HUDDERSFIELD STATION

Methodology for deconstructing, storing and reconstructing the Tea Rooms

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TRANSPENNINE ROUTE UPGRADE

ON TRACK TO BETTER

Document verification

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Executive summary

This document presents a methodology for the dismantling and eventual reconstruction of the Tea Rooms, a small Victorian timber building currently located between platforms 4 and 8 in Huddersfield railway station.

As part of works associated with the TransPennine Route Upgrade (TRU), the Tea Rooms must be relocated. Having ruled out all options for relocating the building intact, the successful Transport Works Act Order (TWAO) and Listed Building Consent (LBC) applications included in-principle details for deconstructing, storing and reconstructing the building in a different location on the amended island platform.

The building will remain largely intact in its original form, constructed of timber studs and joists and cladding boards inside and out. Although the building has seen some changes over time, principally in its internal layout and functions, it will be reconstructed in its present form – although rotated by 180 degrees.

Across four parts this document provides an approach to cataloguing and surveying, deconstructing, handling, storing, repairing, altering and reconstructing all parts of the building. Indicative drawings and outline specification clauses are provided, to be followed (and, where appropriate, developed) by a specialist contractor.

This information is also indented for use by the conservation officer and others in the project team, to assist them in understanding and assessing the technical requirements of the work.

References, definitions & abbreviations

References

Atkins, *Huddersfield Station: Statement of Significance*, 2018
Historic England, *Conservation Principles, Policies and Guidance*, 2008
Historic England, *Practical Building Conservation: Timber*, 2012
Historic England, *Practical Building Conservation: Mortars, Renders & Plasters*, 2011
Getty Conservation Institute, *Recording, Documentation and Information Management for Historic Places*, *Guiding Principles*, 2008
Manuela Farneti, *Technical-Historical Glossary of Mosaic Art*, 1989
Network Rail archive drawings
ICOMOS (International Council on Monuments and Sites The International Council on Monuments and Sites) principles and charters

Definitions

Heritage values	Aesthetic, communal, evidential and historical: contributors to an assessment of heritage significance. (Historic England)
Integrity	“Wholeness, honesty.” (Historic England)
Measured survey	The activity of producing measured drawings on site by hand measurement, and/or by using various heritage recording tools (e.g. total stations, photogrammetry, 3D laser scanners, etc.).
Morphological study	Study of the form describing the change of buildings and their use from a historical perspective.
Joint line	The intersection between components of a building, or sub-components of part of a building. A concept derived from the practice of dismantling and relaying mosaics: “For any large-scale project, the work must be broken down into sections which are more easily manageable. To conceal the joints between the sections, panels are cut to follow the general outlines of the mosaic design. Each section... is marked and numbered, and a key drawing is carefully followed to make sure that unity is achieved when the pieces are fitted together on site.” (Farneti)
Heritage record	“A technical dossier of a cultural heritage place prepared by heritage recorders. It consists of measured drawings, photographs and technical analysis. They are meant to provide necessary basic data for conservation and monitoring activities. They also provide the public archives with posterity records.” (Getty)
Terrazzo	“Flooring in which chips of marble ... form simple linear patterns on cement matrix.” (Farneti)

Abbreviations

CIMP	Conservation Implementation Management Plan
GRIP 5	Stage of the project (similar to RIBA Stage 4)
LBC	Listed Building Consent
TRU	TransPennine Route Upgrade
TWAO	Transport Works Act Order: specifically the Network Rail (Huddersfield to Westtown (Dewsbury) Improvements) Order

Project roles & definitions

Alliance	TRU West Alliance: a consortium comprising Bam, Amey & Arup
Conservation team	Conservation specialists within Alliance: Heritage team at Arup with specialist contractors at Bam
Consents team	Atkins, on behalf of Network Rail
Conservation officer	Heritage advisor for Kirklees Council, the local planning authority

Part 1: General principles and heritage significance

1. Introduction

1.1 TransPennine Route Upgrade

In July 2022 a Transport and Works Act Order (TWAO) was granted to authorise the TransPennine Route Upgrade (TRU) project, a multi-billion pound, transformative, long-term railway infrastructure programme that will improve connectivity in the North. The project involves increasing line speed, improving platform capacity and introducing overhead electrification along the TransPennine line. This will mean the large-scale adaptation of various existing stations.

1.2 Huddersfield station

Huddersfield station is a Grade I listed building, originally constructed between 1846 and 1850 and substantially upgraded in the 1880s. It is principally famous for its grand classical frontage, referred to in the TRU proposals as the Principal Building. Other features of its train sheds and platform environment are also of significance, along with its architectural and townscape context adjacent to a historic goods yard with two large listed railway warehouses.

Extending platforms and upgrading switches and crossings for TRU will involve significant changes to the listed building.

The scheme for Huddersfield station will include the following. More detail is provided in other documents, including the application for listed building consent (LBC).

- removing one of two existing 1880s train shed roofs;
- reconstructing the existing island platform in a new location;
- constructing a new island platform;
- construction a large new roof spanning between the island platforms with a cantilevering canopy covering the westernmost platform;
- dismantling, storing and reconstructing a timber structure (known as the 'Tea Rooms'), which currently occupies a site on the existing island platform, in a slightly different position on the reconstructed island platform.

1.3 The Tea Rooms

The Tea Rooms are a distinctive part of the historic platform environment at Huddersfield station. As described in section 3, they have a high heritage significance: both for their architectural quality and for their functional role as a building designed for use specifically on an island platform, with access from doorways on both sides.

A key part of the TRU proposals has been to preserve this functional role in the upgraded station – and indeed to maintain, as closely as possible, the building's existing spatial relationships to the other structures.

However, the footprint of the relocated island platform does not allow the Tea Rooms to remain in their original location. The new western platform edge of the island platform will sit significantly closer to the Principal Building, meaning that there will not be sufficient clearance to the platform edge. Columns for the new roof structure will also need to pass through the Tea Rooms building.

Options were previously considered to move the building to its new location on rollers. This was ruled out due to a number of reasons, principally:

- the complexity of constructing primary structure columns (for the new canopy roofs) within the Tea Rooms;
- the support required for the lightweight structure of the building itself during the operation, which would be highly intrusive and damaging to its historic fabric.

With this in mind the consented scheme involves carefully dismantling and removing the Tea Rooms, storing all components off-site, then reconstructing them on the new island platform around three of the new roof columns.

The building will be located around 2.5m from its existing position, and will be rotated by 180 degrees to enable the cafe to be a more prominent feature.

1.4 Consents

The project at Huddersfield station has required both planning permission (via the TWAO) and LBC. LBC was granted in June 2022 (ref: 2021/91382), with conditions 3 and 5 relating to the Tea Rooms.

Condition 3 states that:

> *"No works of demolition shall take place until an approved methodology for full structure recording has been approved in writing with the local planning authority. Subsequent recording to the appropriate level (as recommended by Historic England) will take place prior to demolition and be deposited with the West Yorkshire Archive Service and West Yorkshire Historic Environment Record in accordance with the timescales agreed in the approved methodology. The following structures are the subject of this condition: ... ii) Huddersfield Station Tea Rooms (level 2)."*

'Level 2' in this case refers to the level of recorded detail as defined in the Historic England publication *Understanding Historic Buildings: A Guide to Good Recording Practice* (2016).

Condition 5 states that:

> *"No works including any works of demolition shall commence until a Conservation Implementation Plan (CIMP) for Huddersfield Station and Huddersfield Viaduct (MVL 3/92) has been submitted to and approved in writing by the local planning authority. The approved CIMP will include as a minimum requirement contents based on the model template CIMP structure annexed to this list of conditions.*
>
> *The CIMP will specifically include methodologies for:*
>
> *iii) the deconstruction, storage and reconstruction of the Tea Rooms at Huddersfield Station;*
>
> *iv) the identification of historically or architecturally significant elements of the fabric which once removed may be reused or preserved, and a strategy for their storage or reuse;*

v) any improvements to the setting to sustain, enhance and better reveal the heritage asset affected;

The works must be carried out in accordance with the approved CIMP unless otherwise agreed in writing with the local planning authority."

1.5 This document

This document is intended to provide the information required to discharge the conditions on listed building consent relating to the Tea Rooms. It provides a methodology for the deconstruction, storage and reconstruction of the building, consisting of the following four distinct parts.

Part 1	General principles and heritage significance
Part 2a	Exteriors
Part 2b	Interiors
Part 3	Outline repair specification and notes

Through all four sections the methodology is underpinned by a detailed significance assessment, a rigorous morphological study and a systematic approach to recording the building both in situ and during dismantling.

It is intended to be read alongside and in the context of the CIMP.

1.6 Additional approvals

Discharging the conditions noted above will require regular engagement between contractor, conservation team, consents team and conservation officer.

While the conservation team will be responsible for monitoring progress generally, under the conditions of LBC certain key items will need to be offered to the conservation officer (and, through them, to other statutory and non-statutory stakeholders) for formal approval. This list is likely to expand during dismantling, as hidden parts of the building are exposed and inspected for the first time.

These items will generally be assessed first by the conservation team, then discussed with the consents team prior to formal submission to the conservation officer (via a mechanism to be agreed). This process is summarised throughout this document as **"conservation officer approval"**.

An in-principle methodology and indicative timescales for these approvals will be agreed by all parties at the appropriate time.

1.7 Authorship and credits

This report has been prepared by Francesca Bellucci Layland and edited by Thomas Pearson from the Heritage & Conservation Architecture team at Arup. It contains previous work by others in the Arup team including trial opening-up works carried out in 2019.

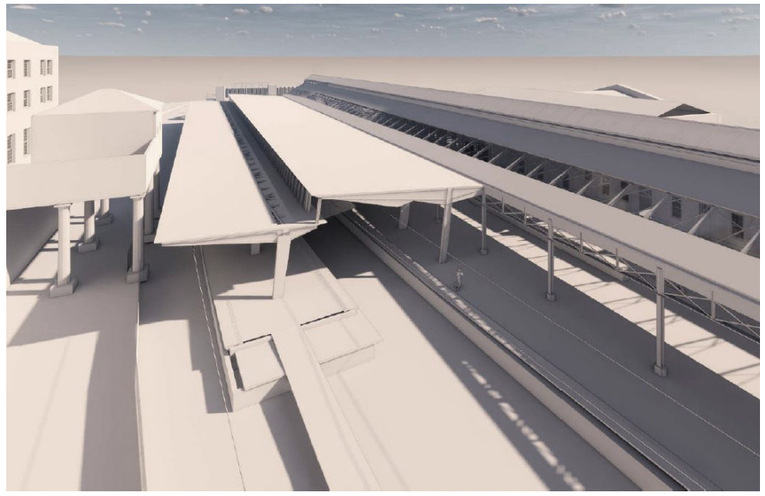
Image credits are as noted in figure captions. Where no credit is given the image is the work of the TRU design team (Arup or AHR). The 3D survey model referred to in parts 2a and 2b was prepared by BAM Construction in October 2022.



(1)1. Huddersfield station from St. George's Square



(1)2. 1880s train sheds to rear of Principal Building (Google)



(1)3. Proposed new structure replacing existing Victorian shed



(1)4. Servery area in café



(1)5. Tea Rooms from platform 4



(1)6. Impression of Tea Rooms within upgraded station

2. General approach for working with the Tea Rooms

2.1 Understanding significance, history and construction

The first step in the methodology is to understand the building in terms of its significance and its physical, chronological and morphological evolution. This information is contained within chapter 3..

Assessing significance is essential before starting to plan a system for disassembly. It is crucial to understand which parts of the building are more or less important, or may be constructed from different materials, or where unusual details may be encountered. The building appears regular and repetitive but this may not always be the case.

Archival research allows a detailed assessment at this stage. This part of the dismantling methodology (part 1) contains the following:

- morphological study (historical development);
- statement of significance, extracted and expanded upon from the project-wide *Statement of significance* (Atkins, 2018).

Parts 2a and 2b both begin with a summary of the construction (externally and internally, respectively) as observed today. They include:

- record of elements (including an assumed structural layout), including information of a trial dismantling exercise);
- record of materials;
- high-level condition survey.

Other related works to be carried out during the current project stage (GRIP 5) which will inform the methodology, and be circulated separately in due course, are as follows:

- opening-up works to establish the existing ceiling construction and condition;
- paint analysis (history and toxicity).

2.2 Identifying elements for alteration

Parts 2a and 2b describe proposals for which elements will be removed and replaced. Any additional replacements for elements which are found to be more decayed than expected, or other findings not identified by visual observations prior to the commencement of work, will be presented to the conservation team and conservation officer for consideration. This will enable the conservation officer to assess and, if appropriate, approve the proposed amendments.

This exercise will be developed further by a specialist contractor and updated as works proceed on site, following a methodology to be agreed with the conservation officer.

2.3 Recording system

Each element of the building must be identified with a name, labelled, photographed and placed on a set of key drawings. The key drawings and their labelling system will be used later for the re-erection of the building.

Parts 2a and 2b indicate how such a system may be devised for the different parts of the building. The specialist contractor may develop their own versions using these as their guide. They must consider various additional aspects which will be under their control, such as off-site storage: how they choose to store the dismantled building may have a considerable bearing on their approach to numbering and labelling its parts.

2.4 Site work

The following steps, all to be carried out by the specialist contractor in the following project stage (GRIP 6), are outlined in parts 2a, 2b and 3.

- *Dismantling all building elements*

  As the building is carefully dismantled, following a methodology and specification agreed in advance with the conservation officer other parties, the contractor will incorporate the structural elements currently obscured behind the cladding into the key drawings, labelling system and other documents.

  It is likely that the framework of studs, joists, etc. is repetitive in relation to the strict rhythm of the façade. However, without substantially more trial dismantling, or multiple repeats of the exercise described in section 2a, these elements can only be estimated at this stage.

- *Storage of all components off-site, under suitable conditions*

  Allowing for adequate humidity control, access for inspection if required, clear and logical grouping of related elements, etc.

- *Reassembly of the building*

  This will be in accordance with the survey and design drawings, the specification included in part 3, and all relevant conditions of the listed building consent granted for the station project.

  The reconstruction will include various new elements including three new structural steel columns, new building services, fire safety upgrades, etc.

2.5 Key principles

2.5.1 Joint lines

Each element will be divided into its constituent sub-elements based on their *joint lines*. The joint line is where a component is joined to any adjacent pieces. Each component may have several joint lines: the horizontal panel joins the skirting board, the dado rail and the column shaft; the column shaft joins the boarded wall panel, the plinth and the capital; the capital joins the entablature and the console bracket; and so on.

The joint is where the agreed dismantling point/line is located. It is a key reference that will be used for the re-erection of the building.

The unique aspect of this approach is that the setting-out of the reconstructed building is based on using the joint lines as reference, rather than working from other exposed surfaces which may vary significantly relative to the joint.

This methodology is derived from techniques for the detachment, lifting and relocating of mosaic floors. This was carried out for the first time in France around the turn of the nineteenth century and subsequently developed and refined by specialist conservation institutions such as the mosaic restoration school in Ravenna, Italy (part of IC Rome and OPD Florence). The approach has been improved over time through practice and debate to minimise the loss of materials and mitigate environmental and relocation impacts.

2.5.2 Overall conservation principles

The conservation principles used for the works are as follows:

- minimum intervention (recognising that dismantling and reconstruction will itself be a major change);
- chemical, physical, mechanical and aesthetical compatibility between existing and modern materials;
- preservation of earlier works as far as possible.

We note that given the painted nature of the building, the future 'legibility' of repairs or new elements within the underlying timber structure and cladding is likely to be negligible.

2.6 Stakeholder engagement

High-level designs for the Tea Rooms, along with the results of the trial dismantling work, were presented to Historic England and Kirklees Council in March 2020 and again as part of a summary presentation of the whole Huddersfield scheme in April 2020. This material remained unchanged for the TWAO and LBC submissions later that year.

An overview presentation looking at the Tea Rooms in more detail was delivered to Kirklees Council on 17 March 2022. The table on this page, presented in that meeting, describes the status of various items relating to this methodology.

Record	Status (as of meeting with Kirklees Council, 17 March 2022)	Constraints	Ref.
Statement of significance	Completed by Atkins.		
Archive drawings	Obtained from NRG Archive.		Part 1: 4
Photogrammetric survey	High resolution photographs: view points to be agreed. To be produced by contractors, to be confirmed.	May be some constraints around access.	Matterport survey
Morphological study of the building	Exteriors and partially interiors (wall position) report completed based on archive drawings and in situ evidence. Interiors to be inspected. Morphological plans in progress.		Part 1: 4.7
Record of elements	Exteriors completed (except for south elevation and roof). Completion will be after kiosk is removed and roof accessed. Contractors to follow approved methodology and subdivide elements to suit the 'joint line' or 're-sewing' line; position of line to be agreed between contractors and the conservation/heritage team.	South elevation not recorded due to kiosk. No access to roof.	Part 2a: 4.3 Part 2b: 3.1
Record of materials	Exteriors completed (except for south elevation and roof). Completion will be after kiosk removal. Paint analysis to be undertaken. Contractors to produce records of materials before and during dismantling process.	South elevation not recorded due to kiosk. No access to roof.	Part 2a: 3.1 Part 2b: 3.1
Condition survey	External condition survey completed (except for south elevation). Completion will be after kiosk removal. Contractors to produce records of surveys before and during dismantling process.	South elevation not recorded due to kiosk. No access to roof.	Part 2a: 3.2 Part 2b: 3.1
Record of materials not be retained	Exteriors completed (except for south elevation and roof). Completion will be after kiosk removal. Roof to be recorded when access available. Contractors to produce records of elements and seek permission for all elements not salvageable due to their condition.	South elevation not recorded due to kiosk. No access to roof.	Part 2a: 4.4 Part 2b: 4.4
Record of repairs and replacements	Exteriors completed based on visual observation and archive records (except for south elevation and roof). Completion will be after kiosk removal. Contractors to produce records of elements and seek permission for all elements to be repaired or replaced if not salvageable due to their condition.	South elevation not recorded due to kiosk. No access to roof.	Part 2a: 4.5, 4.6 Part 2b: 4.5, 4.7
Physical survey	Contractors to follow approved methodology and produce record surveys before and during dismantling process. Methodology to be submitted to and approved by HE and Kirklees.		See figures (2a)1 & (2b)1
Drawings	Drawings, Revit model and schedules in progress		Drawing package
Record of findings	External vent slots to timber skirting behind plastic grille vents have been identified as possibly original to building. In progress. Contractors to follow approved methodology and produce record of findings before and during dismantling process. Methodology to be submitted to HE and Kirklees for comment.	May be some constraints around access.	Part 2a: 4.7 Part 2b: 4.8

3. Understanding the building

3.1 List entry

As part of the list entry (number 1277385) for Huddersfield station, the Tea Rooms are noted as follows. This is simply intended as a descriptive record of the building, not a guide to its significance.

> *"Buffet and Waiting Room between platforms 4 and 8 is a separate match-boarded structure with panelled pilasters, each taking paired brackets and cornice."*

3.2 Basic arrangement, as originally designed

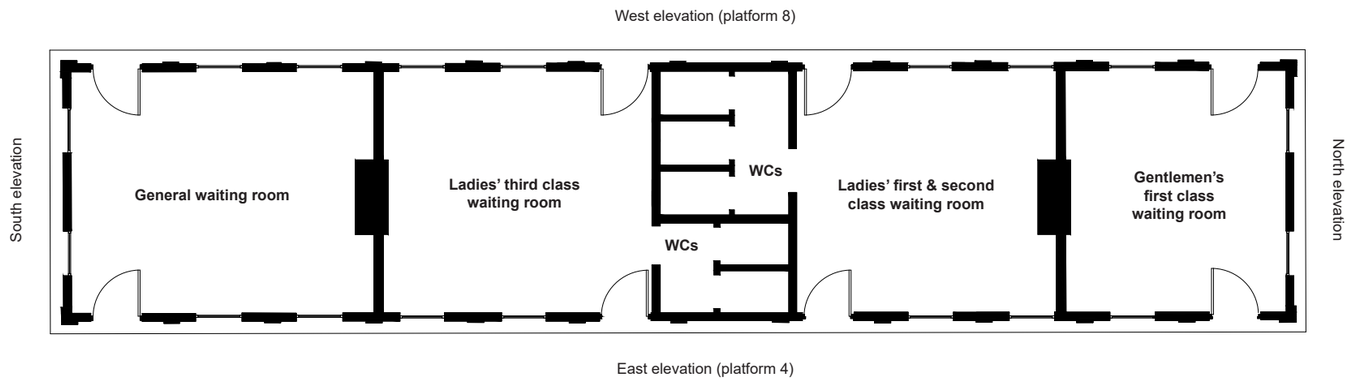
The Tea Rooms are a simple timber building, rectangular on plan. The building was originally divided roughly symmetrically, with a central area of WCs. Each side featured a passenger rooms divided by a single cross-wall with chimney. This plan form is illustrated on figure (1)7.

The external elevations, shown on various figures including (1)16 and (2a)18 to (2a)21, feature a plinth base and an entablature with console brackets at the roof line. The elevations are divided vertically by a series of repeating pilaster/capital/bracket modules. Each bay contains either a door or a window.

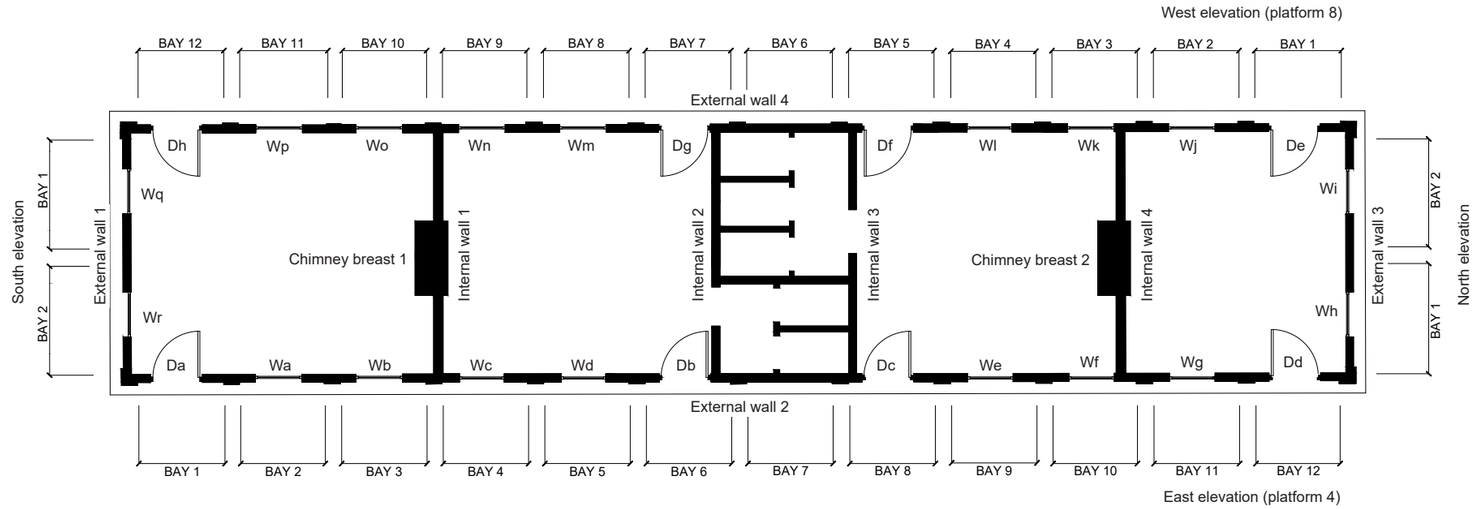
3.3 Subdivision and nomenclature

Figure (1)8 shows how the bays have been numbered, running left to right on each elevation. Each bay number must be accompanied by the corresponding orientation (north, south, east or west) or platform number (4 or 8) for the long elevations.

The original doors, windows, walls and chimney breasts have also been assigned reference numbers. These referencing system has been used in the tables in chapter 4.



(1)7. Tea Rooms floor plan, c.1884



(1)8. Tea Rooms floor plan, c.1884, with key elements noted and numbered

4. Historical development

4.1 Background

Although the original building is largely intact today, various elements have been modified over time.

Work to the exterior elevations appears to have generally been carried out sympathetically, respecting the modular design and materials of the Victorian construction. Some internal changes have been more pragmatic in nature, leaving many interior spaces with relatively low-quality fittings and finishes.

The principal changes over time have been assessed using a sequence of drawings from the Network Rail archives. These are presented in the following sections, using the basic element nomenclature as described on figure (1)8.

Important note: It is not always known when (or, in some cases, if) the changes which appear on the drawings took place. Where design drawings exist, it has been presumed that alteration works took place around the date noted on the drawing. This is unlikely to be strictly accurate, so specific dates should be considered as approximate.

4.2 c1880 plan with c1884-1898 alteration

4.2.1 Descriptive summary

- General waiting room converted to booking office and passageway with lift.
- The cladding system 'rough boarding canvassed and papered with lining paper' is also indicated in the WCs where not tiled

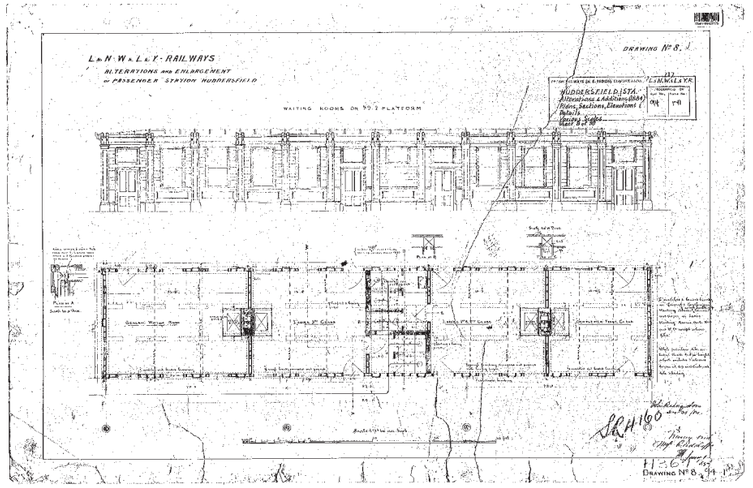
See figures (1)9 to (1)13 overleaf.

