

## Section 5: Areas of Activity

| WORK AREA DETAILS                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                        |                                                                                       |                   |      |
|----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|---------------------------------------------------------------------------------------|-------------------|------|
| Item No & Location*                    | Item 01 – High Level Spray Coating Removal                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                        |                                                                                       |                   |      |
| Description of Work                    | <ul style="list-style-type: none"> <li>High Peak will construct a fixed birdcage scaffold to cover the entire room and will provide access stairways and hoist.</li> <li>Once the scaffold is complete, it will be fully sheeted with 1000-gauge visqueen to create one enclosure.</li> <li>Our supervisor will oversee a smoke test of the area, which may be witnessed by client if required.</li> <li>If the smoke test is successful, we will inject the spray coating with a fibre suppressant and strip it using handheld tools once it is fully wetted.</li> <li>Works will also include the removal of textured coating to the perimeter of the room at low level</li> <li>Following bulk removal bitumen coating will be removed using abrasive blasting techniques.</li> <li>The surface of the concrete will be thoroughly cleaned using wire brushes and type H vacuum cleaners.</li> <li>LAR will provide an independent analyst to carry out the 4 Stage Clearance, as well as personal monitoring and leak testing during the removal process.</li> </ul> |                        |                                                                                       |                   |      |
| HIGH RISK ACTIVITIES                   | N/A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                        |                                                                                       |                   |      |
| Programme (or see attached)            | Scaffold                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Enclosure Construction | Asbestos Removal                                                                      | 4 Stage Clearance |      |
|                                        | Refer to the Programme Provided                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                        |                                                                                       |                   |      |
| Photos                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                        |  |                   |      |
| Form of Asbestos                       | Asbestos Sprayed Coating                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                        |                                                                                       |                   |      |
| Bulk Sample Results*                   | Chrysotile                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Amosite                | Crocidolite                                                                           |                   |      |
|                                        | ✓                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | -                      | -                                                                                     |                   |      |
| Condition of Asbestos                  | Good                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                        |                                                                                       |                   |      |
| Size of Job (area or volume) *         | 2444 M <sup>3</sup>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                        |                                                                                       |                   |      |
| Specify Size of ACM                    | Approximately 608 M <sup>2</sup>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                        |                                                                                       |                   |      |
| How is the ACM fixed?                  | Sprayed Coating                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                        |                                                                                       |                   |      |
| Expected Exposure Levels               | ACM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Task                   | Fixing                                                                                | AER               | MER  |
|                                        | Insulation (Sprayed)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Removal                | Coating                                                                               | 3                 | 0.09 |
| Type of Respirator (Main Removal)      | FFPA (Scott Vision/Phantom)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                        |                                                                                       |                   |      |
| Type of Respirator (Abrasive Blasting) | RAS Air Fed (Scott Vision/Phantom)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                        |                                                                                       |                   |      |

