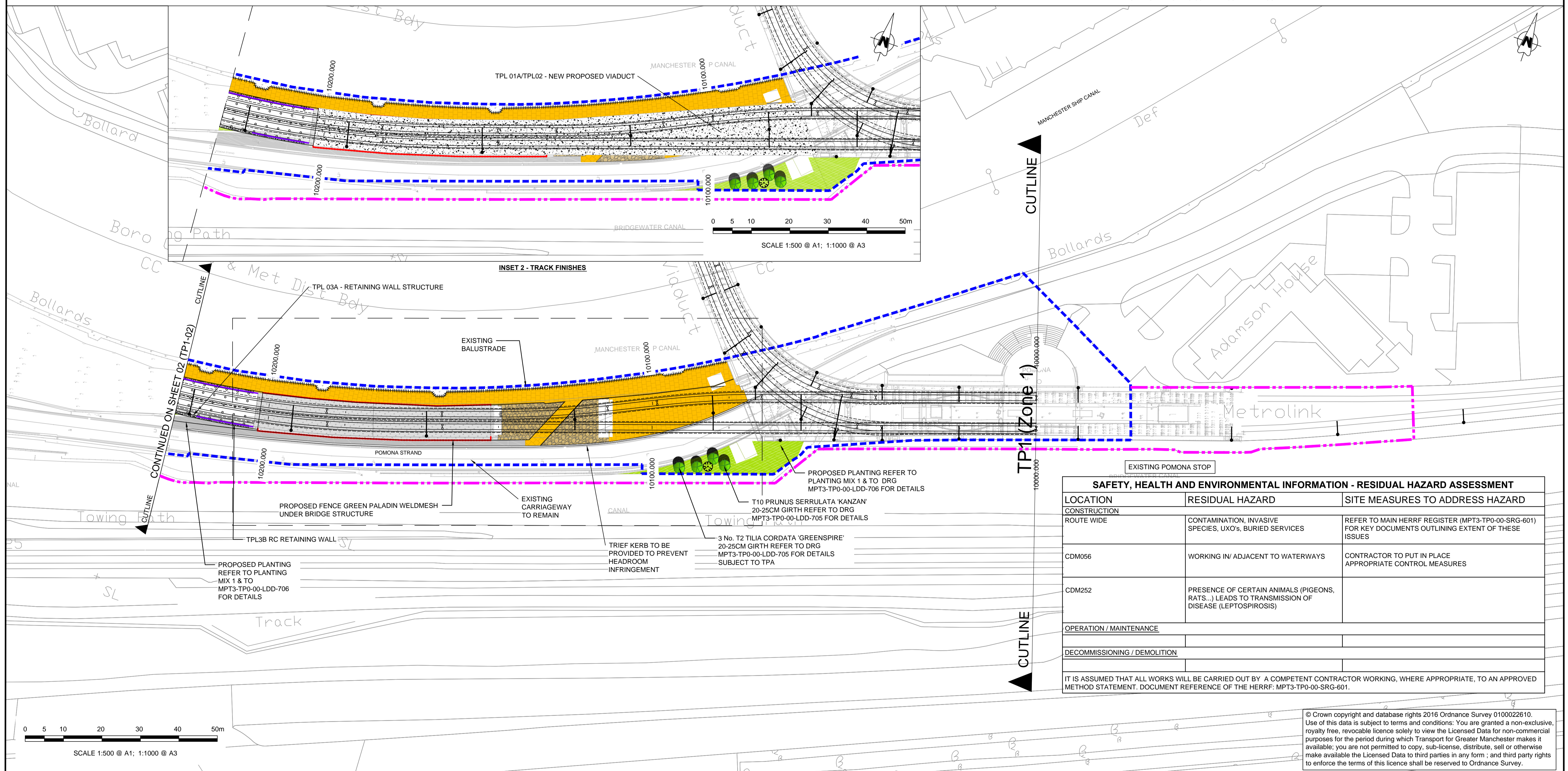


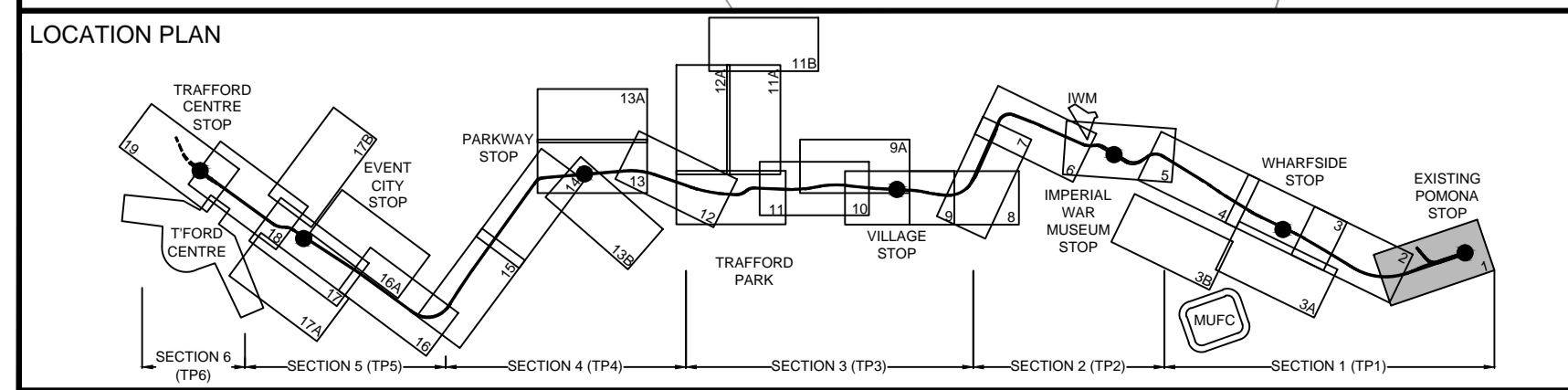
5.0 | APPENDICES

5.0 | Appendix 1: Urban Realm GA Plans

- NOTES:**
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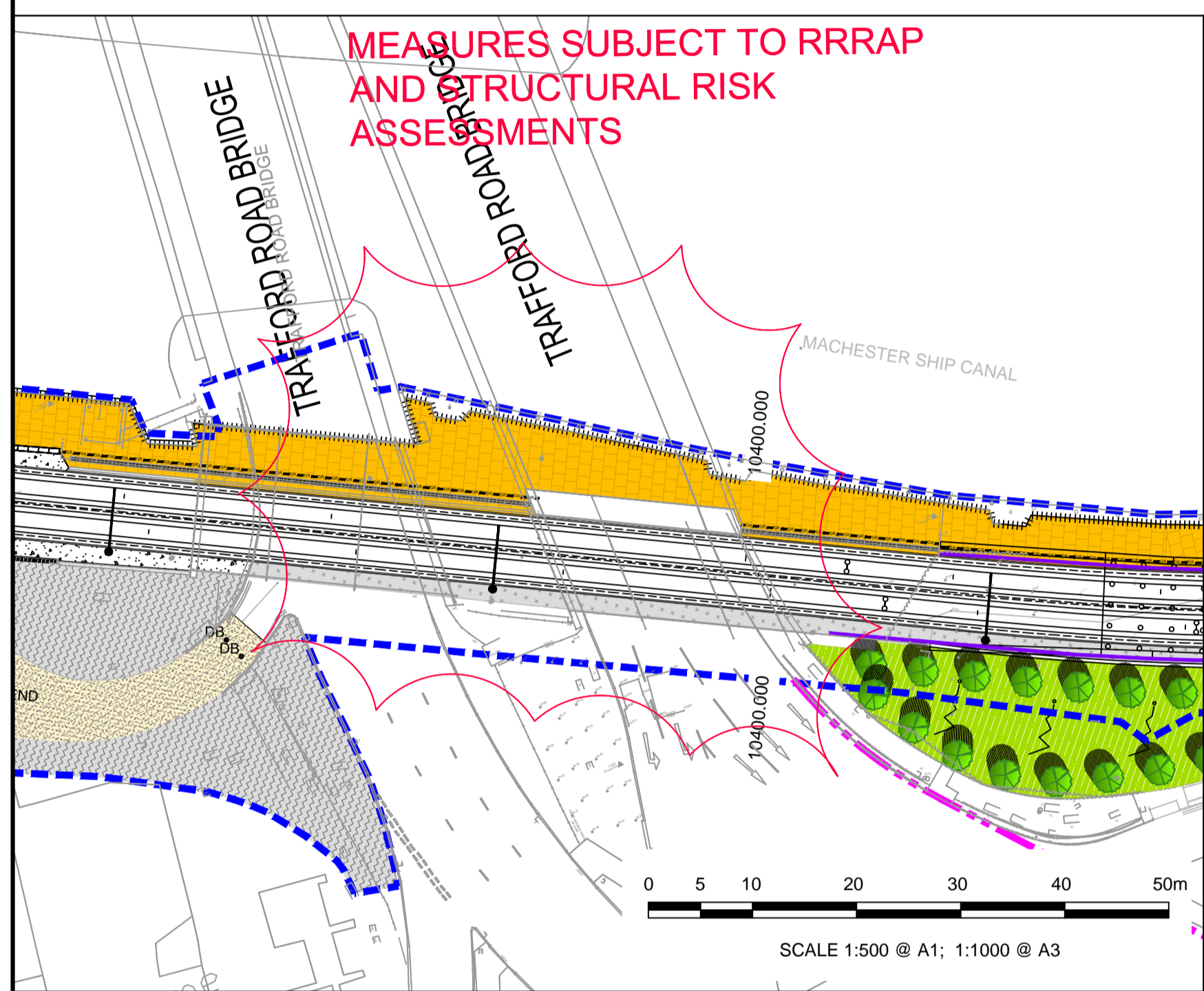
FOR CONSTRUCTION