4.2.2 Element-by-element analysis: exteriors

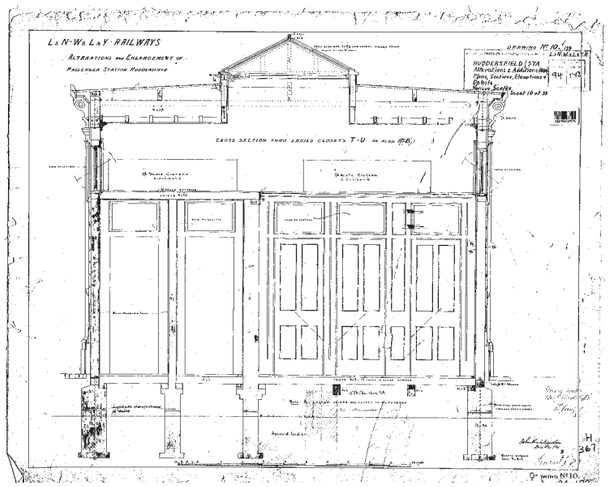
Elevation	Bay	Element	Alteration
East (P4)	1 2 3	Wall panel, horizontal panel, plinth, door architrave	Timber wall panel and horizontal panel taken down. Alteration to plinth base and door architrave on bay 3.
		Wa Wb	Windows taken down. Sash window Wa on bay 2 moved to bay 1.
		Da	Door and fanlight moved to Bay 2 from Bay 1. Door shown as four-panel door with frame and plinth.
		Chimney breast 1	Stove and stone hearth *'to be removed'*.
		Internal wall	Construction of wall parallel to internal wall 1 between Bay 2 and Bay 3 to create a space for lift.
West (P8)	10 11 12	Wall panel, horizontal panel, plinth, door architrave	Timber wall panel and horizontal panel taken down. Alteration to plinth base.
South	1 2	Wq Wr	Windows Wq and Wr replaced with new details. Panels and dado rails lowered; wood framing to bottom sash to form ticket window. Brass wire and baywood gratings.

4.2.3 Element-by-element analysis: interiors

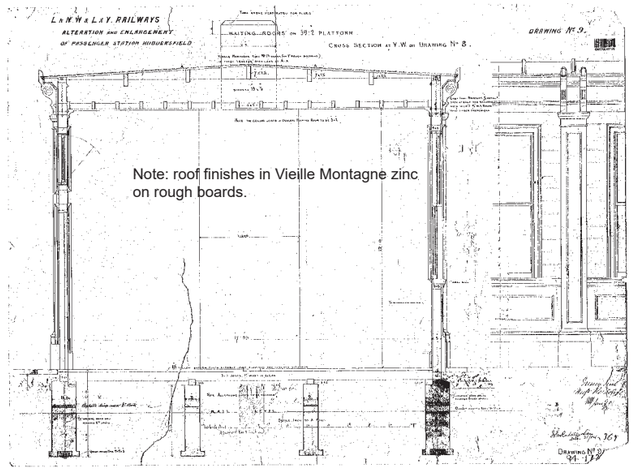
Elevation	Bay	Element	Alteration
West (P8)	7	Tile	'White porcelain tiles in the WCs and ladies' closet'
West (P8) East (P4)	1 6 8 12 1 5 7 12	Perimeter door	'Teak sills' on the door threshold
West (P8)	6 8	Solid wall	Internal wall 2, 3 and the middle wall as solid walls with 'plastered & lining paper' on the outer wall and white porcelain tiles and skirting in the ladies' closet.
East (P4)	4 5 6 8 9	Rough boarding canvassed and papered with lining paper	Internal wall of ladies' 3rd class waiting room and ladies' 1st & 2nd class waiting room.
East (P4)	11 12	Matched and beaded boarding	Internal cladding walls in gentlemen's first class room
East (P4)	1 2 3	Matched and beaded boarding	Internal cladding walls in general waiting room
		Timber floor	'Yellow batten floor straight joints ploughed and tongued with iron' throughout the building with the possible exception of WC areas



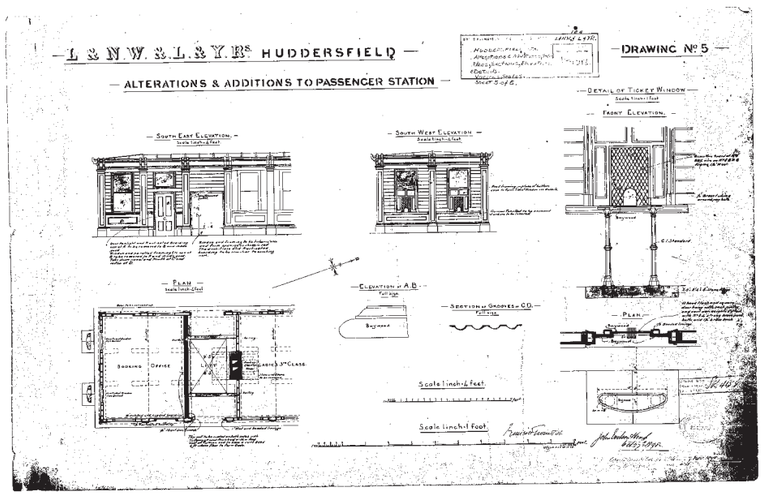
(1)9. Elevation and plan section, 1884



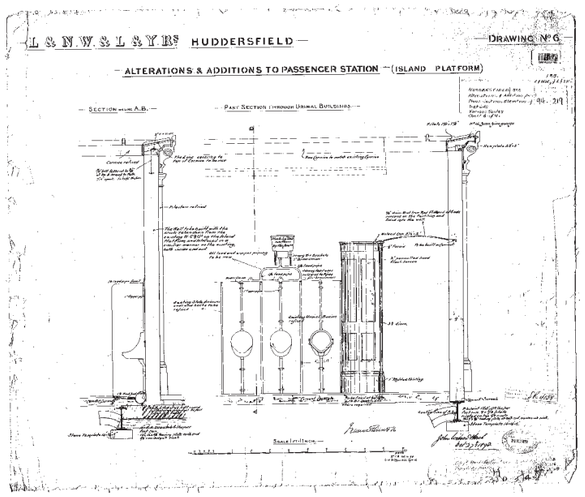
(1)10. Short section (through ladies' closets), 1884



(1)11. Short section, 1884



(1)12. Elevations, part plan and details, 1898



(1)13. Short section (through gentlemen's lavatories), 1898

4.3 c1901-02 drawings

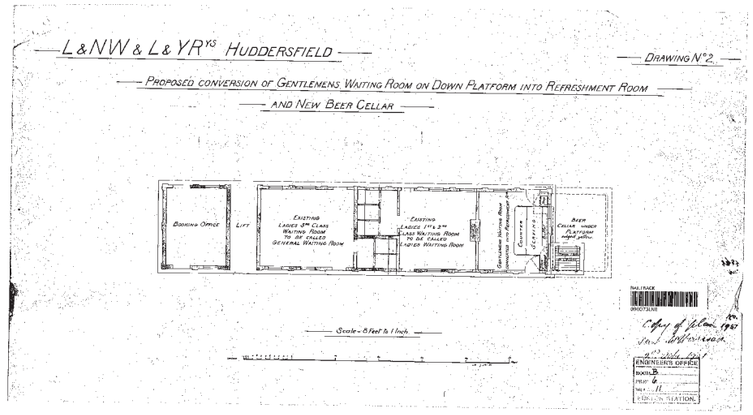
4.3.1 Descriptive summary

To be read in conjunction with the plans dating from c.1901 and c.1902 (figures (1)14 and (1)15).

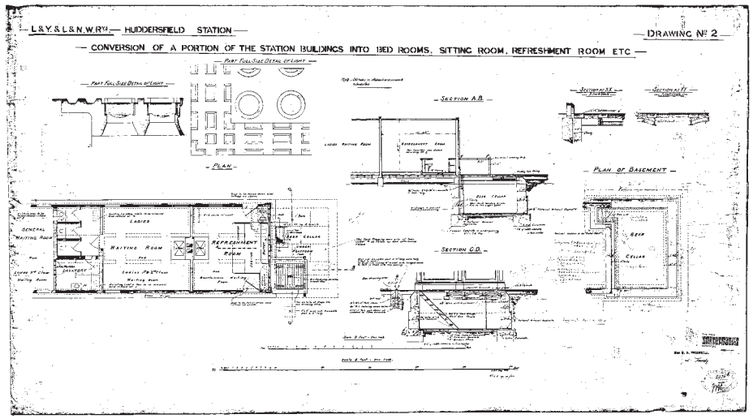
- Ladies' third class waiting room converted into general waiting room.
- First and second class ladies' waiting room converted to ladies' waiting room.
- Gentlemen's first class waiting room converted into refreshment room. Construction of counter, serving and buffet counters and store cupboard. Trap and ladder to beer cellar.
- Construction of beer cellar under platform with trap door (access at platform paving level). *"York flagging over site of beer cellar to be taken up and afterward relaid."*

4.3.2 Element-by-element analysis

Elevation	Bay	Element	Alteration and comparison
East (P4)	4 5 6	Internal walls 1 & 2	As per c1880 plan. The internal door opening to the toilets as per c1880 plan.
	7	Internal walls 2 & 3	As per c 1880 plan. Door to lavatory from general waiting room blocked up and re-erected internally in the partition wall to the lavatory side (see 1956 plan).
	8 9 10	Internal walls 3 & 4	As per c1880 plan including internal door opening to toilets.
		Chimney breast 2	As per c1880 plan.
	11 12	Dd	Door Dd as per 1880s plan hinged on the opposite side.
West (P8)	1	De	Door De as per 1880s plan hinged on the opposite side.



(1)14. Proposed conversion of gentlemen's waiting room into refreshment room, 1901



(1)15. Proposed conversion, 1902

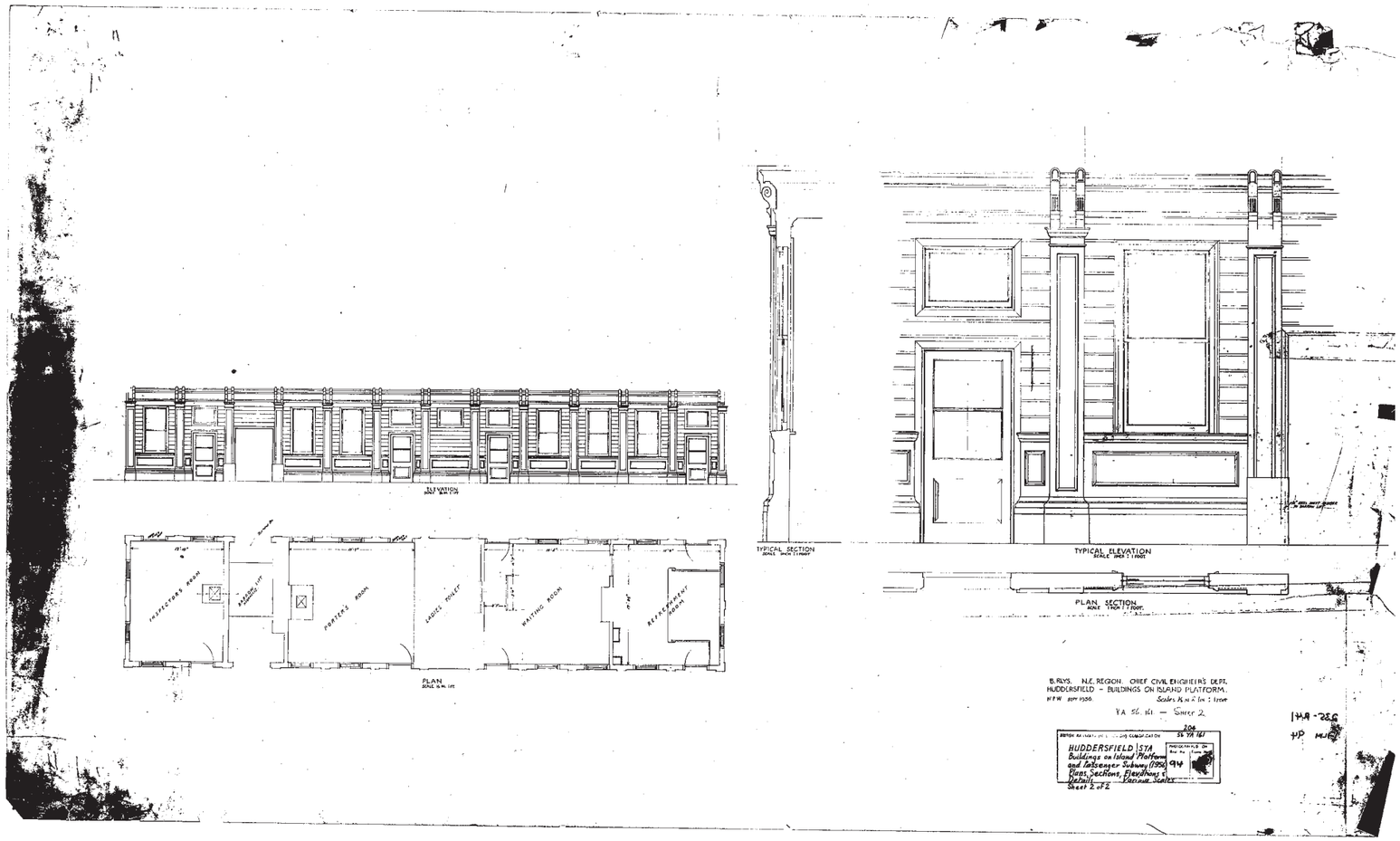
4.4 1956 drawings

4.4.1 Descriptive summary

- Booking office converted into inspectors' room. The 1956 door design (lower moulded pane and two glazed inset panes at upper level door) is different from the previous four panel layout. Additional side door panels with inset mouldings. The bay 1-2-3 are as per 1901-1902 plan layout.
- General waiting room converted into porter's room (bay 4-5-6 to platform 4 and bay 7-8-9 to platform 8).
- 'Ladies' toilet' marked as a single room.

4.4.2 Element-by-element analysis

Elevation	Bay	Element	Alteration and comparison
4	1 2 3	Chimney breast & hearth	Shown on inspector room side.
		Barrow hydraulic	Shown on plan (bay 3).
		internal wall 1	Shows a larger wall thickness.
	2 6 8 12	Da Db Dc Dd	Doors position as per 1901-1902 and 1898 plans.
	11 12	Internal wall 4	New door opening between refreshment room and waiting room.



(1)16. Plan, elevation and detailed elevation, 1956

4.5 1978 plan

4.5.1 Descriptive summary

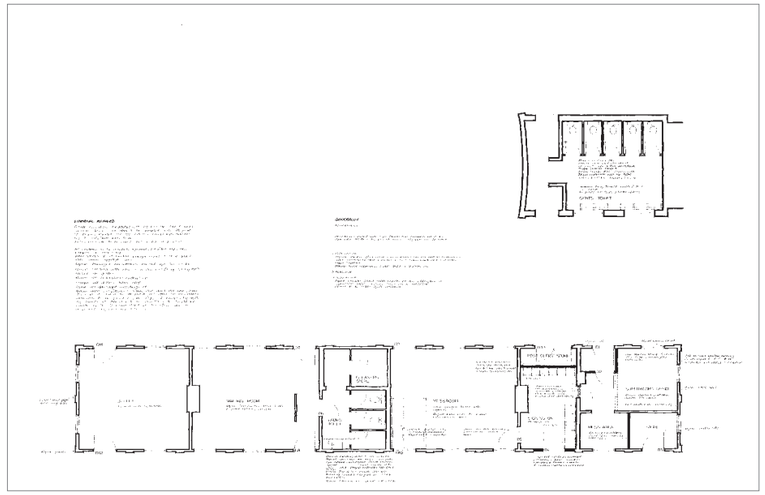
- Inspector's room subdivided to create storage, supervisors' office and mess room with a sink. A partition wall within the supervisors' office is marked as having been removed, although there is no record of when this partition was originally installed. There is also no record for the erection of the partition between the store room and the supervisors office prior to 1978.
- Passage with barrow lift infilled (bay 3 to platform 4) to create signing-on room and post office store.
- Ladies' toilets partially replaced with cleaner store (bay 7 to platform 4).
- Existing floor covering removed in waiting room, mess room, supervisor's office, mess area and store, to be replaced with 32mm hardboard and 32mm sheet linoleum; sheet linoleum also provided in ladies' toilet and signing-on room.
- Tiles removed from ladies' toilet cubicles; walls replastered.

4.5.2 Other notes

"Redundant battens removed; air grate replaced; extent vent pipe on buffet side". Work to waiting room (bay 8-10 to platform 4): *"repair 3no existing bench seats. Re-paint existing gas fire".*

4.5.3 Element-by-element analysis

Elevation	Bay	Element	Alteration and comparison
All	All	Windows, doors	From the drawing notes: *"All external doors are replaced with new doors to match 'original'; all sash windows except on the buffet room reglazed"*
East (P4)	1 2 3 4	c1880, 1901-1902 internal wall	New door opening to internal wall. Construction of partition box and new partition walls to form a lobby. Removal of existing partition to form supervisors' office.
		Bay opening	Double door added (visible the door frame on the existing elevation).
		Internal wall 1	New door opening to mess room.
	6	Internal wall 2	Door opening to toilet blocked up (mess room side on the c1880 plan).
	7	Internal wall 3	Door opening position to ladies' toilets as per previous plans.
	10	Internal wall 4	1956 door opening blocked up.
West (P8)	10	Wall & horizontal panels	*'strip out existing boarded partition and form new door opening and timber panel to match existing elsewhere'.*



(1)17. Floor plan, 1978
(note that plan is rotated in relation to previous drawings)

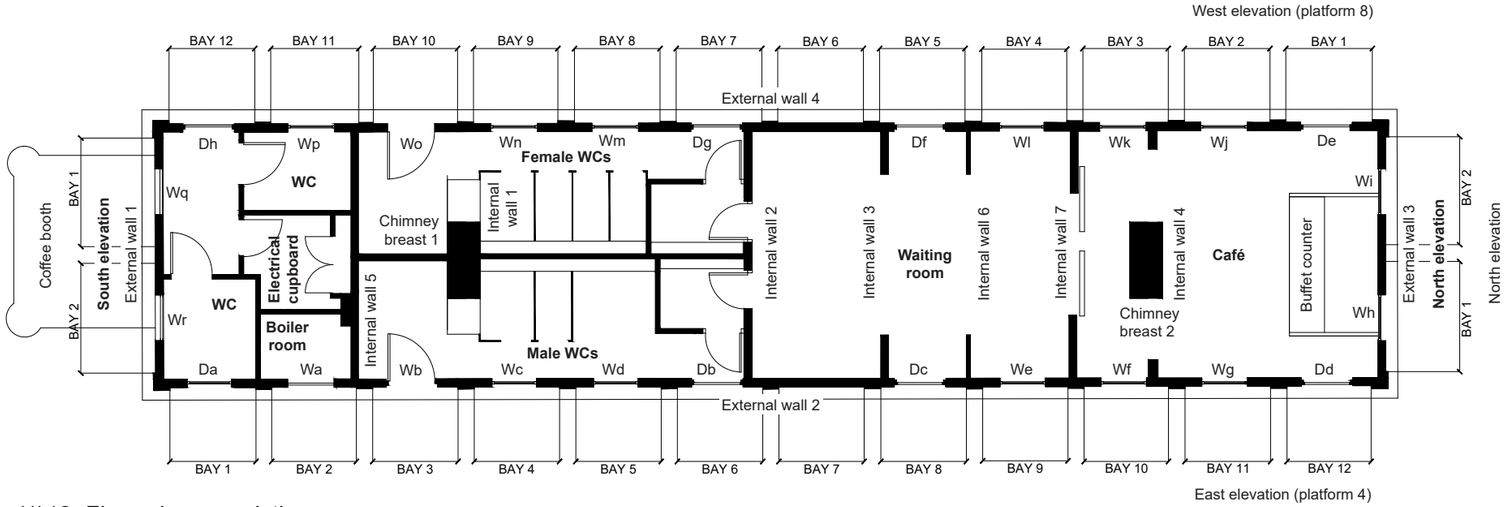
4.6 2022 layout

4.6.1 Descriptive summary of changes since c.1978

Erection of coffee booth on the side elevation (orientation) towards staircase. Erection of internal wall partitions to suit layout of male and female WCs.

4.6.2 Element-by-element analysis

Elevation	Bay	Element	Alteration and comparison
West (P8)	1 2 3	bay opening	Double door became single door (bay 3). Only the side nibs survive.
		Internal wall 4	Removed.
		New internal partition	Erection of new partition wall with sliding double door (bay 3-4 to platform 8).
	4 5	New half partition	Erection of side half partition between bay 4 and 5 to platform 8.
		Internal wall 3	Wall position as per previous plans. Large opening on wall.
	6	Internal wall 2	Wall position as per previous plans. New door opening to male WCs as per c1880, 1901-1902, 1956 plans. New door opening to ladies' WCs.
	9 10	Internal wall 1	Removed.
		Chimney breast 1	Position unchanged.
		Internal c1898 wall	Wall position as per previous plans. The 1978 door opening to signing area blocked up.
East (P4)	1 2	New partition walls	Erection of new partition walls and door openings to suit the separate WC room. Some of the partitions are erected on the 1978 partition footprint.



(1)18. Floor plan as existing

Note: Figure (1)18 is used throughout the following parts of this methodology as a reference guide for the existing and proposed (reconstructed) Tea Rooms layout.

4.7 Morphological plans

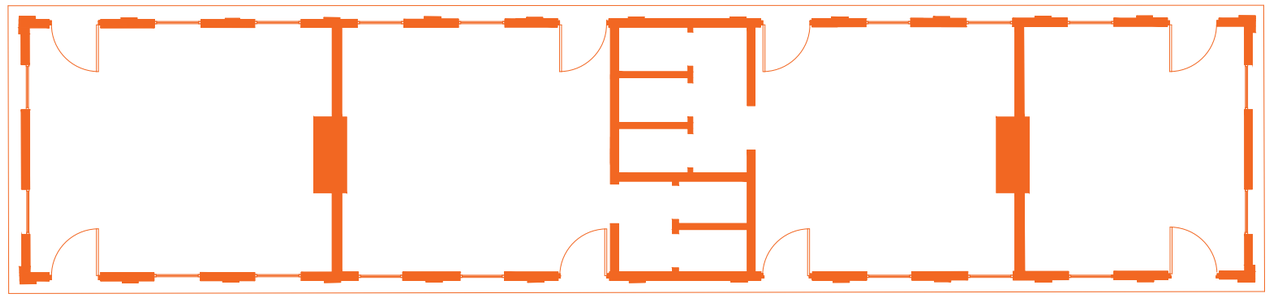
The following plans summarise the changes described in the previous sections, using a colour key to denote elements of different ages.

Colour key

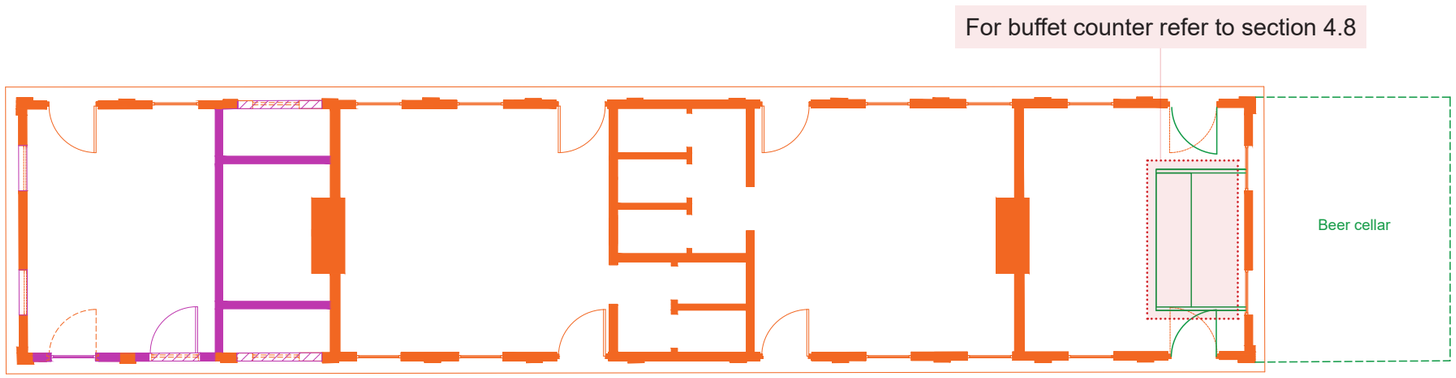
- 1880
- 1884-1898
- 1901
- 1901-1956
- 1956
- 1978
- 1978-existing

Hatching key

- retained element
- opening
- footprint of previous element



(1)19. c.1880



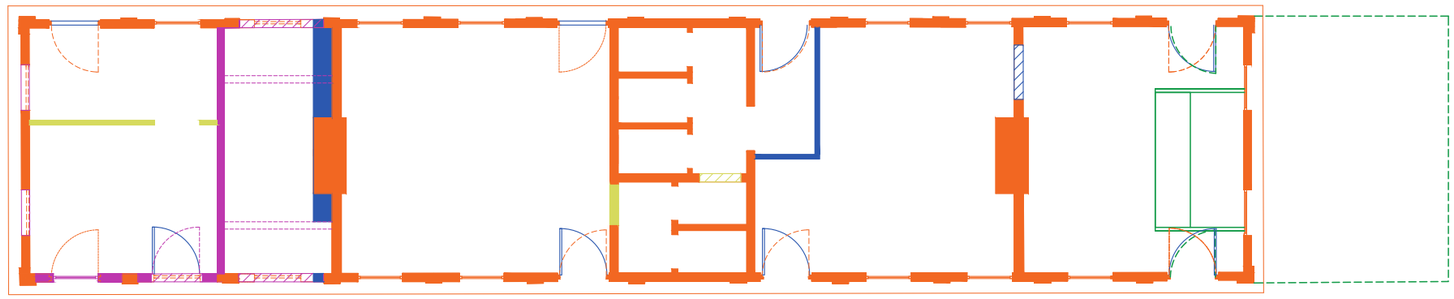
(1)20. Up to c.1901

Colour key

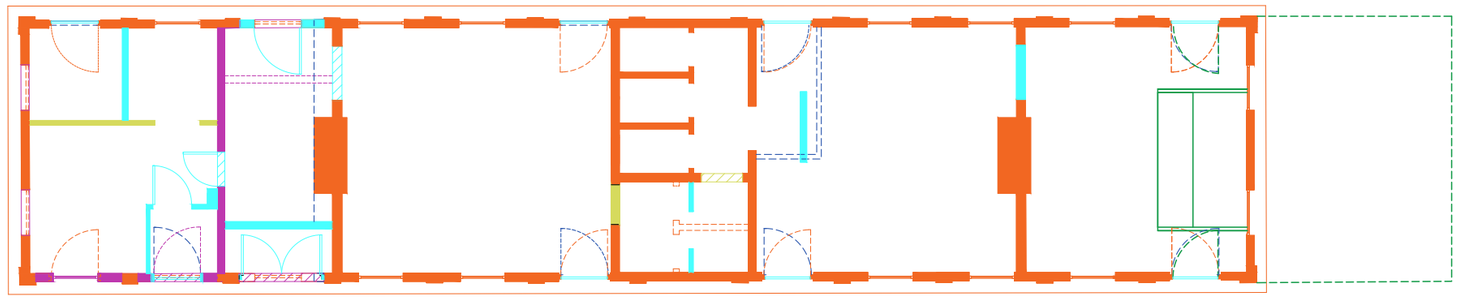
- 1880
- 1884-1898
- 1901
- 1901-1956
- 1956
- 1978
- 1978-existing

Hatching key

- retained element
- opening
- footprint of previous element



(1)21. Up to c.1956



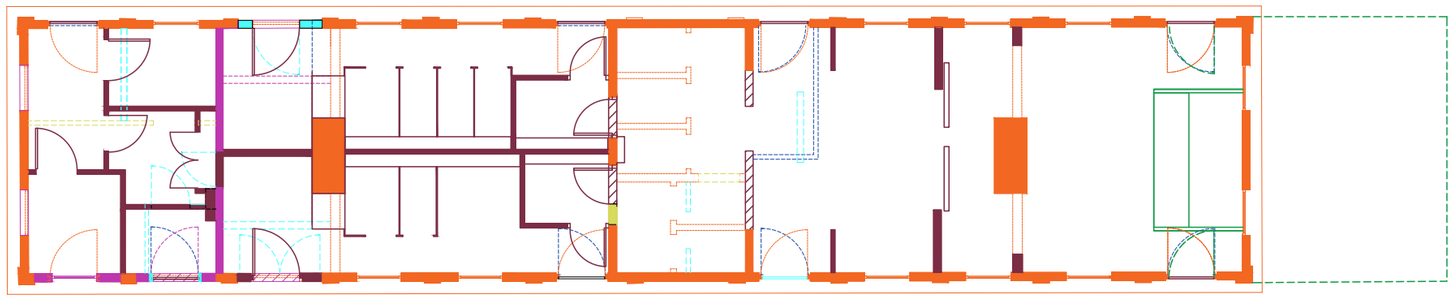
(1)22. Up to c.1978

Colour key

- 1880
- 1884-1898
- 1901
- 1901-1956
- 1956
- 1978
- 1978-existing

Hatching key

- retained element
- opening
- footprint of previous element



(1)23. Up to 2022

4.8 Buffet counter

4.8.1 Background

The station buffet counter dates from the 1901-1902 development, as described in 4.3 and shown on figure (1)20, when the room was converted from a gentlemen's waiting room to a refreshment room. A buffet counter was installed on the inside of the north wall, and two doorways facing the counter (Dd to platform 4 and De to platform 8) were reversed. The scheme also included the creation of a beer cellar under the platform level to the north of the Tea Rooms.

