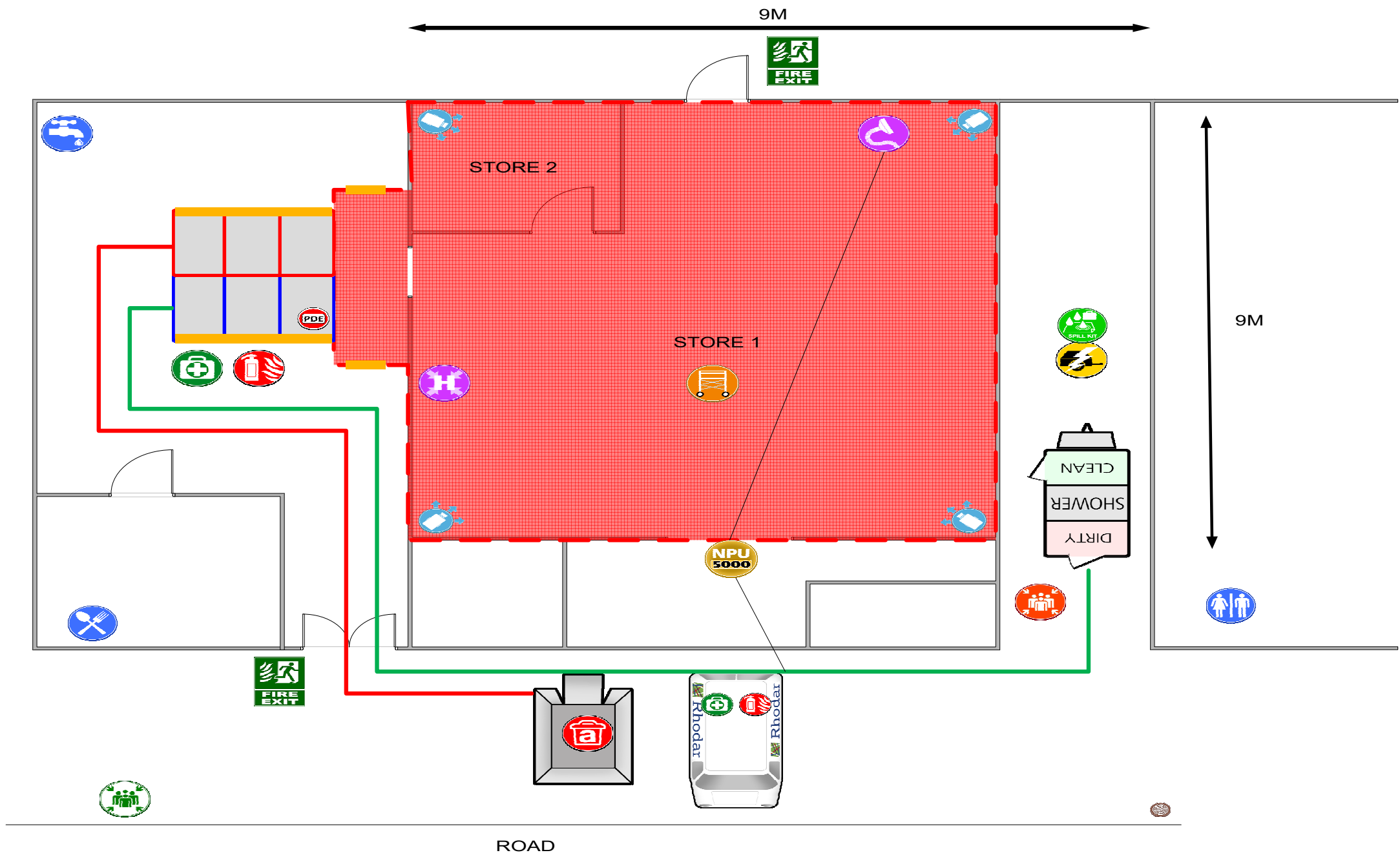


Drawing

- MEWP
- Scaffold Tower
- Toilets
- Welfare
- Primary Decontamination Equipment
- Modular Hygiene Unit
- Mobile Hygiene Unit
- Pedestrian route
- Respirator Zone
- Enclosure
- Airlock
- Baglock
- Transit Route
- Waste Route
- Escape Route
- Skip
- Van
- Temporary Fencing
- Viewing Panel
- Cctv
- Non-Contaminated Muster
- Contaminated Muster
- Spill Kit
- Fire Exit
- Negative Pressure Unit (Rated)
- H-Type Vacuum
- Roving Head
- Dustless Blaster
- Injection Machine
- First Aid Kit
- Fire Extinguisher
- Generator
- Power Supply
- Water Supply
- Asbestos Waste
- Drain



