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**Technical Specification  
for  
London Underground**

**Railway Timetable Data - Common User Format File**

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LU/ED

**Version 4.1**

**Issue Dated  
20 April 2016**

**Implementation Date  
15 May 2016**

**Alterations up to and including  
15 April 2016**

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## Distribution

Name	Position/Organisation

## History

Date	Release	Author	Description
19/9/15	Issue 4.0	Nick Freezer	Revised to incorporate information on Overnight running, and the provision of a Signal Control CUF file in addition to the standard CUF file. Infrastructure changes since 2009 are reflected in the Appendices The list of Locations in Appendix F has been enhanced to show those locations which only appear in Signal Control CUF files
20/4/16	Issue 4.1	Nick Freezer	Prefaces and revisions to versions prior to version 4.0 have been deleted. Additional Day of Use Codes are included in Appendix A to reflect technical requirements for the operation of extended engineering hours between Baker Street and Finchley Road Locations previously marked as Out of use removed from Appendices C, D and F Locations marked as out of use in connection with following infrastructure changes: <ul style="list-style-type: none"> <li>• Removal of Putney Bridge bay road</li> <li>• Removal of crossovers at Acton Town, Hornchurch and Bromley-by-Bow</li> <li>• Commissioning of revised layout at King's Cross (Met)</li> </ul>
21/1/15	Issue 4.0	Nick Freezer	Introduction of Signal Control Centre Specific format CUF files Revisions made for regular overnight operation Additional fields provided in ID file to explicitly indicate that overnight running is applicable for the file set. Minor corrections have been made to the existing text where necessary. File naming convention changed to allow more information to be shown in file name. Section 2.2 and Appendix C revised to reflect continuation of Sutor code support. Section 2.3 split into sections 2.3 to 2.5 to reflect differences between standard and signal control format CUF files. Section 2.6 introduced to describe actions for overnight operation on clock change weekends Appendix A revised to include additional codes for overnight operation on clock change weekends. Revision associated with following changes: <ul style="list-style-type: none"> <li>• Commissioning of West Ham Siding in lieu of Plaistow WB Line Reversing Berth and remodelling of Whitechapel station for Crossrail interchange</li> <li>• Provision of compulsory trip events at outlet signals in SCCS format files for Neasden, Stratford Market, Golders Green and Morden Depots, at Edgware and Highgate Sidings and in Kings Cross Loop for revised Signal Control System requirements</li> <li>• Corrections to platform names at Angel</li> <li>• Renaming of Shepherds Bush Market station</li> <li>• Link between District and Central Lines at Ealing Broadway formally taken out of use.</li> </ul>

<i>Date</i>	<i>Release</i>	<i>Author</i>	<i>Description</i>
			<ul style="list-style-type: none"> <li>• Roads and reversing berths decommissioned at Edgware Road, Triangle Sidings, Edgware and Totteridge following resignalling thereat.</li> <li>• Standardisation of running line reversing berth naming.</li> <li>• Provision for use of Royal Oak emergency crossover.</li> <li>• Provision for scheduled use of both Staff Platforms at Northumberland Park Depot</li> <li>• Introduction of new reversing berth at King's Cross from December 2015</li> </ul>

### Document Authorisation

The contents of this document have been approved by the undersigned.

<i>Name</i>	<i>Role - Organisation</i>	<i>Date</i>	<i>Signature</i>

Issued Document

## 1. Detailed Revision History

### 1.1 Revisions starting from version 4.0

Changes made to versions prior to version 4.0 have been deleted.

Appendix F has been revised to reflect the following features:

The removal of crossovers at Acton Town, King's Cross, Hornchurch and Bromley-by-Bow and consequential decommissioning of associated reversing locations

The removal of the bay road at Putney Bridge in Summer 2015 (the location code will be retained for reuse when the running line is slewed to pass through the platform)

Appendix A has been revised to incorporate additional Day of Use codes which highlight technical requirements for the operation of extended engineering hours between Baker Street and Finchley Road at start and / or end of traffic.

Records marked as 'Out of Use' in Version 4.0 removed from Appendices C, D and F.

Issued Document

## 2. General

London Underground (LUL) has developed a Common User Format (CUF) file that they believe contains all the currently available timetable data in a readily usable form. Three further files support the CUF file. The purpose of each of the files (including the CUF file) is as follows:

	File Type	Content
1.	ID	Basic timetable information including, for example, dates of operation, and provides a look-up key which is also present in the CUF and Header file records
2.	Header	Information that is generic to each trip in the timetable
3.	CUF	Information about timed "events" on trips within a timetable
4.	Checksum	Check Sums to assist in ensuring the integrity of the other three files - there is no check sum for this file.

More detailed descriptions of the content of each file are given below.

Each record in all four files commences with a record (type) identifier. The identifier text is suffixed by a colon and followed by a field separator - commas are used as field separators. In order to minimise the size of files, unused fields (and those that would otherwise contain a zero value) are empty.

Text Strings **are not** enclosed within quotation marks.

Trips of non LU trains *i.e.* those operated by National Rail Train Operating Companies (TOCs), are included in some files as they form a generic part of the train service on the line concerned. However, the District line timetable file does **not** currently include TOC trains between Gunnersbury and Richmond, although these may be added at a later date.

The CUF file is designed to provide the same kind of information that is printed in a timetable – normally a time (and optional platform) at a location. It is up to the user to build up routes through sites (where applicable) from the complete trip's information. Individual records within CUF do not necessarily provide a complete picture of a trip's route through the site. For example, a southbound train at Harrow-on-the-Hill will have a record showing the Harrow platform time and (platform) number. It is necessary to reference the following record to ascertain whether the train departs from Harrow-on-the-Hill via the fast or local line.

Two varieties of CUF file are supported; the 'Standard' design is provided for general use; a revised 'SCCS' design is provided for use with signal control systems. Both varieties use the same structure and data format; the detail differences are highlighted in the relevant section.

### 2.1 File Naming Conventions

The file naming convention has been expanded to provide additional information within the file name, providing distinguishable names for 'standard' and 'SCCS' designs and to include versioning based upon the CUF Timetable Identity.

All files share a common eighteen character 'timetable description' section, followed by the file type, a period ( . ) and a file extension, **which will be csv for the ID, Header and Event files and txt for the Checksum file**. SCCS format file names are then prefixed by 'SC' for clarity.

The file Name format is:

**-LNNNVVVV**

## SCLXXXXPNNNYYVVVVducTYP.Ext

Where (for any file)

- SC** = SC prefix indicating a file set compiled under Signal Control information rules
- L** = Line -Line prefix indicating the line to which the timetable applies.  
E.g. D for District Line, V for Victoria, N for Northern (Note: H = Circle and Hammersmith), etc
- XXXX** = CUF Timetable Identity, assigned at run time, repeating the value shown in the TTid field in the file.
- P** = Timetable Prefix (T, N, C or X, as defined in section 2.2.1 of this document)
- NNN** = Timetable number - Three digits with leading zeroes if necessary.
- YY** = Two digit year identity – set to '00' for WTT (T prefix) files
- VVVV** = Timetable Version Number - Four digits number with leading zeroes if necessary
- duc** = Day of Use code for service, e.g. **CRI** for Christmas Day, **MTF** for Monday to Friday. Appendix A to this document provides the meanings for each of the codes
- TYP** = File Type (formerly file extension); for the (timetable) identity, (trip) header, CUF (trip) event and check sum files, respectively, are: **ID**, **HDR**, **EVT** and **CHK**.
- Ext** = **File Extension, used to indicate a compatible program with which the file can be opened. This is csv for files of type ID, HDR and EVT and txt for CHK type files.**

LUL do not currently operate a policy of incrementing timetable version numbers when timetables are updated. However, the timetable identity number contained in the file name and the ID file will be unique for a given CUF file version.

The day of use component of the file name can be used to differentiate between different timetables that carry the same timetable identity. For example, the Monday to Friday, Saturday and Sunday timetables that comprise a Working Timetable will all have the same timetable prefix, number and year identity but each will have a distinct extension; revised versions of the service will have the same extension but will display a different CUF Timetable Identity.

For example, an event file for Northern Line WTT 56, formerly named N0560300.SUN, would now be named; items in bold can be recognised as part of the former file name structure:

(SC)**N7144T056150300SUN**EVT.csv.

The corresponding Checksum file will be named (SC)**N7144T056150300SUN**CHK.txt

## 2.2 File Content and Format

### 2.2.1 ID File

The ID file contains a number of records, each prefixed by a record (type) identifier.

A sample file format will be as follows - actual values will replace the codes shown below:

**TTID:,LLLL**

**TTType:**, T  
**TTNo:**.NNN  
**TTVer:**,VVVV  
**DayCode:**,DDD  
**PrevOvnt:**, P  
**NextOvnt:**, Q  
**TTComment:**,Any Text  
**OpDate:**,dd/mm/yyyy  
**OpDate:**,dd/mm/yyyy  
**OpDate:**,dd/mm/yyyy  
**OpDate:**,dd/mm/yyyy  
**OpDate:**,dd/mm/yyyy

Although the table below shows provision for six date records (and the sample file format shows five dates), only the first is mandatory. The number of other (Operational) date records will be determined by the number of dates on which the timetable is scheduled to operate at the time when the file is created. Files related to a Working Timetable (and other timetables that may temporarily supersede a Working Timetable) will only have one date record. However, the absence of more than one date does not necessarily indicate that a timetable will supersede the Working Timetable on anything other than the date specified.

The following table details the Record Identifier for each record, the field Code (used in the sample above), (Range) Values for the field and comments on the field's content. The Value (Range), Explanation and Comments columns in the table below are included for explanation in this document, they will **not** appear in the file.

Field codes (in the table) prefixed by an asterisk ( \* ) indicate a new data element (relative to the original file content). The asterisk does not appear in the file.

<b>Record Identifier</b>	<b>Field Value</b>	<b>Value (range)</b>	<b>Comment</b>
<i>TTID:</i>	<b>LLLL</b>	1 to 9999	Timetable Identity - A Unique number identifying the timetable within the <i>HDR</i> and <i>CUF</i> file.
<i>TTType:</i>	<b>T</b>	<b>T, C, N or X</b>	Timetable Type - Type of document in which the timetable (or changes thereto) is liable to be published: <b>T</b> – Working Timetable, <b>C</b> – Traffic Circular, <b>N</b> – Timetable Notice, <b>X</b> – Test timetable.
<i>TTNo:</i>	<b>NNN</b>	1 - 999	Timetable Number, including leading zeros - The number of the timetable or other publication in which the timetable will appear or be referenced.
<i>TTVer:</i>	<b>VVVV</b>	1 to 9999	Timetable Version Number, including leading zeros - The version number of the timetable. This number is primarily used to differentiate between different train services issued in the same publication. For example, Monday to Friday, Saturday and Sunday timetables appear in the same printed Working Timetable document, each with their own distinct version number.
<i>DayCode:</i>	<b>DDD</b>	Any 3 characters	Day definition - Three-character day of use code that is used as the File Extension for the <i>CUF</i> file.
<i>*TTComment:</i>		Up to 100 characters	Timetable Comment - A text description of the timetable e.g. Mondays to Fridays or Engineering Work at Richmond
<i>*PrevOvnt:</i>	<b>P</b>	0, 1	0: No overnight running at start of day 1: overnight running occurs at start of day
<i>*NextOvnt:</i>	<b>Q</b>	0, 1	0: No overnight running at end of day 1: overnight running occurs at end of day
<i>*OpDate:</i>	<b>dd/mm/yyyy</b>	Valid Date	(Initial) Date of Operation of the timetable
<i>*OpDate:</i>	<b>dd/mm/yyyy</b>	Valid Date	Any (known) subsequent Date of Operation of the



			timetable, as specified by the User at run time.
*OpDate:	dd/mm/yyyy	Valid Date	Any (known) subsequent Date of Operation of the timetable, as specified by the User at run time.
*OpDate:	dd/mm/yyyy	Valid Date	Any (known) subsequent Date of Operation of the timetable, as specified by the User at run time.
*OpDate:	dd/mm/yyyy	Valid Date	Any (known) subsequent Date of Operation of the timetable, as specified by the User at run time.
*OpDate:	dd/mm/yyyy	Valid Date	Any (known) subsequent Date of Operation of the timetable, as specified by the User at run time.

## 2.2.2 The Header (HDR) File

The Header (HDR) file contains a number of multi-field records, one for each scheduled trip in the timetable.

The format of this file will be similar to the format of the *CUF* file in so much that each multi-field record will be prefixed by a record identifier (**Hdr**). Although not strictly necessary, as all the records in this file will be of the same type and to the same format, the record identifier in this file is included for standardisation of format with the other files and will enable recipients to merge files if they so wish.

The first three fields in each record (after the record identifier) will provide the key to the individual records for the trip in the *CUF* file as the content of these three fields will also be written to the relevant records in the *CUF* file.

A sample record format will be as follows - actual values will replace the codes shown below:

**Hdr:LLLL,TTTT,SSS,E,R,D,T,OOO,g,ddd,e,ttt,ZZ,HHHH,b,jjjjjj,kkkkkkk**

The meaning of each of the above field "codes" is shown in the left hand column of the table below. Field codes (in the table) prefixed by an asterisk ( \* ) indicate a new or revised data element. The asterisk does not appear in the file.