The 1956 alteration (figure (1)21) includes an opening through the internal wall between the cafe' room and the waiting room, and the design of the external doors changed again.

The 1978 works record the full replacement of these doors. The 1956 opening was blocked off.

At some point between 1978 and recent years two openings were added to internal wall 4, leaving two side nibs still visible on the east and west sides. A partition wall with a large opening and sliding doors were erected.

4.8.2 1901-02 design

Figure (1)24 shows the buffet counter in the middle of the two entrance doors. On the floor behind the left door (facing the buffet counter) is an access trap door for the beer cellar created under the platform level as part of the same 1901-02 development of the station.

The buffet counter area is accessed through a door to the left; another door gives access from there to a cupboard on the right. The floor is raised above the room floor level. The internal layout of the buffet counter includes a sink and basin, a set of drawers within and a cash drawer on the top. There is also a shelf with beer engine underneath and another shelf with bin area.

The timber front counter structure is of a classical design with a plinth, a front elevation divided by pilasters and moulded panels, and a Sicilian marble top. The panel in front of the beer engine space is shown as a loose panel access.

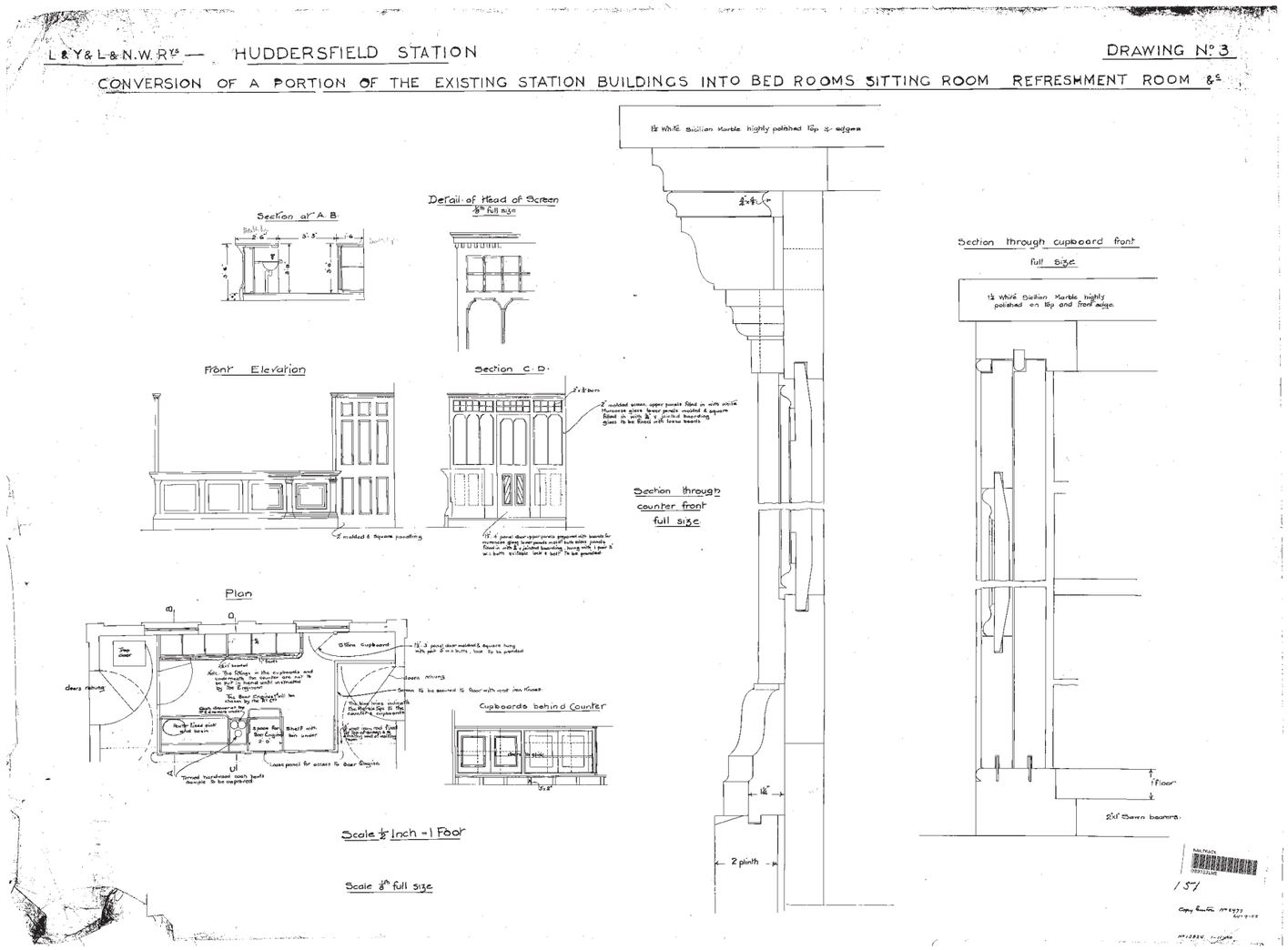
The rear counter wall features a range of cupboards with a counter the same height as the front bar. The cupboards feature sliding doors and a white Sicilian marble top.

The store cupboard has a three-panel moulded door. The front elevation of the cupboard, facing into the room behind door Dd, shows a moulded panelled wall ending with a moulded dentilled coving.

On the left side of the front counter, a screen runs perpendicular to the counter with moulded dentilled coving above. The middle panel consists of a four-panel door with inset panes of Muranese glass; the lower panel features a plinth and two panels of diagonal boarding. The fixed parts of the screen feature a similar pattern of glass panes above and timber below.

A similar screen runs on the right side of the front counter, presumably originally glazed in a similar fashion to the other screen, and is secured to the floor with wrought iron knees.

On both side of the front counter there are *"two wrought iron rods fixed at top of screen & to the existing wall of waiting room"*.



(1)24. Details of 1902 conversion to refreshment room

4.8.3 The counter today

The layout of the buffet counter remains as per the original layout with a rear counter at the back and a small storage cupboard on the right-hand side. Observations made on 5 August 2022 include the following (see also figures (1)25 to (1)30).

- All the screens have modern inset glazing panes occupying the full area created by the outer timber framing. The original pattern of smaller inset panes no longer exists.
- The entrance door on the left-hand screen is missing.
- The side wall panel of the storage cupboard has been altered with the insertion of a hinged panelled door, in place of the original entrance behind the counter. This earlier door is no longer present: in its place is a partition with modern tiles.
- The front counter top appears to be laminated MDF. The rear counter retains the original white Sicilian marble.
- The rear counter cupboard doors have been replaced with modern doors, although internally the frame (including the sliding door system) appears to be part of the original scheme.
- The rear counter wall has modern ceramic wall tiles and a modern stainless steel kitchen extractor.
- The buffet counter features various modern appliances for the preparation of food, with service conduits as required.
- The front counter has a till on top and a sink and shelves underneath as per the original layout function
- The buffet counter floor is raised from the room floor finishes, with a timber step, and is covered by a modern vinyl.
- Services run through the left-hand side screen at low level.
- The plinth of the buffet counter front elevation is covered by a plastic sheet, fixed directly into the historic timber with screws.
- The existence of the trap door on the left side of the counter could not be verified because of a large fridge sitting on top.



(1)25. The buffet counter today



(1)26. Buffet counter: Left side screen, with missing door



(1)27. Buffet counter: left side screen, step and opening detail



(1)28. Buffet counter: right side



(1)29. Inside buffet area



(1)30. View of rear of buffet area

5. Significance

5.1 Tea Rooms as a whole

The project *Statement of significance* considers the importance of the Tea Rooms building in the context of the station and a wider architectural and railway history. It states that:

> *"The Tea Room at Huddersfield is reflective of the trends for providing improved station facilities for passengers alongside wider works to expand stations from the 1860s onwards. Comparative examples are difficult to come by, though this is partly due to the relative lack of research given over to such structures when compared to principal station buildings or engineering structures such as station roofs.*
>
> *Nevertheless, it is clear that Huddersfield represents a rare example of the use of timber boarding in such buildings, even though isolated examples do survive elsewhere of timber platform buildings of similar date or as elements of station expansion, a number of which remain in use.*
>
> *The significance of the Tea Room building lies in its historical association with the expansion of the station in the 1880s and the timber-boarded form, both elements particularly connected to the architectural expression of their plan form within the context of the island platform; designed to be accessed from both sides, this is a key element to be retained.*
>
> *The interior of the structure has been altered in places, and as long as any design solution maintains the external character and accessibility into and across the building from both sides, alterations to interior elements such as the location of the servery will not impact on the building's significance, nor detract from the extent to which it contributes to the overall significance of the station.*
>
> *The functionality of the structure is also key to its significance, given it has maintained its intended use.*
>
> *Therefore, where there are opportunities to improve this functionality, as long as these are not to the detriment of other elements contributing to significance, these can be pursued, in order to enhance the structure for its continued operational life."*

For the purposes of this methodology, within the context of Huddersfield station being of **very high** significance overall, the Tea Rooms are considered as having a **high** significance.

5.2 Subsidiary elements

The external elements are considered to have a **high** significance, as being of key importance to the largely unaltered appearance of the building. Studwork and other hidden structural elements are considered to be of **medium** significance. Interior finishes are considered to be of **medium** significance where original finishes and structural elements exist, and of **low** significance elsewhere. Modern elements, particularly those which obscure older architectural components, are of **negligible** significance at most.

5.3 Buffet counter

In order to guide the dismantling scheme for the buffet counter itself, the following brief assessment is presented as an extension to the *Statement of Significance* for Huddersfield station overall.

The assessment of the buffet counter's heritage significance is based on archival research, a visual site inspection, and consideration of the following four heritage values (evidential, historical, aesthetic and communal) as defined by Historic England in *Conservation Principles, Policies and Guidance* (2008).

Evidential value

The evidential value of the buffet counter lies principally in its function and layout, which have barely changed from the 1901-02 installation. Elements including the plan form, side access, wrought iron side fixings, front counter elevations and rear counter top and framing are all original to the scheme.

As noted in the *Statement of significance*, the Tea Rooms' position on the island platform, with access from both sides, was distinctive: *"an important element evidencing the development of the island platform and station expansion of the 1880s."* This distinctiveness is carried through to the design of the café area, with its passenger doorways on both sides creating an unusual sense of split circulation.

Historical value

The main historical value of the buffet counter is its association with the provision of station refreshments. Although similiar catering facilities would have been commonplace on the rail network the Tea Rooms remain an evocative element within the context of Huddersfield station today.

Modern additions such as the kitchen extractor, appliances, and additional shelves are of no significance in themselves, but they help to demonstrate the adaptation and continued relevance of the café over time.

Aesthetic value

The main aesthetic value of the buffet counter is its integral and harmonious role within the overall Tea Rooms arrangement. Despite being significantly younger than the building it is entirely sympathetic with its architectural context. The buffet counter and side screens panels contribute to the room as a focal point, and (although compromised over time) are clearly items of competent craftsmanship.

Communal value

The buffet counter is the centrepiece – the most familiar part – of an important station facility used by countless travellers over more than a century. The owners today talk of a community of regular customers, for whom the characterful café is an important part of their experience of Huddersfield station and the TransPennine railway line.

Overall

Within the **very high** significance of Huddersfield station overall, and what might be considered the **high** significance of the Tea Rooms, the café and its buffet counter have a **high** significance in and of themselves.

Within this significance the surviving original components are of the highest significance. Other items, including off-the-shelf modern kitchen equipment and components which obscure the older fabric (such as the plinth fascia and the MDF counter) contribute little if anything to the heritage values and are of **negligible** significance at most.

Part 2a: Exteriors

1. Introduction

1.1 This document

This document is part 2a of a methodology for the dismantling, storing and reconstructing the timber Tea Rooms building at the Grade I listed Huddersfield station, as part of the TransPennine Route Upgrade.

It expands on the ‘general approach’ outlined in chapter 2 of part 1, focussing specifically on the external elements of the building. It also includes an assumed approach to the studwork and structural timber hidden within the walls.

The Tea Rooms exteriors have been assessed visually during visits in October 2019, March 2020 and November 2021. They have also been examined intrusively during a dismantling trial carried out in December 2019. A trial excavation was also undertaken at the base of the building in April 2020. These inspections are all described in chapter 2 below.

Chapter 3 covers the recording of all existing external materials, with observations on their present condition. Chapter 4 describes a set of additional surveys required of a contractor. It includes a set of outline proposals for elements to be repaired or removed, to be developed further as the building is dismantled. Chapter 5 presents a proposed dismantling sequence, to be read in conjunction with the outline repair and specification notes of part 3.

1.2 Exteriors

The exterior parts of the building include:

- timber cladding applied to the outside of its studwork frame;
- timber pilasters with plinths and capital mouldings;
- timber architraves with mouldings;
- cast-iron console brackets above the pilasters;
- sash windows;
- doors;
- roof.



(2a)1. Huddersfield Station Tea Rooms: axonometric bird’s-eye-view from 3D model

2. Surveys to date

2.1 Visual inspections

The Arup team undertook general visual inspections of the building's exteriors in October 2019, March 2020 and November 2021. Photographs and observations taken during these visits are included throughout this methodology document.

2.2 Pilaster removal

An intrusive inspection of the Tea Room, trialling dismantling techniques, was carried out in week commencing 9 December 2019.

The work was focussed on a single pilaster on the Platform 4 elevation (between Bays 4 and 5 according to figure (1)18). A trial hole was also excavated at the south-eastern corner of the building to determine the make-up of the ground below.

Timber mouldings surrounding larger panels and covering some cladding joints were found to be relatively easy to lever off the building, along with their fixing nails, although some damage was inevitably caused by the hand tools used. The force required to break through the paintwork was also considerable. Filling of small-scale surface damage, and some repair to split timber, was required upon reinstatement.

Once released, the pilaster panel could be removed relatively easily as a single piece. This was found to be a large pre-fabricated element with some fine carpentered joints.

Once the pilaster panel was removed, and the edge of the cladding boards exposed, they could be prised away from the walls studs relatively easily. These boards are lapped, so their removal must be sequential.

The cast iron console brackets above the pilaster elements could not be removed due to a lack of access to the fastening nut within the roof void.



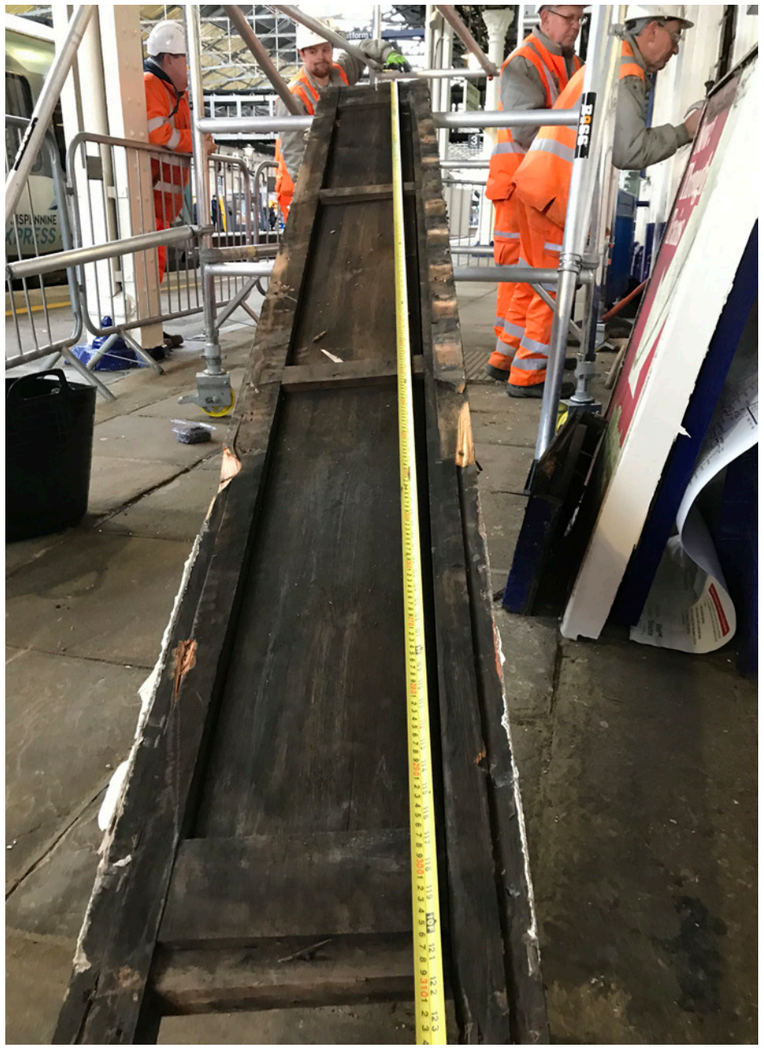
(2a)2. Initial removal of plinth to access pilaster frame



(2a)3. Release of pilaster



(2a)4. Pilaster removed



(2a)5. Inner face of pilaster



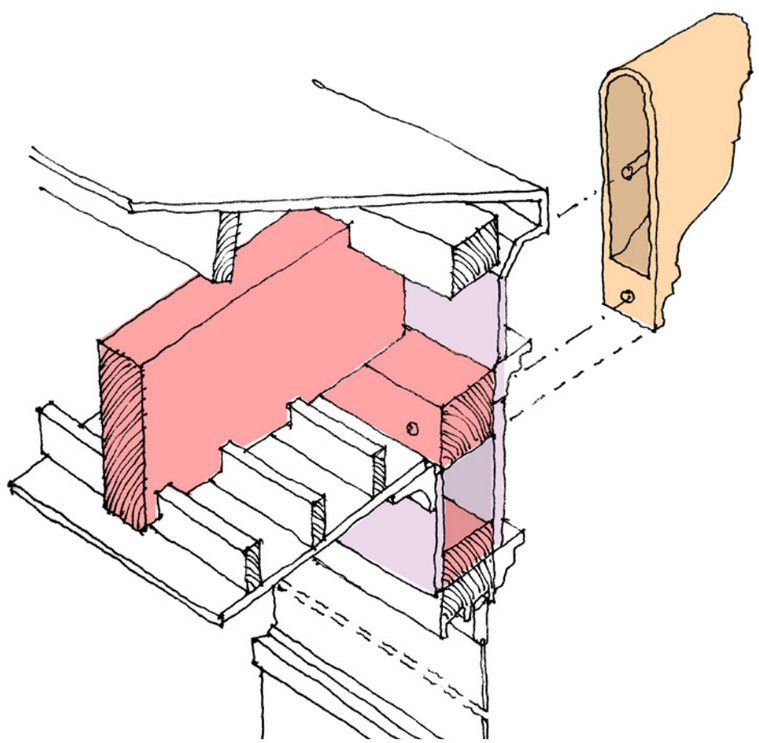
(2a)6. Dovetail joint in pilaster frame



(2a)7. Exposed unpainted cladding

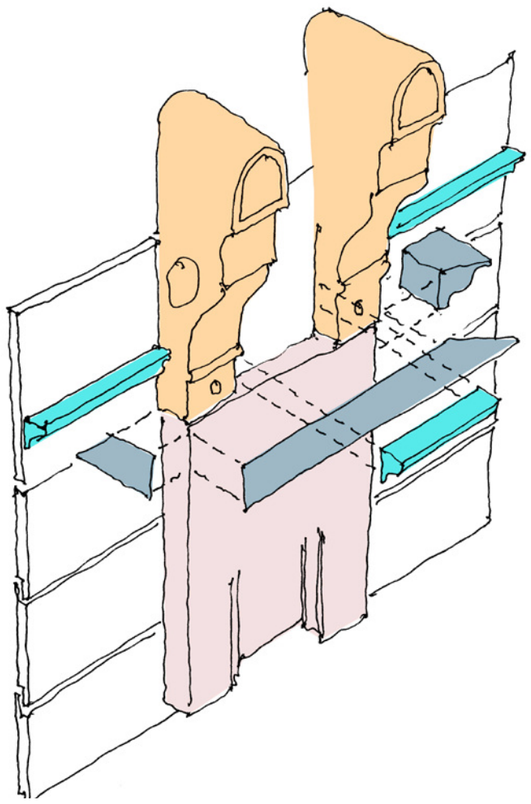


(2a)8. Cut iron nails from cladding



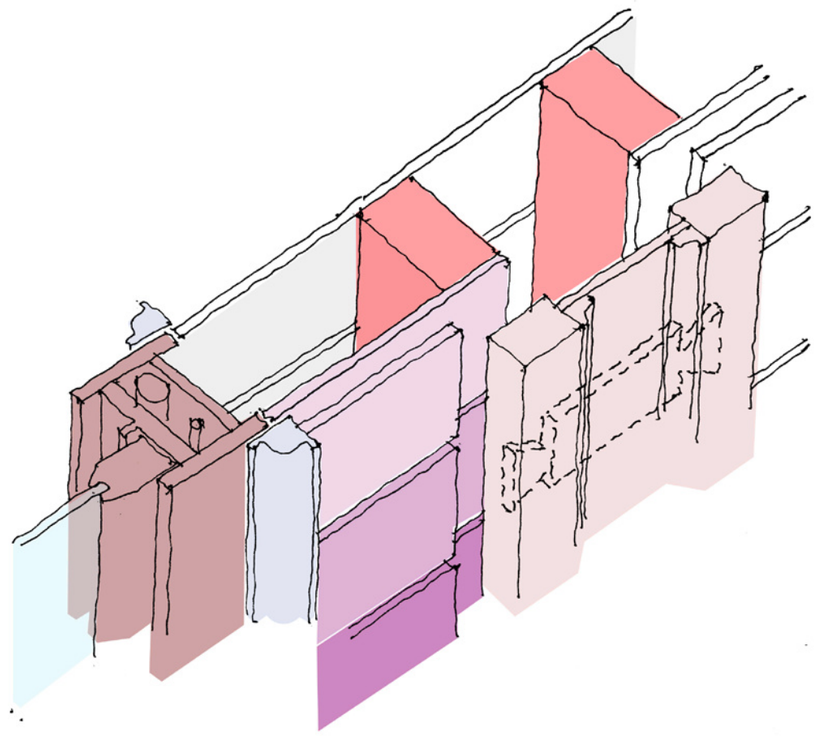
(2a)9. Exploded sketch of assumed fixing details to console brackets and inner frame

- *Timber stud/joist frame*
- *Cladding boards*
- *Decorative cast iron console brackets*



(2a)10. Exploded sketch of upper framework of external face

- *Small top roll: face-fixed*
- *Pilaster head moulding: face-fixed*
- *Prefabricated pilaster panel*



(2a)11. Cutaway sketch showing studwork and sash box behind cladding boards

- *Sash window*
- *Window surround*
- *Lapped cladding boards (external)*

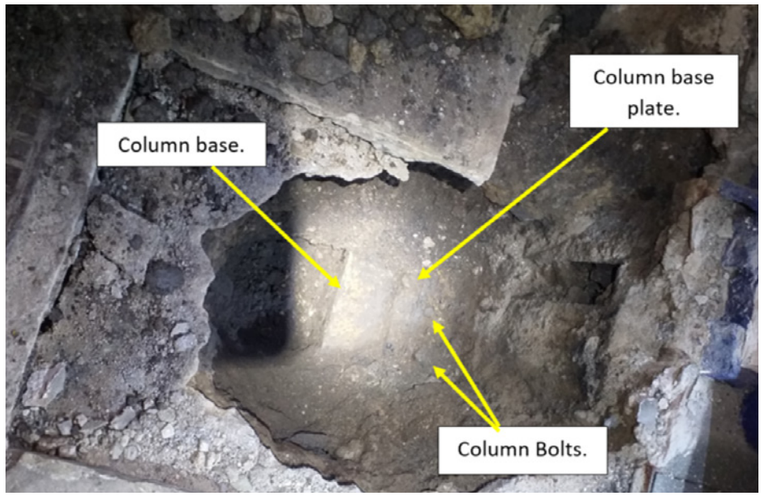
2.3 Foundation survey

A trial to determine the foundations of the columns which are in proximity to the Tea Room was completed in April 2020.

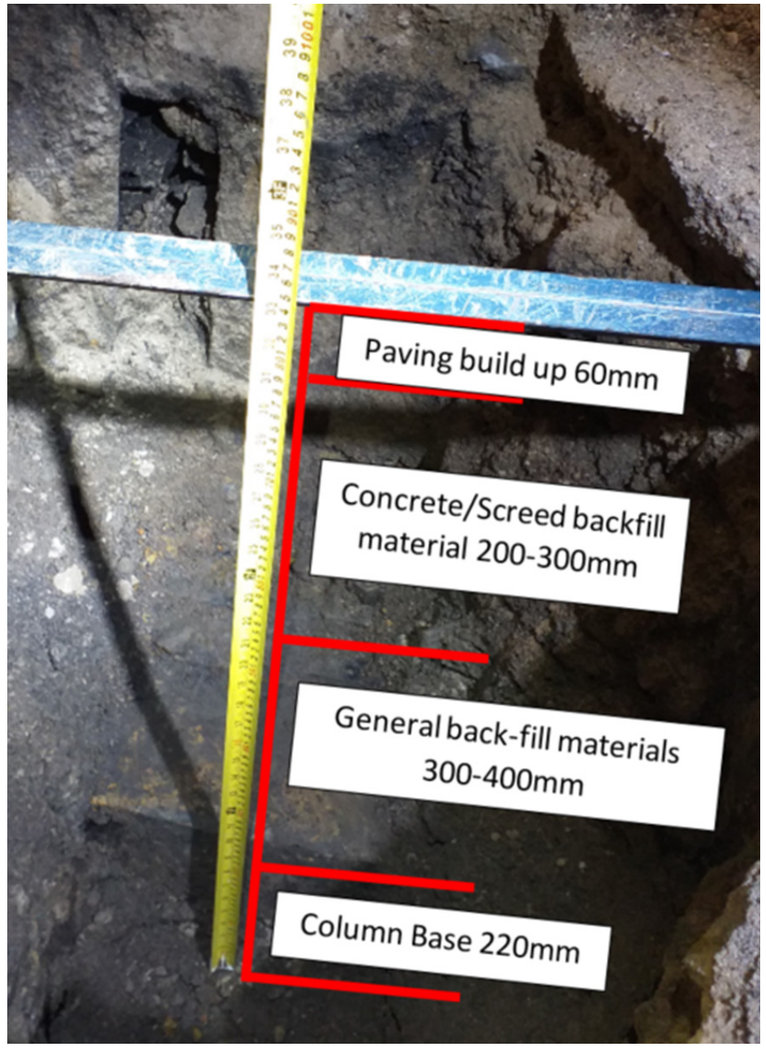
Figures (2a)12 and (2a)13 show birds-eye views of the excavation at platform level. The foundation as found was nothing like the column detail shown on the archive drawings (figure (2a)14).

