

52.8.9 Without limiting the effect of any other clause of this Contract relating to termination, if the Supplier fails to comply with any of Clauses 52.8.2, 52.8.3, 52.8.4, 52.8.5, 52.8.6, 52.8.7 and/or 52.8.8:

- (a) the Supplier has committed a material breach of this Contract; and
- (b) the Company may refuse the Supplier, its employees, agents and Delivery and Servicing Vehicles entry onto any property that is owned, occupied or managed by the Company for any purpose (including but not limited to deliveries).

### **53 CompeteFor**

53.1 Without prejudice to Clause 32, the Supplier will, on a non-exclusive basis, use the CompeteFor electronic brokerage service (or such alternative web-based tool as the Company may direct from time to time) ("**CompeteFor**") to make available to other suppliers all appropriate opportunities, arising in connection with the Contract, to supply goods, works or services to the Supplier.

53.2 The Supplier will use all reasonable endeavours to ensure that its subcontractors (for the purposes of this Clause, the "**Supplier's Subcontractors**") use CompeteFor, on a non-exclusive basis, to make available to other subcontractors all appropriate opportunities, arising in connection with the Contract, to supply goods, works and services to the Supplier's Subcontractors.

53.3 The Supplier will monitor (and maintain a record of) the number, type and value of opportunities, arising in connection with the Contract, made available to other suppliers via CompeteFor, whether by the Supplier or the Supplier's Subcontractors, as required by this Clause 53.3, and will report this information on a quarterly basis by way of email to the Company's Representative.

### **54 Criminal Record Declarations**

54.1 For the purposes of this Clause 54:

"**Relevant Individual**" means any servant, employee, officer, consultant or agent of either the Supplier or any subcontractor or supplier involved in the provision of , or intended to provision of, any aspect of the Goods and Services; and

"**Relevant Conviction**" means any unspent criminal conviction relating to actual or potential acts of terrorism or acts which threaten national security.

54.2 The Supplier shall procure from each Relevant Individual (as the case may be) a declaration that he has no Relevant Convictions ("**Declaration**") or disclosure of any Relevant Convictions. A Declaration shall be procured prior to a Relevant Individual providing any of the Goods and

Services. The Supplier shall confirm to the Company in writing on request or in any event not less than once in every year that each Relevant Individual has provided a Declaration. The Supplier shall procure that a Relevant Individual notifies the Supplier immediately if he commits a Relevant Conviction and the Supplier shall notify the Company in writing immediately on becoming aware that a Relevant Individual has committed a Relevant Conviction.

- 54.3 The Supplier shall not engage or allow to act on behalf of the Supplier or any subcontractor in the performance of any aspect of the Goods and Services any Relevant Individual who has disclosed a Relevant Conviction.
- 54.4 The Company shall have the right in accordance with the audit rights set out in Clause 4 to audit and inspect the records of the Supplier and its subcontractors and its and their respective employees and agents in order to confirm and monitor compliance with this Clause 54 at any time during performance of this Contract.
- 54.5 If the Supplier fails to comply with the requirements under Clauses 54.2 and/or 54.3 the Company may, without prejudice to its rights under Clause 20.1, serve notice on the Supplier requiring the Supplier to remove or procure the removal of (as the case may be) any Relevant Individual who has not provided a Declaration from the Contract and/or Company's site with immediate effect and take such steps as are necessary to ensure that such Relevant Individual has no further involvement with the provision of the Goods and Services unless (in the case of non-compliance with Clause 54.2) within seven (7) days of receipt of the notice the Supplier confirms to the Company that he has procured all of the relevant Declarations required under Clause 54.2.
- 54.6 A persistent breach of Clause 54.2 and/or Clause 54.3 by the Supplier shall entitle the Company to terminate the Contract in whole or in part with immediate effect in accordance with Clause 20.1(a).
- 54.7 In the event the Company becomes aware that a Relevant Individual has committed a Relevant Conviction, the Supplier shall remove or procure the removal (as the case may be) of such Relevant Individual from the Contract and/or the Company's site with immediate effect and take such steps as are necessary to ensure that such Relevant Individual has no further involvement with the provision of the Goods and Services.
- 54.8 Nothing in this Clause 54 shall in any way waive, limit or amend any obligation of the Supplier to the Company arising under the Contract and the Supplier's responsibilities in respect of the provision of the Goods and Services remain in full force and effect and the Supplier cannot claim any extra costs or time as a result of any actions under this Clause 54.

**Schedule 1**  
**Detailed Terms**

Commencement Date	August 2017
Expected Delivery Date(s)	August 2017- December 2019.
Completion Date	December 2019
Delivery Address	Cockfosters Train Maintenance Depot, Bramley Road, Oakwood, London N14 4HX or Northfields Train Maintenance Depot Northfields Avenue, London W5 4UB
Supplier's Representative: Address for service of notices: Telephone:  Email:	REDACTED
Company's Representative: Address for service of notices:  Telephone: Email	REDACTED
Quantity	Please refer to Schedule 2
Contract Price	Please refer to Schedule 2
Warranty Period	10 year warranty on all floor panels and 15year warranty on the materials. Should the vehicle life be extended beyond the expected 10 year window, MCI shall offer a warranty extension.
Initial Period	36 months with an option to extend by 12 months
Specification	Please refer to Schedule 3
Programme	Please refer to Schedule 5
Additional applicable standards under Clause 3.2(d) and 3.3(d)	
Additional Comments/Special Instructions	In order to complete the assurance process, TfL will require a full set of manufacturer's drawings for the panels and a manufacturer's data sheet or similar for the material.  In order to assure the design and therefore fit the flooring a complete set of drawings must be