<p>CLIENT: Transport for Greater Manchester</p> <p>MPT Lobby O'Rourke VolkerRail & Thales</p>	<p>DESIGN: EC</p> <p>CAD: EC</p> <p>CHKD: EOG</p> <p>APPD: ND</p> <p>SCALE: 1:500</p> <p>DATE: 2016-11-22</p>	<p>MANCHESTER METROLINK TRAFFORD PARK LINE</p> <p>TITLE: URBAN REALM & LANDSCAPE GENERAL ARRANGEMENT SHEET 01</p> <p>DRG No: MPT3-TP1-01-LDG-603</p> <p>REV: Q01</p>	<p>Q01 22.11.16 For Construction</p> <p>REV DATE DETAIL</p> <p>EC EOG ND MADE CHKD APPD</p>
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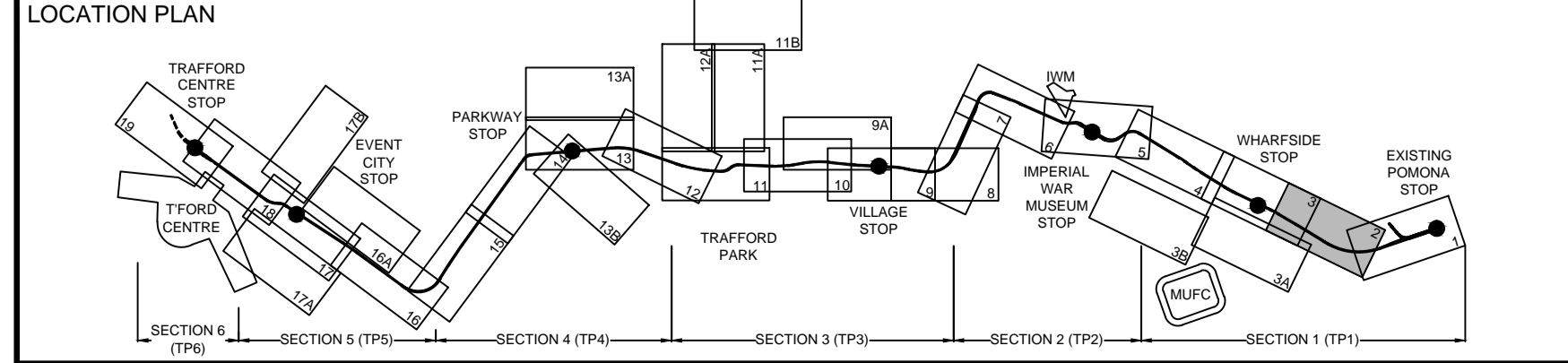
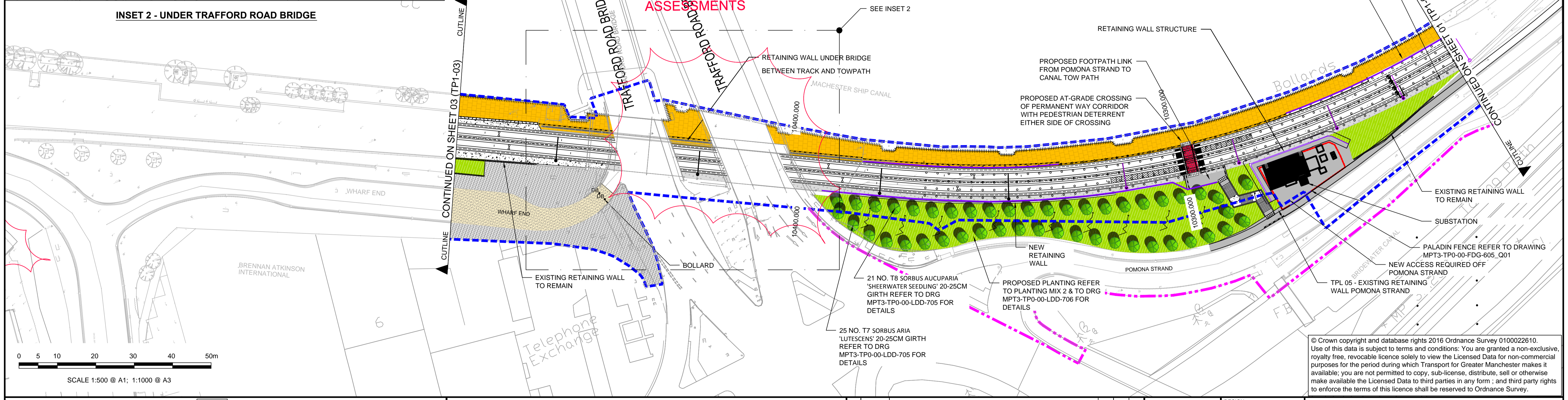
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FOR CONSTRUCTION

CLIENT:	Transport for Greater Manchester	DESIGN:	EC	MANCHESTER METROLINK TRAFFORD PARK LINE TITLE: URBAN REALM & LANDSCAPE GENERAL ARRANGEMENT SHEET 02
		CAD:	EC	
		CHKD:	EOG	
		APPD:	ND	
		SCALE:	1:500	DRG No:
		DATE:	2016-11-22	MPT3-TP1-02-LDG-603
				REV:
				Q01