|                                                                                        |                                                                                                                          |                                                                                                                 |                                                 |                      |
|----------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|-------------------------------------------------|----------------------|
| Eye Protection Required                                                                | Full Face Mask for works within the enclosure                                                                            |                                                                                                                 |                                                 |                      |
| Hand Protection                                                                        | General Purpose Grip Glove                                                                                               |                                                                                                                 |                                                 |                      |
| Is the Area Contaminated?                                                              | No                                                                                                                       |                                                                                                                 |                                                 |                      |
| If yes, specify controls                                                               | N/A                                                                                                                      |                                                                                                                 |                                                 |                      |
| <b>WORKING AT HEIGHT</b>                                                               |                                                                                                                          |                                                                                                                 |                                                 |                      |
| Does task require works at height?                                                     | Yes                                                                                                                      | Platform Height – 9m                                                                                            |                                                 |                      |
| Height of Void Spaces                                                                  | N/A                                                                                                                      |                                                                                                                 |                                                 |                      |
| Access Equipment                                                                       | High Peak will construct a fixed birdcage scaffold to cover the entire room and will provide access stairways and hoist. |                                                                                                                 |                                                 |                      |
| If 'stepladders' are to be used – state reason:                                        | N/A                                                                                                                      |                                                                                                                 |                                                 |                      |
| Fixed Scaffolding                                                                      | Scaffold Built to TG20                                                                                                   |                                                                                                                 |                                                 |                      |
| Is the Scaffold Licenced?                                                              | Yes                                                                                                                      |                                                                                                                 |                                                 |                      |
| <b>ISOLATIONS</b>                                                                      |                                                                                                                          |                                                                                                                 |                                                 |                      |
| Are there specific isolations required?                                                | No                                                                                                                       |                                                                                                                 |                                                 |                      |
| Will any services within the area remain live?                                         | No                                                                                                                       | Note unless proof of isolation has been provided services are to be assumed <u>LIVE</u> and must not be removed |                                                 |                      |
| Please specify any additional information                                              | -                                                                                                                        |                                                                                                                 |                                                 |                      |
| <b>Type</b>                                                                            | <b>IS IT LIVE?</b>                                                                                                       | <b>Is Isolation Required</b>                                                                                    | <b>How is this Managed</b>                      | <b>Cert Required</b> |
| Electrical                                                                             | -                                                                                                                        | -                                                                                                               | Services to the building have been disconnected | Yes                  |
| Water                                                                                  | -                                                                                                                        | -                                                                                                               |                                                 | Yes                  |
| <b>ENCLOSURE</b>                                                                       |                                                                                                                          |                                                                                                                 |                                                 |                      |
| Describe Airlock to be Used                                                            | 3nr Airlock (3m x 1m x 2m High) with viewing panels to be used for equipment and personnel located on each level         |                                                                                                                 |                                                 |                      |
| If not the minimum size, please specify why:                                           | N/A                                                                                                                      |                                                                                                                 |                                                 |                      |
| Will a separate Baglock be used?                                                       | Yes 3nr, 3m x 2m x 1m Baglock                                                                                            |                                                                                                                 |                                                 |                      |
| If 'No' state, why not:                                                                | -                                                                                                                        |                                                                                                                 |                                                 |                      |
| Will any waste remain in enclosure due to size and form part of the 4 Stage Clearance? | No                                                                                                                       |                                                                                                                 |                                                 |                      |
| Does any part of the enclosure need weather protection                                 | No                                                                                                                       |                                                                                                                 |                                                 |                      |
| If 'Yes' state, how this will be achieved                                              | N/A                                                                                                                      |                                                                                                                 |                                                 |                      |
| <b>WASTE &amp; TRANSIT ROUTE [SP01-M]</b>                                              |                                                                                                                          |                                                                                                                 |                                                 |                      |
| Will the DCU be directly connected to the work area                                    | No                                                                                                                       |                                                                                                                 |                                                 |                      |
| If no please state why.                                                                | Area is within the building with no vehicle access                                                                       |                                                                                                                 |                                                 |                      |
| <b>Detail</b>                                                                          | <b>Waste Route</b>                                                                                                       |                                                                                                                 | <b>Transit Route</b>                            |                      |

|                             |                     |                     |
|-----------------------------|---------------------|---------------------|
| Distance                    | 20 (m)              | 16 (m)              |
| Internal Make up of Surface | Concrete (smooth)   | Concrete (smooth)   |
| Surface Protection          | Cover with Corex    | Cover with Corex    |
| External Make up of Surface | Tarmac              | Tarmac              |
| Surface Protection          | Sweep prior to work | Sweep prior to work |
| Segregation                 | Heras Fencing       | Heras Fencing       |
| Walls to be Sheeted         | N/A                 | N/A                 |
| Transit Method              | Carrying            | Direct to DCU       |
| Waste for the work area     | 600                 |                     |

Please refer to drawings for enclosure sizes and NPU calculations

Supervisor to record site specific calculations from anemometer readings and record in the site paperwork

### 1. Preliminary Works

- Complete and sign dynamic risk assessment at start of project and update in the event of any significant changes.
- Set up Decontamination Unit to power and water as per attached drawing [LAR Procedure SP01-G].
- Ensure provision for waste has been set up.
- Supervisor to take photos of area prior to commencing works and upload within the Dropbox job folder or email.
- Ensure the isolations set out above have been carried out and certificate of isolation has been received.