	<p>supplied as part of the contract along with the manufacturers fitment/installation instructions</p> <p>A First Article Inspection (FAI) will be required.</p>
<p>Security required pursuant to Clause 46:</p> <p>Bond</p> <p>Parent company guarantee</p>	
<p>The Liquidated Damages for delay for the purpose of Clause 9.3 payable for such Goods under TfL-00735 Schedule 2 are:</p> <p>The period of delay over which the Liquidated Damages shall be calculated for the purpose of 9.3 under TfL-00735 Schedule 2 is every</p> <p>The maximum amount of Liquidated Damages payable under Clause 9.3, expressed as a percentage of the price payable for such Goods under TfL-00735 Schedule 2 is:</p>	<p>REDACTED</p> <p>REDACTED</p> <p>REDACTED</p>
<p>The Liquidated Damages for delay for the purpose of Clause 12.15 payable for such Services under TfL-00735 Schedule 2a are:</p> <p>The period of delay over which the Liquidated Damages shall be calculated for the purpose of Clause 12.15 under TfL-00735 Schedule 2a is every:</p> <p>The maximum amount of Liquidated Damages payable under Clause 12.15, expressed as a percentage of the price payable for such Services under TfL-00735 Schedule 2a is:</p>	<p>REDACTED</p> <p>REDACTED</p> <p>REDACTED</p>

**Schedule 2  
Pricing Schedule**

REDACTED

**Schedule 2a  
Pricing Schedule**

REDACTED

## **Schedule 3**

### **Specification and Drawings**

#### **Rail Vehicle Accessibility Regulations (RVAR)**

The supplier shall ensure that the flooring system (structural and covering) is compliant with Regulation for Floors of the Rail Vehicle Accessibility Regulation 2010.

#### **Replacement Flooring System**

Appendix A consists of a drawing list of the components parts. This list is not exhaustive and all details should be checked before proceeding with procurement or manufacture. The supplier may request further information or drawings. If the company has no access to required information, the supplier may have to obtain the information by sample or the design or new components. Any design will require Prior approval by LUL.

The design must meet the requirements detailed in S1180, A8 – Standard for Rolling Stock and S2180, A3 – Passenger Rolling Stock.

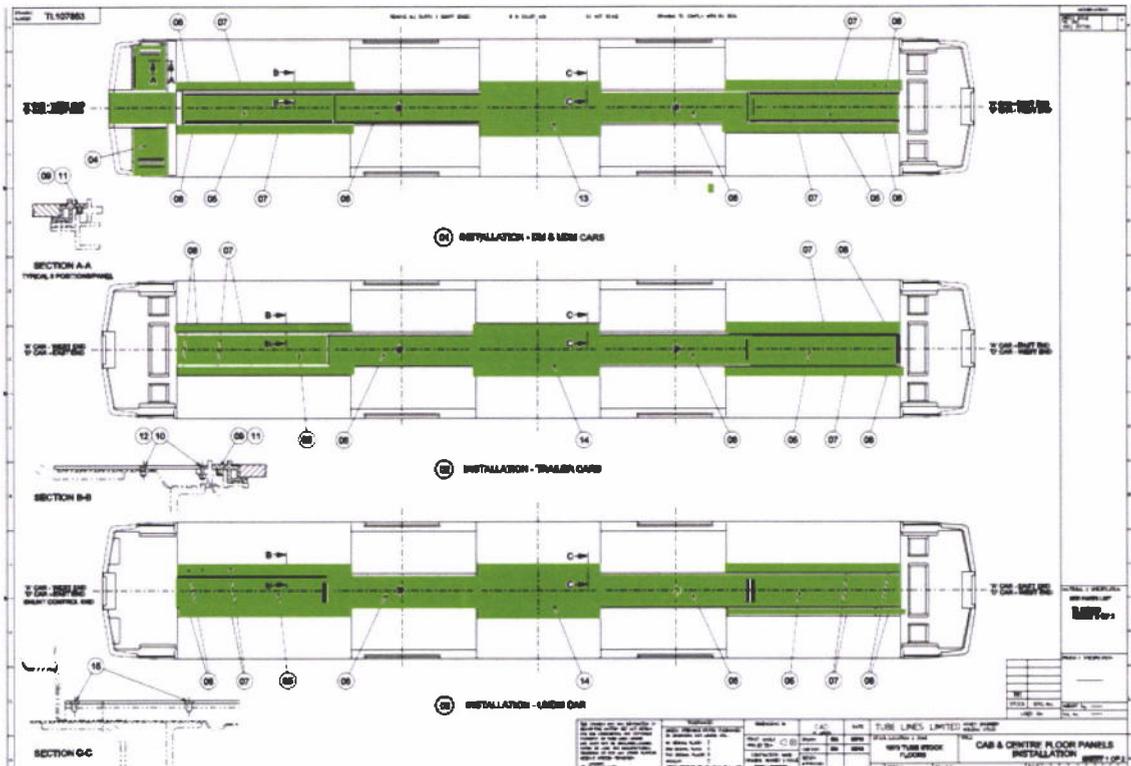
#### **Replacement Floor Covering**

Appendix B consists of a drawing for the component parts and lino location. This list is not exhaustive and all details should be checked before proceeding with procurement or manufacture. The supplier may request further information or drawings. If the company has no access to required information, the supplier may have to obtain the information by sample or the design of new. Any design will require prior approval by LUL.