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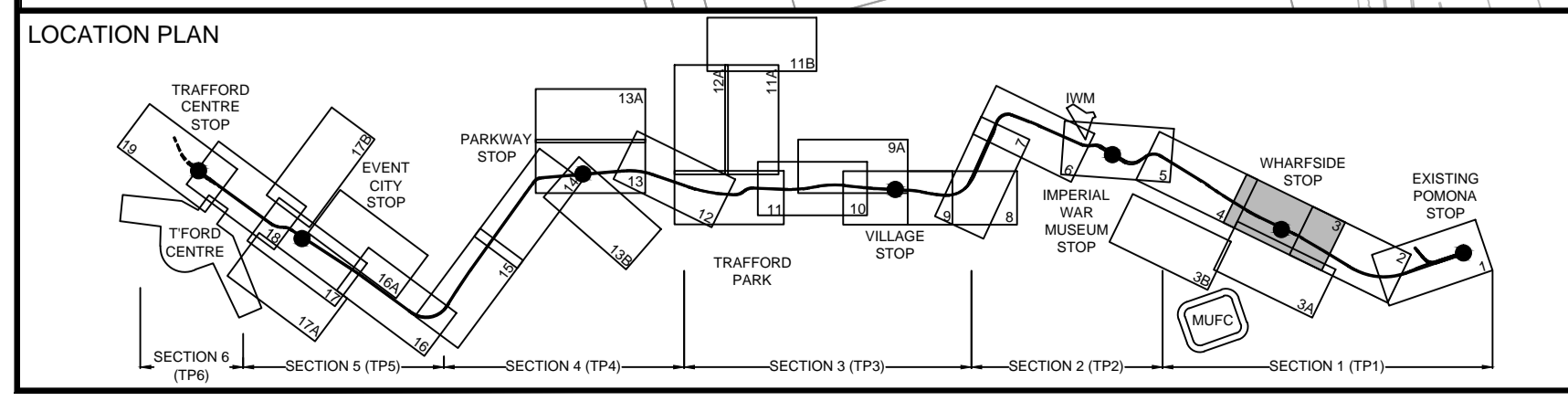
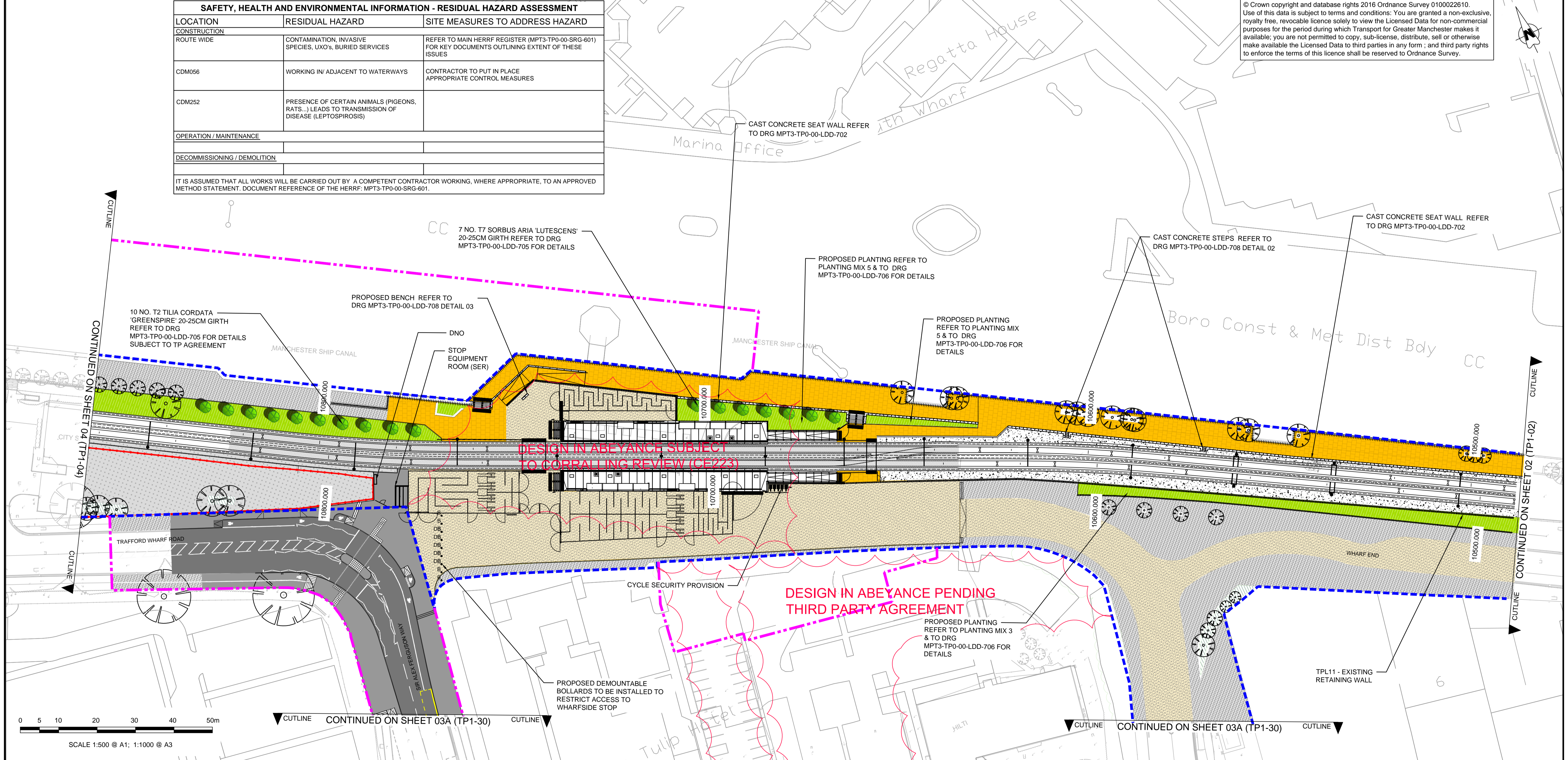
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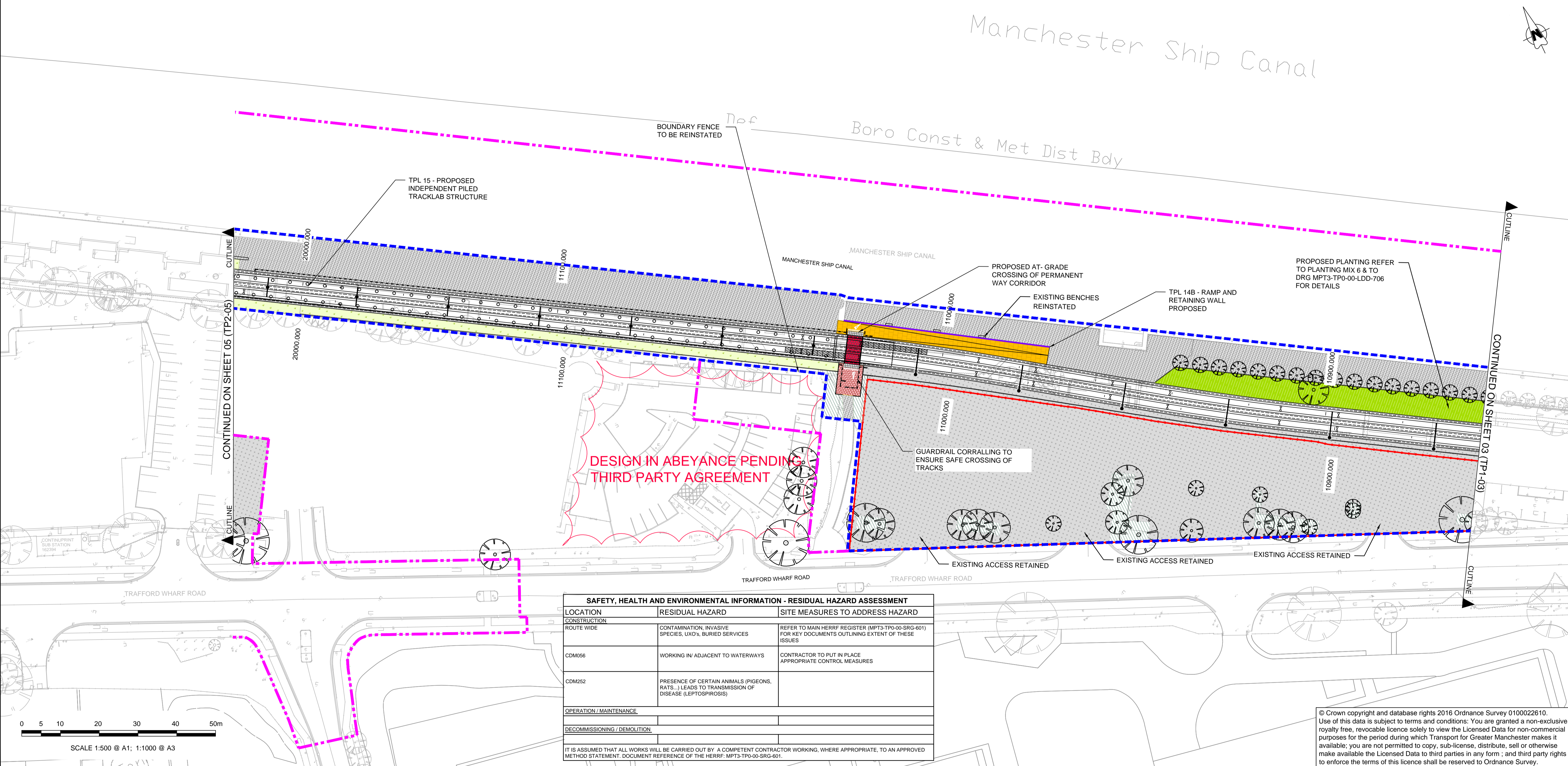
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