A typical file record might be:

**Hdr:,3247,0256,17,,1,,HMS,P,HMS,D,,31,,341003,342000**

**Note:** empty fields are indicated by consecutive commas as is conventional in comma separated format.

The (trip) header record above can be interpreted as:

Record Identifier = **Hdr:**

Timetable Identity = **3247**

(LU) Train Number = **(0)256**

Trip Number = **17**

De-icing indicator = **(Blank)** (Train does not convey a de-icing trailer)

Run As Required indicator = **(Blank)** (Trip is **not** Runs As Required)

Direction = **1** (Eastbound)

Trip Route = **(Blank)** (There is only a single route between the trip start and trip end sites)

Trip Start Site = **HMS** (Hammersmith)

(Trip Start) Location Type = **P** (Platform)

Trip Destination Site = **HMS** (Hammersmith)

(Trip Destination) Location Type = **D** (Depot)

Passenger Destination = **(Blank)** (The trip is empty throughout)

Day Restriction Code = **31** (The trip operates on Mondays to Fridays)

Train Description = **(Blank)**

Step Back Indicator = **(Blank)**

Trip Start Location = 341003

Trip **End** Location = 342000

In the table below, the field code is shown for reference and is replaced in the output file with an actual value. The Value (Range), Explanation and Comments columns in the table below are included for explanation in this document, they will **not** appear in the file.

<b>Field Code</b>	<b>Possible Values</b>	<b>Explanation</b>	<b>Comments</b>
<b>LLLL</b>	1 to 9999	Timetable Identity	As found in the ID File.
<b>TTTT</b>	Any 4 characters	Train Number	<b>For LUL trains:</b> A four digit numeric value between 1 and 999, normally excluding 8s and 9s but including leading zeros. <b>For non-LUL trains:</b> Four characters, the second one of which is always alphabetic (the remaining characters are always numeric).
<b>SSS</b>	1 to 999	Trip Number	As used by signal control systems. Trip numbers <b>normally</b> change each time a train reverses or pass through nominated stations on loops e.g. Aldgate (Circle) and Heathrow 1, 2, 3. See note below
<b>*E</b>	0 or 1	De-icing Indicator	<b>For LUL trains:</b> Set to 1 if the train is scheduled to convey a de-icing trailer, otherwise empty. <b>For all other trains:</b> Empty
<b>R</b>	0 or 1	Runs As Required	Indicates whether the trip referenced by this record operates "As Required". This field is empty when the trip operates on all days that the timetable is scheduled to operate.
<b>D</b>	1 or 2	Direction	<b>Generic Trip</b> Direction. Direction 1 equates Southbound / Eastbound / Outer Rail and Direction 2 equates Northbound / Westbound / Inner Rail. See note below.
<b>T</b>	0, 1 or 2	Trip Route	Used to indicate the route of the trip when more than one route exists between the trip start and trip end locations. All records for the same trip will have the same trip route value. The field is empty where there is no option on trip route. See note below.
<b>OOO</b>	Any 3 characters	Trip Start Site	The Site Code for the trip's origin location. <del><b>N.B.</b> Continued support for this field cannot be guaranteed beyond December 2007</del>
<b>*g</b>	<b>D, J, S, P, X, B, R, W, N</b> or <b>T</b>	Location Type	Location Type relative to the Trip Start Site. <del><b>N.B.</b> Continued support for this field cannot be guaranteed beyond December 2007</del>
<b>ddd</b>	Any 3 characters	Trip Destination Site	The Site Code for the trip's destination location. <del><b>N.B.</b> Continued support for this field cannot be guaranteed beyond December 2007</del>
<b>*e</b>	<b>D, J, S, P, X, B, R, W, N</b> or <b>T</b>	Location Type	Location Type relative to the Trip Destination Site. <del><b>N.B.</b> Continued support for this field cannot be guaranteed beyond December 2007</del>

<b>*ttt</b>	Any 3 characters	Passenger Destination	The Site Code of location where the trip ceases to convey passengers e.g. <b>WLO (Waterloo)</b> for trips to <b>London Road Depot</b> . The presence of a value in this field does not necessarily indicate that the trip is passenger at all locations prior the site to which this code relates, the field simply indicates where the trip ceases to be passenger. This field will be unused when a trip is non-passenger throughout.
<b>ZZ</b>	1 to 64	Day Restriction Code	Determines the day or days on which the train will run. See appendix B for an explanation of the possible codes
<b>HHHH</b>	Any 4 characters	Train Description	Normally, but not always, the Train Description Code used by signalling control systems. This field is normally only populated when the Train Description Code is published in the printed timetable document. The code can help to identify those stations at which the train stops (or doesn't stop). The code shown in this field will be that printed in the timetable
<b>*b</b>	0 or 1	Step Back Indicator	Set to 1 when Crew Stepping Back occurs at the end of the trip, otherwise empty.
<b>jjjjjj</b>	Any seven alphanumeric characters	Trip Start Location	Unique identity of the place where the trip starts – See Appendix F for explanation of codes
<b>kkkkkkk</b>	Any seven alphanumeric characters	Trip End Location	Unique identity of the place where the trip terminates – See Appendix F for explanation of codes

The Location Type field will hold one of the following nine alphabetic values: **D, J, S, P, X, B, R, W, N** or **T**. The respective meanings of these values is: **D** - Depot, **J** – Junction or other location remote from a station, **S** - Sidings, either used for stabling or reversing, **P** - platform (excluding (Staff) platforms that are not available for passenger usage), **X** - Staff platform, that are not available for passenger usage, **B** - Running line reversing berth or loop, **R** – Depot Reception Road, **W** - Works (as in Acton Works), **N** - National Rail station or junction, not served by LUL trains and **T** – through lines (without adjacent platforms) at stations (e.g. Chiswick Park [Piccadilly]).

### 2.2.3 The CUF Event (EVT) File

The CUF **Event** file contains a number of multi-field records, one for each scheduled (or timed) trip "event".

There are five Record identifier types:

**TS** - **Train** Start record. This record identifier will replace the *TF* record identifier as the first record for the trip when the train starts ex stable - normally at the start of the day, but sometimes after the train has been stabled during the day.

**TF** - **Trip** Start record. This record identifier will be used as the first record of the trip when the trip does not start ex stable.

**TI** - **Trip** Intermediate record. This record identifier will be used for all but the first and last records of each trip.

**TL** - **Trip** Last record. This record identifier will be used as the last record of the trip when the trip does not stable.

**TE** - **Train** End record. This record identifier will replace the *TL* record identifier as the last record for the trip when the train stables.

The first three fields in each record (after the record identifier) will provide the key to the trip header record in the *HDR* file and the content of these three fields will also be written to the records in the *HDR* file.

A sample record format will be as follows - actual values will replace the codes shown below:

**(Record Identifier):,LLLL,TTTT,SSS,AAA,w,G,BBBBBB,CCCCC,PP,r,M,X,NNN,ffffff**

The meaning of each of the above field "codes" is shown in the left hand column of the table below. Field codes (in the table) prefixed by an asterisk ( \* ) indicate a new a revised data element. The asterisk does not appear in the output file.

The CUF file records that might "map" to the sample HDR file record would be as follows:

**TF:,3247,0256,17,HMS,P,1,,90300,3,,2,,341003**

**TE:,3247,0256,17,HMS,D,1,90480,,,2,,342000**

The CUF file records above can be interpreted as:

*First record:*

Record Identifier = **TF:** (first record for the trip)

Timetable Identity = **3247**

(LU) Train Number = **(0)256**

Trip Number = **17**

(Trip Start) Site = **HMS** (Hammersmith)

Location Type = **P** (Platform)

Direction = **1** (Eastbound)

Arrival Time = **(Blank)** (Train arrives at Hammersmith at end of previous trip)

Departure Time = **90300** (01:05)

Facility Number = **3** (Platform 3)

Departure Route = **(Blank)** (There is no option on the route to the Site specified in the next record)

Mode = **E** (Trip is Empty)

Non Stop Status = **(Blank)** (Trip was stationary prior to departure *i.e.* train stopped)

Duty Number = **(Blank)** (Will have a value in due course)

Unique Location Code = 341003

*Second record:*

Record Identifier = **TE:** (The last record for the **train** - it stables in the depot and does not restart during the traffic day )

Timetable Identity = **3247**

(LU) Train Number = **(0)256**

Trip Number = **17**

(Trip Start) Site = **HMS** (Hammersmith)

Location Type = **D** (Depot)

Direction = **1** (Eastbound)

Arrival Time = **90480** (01.08)

Departure Time = **(Blank)** (Train stables and, thus, does not depart)

Facility Number = **(Blank)** (Road number in depot is not scheduled)

Departure Route = **(Blank)** (Train does not depart)

Mode = **E** (Trip is Empty)

Non Stop Status = (**Blank**) (Trip will be stationary on arrival *i.e.* train stopped)

Duty Number = (**Blank**) (Will have a value in due course)

Unique Location Code = 342000

In the table below, the field code is shown for reference and is replaced in the output file with an actual value. The Value (Range), Explanation and Comments columns in the table below are included for explanation in this document, they will **not** appear in the file.

<b>Field Code</b>	<b>Possible Values</b>	<b>Explanation</b>	<b>Comments</b>
<b>LLLL</b>	1 to 9999	Timetable Identity	As found in the <i>HDR</i> File.
<b>TTTT</b>	Any 4 characters	Train Number	As found in the <i>HDR</i> file
<b>SSS</b>	1 to 999	Trip Number	As found in the <i>HDR</i> file
<b>AAA</b>	Any 3 characters	Site Code	The Site Code appropriate to the Location where the trip event occurs.
<b>*G</b>	<b>D, J, S, P, X, B, R, W, N or T</b>	Location Type	The Location Type assigned to the Location where the trip event occurs.
<b>w</b>	<b>1 or 2</b>	Direction	<b>Event</b> Direction. See note below.
<b>BBBBBB</b>	0 to 999999	Arrival Time in seconds	Arrival Time at the (event) site. The field is empty for the first event on a trip or where the trip does not stop.
<b>CCCCCC</b>	0 to 999999	Departure Time in seconds	Departure Time from the (event) site. The field is empty for the last event on a trip.
<b>PP</b>	Any 2 characters	Facility Identifier	The "number" of the platform or siding used by the train at the site at which the timetable event referenced by this record takes place. Appendix D provides a key to identities of facilities that do not have a unique identity e.g. Northolt Siding <b>N.B.</b> Continued support for this field cannot be guaranteed beyond December 2007
<b>*r</b>	0 to 9	Departure Route	Normally set to empty. However, this field will be used to define the route taken by a train between the current and next trip (event) site when there are optional "routes" to move between the two locations e.g. between Wembley Park (platform 4) and Neasden depot (Reception Road). Appendix E identifies those locations where optional routes are scheduled to be used.
<b>M</b>	<b>P, E, R, S or T</b>	Mode on departure from (or passing) the site	The mode of the trip is either <b>Passenger, Empty, SpaRe, Staff or Test</b> . The mode at the last site on the trip is the mode on <b>arrival</b> . See note below.
<b>X</b>	0, 1 or 2	Non Stop Status	If the value is 1 (One) the train does not stop at the location referenced by this record. A value of 2 – used only in conjunction with a Mode on Departure field value of "P" – indicates that the train stops but not for passenger purposes. The field is empty when the trip stops at the location.
<b>NNN</b>	0 - 999	Duty Number	This is <b>currently</b> set to the Crew Running Number which is used in association with Stepping Back where this applies to the timetable. This field will be empty if no Crew Running Number is allocated to the trip in the timetable. However, as soon as Duty Numbers become available, the contents of this field will show the number of the Duty scheduled to work the train when it departs from the location to which the record relates - for the last record for a trip, this field will contain the value used in the previous record for the trip. The field value will then be empty if the trip to which the record relates is not assigned a scheduled crew on the Duty Sheet.
<b>ffffff</b>	Any seven alphanumeric characters	Unique Location Code	Unique identity of the place to which the time(s) apply – See Appendix F for explanation of codes

## IMPORTANT

Each timetable normally contains details of all trips of trains “owned” by that line. For example, the East London timetable contained details of trips between Neasden depot and New Cross depot. However, because of current limitations within LU's computer system the Piccadilly line timetable only contains details of the trip between Ealing Common depot and Ruislip Siding, the subsequent trip from Ruislip Siding to Neasden depot is included in the Metropolitan line timetable file.

### 2.2.4 The Checksum (CHK) File

The Checksum (CHK) file contains three single field records, one relating to each of the other three files produced from one occurrence of the generating software's runs.

The three records are formatted similarly, comprising a record label and a numerical value – the checksum.

A typical file might be:-

```
IDCHK:-64527  
HDCHK:-7081  
TTCHK:-24631
```

Where the first record indicates that the checksum for the ID file is 64527, the second record indicates that the checksum for the Header file is 7081 and the third record indicates that the checksum for the CUF file is 24631.

Checksums are calculated based on the CRC-16 algorithm. The logic for this method of calculating the CRC 16 bit polynomial is taken from an article by David Schwaderer in the April 1985 issue of PC Tech Journal. However, in the CUF file implementation of the checksum logic, the variable 'theChecksum' is initialised as 0xFFFF whereas the prototype uses 0

**Details of how the Checksum is calculated are described in Appendix G to this document.**

## 2.3 Notes – Standard CUF File

**Scope of Timetable Data:** The LUL traffic day is nominally from 03:00:00 (on day 1) to 02:59:59 the following day – day 2. The CUF file will include details of all trips in the timetable with a Trip Start Time within this range. Any trips which start before 02:59:59 on Day 1 and continue after 03:00:00 on Day 1, and therefore fall within the current Traffic Day, will be included in the previous service day's timetable with times shown as actual time plus 24 hours. See also note on **Times**.