The design must meet the requirements detailed in S1180, A8 – Standard for Rolling Stock and S2180, A3 – Passenger Rolling Stock.

## APPENDICE A

Area's In Green to be replaced.



## Appendix B

- 73TS Flooring Condition Assessment
- 86142
- 86161
- 89134
- 86162
- 86173
- 86167
- 88920

# Piccadilly Line

Saloon and Cab Flooring Condition assessment Report.

MAYOR OF LONDON



Saloon and Cab Flooring Condition Report  
 Date: 22/04/2016  
 Revision: Issue 1  
 Robert Jenks



	NAME	SIGNATURE	DATE	POSITION
AUTHOR	R Jenks	<i>[Signature]</i>	22/4/16	Engineering Manager
APPROVAL	M Harris	<i>[Signature]</i>	25/4/16	Fleet Manager
APPROVAL	H. Morgan	<i>[Signature]</i>	25/4/16	Asset Engineer

Document Revision Record

Issue	Date	Notes
Draft 1	19/4/2016	Initial draft for comment.
1	22/04/2016	Formal Issue following review

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## Saloon and Cab Flooring Condition Report

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### 1. Introduction

The Piccadilly Fleet was previously due for de-commissioning prior to 2016. However, the Fleet now has a revised disposal date of 2026. Therefore, a major review of the current Fleet condition and Reliability, and the work required to keep running a safe and Reliable Fleet until this revised date has been undertaken.

The Saloon and Cab Flooring were areas identified as requiring attention within the 2026 strategy paper due to the current condition, incidents experienced in service, the potential for tripping hazards, and the possibility of damage to cabling resulting from defective flooring sections. A major Fleet wide project to replace the sections of flooring in proximity to the saloon doors has recently been completed by an external contractor (RPL LTD), and therefore this report focuses on those sections of flooring not replaced within the saloons, and the flooring within the cabs.

A visual assessment of the saloon and cab flooring condition has been conducted on 10 units and the findings documented within this report.

Service affecting failure data for the last 2 years has also been scrutinised for incidents relating to flooring and is detailed within this report.

## Saloon and Cab Flooring Condition Report

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## 2. Saloon and Cab Flooring – Current Construction

The Piccadilly Fleet comprises 172 Three car units which consist of a combination of the following cars dependant on whether the unit is a "single ender" or "double ender":

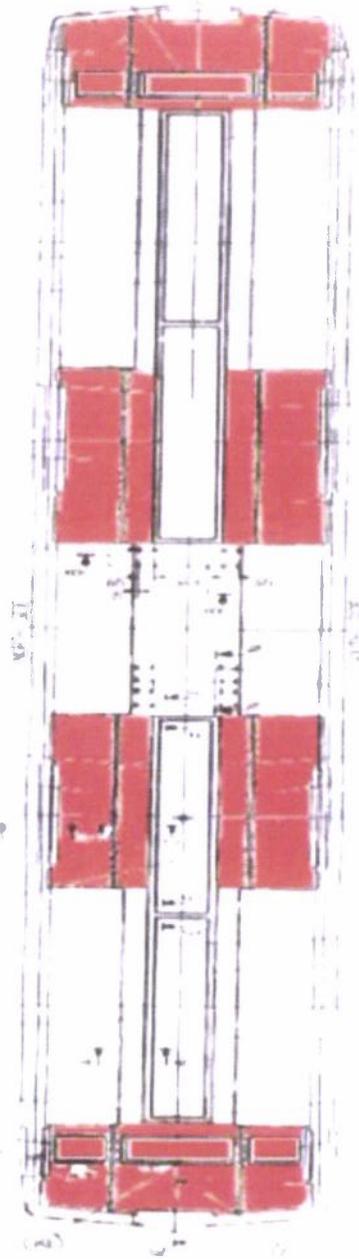
- Driving Motor Cars (DM's and UDM's)
- Trailer and Special Trailer cars (T and SpT)
- Uncoupling Driving Motor cars (UNDM's)

Of the 172 units, 151 are "Single enders" consisting of a Driving Motor, Trailer car and Uncoupling Driving motor car. The remaining 21 units are "Double ended" with a Driving Motor at each end of the unit and a Trailer car in the middle of the consist

As detailed in the introduction of this report, some sections of the Saloon flooring have recently been replaced as part of a major project where a completely different design to the original flooring has been utilised. The sections of flooring not replaced as part of this programme were last replaced during fleet Refurbishment by Bombardier between 1996 and 2001. The following sections provide an overview of the configuration and construction of the flooring for both the new flooring, and the original sections still in place in both the saloons and cabs.

### 2.1 Saloon Flooring

As previously detailed, the saloon flooring is a combination of lino sections fitted during the Bombardier Refurbishment programme carried out between 1996 and 2001, and areas replaced during the recent scope of work undertaken by RPL LTD. In the following drawing, those areas detailed in red were replaced by RPL across the whole fleet between 2013 and 2015 where the original aluminium honeycomb sandwich arrangement was replaced with phenolic flooring panels topped with a synthetic rubber.



