

GENERAL HERITAGE MANAGEMENT PRINCIPLES

All significant interventions notified and preceded through documentary research and detailed visual and if necessary, physical investigation.

Works will be planned to ensure minimum intervention and disturbance to the fabric of the building. Proposed works will be evaluated and for their potential impact on the fabric of the building and notified accordingly.

Intervention works have been carefully considered and justified in terms of its necessity as a repair, an adaptation which better reveals its significance, or an enhancement which extends its sustainable use.

Interventions to the fabric which protect or better reveal the buildings heritage will be encouraged, and change which could cause unmitigated harm to the significance of the building will be avoided.

Every element of the works will be completed sympathetically by competent operatives with a proven track record of working within a Grade II Listed environment. The project culture of care, consideration and preservation of the buildings heritage will be maintained.

This culture will be administered via contractor selection, induction, and relevant toolbox talks throughout the duration of the project.

If required, the heritage consultant will be engaged as works progress to mitigate any detrimental effect on the heritage components of the building.

Before any works commence, the management team will carry out a review of the work area to understand the building fabric within and adjacent to the space.

METHODOLOGY

CONDITION 3 – STRUCTURAL REPORT

The structural report provided by EOC is included within this submission and comprises of documents SUN-EOC-V1-ZZ-DR-S-4300, SUN-EOC-V1-ZZ-DR-S-4301, and SUN-EOC-V1-ZZ-DR-S-4302.

CONDITION 4 – CONCRETE STRUCTURE

For concrete repairs, the following methodology (**Repair Detail 02**) will be used. Data sheets for all products are included within the submission.

- Square cut edges to a minimum depth of 25mm.
- Remove spalled concrete and expose the steel beam until a non-corroded steel is reached and a minimum of 25mm above the steel beam flange is exposed.
- Clean exposed steel to bright condition by using an angle grinder with a cup brush attachment and wipe down using thinners.
- Remove any debris or contaminants from the substrate and steel.
- Apply the **Nitoprime Zinrich Plus** on the exposed steel using a brush.
- Wrap the bottom flange with **Expamet Mesh** and secure in place with shot-fired nails.
- Apply a coat **Nitoprime Zinrich Plus** on the bottom of the steel mesh.

Shell & Core Methodology
Planning Conditions 3, 4, 5, 6 and 7
Condition Number 142317/LO/2025



- Mix the **Renderoc Primer** component A and B in a clean vessel using a spatula or low speed paddle mixer until a homogenous smooth slurry is achieved.
- Scrub the **Renderoc Primer** onto the concrete substrate.
- Install the formwork prepared by adjusting the supporting legs to the right height. Inspect the beam temporary works against the TW Drawings.
- Create small letter boxes along the top of the formwork shutter to be used as an entry for the repair material.
- Mix the **Renderoc LA55** as per below:
- Prepare 3.3L of clean drinking water for every full 25kg bag of the **Renderoc LA55**.
- Pour the water volume into a clean mixing vessel and start the paddle mixer at slow speed (400/500 rpm).
- Add the **Renderoc LA55** into the water and mix for 2-3 minutes until a smooth homogenous consistency is achieved.
- Take 3-100mm cube samples of the material for testing.
- Pump the **Renderoc LA55** into the prepared formwork moving along the opening on the formwork, where pumping will proceed to the next opening once the material comes out of the opening.
- Leave the formwork in place until the cube strength has reached 10MPa.
- Remove any excess concrete as a result of the letter box openings along the formwork.
- Apply the **Nitobond AR** using a brush onto the reinstated concrete surface.

CONDITION 5 – HERITAGE TILES

There are no heritage tiles in the shell and core area and all strip out works have been completed. The only heritage tiling is covered within the End of Journey application

CONDITION 6 – POOL AREA COLUMNS

Investigation works to the columns has already concluded and a repair strategy in place as per the enclosed report. The method of repair (**Repair Detail 04**) is as follows:

- Remove spalled and loose concrete and expose the steel column until the full flange is exposed.
- Clean exposed steel to bright condition by using an angle grinder with a cup brush attachment and wipe down using thinners.
- Remove any debris or contaminants from the substrate and steel.
- Apply the **Nitoprime Zinrich Plus** on the exposed steel using a brush.
- Wrap the flange with **Expamet Mesh** and secure in place with shot-fired nails.
- Apply a coat **Nitoprime Zinrich Plus** on the surface of the steel mesh.
- Mix the **Renderoc Primer** component A and B in a clean vessel using a spatula or low speed paddle mixer until a homogenous smooth slurry is achieved.
- Scrub the **Renderoc Primer** onto the concrete substrate.
- Mix the **Renderoc HB45** as per below:
- Prepare 3.0L to 3.5L of clean drinking water for every full 25kg bag of the **Renderoc HB45**.
- Pour the water volume (start with 3.0L then adjust when needed to 3.5L max) into a clean mixing vessel and start the paddle mixer at slow speed (400/500 rpm).