**Trip Numbers (1):** Trip numbers normally commence at 1 and increment with every trip reversal or passage through pre-defined (loop) stations e.g. Aldgate, Heathrow Terminals 1, 2, 3. However, for operational reasons, although trip numbers will always increment, they **may not** always start at 1 and may not be sequential. Trip Numbers **will** always be unique to a specific trip (or journey).

**Trip Numbers (2):** Trip Numbers normally restart at the beginning of the day (i.e. the first trip of a train will carry the lowest trip number). This is not necessarily possible where through the night operation occurs. Trips which commence before 03:00:00 and continue until after 03:00:00 will only be shown in one CUF file. It should be understood that with some signal control systems it will be necessary for the operator to manually (re-)enter the portion of the trip after 03:00:00 into the signal control system. In these circumstances, the trip number of this portion of the trip will normally be reset to 1 even though, in the printed timetable document, the trip will continue to be identified by the trip number applicable at the start of the journey.

**Times:** The LUL traffic day is nominally from 03:00:00 (on day 1) to 02:59:59 the following day – day 2. As a result, the LU computer system uses a 27 hour clock to ensure the correct indexing of train times. Train times between 00:00:00 and 02:59:59 on day 2 are indicated within the file as time plus 24 hours. For example 01:00:00 is indicated as 25:00:00 and 02:30:00 as 26:30:00. **N.B.** Data for timetables associated with scheduled overnight train operation will include trips that start up to and including 02:59:59 and the CUF file will include information relating to the whole trip, including times beyond 02:59:59 (on day 2).

All times are shown in seconds, using the same 27 hour clock format concept throughout.

## 2.4 Notes – Signal Control System Specific (SCCS) CUF File

**Scope of Timetable Data:** The LUL traffic day is nominally from 03:00:00 (on day 1) to 02:59:59 the following day – day 2. The CUF file will include full details of all trips in the timetable with events within this period. Any trips which start before 02:59:59 on Day 1 and continue after 03:00:00 on Day 1, and therefore fall within the current Traffic Day, will be included in this CUF File, to give Signal Control System a full picture of the scheduled service during the current Traffic Day. In addition, trips which finish within a specific time range of 03:00:00 on Day 1, or which start within a specific time range of 02:59:59 on Day 2, will be included in the CUF file to aid the Signal Control System in the transition between the two day' service. Times will be shown a appropriate to the current Traffic Day, thus trips which start after 02:59:59 on Day 2 will be shown with times shown as published time plus 24 hours. See also note on **Times**.

**Trip Numbers (1):** Trip numbers normally commence at 1 and increment with every trip reversal or passage through pre-defined (loop) stations e.g. Aldgate, Heathrow Terminals 1, 2, 3. However, for operational reasons, although trip numbers will always increment, they **may not** always start at 1 and may not be sequential. Trip Numbers **will** always be unique to a specific trip (or journey).

**Trip Numbers (2):** Trip Numbers normally restart at the beginning of the day (i.e. the first trip of a train will carry the lowest trip number). This is not possible where through the night operation occurs. Trips which commence before 03:00:00 and continue until after 03:00:00 will be duplicated in two CUF files, to facilitate operation of the signalling control system. For overnight services, trip numbers will be assigned as follows:

- Trips starting within current Traffic Day: Trip Number as shown in printed timetable
- Trips which commence before 03:00:00 on current Traffic Day and continue until after 03:00:00: Trip Number 1
- Trips starting after end of current Traffic Day: Trip Number continue sequentially on from last trip of train on current Traffic Day
- Trips starting and ending before start of current Traffic Day: Trip Number starting from highest available for signal control system for latest trip and counting backwards where previous trips also exist.

In the last three cases, the Trip Number shown in the CUF file will differ from that shown in the published timetable.

**Times:** The LUL traffic day is nominally from 03:00:00 (on day 1) to 02:59:59 the following day – day 2. As a result, the LU computer system uses a 27 hour clock to ensure the correct indexing of train times. Train times between 00:00:00 and 02:59:59 on day 2 are indicated within the file as time plus 24 hours. For example 01:00:00 is indicated as 25:00:00 and 02:30:00 as 26:30:00. **N.B.** Data for timetables associated with scheduled overnight train operation will include trips which span the day boundary, and times will be shown adjusted to the current Traffic Day; trips with events before 03:00:00 on Day 1 are shown in their entirety with times shown before 03:00:00 as necessary; trips with events after 03:00:00 on Day 2 are also shown in their entirety with times after 02:59:59 shown with times increased by 24 hours from those published.

In the event that the times for a trip for signal control purposes differ in whole or in part from the published times (where the signal control system can work to a better granularity than the published

timetable), the signal control file will show the intended departure times, which will be no more than the line's time resolution (15 or 30 seconds) later than the published time.

All times are shown in seconds, using the same 27 hour clock format concept throughout.

## 2.5 Notes – All outputs

**Trip Numbers (3):** Although there are instances where trips (journeys) change direction en route – see notes on direction, below - the trip number remains the same throughout that journey.

**Trip Mode:** The LU computer system currently only recognises the four trip modes identified in the CUF file explanation. However, it is recognised that this range is limited and doesn't necessarily describe all possible modes. For example, there is no dedicated mode to describe Engineers' trains. Additional modes may be introduced as part of the ongoing LU computer system upgrade.

**Direction (1):** Circle line trips are normally part of the Circle & Hammersmith line timetable. An Inner Rail trip from Aldgate to Aldgate is nominally westbound from Aldgate to High Street Kensington and eastbound from Gloucester Road to Aldgate. These trips are shown on the appropriate direction pages in the relevant printed timetable (westbound pages throughout in the Circle & Hammersmith line timetable and eastbound pages (only) between Gloucester Road to Aldgate in the District line timetable. (The converse of the above is true for Outer Rail Circle line trips). The HDR file direction field relates to the nominal trip direction, as shown in the (printed) Circle and Hammersmith line timetable. The CUF file direction field relates to the nominal direction of the trip at the station to which the record relates.

**Direction (2):** Following the opening of Terminal 5, trip directions at Heathrow 1, 2, 3 conform to the physical direction. Trips running via Terminal 4 are shown as reversing at Terminal 4, *i.e.* arriving trips will be shown as westbound trips and departing trips as eastbound trips.

Trip Directions at Hainault also generally reflect the direction of the trip at the start of the journey, as seen by the signal control system, with all arriving trips being eastbound and all departing trips being westbound. However, some local trips between Hainault station and Hainault depot may be shown in either direction. It is hoped to be able to address this anomaly as part of the ongoing LU computer system upgrade process.

**Direction (3):** Southbound trips from Watford to Rickmansworth and north thereof effectively reverse direction between Croxley and Rickmansworth. The CUF file shows the correct physical direction of these trips at each station relative to other trains travelling between the same stations. The same applies to Southbound trips from Rickmansworth (and north thereof) to Watford.

**Trip Route:** Numerical route identities shown in the HDR file are used to indicate the routing of trains where options exist between trip start and destination stations *e.g.* between Morden and Edgware trains can be routed either via Charing Cross or Bank. The following Route Codes are currently used within CART:

**Northern Line** - Route 1, via Bank, Route 2, via Charing Cross

**Central Line** - Route 1 via Newbury Park, Route 2 via Grange Hill

**District and Circle Lines** - Route 1 via Embankment, Route 2 via Baker Street (Metropolitan line trains between Aldgate and Baker Street are **not** routed *i.e.* the route field is zero).

Trains that Start or Terminate within a routed area but do not have an option of route to their destination (or from their origin location, respectively) will also be assigned a route number. Similarly, trips that pass through a routed area, when there is no option of route between trip start and origin locations *e.g.* between Barking Sidings and Neasden depot – will also be assigned a route number.



## 2.6 Clock Change Arrangements

The introduction or removal of Daylight Saving results in a non-standard length night period between Saturday and Sunday, with clocks officially changing at 01:00 (GMT) in the Spring or 02:00 (BST) in the Autumn. It will be noticed that the Spring clock change occurs during the normal traffic day, but is ignored with the actual clock change occurring during non-traffic hours.

From October 2015, the change will occur during traffic hours on lines with an all night service. On these lines, a special service will operate, modified to reflect the different length of the night period. These will make use of specific Day of Use codes as shown in Appendix A.

To avoid any unnecessary alterations on lines without an overnight service, the clock change within the CUF file will occur at the day change boundary which will be at 02:00 (GMT) / 03:00 (BST). All times within the CUF file will be in the base time for the Service Day, ensuring consistency of such times.

The standard CUF file (for iCart, etc.) would include all trips starting in the Service Day as outlined above.

Thus, in the standard CUF file:

- Spring Saturday (Day of Use Code PCS) to include all trips starting up to 01:59:59 (GMT); all times in GMT
- Spring Sunday (PCU) to include all trips starting from 03:00:00 (BST); all times in BST
- Autumn Saturday (ACS) to include all trips starting up to 02:59:59 (BST); all times in BST
- Autumn Sunday (ACU) to include all trips starting from 02:00:00 (GMT); all times in GMT

CUF files supplied for Signal Control purposes will include all trips operating within the service day plus any 'overlap trips' using existing rules (e.g. includes event 15 minutes before boundary / 10 minutes after boundary) to define such trips.

If it is necessary to supply an 'infill' CUF file to separately cover the 'repeated' period between 02:00 and 03:00 for the Autumn Clock change, this file set (Day of Use Code AXU) will include all trips with an event between 01:45:00 (GMT) and 03:10:00 (GMT), with all times in GMT; signal trip numbers will conform to Sunday rules, with the first trip of each train starting at or after 02:00 being assigned Trip Number 2.

### 3. Appendix A

#### 3.1 Day of Use Codes

The following is a summary of the three character **Day of Use** codes that can be found in the CUF file name.

Day Code	Day Type	Day Code	Day Type
MTH	Mondays to Thursdays	MHS	Mondays to Thursdays Special Service
MTF	Mondays to Fridays	MFS	Mondays to Fridays Special Service
FRI	Fridays	FRS	Friday Special Service
SAT	Saturdays	SAS	Saturday Special Service
SUN	Sundays	SUS	Sunday Special Service
24D	Christmas Eve	MHW	Mondays to Thursdays Engineering Work
CRI	Christmas Day	MFW	Mondays to Fridays Engineering Work
BOX	Boxing Day	FRW	Friday Engineering Work
27D	27 December	SAW	Saturday Engineering Work
NEV	New Years Eve	SUW	Sunday Engineering work
NYR	New Years Day	EFW	M-Th Engineering Work Early Finish *
ABM	August Bank Holiday	SDW	M-Th Engineering Work Short Day *
BHL	Bank Holidays	LSW	M-Th Engineering Work Late Start *
BHE	Bank Holiday Events	MHE	Mondays to Thursdays Special Events
PSC	Spring Clock Change Saturday	MFE	Mondays to Fridays Special Events
PUC	Spring Clock Change Sunday	FRE	Friday Special Events
ASC	Autumn Clock Change Saturday	SAE	Saturday Special Events
AUC	Autumn Clock Change Sunday	SUE	Sunday Special Events
AXC	Autumn Clock Change Extra Hour	LSE	M-Th Special Event Late Start *
EFS	Mondays to Thursdays Early Finish *	GFR	Good Friday
SDS	Mondays to Thursdays Short Day *		
LSS	Mondays to Thursdays Late Start *		

\* Day Codes associated with extended engineering hours (B2F services ) indicating the end of the day on which the extended engineering hours apply.

## 4. Appendix B

### 4.1 Day Restriction Codes

The decimal codes in this section are derived from a seven bit binary format.

<i>Most significant bit</i>						<i>Least significant bit</i>
Sunday	Saturday	Monday	Tuesday	Wednesday	Thursday	Friday

Developers should note that future evolutions of this structure may seek to resolve and correct inconsistencies or non standard patterns, and complete conversions and correlations will be published in advance of any change.

The numeric Days of Operation codes that are found in the CUF file can be interpreted as follows:

Value	Meaning	Value	Meaning
1	Friday Only ( <b>FO</b> )	18	Monday and Thursday Only ( <b>MThO</b> )
2	Thursday Only ( <b>ThO</b> )	19	Tuesday and Wednesday Excepted ( <b>TWX</b> )
3	Thursday and Friday Only ( <b>ThFO</b> )	20	Monday and Wednesday Only ( <b>MWO</b> )
4	Wednesday Only ( <b>WO</b> )	21	Tuesday and Thursday Excepted ( <b>TThX</b> )
5	Wednesday and Friday Only ( <b>WFO</b> )	22	Tuesday and Friday Excepted ( <b>TFX</b> )
6	Wednesday and Thursday Only ( <b>WThO</b> )	23	Tuesday Excepted ( <b>TX</b> )
7	Monday and Tuesday Excepted ( <b>MTX</b> )	24	Monday and Tuesday Only ( <b>MTO</b> )
8	Tuesday Only ( <b>TO</b> )	25	Wednesday and Thursday Excepted ( <b>WThX</b> )
9	Tuesday and Friday Only ( <b>TFO</b> )	26	Wednesday and Friday Excepted ( <b>WFX</b> )
10	Tuesday and Thursday Only ( <b>TThO</b> )	27	Wednesday Excepted ( <b>WX</b> )
11	Monday and Wednesday Excepted ( <b>MWX</b> )	28	Thursday and Friday Excepted ( <b>ThFX</b> )
12	Tuesday and Wednesday Only ( <b>TWO</b> )	29	Thursday Excepted ( <b>ThX</b> )
13	Monday and Thursday Excepted ( <b>MThX</b> )	30	Friday Excepted ( <b>FX</b> )
14	Monday and Friday Excepted ( <b>MFX</b> )	31	Mondays to Fridays
15	Monday Excepted ( <b>MX</b> )	32	Saturdays
16	Monday Only ( <b>MO</b> )	64	Sundays
17	Monday and Friday Only ( <b>MFO</b> )		

The abbreviations shown in brackets are those that may appear in printed publications.