Just below the paving there appeared to be a layer of concrete/screed material which was weak enough to be broken away with a shovel. This layer varied in depth between 200-300mm.

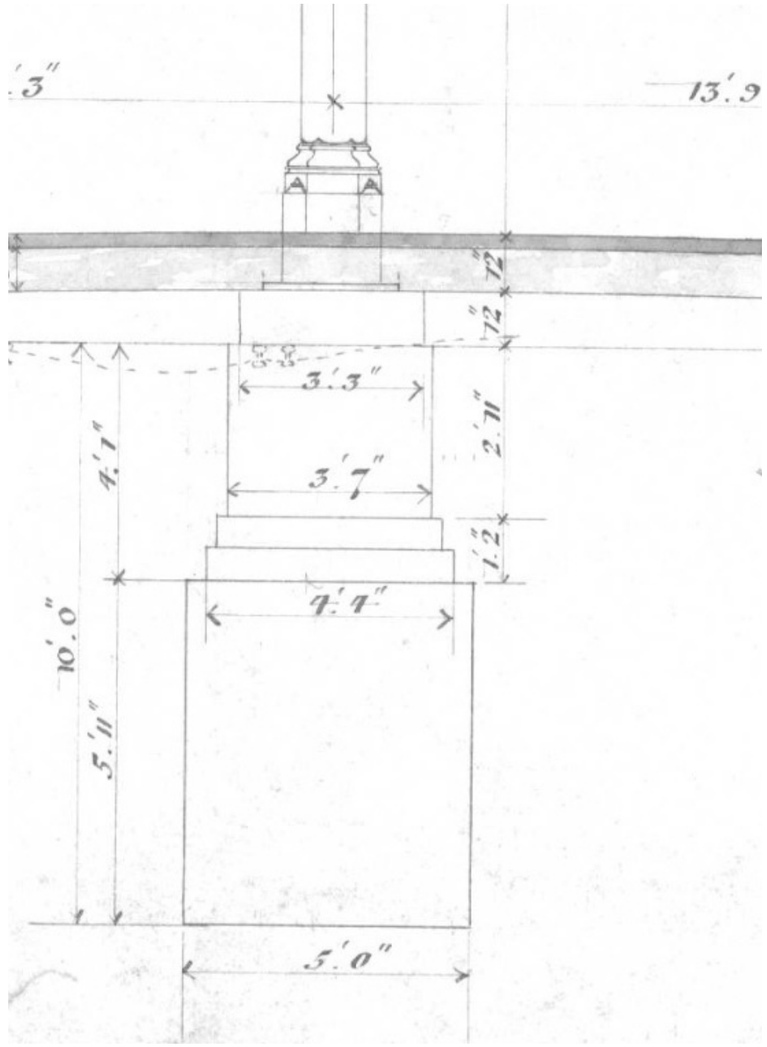
Below this layer there was a non-binding back fill material between 300-400mm depth, and finally the 220mm deep base for the column.



(2a)12. Extents of column base trial



(2a)13. Material depths



(2a)14. Column foundation from archival drawing

3.1 Record of materials

3.1.1 In general

The materials used to construct the exterior parts of the Tea Rooms have been identified based on visual observation from the platform level. They have been noted on figures (2a)18 to (2a)21 using the legend key in section 3.1.2 below.

The specialist contractor will verify and update these drawings before and during the dismantling process. These will be included in relevant phases of the CIMP (if appropriate).

Parts of the south elevation and roof have not been recorded in detail, due to site constraints. Inspections of these areas will be completed after the removal of the coffee kiosk and once the roof may be safely accessed.

3.1.2 Principal construction materials

The principal materials used to construct the building are assumed to be as follows. Since the building is painted this list is based on the results of the trial dismantling exercise carried out in December 2019.

The materials are labelled with the following reference key:

- T — Timber for wall studs, floor and roof joists, floorboards, rafters, pilasters, cladding boards, sash windows, doors, and all mouldings and surrounds
- CI — Cast iron for console brackets
- G — Glass for windows
- P — Plastic for vent grilles
- M — Metal for vent grilles at upper level, service conduits, door handles, hinges
- S — Stone for flags around the base of the building



(2a)15. Timber pilaster, cladding, entablature, window framing and surround; cast iron console bracket; glass window



(2a)16. Plastic vent grille

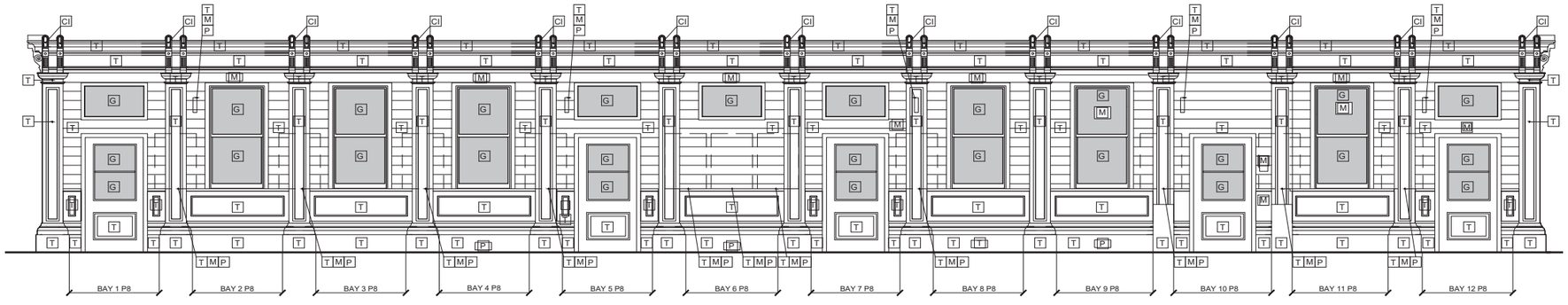


(2a)17. Traces of green paint

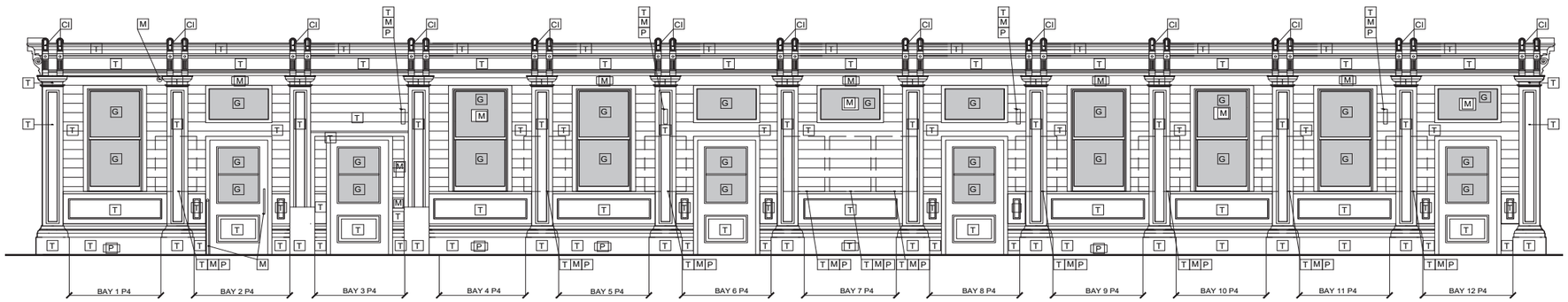
3.1.3 Paint

Paint analysis is to be undertaken by specialists in historical paint to establish the layers of historic colours. This is for record purposes and to determine the original colour scheme of the building. It will also inform the safety risk around dismantling, since the paint may have levels of toxicity due to traces of arsenic, lead and bird guano. The paint analysis locations and results will be circulated within a separate document.

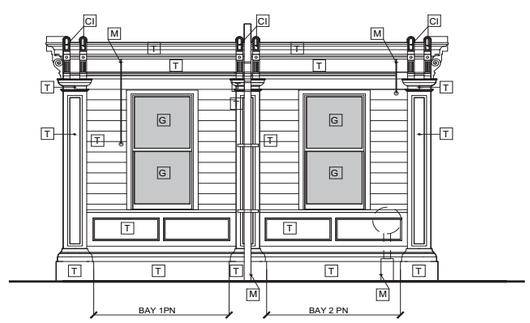
The pilaster reinstated following the December 2019 dismantling trial revealed earlier paint layers exposed when the painted surface was disturbed. The green paint visible beneath the most recent paint layer was identified during closer site observations in 2021 as possibly Paris Green (also known as Sheele's) which was fashionable in Victorian times; if so, it may contain toxic pigments including arsenic, which was found in many Victorian items such as paint, paper, medicine, foods and clothing.



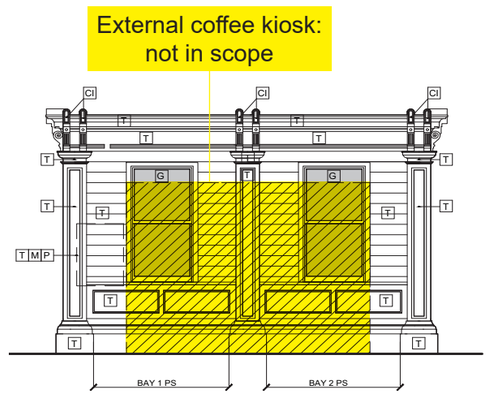
(2a)18. Materials: west elevation (platform 8) – refer to section 3.1.2 for legend key



(2a)19. Materials: east elevation (platform 4)



(2a)20. Materials: north elevation



(2a)21. Materials: south elevation

3.2 Record of condition

3.2.1 In general

The Tea Rooms have been inspected visually from platform level. The following observations are common to each elevation:

- inappropriate timber repairs, including patch repairs and infill pieces not aligned with the existing adjacent material;
- loss of timber for various reasons;
- loss of paint for various reasons;
- layers of paint;
- evidence of new gloss paint locally, perhaps on top of new repairs;
- general cracks;
- signs of deformation in the surface between horizontal panel mouldings and inset planes, which may suggest some detachment (see figure (2a)22);
- cables with fixings;
- redundant services;
- heads of nails from prior fixings;
- sign of corrosion;
- advertising signs hung with timber frames and battens. The battens seem to be common also for hanging services such as the pipe on the side elevation.

3.2.2 Elevation-by-elevation notes

The following sections describe various observations made for each of the building's four elevations in turn: east, west, north and south.



(2a)22. View along platform 8, with deformation in cladding highlighted



(2a)23. Detail view of pilaster and cladding boards

3.2.3 East elevation (platform 4): observations

Bay 1	Bay 2	Bay 3	Bay 4	Bay 5	Bay 6	Bay 7	Bay 8	Bay 9	Bay 10	Bay 11	Bay 12
Modern plain glass in sash window Modern plastic vent grille damaged at skirting board level	Door (customer assistance): loss of handle, modern hinges, modern mirrored inset pane; door sign fixing Loss of side panes including mouldings Dado rail with inappropriate misaligned repair Old alteration to timber plinth on right side of door Side handrail access fixed to door frame Upper-level window with modern glass Assumed metal vent grille over painted above upper-level window	Old alteration to plinth on right and left of door Old repair due to past alteration (door/passage frame) Redundant services Door: loss of handle, modern glass inset pane Modern vent grille in sash window (upper level)	Modern plain glass in sash window Modern extractor in sash window Modern plastic damaged vent grille at skirting board level	Modern plain glass in sash window Modern plastic damaged vent grille at skirting board level Assumed metal vent grille over painted above upper-level window	Sign of cracks on the side inset panes (right and left pane) Door with no entry sign: loss of handle, modern matt glass inset, ‘no entry’ sign fixing Modern matt glass in the upper-level window	Inappropriate repair: vent grille at plinth level (piece of plywood screwed to the plinth as patch repair) Modern extractor in upper-level window Assumed metal vent grille over painted above upper-level window	Plinth with loss of timber (indentation for possible passage of conduit) Cracks on the side door inset pane Door (waiting room): loss of handle (modern push plate in situ, modern long strip hinge, modern plain glass inset panes Loss of stone on door threshold ‘Waiting room’ sign fixing Modern glass in upper-level window	Modern glass in sash window Modern plastic damaged vent grille at skirting board level Assumed metal vent grille over painted above upper-level window	Modern glass in sash window Modern extractor in sash window	Modern glass in sash window Assumed metal vent grille over painted above upper-level window	Loss of timber on right side of plinth Patch repair on left side of plinth Cracks on the door side inset pane Door (café): loss of threshold (concrete/ composite material in situ), loss of paint, modern long strip hinge, modern glass inset pane, ‘buffet’ sign fixing Modern glass in upper-level window Modern extractor in upper-level window Loss of timber on upper-level window frame



(2a)24. East elevation (platform 4), southern portion



(2a)25. East elevation (platform 4), northern portion



(2a)26. E, Bay 1



(2a)27. E, Bay 2



(2a)28. E, Bay 3



(2a)29. E, Bay 4



(2a)30. E, Bay 5



(2a)31. E, Bay 6



(2a)32. E, Bay 7



(2a)33. E, Bay 8



(2a)34. E, Bay 9



(2a)35. E, Bay 10



(2a)36. E, Bay 11



(2a)37. E, Bay 12

3.2.4 West elevation (platform 8): observations

Bay 1	Bay 2	Bay 3	Bay 4	Bay 5	Bay 6	Bay 7	Bay 8	Bay 9	Bay 10	Bay 11	Bay 12
Loss of timber on plinth to left side of door Door (café): loss of paint, loss of timber, modern hinges, modern inset pane, modern handle Assumed loss of door threshold Possible threshold replacement 'Buffet' sign fixing Modern plain glass in upper window	Cracks on plinth Deformation of horizontal panel Modern plain glass in sash window Sign of detachment on fascia Assumed metal vent grille over painted above upper-level window	Sign of cracks on horizontal panel Modern glass in sash window Sign of detachment on fascia Sign of old repair on cornice	Sign of cracks on horizontal panel Sign of indentation on horizontal panel Modern glass in sash window Modern plastic damaged vent grille at skirting board level Assumed metal vent grille over painted above upper-level window	Door (waiting room): inappropriate patch repair on threshold, modern hinge, loss of door handle, modern push plate, modern glass inset pane, push button 'Waiting room' sign fixing	Loss of timber on right pilaster plinth Modern plastic damaged vent grille at skirting board level Assumed metal vent grille over painted above upper-level window	Door (no entry): loss of door handle, modern matt glass inset pane, signs of indentation Inappropriate repair to door threshold 'No entry' sign fixing Metal fixing under the upper window Modern glass in upper window Modern plastic vent grille on top of right side of door	Inappropriate repair on vent grille at plinth level (plywood sheet) Sign of cracks on horizontal panel Dent on timber dado rail Modern glass in sash window Damage to cornice moulding Modern plastic damaged vent grille at skirting board level Assumed metal vent grille over painted above upper-level window	Timber vent grille damaged behind modern plastic vent grille Crack on horizontal panel Dent on timber dado rail Modern matt glass in sash window Modern extractor in upper sash window Loss of timber on fascia Cracks on cornice Old repair on cornice Damaged modern plastic vent grille at skirting board level	Old alteration to plinth on the right and left of the door Door (ladies' WCs): loss of door handle, modern matt glass inset pane, loss of moulding to frame Door threshold damage Press button Old repair on boarded wall pane above door	Inappropriate repair on vent grille at plinth level: plywood sheet screwed on top to block vent Loss of timber on dado rail Modern matt glass in sash window Modern extractor in upper sash window Loss of timber on boarded wall panel (possibly due to old sign fixing) Old repair on cornice Indentation at bracket level Assumed metal vent grille over painted above upper-level window	Old patch repair on plinth (right side of the door) Old repair on cornice Indentation on dado rail Door (accessible WC and baby change): loss of door handle, loss of moulding to frame, modern matt glass inset pane Delamination to door threshold 'Accessible toilet' sign fixing Assumed sensor box on boarded wall panel above door, with loss of timber Modern glass in upper window



(2a)38. West elevation (platform 8)



(2a)39. W, Bay 1



(2a)40. W, Bay 2



(2a)41. W, Bay 3



(2a)42. W, Bay 4



(2a)43. W, Bay 5



(2a)44. W, Bay 6



(2a)45. W, Bay 7



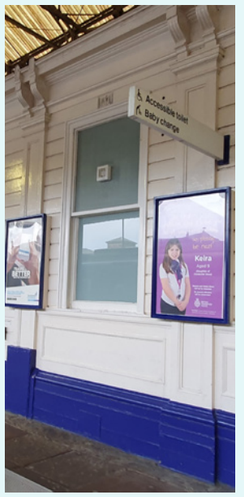
(2a)46. W, Bay 8



(2a)47. W, Bay 9



(2a)48. W, Bay 10



(2a)49. W, Bay 11



(2a)50. W, Bay 12

3.2.5 North elevation

Bay 1	Bay 2
Modern plain glass in sash window	Modern plain glass in sash window
Old patch timber repair (plinth left corner and right sash window)	Mismatching patch of gloss paint
Mismatching patch of gloss paint	Sign of detachment (between horizontal panel moulding and inset panel)
Sign of detachment (between horizontal panel moulding and inset panel)	Damage to cornice
Damage to cornice	Surface-mounted cable using inappropriate fixings
Damage and loss of timber to accommodate route of inappropriately-fixed service conduits	Damage and loss of timber to accommodate route of inappropriately-fixed service conduit
Signs of localised corrosion around fixing nail positions	Signs of localised corrosion around fixing nail positions
	Sign fixing

3.2.6 South elevation

Bay 1	Bay 2
The condition survey will be carried out after the kiosk removal	The condition survey will be carried out after the kiosk removal



(2a)51. North elevation



(2a)52. South elevation

4. Additional surveys and schedules

4.1 In general

The specialist contractor will carry out their own surveys of the building exteriors, including a detailed photogrammetric and metric survey (section 4.2). They will maintain 'live' drawings, schedules and digital photographic records of the following:

- materials found on the building exterior (similar to the example shown in section 3.1);
- condition of the building exterior and its parts (similar to the example shown in section 3.2);
- all elements, catalogued and codified (section 4.3);
- elements not to be retained (section 4.4);
- elements to be replaced (section 4.5);
- elements to be repaired (section 4.6);
- all other findings (section 4.7).

Sections 4.2 to 4.5 of this document include drawings which indicate the design team's proposals and assumptions prior to dismantling. These drawings are not intended to be used for detailed construction, setting-out, etc.

4.2 Metric survey

4.2.1 Three layers

The contractor shall carry out a full metric survey of the building exterior and, later, its supporting studwork, as follows.

- *Layer 1: exterior cladding and detailing* – readily accessible for survey once suitable access is made available within the live railway environment;
- *Layer 2: studwork and other structural timber* – encapsulated between external and internal cladding boards and other finishes, and only available to be surveyed once Layer 1 has been removed;

Layer 3 comprises the interior cladding. A metric survey of this layer, which will only be possible after the fixtures and fittings have been removed, is covered in section 4.2 of part 2b.

Defining a separate 0.00 point for each layer (0.00 exterior, 0.00 studs, 0.00 interior lining), and ensuring that the components of each layer are set out relative to that point, will help to reduce the risk of setting-out errors accumulating through the build-up of the wall.

For example: if the thickness of exterior cladding varied along the length of the building, perhaps due to different batches of boards from different Victorian sawmills, it would be a mistake to set out the wall studs relative to the external geometry of the building. Deviations on Layer 1 would then pass to Layer 3 and achieving a satisfactory internal finish in the corners of the rooms might become problematic.

The three layers must also be referenced accurately to the main station building survey grid.

4.2.2 Plans

Each layer is calibrated to an agreed 0.00-point corner on plan. The plan shape, position, and external and internal perimeter of the building are essential to be able to reassemble the building without the risk of gaps or clashes during reconstruction.

The contractor shall establish a grid reference for the building plan and elevations in relation to key elements of the building. Suggested elements for Layer 1 are the corner pilasters, noted as Grid 0.00A and Grid line 0.00B on figure (2a)53.

4.2.3 Elevations

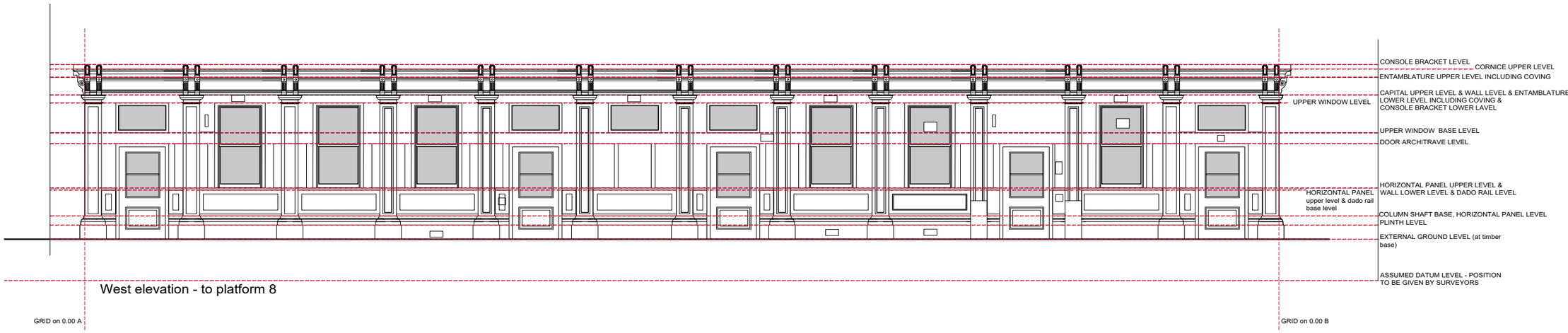
Along with an accurate representation of the elevation details form of the different components, this survey will include the following horizontal (or near-horizontal) levels, as illustrated on figures (2a)53 and (2a)54 for Layers 1 and 2.

Layer 1

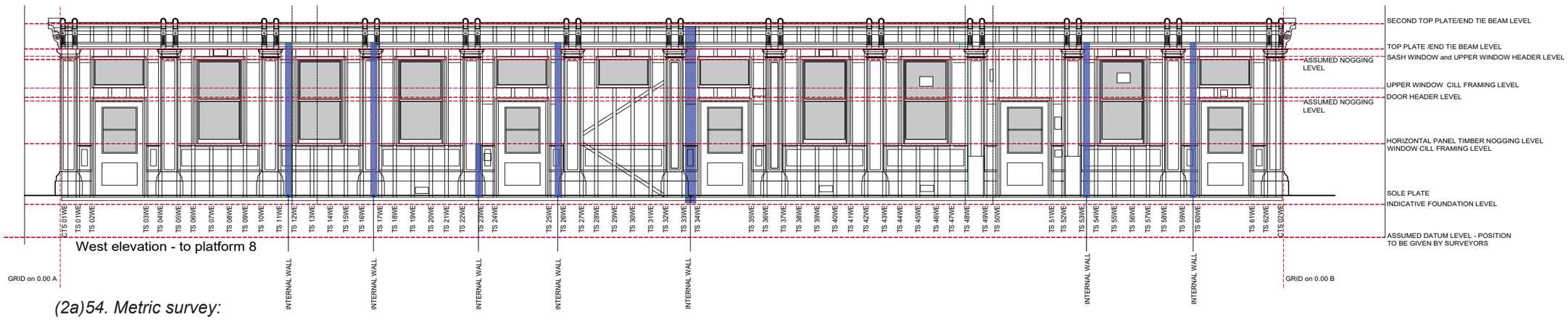
- External ground level
- Plinth level
- Column shaft base, horizontal panel level
- Horizontal panel upper level & dado rail base level
- Horizontal panel upper level, wall panel lower level & dado rail
- Door architrave
- Upper window base level
- Upper window level
- Capital upper level, wall upper level panel level, entablature lower level including coving and console bracket
- Entablature upper level including coving
- Cornice upper level
- Console bracket level
- Roof pitch

Layer 2

- Top plate and end tie beam level
- Sash window and upper window header level
- Upper window sill framing level
- Door header level
- Horizontal panel timber nogging level
- Window sill framing level
- Sole plate
- Wall plate
- Indicative foundation level



*(2a)53. Metric survey: sample datum levels for **Layer 1 (external cladding)***



*(2a)54. Metric survey: sample datum levels for **Layer 2 (studwork)***

4.3 Record of elements: the *key drawings*

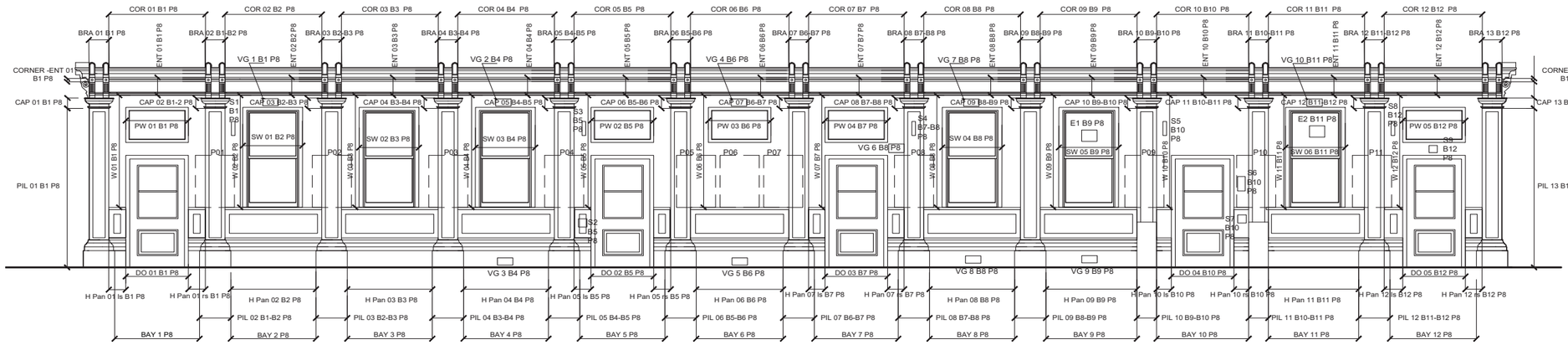
The contractor shall produce a comprehensive system to define and catalogue every element on the building exteriors. This shall take place before any works commence on site and be checked and updated as required through all subsequent stages.

