

LT-IMS-ENG-060

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1 Purpose

The purpose of this document is to define the London Tramlink (LT) Location Coding System (LCS) and provide guidance on the use of location codes for assets and associated files.

2 Scope

The LT LCS applies to all geographically located data created by LT, or supplied / made accessible to LT by third parties, to ensure that all geographically located files are sited according to a common standard across all LT systems. This includes TfL Document Manager, ProjectWise and AMIS.

3 Location Coding System

Location coding is used to describe the geographic position of any asset or file relating to an asset that exists on the Tramlink system. The LT LCS provides incremental levels of geographic resolution through levels of coding described below.

Each asset or file to be located does not necessarily require all levels of location code. The minimum required to site an asset is Level 2, describing its location either at a tramstop or on a line section between tramstops.

Level	1	2a	2b			3	4					5	6		
Description	System	Location Code			Arrangement		Chainage					Offset	Offset Metres		
Format	AA	N	N	N	AA	N	N	N	N	N	A	N	N	N	
Example	LT	1	1	6	WB	0	5	5	1	3	S	0	1	2	

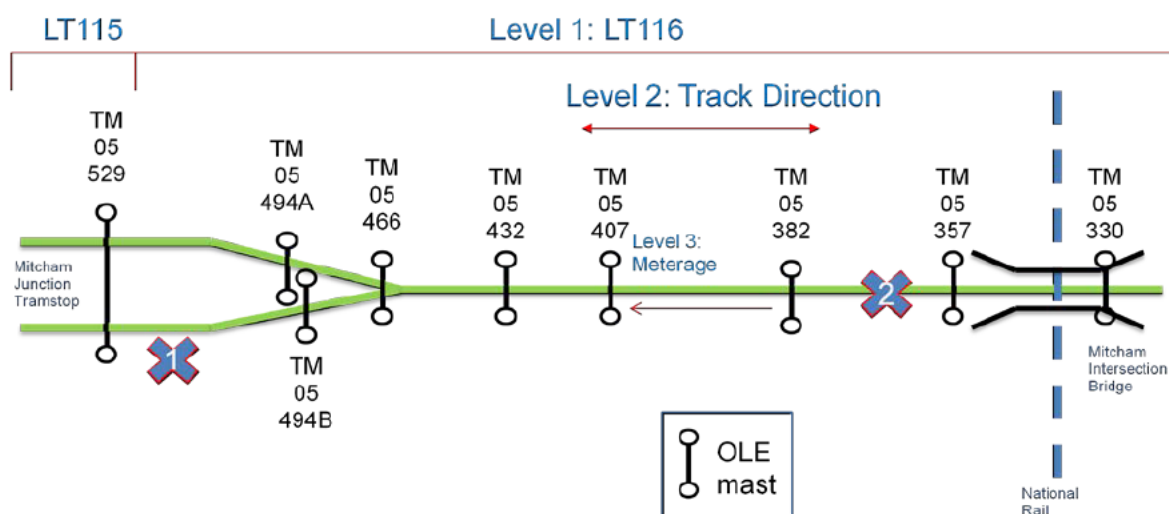
- **Level 1:** The system code for London Tramlink is (LT), provided for interface with other TfL networks and to provide capacity for expansion of the current system in other areas.
- **Level 2:** The location code describes either a tramstop or line between tramstops. Boundaries of location code areas are defined in Section 5. In addition, special codes are reserved for other network locations such as Depot and junctions.
 - **2a:** Line number
 - **2b:** Location code
- **Level 3:** The track arrangement, showing normal direction of travel or other arrangements such as crossovers.
- **Level 4:** The chainage is measured from the system zero point at East Croydon along the track centreline and is a five digit number to the nearest metre.
- **Level 5:** The offset describes whether an asset is offset North or South of the track centreline, measured in the Eastbound direction from Wimbledon.
- **Level 6:** The offset of the asset from the track centreline to the nearest metre, perpendicular to the track alignment.

The table below describes the codes in use for selected Levels of the LCS.