#### STOP & HOLD

Prior to continuing ensure that the isolations stated within the isolation section have been carried out certificates in place

DATE

SIGN

- [LAR Procedure SP01-I] The enclosure will be formed using the structure of the scaffold + 1000-gauge visqueen / flame retardant visqueen.
- A viewing panel will be fixed to the enclosure as per the drawing provided.
- CCTV camera to be connected to provide vision into the work area as shown on the drawing provided. These will be moved as the works progress
- Warning signs to be fixed to the airlock, baglock and enclosure.
- Warning signs to be fixed to the barrier tape.
- Air movement tape to be positioned within the middle stage of airlocks together with low level viewing panel for viewing.
- Additional negative pressure added to the enclosure due to abrasive blasting being completed, these may need to be changed as the works progress.
- Additional air monitoring will be carried out during the works as we are unable to vent the NPUs externally.
- Anemometer readings to be taken from negative pressure units and figures recorded onto the supervisor's site paperwork.
- If the readings indicate that the NP Unit are drawing in sufficient airflow and the flap displacement is between 200mm and 300mm then the smoke test will be carried out.
- Smoke and negative pressure test as per [LAR Procedure SP01-L] witnessed by the site supervisor and analyst

### 2. Asbestos Abatement Works

- On successful smoke test commence works as follows:
- All waste generated during the below process will be single bagged into red waste bags and double bagged into clear asbestos labelled waste bags through the bag lock [LAR Procedure SP01-N].

#### 2.1 Sprayed Coating

- The sprayed coating will be injected with fibre suppressant liquid at a dilution rate of 1:10 using straight or angled needles fed through a wet injection system.
- We will then proceed to insert the multi-point injection needles into the spray coating. The coating will be injected in patches of around 2m<sup>2</sup> (bank of 30-50 needles at 10–20cm apart) a minimum of 15 used per square metre.
- Suitable saturation will be checked by the supervisor or designated operative. They will carry out tests with a knife, during such tests shadow vacuuming will be used. If any exposed dry patches are found they should be sprayed immediately and then re-injected.
- In addition, the ACM will then be sprayed with liquid fibre suppressant using a low-pressure hand-held sprayer.
- Only then when saturated will the ACM will be removed and peeled off in sections using hand tools e.g. scrapers, screwdrivers, wire brushes to remove the spray coating sections, continuously spraying through suitable atomising devices to guard against any possible dry patches. The sprayed coating will be scraped directly into red bags and once removed and not allowed accumulate on the floor.
- Surfaces will be checked for overspray which will then be cleaned using a combination of scrapers, wire brushes to a point where the residue can be removed using abrasive blasting techniques as described below.

## 2.2 Textured Coating

- The coating to be removed will have Tor strip WBS applied – this is a water-based paint stripper
- Applied either by paint brushes or rollers.
- the solutions activate it melts down the coating, this usually takes between thirty minutes to two hours.
- Once all the coating has broken down then it will be scraped off using handheld scrapers and placed directly into asbestos waste sacks.
- This work should be carried out systematically dealing with manageable sections at a time. Once the coating has been removed the surfaces will be cleaned down using damp cloths / rags.

## 3. **Abrasive Blasting** (Switch to Air Fed Respirator)

- All ceilings will be scraped with hand scrapers & wire brushes to remove as much residue as possible prior to commencing quill blasting. Sprays of fibre suppressant and shadow vacuuming techniques are to be employed during this process.
- Supervisor shall confirm before blasting that all visible asbestos residues/snots etc. have been removed and only potentially asbestos contaminated bitumen remains.
- Ear protection zones shall be marked with notices as far as is reasonably practicable, where daily exposure is likely to 85dB (A) or above, workers who enter the ear protection zone will wear ear protection.
- Inner and outer ear defenders to be worn in the work area. LAR previous assessment of noise levels from the activity up to 103db(a)
- Ear defenders to be worn by outside operative managing the external pot. Safety glasses to be worn.
- On completion of the above, quill blasting will commence as follows:
- The operator will ensure that the nozzle is directed away from other persons in proximity during blasting operations. This includes other operatives who are blasting. The Supervisor will monitor the manometer to ensure that filters remain operational during blasting.
- Direct the blasting nozzle at the surface to be cleaned and adjust to get the right pressure. Once this is achieved the blast nozzle shall be kept at a consistent distance, angle, and dwell time. The system will be intermittently depressurised to refill with water and abrasive blast material.
- Blasting will occur systematically in sections of the ceilings, once a section is complete, blasting will stop. Operatives will then bag up the spent shot media from surfaces and floor using hand shovels and a wet vac, a sprayer can be used to clean off any heavy deposits from surfaces.
- All residues and spent grit will be removed as contaminated waste and never re-used through the blasting machine.
- The above method will be adopted until all required surfaces have been blasted, this will be checked by the supervisor on completion.
- When all materials have been removed and bagged all adjacent surfaces, walls, ceiling, and floors will be vacuumed using type H vacs and wiped and wire brushed to remove all traces of dust and debris, intermittent fibre suppression will also take place during this operation.