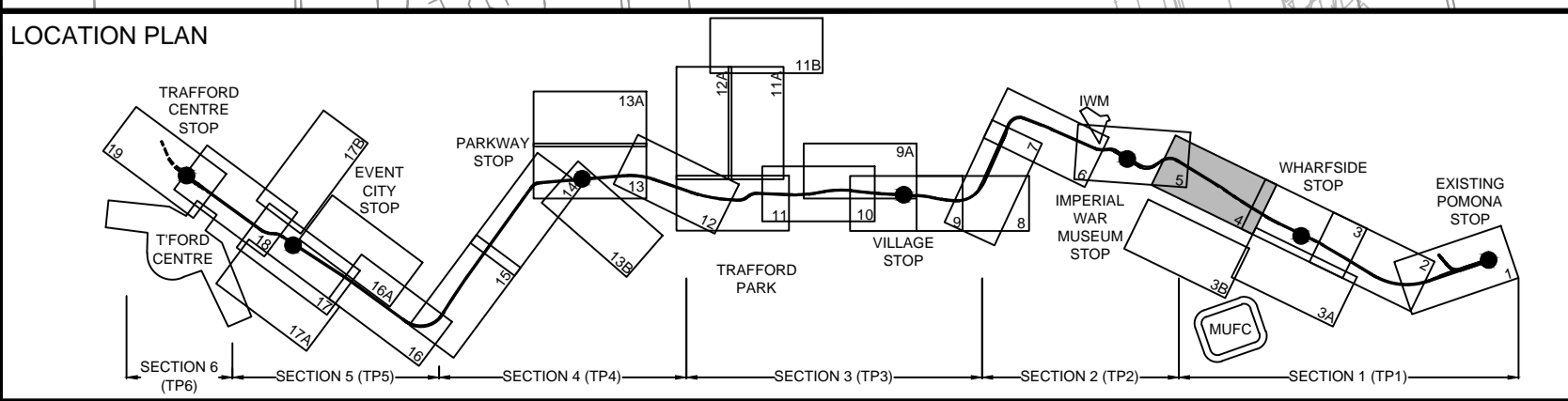
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Q01 22.11.16	For Construction	EC EOG ND		DRG No: MPT3-TP1-03-LDG-603
REV	DATE	DETAIL	MAKE	CHKD
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FOR CONSTRUCTION