**Figure 1 – Scope of RPL Saloon Flooring Replacement Project**

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The remaining centre or longitudinal sections have varying construction dependent upon location. The sections between seats (Centre Panel) as indicated in the drawing below comprise a solid aluminium alloy sheet supported by aluminium extrusions with the lino bonded onto the sheet

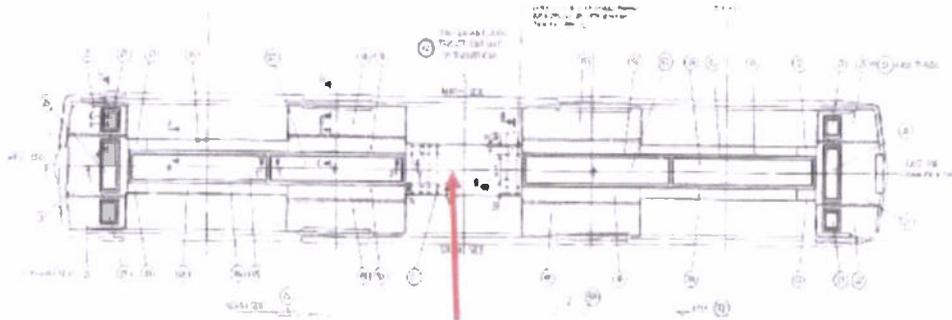


Figure 2 – Longitudinal Flooring, Centre Panel Location

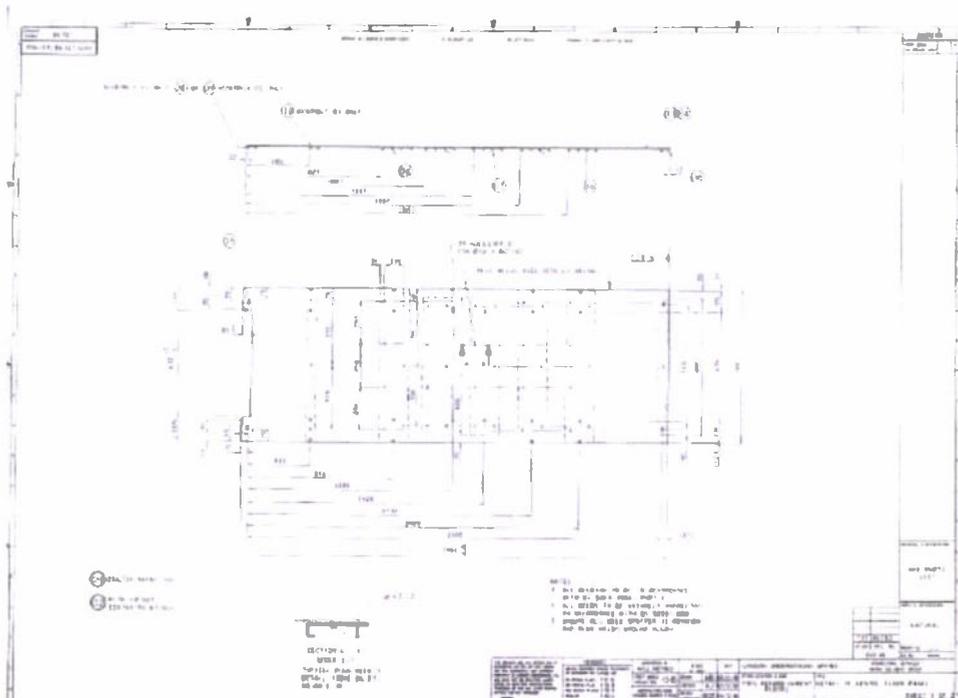


Figure 3 – Longitudinal Flooring, Centre Panel construction

The remaining longitudinal sections in the vestibule areas as indicated in figure 4 consist of floor traps constructed from aluminium alloy frames and plates, onto which the lino is bonded – See drawings below.



### 3 Cab Flooring - Current Construction

The cab flooring has not been replaced other than as a result of casualty work since the Fleet Refurbishment project undertaken between 1996 and 2001. The flooring is made up from several separate sections of lino that are secured in a number of different ways as shown in the following drawings and photographs



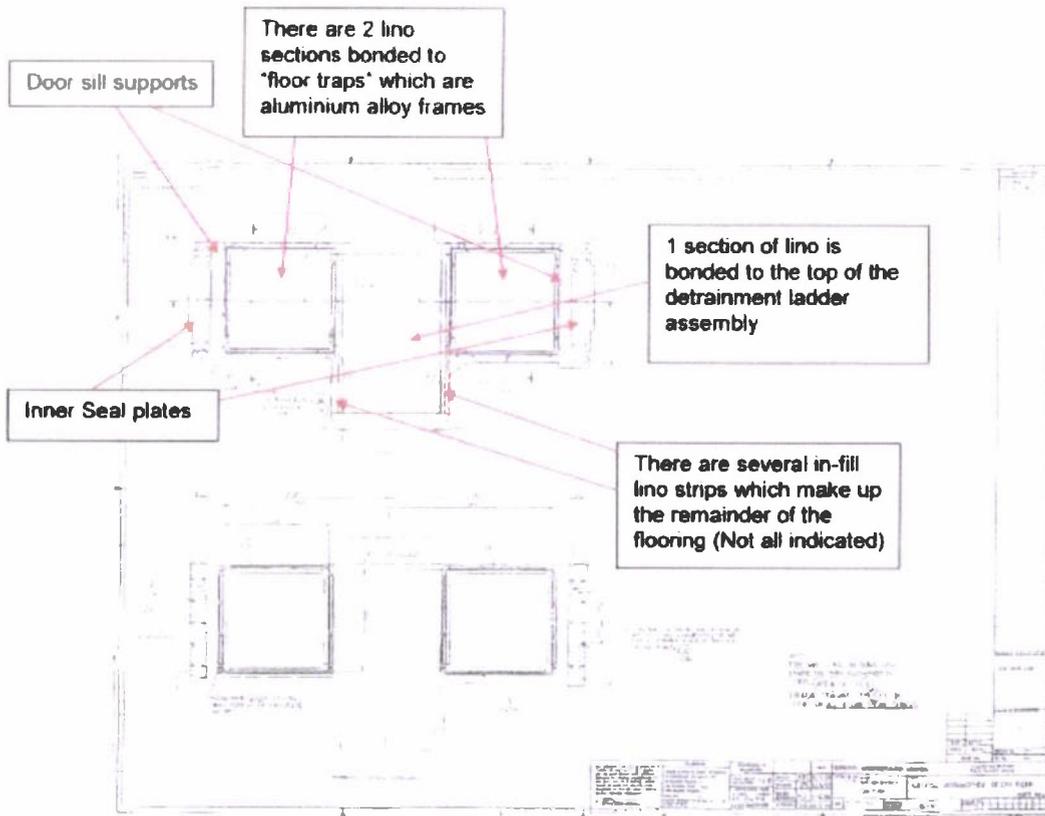
**Figure 6 – Example of Cab flooring arrangement**