Each architectural component (and sub-component, where appropriate) must be identified and organised on a set of drawings with names and numbers. These codified drawings are the *key drawings*, the most important reference documents for the work to come. They will be used to identify all parts along with their *in-situ* locations and relationships to all adjoining elements. It will also assist in identifying appropriate sequences for reassembly and reconstruction.

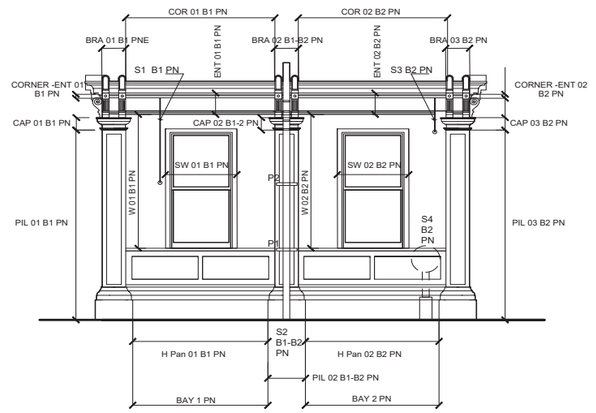
The table on this page, read in conjunction with figures (2a)55 to (2a)58, presents a sample referencing system.

Important note: The final level of detail will be considerably greater than this, because each sub-component will also eventually be catalogued. For example, each cladding board within a given wall section will receive its own sub-component number.

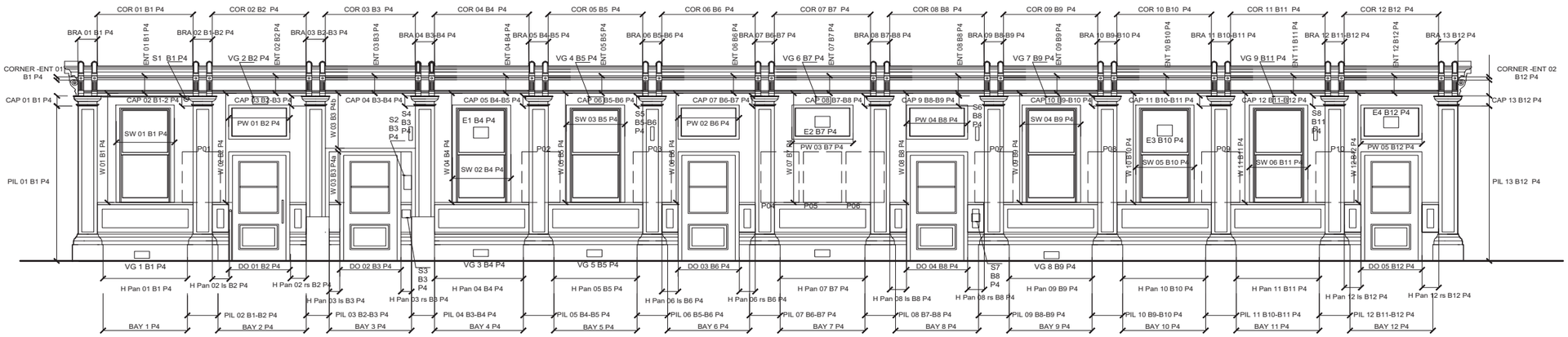
Element	Sample reference	Description
Bay between pilasters	Bay 1 P8 Bay 1 PN	Bay 1, platform 8 Bay 1, platform north
Horizontal panel from ground floor to dado rail (including skirting board, horizontal panel and dado rail)	H Pan 01 B1 P8 H Pan 01 ls B1 P8 H Pan 01 rs B1 P8	Horizontal panel 01, bay 1, platform 8 Horizontal panel on left side of door Horizontal panel on right side of door
Wall from dado rail to entablature level (including horizontal boards and coving)	W 01 B1 P8	Wall section 1, bay 1, platform 8
Entablature from coving to cornice	ENT 01 B1 P8	Entablature section 1, bay 1, platform 8
Cornice	COR 01 B1 P8	Cornice section 1, bay 1, platform 8
Pilaster including plinth base and shaft to capital	PIL 01 B1 P8	Pilaster 1, bay 1, platform 8
Capital	CAP 01 B1 P8	Capital 1, bay 1, platform 8
Console bracket including timber boards	BRA 01 B1 P8	Bracket 1, bay 1, platform 8
Door including frame and door lining	DO 01 B1 P8	Door 1, bay 1, platform 8
Sash window	SW 01 B1 P8	Sash window 1, bay 1, platform 8
Pivoted window including frame and window lining	PW 01 B1 P8	Pivoted window 1, bay 1, platform 8
Vent grille	VG 01 B1 P8	Vent grille 1, bay 1, platform 8
Extractor	E1 01 B1 P8	Extractor 1, bay 1, platform 8
Service equipment including redundant cables, push plates, signage posts	S1 01 B1 P8	Service item 1, bay 1, platform 8
Poster including fixing battens	P1 01 B1 P8	Poster 1, bay 1, platform 8
Principal locations/spacings/patterns of nails, etc.	(Included on drawings as general notes)	



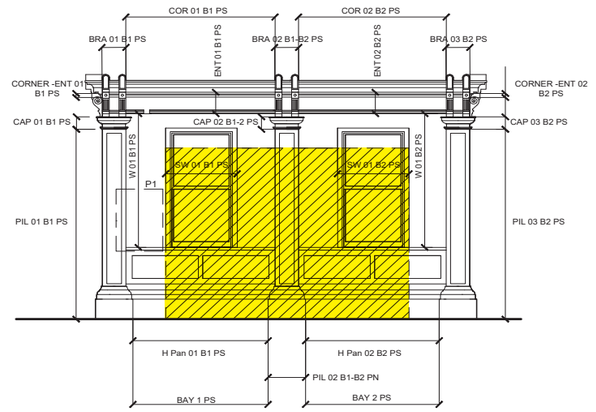
(2a)55. Sample key drawing: west elevation (platform 8) – refer to section 4.3 for legend key



(2a)56. Sample key drawing: north elevation



(2a)57. Sample key drawing: east elevation (platform 4)



(2a)58. Sample key drawing: south elevation (■ coffee kiosk)

4.4 Record of elements that are *not to be* retained

The contractor shall prepare and maintain a comprehensive drawing and schedule, with photographs, referenced in accordance with the system defined in section 4.3, to present all of the external elements which will be removed from the building as it is reconstructed. This will be a live document, to be updated as additional observations are made during dismantling and reconstruction.

Figures (2a)59 to (2a)62 illustrate an early assessment, prior to cleaning and intrusive investigation, of elements not to be retained. The contractor shall carefully remove and sustainably dispose of each of the elements marked as , in accordance with a suitable approved methodology. The existing modern flat roof will also be carefully dismantled and discarded.

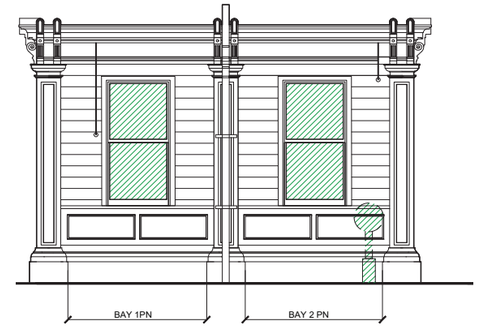
Items considered unsuitable, not reusable or redundant, may only be disposed of in accordance with a methodology subject to conservation officer approval.

Elevation	Action
West (platform 8)	• Remove plastic modern vent grilles. • Expose existing timber vent grilles in the skirting board. Vent grilles to be inspected for possible re-use. • Modern glazing inset panes in windows and doors not to be retained. Dismantle/remove and discard all modern glazing panes. • Remove the modern extractors from the sash windows. • Doors DO 01 Bl P8: remove modern door handle DO 02 85 P8: remove door push plate DO 04 BI0 P8: remove modern door handle and metal bar DO 05 B12 P8: remove door push plate/door lock
South	• Secure adjacent mouldings and surfaces by the coffee booth kiosk. • Remove the coffee booth kiosk. • Expose existing elevation. Inspect existing conditions and record the findings.

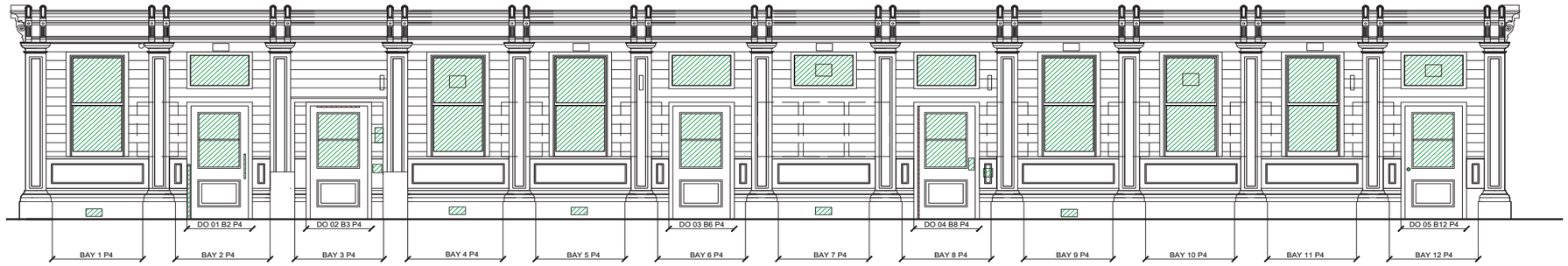
Elevation	Action
East (platform 4)	• Remove plastic modern vent grilles. • Expose existing timber vent grilles in the skirting. Vent grilles to be inspected for possible re-use. • Remove timber plywood sheet from the assumed existing timber vent grille. • Modern glazing inset panes in windows and doors not to be retained. Dismantle/remove and discard all the modern glazing panes. • Remove the modern extractors from the sash windows. • Remove electrical cables. • Remove service conduits. • Doors DO 01 B2 P4: remove modern door handle, modern hinges and handrail DO 02 B3 P4: remove metal bar DO 04 B8 P4: remove push plate, door handle and modern vertical/strip hinge
North	• Modern glazing panes in windows not to be retained. Dismantle/remove and discard all the modern glazing panes. • Remove electrical cables. • Remove service conduits.



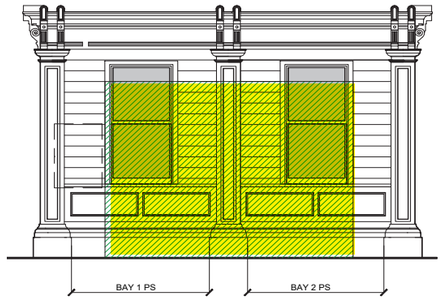
*(2a)59. Elements **not to be retained**: west elevation (platform 8)*



*(2a)60. Elements **not to be retained**: north elevation*



*(2a)61. Elements **not to be retained**: east elevation (platform 4)*



*(2a)62. Elements **not to be retained**: south elevation (■ coffee kiosk)*

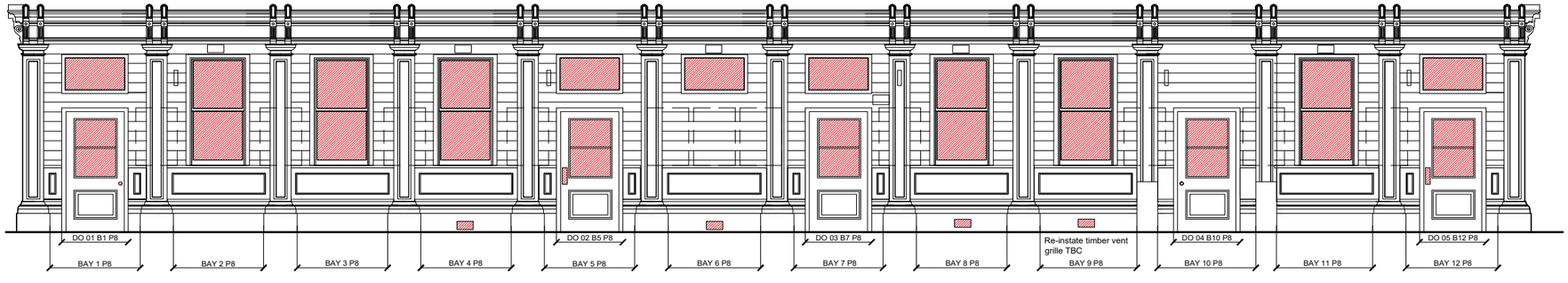
4.5 Record of elements to be replaced

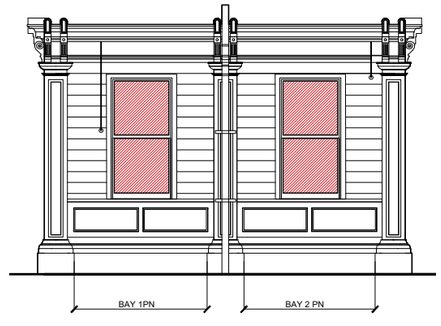
The contractor shall prepare and maintain a drawn and cross-referenced record of all items to be replaced with new material.

Figures (2a)63 to (2a)65 illustrate the proposed replacement components in the final construction: each is marked as ▨ .

Note that this is similar, but not identical, to section 4.4: a small number of items (plastic vent grilles, for instance) will be removed and not replaced.

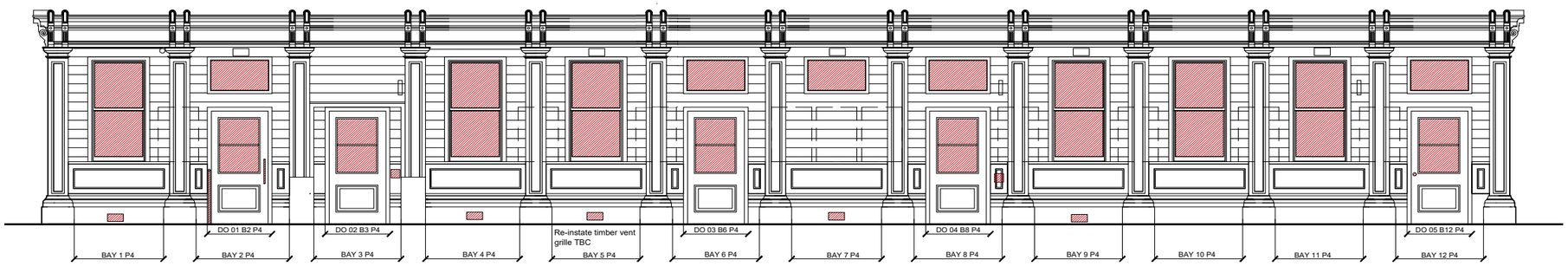
Location	Proposal
All	• New roof. • New glazed panes to existing skylight. • New skylight timber frame if existing not in salvageable condition. • Three new structural columns. • New foundations, keeping the existing foundations in place to be possibly integrated with the new. (To be confirmed after the dismantling of the building.) • New drainage system below ground. • If new surface-mounted service conduits are required, reuse the same locations as the existing versions (with the exception of existing loose/informal wiring tacked in place).
West elevation (platform 8)	• New glass inset pane to sash windows. • New glass inset pane to doors. • New door handle and openable mechanism. • Allow for supply and fit of new vent grilles at skirting boards level if the timber slots are not suitable for re-use.
East elevation (platform 4)	• New glass inset pane to sash windows. • New glass inset pane to doors. • New door handle and openable mechanism. • Allow for supply and fit of new vent grilles at skirting boards level if the timber slots are not suitable for re-use.
North	• New glass inset pane to sash windows.
South	• New glass inset pane to sash windows.





(2a)63. Elements to be replaced: east (formerly west) elevation

(2a)64. Elements to be replaced: south (formerly north) elevation



(2a)65. Elements to be replaced: west (formerly east) elevation

4.6 Record of elements to be repaired

The contractor shall prepare and maintain a drawn and cross-referenced record of all items to be repaired. Although some defects have been identified in section 3.2, the manifestation of surface cracks and other features on the timber elements hidden behind paintwork or cladding will only become clear once dismantling begins.

This will be a finely-detailed study, requiring close inspection of all elements by timber conservation specialists.

4.7 Record of findings

The contractor shall follow a methodology agreed in advance with the conservation team and conservation officer to keep a record of observations made during operations on site.

Key aspects of this work include:

- dismantling the existing modern roof finishes in such a way that any earlier or original roof and ceiling structure may be inspected and recorded;
- verifying the nature and condition of external vent slots within timber skirting, which are thought to be located behind non-original plastic grille vents and may be original;
- any unusual fixing types or locations;
- verifying the nature and condition of the existing building foundations. Foundations are to be recorded, salvaged and re-incorporated into the proposed foundations of the re-erected building as far as possible, subject to verification by the structural engineer. Subject to conservation officer approval.

5. Dismantling

5.1 Trials

Once the building has been emptied, the contractor shall carry out dismantling trials, agreed with the conservation team, in order to verify assumptions and reduce risk in the following works stages. These shall include the following:

- remove a portion of external paving slabs;
- remove a section of cornicing and at least two cast-iron console brackets;
- remove a pilaster and a section of cladding boards;
- remove a window and door.

5.2 Dismantling work in general

The contractor shall carefully dismantle all of the components of the building's exterior, including mechanical fixings. All elements are to be moved to the contractor's storage facility, subject to the requirements of the specification provided in part 3.

The contractor shall take care to avoid any damage during the dismantling and removal of the elements. Composite elements (such as the pilaster strips, seen during the dismantling trial as being neatly carpentered with precise dovetail joints) will be disassembled into as few subsidiary components as possible in order to minimise damage and material loss.

Timber elements are to be carefully prised off, corresponding to the agreed joint line in each case, in order to release them from their backing parts. The type of fixings (glue, nails, bolts, screws, etc.) shall be assessed prior to dismantling, and their location identified using a metal detector if necessary.

Depending on the extent of paint stripping carried out in the previous stage, localised sanding to locate nails, bolts and screws may be necessary.

5.3 Sequence

Broadly speaking, the sequence for dismantling the building exteriors must reverse the sequence in which they were constructed: this will help minimise any damage. An outline sequence of disassembly for Layer 1 (as defined in section 4.2.1 of part 2a) is as follows:

- remove existing modern flat roof by layers and expose the existing structure;
- take apart posters, signage and timber battens;
- detach pipes, service conduits and wires;
- remove plastic grille vent from the timber plinth skirting boards;
- remove metal grille vent above windows;
- lift and remove door threshold;
- remove doors, door architraves and door linings, including hinges, but not frames;
- remove timber sash window architraves and beads;
- remove timber dado rails;
- lift and remove timber pilaster plinths boards parts;
- remove all beading around pilasters;
- lift and remove timber pilasters as units;
- lift and remove cornice mouldings, entablatures, and cove mouldings, but not cornicing frame;
- remove the assumed cast iron console brackets;
- lift and remove the horizontal panels, but not frames;
- lift and remove the timber wall panelling, but not frames;
- lift and remove the sash boxes, but not frames;
- release all metal screws and fixings.

It is assumed that any substrate frames and backings supporting the Layer 1 elements (i.e. components between the wall studs and the rear of the cladding) form part of Layer 2. They will therefore remain in place with the rest of the studwork structure until Layer 2 is surveyed and dismantled.

Part 2b: Interiors

1. Introduction

1.1 This document

This document is part 2b of a methodology for the dismantling, storage and reconstruction of the timber Tea Rooms building at the Grade I listed Huddersfield station, as part of the TransPennine Route Upgrade.

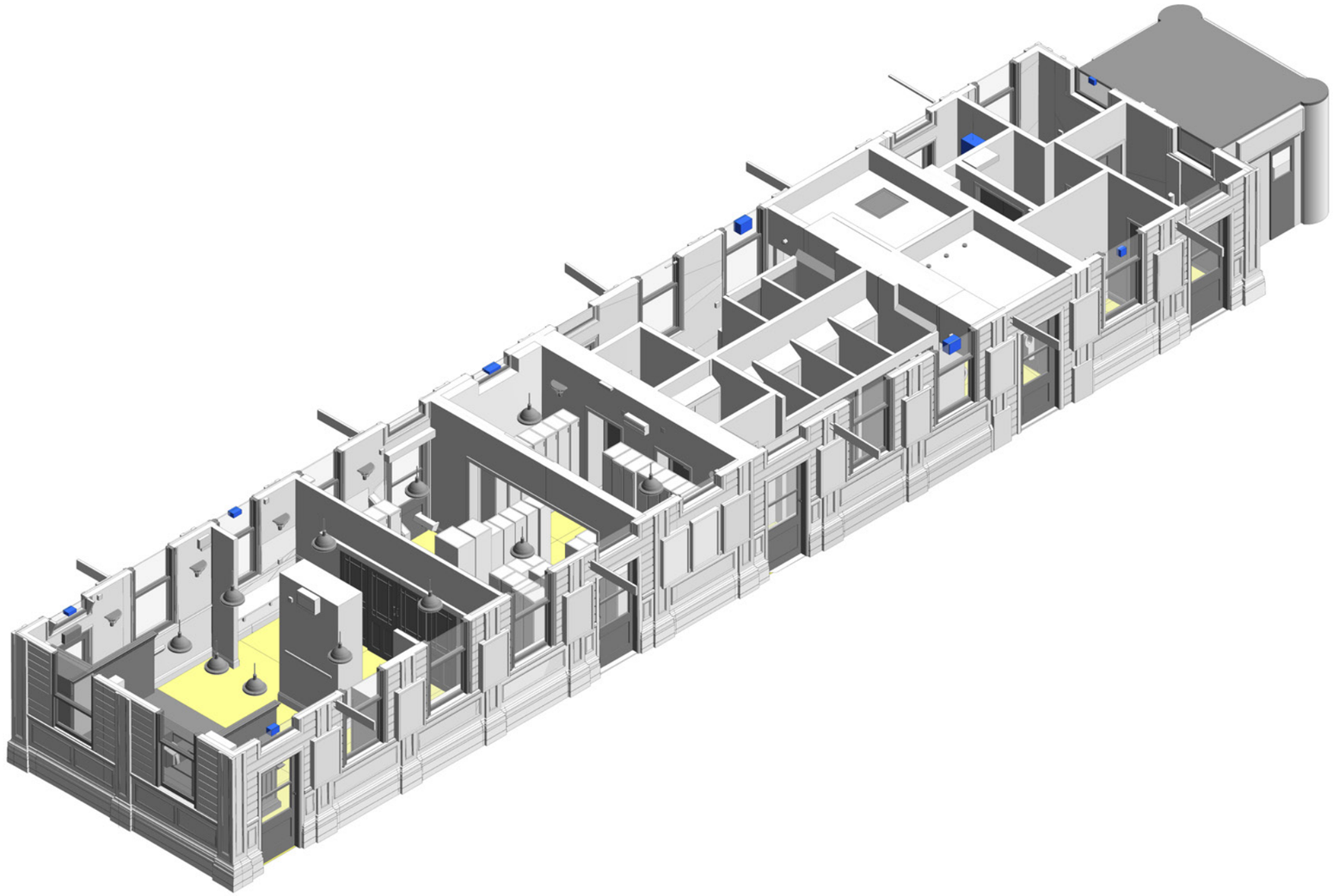
It expands on the ‘general approach’ outlined in section 2 of part 1, focussing specifically on the **internal** elements of the building.

Chapter 2 notes the surveys carried out to date. Chapter 3 provides observations on the different materials and elements, and their condition. Chapter 4 describes a range of additional recording works required of a contractor. Chapter 5 presents an indicative proposed dismantling sequence, based on the observations made to date, and various requirements specific to the dismantling process. These should be read in conjunction with the outline repair and specification notes of part 3.

1.2 Interiors

The internal parts of the building include:

- various elements of joinery, including the buffet counter and wall finishes;
- flooring finishes, including tiles and carpet;
- ceilings, ceiling finishes and cornicing;
- building services and associate fit-out elements including light fittings and sanitary ware.



(2b)1. Huddersfield Station Tea Rooms: axonometric cutaway from 3D model, showing interiors as existing

2. Surveys to date

2.1 Visual inspections

On-site visual assessments have been carried out during site visits in October 2019, April 2021 and (most comprehensively and full) August 2022. The photographs and observations made on site comprise the schedule of records to date and inform the proposed dismantling and reconstruction methodology.

Surveyors from the Alliance team also undertook a full three-dimensional scan survey of the building in October 2022. The resulting 3D model has been used to prepare various views and drawings, as included in this document.

2.2 The need for more understanding

Not all of the interiors have been recorded. This is due to factors such as the temporary housing of train crew lockers in the waiting room, which prevent access to all of the walls and floors, and various items of fixed furniture throughout the building. A full assessment of the interiors will take place once furniture has been removed by contractors.

Other aspects of the historic interiors are, or may be, obscured by modern finishes, such as those in the WCs. Assessing the nature and extent of this hidden historic fabric, and determining appropriate conservation works, will be an important aspect of the dismantling process.

Trial opening-up works will also be required to cover health and safety aspects that may affect contractors during dismantling and reconstruction works. These will be subject to conservation officer approval.



(2b)2. Surveying the cafe, August 2022



(2b)3. Surveying the cafe, August 2022

3.1 Record of materials and elements, and their condition

3.1.1 In general

Unlike in part 2a, where the different parts used in the construction of the building exterior may be categorised relatively easily, the interiors feature *elements* (the buffet counter, for instance) which are often made from many different *materials* (timber, stone, glass, etc.).

For this reason part 2b is organised in a slightly different way. The following table summaries how the various elements and materials have been grouped and ordered: approximately by trade package.

The J F C S reference key is used throughout this section to denote the group.

Group	Materials and elements	Section
J Joinery	Buffet counter, cupboards, screens, panelling	3.1.2
	Perimeter walls	3.1.3
	Internal walls and chimney breasts	3.1.4
	Perimeter doors, architraves, thresholds, etc.	3.1.5
	Internal doors, architraves, etc.	3.1.6
	Windows, architraves and cills	3.1.7
	Other items (skirting boards, dado rails, wall-mounted tables, possible timber floorboards and ceiling laths)	3.1.8
F Flooring	Tiles, carpet	3.1.9
C Ceilings	Ceiling finishes, cornices	3.1.10
S Building services	Mechanical, electrical	3.1.11
	Ceiling lights and wall lights	3.1.12
	Sinks, taps	3.1.13

3.1.2 J Buffet counter

Refer to part 1 chapter 4 of the report for a detailed description of the buffet counter area.

The overall condition of the counter appears to be reasonable, with some localised damage. More detailed observations are provided in the table below.