Q01	22.11.16	For Construction	EC	EOG	ND
REV	DATE	DETAIL	MADE	CHKD	APPR

CLIENT: Transport for Greater Manchester

DESIGN: EC
 CAD: EC
 CHKD: EOG
 APPD: ND
 SCALE: 1:500
 DATE: 2016-11-22

MANCHESTER METROLINK TRAFFORD PARK LINE

TITLE: URBAN REALM & LANDSCAPE GENERAL ARRANGEMENT SHEET 04

DRG No: MPT3-TP1-04-LDG-603

REV: Q01

DRG Path: C:\working\mpt3-tp1-04-LDG-603 - Sheet 4.dwg User: patrick.hamill Plot time: 19-12-16 @ 10:58am

NOTES:

1. TO BE READ IN CONJUNCTION WITH OTHER RELEVANT GENERAL ARRANGEMENT DRAWINGS. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE STATED.
2. WORKS TO BE CARRIED OUT IN ACCORDANCE WITH THE DESIGN GUIDE REFER TO DRG MPT3-TP0-00-MGD-600.
3. CHAINAGE INDICATED IS RELATIVE TO PERMANENT WAY ALIGNMENT.
4. FOR DETAILS OF NON-HIGHWAY ELEMENTS REFER TO DISCIPLINE-SPECIFIC LAYOUT DRAWINGS AND DETAILS.
5. FOR SHARED SURFACES, TACTILE PAVING, VEHICLE LOADING AND SURFACES IN UNTRAFFICKED AREAS, ALONG WITH PUBLIC SIGNS, SIGNALS AND OLE POLES REFER TO ENGINEERS AND HIGHWAYS DRAWINGS FOR DETAILS