Calculation includes for pod area, airlock and baglock

Enclosure	Height (m)	Width (m)	Length (m)	Total Volume (m3)	Roving Head?	Air Changes per Hour	Total CMH required	Smoke Clearance Time	Recommended NPU setup
Enclosure A	3	9	10	270	Yes	12	4,050	5 mins 0 seconds	1 x 5000 CMH, 0 x 2500 CMH

## Plan of Works

### SCOPE

1. The work involves the removal & disposal of nail fixed asbestos insulation board panels to store 1 & 2. The AIB is nail fixed on to a wooden framework.

The quantity to be removed is 81m<sup>2</sup>.

The works will be carried out under fully controlled conditions, a full environmental clean will be carried out to the work area.

2. Removal of cement wall linings to fridge within store 6.
3. Removal of floor tiles to store 1 and former shop area.

### AIB CEILING REMOVAL

### SIGNAGE

Warning notices will be located at the perimeter of the work area. Notices will be placed to restrict persons from entering into the work area without causing alarm to personnel. All signage will be placed on the work site entry points, the signage will vary but will be similar to that identified in our CSP AA/01 (page 103). Documentation/Warning signs section. As a minimum signs must be located on all asbestos work areas to entrances, during asbestos removal operations.

### HYGIENE UNIT

The unit is to be set up and checked that it is fully operational prior to commencing any asbestos related works in accordance with **CSP HS/04** (page 52).

Operatives will transit to the hygiene facility as the facilities cannot be connected directly to the work areas due to works being carried out within the store.

The transit routes shall be cleared of all loose items by the client prior to works starting and the transit routes will be checked twice daily.

Air lock and bag lock will be constructed in accordance with **CSP AA/02** (page 109).

Air lock and bag lock will be built 1m x 1m x 2m(h).

## Plan of Works

### SITE SET UP

All loose fixtures and fittings within store 1, 2 and 6 by the client prior to works.

The site shall be set-up as per drawing. Pre-cleaning works shall be carried out in accordance with CSP AA/02 and risk assessment. The enclosure construction and smoke test shall be undertaken in accordance with CSP AA/02 (page 109).

Access to the works will be via a Rhodar issue mobile tower erected by PASMA trained operatives alternatively a hop up and used by Safeguard trained operatives.

We will be working to a minimum of 12 air changes per hour within the enclosure (see calculations on sketch plan). NPU calculations include airlock and baglock.

Toilet and welfare supplied utilising existing within main shop and outbuilding.

All power will be taken from 20 KVA generator onsite positioned within secure area as per plan.

Water will be taken from existing services on site.

An outside man will be present on site at all times when operatives are within the enclosure.

Warning notices to be attached to the air lock and enclosure to allow no unauthorised access.

The enclosures will be constructed using 2 x 2 timber, 1000 gauge blue polythene, staples and cloth tape.

CCTV will be used to monitor the works inside the enclosure. Moved along as works progress

The asbestos waste will be taken to lockable skip located adjacent to the building.

Tool box talks to be carried out prior to works commencing.

## Plan of Works

### LIVE ELECTRICS

All electrics to be isolated by the client prior to works. Confirmation to be provided by the client and supervisor to log within site diary.

### REMOVAL METHOD – AIB TO CEILING AND BEAMS.

Two operatives wearing full faced respirators, red disposable coveralls, super touch gloves and safety footwear will enter the enclosure using a mobile tower and Rhodar issue hop up for safe access.

The nail fixed insulating board panels to the ceiling will be removed using hand tools such as small angle bars, claw hammer and screw driver. The board will be treated with fibre suppressant surfactant or equivalent mixed at a ratio of 10 parts water to 1 part surfactant.

The first ceiling panel may have to be broken and any breakages will be kept to a minimum. A sharp knife will be used to deeply score the Panel where it is to be broken.

Using a small lever bar prise away the panel. A second operative using an H-type vacuum will provide local shadow vac close to the area to be broken to capture any fibres released during the initial breakage.

As the panel is freed from its fixings a lead edge will be lowered to enable surfactant to be sprayed via low pressure killa spray. The introduction of a type H vacuum cleaner will be introduced to remove any bulk debris from the panel. The panel can then be immediately lowered and placed into an oversized red asbestos waste bag or wrapped in Rhodar standard polythene depending on size. The framework will be vacuumed down to ensure any debris is removed.