Level	1	2a	3	5
Codes	LT Tramlink Network	1 Wimbledon - Reeves Corner	WB Westbound	N North
		2 Reeves Corner - Sandilands Junction	EB Eastbound	S South
		3 Sandilands Junction - Beckenham Junction	BD Bidirectional	
		4 Sandilands Junction - New Addington	CE Central*	
		0 Depot and Sidings	IL Interlaced	
			XA, XB, XC...	Crossover
			SI Sidings	

*middle track of three

To locate an asset to the nearest metre on the Tramlink system, the chainage along the track alignment is combined with the offset perpendicular to the track alignment.



Level	Example 1	Example 2	Notes
1+2	LT116	LT116	
3	WB	BD	
4	05513	05365	Chainage of asset
5+6	S012	-	Offset N/S from track centreline (m)
Code	LT116-WB-05513-S012	LT116-BD-05365	

4 Anomalies

Two junctions are treated as tramstops. Sandilands Junction (LT221) and the junction at Arena (LT311) have odd numbered codes as they mark locations where lines diverge and therefore avoid multiple location codes applying to the same track.

Junction locations are a single point rather than an area and should not be used for locating assets. They are defined as the point at which two tracks turn out become separate.

The track connecting the Church Street to Reeves Corner line (LT214) with the Reeves Corner to Centrale line LT202) is called Church Street to Centrale with the code LT222. The code LT215 is not used. This is because the Church Street to Centrale line completes the Croydon loop but is not a primary line connecting two tramstops.

5 Use

5.1 Systems

Location coding is used as metadata in document and asset management systems. Use of a consistent LCS across systems allows for interoperability in accessing location-specific data.

- **TfL Document Manager:** Level 2 LCS code is a required metadata field for all files of geographic significance, such as those relating to physical assets. For all other files, location coding is an optional metadata field to be used where possible.
- **ProjectWise:** Level 2 LCS code plus the Level Code is required for drawings and models of physical assets and also forms part of the drawing name. Further levels are optional metadata for increased precision of location.
- **AMIS:** Level 2 LCS code is required for all physical assets. The location code along with each asset code forms a unique asset reference that allows for the asset to be sited with precision across different systems.

5.2 Levels

When used as metadata in document and asset management systems, the LCS Level 2 Code can be appended by a single character Level Code using an underscore ('_'), as described in the table below (e.g. LT101_1).

	Code	Description
a)	C	Third Floor etc
b)	B	Second Floor
c)	A	First Floor
d)	1	Ground Floor
e)	2	One floor below ground
f)	3	Two floors below ground
g)	4	Three floors below ground etc
h)	Z	Multiple levels
j)	0	Non-Station assets (including track side assets)

6 Definitions and Boundaries

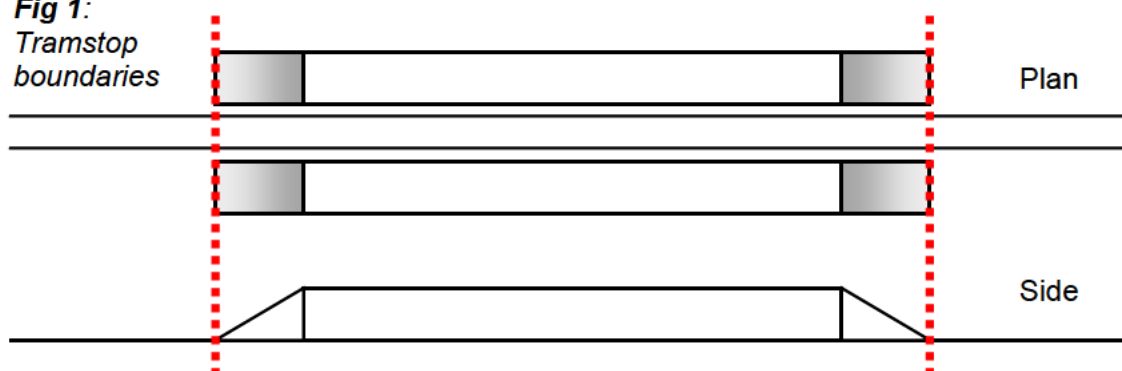
6.1 Tramstops

Tramstops and junctions have **odd** numbered codes; line between tramstops and junctions has **even** numbered codes

At tramstops the location code area is bounded by the bottom of the platform ramp

Fig 1:

*Tramstop
boundaries*



6.2 Junctions

At junctions, the location code area is bounded by the point at which the track turns out and becomes two separate tracks. For interlaced sections with turnouts, it is the point where both rails are clear of the other track, perpendicular to the main running line.