Shell & Core Methodology
Planning Conditions 3, 4, 5, 6 and 7
Condition Number 142317/LO/2025



- Add the **Renderoc HB45** into the water and mix for a minimum of 3 minutes and maximum of 5 minutes.
- Apply the **Renderoc HB45** with gloved hands to encase the exposed steel and ensure that all crevices are filled and packed with the mortar. The first application can be applied to a maximum of 80mm.
- Where additional layer is required, the surface of the intermediate layers should be comb scratch-keyed, cured with **Nitobond AR** and reprime with **Renderoc Primer**. The application of the next layer may proceed as soon as the primed layer has set.
- Use a trowel to achieve the required dimension and finish.
- Apply the **Nitobond AR** using a brush onto the reinstated concrete surface.

CONDITION 7 – REPAIR WORKS

Other repairs detailed within the EOC report which are not covered above will use **Repair Detail 01** or **Repair Detail 03**. The methods for these are detailed below.

Repair Detail 01

- Create a rectangular cut around the affected area at a minimum depth of 10mm to create a squared edge.
- Break out the concrete to create a rectangular pocket and expose the full circumference of the steel to a minimum depth of 15mm beyond the rebar.
- Remove any debris or contaminants from the substrate.
- Clean exposed reinforcement bars to bright condition by using an angle grinder with a cup brush attachment.
- Wipe down the exposed steel surface using thinners and remove any contaminants.
- Prepare the **Mapefer 1K Zero** as per below excerpt from the manufacturer's instructions:
- Pour 1.0-1.1 l of clean water into a clean container and, while mixing, slowly disperse 5kg of **Mapefer 1K Zero**.
- Mix the product until a lump-free homogeneous paste is obtained. Once prepared, **Mapefer 1K Zero** must be applied within 1 hour.
- Prime the exposed steel by applying 2ml of **Mapefer 1K Zero** with a brush. The second coat can be applied, approximately 2 hours after the first coat and preferably within 24 hours.
- Repair mortar can be applied once the Mapefer has dried (approximately 6 Hours).
- Pre wet the substrate before proceeding with the repair mortar.
- Prepare the **Mapemortar HB R3 Zero** as per below excerpt from the manufacturer's instructions:

Application	Volume of water per 25kg bag
Trowel application	3.4 litres
Hand application	3.6 litres

- Start the mixer and slowly add the **Mapemortar HB R3 Zero** to the clean drinking water in a continuous way.
- Mix for 1-2 minutes, then make sure that the mix is well blended. Scrape any unblended powder from the bottom and sides of the mixing drum and then mix for a further 3 minutes.

Shell & Core Methodology
Planning Conditions 3, 4, 5, 6 and 7
Condition Number 142317/LO/2025



- Either a forced action mixer or a suitable drill and paddle may be used according to the amount of mortar required. Mixing must be carried out at low speeds to avoid air being entrapped in the mix.
- Avoid mixing manually.
- Apply the **Mapemortar HB R3 Zero** by trowel or by gloved hand to a maximum depth of 70mm.
- If the pocket is more than 70mm in depth, apply a second layer before the previous layer cures and smooth the surface using a trowel.
- Remove the exclusion zones only when the mortar has fully cured.

Repair Detail 03

- Install temporary props on the concrete slab adjacent to the steel beam being repaired as per the TW design.
- Clean the exposed steel using a grinder or drill with a wire brush attachment to a bright condition.
- Fix the new supporting angle bars to the existing columns at both ends following the location and fixing detail as per the latest drawing.
- Install the new steel beam onto the supporting angle bars and fasten as per the latest drawing.
- Remove the props.

DRAWING REGISTER

The documents detailed below are included within this submission.

Drawings

SUN-EOC-V1-ZZ-DR-S-4300_MEZZANINE REPAIR PLAN

Revision: P03

SUN-EOC-V1-ZZ-DR-S-4301_REPAIR DETAIL SHEET 1 OF 2

Revision: P03

SUN-EOC-V1-ZZ-DR-S-4302_REPAIR DETAIL SHEET 2 OF 2

Revision: P03

Data Sheets

Fosroc_Nitobond_AR_TDS

Fosroc_Nitoprime_Zincrich_TDS

Fosroc_Renderoc_LA55_TDS

Maapefer 1K Zero Technical Data Sheet

Maapegrout Hi-Flow Zero Technical Data Sheet

Mapemortar HB R3 Zero Technical Data Sheet

Renderoc-HB45-TDS-v2

Renderoc-Primer-Jul20