- Following the completion of the blasting works operatives will revert to the use of standard full-face power assisted respirators within the enclosure.
- Contaminated wastewater from the wet vacuums will be filtered through a water filtration system and drained into a foul drain.

#### 4. Final Clean & Supervisor Visual [\(Switch to Powered RPE\)](#)

- On completion of the above works, the area will be thoroughly cleaned using Type H vacuum cleaners and wiped down with damp disposable cloths. This will include the removal of dust and debris on all surfaces, items, and equipment.
- Prior to handing over the area to the analyst, the site supervisor will enter the enclosure and carry out a thorough visual inspection and record duration below.
- Supervisor to complete Analyst Handover form and retain a copy or photograph of it

#### 5. Analyst to Conduct 4 Stage Clearance Procedures [\[LAR Procedure SP01-O\]](#)

- The supervisor will liaise with the onsite analyst if anything will be left in the enclosure e.g., mobile towers.
- The analyst will carry out the visual inspection and air testing, any access equipment which was used for our purposes will be left in the enclosure for the analyst to utilise.
- Warning labels will be fitted as per client request

**ONLY SHOULD FULL CLEARANCE NOT BE ACHIEVED AND IF BITUMEN IS PRESENT WILL ENCAPSULATION BE CARRIED OUT**

- Analyst to forward all air monitoring certification for this project to
- The area will then be de-tented, and the 4<sup>th</sup> stage of the clearance carried out.
- Supervisor to take photos of area on completion of works and upload within the Dropbox job folder.

#### 6. Final Inspection

- Prior to leaving site, the LAR Site Supervisor is to carry out a final walk-through visual inspection of the work area and transit route to ensure that the site is left in a clean and tidy condition
- Supervisor to contact LAR head office to confirm off hire of skip / plant if applicable.
- Complete Section 7: Certificate of Final Inspection

**Work Area/Ref:**

Item 01 – High Level Sprayed Coating Removal

- Scope of Works:**
- High peak to provide a fixed birdcage scaffold 4m x 4 m x 7 m, to give us safe access to the high level.
  - The scaffold will then be fully sheeted with visqueen and sealed with tape.
  - Area will be then smoke tested, witnessed by our supervisor and if required by yourself.
  - A section of spray will be injected with a fibre suppressant and once fully wetted the section will be stripped, this will confirm if there is any adhesive below or its just adhered to the concrete slab.
  - We will also apply two coats of ET 150 to the surface of the spray that remains, if you feel that an approach you would like to take on the remainder if you don't strip the coating, after the trail.( small section)
  - Please note that if during the trail it comes apparent that beneath the spray there is an adhesive coat, we will need to encapsulate this section.
  - We will provide you with photos during the process of the works and provide you this information on completion of the works.
  - We have included as a separate cost to provide an independent analyst to carryout the 4<sup>th</sup> stage clearance and to provide one day of personal monitoring during the removal.