Fig 2: Left
hand
turnout

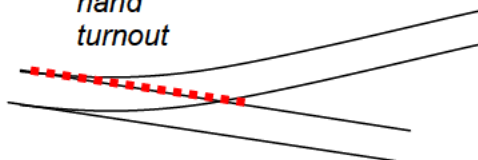
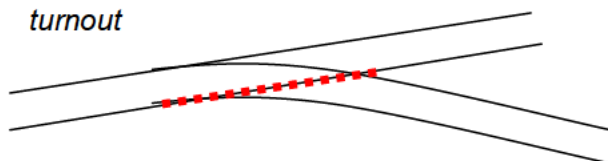


Fig 3: Interlaced
left hand



Fig 4: Right
hand
turnout



Line of
clearance:



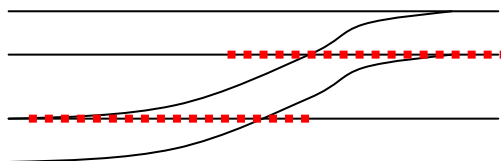
6.3 Crossovers

For track crossovers, the location code area is the track that crosses the 'six foot' gap between the EB and WB running tracks.

Track crossover location codes are defined by the location code for the track section, with the direction (EB, WB, BD etc) replaced by XA.

Where there is more than one crossover in a section, sequential alphabetic letters are appended to the X, increasing in the direction of increasing location code numbers, e.g. LT118XA and LT118XB between tramstops LT117 and LT119.

Fig 4:
Crossover



6.4 Chainage

The chainage is measured to the nearest metre from the system zero point, located in East Croydon Station. It follows the track centreline, from which the offset of assets is also measured.

7 Appendix 1: Location Codes

LCS Code	Description	Abbreviation
LA000	London Tramlink System Wide	
LT100	Route 1: Wimbledon to Reeves Corner	
LT101	Wimbledon Tram Stop	WMB
LT102	Wimbledon - Dundonald Road	WMB-DDR
LT103	Dundonald Road Tram Stop	DDR
LT104	Dundonald Road - Merton Park	DDR-MPK
LT105	Merton Park Tram Stop	MPK
LT106	Merton Park - Morden Road	MPK-MRD
LT107	Morden Road Tram Stop	MRD
LT108	Morden Road - Phipps Bridge	MRD-PBR
LT109	Phipps Bridge Tram Stop	PBR
LT110	Phipps Bridge - Belgrave Walk	PBR-BGW
LT111	Belgrave Walk Tram Stop	BGW
LT112	Belgrave Walk - Mitcham	BGW-MTM
LT113	Mitcham Tram Stop	MTM
LT114	Mitcham - Mitcham Junction	MTM-MTJ
LT115	Mitcham Junction	MTJ
LT116	Mitcham Junction - Beddington Lane	MTJ-BDL
LT117	Beddington Lane Tram Stop	BDL
LT118	Beddington Lane - Therapia Lane	BDL-TPL
LT119	Therapia Lane Tram Stop	TPL
LT120	Therapia Lane - Ampere Way	TPL-AMP
LT121	Ampere Way Tram Stop	AMP
LT122	Ampere Way - Waddon Marsh	AMP-WDM
LT123	Waddon Marsh Tram Stop	WDM
LT124	Waddon Marsh - Wandle Park	WDM-WPK
LT125	Wandle Park Tram Stop	WPK
LT126	Wandle Park - Reeves Corner	WPK-RVC
LT200	Route 2: Reeves Corner to Sandilands Junction	
LT201	Reeves Corner Tram Stop	RVC
LT202	Reeves Corner - Centrale	RVC-CEN
LT203	Centrale Tram Stop	CEN
LT204	Centrale - West Croydon	CEN-WCR
LT205	West Croydon Tram Stop	WCR
LT206	West Croydon - Wellesley Road	WCR-WLR
LT207	Wellesley Road Tram Stop	WLR
LT208	Wellesley Road - East Croydon	WLR-ECR
LT209	East Croydon Tramstop	ECR