A Day Restriction Code will be present in each trip header record to reflect the day or days of operation of the trip, this includes trips scheduled to operate on each day the timetable operates.

Where a timetable is designed to operate on days of the week that may be unknown when the timetable is issued, the Day Restriction Codes for trips will be set to the maximum for the timetable. For example, trips in a timetable that is issued primarily for events at Wembley Stadium on Wednesday evenings, but could be used on Tuesday evenings, will have the Day Restriction Code of 12 on all trips (unless there are specific trips that are only designed to operate on either a Tuesday or Wednesday, when their respective Day Restriction Code settings will be 8 or 4).

Day Restriction Codes with the word **Excepted** in their meaning should be understood to exclude operation on Saturdays and Sundays *e.g. Mondays Excepted* indicates operation on Tuesday to Fridays Only – not Saturdays, Sundays or Mondays.

## 5. Appendix C

### 5.1 Site Codes

The codes used originate from now superseded systems, including Sutor. Every attempt is being made to allocate previously unused codes to locations which were not assigned while Sutor was active.

Developers should note that future evolutions of CUF may not necessarily rely on legacy coding, though complete conversions and correlations will be published in advance of any change.

The Site codes used in both the Header and CUF files are as follows:

Code	Meaning	Code	Meaning
ACT	Acton Town	CHX	Charing Cross
ACW	Acton Works	CLF	Chalfont & Latimer
AGR	Arnos Grove (& Sidings)	CLW	Colliers Wood
ALC	Aldgate (to/from Tower Hill)	CMJ	Camden Junction (NR)
ALD	Aldgate (to/from Liverpool Street)	CNJ	Canal Junction
ALE	Aldgate East	CNT	Canning Town
ALP	Alperton	COL	Colindale
AME	Amersham	COV	Covent Garden
ANG	Angel	CPC	Clapham Common
ANJ	Aldgate North Junction	CPK	Canons Park
ARC	Archway	CPN	Clapham North
ARL	Arsenal	CPP	Carpenders Park
AWY	Aldwych	CPS	Clapham South
AYL	Aylesbury	CRD	Caledonian Road
BAL	Balham	CRH	Croxleyhall
BAR	Barbican	CRX	Croxley
BAY	Bayswater	CST	Cannon Street
BBB	Bromley by Bow	CTN	Camden Town
BCT	Barons Court	CWD	Chorleywood
BDE	Barkingside	CWF	Canary Wharf
BDS	Bond Street	CWR	Canada Water
BEC	Becontree	CYL	Chancery Lane
BER	Bermondsey	DEB	Debden
BGR	Bounds Green	DGE	Dagenham East
BHL	Buckhurst Hill	DGH	Dagenham Heathway
BHR	Blackhorse Road	DHL	Dollis Hill
BKG	Barking (& Sidings)	DST	Down Street
BLF	Blackfriars	EAC	East Acton
BMS	British Museum	EBY	Ealing Broadway
BNG	Bethnal Green	ECM	Ealing Common (& Depot)
BNK	Bank	ECT	Earl's Court
BOR	Borough	EDG	Edgware (& Sidings)
BOS	Boston Manor	EFY	East Finchley
BPK	Belsize Park	EHM	East Ham
BRX	Brixton	ELE	Elephant & Castle
BST	Baker Street	EMB	Embankment
BSY	Bushey	EPK	Elm Park
BTX	Brent Cross	EPP	Epping
BUR	Burnt Oak	EPY	East Putney
BWR	Bow Road	ERB	Edgware Road (Bloo)
CFS	Cockfosters (& Depot)	ERD	Edgware Road (C & H / Dist)
CHF	Chalk Farm	ESQ	Euston Square
CHG	Chigwell	ETE	Eastcote
CHM	Chesham	EUS	Euston (incl. NR)
CHP	Chiswick Park	FAR	Farringdon

<b>Code</b>	<b>Meaning</b>	<b>Code</b>	<b>Meaning</b>
FBY	Fulham Broadway	LEY	Leyton
FLP	Fairlop	LGR	Ladbroke Grove
FPK	Finsbury Park	LIL	Lillie Bridge Depot
FRD	Finchley Road	LON	London Bridge
FYC	Finchley Central	LRD	London Road Sidings
GFD	Greenford	LSQ	Leicester Square
GGR	Golders Green (& Depot)	LST	Liverpool Street
GHL	Gants Hill	LTN	Loughton (& Sidings)
GHR	Goldhawk Road	LYS	Leytonstone
GMS	Great Missenden	MAN	Mansion House
GPK	Green Park	MAR	Marble Arch
GPS	Great Portland Street	MCR	Mornington Crescent
GRD	Gloucester Road	MDV	Maida Vale
GRH	Grange Hill (& Depot Neck)	MGT	Moorgate
GST	Goodge Street	MHE	Mill Hill East
GUN	Gunnersbury	MLE	Mile End
HAI	Hainault (& Depot & Depot Neck)	MNJ	Minories Junction
HAT	Hatch End	MNR	Manor House
HAW	Harrow & Wealdstone	MON	Monument
HBT	High Barnet (& Sidings)	MOR	Morden (& Depot)
HBY	Highbury & Islington	MPK	Moor Park
HCH	Hornchurch	MYB	Marylebone (Bloo)
HDN	Hillingdon	MYL	Marylebone (NR)
HIG	Highgate (& Sidings)	NAC	North Acton
HLJ	Hanger Lane Junction	NAJ	North Acton Junction
HLN	Hanger Lane	NEA	Neasden (& Depot)
HMD	Hammersmith (Dist & Picc)	NEL	North Ealing
HMP	Hampstead	NEP	Newbury Park
HMS	Hammersmith (Met) (& Depot)	NFD	Northfields (& Depot)
HNC	Hounslow Central	NGW	North Greenwich
HND	Hendon Central	NHG	Notting Hill Gate
HNE	Hounslow East	NHR	North Harrow
HNW	Hounslow West	NHT	Northolt
HOH	Harrow-on-the-Hill	NPK	Northumberland Park Depot (& Staff Pfm)
HOL	Holborn	NSJ	Neasden South Junction (NR)
HPC	Hyde Park Corner	NWD	Northwood
HPK	Holland Park	NWH	Northwood Hills
HRC	Heathrow Terminals 1 2 3	NWM	North Wembley
HRD	Holloway Road	NWP	Northwick Park
HRF	Heathrow Terminal 4	OAK	Oakwood
HRV	Heathrow Terminal 5	OLD	Old Street
HSD	Harlesden	OLY	Olympia
HSL	Headstone Lane	OST	Osterley
HST	High Street Kensington	OVL	Oval
HTX	Hatton Cross	OXC	Oxford Circus
ICK	Ickenham	PAD	Paddington
KBY	Kingsbury	PER	Perivale
KEN	Kennington	PGR	Parsons Green
KEW	Kew Gardens	PIC	Piccadilly Circus
KGJ	Kensal Green Junction (NR)	PIM	Pimlico
KGN	Kensal Green	PIN	Pinner
KHR	Kilburn High Road	PKJ	Park Junction
KIL	Kilburn	PLW	Plaistow
KNB	Knightsbridge	PPJ	Point Pleasant Junction
KNT	Kenton	PRD	Preston Road
KPK	Kilburn Park	PRY	Park Royal
KTN	Kentish Town	PST	Praed Street Junction
KXX	King's Cross	PUT	Putney Bridge
LAM	Lambeth North	QBY	Queensbury
LAN	Lancaster Gate	QPK	Queen's Park
LAT	Latimer Road	QPN	Queen's Park North

<b>Code</b>	<b>Meaning</b>	<b>Code</b>	<b>Meaning</b>
QWY	Queensway	THL	Tower Hill
RAY	Raynes Park	TOT	Totteridge & Whetstone
RCP	Ravenscourt Park	TPK	Tufnell Park
RED	Redbridge	TPL	Turnpike Lane
RIM	Ruislip IMR	TRI	Triangle Sidings
RKY	Rickmansworth (& Sidings)	TTH	Tottenham Hale
RLN	Rayners Lane	UPB	Upminster Bridge
RMD	Richmond	UPK	Upton Park
ROD	Roding Valley	UPM	Upminster (& Depot)
ROY	Royal Oak	UPY	Upney
RPK	Regents Park	UXB	Uxbridge (& Sidings)
RSQ	Russell Square	VIC	Victoria
RUG	Ruislip Gardens	VUX	Vauxhall
RUI	Ruislip	WAC	West Acton
RUM	Ruislip Manor	WAL	Walthamstow Central
SAC	South Acton	WAN	Wanstead
SBC	Shepherds Bush	WAR	Warwick Avenue
SBM	Shepherds Bush Market	WAT	Watford
SDJ	Stratford Market Junction	WBP	Westbourne Park
SEL	South Ealing	WBT	West Brompton
SFD	Stratford (& Depot)	WCL	Whitechapel
SFS	Southfields	WCT	White City (& Sidings)
SGT	Southgate	WDJ	Woodford Junction
SHL	Sudbury Hill	WDL	Wood Lane
SHO	Shoreditch (Closed)	WDN	Wimbledon
SHP	South Hampstead	WEM	Wembley Central
SHR	South Harrow (& Sidings)	WEN	Wendover
SJP	St. James's Park	WFD	Woodford
SJW	St. John's Wood	WFW	Woodford West
SKN	South Kensington	Wfy	West Finchley
SKT	South Kenton	WGN	Wood Green
SNB	Snaresbrook	WHD	West Hampstead
SPK	Stonebridge Park (& Depot)	WHJ	West Ham Junction
SRP	South Ruislip	WHM	West Ham
SSQ	Sloane Square	WHR	West Harrow
STA	Stanmore (& Sidings)	WJN	Willesden Junction
STB	Stamford Brook	WKE	West Kensington East Junction
STG	Stepney Green	WKN	West Kensington
STK	Stockwell	WLG	Willesden Green
STM	Stoke Mandeville	WLO	Waterloo (& Depot)
STN	Sudbury Town	WMP	Wimbledon Park (& Depot)
STP	St. Paul's	WMS	Westminster
SVS	Seven Sisters	WPK	Wembley Park (& Sidings)
SWC	Swiss Cottage	WRP	West Ruislip (& Depot)
SWF	South Woodford	WSP	Woodside Park
SWK	Southwark	WST	Warren Street
SWM	South Wimbledon	WTH	Watford High Street
TBE	Tooting Bec	WTJ	Watford Junction
TBY	Tooting Broadway		
TCR	Tottenham Court Road		
TEM	Temple		
TGR	Turnham Green		
THB	Theydon Bois		

## 6. Appendix D

### 6.1 Facility Identifiers

In general the Facility Indicators will those by which the facility is commonly known e.g. Platform 3 or 31 Siding. However, some "locations" without generic identifiers are also used within the timetables and may be referenced in the CUF file.

The following generally concepts have been adopted for identifying these facilities:

The generic code for Sidings is **SD**, for Loops it is **LP** and for Reception Roads it is **RR**. Running line (reversal) locations are referred to by the line initials e.g. **SB** for Southbound and **IR** for Inner Rail. We also use **UP** and **DN** for Up and Down lines on the National Rail network. The Chesham branch reversal berth is shown as **BR**.

Facilities without actual identifiers or generic names / numbers (and there respective identifiers) are:

Site	Identifier	Comment
Hainault / Grange Hill	WR	(Hainault Depot) Wash Road
Woodford	SD	(Any of) Woodford Sidings*
Loughton	SD	(Any of) Loughton Sidings*
Uxbridge	SD	(Any of) Uxbridge Sidings*
Amersham	SN	Southbound (Up) line (north) reversing berth
	SS	Southbound (Up) line (south) reversing berth
Rickmansworth	21	21 or 22 Siding*
	3S, 3N	23 (South) and 23 (North) Siding, respectively
	SD	South Sidings*
Watford	SN	Southbound line (north) reversing berth
	SS	Southbound line (south) reversing berth
	4S, 4N	24 (South) and 24 (North) Siding, respectively
Stanmore	SD	(Any of) Stanmore Sidings*
Wembley Park	SH	(Any of) Wembley Park Shed roads*
	DR	(Neasden) Depot Reception Road
	FU	Flyunder
Neasden [Depot]	11	(Neasden Depot) Nos. 11 to 14 Roads
	D2	(Neasden Depot) 2 Road
	D3	(Neasden Depot) 3 Road
	D4	(Neasden Depot) 4 Road
	SN	(Neasden Depot) South Shunting Neck
	SF	(Neasden Depot) South Fan (MM14/MM15)
Neasden [Station]	3S	(Neasden Depot) 23 Road South
	3N	(Neasden Depot) 23 Road North
	NJ	Northbound (Jubilee) line reversing berth
	NM	Northbound (Metropolitan) line reversing berth
Finchley Road	NJ	Northbound (Jubilee) line reversing berth
North Greenwich	EE	Eastbound line (east) reversing berth
	WW	Westbound line (west) reversing berth
West Ham [Jubilee]	U8	Reversing berth at signal TU18
	U9	Reversing berth at signal TU19
	RR	(Stratford Market) Depot Reception Road
	U2	Reversing berth at signal TU2

Site	Identifier	Comment
Stratford [Jubilee]	EB	Eastbound line (east) reversing berth
	WB	Westbound line (east) reversing berth
	W1	Reversing berth at signal TW1
	DR	(Stratford Market) Depot Departure Road
	AR	(Stratford Market) Depot Arrival Road
	W4	Reversing berth at signal TW4
South Harrow	SD	(Any of) South Harrow Sidings*
Arnos Grove	SD	(Any of) Arnos Grove Sidings*
Barking Sidings	6E, 7E, 8E, 9E	26 (East), 27 (East), 28 (East) and 29 (East) Sidings, respectively
		26 (West), 27 (West), 28 (West) and 29 (West) Sidings, respectively
New Cross	6W, 7W, 8W, 9W	26 (East), 27 (East), 28 (East) and 29 (East) Sidings, respectively
		26 (West), 27 (West), 28 (West) and 29 (West) Sidings, respectively
Waterloo depot	SL	Single line reversing berth
Queen's Park South Shed	0	(Any of) Roads within Waterloo Depot*
Edgware North Sidings	25	25 or 26 Sidings (North and South)*
Edgware South Sidings	11	(Any of) Edgware North Sidings*
Golders Green	35	(Any of) Edgware South Sidings*
		Reversing berth at signal G42 – the equivalent location on the northbound line will be shown with a value of "0" and a type of "J".
King's Cross [Northern]	SB	Reversing berth at signal G42 – the equivalent location on the northbound line will be shown with a value of "0" and a type of "J".
King's Cross [Northern]	SD	Euston loop – to / from King's Cross

\* - The indicated code may be replaced by actual siding numbers at these locations in due course.