Front counter Left-hand elevation	**Front counter** Front elevation	**Front counter** Right-hand elevation	**Rear counter**	**Side cupboard**
Timber step in poor condition with heavy staining and corroded threshold bar (see figure (1)27). Right side pane has a plastic pipe with fixing; hole, sign of indentation. Skirting boards/plinth show sign of indentation and damage to the corner. Timber on the inset pane moulding next to the plastic pipe shows a dark stain. Hole to lower skirting. Modern plain glass. Cables running through the side screen panes and on top of the screen fixed directly to the timber. Top screen seems covered by a sheet (material unknown) fixed to timber.	Plinth is covered by a plastic type of sheet fixed directly to the timber. Sealant foam between base of the plinth and floor tiles. Heavily worn timber arris on top of skirting board section in central part of counter (visible on figure (1)28). Plinth shows sign of indentation to the right side corner. Central inset panel has a visible horizontal fine crack.	Plinth is partially covered with a type of plastic sheet on the lower section fixed directly to the timber. Sign of indentation at lower level. Side screen: tiles possibly glued to wooden upper frame.	The rear counter joinery doors are a modern addition. Interior carcass in reasonable condition overall. Sicilian ‘grey’ marble top apparently intact and in reasonable condition.	Wall panel showing some loss. Modern hinged door added. Side wall toward front counter right side covered by a tiled partition. Interior altered with cabling. Soffit with painted timber boarding in good condition. Unknown arrangement of cupboard ceiling: plywood sheet observed oversailing cornice edge



(2b)4. Left-hand elevation with services attached



(2b)5. Front elevation with detail of crack



(2b)6. Right-hand elevation: MDF counter top and vertical crack



(2b)7. Right-hand elevation: dents in skirting



(2b)8. Rear counter: cupboard door and interior



(2b)9. Side cupboard

3.1.3 J *Perimeter walls*

Three types of perimeter walls have been identified, as follows (and identified by colour on (2b)10).

Type A: painted timber boards fixed to timber studs

Believed to be original to the building. Still visible in the café area, although partially obscured by modern wall tiles, shelves, refrigerator, cooker hood and store cupboard. Appears to be in reasonable condition, although a horizontal crack in Bay 1 and Bay 2 to platform 8 indicates some detachment.

Through-wall fixings and bolts for external signage are visible in Bay 2 to platform 8 and Bay 11 to platform 4. Low-level panels marked with asbestos warning stickers are visible in Bay 2 to platform 8 and Bay 11 to platform 4. The historical function of these panels is not known. Picture rails, dado rails, skirting boards and tiling behind the buffet counter are all of an unknown age but presumed to be non-original.

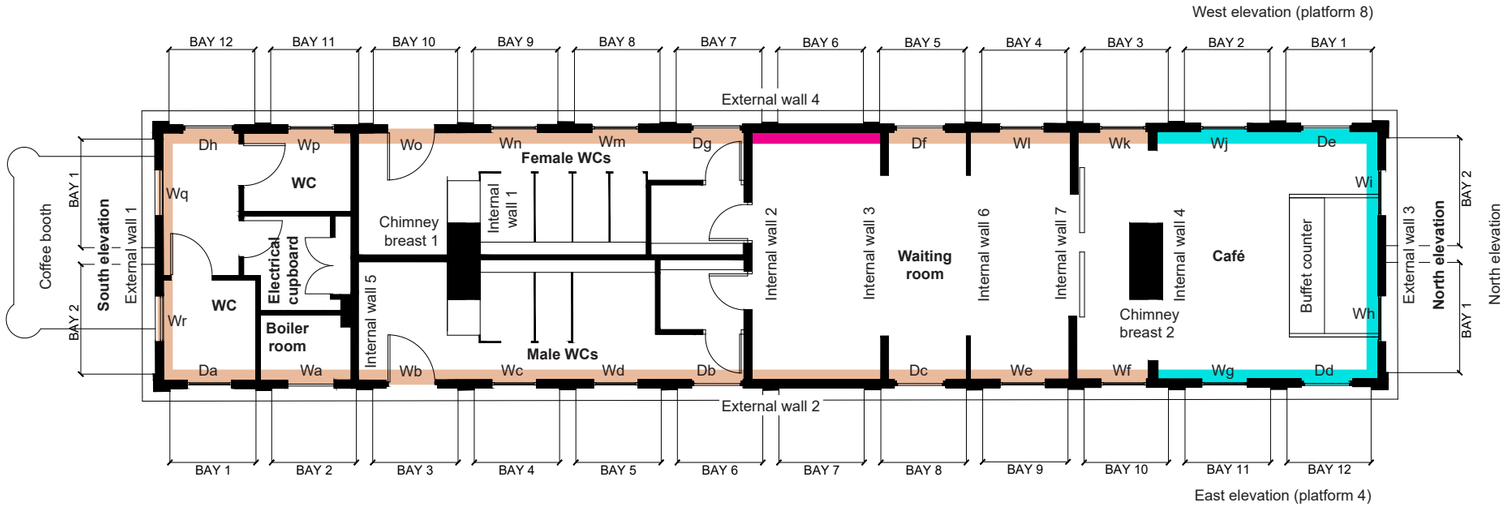
Type B: painted flat finish, presumed to be plywood panels fixed to original timber boards

Measurements around skirtings and window mouldings suggest that a sheet material has been applied onto the original cladding boards - possibly skimmed with plaster. One area exists in the female WCs (see figure (2b)12) where paintwork has peeled away and the substrate is identifiable as plywood sheets. It has therefore been assumed that this material is present throughout this cladding type. Non-original to the building but of unknown age.

The substrate build-up has not been established. The presence of studwork behind is suggested by a hollow sound upon tapping. The surface generally appears to be in reasonable condition.

Type C: *painted flat finish to solid wall*

Tap-testing indicates a solid substrate. Historical records show that parts of internal walls 2 and 3 were originally solid walls, so this bay may have been constructed the same way – perhaps contributing to the building's stability system. The surface generally appears to be in reasonable condition.



(2b)10. Floor plan with perimeter wall types



(2b)11. Type A: horizontal crack between lower cladding boards



(2b)12. Type B: plywood visible behind paintwork in ladies' WCs



(2b)13. Type A: Bay 1 & 2 to platform 8



(2b)14. Type A: through-wall bolts for signage, Bay 2 to platform 4



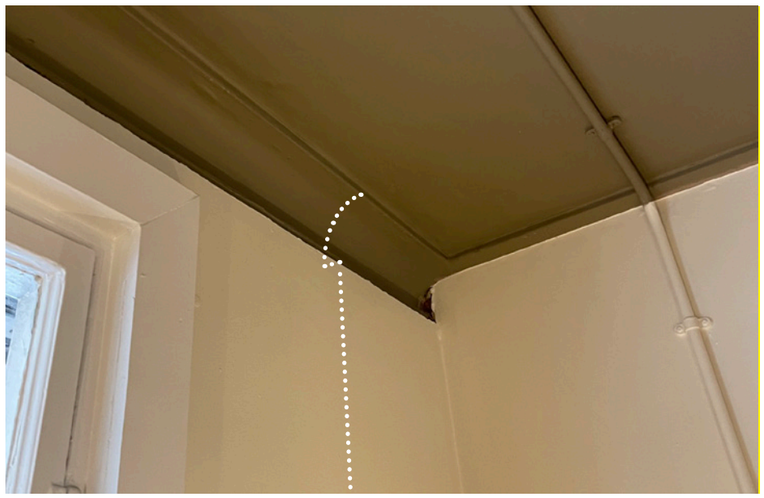
(2b)15. Type A: asbestos panel (below window), Bay 2 to platform 8



(2b)16. Type A: tiles cladding behind buffet counter



(2b)17. Type B: painted plywood sheet



(2b)18. Type B: covering to wall manifest as step outwards from coving

3.1.4 J *Internal walls and chimney breasts*

Internal walls appear to be lined with modern plasterboard. They are painted with no obvious signs of serious damage. Some are known to be modern stud walls; others, including the chimney breasts, are known (from the historical analysis) to have been constructed from bricks.

Wall	Observations
Internal wall 1	Some nibs of this wall may survive next to both east and west perimeter walls. Part of the chimney breast is also visible.
Internal wall 2	The c.1884 plan (figure (1)9)) shows a portion of internal wall 2 (adjacent to platform 8) as a solid wall. This arrangement is no longer visible: tap tests suggest that portions of the wall now consist of hollow studwork, possibly with brickwork inside.
Internal wall 3	Similar to internal wall 2, although reversed, The portion of this wall adjacent to platform 4 is solid. The portion adjacent to platform 8 is a stud wall.
Internal wall 4	Surviving nibs of internal wall 4 adjacent to platform 4 are likely to be original to the building although the openings (and lintels above) are not.
Internal wall 5	There appear to be some traces of solid wall, possibly part of the 1884 scheme although the wall was also altered in 1956 and 1978.
Internal wall 6	Two half-height walls are a modern addition.
Internal wall 7	This stud wall, with skirting boards on both sides and a large sliding door, was erected after 1978.
Other partitions	All the internal partitions on Bay 1 and Bay 2 to platform 4 and Bay 12 and Bay 11 to platform 8 are modern stud walls, dating from since 1978.
WC cubicles	The cubicles are separated by modern light partitions.



(2b)19. Internal wall 1 (chimney breast 1) in café



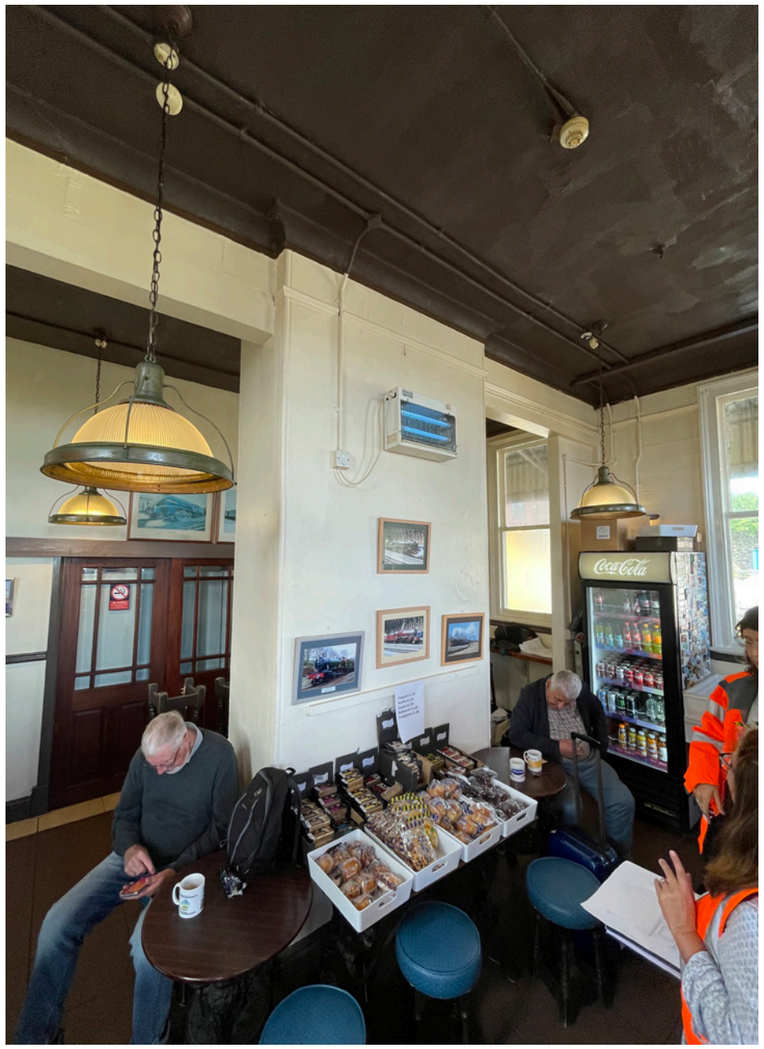
(2b)20. Internal wall 2 in waiting room



(2b)21. Internal wall 3 with large opening in waiting room



(2b)22. Top of internal wall 4 (chimney breast 2) in café



(2b)23. Internal wall 4 (chimney breast 2) in café



(2b)24. Internal wall 5 in boiler room: cornicing cut by partition wall



(2b)25. Internal wall 6 (to left of door)



(2b)26. Internal wall 7 from waiting room

3.1.5 J *Perimeter doors*

The design of the internal door leaves is the same as the exteriors, as covered in section 3.2 of part 2a, with the exception of Door Db on Bay 6 to platform 4 and door Dg on Bay 7 to platform 8 where the openings have been modified to accommodate a radiator behind. These doors are indicated on figures (2b)29 and (2b)30.

All the doors and door architraves are painted timber.

Detailed condition notes for doors and thresholds are provided in the following tables. Where past alterations and patch repairs are visible they generally detract from the aesthetical value of the doors and the building as a whole. Unusually, all of the internal perimeter door architraves which could be visually inspected appear to have a ‘plinth block’ detail on one side only.

Note that, as described in part 1 of the report, the c.1884 archive record drawing plan indicates ‘teak sills’ on the door thresholds.



(2b)29. Platform 4 composite elevation, with sealed door Db highlighted



(2b)30. Platform 8 composite elevation, with sealed door Dg highlighted



(2b)27. Boiler room: left-hand threshold detail with ‘plinth block’



(2b)28. Boiler room: right-hand threshold without ‘plinth block’

The following table summarises observations made on the condition of the perimeter doors for the east elevation (platform 4). Refer to section 4.3 of part 2a for reference codes.

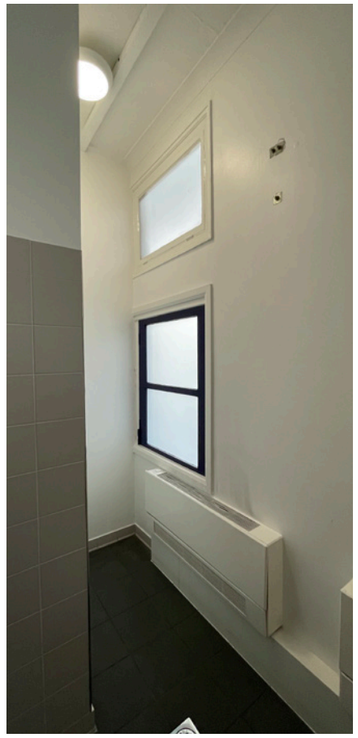
Door DO 01 B2 P4		Door DO 02 B3 P4		Door DO 03 B6 P4		Door D0 04 B8 P4		Door DO 05 B12 P4	
Interior	**Threshold**	**Interior**	**Threshold**	**Interior**	**Threshold**	**Interior**	**Threshold**	**Interior**	**Threshold**
Door leaf: loss of bead on the lower inset pane. Modern hinges. Push plate on right side. Plinth on left side. Additional timber bar, possibly part of a modern intervention on the left side. Loss of timber on right-side base moulding. Indentation on right-side base. Modern hinges on right-hand door lining.	Threshold divided in two: timber section located within door frame and lining as per original design; cementitious infill applied outside the line of the door frame. Timber section shows sign of delamination and indentation. Indication of blue paint. Concrete shows signs of exfoliation and loss of material.	Door leaf: door mechanism on top door frame. Sign of timber indentation. Automatic door push opening system. Door architrave: assumed loss of top door architrave due to door opening mechanism. Sign of modern alteration to architrave and door lining. Modern strip hinge on right-hand side.	Timber threshold part of modern alteration after 1978. Installed as per original design. Screed between York slabs and door threshold. Timber section has fixings and shows sign of discolouration, cracks, and some old infill repair.	Door partially blocked up internally. Door architrave altered to suit modern window casement. Right side absent. Sign of timber indentation. Fixed shut, with internal build up at lower level to form a casement window. Internal window frame is modern with no vertical left side element.	Threshold is part of a past alteration. Threshold is part in timber on inner door frame side, part in cementitious material on external plinth wall cladding side. Timber has fixings and shows sign of delamination.	Door leaf: door mechanism on top of door. Modern door handle and locker. Sign for automatic door fixed to timber frame. Sign of old door opening mechanism. Door architrave: assumed loss of top architrave. Modern alteration and conduit on left side. Plinth to right side. Plinth to left side altered. Modern door strip hinge on the right-side door lining.	Part of a past unknown alteration. Threshold is part in timber and part in cementitious material. Timber has a raised profile and shows sign of delamination. Friable cementitious infill on top of external portion, with timber visible below. Traces of broken stone elements between York slab stone and the cementitious material. Carpet threshold bar visible externally.	Door leaf: loss of timber, sign of timber indentation. Modern door handle and locker. Internal colour in brown and different from rest of the external doors. Door architrave: left side absent. Top door architrave stops to the counter side front panel. Door mechanism on top-left painted over. Modern strip hinge on left side door lining. Metal bar to door lining.	Part of a past unknown alteration. Door threshold consists in a composite, ‘terrazzo’ type material covering front line of the lost York stone slabs. Sign of crack and loss of material on external door architrave side (joint between earlier door threshold and York stone slabs). Carpet threshold bar visible externally, showing sign of corrosion.



(2b)31. DO 01 B2 P4: door



(2b)33. DO 02 B3 P4: door



(2b)35. DO 03 B6 P4: door



(2b)37. DO 04 B8 P4: door



(2b)39. DO 05 B12 P4: door



(2b)32. DO 02 B3 P4: threshold



(2b)34. DO 02 B3 P4: threshold



(2b)36. DO 03 B6 P4: threshold



(2b)38. DO 04 B8 P4: threshold



(2b)40. DO 05 B12 P4: threshold

The following table summarises observations made on the condition of the perimeter doors for the west elevation (platform 8). Refer to section 4.3 of part 2a for reference codes.

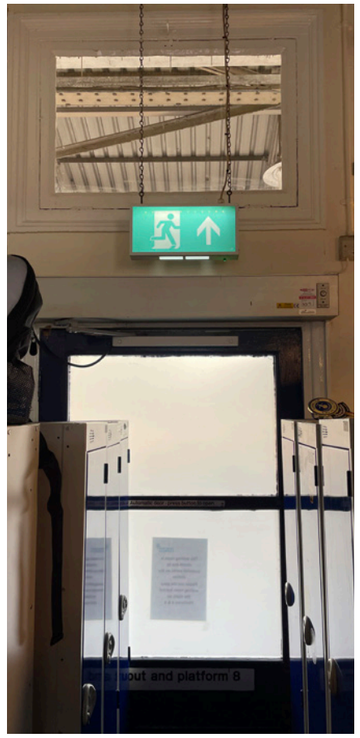
Door DO 01 B1 P8		Door DO 02 B5 P8		Door DO 03 B7 P8		Door DO 04 B10 P8		Door DO 05 B12 P8	
Interior	**Threshold**	**Interior**	**Threshold**	**Interior**	**Threshold**	**Interior**	**Threshold**	**Interior**	**Threshold**
Door leaf: door open mechanism on top right side of door. Sign of timber delamination on right side of the inset panel. Modern door handle. Internal colour in brown and different from rest of external doors. Door architrave: with both plinths. Sign of timber indentation.	Part of a past alteration. Door threshold consists of a composite, 'terrazzo' type material. Threshold is in full depth of the door architrave and lining. 'Terrazzo' material shows sign of loss. Carpet threshold bar visible externally, showing sign of corrosion.	*Note: obscured by train crew lockers installed temporarily in waiting room* Door and door architrave partially visible due to closets. Door leaf: door opening mechanism on top frame. Sign for entrance fixed to timber frame. Loss of beading on lower inset pane. Loss of timber on top left frame. Door architrave: assumed loss of top door architrave due to door opening mechanism	Part of a past alteration. Threshold is part in timber on inner door frame side, part in cementitious material on external plinth wall cladding side. Timber has a raised profile and shows sign of delamination. Cementitious material is part of a past inappropriate repair and shows loss of material, cracks, and trace of timber on layer below.	Door partially blocked up internally. Door architrave altered to suit modern window casement. Right side absent. Sign of timber indentation. Fixed shut, with internal build up at lower level to form a casement window. Modern internal window cill. Window frame seems to be an alteration of door frame.	Threshold in timber. Threshold level is below from perimeter slab. Timber shows signs of delamination, stain, loss.	Door leaf: door open mechanism on top left side of door. Door hinges visible on left side. Modern locker. Modern push bottom on right side of door. Door architrave: assumed loss of top architrave due to door opening mechanism. Right and left architrave sides not visible. Possibly covered by finish plywood or loss. Modern door strip hinge on left-side door lining.	Part of a past alteration. Timber section is a modern addition fixed on top of an earlier alteration made by a 'terrazzo' type cementitious base. Timber shows loss of material, discolouration, and delamination.	Door leaf: door open mechanism on top left frame. Modern door handle. Door architrave: modern door opening mechanism. Loss of timber.	Threshold is in timber and partially covered by an assumed metal plate. Timber shows sign of delamination, line crack, discolouration. Metal plate fixed to timber door threshold.



(2b)41. DO 01 B1 P8: door



(2b)42. DO 01 B1 P8: threshold



(2b)43. DO 02 B5 P8: door



(2b)44. DO 02 B5 P8: threshold



(2b)45. DO 03 B7 P8: door



(2b)46. DO 03 B7 P8: threshold



(2b)47. DO 04 B10 P8: door



(2b)48. DO 04 B10 P8: threshold



(2b)49. DO 05 B12 P8: door



(2b)50. DO 05 B12 P8: threshold

3.1.6 J Internal doors

The internal doors for the waiting room, WCs, accessible WCs and store room are modern, of plain design, and assumed to be fire-rated to suit building regulations.

The panelled cupboard door to the right of the buffet counter is modern. Although it has a traditional design it does not match the rest of the buffet counter.

The sliding door between the café and waiting room is modern but of more sympathetic design and apparently high-quality construction. Assumed to consist of solid wood lower panelling with inset glass panels above.

All the internal doors appear to be in reasonable condition.



(2b)51. Sliding door in internal wall 7 (café side)



(2b)52. Waiting room



(2b)53. Electrical cupboard

3.1.7 J *Windows, architraves and cills*

The internal windows have been inspected visually from ground floor level. Most windows have internal cills and architraves, all frames are painted timber, and all windows appear to be sealed and painted shut.

The following tables describe internal observations made for each of the building's window architraves and cills, for the **east elevation** (platform 4) and **west elevation** (platform 8) respectively. They should be read in conjunction with those included in section 3.2 of part 2a.

Sash window SW 01 B1 P4	**Pivoting window PW 01 B2 P4**	(No window on Bay 3)	**Sash window SW 02 B4 P4**	**Sash window SW 03 B5 P4**	**Pivoting window PW 02 B6 P4**	**Pivoting window PW 03 B7 P4**	**Pivoting window PW 04 B8 P4**	**Sash window SW 04 B9 P4**	**Sash window SW 05 B10 P4**	**Sash window SW 06 B11 P4**	**Pivoting window PW 05 B12**
No sash lock and latch.	Window openable, opening mechanism over paint. Fixings for pipes.		No sash lock and latch.	No sash lock and latch.	Hinges painted over. Window painted shut. Left side frame not visible.	Paint over mechanism. Window architrave absent.	Paint over hinges and opening mechanism. Right side architrave shows sign of detachment with crack.	Partially visible. No sash lock and latch.	Two curtain hooks. No sash lock and latch.	Two curtain hooks. No lock/latch. Fixings to lower sash window frame for cabling and to hold 'Coca-Cola sign'.	Paint over mechanism. Surface-fixed cable on frame. Side wings to hold window open.

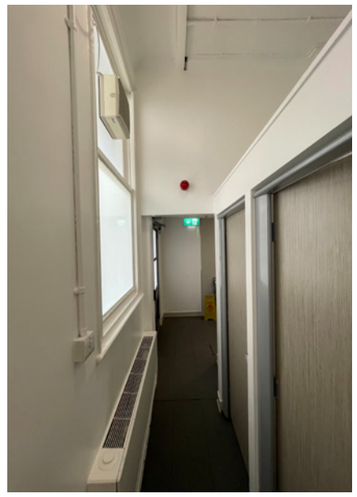
Pivoting window PW 01 B1 P8	**Sash window SW 01 B2 P8**	**Sash window SW 02 B3 P8**	**Sash window SW 03 B4 P8**	**Pivoting window PW 02 B5 P8**	**Pivoting window PW 03 B6 P8**	**Pivoting window PW 04 B7 P8**	**Sash window SW 04 B8 P8**	**Sash window SW 05 B9 P8**	(No window on Bay 10)	**Sash window SW 06 B11 P8**	**Pivoting window PW 05 B12 P8**
Paint over hinges and opening mechanism. Surface-fixed cable on frame. One side wing, presumably originally one of a pair.	No sash lock and latch.	No sash lock and latch. Assumed curtain hooks.	No sash lock and latch. Assumed curtain hooks.	Paint over mechanism. Extra timber frame on left side.	Paint over mechanism. Loss of timber on external frame moulding.	Paint over mechanism. Loss of timber on external frame moulding.	No sash lock and latch. Window handle on lower frame.	No sash lock and latch. Window handle on lower frame.		No sash lock and latch.	Paint over mechanism.



(2b)54. SW 01 B1 P4



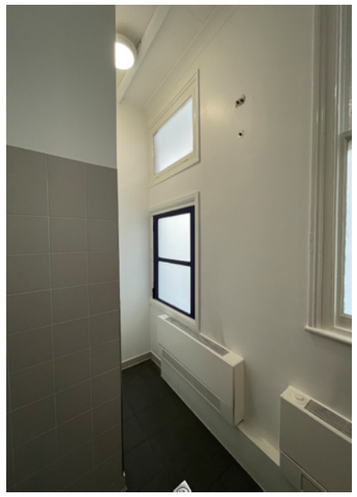
(2b)55. PW 01 B2 P4



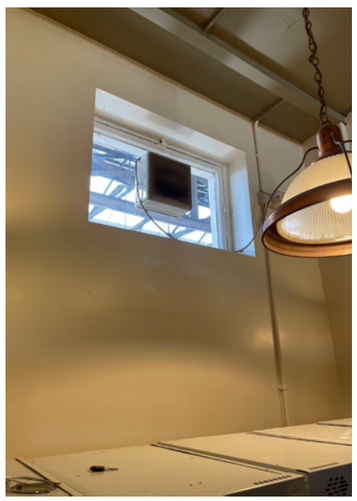
(2b)56. SW 02 B4 P4



(2b)57. SW 03 B5 P4



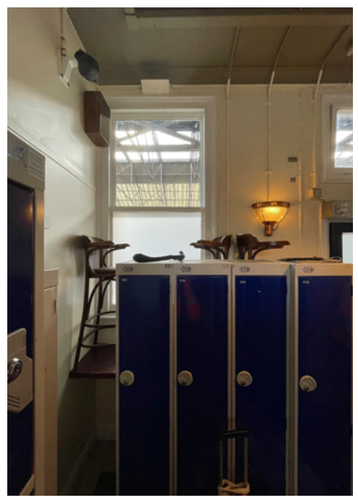
(2b)58. PW 02 B6 P4



(2b)59. PW 03 B7 P4



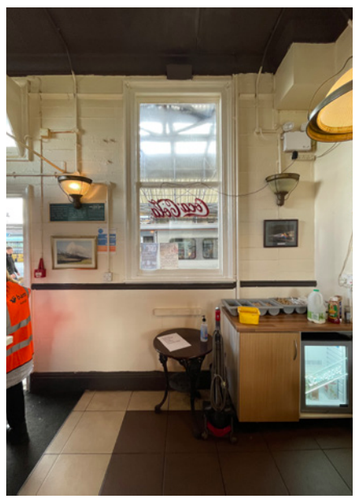
(2b)60. PW 04 B8 P4



(2b)61. SW 04 B9 P4



(2b)62. SW 05 B10 P4



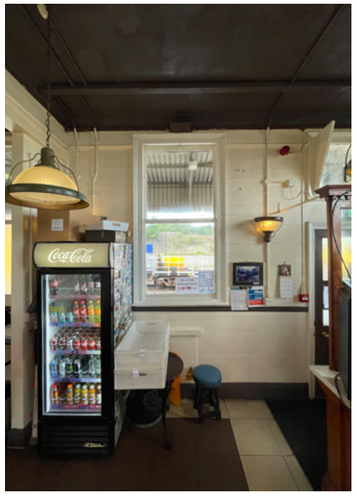
(2b)63. SW 06 B11 P4



(2b)64. SW 05 B12



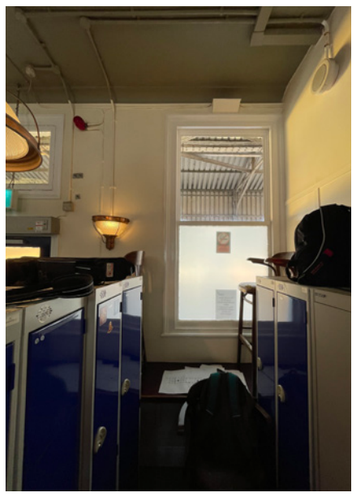
(2b)65. PW 01 B1 P8



(2b)66. SW 01 B2 P8



(2b)67. SW 02 B3 P8



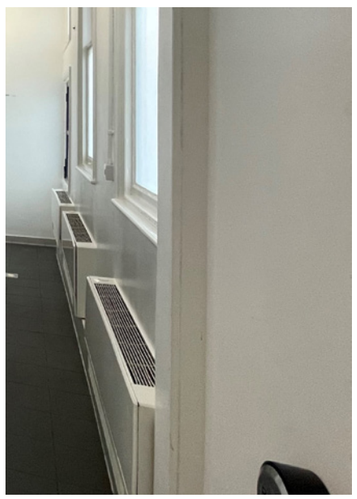
(2b)68. SW 03 B4 P8



(2b)69. PW 02 B5 P8



(2b)70. PW 03 B6 P8



(2b)71. PW 04 B7 P8



(2b)72. SW 04 B8 P8



(2b)73. SW 05 B9 P8



(2b)74. SW 06 B11 P8



(2b)75. PW 05 B12 P8

The following tables provide survey notes for the windows on the north elevation and south elevation respectively. All sash windows have internal cills and architraves, all frames are painted timber, and all windows appear to be sealed shut.