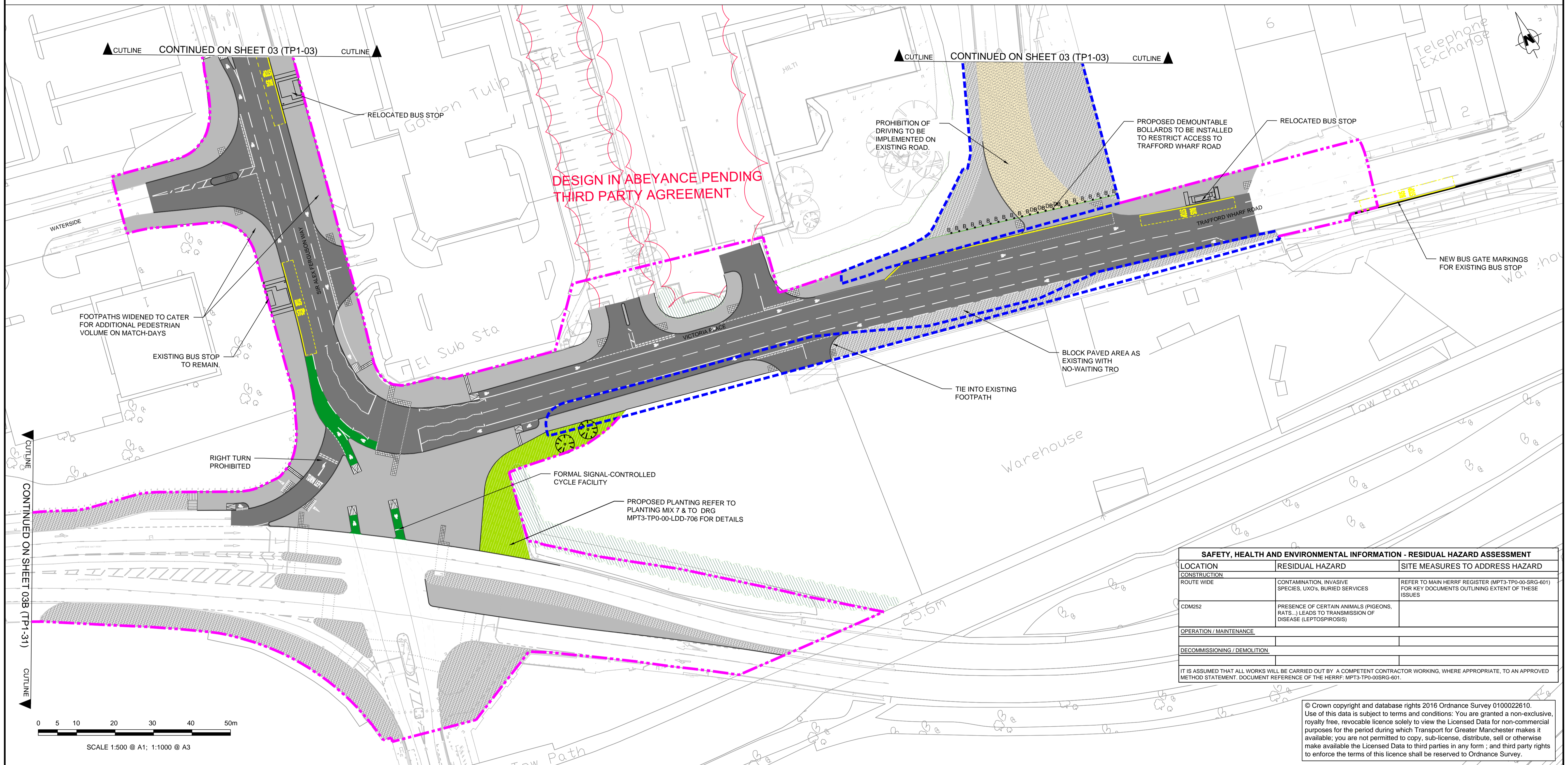
GENERAL ARRANGEMENT KEY:

- PROPOSED CARRIAGEWAY WORKS
- PROPOSED WHITE ROAD MARKINGS
- PROPOSED FLEXIBLE MACADAM - BLACK FOOTWAY / CYCLEWAY.
- PROPOSED FLEXIBLE MACADAM - COLOURED FOOTWAY / CYCLEWAY.
- PROPOSED GREEN SURFACING
- PROPOSED AGGREGATE - MOT TYPE 1
- EXISTING FOOTWAY URBAN REALM RETAINED AS IS / MADE GOOD
- PROPOSED CONCRETE SURFACE
- PROPOSED PCC FLAG PAVING (MARSHALLS METROPOLITAN) SIZE: 600x300 300x300 200x300
- PROPOSED BLOCK PAVING / MAINTENANCE STRIP SIZE: 200 X 100 COLOUR TO MATCH EXISTING
- PROPOSED SCOTTISH ROUNDED COBBLES 150-200MM SET IN CONCRETE FOUNDATION
- PROPOSED REINFORCED GRASS SURFACE REFER TO DRG MPT3-TP0-00-LDD-701 DETAIL 02
- PROPOSED FIXED BOLLARD REFER TO DRG MPT3-TP0-00-LDD-708 DETAIL 01
- PROPOSED DEMOUNTABLE BOLLARD REFER TO DRG MPT3-TP0-00-LDD-708 DETAIL 01
- PROPOSED BENCH REFER TO DRG MPT3-TP0-00-LDD-708 DETAIL 03
- EARTHWORKS GRADIENT BETWEEN 1 in 10 AND 1 in 2.5. REFER TO MODEL FOR SPECIFIC GRADIENT