Airlock / Baglock Minimum 3m x 2m x 1m Where Practicable

**Key:**

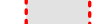
 VIEWING PANEL

 WASTE ROUTE

 TRANSIT ROUTE

 AIRLOCK

 BAGLOCK

 ENCLOSURE

 MOBILE HYGIENE UNIT

 2500 NPU

 6500 NPU

 VAN

 SKIP

 NON-CONTAMINATED MUSTER POINT

 CONTAMINATED MUSTER POINT

 DRAW FILTER

 DRAIN

 FIRE EXTINGUISHER

 FIRST AID

 FIRE EXIT

 TEMPORARY FENCING

 TOILETS

 WELFARE

 GENERATOR

 CCTV

 H-TYPE VAC

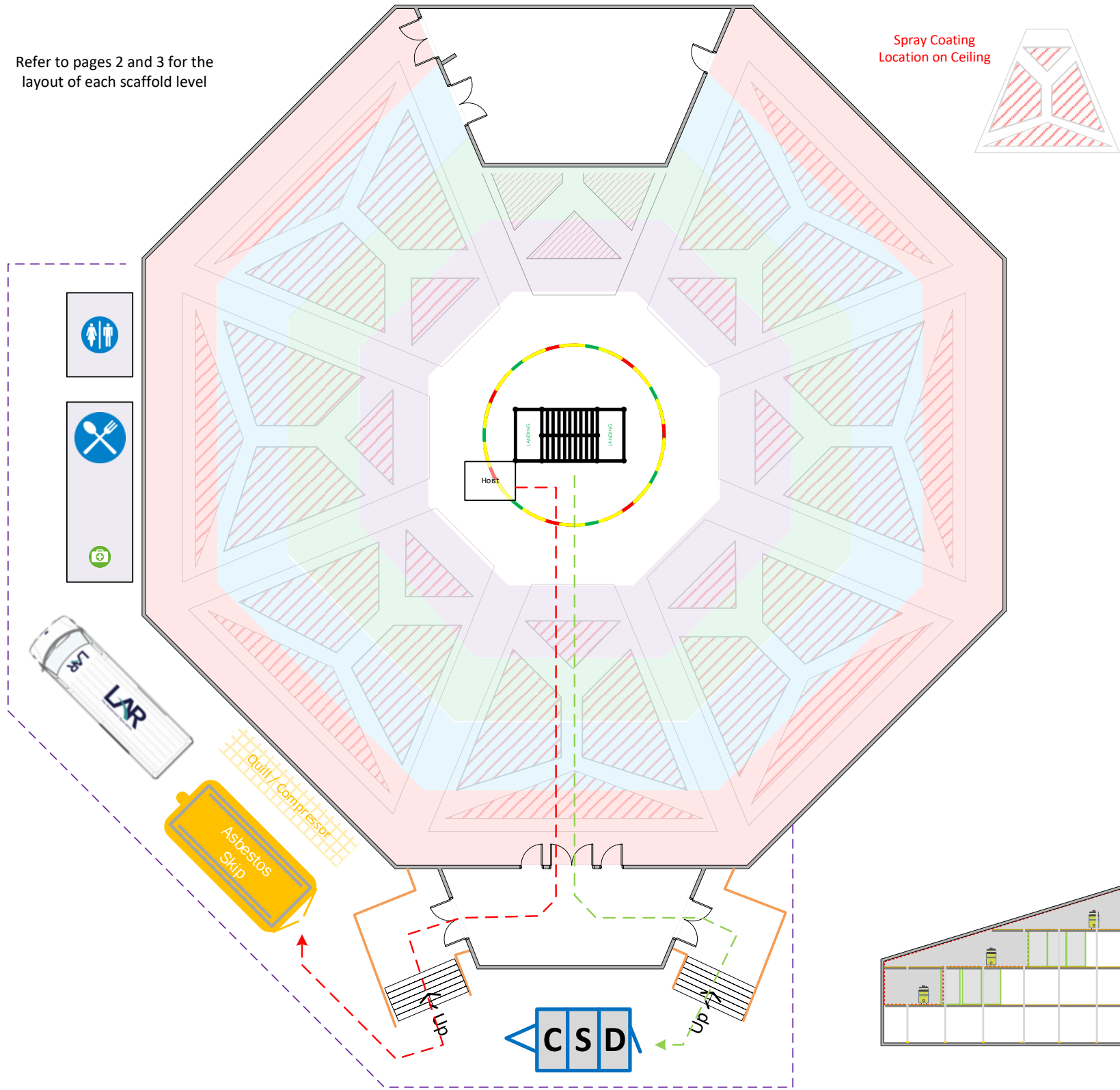
 POWER SUPPLY

 WATER SUPPLY

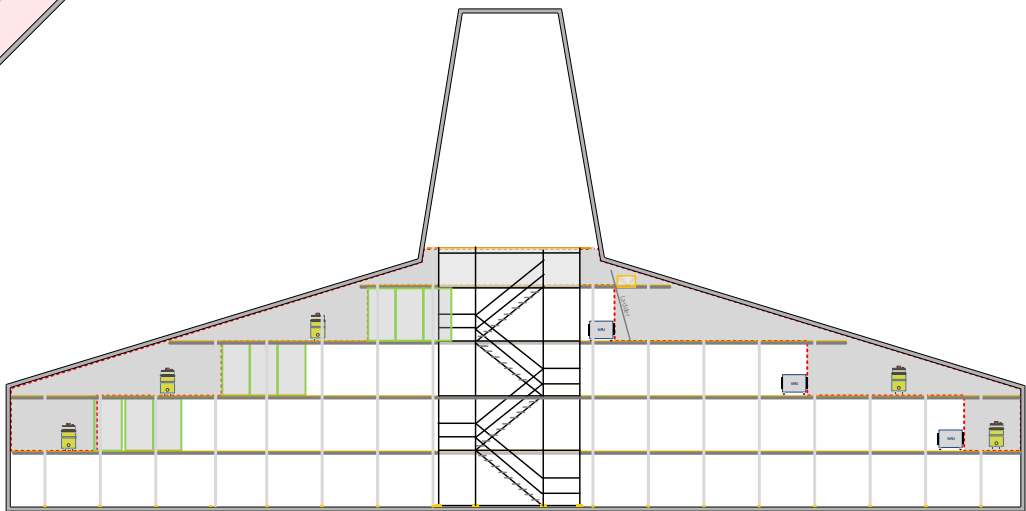
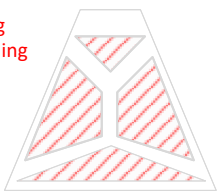
**Authorised By:** 



Refer to pages 2 and 3 for the layout of each scaffold level



Spray Coating Location on Ceiling



**Calculation of NPU capacity**

| Width                                                                     | Height | Length | Airlock        | Baglock        | Add Section    | Ceiling Void   | Volume               | Air Changes Per hour                | Minimum Negative Pressure Required            |
|---------------------------------------------------------------------------|--------|--------|----------------|----------------|----------------|----------------|----------------------|-------------------------------------|-----------------------------------------------|
| m                                                                         | m      | m      | m <sup>3</sup> | m <sup>3</sup> | m <sup>3</sup> | m <sup>3</sup> | m <sup>3</sup>       | 16 or 8                             | m <sup>3</sup> /hour                          |
| 4                                                                         | 2      | 301    | 18             | 18             | 0              | 0              | 2444                 | 8                                   | 19552                                         |
| Proposed number & size of NPU's to be used                                |        |        |                |                | 0 @            | 1500           | Total Value of NPU's |                                     |                                               |
|                                                                           |        |        |                |                | 0 @            | 2500           |                      |                                     |                                               |