The operatives can then systematically remove the remaining ceiling panels by carefully prising and levering the ceiling panel away from its framework and allowing it to ease back into place. This will then allow protruding nail heads to be removed using claw hammers or lever bars under local exhaust ventilation from the H-type vacuum. Nail holes will be drilled out using oversized drill bit. The operatives are to ensure the ceiling panels are bagged/wrapped with no more than 1 panel to a single bag/ parcel.

Waste materials will be immediately placed in red asbestos bags / parcels and labelled. Waste Bags and debris will not be allowed to accumulate on the floor. Bags / Parcels will be removed by end of each shift following standard procedures (as per **CSP AA/08** page 136).

Once all removals works are completed the operatives will conduct a full environmental clean to the enclosure using Type H Vacuums, damp cloths and Tak Rags to clean all surfaces from visible traces of dusts & residues. All

### Plan of Works

walls and floors of the enclosure will be cleaned starting at the highest point of the enclosure working in a systematic manner down to floor level paying close attention to areas where dusts can easily accumulate. Once at floor level the operatives will work in a systematic manner from the airlocks and work towards the NPU's.

The site supervisor shall enter the enclosure to carry out a pre visual inspection, any areas requiring further attention will be highlighted to the operatives to then carry out the required works. Once the supervisor is satisfied then he will present the area to the analyst. (Supervisor visual will take approx. between 20-30 min)

#### FOUR STAGE CLEARANCE

On completion of the removal works a four stage clearance will take place in accordance with **CSP AA/09** (page 141).

Hygiene facility to be air tested on completion

#### WASTE REMOVAL

All waste will be removed from the enclosure as per **CSP AA/08** (page 136) to the skip.

#### SITE CLEARANCE

On completion of all works we shall conduct a site clearance involving the removal of all plant, equipment and carryout a site walk around with the analyst to verify that all work areas, transit routes are cleared.

On completion a post remediation checklist should be completed by the supervisor covering all areas of work.

### Plan of Works

#### CEMENT WALL LINING REMOVAL

#### PERSONAL DECONTAMINATION

Within the exclusion zone at the base of the mobile tower a decontamination zone shall be formed. This will be demarcated with red and white barrier tape and warning notices on display.

Cordex shall be laid to floor area. A bucket/sponge and H-Type vac shall be sited within decontamination zone for decontamination purposes. This will include vacuuming dusts from overalls and wiping down half face respirators.

#### METHOD REMOVAL – ASBESTOS CEMENT WALL LININGS

Operatives will enter the work area wearing half face masks, cat 3 type 5/6 disposable overalls, safety shoes/boots and general purpose gloves.

Access to the cement wall lining will be via a mobile tower/hop up in accordance with CSP HS/10 (page 76) where required. Standard gauge polythene will be placed on the platform to catch any falling materials. The polythene will also be taped where possible to the wall to prevent falling debris.

One operative shall stay on the ground level and pass the equipment through the hatch to the second operative standing on the first level of the scaffold. Then once the equipment is on the first it shall be set down and each operative shall move up one position until the equipment is on the working platform.

The cement wall lining will then be sprayed using fibre suppressant in accordance with AA/09. Once wetted the boards will be carefully prised out from the joint whilst applying dust surfactant then eased back in place to reveal the protruding nails.

We shall remove the nails using pliers or pin bar progressively whilst vacuuming with an H-Type vac to ensure controlled removal. Nail holes will be wired brushed or drilled out with a cordless bit whilst shadow vacuuming and applying dust surfactant.

The wall lining board will then be placed directly into waste bags or if too large/bulky, wrapped in polythene sheeting and double bagged or wrapped at this stage if possible. (If wrapped in polythene a red bag shall be placed within the polythene to identify that it contains asbestos).

The parcels will then be sprayed with fibre suppressant, wiped down then transported to the waste skip on site in accordance with CSP HS/06. (When removing the bags from the scaffold, one operative shall stay on the upper

### Plan of Works

level of the scaffold and pass the swan neck bag containing asbestos through the access hatch to another operative on the ground level).

Once all the cement wall lining have been removed, the area will be thoroughly wiped down and vacuumed using an H-Type vac making sure all debris is removed from the area. All tools and plant will be thoroughly vacuumed and wiped down with rags in accordance with CSP AA/03 (page 116) and AA/04 (page 124).

All waste will be safely disposed of in accordance with CSP AA/08 (page 136).