- PROPOSED PERMANENT WAY / TRAM TRACK RAISED RAIL AND EXPOSED AGGREGATE CONCRETE TO PERMANENT WAY DETAILS
- PROPOSED FLUSH RAIL AND EXPOSED AGGREGATE CONCRETE TO PERMANENT WAY DETAILS
- PROPOSED INFILL PANEL TRACK CROSSING WITH/WITHOUT PROPOSED PEDESTRIAN DETERRENT
- OVERHEAD LINE EQUIPMENT
- PROPOSED KERB LINE REFER TO HIGHWAYS DRAWINGS FOR DETAILS
- PROPOSED PCC TACTILE FLAGS TO CROSSING. REFER TO HIGHWAYS DRAWINGS FOR DETAILS
- PROPOSED PCC TACTILE FLAGS TO CYCLEWAY. REFER TO HIGHWAYS DRAWINGS FOR DETAILS

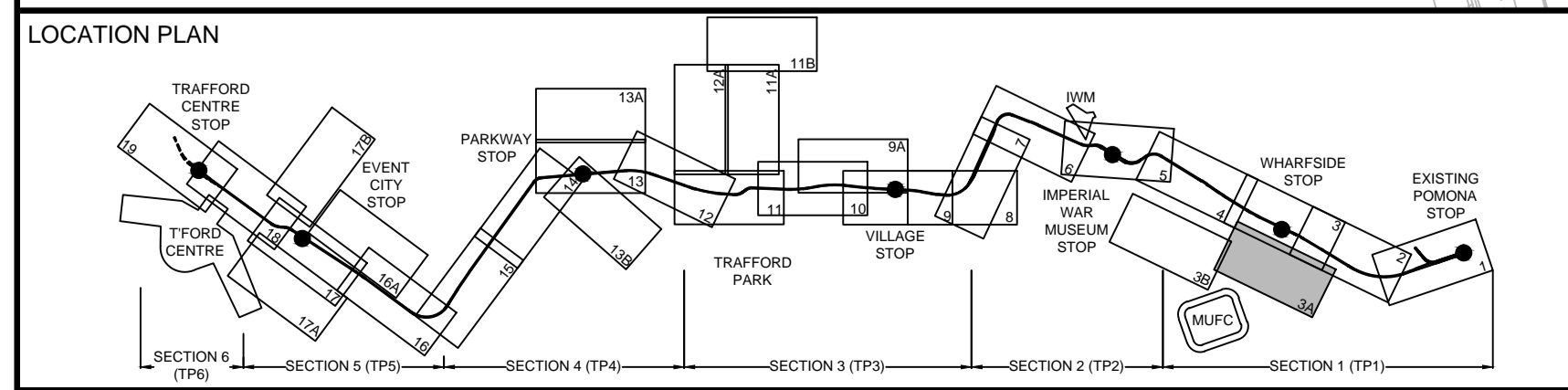
- AMENITY GRASS. GRASS SEEDED AREA. REFER TO DRG MPT3-TP0-00-LDD-706 DETAIL 03
- PROPOSED ORNAMENTAL MIX. REFER TO DRG MPT3-TP0-00-LDD-706 DETAIL 04
- EXISTING SOFT LANDSCAPE RETAINED AS IS / MADE GOOD
- PROPOSED NATIVE HEDGE / POST AND WIRE FENCE REFER TO DRG MPT3-TP0-00-LDD-706 FOR DETAILS
- PROPOSED TREES. SUBJECT TO AGREEMENT WITH TRAFFORD COUNCIL & THIRD PARTIES REFER TO TREE PLANTING DETAILS
- EXISTING TREES RETAINED AND PROTECTED TO BS5837
- PROPOSED BULB PLANTING/REFER TO DRG MPT3-TP0-00-LDD-706
- PROPOSED WOODLAND TREE PLANTING REFER TO DRG MPT3-TP0-00-LDD-706 DETAIL 06

- PROPOSED RETAINING WALL TO ENGINEERS DETAIL
- BOUNDARY TREATMENT. TO BE DEVELOPED AS PER 3RD PARTY AGREEMENTS & TRAFFORD COUNCIL REQUIREMENTS
- PROPOSED PEDESTRIAN GUARDRAIL REFER TO ENGINEERS DETAILS
- PROPOSED POST AND KNEE RAIL REFER TO DRG MPT3-TP0-00-LDD-701 DETAIL 01
- EXISTING PARAPET UNDER REVIEW BY TfGM.
- LIMIT OF DEVIATION (LOD) (THIS ALSO FORMS THE DEEMED PLANNING BOUNDARY WHEN IT IS THE OUTER MOST)
- TEMPORARY LIMIT OF LAND ACQUIRED OR USED (TLLAU) (THIS ALSO FORMS THE DEEMED PLANNING BOUNDARY WHEN IT IS THE OUTER MOST)



SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION - RESIDUAL HAZARD ASSESSMENT		
LOCATION	RESIDUAL HAZARD	SITE MEASURES TO ADDRESS HAZARD
CONSTRUCTION		
ROUTE WIDE	CONTAMINATION, INVASIVE SPECIES, UXO's, BURIED SERVICES	REFER TO MAIN HERRF REGISTER (MPT3-TP0-00-SRG-601) FOR KEY DOCUMENTS OUTLINING EXTENT OF THESE ISSUES
CDM252	PRESENCE OF CERTAIN ANIMALS (PIGEONS, RATS...) LEADS TO TRANSMISSION OF DISEASE (LEPTOSPIROSIS)	
OPERATION / MAINTENANCE		
DECOMMISSIONING / DEMOLITION		
IT IS ASSUMED THAT ALL WORKS WILL BE CARRIED OUT BY A COMPETENT CONTRACTOR WORKING, WHERE APPROPRIATE, TO AN APPROVED METHOD STATEMENT. DOCUMENT REFERENCE OF THE HERRF: MPT3-TP0-00-SRG-601.		