Sash window SW 01 B1 PN	**Sash window SW 02 B2 PN**
Two curtain hooks. No sash lock and latch. Fixings for cables. Window cill covered by an internal tiled modern cill.	Two curtain hooks. No sash lock and latch. Fixings for cables. Timber window cill is visible on left side of the counter screen. Window cill cover by an internal tiled modern cill.

Sash window SW 01 B1 PS	**Sash window SW 02 B2 PS**
Window partially obscured by modern build-up. Loss of timber on the upper moulding. Modern window cill.	Window partially obscured by modern build-up. Sign of timber indentation on the upper moulding. Modern window cill.



(2b)76. SW 01 B1 PN & SW 02 B2 PN



(2b)77. SW 01 B1 PS



(2b)78. SW 02 B2 PS

3.1.8 J Other joinery elements

The **skirting boards** visible along the perimeter walls within the café, waiting room, boiler room, and accessible toilets may be part of an early development. The internal walls within the waiting room feature modern skirting boards. **Dado & picture rails** in the café and partially visible in the waiting room appear to be part of an early development. These items are all painted and appear to be in reasonable condition.

Console tables within the café and waiting room, and **benches** in the waiting room, appear to be part of an early development. All appear to be in reasonable condition.

It is assumed that **floorboards**, some of which are likely to be original to the building, exist beneath the visible floor finishes. Original elements are thought to be 'ploughed and tongued' with iron, as noted in section 4.2 of part 1. Their condition is not known.

The ceilings may be supported by early or original **ceiling laths**. The condition of these elements, if they survive, is unknown.



(2b)79. Dado and picture rails in the café

3.1.9 F Flooring

A number of different floor finishes are present in the Tea Rooms. All existing finishes are relatively recent additions. They appear to be in reasonable condition throughout, with no obvious signs of cracking or detachment.

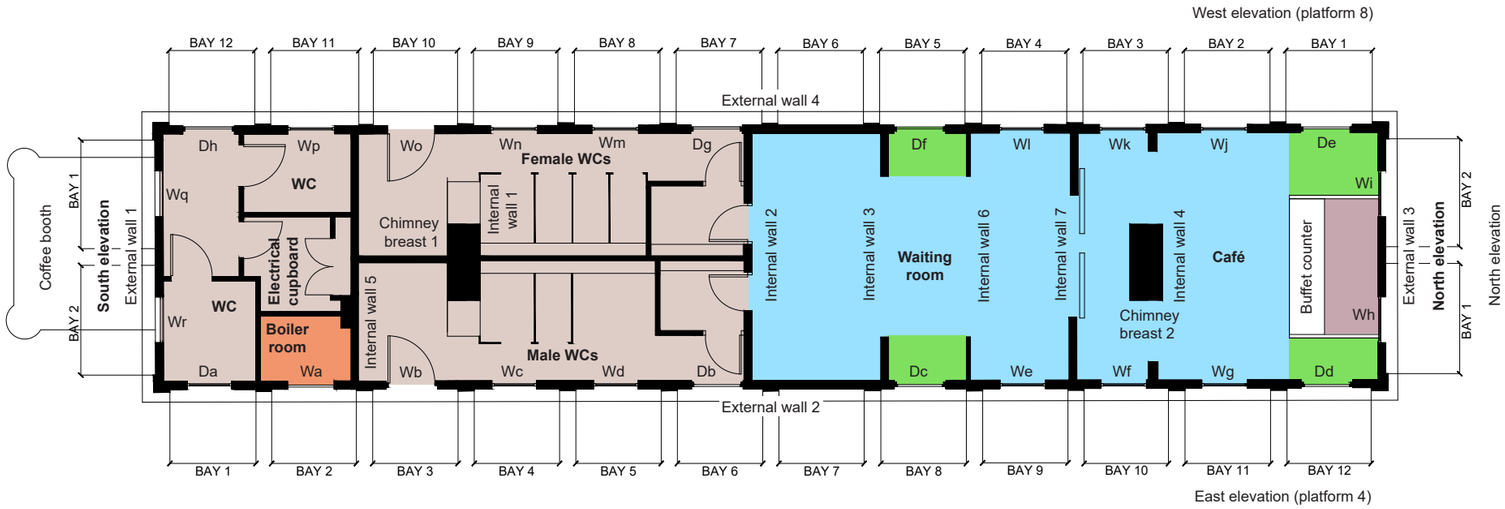
Type F1: rectangular tiles (brown and cream) in café and waiting room.

Type F2: square tiles (dark grey) in WCs.

Type F3: square tiles (light grey) in boiler room.

Type F4: carpet at entrances to waiting room and cafe.

Type F5: linoleum behind buffet counter.



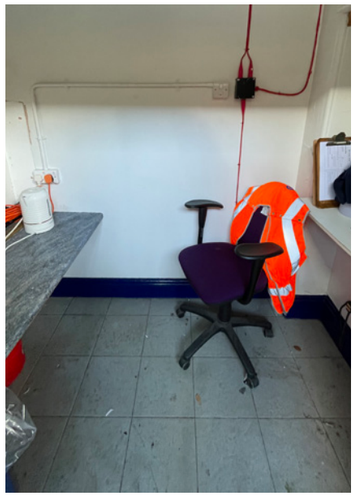
(2b)80. Floor plan with flooring types



(2b)81. Tiles in café room



(2b)82. Tiles in main WCs



(2b)83. Tiles in boiler room



(2b)84. Carpet in cafe' room



(2b)85. Linoleum behind buffet

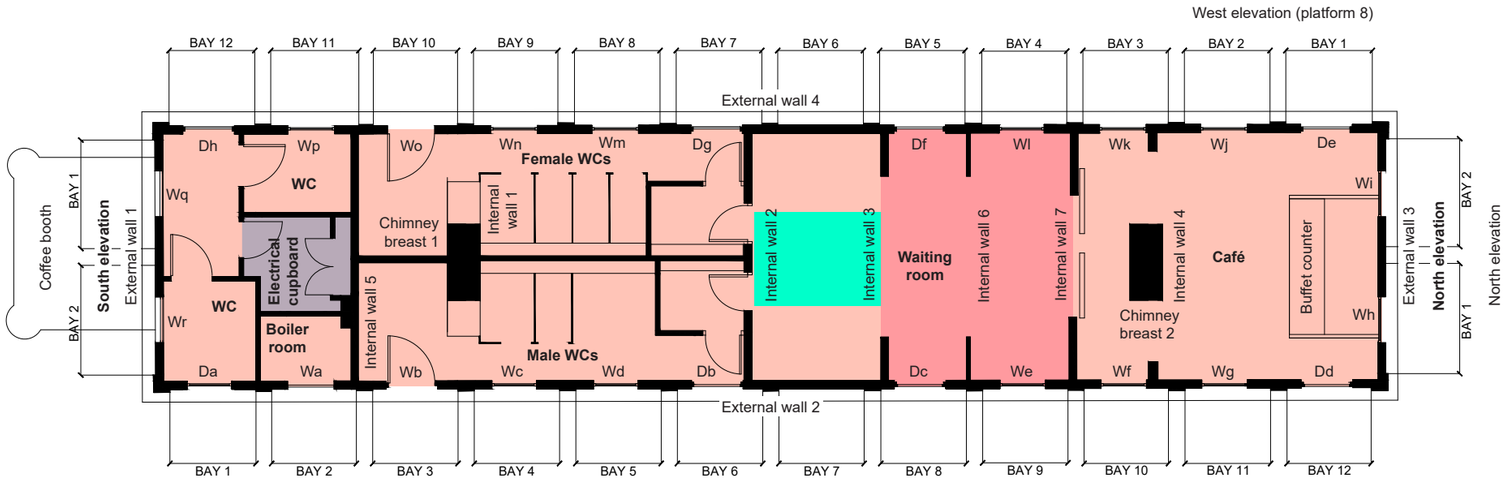
3.1.10 C *Ceilings and cornices*

Ceilings in the Tea Rooms have been inspected visually but no access has gained to allow identification of substrate materials.

In general the ceilings appear to be finished flat and smooth (shaded ■ on figure (2b)86), with the exception of two areas of more textured surface: part of the waiting room (■) and the electrical cupboard (■). All ceilings are finished with paint. Cornicing and coving (in some cases of a plain 'Victorian' type) is in place in some but not all rooms. Due to the date of the building and its alterations it is assumed that a combination of lath and plaster, gypsum plaster and fibrous plaster surviving areas may be found.

A glazed lantern (■) is in place over the waiting room.

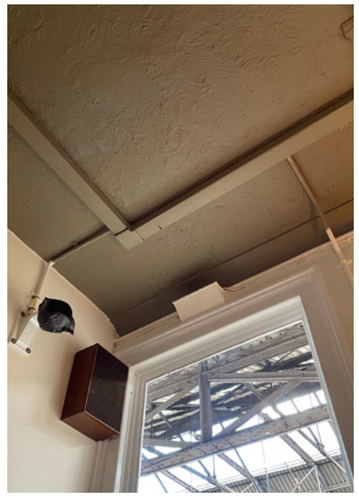
No obvious signs of damage or displacement have been observed from ground level. A package of opening-up works will establish materials, elements and condition in more detail.



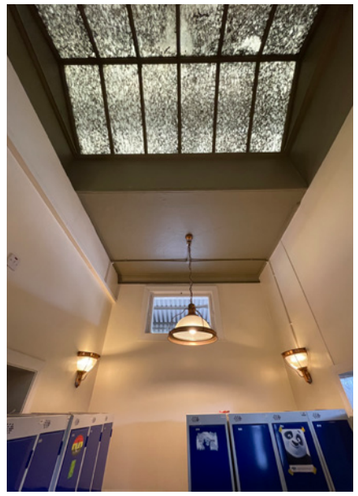
(2b)86. Floor plan with indication of ceiling types above



(2b)87. Café ■



(2b)88. Waiting room ■



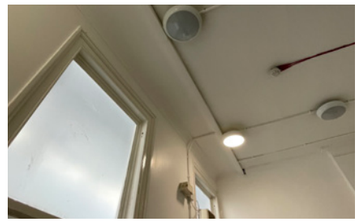
(2b)89. Waiting room ■■



(2b)90. Electrical store ■



(2b)91. Boiler room ■



(2b)92. Male WCs ■

3.1.11 S *Mechanical and electrical systems*

Radiators, service boxes, boiler, electrical boxes, switchers and sockets, fire alarms all appear to be recent additions.

The location of some of the sockets are known to be non-standard, such as items located inside cupboards and cabling around the counter. As noted in section 3.1.2, their location and fixing diminish the condition of the buffet counter. For these reasons, regardless of their condition, they will not be refitted in the same locations after reconstruction.

3.1.12 S Light fittings

The ceiling lights, wall lights and shades are modern: possibly part of a recent makeover. The café and waiting room wall lights and shades are modern replicas of an older traditional design.

Overall they appear to be in reasonable condition, with some evidence of wear and tear and paint staining.

3.1.13 S Sanitary ware

The toilets, sinks and taps in the WCs all appear to be off-the-shelf modern products, presumably installed relatively recently as part of a standardised approach from the train operating company.

The buffet counter sink appears to be a relatively modern addition.

Overall these elements appear to be in reasonable condition.



(2b)93. Buffet counter: pipe



(2b)94. Buffet counter: sockets



(2b)95. Buffet counter: cabling



(2b)96. Café light fitting



(2b)97. Accessible toilet



(2b)98. Buffet counter: sink

4. Additional surveys and schedules

4.1 In general

As part of the specialist contractor's own surveys of the building, outlined for the exteriors in section 4.1 of part 2a, they will prepare a set of measured surveys of the interiors (section 4.2 below). They will use this information to maintain 'live' drawings, schedules and digital photographic records of the following:

- materials and elements, and their condition (section 4.3);
- elements not to be retained (section 4.4);
- elements to be replaced (section 4.5);
- elements to be retained for record purposes (section 4.6);
- elements to be repaired (section 4.7);
- all other findings (section 4.8).

4.2 Metric surveys

The contractor shall survey the interiors twice: firstly to record the location, measurement, description and setting-out of all internal elements, *prior to any removal*; secondly *after all furniture has been removed* and the 'shell' of the interiors may be fully accessed and inspected. The survey shall include levels of ceilings, coving, etc.

As with the equivalent survey in part 2a, 0.00 points shall be established for each room or principal volume within the building. These points will be closely calibrated with the equivalent 0.00 points for Layers 1 and 2. See section 4.2 in part 2a.

The survey shall include joinery drawings at 1:20 scale with profiles, mouldings and fixing details shown at 1:5 and 1:1 as appropriate.

4.3 Record of materials, elements and condition

4.3.1 Interiors in general

The contractor shall verify and update the observations in the previous section *before* and *during* the dismantling process. As discussed in 2.2, this is particularly important for the areas which were filled with lockers during the 2022 surveys, and those rooms with modern finishes which potentially mask older fabric.

The contractor must label the interior elements, each in its existing position within the building, before any dismantling/deconstructing processes commence. Each element must be numbered following a logical system, similar to that proposed in 4.3 of part 2a for the exteriors, to be agreed with the conservation team. The contractor shall take photographs of the elements, each with their label in place, prior to and during the dismantling works, in order record the assembly of the item and minimise risks during the reinstatement phase.

4.3.2 Ceilings

The contractor shall survey and identify all types of surviving plaster and support structures (any backing, laths or beams), with the inspection carried out by a plaster specialist and a structural engineer. The survey shall include an assessment of asbestos or other toxic materials, in order to inform a decision on the potential retention and repair of the ceilings, coving and mouldings.

Findings shall be presented in a report and illustrated on drawings which indicate all different types of material in the ceilings, covings and mouldings, clearly identifying elements and areas appropriate (or otherwise) for retention or re-use.

This work will be intrusive, involving trial areas for opening and inspecting, but damage to the ceilings must be strictly controlled. It shall be carried out in accordance with a separate specification, subject to conservation officer approval prior to the commencement of works.

Before any ceiling removal, the contractor shall identify areas at risk of collapse and provide protective measures as appropriate.

4.4 Record of elements that are *not to be* retained

The contractor shall prepare and maintain a comprehensive drawing (at 1:20 scale) and schedule (with photographs), referenced in accordance with the system defined in section 4.3 of part 2a, to present all of the elements which will be removed from the building when it is reconstructed. This will be a live document, to be updated as additional observations are made during dismantling and reconstruction, and will require approval from the conservation officer prior to commencement.

The table below is a simplified list, to be read in conjunction with those in sections 4.5 and section 4.6.

Group	Materials and elements *not to be* retained
J Joinery	Buffet counter: inset glass panes, rear buffet cupboard doors, shelving, side cupboard door Perimeter walls: painted plywood sheet to Type B wall and painted flat finish to solid Type C wall (subject to further investigation) Internal walls: modern wall liners and studs which cannot be retained, solid chimney stacks and internal solid walls (except a sample of bricks, as noted in section 4.6), WC cubicle partitions Perimeter doors: ironmongery, mechanisms, thresholds Internal doors: leaves, architraves, handles and opening mechanisms, with the exception of sliding door between café and waiting room Other items: modern skirting boards from internal partition walls and skirting tiles
F Flooring	Floor tiles (except for a sample, as noted in section 4.6) Linoleum and substructure behind buffet counter Carpet at entrance doors
C Ceilings	Ceilings found to be contaminated, or of low quality, or otherwise considered to be unsuitable for reusing following further investigation
S Building services	Mechanical, electrical: service conduits, pipes, radiators, wiring, switches and sockets Modern ceiling lights if not reusable WCs, cistern system, sinks, taps and waste pipes Fire detectors Kitchen extractor

4.5 Record of elements to be replaced

The contractor shall prepare and maintain a drawn and cross-referenced record of all items to be replaced with new material.

Not all of the items which are not to be retained are to be replaced like-for-like. The emphasis of this record is where variations from the existing design and materials will be introduced.

Group	Materials and elements to be replaced
J Joinery	Buffet counter: new counter top (to same dimensions as existing MDF version), inset glass panes, cupboard doors, shelving, side cupboard door Perimeter walls: Reinstatement of cladding boards throughout in place of Type B and Type C wall. These walls are both subject to futher investigation in order to establish cladding and finish type. Internal walls: • partitions (including any studs which cannot be reused, subject to findings) to be replaced, with thickness of replacement wall to match existing – except in the cases where partitions will accommodate structural columns supporting the new station roof; • chimney breasts removed; • new internal partitions in same locations; • where existing solid walls cannot be reused, reinstate with new bricks • new wall linings to internal partitions, to comply with building regulations • WC cubicle partitions Perimeter doors: ironmongery, opening mechanisms and thresholds
	Internal doors: • leaves, architraves, ironmongery, and hinges to suit fire rating where required • new opening mechanisms, including latches and handles, to make windows openable where required Windows: full height of sash windows on south elevation to be exposed Other items: modern skirting boards from internal partitions, wall and skirting tiles
F Flooring	Floor tiles Linoleum and substructure behind buffet counter Carpet at entrance doors
C Ceilings	New ceiling, where existing elements including joists and coving cannot be reused
S Building services	Mechanical, electrical: Service conduits, mechanical pipes, radiators, electrical layout, switches and sockets Modern ceiling lights (TBC) WCs, cistern system, sinks, taps and waste pipes Fire detectors Kitchen extractor

4.6 Record of elements to be retained *for record purposes only*

The contractor shall prepare and maintain a drawn and cross-referenced record of all items to be salvaged for record purposes. Reasons for preserving certain key elements include:

- allowing detailed measurements to be taken off-site;
- preserving examples of existing (modern) components, such as tiles, which are unrealistic to conserve and reuse but need to be replaced with elements of similar dimensions when the building is reconstructed;
- to provide a reference for appropriate mouldings, etc., in case of damage during dismantling such that replacement parts are required to match what was previously installed.

The table below provides an early assessment of elements to be retained for these reasons.

Group	Materials and elements to be retained *for record purposes only*
J Joinery	MDF buffet counter top A sample of cladding Type B plywood sheet Bricks from solid walls and chimney breasts, if they cannot be salvaged and reused All door thresholds A sample of tiles (from floor and wall) Timber backing wall behind buffet counter
F Flooring	Examples of all floor tile types
C Ceilings	A sample of any ceiling timber joists considered (after inspection) to not be reusable

4.7 Record of elements to be repaired

The contractor shall prepare and maintain a drawn and cross-referenced record of all items to be repaired. Although some defects have been identified, the manifestation of surface cracks and other features on the timber elements hidden behind paintwork, plywood sheets, timber studs or other elements is likely to only become clear once dismantling begins.

This will be a finely-detailed study, requiring close inspection of all elements by timber, stone and plaster conservation specialists.

4.8 Record of findings

The contractor shall follow a methodology, subject to conservation officer approval, to keep a record of observations made during the dismantling and recording of the interiors.

Each finding shall be discussed with the conservation team and conservation officer in order to understand the potential for re-use in the reconstructed building. Observations shall include, but not be limited to:

- any bricks found in chimney stacks or internal partition walls and any stud walls;
- any timber boarding behind the painted plywood sheets;
- ceilings and cornicing including battens and fixings;
- any skirting boards (at the moment the skirting boards are visible on the inner perimeter walls in the accessible toilet area, boiler room, café room and partially in waiting room);
- any dado rails (at the moment the dado rails sections are visible in the café room and waiting room);
- any unusual fixing types or locations;
- any surviving nails, metal tongues, battens, floor substrate;
- timber floorboards;
- any modern partition interface with older walls.

5. Dismantling

5.1 In general

The contractor shall follow the general dismantling requirements of section 5.2 in part 2a.

5.2 Sequence

Broadly speaking, the sequence for dismantling the interiors should reverse the sequence in which they were constructed and fitted out. An outline sequence of disassembly is as follows:

- take apart the interior fitout elements, including the buffet counter, skirtings and internal doors, recording the dismantling process to allow the reinstatement in their original location;
- remove light fittings and shades;
- remove sanitary ware;
- disconnect and dismantle the building sevices;
- dismantle ceilings including coving and cornicing (except in the rooms to the south of internal wall 5, where the surviving cornicing on the perimeter walls and internal wall 5 will be removed after the more recent partition walls);
- dismantle internal stud partitions;
- expose the interface between window/door architraves and perimeter wall cladding by removing all sealant (after testing for presence of toxins);
- dismantle perimeter wall cladding;
- dismantle modern floor finishes (unless wall plates are found to run through floor plane);
- dismantle possible salvageable surviving timber floor boards beneath the floor finishes;
- dismantle perimeter door thresholds.

This sequence must be planned and executed in conjunction with exterior work. Various elements, including doors and windows, will form part of both sequences.

Prior to dismantling the wall cladding, the contractors shall ensure that all internal obstructions have been removed.

5.3 Joinery

Joinery must be taken apart in the fewest possible large components to avoid any loss of parts or subcomponents. All visible fragile areas shall be identified and any loose parts logged and kept safely and securely with the main component. Visible elements may be fixed to timber backings, grounds or carcassing of inferior material such as softwood or plywood.

5.4 Perimeter walls

Cladding boards are to be detached starting from the top and moving downwards.

All fixings/bolts on the walls shall be verified in order to understand their function. The contractor shall carry out a trial removal of the skirting ceramic tiles on Bay 3 to platform 4 and the boxes at floor level under the radiators from Bay 4 to Bay 6 to understand the method of fixing and what they are fixed to.

Joinery mouldings of the door architrave, upper level window, assumed vent cover pelmet and covings shall be protected during dismantling.

All mechanical fixings and wall penetrations are to be carefully investigated after the wall has been exposed, in order to understand the method and depth of fixing.

5.5 Internal walls

Particular attention must be given to the connection between internal partitions and perimeter walls. These areas are to be exposed and presented to the conservation team for consideration.

The end studs of the c.1884 partitions are likely to have end studs within the perimeter walls, so a corner detail may exist between the perimeter wall cladding and the wall linings of the partitions.

More recently erected walls are likely to have new studs at their ends, with the perimeter wall cladding running through the partition line.

The brickwork of the solid chimney breasts and solid walls shall be assessed for condition and type of mortar prior to any removal. If possible they shall be carefully dismantled and bricks stored and cleaned prior to reuse within the reconstructed building.

Modern internal stud walls shall be dismantled carefully, removing the external layers (plywood sheet or plaster board) to expose the studs. The position of studs and other framing shall then be surveyed and recorded, to allow accurate repositioning in the reconstructed building.

5.6 Floors

The floors of the Tea Rooms are likely to contain some surviving pine floorboards, potentially from the original construction. As noted in section 4.2 of part 1, the archive drawings report the use of *“yellow batten floor straight joint ploughed and tongued with iron”*. The protection, repair and reuse of any such elements is an important part of the project.

In order to establish what (if any) floorboards remain in place, the removal of floor finishes must be carried out very carefully. Before any boards are lifted, the contractor shall carry out trial investigations under the supervision of a timber specialist (subject to a separate specification, for conservation officer approval) to ascertain the type of construction of the floor and its suitability for dismantling and reuse.

The timber boards are to be carefully lifted, salvaged and stored off-site. Their removal will start from the external side of the room by carefully lifting the first board and releasing it from the adjoining board. Nailed boards shall be released with a bolster and lifted with a crowbar in such a way that the joists and the undersides of the boards are protected.

The contractor shall undertake a trial lift of the boards prior to commencing the works. Observations shall be reported to the conservation team.

Part 3: Outline repair and specification notes

1. General requirements

1.1 Heritage

Regardless of its current condition the Tea Rooms building is listed at Grade I, under the listing of Huddersfield station as a whole, and is of highly significant heritage value. Disturbance to the building fabric during the process of dismantling and reconstruction must be strictly limited to the extent described in this document, or otherwise agreed prior to the commencement of work.

Treatment to the building fabric shall comply with best conservation practice, the Planning (Listed Buildings and Conservation Areas) Act 1990, and the stipulations of the TWAO, LBC and any other relevant outcomes from the process of discharging consent conditions. It is intended that this shall be achieved through adherence to this methodology document.

The works shall comply with Building Regulations where appropriate. It should be noted that the building's listed status can exempt it from regulations in certain special circumstances.

1.2 Technical approvals

Works to the Tea Rooms shall also be subject to technical approval in line with Network Rail standards and best practice guidelines. If these conflict with heritage constraints, the contractor shall present the situation to the conservation team in the first instance. Consultation may be required with other technical disciplines and final proposals may be subject to conservation officer approval.

1.3 Following this methodology

The contractor shall follow the proposed methodology contained within all four parts (1, 2a, 2b and 3) of this document. The overarching general requirement is for all parts of the Tea Rooms building to be safely dismantled, catalogued, stored off-site, cleaned and eventually returned to site for the Tea Rooms to be reconstructed in its entirety.

1.4 Operatives

Dismantling, repairs and re-erecting the components of the Tea Rooms shall be carried out by skilled craftspeople who specialise in conservation work to timber, stone, cast iron and other materials as appropriate. Evidence of previous work experience is required.