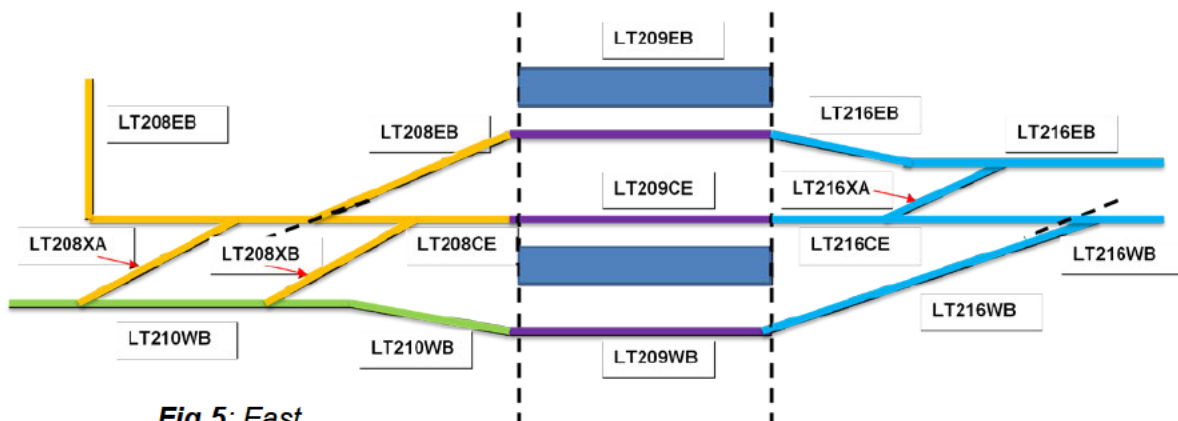
LT210	East Croydon - George Street	ECR-GST
LT211	George Street Tram Stop	GST
LT212	George Street - Church Street	GST-CST
LT213	Church Street Tram Stop	CST
LT214	Church Street - Reeves Corner	CST-RVC
LT215		
LT216	East Croydon - Lebanon Road	ECR-LEB
LT217	Lebanon Road Tram Stop	LEB
LT218	Lebanon Road - Sandilands	LEB-SAN
LT219	Sandilands Tram Stop	SAN
LT220	Sandilands - Sandilands Junction	SAN-SNJ
LT221	<i>Sandilands Junction</i>	SNJ
LT222	<i>Church Street - Centrale</i>	CST-CEN
LT300	<i>Route 3: Sandilands Jctn to Beckenham Jctn</i>	
LT302	Sandilands Junction - Addiscombe	SNJ-ADS
LT303	Addiscombe Tram Stop	ADS
LT304	Addiscombe - Blackhorse Lane	ADS-BHL
LT305	Blackhorse Lane Tram Stop	BHL
LT306	Blackhorse Lane - Woodside	BHL-WDS
LT307	Woodside Tram Stop	WDS
LT308	Woodside - Arena	WDS-ARN
LT309	Arena Tram Stop	ARN
LT310	Arena - Arena Junction	ARN-ARJ
LT311	<i>Arena Junction</i>	ARJ
LT312	Arena Junction - Harrington Road	ARJ-HRD
LT313	Harrington Road Tram Stop	HRD
LT314	Harrington Road - Birkbeck	HRD-BKB
LT315	Birkbeck Tram Stop	BKB
LT316	Birkbeck - Avenue Road	BKB-AVR
LT317	Avenue Road Tram Stop	AVR
LT318	Avenue Road - Beckenham Road	AVR-BCR
LT319	Beckenham Road Tram Stop	BCR
LT320	Beckenham Road - Beckenham Junction	BCR-BCJ
LT321	Beckenham Junction Tram Stop	BCJ
LT322	Arena Junction - Elmers End	ARJ-ELM
LT323	Elmers End Tram Stop	ELM
LT400	<i>Route 4: Sandilands Jctn to New Addington</i>	
LT402	Sandilands Junction - Lloyd Park	SNJ-LPK
LT403	Lloyd Park Tram Stop	LPK
LT404	Lloyd Park - Coombe Lane	LPK-CLN
LT405	Coombe Lane Tram Stop	CLN
LT406	Coombe Lane - Gravel Hill	CLN-GVH

