MUST BE INSTALLED ON EACH SIDE OF THE DOORWAY LOCATED DIRECTLY OF THE OPENING STATING - WARNING - SLIDING FIRE DOOR - IN CAPITAL LETTERS NOT LESS THAT 50mm HIGH IN A COLOUR CONTRASTING WITH THE BACKGROUND.
- SMOKE / HEAT DETECTION SYSTEM TO BE IN ACCORDANCE WITH AS1670.1, 2 & 3-2004
- THE DOOR TO A FULLY ENCLOSED SANITARY COMPARTMENT MUST COMPLY WITH THE FOLLOWING IF THERE IS NOT A CLEAR SPACE OF 1.2m BETWEEN THE CLOSET PAN AND NEAREST PART OF DOORWAY:
- OPEN OUTWARDS OR
- SLIDE OR
- BE READILY REMOVED FROM THE OUTSIDE OF THE SANITARY COMPARTMENT
69. COOLROOMS AND FREEZERS WILL BE PROVIDED WITH THE FOLLOWING IN ACCORDANCE WITH CLAUSE G1.2, BCA:
- DOOR OPENINGS NOT LESS THAN 600mm IN WIDTH AND A CLEAR HEIGHT NOT LESS THAN 1500mm
- DOORS WHICH ARE CAPABLE OF BEING OPENED BY HAND FROM INSIDE WITHOUT A KEY
- INTERNAL LIGHTING CONTROLLED ONLY BY A SWITCH LOCATED ADJACENT TO THE INSIDE OF THE ENTRANCE DOORWAY
- INDICATOR LAMP POSITIONED OUTSIDE WHICH IS ILLUMINATED WHEN THE INTERNAL LIGHTS ARE SWITCHED ON
- AN ALARM DEVICE LOCATED OUTSIDE BUT CONTROLLABLE ONLY FROM WITHIN THE CHAMBER.

THIS WORK IS EXCLUSIVELY OWNED BY SDS DEVELOPMENTS PTY LTD AND CANNOT BE REPRODUCED OR COPIED, EITHER WHOLE OR IN PART, IN ANY FORM (GRAPHIC, ELECTRONIC OR MECHANICAL INCLUDING PHOTOCOPIING) WITHOUT THE WRITTEN PERMISSION OF SDS DEVELOPMENTS PTY LTD.  DO NOT SCALE DRAWINGS. WRITTEN DIMENSIONS TAKE PRECEDENCE. CONFIRM ALL LEVELS AND DIMENSIONS ON SITE BEFORE THE COMMENCEMENT OF ANY WORKS.  © COPYRIGHT 2015	CLIENT		DATE		REVISION		No.		PROJECT TITLE		DRAWING TITLE		ISSUE DATE		JOB No.		DRAWN		TOWN PLANNING	
	ARPANSA								STORAGE FACILITY		GENERAL NOTES		07.05.2018		201808		RW		PO BOX 1184	
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									619 LOWER PLENTY RD, YALLAMBIE, VIC 3085						06		A		P. 0071 139 073 w. sds@sdspartshd.com.au	



LOWER PLENTY ROAD

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ARPANSA	-	-	-	-	STORAGE FACILITY	SITE PLAN - GROUND FLOOR	07.05.2018	201808	RW	SDS developments pty ltd
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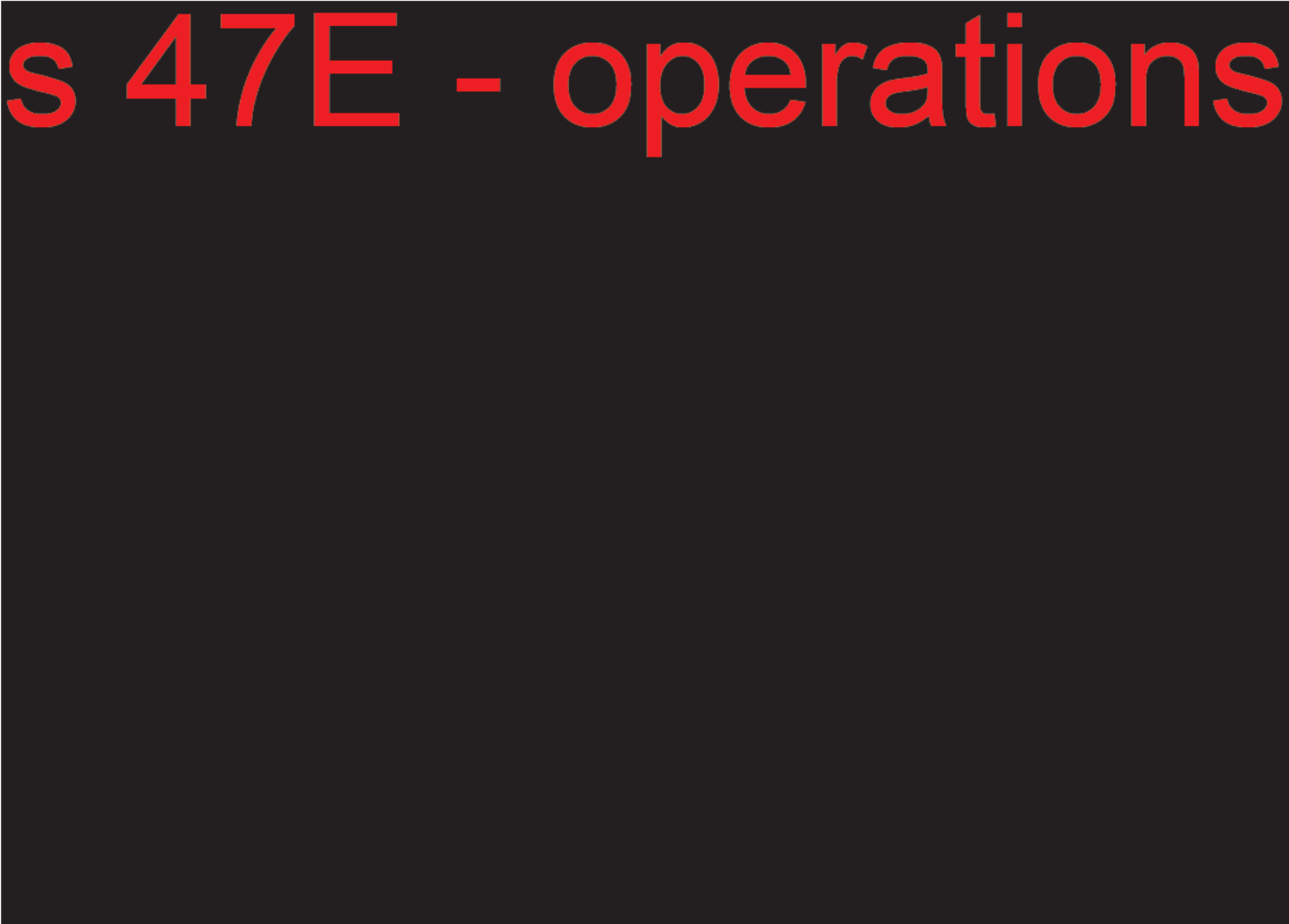


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		ARPANSA										STORAGE FACILITY		PROPOSED WORKS		07.05.2018		201808		RW		SDS developments pvt ltd	
												PROJECT ADDRESS				SCALE		DRAWING No.		REVISION		PO BOX 1194 57 KILDA STH VIC 3182 P. 0621 138 013 W. info@sdsltd.com.au	
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