The Supervisor will then access the work area to carry out a visual inspection which will take a minimum of ½ an hour.

#### WASTE REMOVAL

All waste will be removed from the enclosure as per **CSP AA/08** (page 136) to the skip.

#### SITE CLEARANCE

On completion of all works we shall conduct a site clearance involving the removal of all plant, equipment and carryout a site walk around with the analyst to verify that all work areas, transit routes are cleared.

On completion a post remediation checklist should be completed by the supervisor covering all areas of work.

## Plan of Works

### FLOORTILE REMOVAL

#### PERSONAL DECONTAMINATION

Within the exclusion zone a decontamination zone shall be formed. This will be demarcated with red and white barrier tape and warning notices on display.

Cordex shall be laid to floor area. A bucket/sponge and H-Type vac shall be sited within decontamination zone for decontamination purposes. This will include vacuuming dusts from overalls and wiping down half face respirators.

#### METHOD REMOVAL – FLOOR TILES

Operatives wearing white type 5/6 coveralls, half face Respirator, anti cut gloves, goggles and ear defenders covering a range of 85 - 100 Dba, will enter the work area and commence with the removal of floor tiles.

Where possible hand tools will be used i.e. a long handled scraper where hand tools are not sufficient, kango with floortile lifting attachment will be used.

The scraper is to be placed into the joints between the tiles and gently lifted to minimise breakage. Where a large area is to be covered then a shovel will be used. Fibre suppressant will be continuously sprayed under the tiles during the process of removal.

Where bitumen is present beneath the floor tiles this will be removed as far as reasonably practicable by gently scraping up with hand tools.

The debris can then be cleared by hand shovel and bagged - Max 4 hand shovels per bag to maintain a suitable weight. Waste materials produced will be placed directly into clear asbestos waste bags and sealed with 75mm poly cloth tape.

Waste bags will then be cleaned externally and double bagged into a second clear bag, wiped down then transported to the skip on site in accordance with **CSP AA/08 (page 136)**.

Once the floor tiles have been removed, the team will complete a fine clean of the entire area including all the enclosure sheeting and surfaces using tak rags and H-type vacuums.

The Supervisor will then conduct a thorough visual of the work area being a minimum of 10 minutes per area.

## Plan of Works

### **HAND ARM VIBRATION CONTROL MEASURE FOR MAKITA HR4011C BREAKER**

The equipment that has been assessed for HAV on this site is MAKITA HR4011C breaker for the removal of floor tiles.

Based on the breaker instruction manual the vibration emission is no more than 6.5m/s<sup>2</sup>. An assessment completed by the contracts manager using the HSE hand arm vibration calculator this piece of equipment can be used for a maximum of 71 minutes trigger time per day.

The site supervisor will take into account the actual trigger time applied during any combined period of use ensuring the maximum time is not exceeded. For this piece of equipment you must not exceed a trigger time of 10 minutes in any one session. Once you have used this piece of equipment for the time specified you must revert to other duties and rotate if necessary the piece of equipment.

Records of any noise and HAV monitoring undertaken will be kept on site by the supervisor and recorded on the noise and vibration exposure record form.

#### **NOISE CONTROL MEASURE FOR BREAKER**

Based on previous noise assessment data we anticipate the noise levels within the enclosure to be no more than 104 dB (A).

Ear protection zones shall be marked with notices as far as is reasonably practicable, workers who enter the enclosure will wear ear defenders (SNR 25) and plugs (SNR 37).

Site staff that are working within 4m of the breaker equipment outside the enclosure shall also wear ear plugs, based on previous noise monitoring data we anticipate a maximum exposure level of 80 d B (A) whilst working within 4 metres of the equipment outside the enclosure.

Random noise monitoring may be carried out during the works and if so must be documented on the company noise assessment form; this should be sent back to compliance who will add the results to the current database of noise levels recorded during these works.

#### WASTE REMOVAL

All waste will be removed from the enclosure as per **CSP AA/08 (page 136)** to the skip.

## Plan of Works

### SITE CLEARANCE

On completion of all works we shall conduct a site clearance involving the removal of all plant, equipment and carryout a site walk around with the analyst to verify that all work areas, transit routes are cleared.

On completion a post remediation checklist should be completed by the supervisor covering all areas of work.

ENTRY/EXIT, TRANSIT & WASTE ROUTE



CEILING



AIB CEILING



POSITION OF HYGIENE UNIT



PARKING FOR VEHICLE AND SKIP



HYGIENE UNIT POSITIONED BEHIND HOARDING