**Saloon and Cab Flooring Condition Report**

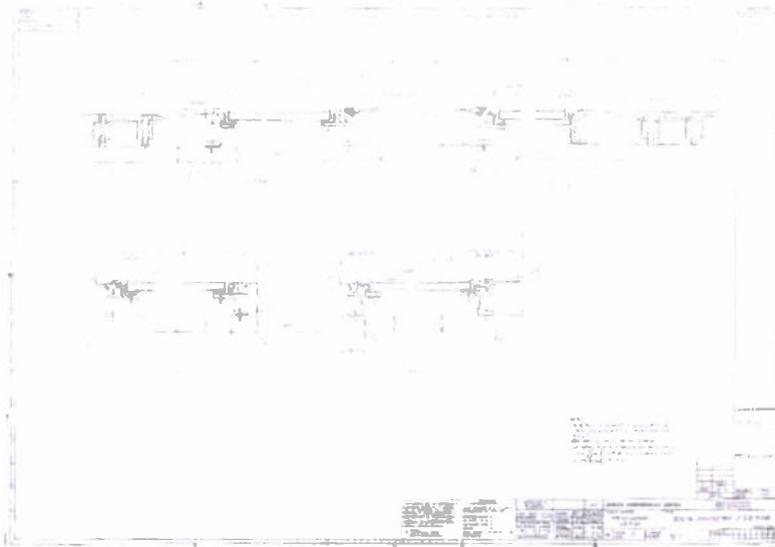
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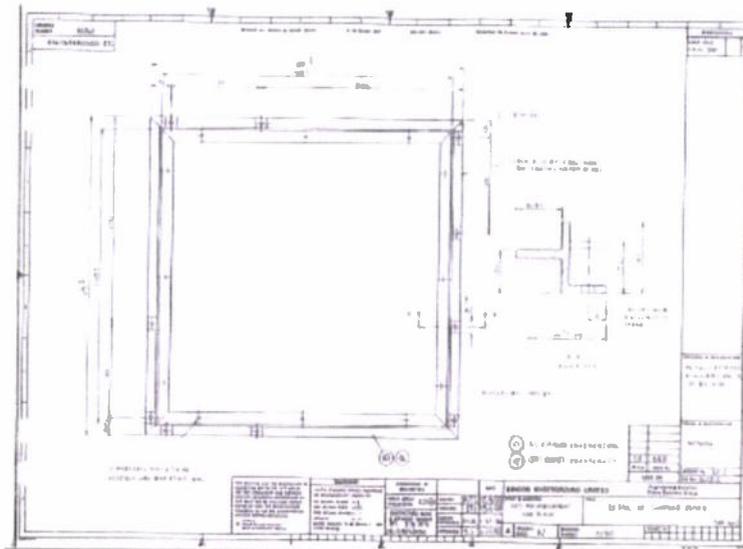
**Figure 7 - Cab Floor general arrangement**



**Figure 8 - Cab Floor, support arrangement**

It can be seen from figure 8 above that the flooring is mounted on top of aluminium extrusion support frames

The two floor traps are constructed from Aluminium Alloy and comprise a frame and trap plate – See figures 9 to 12 below.