|                                                                           |        |        |                |                | 6 @            | 6500           |                      |                                     |                                               |
| Capacity is 85% of NPU rating, average reading taken from service records |        |        |                |                |                |                |                      | -15%                                | 33150                                         |
| Ducting ADD length for ONE NPU only = 1% loss per mtr per NPU             |        |        |                |                |                |                |                      | 0%                                  | 33150                                         |
| BENDS ADD Total amount of bends PER NPU only = 2% loss per bend           |        |        |                |                |                |                |                      | 0%                                  | 33150                                         |
| Is unit suitable after calculations                                       |        |        |                |                |                |                |                      | Minimum requirement<br><b>19552</b> | NPU Capacity after deductions<br><b>33150</b> |

**Air Intake**

| Method       | m3/hour | Quantity    |
|--------------|---------|-------------|
| Air Cube     | 4000    | 0           |
| Airlock      | 1500    | 3           |
| Baglock      | 1500    | 3           |
| Draw Filter  | 300     | 0           |
| Total AIR IN |         | <b>9000</b> |

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**Key:**

|  |                               |  |                   |
|--|-------------------------------|--|-------------------|
|  | VIEWING PANEL                 |  | DRAW FILTER       |
|  | WASTE ROUTE                   |  | DRAIN             |
|  | TRANSIT ROUTE                 |  | FIRE EXTINGUISHER |
|  | AIRLOCK                       |  | FIRST AID         |
|  | BAGLOCK                       |  | FIRE EXIT         |
|  | ENCLOSURE                     |  | TEMPORARY FENCING |
|  | MOBILE HYGIENE UNIT           |  | TOILETS           |
|  | 2500 NPU                      |  | WELFARE           |
|  | 6500 NPU                      |  | GENERATOR         |
|  | VAN                           |  | CCTV              |
|  | SKIP                          |  | H-TYPE VAC        |
|  | NON-CONTAMINATED MUSTER POINT |  | POWER SUPPLY      |
|  | CONTAMINATED MUSTER POINT     |  | WATER SUPPLY      |

**Authorised By:**