## 7. Appendix E

### 7.1 Local Routeing Options

At a limited number of Sites there are options on the routes available to the next Site. These options are:

<b>Site</b>	<b>Direction</b>	<b>Route</b>	<b>Route via</b>
Arnos Grove (Platform 2)*	Westbound	1	Via 21 crossover
		2	Via 19 crossover
Barons Court	Westbound	1	Westbound local
		2	Westbound fast
		3	Barons Court Siding
Cockfosters Platform 1 to Depot *	Westbound	1	28 and 29 Roads
		2	30 Road
Cockfosters Depot to Station	Eastbound	1	30 Road
		2	28 or 29 Roads
Debden (Platform 2)	Eastbound	1	Eastbound line
		2	Loop (22 Road)
Earl's Court (Platform 2)	Eastbound	1	Eastbound local road
		2	20 Road
Edgware (Platform 2) *	Southbound	1	No. 22 crossover
		2	No. 7 crossover
Golders Green [Tunnel Mouth] *	Northbound	1	Northbound line
		2	Northbound Loop
		3	Southbound line
		4	26 Road
Golders Green (Platform 5)	Southbound	1	26 Road
		2	Southbound line
Hammersmith [District & Piccadilly] (Platform 3)	Eastbound	1	Eastbound fast
		2	Barons Court Siding
Leytonstone (Platform 1)	Westbound	1	Loop
		2	Westbound line
Morden depot to station	Northbound	1	45 Road
		2	44 Road
Morden station to depot	Southbound	1	44 Road
		2	45 Road
Newbury Park (Platform 2)	Inner Rail	1	Eastbound line
		2	Loop (31 Road)
Northumberland Park Reception Road	Southbound	1	Southbound Line
		2	Northbound Line
Plaistow	Westbound	1	Westbound line
		2	West Ham Siding
Seven Sisters	Northbound	1	Northbound Line
		2	Southbound Line

<b>Site</b>	<b>Direction</b>	<b>Route</b>	<b>Route via</b>
Upminster (Platforms 4 and 5) to Depot	Eastbound	1	51 Road
		2	52 Road
		3	53 Road
Upminster Depot to Station	Westbound	1	53 Road
		2	52 Road
		3	51 Road
Watford (24 Road [North])	Southbound	1	24 Road South
		2	Southbound line
West Ham (District) (Platform 2)	Eastbound	1	Eastbound line
		2	West Ham Siding
West Ham Junction	Eastbound	1	Eastbound line
		2	Westbound line
Wembley Park (Platform 4)	Southbound	1	Metropolitan line
		2	Jubilee line
Woodford (Platform 2)	Westbound	1	Via 21 Road
		2	Via WB Main

Although alternative local routes may exist at other locations, there is no distinction in the route scheduled e.g. departures from Uxbridge and West Ruislip.

\* Indicates a location where there is an alternative route from the facility to a distinct site for which no local route will be supplied. (normally a depot)

## 8. Appendix F

### 8.1 Unique Location Codes

The translations of the Unique Location Codes used in both the Header and CUF files are shown below.

Although there may seem to be a logic to these codes, the intention is that the codes will not change if when the location identity changes. For example, if platform 1 at West Ruislip was renumbered to platform 5, the code would remain unchanged but the associated description of the code would alter.

The inclusion of a code within this list does not necessary imply immediate or guarantee long term use of the code. For example, we cannot currently (July 2006) identify the individual sidings at Woodford. Consequently, the individual siding codes cannot currently be used and the generic code of 0730SDG will be used for each siding. In due course, once we are able to identify the individual sidings at Woodford, the individual siding codes will come into use and the generic code will fall from use. It is recommended that users of this data set up their systems to recognise both generic and individual codes as no guarantee can be given that LUL will be able to provide adequate notice of when changes of use will be introduced.

Locations marked with an asterisk are those that will only appear in the output files if a trip starts or finishes thereat. These places will not be included in the output file for through trains. For example, 006040 will only be used for shunting movements; it will not be output for trips between Northolt and Greenford

002001,	West Ruislip platform 1	035002,	Holland Park platform 2
002002,	West Ruislip platform 2	037003,	Notting Hill Gate platform 3
002023,	West Ruislip No. 23 Road	037004,	Notting Hill Gate platform 4
003000,	West Ruislip Depot	040001,	Queensway platform 1
004001,	Ruislip Gardens platform 1	040002,	Queensway platform 2
004002,	Ruislip Gardens platform 2	040050 *,	Queensway WB line reversing berth
005001,	South Ruislip platform 1	041001,	Lancaster Gate platform 1
005002,	South Ruislip platform 2	041002,	Lancaster Gate platform 2
006001,	Northolt platform 1	042001,	Marble Arch platform 1
006002,	Northolt platform 2	042002,	Marble Arch platform 2
006030,	Northolt siding	042030,	Marble Arch siding
006040 *,	Northolt EB line reversing berth	044001,	Bond Street platform 1
007001,	Greenford platform 1	044002,	Bond Street platform 2
007003,	Greenford platform 3	046001,	Oxford Circus platform 1
008001,	Perivale platform 1	046002,	Oxford Circus platform 2
008002,	Perivale platform 2	048001,	Tottenham Court Road platform 1
009001,	Hanger Lane platform 1	048002,	Tottenham Court Road platform 2
009002,	Hanger Lane platform 2	050001,	Holborn platform 1
011005,	Ealing Broadway platform 5	050002,	Holborn platform 2
011006,	Ealing Broadway platform 6	050030,	Holborn siding
014001,	West Acton platform 1	052001,	Chancery Lane platform 1
014002,	West Acton platform 2	052002,	Chancery Lane platform 2
018040,	North Acton Junction EB line	054001,	St. Paul's platform 1
018050,	North Acton Junction WB line	054002,	St. Paul's platform 2
020001,	North Acton platform 1	056005,	Bank platform 5
020002,	North Acton platform 2	056006,	Bank platform 6
020003,	North Acton platform 3	058004,	Liverpool Street platform 4
020050,	North Acton WB line reversing berth	058005,	Liverpool Street platform 5
024001,	East Acton platform 1	058021,	Liverpool Street No. 1 siding
024002,	East Acton platform 2	058022,	Liverpool Street No. 2 siding
030001,	White City platform 1	058050 *,	Liverpool Street WB line reversing berth
030003,	White City platform 3	059001,	Bethnal Green platform 1
030004,	White City platform 4	059002,	Bethnal Green platform 2
030030,	White City West siding	059050 *,	Bethnal Green WB line reversing berth
030031 *,	White City Sidings Reception Road	060001,	Mile End platform 1
031000,	White City Sidings	060004,	Mile End platform 4
033001,	Shepherds Bush platform 1	061003,	Stratford platform 3
033002,	Shepherds Bush platform 2	061006,	Stratford platform 6
035001,	Holland Park platform 1	062001,	Leyton platform 1

062002,	Leyton platform 2	100026,	Uxbridge No 26 road
063001,	Leytonstone platform 1	101040,	Uxbridge East EB line reversing berth
063002,	Leytonstone platform 2	101050,	Uxbridge East WB line
063003,	Leytonstone platform 3	102001,	Hillingdon platform 1
063040 *,	Leytonstone EB line reversing berth	102002,	Hillingdon platform 2
063050 *,	Leytonstone WB line reversing berth	103001,	Ickenham platform 1
064001,	Wanstead platform 1	103002,	Ickenham platform 2
064002,	Wanstead platform 2	104030,	Ruislip siding
065001,	Redbridge platform 1	104040,	Ruislip (IMR) EB line reversing berth
065002,	Redbridge platform 2	104050,	Ruislip (IMR) WB line
066001,	Gants Hill platform 1	104060,	Ruislip siding, depot road
066002,	Gants Hill platform 2	105001,	Ruislip platform 1
068001,	Newbury Park platform 1	105002,	Ruislip platform 2
068002,	Newbury Park platform 2	106001,	Ruislip Manor platform 1
068031 *,	Newbury Park No. 31 road	106002,	Ruislip Manor platform 2
070001,	Snaresbrook platform 1	107001,	Eastcote platform 1
070002,	Snaresbrook platform 2	107002,	Eastcote platform 2
071001,	South Woodford platform 1	108001,	Rayners Lane platform 1
071002,	South Woodford platform 2	108002,	Rayners Lane platform 2
072040,	Woodford West EB line	108030,	Rayners Lane siding
072050,	Woodford West WB line	109001,	West Harrow platform 1
0730SDG,	Woodford Sidings	109002,	West Harrow platform 2
073001,	Woodford platform 1	110000,	Aylesbury
073002,	Woodford platform 2	111040,	Stoke Mandeville Up platform
073003,	Woodford platform 3	111050,	Stoke Mandeville Down platform
073021 *,	Woodford No. 21 road	112040,	Wendover Up platform
073022,	Woodford No. 22 siding	112050,	Wendover Down platform
073023,	Woodford No. 23 siding	113040,	Great Missenden Up platform
073024,	Woodford No. 24 siding	113050,	Great Missenden Down platform
073025,	Woodford No. 25 siding	114001,	Amersham platform 1
073026,	Woodford No. 26 siding	114002,	Amersham platform 2
073040 *,	Woodford EB Line reversing berth	114003,	Amersham platform 3
073050 *,	Woodford WB Line reversing berth	114031,	Amersham No. 31 siding
074040,	Woodford Junction (EB line)	114032,	Amersham No. 32 siding
074050,	Woodford Junction WB line	114034,	Amersham No. 34 siding
078001,	Barkingside platform 1	114040 *,	Amersham SB line south reversing berth
078002,	Barkingside platform 2	114041 *,	Amersham SB line north reversing berth
079001,	Fairlop platform 1	114050 *,	Amersham NB line reversing berth
079002,	Fairlop platform 2	115002,	Chesham platform 2
080001,	Roding Valley platform 1	116001,	Chalfont & Latimer platform 1
080002,	Roding Valley platform 2	116002,	Chalfont & Latimer platform 2
081001,	Chigwell platform 1	116003,	Chalfont & Latimer platform 3
081002,	Chigwell platform 2	116050 *,	Chalfont & Latimer NB line reversing berth
082060 *,	Hainault Depot Wash Road (North)	116060 *,	Chalfont & Latimer branch line reversing berth
082001,	Grange Hill platform 1	117001,	Chorleywood platform 1
082002,	Grange Hill platform 2	117002,	Chorleywood platform 2
084001,	Hainault platform 1	1180NTH,	Rickmansworth North Sidings
084002,	Hainault platform 2	118001,	Rickmansworth platform 1
084003,	Hainault platform 3	118002,	Rickmansworth platform 2
086000,	Hainault Depot	118003,	Rickmansworth platform 3
087070,	Grange Hill No. 70 siding	118021,	Rickmansworth No. 21 siding
087071,	Grange Hill No. 71 siding	118022,	Rickmansworth No. 22 siding
088021,	Hainault No. 21 siding	118023,	Rickmansworth No. 23 siding
088022,	Hainault No. 22 siding	118023N,	Rickmansworth No. 23 siding (north)
089001,	Buckhurst Hill platform 1	118023S,	Rickmansworth No. 23 siding (south)
089002,	Buckhurst Hill platform 2	118025,	Rickmansworth No. 25 road
090000,	Loughton Sidings	118040 *,	Rickmansworth SB line reversing berth
091001,	Loughton platform 1	119000,	Rickmansworth South Sidings
091003,	Loughton platform 3	121001,	Watford platform 1
091004,	Loughton platform 4	121002,	Watford platform 2
092001,	Debden platform 1	121021,	Watford No. 21 siding
092002,	Debden platform 2	121024,	Watford No. 24 siding
092022 *,	Debden No. 22 road	121024N,	Watford No. 24 siding (north)
093001,	Theydon Bois platform 1	121024S,	Watford No. 24 siding (south)
093002,	Theydon Bois platform 2	121040 *,	Watford SB line north reversing berth
094001,	Epping platform 1	121041 *,	Watford SB line south reversing berth
094002,	Epping platform 2	124001,	Croxley platform 1
098001,	Uxbridge platform 1	124002,	Croxley platform 2
098003,	Uxbridge platform 3	125040,	Watford South Junction (SB main)
098004,	Uxbridge platform 4	125041,	Watford South Junction (SB Local)
099000,	Uxbridge Sidings	125050,	Watford South Junction (NB Main)
100025,	Uxbridge No 25 road	125051,	Watford South Junction (NB Local)