1.5 Power tools

No power tools may be used at any point during the dismantling process, unless specifically approved by the conservation team based on on-site benchmarks to verify an appropriate level of skill and care.

1.6 Method statements and risk assessments

The contractor shall provide method statements and risk assessments for all aspects of surveying, *in situ* cleaning, *in situ* repairs, labelling, dismantling (including recording and reporting observations), storage, off-site cleaning, off-site repairs and reconstruction. These documents are subject to conservation officer approval prior to the commencement of work. Where appropriate, such method statements will be included in the relevant phases of submission of the CIMP.

1.7 Additional surveys

The majority of elements have not been surveyed in any detail, due to the building being painted. With the exception of the area temporarily opened-up and inspected (see section 2.2 of part 2a) Layer 2 has not been observed. The roof, lantern and supporting structure (including, importantly, the perimeter connection of rafters) have also not yet been surveyed, due to a lack of access. The contractor shall survey all of these elements: this is for record purposes and also to verify the proposals for re-use, repair or replacement.

The contractor shall create a moulding register for all decorative parts (such as the external architrave) which will be dismantled into constituent components, to check that the original composite profile has been accurately recreated on site.

Unexpected *in situ* findings shall be discussed with the conservation team with regard to potential design changes. These may be subject to conservation officer approval. The process for contacting and discussing with the conservation officer unexpected findings etc. shall be agreed by all parties before the commencement of work.

1.8 Drawings

The contractor shall survey every element of the building and prepare survey drawings (at scale 1:20) and details (at scale 1:1 and 1;5) to allow all parts to be reassembled correctly, following the agreed joint line in each case. The drawing set shall follow the methodology outlined in this document.

1.9 Specification

The contractor shall produce a detailed specification for the works described in this methodology, for approval by the conservation team.

1.10 Paint analysis

Samples of the building's paintwork (external and internal) will be analysed during the GRIP 5 design stage and covered in a separate document. This assessment will establish the number, colour, material and significance of historic paint layers, along with any toxicity contained within the paint material(s).

Because of the health & safety implications of removing paintwork with traces of toxic elements, particularly *in situ* in a live railway environment, the sequence and extent of all subsequent works will be informed by the results of the analysis.

The contractor shall also note that the samples taken from the building will represent only a small portion of the paintwork applied. They may consider carrying out additional tests of their own.

1.11 Phasing of site works

The contractor shall undertake the following sequence of activities, as specified in subsequent sections (assuming no or manageable levels of toxicity in the paintwork):

- paint analysis (during GRIP 5);
- benchmark cleaning and paint-stripping trials;
- *in situ* or (predominantly) off-site cleaning;
- *in situ* repairs;
- *in situ* labelling;
- dismantling trials;
- dismantling, with labelling;
- storage;
- reconstruction trials;
- reconstruction, including repairs and replacements;
- application of finishes and paint.

1.12 Repairs

All elements are to be repaired as appropriate unless marked on notes. The contractor shall prepare and maintain a detailed condition survey based on their findings on site. This shall be carried out with reference to the initial condition survey notes (part 2a and part 2b of this document) in the first instance.

Urgent repairs may be required to parts disturbed during site activities. Prior to any dismantling work the contractor shall propose a method for seeking rapid assessment from the conservation team for repairs of this nature.

1.13 Replacement elements

Replacement elements shall match the material and geometric characteristics of the original components, with the exception of any obvious damage or defects: no attempt shall be made to falsify the effects of age.

The contractor shall seek permission from the conservation team following the agreed methodology for any hidden elements to be replaced if not salvageable once exposed. Any elements subject to replacement shall be measured in detail in order for the contractor to produce drawings for accurate replication.

It is anticipated that drawings, record photographs and/or samples of materials may be required by the conservation officer for all replaced elements. If so, these should be provided in accordance with a methodology and timescales to be agreed.

1.14 Removal without replacement

Disposal of any items considered unsuitable, redundant or not required for re-use is likely to require approval from the conservation officer.

1.15 Structural stability

The contractor shall assume responsibility for the structural stability of the building.

2. Preparation

2.1 Temporary works

The contractor shall provide scaffolding, safe access platforms, temporary support, safety nets, etc. to all the elements of the building during surveys, small-scale intrusive works, dismantling and reconstruction in order to prevent damage to or collapse of the building's elements. Anticipated changes to the temporary works shall be described in the contractor's method statements.

Space must always be allowed for the manoeuvring of elements, in order to prevent additional damage during handling.

Where elements (such as inappropriate earlier repairs, although these are assumed to be small in scale) are removed from the building, care must be taken to secure and support the surrounding fabric prior to replacement pieces being installed.

2.2 Cleaning & paint-stripping

The contractor shall propose methods for removing the paintwork on the building, noting the advantages and disadvantages of carrying out this work on-site (with the building intact) or off-site (in a workshop environment). The intention is to:

- strip the paint sufficiently that planar surfaces are essentially smooth and flat (while maintaining any natural deformation in the elements) such that joints can be neatly aligned, with flush joints being reconstructed as flush;
- prepare surfaces such that different components can be taken apart and reconstructed cleanly, with no ragged edges due to paint build-up which may interfere with accurate reconstruction;
- prepare the surface of all components to be suitable for the required paint system (see section 6.7) to be applied in accordance with the manufacturer's instructions;
- remove hazardous materials as appropriate.

The intention is *not* to return the building to a fully stripped state, although the sharpness of mouldings and edges should be reinstated. Cleaning and scraping back loose areas and redecorating over existing well-bonded paintwork is likely to be the most appropriate method.

In order to establish a reliable method of cleaning and stripping the components, the contractor shall carry out small-scale trial areas (around $1m^2$) of different processes and different depths of application. The sample areas shall be presented to the conservation team, and once a preferred process has been established they will be offered for conservation officer approval.

If small areas of paint removal are undertaken on site, the contractor shall plan the work to minimise any damage to the inner layers of paint and the fabric of the building.

2.3 In *situ* repairs

The contractor shall undertake repairs to the building prior to dismantling, but only for elements which require stabilisation to enable their removal and storage.

It is anticipated that most repairs will be carried out either off-site or during reconstruction.

2.4 Labelling

2.4.1 In general

Each element shall be identified on the relevant key drawing(s) with a reference number. They shall be labelled using stickers or tags which may be removed later without causing damage or leaving permanent residue. Labelling shall take place before the element is removed from the building, in order to limit the risk of parts being lost or misplaced.

2.4.2 In situ

Larger areas shall be labelled as per the key drawing and photographed *in situ* prior to dismantling.

2.4.3 Components during/after dismantling

As each component is split (where required) into sub-components during dismantling, each element shall also be labelled in accordance with the key drawing.

Related elements, such as cladding boards within the same wall panel, shall be packed together and referenced as such.

3. Handling & storage

3.1 Elements to be retained

Elements to be salvaged shall be stored off site at the contractor's workshop. The contractor shall provide a method statement detailing the proposed methods of storage and handling, including transportation. This shall clearly demonstrate that all possible steps have been taken to minimise the risk of damage.

Materials, assembled units, elements and all components shall be protected, stored, transported and handled in such a manner that will prevent damage, distortion, overstressing, uneven weathering or degradation. Particular attention shall be given to the protection of edges, projecting features, corners and other vulnerable areas.

Storage shall be clean, secure, weathertight and free from vermin and infestation. It shall provide appropriate environmental conditions (including temperature and relative humidity) for each of the elements and materials. Storage conditions shall be such that levels of humidity do not exceed those likely to be encountered by the building *in situ*.

Each element shall be protected by padding, wrapped to prevent abrasion and covered to exclude dust. More fragile items may require separate boxes. Protective materials shall always be appropriate to the stored element and its required environmental conditions.

All elements shall be protected against damage, loss and theft.

Storage containers shall be such that the particular elements can be located and inspected during the storage period by the conservation team, the conservation officer, or others, if required. A method statement for external inspection access shall be agreed by all parties prior to the first visit.

3.2 Elements to be disposed of

All items dismantled and not retained shall be disposed of responsibly, with as much as possible reused elsewhere or otherwise recycled.

4. Reconstruction

4.1 General approach

It is anticipated that the sequence used for dismantling shall be applied in reverse for reconstruction.

Each numbered element shall be reinstalled into its former position using the same fixings, subject to their condition. If the contractor proposes to replace any fixings they shall demonstrate that the original elements are no longer fit for purpose.

The contractor shall provide sample repairs for each principal type of timber component, for conservation officer approval before proceeding with the repairs generally.

4.2 Visual mock-up

The contractor shall create a mock-up of two re-erected bays, with studwork and cladding to both the exterior and interior, in their factory or workshop. This shall be subject to conservation officer approval prior to any reconstruction work.

4.3 Sequence

The Contractor shall reconstruct the building in the following sequence. They may propose an alternative sequence, if justified with a clear logic based on any previous experience or survey work.

- *Foundations*
- *Columns*
- *Utilities*
- *Walls*
  Reconstruct and re-erect external wall frames
  Install cladding boards sequentially, caulking joints as required
  Install wall plate
- *Roof*
- *Doors and windows*
  Install windows and doors following installation of roof
- *Internal walls, floors and ceilings*
  Re-erect internal walls, floors and ceilings with salvageable studs, joists and bricks if possible
- *Internal doors, counters and historic carpentry*
- *Building services and lighting*
- *Decoration*
- *Fixtures, fittings, furniture, posters, clocks, signage, etc.*

5. Element-by-element repair notes

5.1 In general

These high-level proposed repair notes are to be read in conjunction with the records of materials, conditions and elements in parts 2a & 2b.

Unless agreed otherwise:

- all components to be retained shall be repaired and reinstated as per their original location and arrangement on the building;
- damaged surfaces and mouldings shall be made good by fitting new pieces to match the adjacent planes and profiles (existing moulding profiles shall be surveyed and drawn);
- existing rusted fixings which cannot be reused shall be replaced with new fixings suitable for and compatible with existing dimensions and materials.

5.2 Particular elements

5.2.1 Cladding boards

If lapped connections between original external and internal cladding boards are damaged during dismantling they shall be caulked for weathertightness using traditional breathable oakum before redecoration. The contractor shall provide a benchmark sample of caulking to at least two full joints, for conservation officer approval, prior to commencing work.

5.2.2 Doors and windows

The contractor shall expose, inspect and repair all architraves, cills and plinths during the process of removing the adjacent wall cladding.

Repairs shall follow any existent deformation, ensuring that the structural integrity of the frame is maintained and that the window and door continues to work as per the original design. Doors and windows shall move freely without wobbling. They shall hang straight and close without leaving gaps at either head or sill/threshold.

Whenever possible, splice repairs should be formed which include mechanical fixings (timber pegs or dowels, or non-ferrous screws or pins) as well as adhesive. Fixings should ideally be made from the inner face of the window.

Sash windows are currently sealed shut. However, it is assumed that their frames, weights, cords and ironmongery will be repaired/ reinstated so that they could be re-opened in the future. The number of windows that will be operative will be determined to comply with ventilation and security strategy. The Contractor shall use the following sequence as a guide to carrying out this work:

- supply and fit new glazing inset panes in doors;
- repair sashes and sash box *in situ,* or off-site if required;
- clean and sand the inner box surface to remove excess paint build-up;
- re-install sash boxes *in situ*;
- install replacement parting bead with integral draught seal strip;
- clean sashes;
- install new clear glass panes as specified;
- cut small grooves in top edges of top sashes, bottom edges of bottom sashes and meeting rail of bottom sashes, and install draught strips;
- repair loose glazing bar joints;
- reinstate and repair putty around glazing, if required;
- renew sash cords;
- renew and balance weights, where required, to achieve easy movement without sagging;
- realign sashes as necessary;
- install replacement staff beads with new components including integral draught seals;
- service or replace ironmongery;
- redecorate.

5.2.3 Door thresholds

Door thresholds shall be exposed by removing layers of material covering the area. Any timber or ‘terrazzo’ type slab section shall to be removed as one piece and retained for replication purposes if appropriate. Timber fixings shall be recorded before their removal.

The contractor shall supply and fit new door thresholds (material to be confirmed)

5.2.4 Vent grilles

The contractor shall repair and reinstate existing salvaged metal vent grilles at upper level, allowing for the construction and fitting of lost elements.

Modern plastic vent grilles at plinth/skirting board level are not to be retained. They shall be carefully removed, any timber components found behind shall be exposed, repaired and reinstated.

5.2.5 Signage

The contractor shall:

- repair and reinstate projecting signs as per their existing location and arrangement, including through-wall bolts, except for those to be moved as part of the wider station redesign;
- allow for the repair of the timber wall boarding after the removal of signage panels not to be reinstated;
- repair and reinstate all poster frames, with their supporting battens, in accordance with the design drawings.

5.3 Buffet counter

The contractor shall confirm the type of timber and finishes used on the existing counter joinery. If any veneer is present, the contractor shall allow for the supply and fit of new veneer to match existing adjacent mouldings and surfaces, considering the orientation and detail of the timber grain.

6. Materials

6.1 Timber

6.1.1 Repairs in general

The Contractor shall repair rotten portions of timber elements by piecing-in timber to match. New timber elements shall be matched and aligned as closely as possible to existing profiles and mouldings.

Rotten or split sections shall be cut back and replaced with new timber held by timber dowels or countersunk screws.

Timber repairs shall be designed to direct water away from joints, so it cannot lie on a joint face or track back into it.

Small gaps or cracks of less than 5mm width may be repaired using a filler based on wood dust mixed with a two-part epoxy resin or polyester resin. Weakened areas may be strengthened with a resin consolidant and holes repaired with a filler or a combination of filler and timber. Filled repairs shall be painted over as quickly as possible since resin degrades under ultra-violet light.

Face-halved scarf joints shall be used to connect new timber into existing studs (if required). The overlap of the scarf joint shall be three times the depth of the stud.

The surface condition of timber elements shall not be allowed to deteriorate between their preparation and the application of the protective coatings, or during the application sequence.

6.1.2 New timber

Timber for local repairs to both historic and modern material shall be compatible with the surrounding retained material in every way (species, growth characteristics, grain orientation, section orientation and moisture content) in order to limit the risk of differential movement or distortion. The contractor shall allow for laboratory analysis to establish the existing species.

No use of sapwood shall be permitted.

All new timber shall be sourced responsibly and FSC certified. The contractor shall provide evidence regarding its provenance. All new timber elements are to be date-stamped for future recognition.

New timber surfaces shall be clean, dry and free from surface contaminants prior to painting. Additional surface preparation such as abrading and the treatment of knots and resinous or oily areas may be necessary; where required this shall be carried out in accordance with the instructions of the coating manufacturer. Sharp edges shall be rounded off so that corners are adequately covered by the coatings.

Wood knots shall be sealed by the application of two coats of ‘knotting’.

6.1.3 Replacing inappropriate timber repairs

As little as possible of the historic fabric shall be removed. This includes previous repairs, unless it has been agreed by the conservation team that they are damaging to the reconstructed building. The extent of this work shall be verified once the element have been inspected, after test cleaning and dismantling if appropriate.

Where earlier repairs are to be removed, the contractor shall secure adjacent mouldings and surfaces and carefully remove or cut back the inappropriate material to where the original surface survives.

6.1.4 Cracks

The contractor shall carefully expose and clean any cracks and establish the extent of damage. Cracks of less than 5mm width may be filled with timber filler up to the surface. Gaps larger than 5mm may require a neat infill timber piece.

6.1.5 Holes

Existing holes, including those formed after the removal of fixings during the dismantling process, shall be filled with timber filler to match adjacent surface levels.

6.2 Fixings

The contractor shall use original fixings, as far as possible, to connect the larger structural elements on the building.

If original nails cannot be reused, the Contractor shall use countersunk non-ferrous screws to fix the reconstructed cladding boards and battens in place. Original nail holes shall be reused as often as possible to avoid the creation of new holes in historic timber elements. New fixings shall be suitable for and compatible with existing dimensions and materials.

A benchmark sample of fixings shall be provided for one cladding panel, for the conservation team’s approval, prior to commencing work.

Possible types of fixing found in situ would be nails, screws or glue. The contractor shall identify the location visually, or by metal detector if the joinery is overpainted or the location of backing pieces is unknown.

Any redundant nails shall be retained, and their position recorded.

Salvaged nails shall be kept safely in appropriate boxes.

6.3 Cast and wrought iron

6.3.1 Cleaning

The contractor shall set aside a representative sample of cast iron console brackets to be inspected by the conservation team.

A cleaning specification shall be prepared following the conservation team’s inspection. Samples may be required to determine the most appropriate approach.

Prior to cleaning, the contractor shall:

- remove old paint, rust, loose parts, efflorescence or any atmospheric deposit, defective material and inappropriate repairs – noting that if any of the original cast iron surface becomes exposed there is risk of flash rusting and a moisture-tolerant primer should be applied;
- ensure that the surfaces are stable and in suitable condition to be cleaned;
- carry out cleaning trials to establish a suitable cleaning methodology;
- produce an intermediate report for each method of cleaning tested for effectiveness and then recommend a final cleaning methodology;

- implement appropriate preparation methods following BS EN ISO 8504-1 to 3 and BS EN ISO 8501;
- determine the preparation grades of surfaces in order to determine paint systems;
- produce a final method for cleaning and surface preparation, subject to conservation officer approval, before commencing any cleaning work. A combination of chemical, physical and mechanical methods may be proposed.

Cleaning processes use a combination of chemical, physical and mechanical methods.

- *Physical-mechanical cleaning*

  The contractor shall carry out cleaning trial samples of abrasion cleaning to the cast and wrought iron surfaces, avoiding dry abrasive blast cleaning on wrought iron. Rust, corrosion and defecting coating shall be removed by rubbing down until good metal is found.

  For hand tool cleaning, the contractor shall:

  - carefully clean the metal surface with non-powered hand tools;
  - use hand scrapers, hand wire brushes, abrasive paper and plastic fleece (tools which do not abrade the surface) to carefully remove loose contaminants;
  - use abrasive blocks, with special suitable grades of carborundum as appropriate, and tools such as knives and scrapers lubricated with water.

  If the use of power tools has been approved, the contractor shall:

  - mechanically roughen the surface with rotating wire brushes, needle guns, abrasive paper or plastic fleeces as appropriate;
  - avoid the use of ferrous bristle brushes.

- *Physical-chemical cleaning*

  Steam cleaning may be carried out to prevent abrasion. The nozzle type and distance from the surface to be cleaned shall be adjusted to achieve the optimum cleaning performance based on the manufacturer's recommendation.

  Wet abrasive cleaning may be useful to remove carbon sulphation, lime- and cement-based paints, paint and plaster residues, some old oil-based paints, bitumen (if oxidised) and limescale efflorescence.

  Water sprayed cleaning may be useful to minimise water run-off. The washing cycle and nozzle positions should be adjusted to achieve optimum cleaning performance, based on the manufacturer's recommendations.

  Pressurized water cleaning, using low pressure to prevent abrasion, requires the nozzle type and distance from the surface to be adjusted to achieve the optimum cleaning performance, based on the manufacturer's recommendation.

  Water-based systems are not recommended in cold weather because of the risk of frost. They are also not appropriate for materials with a very high level of degradation.

  Plain poulticing (fibrous paper) may be used to prevent damage and avoid abrasion to the surface. Contact must be maintained as poultices dry out. Poultice material shall not be reused.

  Biocides should be applied by removing loose growths with brushes (preventing abrasion and damage) and using the correct solution to kill any residual growth. The solution shall be compatible with the surface in order to not create stains or any other harmful reaction. Biocides must be registered by the HSE (Health and Safety Executive) and listed on the HSE website under non-agriculture pesticide.

  Chemical cleaning products should be adjusted for each surface to achieve optimum cleaning performance. They can vary by concentration, time, and number of applications. The surface to receive the treatment is to be wetted. The removal of the chemical is to be recommended by the manufacturer, including rinsing with clean water. The chemical treatment shall be applied with paper pulp.

  In case the rinsing of water is not sufficient to neutralise the surface, compatible neutralising agents shall be used.

  The pH value for chemical cleaning must be tested before cleaning, after cleaning the area with water.

6.3.2 Repairs

The contractor shall ensure that surfaces to be repaired are stable and in suitable condition prior to any cleaning. All hot works to iron shall be carried out off site, in a safe workshop environment suitable for hot works with all necessary tools and safety equipment.

- *Mechanical repair*

  Cold repairs can be used for cast iron and wrought iron and mild steel components. This technique reduces the risk of mechanical stress and avoids the risk of fire and thermal shock to the material.

  If pins, bolts or stitches are introduced in order to repair cracks they shall be hidden, as far as possible, to respect conservation principles. All 'new' materials shall be compatible with the surrounding existing fabric. Steel may be used in thin sections.

  Cast iron contains flakes of graphite which lubricate cutting operations such as drilling and tapping (threading) holes.

  General cold repair types are stitching, plating, bolting and studding. These processes are undertaken with cheaper and simpler equipment than hot processes.

  General hot repair types are welding, brazing and soldering.

- *Consolidation and stabilisation*

  For non-structural repairs, metal fillers compatible with the surrounding material may be used on cast iron and wrought iron in good condition.

Small gaps may be filled with two-pack epoxy adhesives. This filling is water-resistant but sensitive to high temperature. The Contractor shall carry out trials of small areas of filler before general execution.

For structural repairs, structural castings may be repaired with fibre-reinforced epoxies. Filaments of carbon glass bonded with polymer resin onto blast-cleaned surfaces maybe used to strengthen a component or repair a deep crack.

6.3.3 Fabrication

The contractor shall allow for two new castings of console brackets and confirmed with the conservation team and conservation officer. The new castings shall be made of the same type of metal as the parts they will replace.

The original component shall be surveyed in detail, after cleaning, and drawings produced which define the form and composition of the element. Where existing pieces of cast iron are used as patterns for new castings, it should be remembered that the new part will be 1% smaller than the original.

6.3.4 Replacement of elements

This type of repair involves cutting off a defective area and replacing with a new one using compatible materials, dimensions and connections.

The most vulnerable components are bolts and rivets, footings and interlocking parts.

6.4 Stone

The top of the rear buffet counter is described as Sicilian marble by the historical records. This marble is known today as a type of Carrara marble.

Prior to any cleaning or repair the contractor shall ensure that all the surfaces are in stable condition and that all repairs have been carried out following its removal from the counter joinery.

The contractor shall provide cleaning and repair specifications for conservation officer approval. Prior to any cleaning, the contractors shall carry out trials to establish a suitable methodology.

Cleaning processes use a combination of chemical, physical and mechanical methods. Manufacturers' instructions shall be followed in all cases. Products applied to the stone shall be tested on a small area to verify that no colour changes occur.

- *Physical-mechanical cleaning*

  Dry cleaning of the surface must be carried out using soft brushes and a vacuum cleaner.

  Allow for physical-mechanical cleaning with small hand tools by specialist personnel.

- *Physical-chemical cleaning*

  Contractor to carry out a method of cleaning that is not aggressive. After dry cleaning and mechanical cleaning, the use of a diluted alkaline cleaner, suitable for natural stone, is recommended. This will help to clean and degrease the surface, preparing it for further treatments, although it is unlikely to remove deep oily stains. The cleaner should be applied for five minutes before gently rubbing the surface with a sponge. Residues should be removed and the surface rinsed.

- *Consolidation and stabilisation*

  Pre-stabilization of the surface is recommended in case of loose materials.

  Existing holes, line cracks or any damage occurred during the dismantling process shall be filled with stone filler with a lime mortar base or other compatible fillers.

- *Protective*

  The stone top needs to be protected once reinstated, when it will be exposed again to a greasy kitchen environment. The protection used must allow the material to breathe after the application.

  Once the surface has been cleaned and restored, a water-based sealer specific for natural stone should be applied. It should be safe for food contact without affecting the visual appearance of the marble. It must be applied evenly on a clean and dry surface using a brush, and any unabsorbed residues removed in an appropriate manner.

  For more routine cleaning during the works, the contractor shall use neutral detergents which do not leave residues.

6.5 Historical plaster

The possible presence of historical plaster is under investigation. Repair notes will be provided should any relevant material be found on site.

6.6 Glass

The contractor shall replace all glass panes as indicated in section 4.5 of part 2a.

The glass thickness shall suit the existing frame. Glazing shall be carried out to BS 6262.

The contractor shall allow for full removal and replacement of the existing glazing putty, using putty softener, mechanical removal and the application of an appropriate glazing sealant.

6.7 Paint and other coatings

6.7.1 In general

A final paint specification will be provided by the conservation team after detailed analysis of the existing paint, along with the stripping trials described in section 2.2, have been undertaken. This is in order to establish compatibility between new finishes, existing finishes and substrate timber. The paint analysis may also inform the final decision on colour.

Key factors to be considered are:

- enviromental conditions;
- film thickness;

- sustainability and availability;
- Network Rail standards for maintenance (reapplication) and durability;
- breathability;
- moisture content on the timber structure support.

The coating system shall be tested on samples of Douglas fir and Parana pine test pieces, and on test pieces of any other timber species specified by the paint manufacturer. These samples shall be offered to the conservation team for review.

Along with guidance from organisations such as Historic England and the SPAB, the contractor shall refer to the following Network Rail documents for additional guidance:

- NR/GN/CIV/002 *The use of protective coatings and sealants*;
- NR/L3/CIV/039 *Specification for the assessment and certification of protective coatings and sealants*;
- NR/L3/CIV/040 *Specification for the use of protective coating systems*.

Painting shall be undertaken by hand using a soft brush which can easily access deeper crevices.

6.7.2 Assumed specification

At present the following specification has been assumed. Specifications for these systems are given in NR/L3/CIV/039.

- Timber shall be generally coated/recoated with Network Rail system T50 (externally) and T54 (internally). T53 may be used for internal new linings where fire resistance is required.
- Ironwork shall be recoated with system M20.

6.8 Hazardous materials

Timber paint can contain toxins, such as arsenic or lead. Lead is typically found in oil-based paints used for doors and windows. The building's paintwork is likely to also be mixed with guano and other atmospheric pollution.

The contractor shall follow all health and safety and environmental regulations when removing paint and possible hazardous materials.

As noted in section 1.10, the contractor shall analyse the existing paint prior to any works on site.

The contractor shall assess the detailed asbestos survey report for the building and propose measures in their method statements for the appropriate treatment of any asbestos-containing materials.

7. Conclusion and next steps

This document has been prepared as reference and guidance for works to dismantle and relocate the Tea Rooms at Huddersfield station. It will be supplemented by various documents covering additional items (including design proposals) in more detail.

It includes a description of the history, significance and condition of this small platform building. Additional drawings and photographs are provided within a separate historic building record report.

The methodology may be referred to as technical guidance for contractors preparing a detailed package of works, and for the conservation officer (and other heritage stakeholders) to understand the implications and heritage impacts involved.

It should be considered in conjunction with the Conservation Implementation Management Plan for Huddersfield station, which is a key condition of the listed building consent secured for the wider TRU project at the station. Once the CIMP has been approved, this methodology will effectively become part of the consented works.

Various items will require further development by a specialist contractor. Different activities will require approval by different parties at different times, so a rigorous approach to planning and sequencing both the works and the review processes will be crucial to a successful result.