LT407	Gravel Hill Tram Stop	GVH
LT408	Gravel Hill - Addington Village	GVH-ADV
LT409	Addington Village Tram Stop	ADV
LT410	Addington Village - Fieldway	ADV-FLW
LT411	Fieldway Tram Stop	FLW
LT412	Fieldway - King Henry Drive	FLW-KHD
LT413	King Henry Drive Tram Stop	KHD
LT414	King Henry Drive - New Addington	KHD-NAD
LT415	New Addington Tram Stop	NAD
LT000	<i>Depot and Sidings</i>	
LT010	Depot Access Track	
LT011	Depot Track 11	
LT012	Depot Track 12	
LT013	Depot Track 13	
LT014	Depot Track 14	
LT015	Depot Track 15	
LT016	Depot Track 16	
LT017	Depot Track 17	
LT018	Depot Track 18	
LT021	Tramlink Depot	
LT022	Tramlink House	
LT023	Outbuildings	
LT024	Depot Service Track 1	
LT025	Depot Service Track 2	
LT030	Carpark	
LT033	IMC Stores	
LT034	Skip Compound	

8 Appendix 2: Guidance Notes

8.1 East Croydon Tramstop

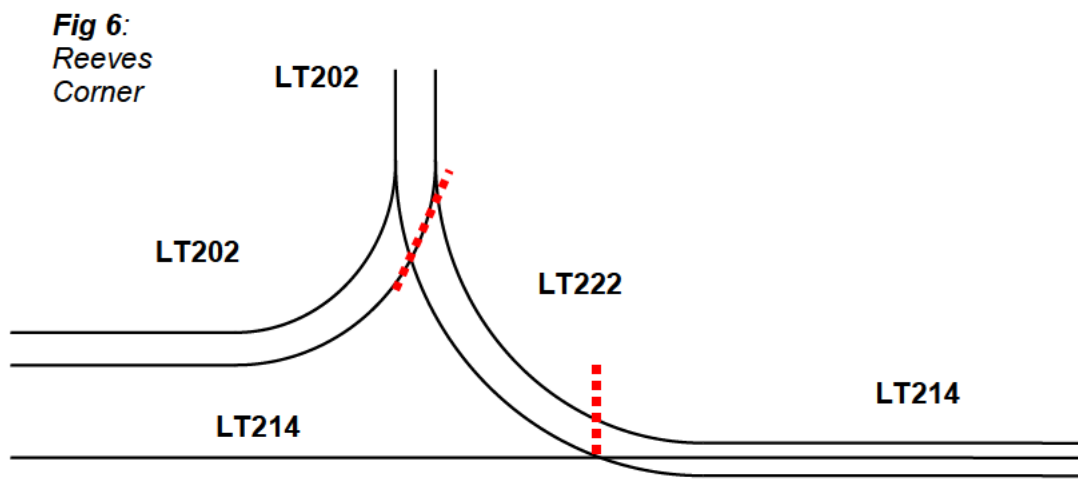
- The middle track of the three at the station is marked Central (CE). The outer tracks are EB and WB respectively.
- The crossovers to and from the middle track at either end of the tramstop are LT208XB west of the station and LT216XA east of the station.
- There is an additional crossover on the western approach to the tramstop with code LT208XA as crossovers take the lowest Level 2 code (LT208) and increment in the direction of increasing Level 2 codes.



**Fig 5: East
Croydon**

8.2 Reeves Corner

- The westbound interlaced track between Church Street and Reeves Corner is LT214.
- The Eastbound track between Reeves Corner and Centrale is LT202.
- The track that is clear of the interlaced section between Church Street and adjoining Reeves Corner to Centrale Eastbound is LT215



**Fig 6:
Reeves
Corner**

8.3 Depot

- The Depot Access Track runs from the turnout at Therapia Lane, through the tramwash and along the Plantroom end of the stabling yard to Depot Entrance West.
- Depot Service Tracks 1 and 2 run through the Plantroom
- All tracks in the Depot are bidirectional