125061,	Watford North Curve (Inner)	158023 †,	Neasden No. 23 siding
125060,	Watford North Curve (Outer)	158050 *,	Neasden NB Met reversing berth
126001,	Moor Park platform 1	158051 *,	Neasden NB Jub reversing berth
126002,	Moor Park platform 2	159001,	Dollis Hill platform 1
126003,	Moor Park platform 3	159002,	Dollis Hill platform 2
126004,	Moor Park platform 4	160001,	Willesden Green platform 1
127001,	Northwood platform 1	160002,	Willesden Green platform 2
127002,	Northwood platform 2	160003,	Willesden Green platform 3
127030,	Northwood siding	160004,	Willesden Green platform 4
127051 *,	Northwood SB line reversing berth	160030,	Willesden Green siding
128001,	Northwood Hills platform 1	161001,	Kilburn platform 1
128002,	Northwood Hills platform 2	161002,	Kilburn platform 2
129001,	Pinner platform 1	162001,	West Hampstead platform 1
129002,	Pinner platform 2	162002,	West Hampstead platform 2
130001,	North Harrow platform 1	162030,	West Hampstead siding
130002,	North Harrow platform 2	163001,	Finchley Road platform 1
131001,	Harrow on the Hill platform 1	163002,	Finchley Road platform 2
131002,	Harrow on the Hill platform 2	163003,	Finchley Road platform 3
131003,	Harrow on the Hill platform 3	163004,	Finchley Road platform 4
131004,	Harrow on the Hill platform 4	163051 *,	Finchley Road NB Jub reversing berth
131005,	Harrow on the Hill platform 5	164001,	Swiss Cottage platform 1
131006,	Harrow on the Hill platform 6	164002,	Swiss Cottage platform 2
131030,	Harrow on the Hill siding	165001,	St Johns Wood platform 1
131050 *,	Harrow on the Hill NB line reversing berth	165002,	St Johns Wood platform 2
132001,	Northwick Park platform 1	166007,	Baker Street platform 7
132002,	Northwick Park platform 2	166010,	Baker Street platform 10
133001,	Preston Road platform 1	167003,	Bond Street platform 3
133002,	Preston Road platform 2	167004,	Bond Street platform 4
136040,	Neasden South Junction Up line	168005,	Green Park platform 5
136050,	Neasden South Junction Down line	168006,	Green Park platform 6
138000,	Marylebone (NR)	169003,	Charing Cross platform 3
142001,	Stanmore platform 1	169004,	Charing Cross platform 4
142002,	Stanmore platform 2	169023,	Charing Cross No. 23 siding
142003,	Stanmore platform 3	169024,	Charing Cross No. 24 siding
144000,	Stanmore sidings	171003,	Westminster platform 3
148033,	Stanmore No. 33 road	171004,	Westminster platform 4
149040,	Stanmore South SB line	172005,	Waterloo platform 5
149050,	Stanmore South NB line	172006,	Waterloo platform 6
151001,	Canons Park platform 1	172050 *,	Waterloo WB line reversing berth
151002,	Canons Park platform 2	173001,	Southwark platform 1
152001,	Queensbury platform 1	173002,	Southwark platform 2
152002,	Queensbury platform 2	175003,	London Bridge platform 3
153001,	Kingsbury platform 1	175004,	London Bridge platform 4
153002,	Kingsbury platform 2	175040 *,	London Bridge EB line reversing berth
1550SHD,	Wembley Park Sidings	176001,	Bermondsey platform 1
155001,	Wembley Park platform 1	176002,	Bermondsey platform 2
155002,	Wembley Park platform 2	178001,	Canada Water platform 1
155003,	Wembley Park platform 3	178002,	Canada Water platform 2
155004,	Wembley Park platform 4	179001,	Canary Wharf platform 1
155005,	Wembley Park platform 5	179002,	Canary Wharf platform 2
155006,	Wembley Park platform 6	179040 *,	Canary Wharf EB line reversing berth
155031,	Wembley Park No. 31 siding	179050 *,	Canary Wharf WB line reversing berth
155032,	Wembley Park No. 32 siding	180001,	North Greenwich platform 1
155033,	Wembley Park No. 33 siding	180002,	North Greenwich platform 2
155034,	Wembley Park No. 34 siding	180003,	North Greenwich platform 3
155035,	Wembley Park No. 35 siding	180041 *,	North Greenwich EB line (east) reversing berth
155036,	Wembley Park No. 36 siding	180051 *,	North Greenwich WB line (west) reversing berth
155060 †,	Wembley Park Fly-under	182005,	Canning Town platform 5
155061 †,	Wembley Park Depot Road	182006,	Canning Town platform 6
156001,	Neasden Depot No. 1 Road	184005,	West Ham platform 5
156002,	Neasden Depot No. 2 Road	184006,	West Ham platform 6
156003,	Neasden Depot No. 3 Road	185040,	West Ham Staff Platform
156004,	Neasden Depot No. 4 Road	1850U18 *,	West Ham signal TU18 berth
156011 *,	Neasden Depot No. 11 Road	1850U19 *,	West Ham signal TU19 berth
157000,	Neasden Depot	1850U2 *,	West Ham signal TU2 berth
158001,	Neasden platform 1	1850U20,	West Ham signal TU20 berth
158002,	Neasden platform 2	1850U21,	West Ham signal TU21 berth
158003,	Neasden platform 3	186000,	Stratford Market Depot
158004,	Neasden platform 4	186001,	Stratford Market Depot No. 1 Holding Road
158005,	Neasden Depot No. 5 Road	186002,	Stratford Market Depot No. 2 Holding Road
158014 §,	Neasden Signals MM14/MM15	1870W2 †,	Stratford signal TW2 berth
158022 †,	Neasden No. 22 siding	1870W26,	Stratford signal TW26 berth

1870W27,	Stratford signal TW27 berth	233003,	South Ealing platform 3
1870W3,	Stratford signal TW3 berth	233004,	South Ealing platform 4
1870W4 *	Stratford signal TW4 berth	234001,	Acton Town platform 1
188013,	Stratford platform 13	234002,	Acton Town platform 2
188014,	Stratford platform 14	234003,	Acton Town platform 3
188015,	Stratford platform 15	234004,	Acton Town platform 4
192040,	Swiss Cottage (Met) SB line reversing berth	234021,	Acton Town No. 21 siding
192050,	Swiss Cottage (Met) NB line	234022,	Acton Town No. 22 siding
205001,	South Harrow platform 1	234023,	Acton Town No. 23 siding
205002,	South Harrow platform 2	<b>234024,</b>	<b>Acton Town No. 24 siding (OOU)</b>
205040 *	South Harrow EB line reversing berth	234026,	Acton Town No. 26 siding
206000,	South Harrow sidings	236000,	Acton Works
206031,	South Harrow No. 31 siding	237001,	Chiswick Park platform 1
206032,	South Harrow No. 32 siding	237002,	Chiswick Park platform 2
206033,	South Harrow No. 33 siding	238003,	Richmond platform 3
206034,	South Harrow No. 34 siding	238004,	Richmond platform 4
206035,	South Harrow No. 35 siding	238005,	Richmond platform 5
206036,	South Harrow No. 36 siding	238006,	Richmond platform 6
207001,	Sudbury Hill platform 1	238007,	Richmond platform 7
207002,	Sudbury Hill platform 2	239001,	Kew Gardens platform 1
208001,	Sudbury Town platform 1	239002,	Kew Gardens platform 2
208002,	Sudbury Town platform 2	240001,	Gunnersbury platform 1
209001,	Alperton platform 1	240002,	Gunnersbury platform 2
209002,	Alperton platform 2	240040 *	Gunnersbury Up line reversing berth
210001,	Park Royal platform 1	241000,	South Acton (NR)
210002,	Park Royal platform 2	242001,	Turnham Green platform 1
211007,	Ealing Broadway platform 7	242002,	Turnham Green platform 2
211008,	Ealing Broadway platform 8	242003,	Turnham Green platform 3
211009,	Ealing Broadway platform 9	242004,	Turnham Green platform 4
211024,	Ealing Broadway No. 24 Road	243001,	Stamford Brook platform 1
211025,	Ealing Broadway No. 25 Road	243002,	Stamford Brook platform 2
211026,	Ealing Broadway No. 26 Road	243003,	Stamford Brook platform 3
212001,	North Ealing platform 1	244001,	Ravenscourt Park platform 1
212002,	North Ealing platform 2	244002,	Ravenscourt Park platform 2
213040,	Hanger Lane Junction EB line	244003,	Ravenscourt Park platform 3
213050,	Hanger Lane Junction WB line	244004,	Ravenscourt Park platform 4
217001,	Ealing Common platform 1	245001,	Hammersmith (Picc) platform 1
217002,	Ealing Common platform 2	245002,	Hammersmith (Picc) platform 2
218000,	Ealing Common Depot	245003,	Hammersmith (Picc) platform 3
218019 *	Ealing Common Depot No. 19 Road	245004,	Hammersmith (Picc) platform 4
218020 *	Ealing Common Depot No. 20 Road	245030 *	Barons Court Siding
220005,	Heathrow Terminal 5 platform 5	246001,	Barons Court platform 1
220006,	Heathrow Terminal 5 platform 6	246002,	Barons Court platform 2
220021,	Heathrow Terminal 5 No. 21 siding	246003,	Barons Court platform 3
220022,	Heathrow Terminal 5 No. 22 siding	246004,	Barons Court platform 4
221001,	Heathrow T123 platform 1	248001,	West Kensington platform 1
221002,	Heathrow T123 platform 2	248002,	West Kensington platform 2
222001,	Heathrow Terminal 4 platform 1	248050 *	West Kensington WB line reversing berth
223001,	Hatton Cross platform 1	249000,	Lillie Bridge Depot
223002,	Hatton Cross platform 2	251005,	Earls Court platform 5
224001,	Hounslow West platform 1	251006,	Earls Court platform 6
224002,	Hounslow West platform 2	252004,	Gloucester Road platform 4
225001,	Hounslow Central platform 1	252005,	Gloucester Road platform 5
225002,	Hounslow Central platform 2	254003,	South Kensington platform 3
227001,	Hounslow East platform 1	254004,	South Kensington platform 4
227002,	Hounslow East platform 2	256001,	Knightsbridge platform 1
228001,	Osterley platform 1	256002,	Knightsbridge platform 2
228002,	Osterley platform 2	258001,	Hyde Park Corner platform 1
229001,	Boston Manor platform 1	258002,	Hyde Park Corner platform 2
229002,	Boston Manor platform 2	258040 *	Hyde Park Corner EB line reversing berth
229029,	Northfields depot No. 29 Road	259000,	Down Street siding
229040 *	Boston Manor EB line reversing berth	260001,	Green Park platform 1
229050 *	Boston Manor WB line reversing berth	260002,	Green Park platform 2
230000,	Northfields Depot	262003,	Piccadilly Circus platform 3
231001,	Northfields platform 1	262004,	Piccadilly Circus platform 4
231002,	Northfields platform 2	264001,	Leicester Square platform 1
231003,	Northfields platform 3	264002,	Leicester Square platform 2
231004,	Northfields platform 4	266001,	Covent Garden platform 1
231030,	Northfields No. 7 siding	266002,	Covent Garden platform 2
233001,	South Ealing platform 1	268001,	Aldwych platform 1
233002,	South Ealing platform 2	270003,	Holborn platform 3
		270004,	Holborn platform 4