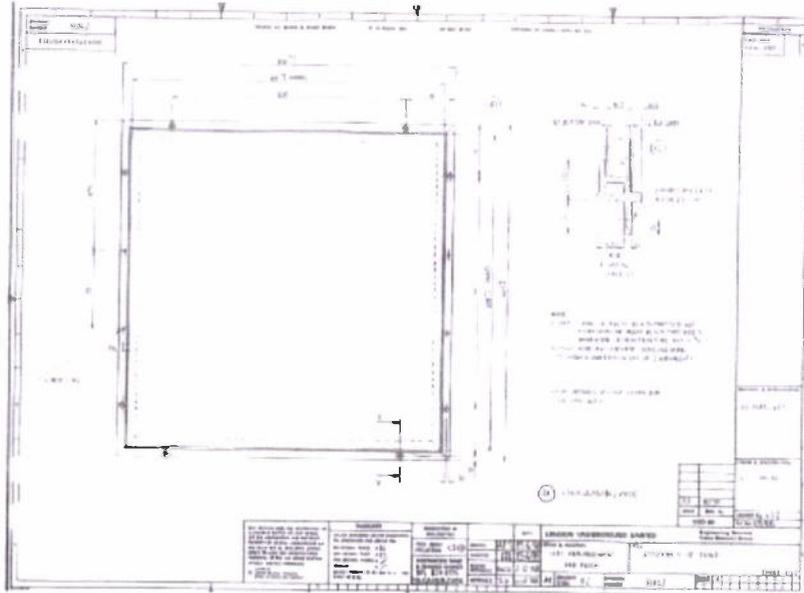
**Figure 9 - Cab Floor trap frame**

**Saloon and Cab Flooring Condition Report**

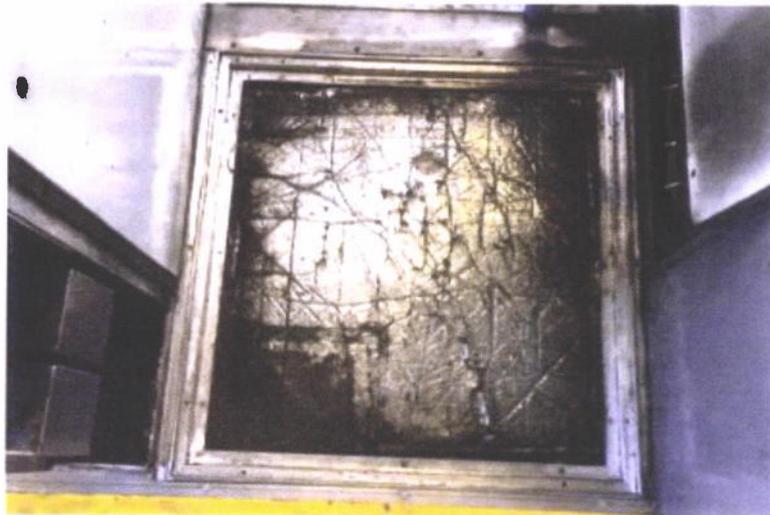
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**Figure 10 – Cab Floor trap Plate**



**Figure 11 – Cab Floor trap Plate example**

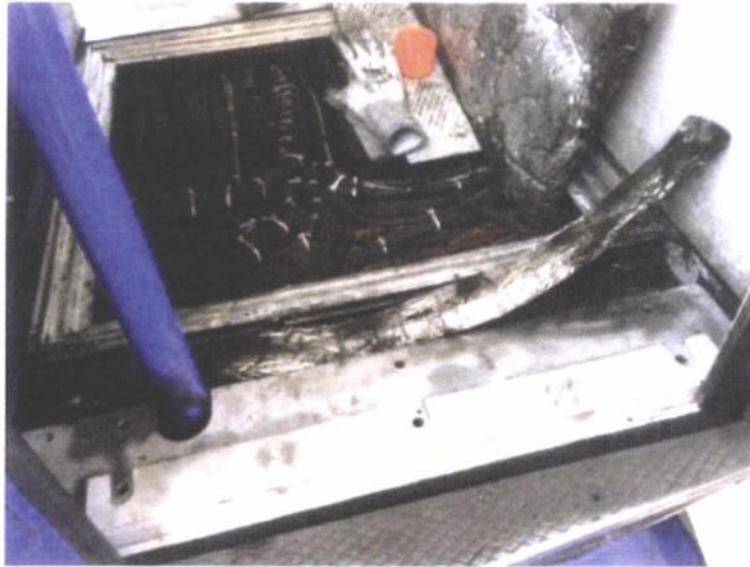


Figure 12 – Cab Floor trap Plate removed

The centre section of the cab floor consists of lino which is bonded directly onto the top section of the detrainment ladder housing. The remainder of the flooring comprises of a number of in-fill strips and metal sill plates as shown in the following drawings:

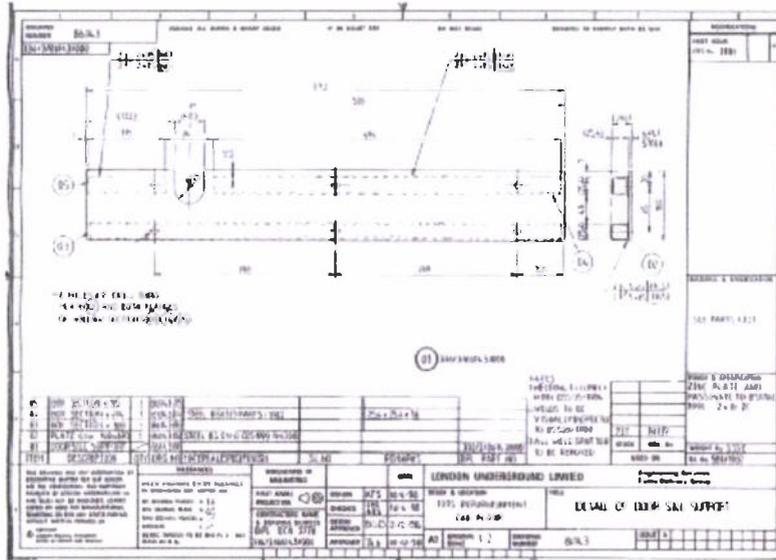


Figure 13 – Door Sill Support

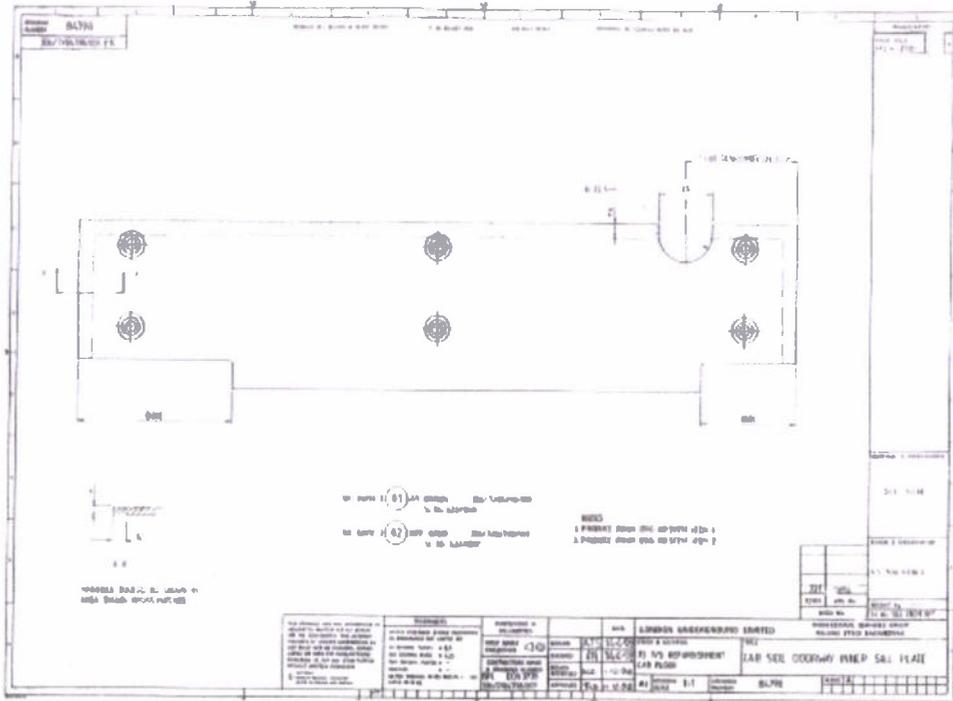
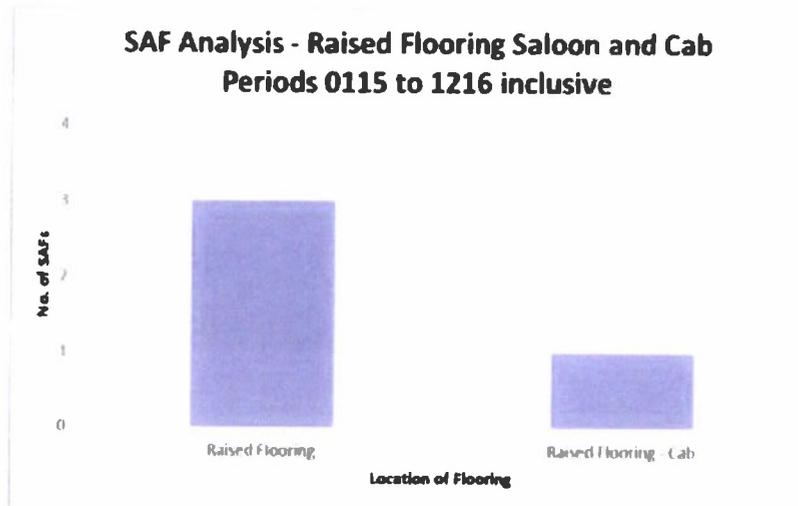


Figure 14 – Cab side doorway inner sill plate

#### 4. Reliability Data analysis

Service affecting failure data for the last 2 years (Periods 0115 to 1216 inclusive) has been analysed for flooring related defects in both Cab and Saloon. It can be seen from the graph below that there have been a total 4 reports of raised flooring and therefore posing as trip hazards.



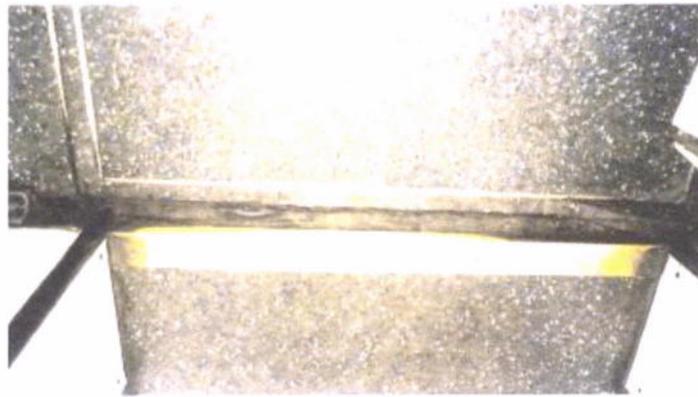
**Figure 16 – SAF Data relating to flooring**

## 5. Condition assessment

### 5.1 Saloon Floor

A random sample of 10 units were visually inspected to ascertain the current condition of the floor areas not replaced as part of the flooring project undertaken by RPL LTD. However, it must be noted that the flooring installed by RPL LTD was found to be in excellent condition in all positions of all units inspected

The condition of the original saloon flooring sections was observed to be generally poor, with wear levels ranging from minimal to significant identified in every car inspected. The wear patterns and locations were very similar and consistent between cars, with sections lifting and denting of the honeycomb underneath the lino seen on the vast majority of flooring sections. Examples of typical damage are detailed in the following photographs