270005,	Holborn platform 5	315002,	Parsons Green platform 2
270040 *	Holborn EB line reversing berth	315021,	Parsons Green No. 21 siding
272001,	Russell Square platform 1	315022,	Parsons Green No. 22 siding
272002,	Russell Square platform 2	315023,	Parsons Green No. 23 siding
274005,	Kings Cross platform 5	315024,	Parsons Green No. 24 siding
274006,	Kings Cross platform 6	315027S,	Parsons Green No. 27 siding (south)
274050 *	Kings Cross WB line reversing berth	315027N,	Parsons Green No. 27 siding (north)
274060,	Kings Cross Loop; Picc reversing berth	315028,	Parsons Green No. 28 siding
274080,	Kings Cross Loop; Nthn reversing berth	315029,	Parsons Green No. 29 siding
276001,	Caledonian Road platform 1	316001,	Kensington (Olympia) platform 1
276002,	Caledonian Road platform 2	317001,	Fulham Broadway platform 1
278001,	Holloway Road platform 1	317002,	Fulham Broadway platform 2
278002,	Holloway Road platform 2	318001,	West Brompton platform 1
280001,	Arsenal platform 1	318002,	West Brompton platform 2
280002,	Arsenal platform 2	319040,	West Kensington East Junction EB line
282001,	Finsbury Park platform 1	319041,	West Kensington East Junction Olympia line
282003,	Finsbury Park platform 3	319050,	West Kensington East Junction WB line
284001,	Manor House platform 1	320001,	Earls Court platform 1
284002,	Manor House platform 2	320002,	Earls Court platform 2
286001,	Turnpike Lane platform 1	320003,	Earls Court platform 3
286002,	Turnpike Lane platform 2	320004,	Earls Court platform 4
288001,	Wood Green platform 1	320020 *	Earls Court No. 20 siding
288002,	Wood Green platform 2	321034,	Triangle No. 34 Siding
288030,	Wood Green siding	321036,	Triangle No. 36 Siding
289001,	Bounds Green platform 1	321037,	Triangle No. 37 Siding
289002,	Bounds Green platform 2	321040,	Triangle Sidings EB line reversing berth
290000,	Arnos Grove sidings	321050,	Triangle Sidings WB line
290025,	Arnos Grove No.25 siding	322001,	High Street Kensington platform 1
290026,	Arnos Grove No.26 siding	322002,	High Street Kensington platform 2
290027,	Arnos Grove No.27 siding	322003,	High Street Kensington platform 3
290028,	Arnos Grove No.28 siding	322004,	High Street Kensington platform 4
290029,	Arnos Grove No.29 siding	322050 *	High Street Kensington Inner Rail reversing berth
290030,	Arnos Grove No.30 siding	323001,	Notting Hill Gate platform 1
290031,	Arnos Grove No.31 siding	323002,	Notting Hill Gate platform 2
291001,	Arnos Grove platform 1	324001,	Bayswater platform 1
291003,	Arnos Grove platform 3	324002,	Bayswater platform 2
291004,	Arnos Grove platform 4	325001,	Paddington platform 1
293001,	Southgate platform 1	325002,	Paddington platform 2
293002,	Southgate platform 2	326001,	Gloucester Road platform 1
294001,	Oakwood platform 1	326002,	Gloucester Road platform 2
294002,	Oakwood platform 2	326003,	Gloucester Road platform 3
295000,	Cockfosters Depot	326050 *	Gloucester Road Outer Rail reversing berth
296001,	Cockfosters platform 1	327001,	South Kensington platform 1
296002,	Cockfosters platform 2	327002,	South Kensington platform 2
296004,	Cockfosters platform 4	327040 *	South Kensington EB line reversing berth
296026,	Cockfosters No. 26 siding	328001,	Sloane Square platform 1
296032,	Cockfosters No. 32 siding	328002,	Sloane Square platform 2
296033,	Cockfosters No. 33 siding	329001,	Victoria platform 1
304000,	Raynes Park	329002,	Victoria platform 2
305001,	Wimbledon platform 1	330001,	St. James Park platform 1
305002,	Wimbledon platform 2	330002,	St. James Park platform 2
305003,	Wimbledon platform 3	331001,	Westminster platform 1
305004,	Wimbledon platform 4	331002,	Westminster platform 2
305005,	Wimbledon platform 5	332001,	Embankment platform 1
305007,	Wimbledon platform 7	332002,	Embankment platform 2
306000,	Wimbledon Park Depot (NR)	332040 *	Embankment EB line reversing berth
307001,	Wimbledon Park platform 1	333001,	Temple platform 1
307002,	Wimbledon Park platform 2	333002,	Temple platform 2
307050 *	Wimbledon Park Down line reversing berth	334001,	Blackfriars platform 1
308001,	Southfields platform 1	334002,	Blackfriars platform 2
308002,	Southfields platform 2	335001,	Mansion House platform 1
309001,	East Putney platform 1	335002,	Mansion House platform 2
309002,	East Putney platform 2	335003,	Mansion House platform 3
309003,	East Putney platform 3	336001,	Cannon Street platform 1
309004,	East Putney Down Line (adj platform 3)	336002,	Cannon Street platform 2
309050 *	East Putney Down line reversing berth	337001,	Monument platform 1
313000,	Point Pleasant Junction	337002,	Monument platform 2
314001,	Putney Bridge platform 1	338001,	Tower Hill platform 1
<b>314002,</b>	<b>Putney Bridge platform 2 (OOU)</b>	338002,	Tower Hill platform 2
314003,	Putney Bridge platform 3	338003,	Tower Hill platform 3
314050 *	Putney Bridge WB line reversing berth	339040,	Minorities Junction EB line
315001,	Parsons Green platform 1	339050,	Minorities Junction WB line

341001,	Hammersmith (C&H) platform 1	373001,	Whitechapel platform 1
341002,	Hammersmith (C&H) platform 2	373002,	Whitechapel platform 2
341003,	Hammersmith (C&H) platform 3	373040,	Whitechapel EB line reversing berth
341024,	Hammersmith No. 24 siding	374001,	Stepney Green platform 1
342000,	Hammersmith Depot	374002,	Stepney Green platform 2
343001,	Goldhawk Road platform 1	375002,	Mile End platform 2
343002,	Goldhawk Road platform 2	375003,	Mile End platform 3
344001,	Shepherds Bush Market platform 1	376001,	Bow Road platform 1
344002,	Shepherds Bush Market platform 2	376002,	Bow Road platform 2
345001,	Wood Lane platform 1	378001,	Bromley by Bow platform 1
345002,	Wood Lane platform 2	378002,	Bromley by Bow platform 2
346001,	Latimer Road platform 1	378050 *,	<b>Bromley by Bow WB line reversing berth (OOU)</b>
346002,	Latimer Road platform 2	379001,	West Ham platform 1
347001,	Ladbroke Grove platform 1	379002,	West Ham platform 2
347002,	Ladbroke Grove platform 2	379010 *,	West Ham Siding
348001,	Westbourne Park platform 1	380001,	Plaistow platform 1
348002,	Westbourne Park platform 2	380002,	Plaistow platform 2
349001,	Royal Oak platform 1	380003,	Plaistow platform 3
349002,	Royal Oak platform 2	381001,	Upton Park platform 1
349050 *,	Royal Oak WB line	381002,	Upton Park platform 2
350015,	Paddington platform 15	382001,	East Ham platform 1
350016,	Paddington platform 16	382002,	East Ham platform 2
351040,	Praed Street Junction EB line	382040 *,	East Ham EB line reversing berth
351050,	Praed Street Junction WB line	383002,	Barking platform 2
352001,	Edgware Road (C&H) platform 1	383003,	Barking platform 3
352002,	Edgware Road (C&H) platform 2	383006,	Barking platform 6
352003,	Edgware Road (C&H) platform 3	384021,	Barking No. 21 siding
352004,	Edgware Road (C&H) platform 4	384022,	Barking No. 22 siding
352026,	Edgware Road No. 26 siding	384023,	Barking No. 23 siding
352040 *,	Edgware Road EB line reversing berth	384024,	Barking No. 24 siding
352050 *,	Edgware Road WB line reversing berth	384025,	Barking No. 25 siding
353001,	Baker Street platform 1	384026W *,	Barking No. 26 siding (west)
353002,	Baker Street platform 2	384027W *,	Barking No. 27 siding (west)
353003,	Baker Street platform 3	384028W *,	Barking No. 28 siding (west)
353004,	Baker Street platform 4	384029W *,	Barking No. 29 siding (west)
353005,	Baker Street platform 5	384026E,	Barking No. 26 siding (east)
353006,	Baker Street platform 6	384027E,	Barking No. 27 siding (east)
353040 *,	Baker Street EB line reversing berth	384028E,	Barking No. 28 siding (east)
355001,	Great Portland Street platform 1	384029E,	Barking No. 29 siding (east)
355002,	Great Portland Street platform 2	384030 *,	Barking Sidings West Reception Road
356001,	Euston Square platform 1	385001,	Upney platform 1
356002,	Euston Square platform 2	385002,	Upney platform 2
358001,	Kings Cross platform 1	386001,	Becontree platform 1
358002,	Kings Cross platform 2	386002,	Becontree platform 2
<b>358040 *,</b>	<b>Kings Cross EB line reversing berth (OOU)</b>	387001,	Dagenham Heathway platform 1
358050 *,	Kings Cross WB line reversing berth	387002,	Dagenham Heathway platform 2
359001,	Farringdon platform 1	388001,	Dagenham East platform 1
359002,	Farringdon platform 2	388002,	Dagenham East platform 2
359023,	Farringdon No. 23 siding	388003,	Dagenham East platform 3
359024,	Farringdon No. 24 siding	388030,	Dagenham East siding
359025,	Farringdon No. 25 siding	388050 *,	Dagenham East WB line reversing berth
359050 *,	Farringdon WB line reversing berth	389001,	Elm Park platform 1
360001,	Barbican platform 1	389002,	Elm Park platform 2
360002,	Barbican platform 2	390001,	Hornchurch platform 1
362001,	Moorgate platform 1	390002,	Hornchurch platform 2
362002,	Moorgate platform 2	<b>390050 *,</b>	<b>Hornchurch WB line reversing berth (OOU)</b>
362003,	Moorgate platform 3	391001,	Upminster Bridge platform 1
362004,	Moorgate platform 4	391002,	Upminster Bridge platform 2
362050 *,	Moorgate WB line reversing berth	392003,	Upminster platform 3
363001,	Liverpool Street platform 1	392004,	Upminster platform 4
363002,	Liverpool Street platform 2	392005,	Upminster platform 5
363050 *,	Liverpool Street WB line reversing berth	393000,	Upminster Depot
366040,	Aldgate North Junction EB line	501000,	Waterloo Depot
366050,	Aldgate North Junction WB line reversing berth	501002,	Waterloo Depot No. 2 Road
367001,	Aldgate platform 1	501003,	Waterloo Depot No. 3 Road
367002,	Aldgate platform 2	501005,	Waterloo Depot No. 5 Road
367003,	Aldgate platform 3	501006,	Waterloo Depot No. 6 Road
367004,	Aldgate platform 4	501007,	Waterloo Depot No. 7 Road
371001,	Aldgate East platform 1	501008,	Waterloo Depot No. 8 Road
371002,	Aldgate East platform 2	503025,	Waterloo platform 25
371040 *,	Aldgate East EB line reversing berth	503026,	Waterloo platform 26



504007,	Bank platform 7	648003,	Paddington platform 3
504008,	Bank platform 8	648004,	Paddington platform 4
605000,	Watford Junction	648050 *,	Paddington NB line reversing berth
607001,	Watford High Street platform 1	650001,	Edgware Road (B'loo) platform 1
607002,	Watford High Street platform 2	650002,	Edgware Road (B'loo) platform 2
608001,	Bushey platform 1	651001,	Marylebone platform 1
608002,	Bushey platform 2	651002,	Marylebone platform 2
610001,	Carpenders Park platform 1	653008,	Baker Street platform 8
610002,	Carpenders Park platform 2	653009,	Baker Street platform 9
611001,	Hatch End platform 1	655001,	Regents Park platform 1
611002,	Hatch End platform 2	655002,	Regents Park platform 2
613001,	Headstone Lane platform 1	656003,	Oxford Circus platform 3
613002,	Headstone Lane platform 2	656004,	Oxford Circus platform 4
614001,	Harrow & Wealdstone platform 1	658001,	Piccadilly Circus platform 1
614002,	Harrow & Wealdstone platform 2	658002,	Piccadilly Circus platform 2
614030,	Harrow & Wealdstone siding	658050 *,	Piccadilly Circus NB line reversing berth
614040 *,	Harrow & Wealdstone Up line reversing berth	659001,	Charing Cross platform 1
616001,	Kenton platform 1	659002,	Charing Cross platform 2
616002,	Kenton platform 2	661005,	Embankment platform 5
617001,	South Kenton platform 1	661006,	Embankment platform 6
617002,	South Kenton platform 2	662003,	Waterloo platform 3
619001,	North Wembley platform 1	662004,	Waterloo platform 4
619002,	North Wembley platform 2	664001,	Lambeth North platform 1
620001,	Wembley Central platform 1	664002,	Lambeth North platform 2
620002,	Wembley Central platform 2	664050 *,	Lambeth North NB line reversing berth
620050 *,	Wembley Central Down line reversing berth	664060,	Lambeth North Depot Road
622000,	Stonebridge Park Depot	666000,	London Road sidings
624021,	Stonebridge Park No. 21 road	668003,	Elephant & Castle platform 3
624022,	Stonebridge Park No. 22 road	668004,	Elephant & Castle platform 4
625001,	Stonebridge Park platform 1	668023,	Elephant & Castle No. 23 siding
625002,	Stonebridge Park platform 2	668024,	Elephant & Castle No. 24 siding
626001,	Harlesden platform 1	668050 *,	Elephant & Castle NB line reversing berth
626002,	Harlesden platform 2	804001,	Edgware platform 1
628001,	Willesden Junction platform 1	804002,	Edgware platform 2
628002,	Willesden Junction platform 2	804003,	Edgware platform 3
628003,	Willesden Junction platform 3	804106 \$,	Edgware Signal AE06
628040 *,	Willesden Junction Up line reversing berth	8041TSG \$,	Edgware Sidings Inbound Stop Board
628050 *,	Willesden Junction Down line reversing berth	805000,	Edgware North Sidings
628060,	Willesden Junction TMD	807000,	Edgware South Sidings
629000,	Kensal Green Junction (NR)	810001,	Burnt Oak platform 1
631001,	Kensal Green platform 1	810002,	Burnt Oak platform 2
631002,	Kensal Green platform 2	811001,	Colindale platform 1
632040,	Queen's Park North Up line	811002,	Colindale platform 2
632050,	Queen's Park North Down line	811030,	Colindale siding
634001,	Queens Park platform 1	813001,	Hendon Central platform 1
634002,	Queens Park platform 2	813002,	Hendon Central platform 2
634003,	Queens Park platform 3	814001,	Brent Cross platform 1
634004,	Queens Park platform 4	814002,	Brent Cross platform 2
634021,	Queens Park No. 21 Road	816002,	Golders Green platform 2
634022,	Queens Park No. 22 siding	816003,	Golders Green platform 3
634023,	Queens Park No. 23 siding	816005,	Golders Green platform 5
634024,	Queens Park No. 24 Road	816024,	Golders Green No. 24 siding
634025S,	Queens Park No. 25 Road (south)	816025,	Golders Green No. 25 siding
634025N,	Queens Park No. 25 Road (north)	816026,	Golders Green No. 26 road
634026S,	Queens Park No. 26 Road (south)	816050 *,	Golders Green NB line reversing berth
634026N,	Queens Park No. 26 Road (north)	816060 *,	Golders Green Loop
6340SSH,	Queens Park South Shed	817000,	Golders Green Depot
637001,	Kilburn High Road platform 1	817111 \$,	Golders Green Signal G11
637002,	Kilburn High Road platform 2	8171TDT \$,	Golders Green Depot Inbound Stop Board
639001,	South Hampstead platform 1	818027,	Golders Green No. 27 road
639002,	South Hampstead platform 2	818040,	Golders Green SB line reversing berth
640000,	Camden Junction (NR)	818050,	Golders Green (Tunnel Mouth) NB line
642000,	Euston (NR)	820001,	Hampstead platform 1
644001,	Kilburn Park platform 1	820002,	Hampstead platform 2
644002,	Kilburn Park platform 2	820050 *,	Hampstead NB line reversing berth
645001,	Maida Vale platform 1	822001,	Belsize Park platform 1
645002,	Maida Vale platform 2	822002,	Belsize Park platform 2
647001,	Warwick Avenue platform 1	823001,	Chalk Farm platform 1
647002,	Warwick Avenue platform 2	823002,	Chalk Farm platform 2
		826001,	High Barnet platform 1
		826002,	High Barnet platform 2
		826003,	High Barnet platform 3

827000,	High Barnet Sidings	874003,	Embankment platform 3
828000,	High Barnet No. 33 siding	874004,	Embankment platform 4
830001,	Totteridge & Whetstone platform 1	876001,	Waterloo platform 1
830002,	Totteridge & Whetstone platform 2	876002,	Waterloo platform 2
831001,	Woodside Park platform 1	878001,	Kennington platform 1
831002,	Woodside Park platform 2	878002,	Kennington platform 2
833001,	West Finchley platform 1	878003,	Kennington platform 3
833002,	West Finchley platform 2	878004,	Kennington platform 4
834001,	Mill Hill East platform 1	878030,	Kennington siding
836001,	Finchley Central platform 1	878060,	Kennington loop
836002,	Finchley Central platform 2	879001,	Oval platform 1
836003,	Finchley Central platform 3	879002,	Oval platform 2
836025,	Finchley Central No. 25 siding	881002,	Stockwell platform 2
836035,	Finchley Central No. 35 siding	881003,	Stockwell platform 3
837001,	East Finchley platform 1	881050 *,	Stockwell NB line reversing berth
837002,	East Finchley platform 2	882001,	Clapham North platform 1
837003,	East Finchley platform 3	882002,	Clapham North platform 2
837004,	East Finchley platform 4	884001,	Clapham Common platform 1
837025,	East Finchley No. 25 siding	884002,	Clapham Common platform 2
837050 *,	East Finchley NB line reversing berth	885001,	Clapham South platform 1
839000,	Highgate Sidings	885002,	Clapham South platform 2
839037 \$,	Highgate Sidings No. 37 road	887001,	Balham platform 1
842001,	Highgate platform 1	887002,	Balham platform 2
842002,	Highgate platform 2	888001,	Tooting Bec platform 1
843001,	Archway platform 1	888002,	Tooting Bec platform 2
843002,	Archway platform 2	890001,	Tooting Broadway platform 1
843030,	Archway siding	890002,	Tooting Broadway platform 2
845001,	Tufnell Park platform 1	890030,	Tooting Broadway siding
845002,	Tufnell Park platform 2	891001,	Colliers Wood platform 1
846001,	Kentish Town platform 1	891002,	Colliers Wood platform 2
846002,	Kentish Town platform 2	893001,	South Wimbledon platform 1
848001,	Camden Town platform 1	893002,	South Wimbledon platform 2
848002,	Camden Town platform 2	894002,	Morden platform 2
848003,	Camden Town platform 3	894003,	Morden platform 3
848004,	Camden Town platform 4	894005,	Morden platform 5
850003,	Euston platform 3	894044 †,	Morden No. 44 road
850006,	Euston platform 6	894045 †,	Morden No. 45 road
850030,	Euston Loop	896000,	Morden Depot
851007,	Kings Cross platform 7	910001,	Walthamstow Central platform 1
851008,	Kings Cross platform 8	910002,	Walthamstow Central platform 2
853001,	Angel platform 2	910021,	Walthamstow Central No. 21 siding
853002,	Angel platform 1	910022,	Walthamstow Central No. 22 siding
854001,	Old Street platform 1	912001,	Blackhorse Road platform 1
854002,	Old Street platform 2	912002,	Blackhorse Road platform 2
856007,	Moorgate platform 7	914001,	Tottenham Hale platform 1
856008,	Moorgate platform 8	914002,	Tottenham Hale platform 2
856050 *,	Moorgate NB line reversing berth	926000,	Northumberland Park Depot
857003,	Bank platform 3	928000,	Northumberland Park Depot staff platform
857004,	Bank platform 4	928019,	Northumberland Park Depot old staff platform
859001,	London Bridge platform 1	930048,	Northumberland Park Depot No. 48 Road
859002,	London Bridge platform 2	930049,	Northumberland Park Depot No. 49 Road
860001,	Borough platform 1	930050,	Northumberland Park Depot No. 50 Road
860002,	Borough platform 2	930051,	Northumberland Park Depot No. 51 Road
862001,	Elephant & Castle platform 1	930052,	Northumberland Park Depot No. 52 Road
862002,	Elephant & Castle platform 2	930053,	Northumberland Park Depot No. 53 Road
864001,	Mornington Crescent platform 1	932003,	Seven Sisters platform 3
864002,	Mornington Crescent platform 2	932004,	Seven Sisters platform 4
864050 *,	Mornington Crescent NB line reversing berth	932005,	Seven Sisters platform 5
865001,	Euston platform 1	932062 *,	Seven Sisters No. 62 road
865002,	Euston platform 2	932063 *,	Seven Sisters No. 63 road
867001,	Warren Street platform 1	934002,	Finsbury Park platform 2
867002,	Warren Street platform 2	934004,	Finsbury Park platform 4
868001,	Goodge Street platform 1	936003,	Highbury & Islington platform 3
868002,	Goodge Street platform 2	936005,	Highbury & Islington platform 5
870003,	Tottenham Court Road platform 3	936050 *,	Highbury & Islington NB line reversing berth
870004,	Tottenham Court Road platform 4	938003,	Kings Cross platform 3
871003,	Leicester Square platform 3	938004,	Kings Cross platform 4
871004,	Leicester Square platform 4	938030,	Kings Cross siding
873005,	Charing Cross platform 5	940004,	Euston platform 4
873006,	Charing Cross platform 6	940005,	Euston platform 5
873050 *,	Charing Cross NB line reversing berth	942003,	Warren Street platform 3
		942004,	Warren Street platform 4

942050 \*, Warren Street NB line reversing berth  
944005, Oxford Circus platform 5  
944006, Oxford Circus platform 6  
946003, Green Park platform 3  
946004, Green Park platform 4  
948003, Victoria platform 3  
948004, Victoria platform 4  
948022, Victoria No. 22 siding  
948023, Victoria No. 23 siding  
948050 \*, Victoria NB line reversing berth

950001, Pimlico platform 1  
950002, Pimlico platform 2  
952001, Vauxhall platform 1  
952002, Vauxhall platform 2  
954001, Stockwell platform 1  
954004, Stockwell platform 4  
956001, Brixton platform 1  
956002, Brixton platform 2  
956021, Brixton No. 21 siding  
956022, Brixton No. 22 siding

\* Only appears as first or last event of trip, excluded from trips passing through this location

† Included in all trips passing location in SCCS files, only appears as first or last event of trip in standard CUF files

§ Included in all trips passing location in SCCS files only.

~~‡ Became unavailable from commissioning of West Ham Siding~~

~~# Decommissioned as part of Whitechapel Station remodelling 2010 – 2011.~~

Issued Document

## 9. Appendix G

### 9.1 Checksum Calculation Coding

The following C++ Coding is used to calculate the values in the Checksum (.chk) file. The line of code which carries out the actual calculation is shown in **bold**.

```
unsigned short int CartInterface::calculateChecksum (string theFileName){
    // 16-bit remainder.
    static const unsigned short int remainders[256] =
    {
        0x0000, 0xC0C1, 0xC181, 0x0140, 0xC301, 0x03C0, 0x0280, 0xC241,
        0xC601, 0x06C0, 0x0780, 0xC741, 0x0500, 0xC5C1, 0xC481, 0x0440,
        0xCC01, 0x0CC0, 0x0D80, 0xCD41, 0x0F00, 0xCFC1, 0xCE81, 0x0E40,
        0x0A00, 0xCAC1, 0xCB81, 0x0B40, 0xC901, 0x09C0, 0x0880, 0xC841,
        0xD801, 0x18C0, 0x1980, 0xD941, 0x1B00, 0xDBC1, 0xDA81, 0x1A40,
        0x1E00, 0xDEC1, 0xDF81, 0x1F40, 0xDD01, 0x1DC0, 0x1C80, 0xDC41,
        0x1400, 0xD4C1, 0xD581, 0x1540, 0xD701, 0x17C0, 0x1680, 0xD641,
        0xD201, 0x12C0, 0x1380, 0xD341, 0x1100, 0xD1C1, 0xD081, 0x1040,
        0xF001, 0x30C0, 0x3180, 0xF141, 0x3300, 0xF3C1, 0xF281, 0x3240,
        0x3600, 0xF6C1, 0xF781, 0x3740, 0xF501, 0x35C0, 0x3480, 0xF441,
        0x3C00, 0xFCC1, 0xFD81, 0x3D40, 0xFF01, 0x3FC0, 0x3E80, 0xFE41,
        0xFA01, 0x3AC0, 0x3B80, 0xFB41, 0x3900, 0xF9C1, 0xF881, 0x3840,
        0x2800, 0xE8C1, 0xE981, 0x2940, 0xEB01, 0x2BC0, 0x2A80, 0xEA41,
        0xEE01, 0x2EC0, 0x2F80, 0xEF41, 0x2D00, 0xEDC1, 0xEC81, 0x2C40,
        0xE401, 0x24C0, 0x2580, 0xE541, 0x2700, 0xE7C1, 0xE681, 0x2640,
        0x2200, 0xE2C1, 0xE381, 0x2340, 0xE101, 0x21C0, 0x2080, 0xE041,
        0xA001, 0x60C0, 0x6180, 0xA141, 0x6300, 0xA3C1, 0xA281, 0x6240,
        0x6600, 0xA6C1, 0xA781, 0x6740, 0xA501, 0x65C0, 0x6480, 0xA441,
        0x6C00, 0xACC1, 0xAD81, 0x6D40, 0xAF01, 0x6FC0, 0x6E80, 0xAE41,
        0xAA01, 0x6AC0, 0x6B80, 0xAB41, 0x6900, 0xA9C1, 0xA881, 0x6840,
        0x7800, 0xB8C1, 0xB981, 0x7940, 0xBB01, 0x7BC0, 0x7A80, 0xBA41,
        0xBE01, 0x7EC0, 0x7F80, 0xBF41, 0x7D00, 0xBDC1, 0xBC81, 0x7C40,
        0xB401, 0x74C0, 0x7580, 0xB541, 0x7700, 0xB7C1, 0xB681, 0x7640,
        0x7200, 0xB2C1, 0xB381, 0x7340, 0xB101, 0x71C0, 0x7080, 0xB041,
        0x5000, 0x90C1, 0x9181, 0x5140, 0x9301, 0x53C0, 0x5280, 0x9241,
        0x9601, 0x56C0, 0x5780, 0x9741, 0x5500, 0x95C1, 0x9481, 0x5440,
        0x9C01, 0x5CC0, 0x5D80, 0x9D41, 0x5F00, 0x9FC1, 0x9E81, 0x5E40,
        0x5A00, 0x9AC1, 0x9B81, 0x5B40, 0x9901, 0x99C0, 0x5880, 0x9841,
        0x8801, 0x48C0, 0x4980, 0x8941, 0x4B00, 0x8BC1, 0x8A81, 0x4A40,
        0x4E00, 0x8EC1, 0x8F81, 0x4F40, 0x8D01, 0x4DC0, 0x4C80, 0x8C41,
        0x4400, 0x84C1, 0x8581, 0x4540, 0x8701, 0x47C0, 0x4680, 0x8641,
        0x8201, 0x42C0, 0x4380, 0x8341, 0x4100, 0x81C1, 0x8081, 0x4040
    };
    fstream theFile;
    string fullFileName;
    char theChar = ' ';
    unsigned short int theChecksum = 0xFFFF;
    fullFileName = ourTimeTableDetailsDirectory + "/" + theFileName;
    theFile.open(fullFileName.c_str(), ios::in);
    theChar = theFile.get();

    while (theChar != EOF){
        theChecksum = remainders[(theChecksum ^ theChar) & 0x00FF] ^ ((theChecksum >> 8) &
0x00FF);
        theChar = theFile.get();
    }
    theFile.close();
    return theChecksum;
}
```