**Figure 16 – Car 101, Saloon to cab threshold**



**Figure 17 – Car 108, Saloon floor condition in proximity to cab**



**Figure 18 – Car 108, Close up of Saloon floor condition in proximity to cab**



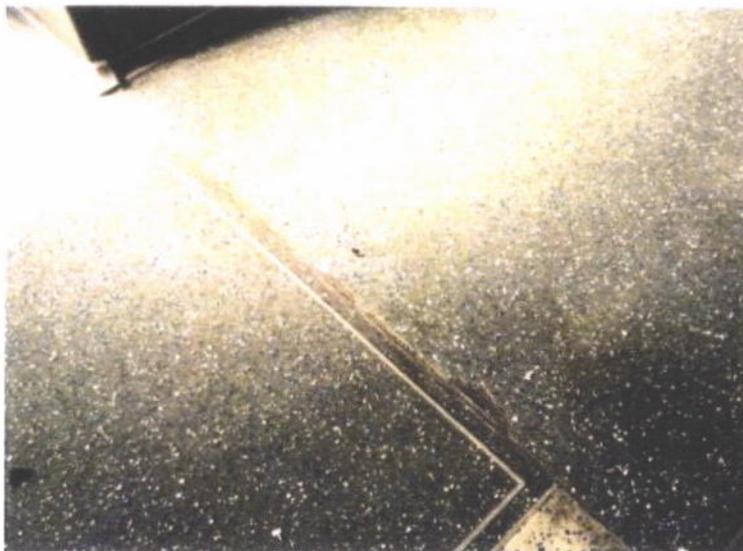
**Figure 19 – Car 108, Centre grab pole condition**

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**Figure 20 – Car 195, Saloon floor condition, centre section**



**Figure 21 – Car 301, Saloon floor condition, centre section threshold**



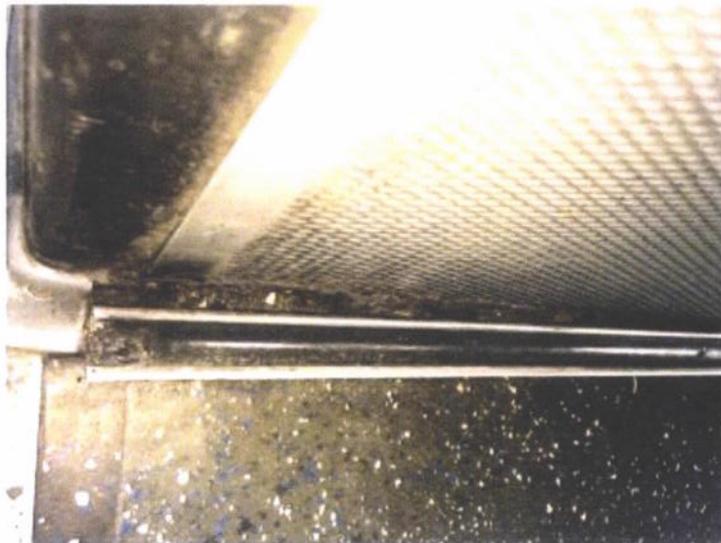
**Figure 22 – Car 338, Saloon floor condition**



**Figure 23 – Car 338, Saloon floor condition, close up of damage, centre section**



**Figure 24 – Car 356, Saloon flooring, damage to coving**



**Figure 25 – Car 356, Saloon flooring, damage to coving, close up**

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**Figure 26 – Car 595, Saloon flooring damage**



**Figure 27 – Car 855, Saloon flooring damage, in-fill strip, centre section**

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### 5.2 Cab Floor

The condition of the cab flooring was found to be generally very poor, with the same wear patterns and locations of damage observed in every cab inspected. The following photographs provide an overview of the damage consistently observed.



Figure 28 – Car 101, Cab floor condition, damage to yellow in-fill strip



Figure 29 – Car 854, Cab floor condition, damage to yellow in-fill strip



**Figure 30 – Car 101, Cab floor, damage to drivers side lino**



**Figure 31 – Car 138, Cab floor, damage to drivers side lino**

The condition of the cab flooring beneath the lino and traps has also been inspected as part of another activity, and although generally found to be in good condition, there are some areas exhibiting corrosion. This has been predominantly in the area underneath the detrainment ladder in proximity to the M Door, and by the cab door sill plates. This corrosion would therefore need to be addressed and floor repaired in conjunction with any replacement programme.

## Saloon and Cab Flooring Condition Report

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### 6. Conclusions

It can be seen from this report that the condition of both the saloon flooring sections last replaced at Refurbishment (1996 to 2001), and the Cab floors is generally poor.

Given the remaining Fleet life, it is recommended that the longitudinal saloon flooring sections and Cab floors are replaced, as they will only continue to degrade further.

The saloon flooring sections replaced by RPL between 2013 and 2015 although only fitted to the fleet for a relatively short period of time are not showing any signs of wear, and therefore it is recommended that the same or a similar flooring construction is used for the replacement.

Piccadilly Fleet have commissioned SNC-Lavalin to produce a conceptual design and associated drawing set for a Saloon and Cab flooring replacement programme. They have been asked to assume that balsa/GRP substrate is to be used as per the flooring fitted by RPL. SNC-Lavalin have also been instructed to ensure that the resultant design conforms to the contrast requirements detailed within the RVAR 2010 regulations.

It must be noted that the cab flooring has been found to be fairly corroded on units where the flooring has been lifted to a sufficient level to expose the substrate. Therefore, a cab floor repair programme which would include removal of the detrainment devices would have to be integrated into any flooring replacement programme. Whereby, the existing flooring would have to be lifted, detrainment device removed, cab flooring repaired, and then new flooring laid.

A number of Ancillary components associated with the flooring were identified as being in a poor condition during the assessment:

- The coving fitted in the saloons between panel edging and floor is in a poor state and starting to become detached, and this must therefore also be factored into the replacement.
- The majority of centre grab poles have damaged shrouds where the pole enters the floor panel which would need to be addressed.

## 7 Technical Requirements

The detailed technical requirements for the flooring replacement will be derived from the conceptual design work currently being undertaken by SNC-Lavalin.