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FOR CONSTRUCTION

Q01	22.11.16	For Construction	EC	EOG	ND
REV	DATE	DETAIL	MADE	CHKD	APPD

CLIENT:	Transport for Greater Manchester	DESIGN:	EC	MANCHESTER METROLINK TRAFFORD PARK LINE
		CAD:	EC	TITLE:
		CHKD:	EOG	URBAN REALM & LANDSCAPE GENERAL ARRANGEMENT SHEET 3A
		APPD:	ND	DRG No:
		SCALE:	1:500	MPT3-TP1-30-LDG-603
		DATE:	2016-11-22	REV:
				Q01

DRG Path: C:\working\mpt3\tp1-30-LDG-603-Sheet 3A.dwg User: patrick.hamill Plot time: 18-12-16 @ 11:00am

NOTES:

1. TO BE READ IN CONJUNCTION WITH OTHER RELEVANT GENERAL ARRANGEMENT DRAWINGS. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE STATED.
2. WORKS TO BE CARRIED OUT IN ACCORDANCE WITH THE DESIGN GUIDE REFER TO DRG MPT3-TP0-00-MGD-600.
3. CHAINAGE INDICATED IS RELATIVE TO PERMANENT WAY ALIGNMENT.
4. FOR DETAILS OF NON-HIGHWAY ELEMENTS REFER TO DISCIPLINE-SPECIFIC LAYOUT DRAWINGS AND DETAILS.
5. FOR SHARED SURFACES, TACTILE PAVING, VEHICLE LOADING AND SURFACES IN UNTRAFFICKED AREAS, ALONG WITH PUBLIC SIGNS, SIGNALS AND OLE POLES REFER TO ENGINEERS AND HIGHWAYS DRAWINGS FOR DETAILS

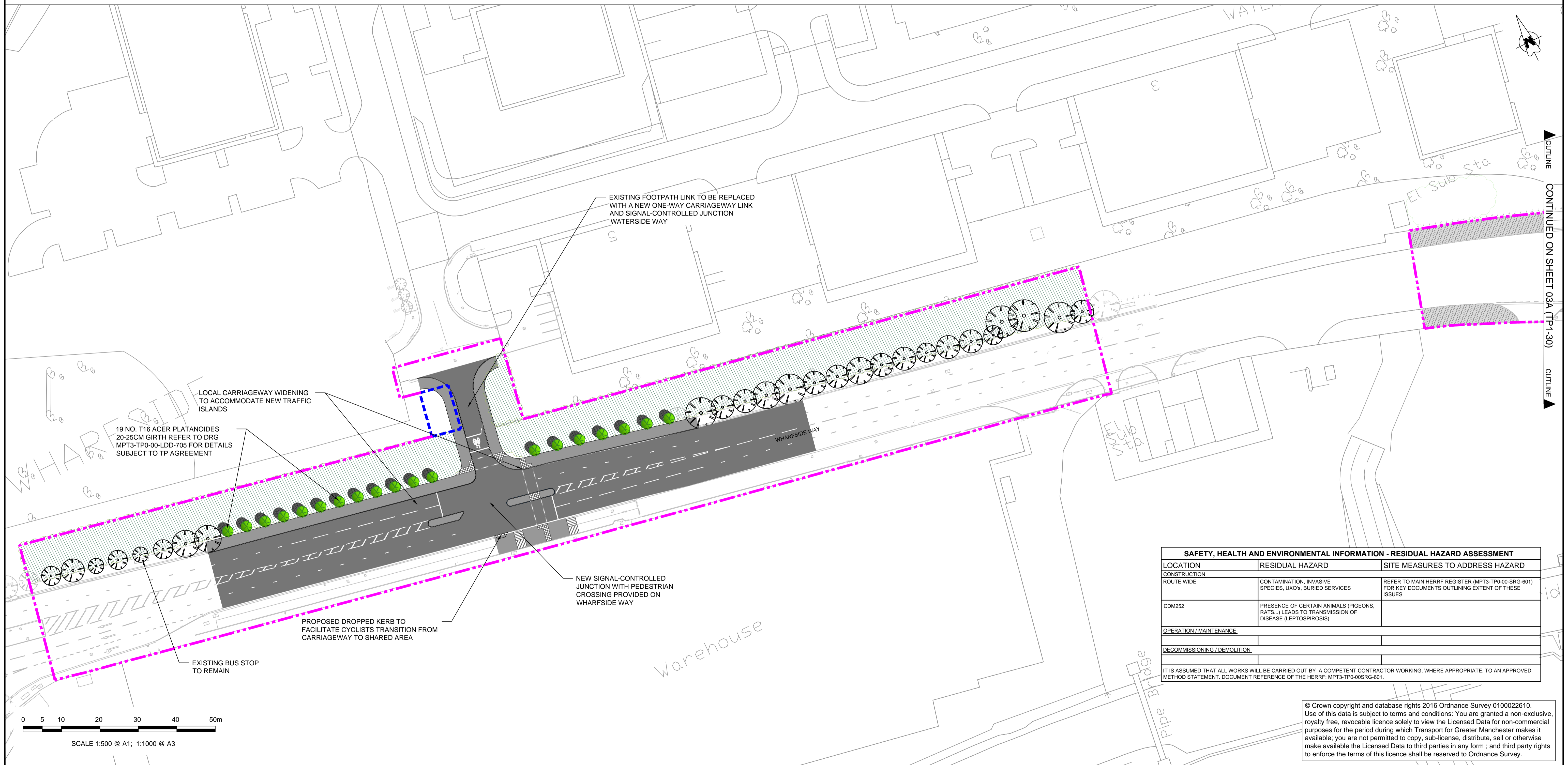
GENERAL ARRANGEMENT KEY:

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- PROPOSED FLEXIBLE MACADAM - BLACK FOOTWAY / CYCLEWAY.
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- PROPOSED REINFORCED GRASS SURFACE REFER TO DRG MPT3-TP0-00-LDD-701 DETAIL 02
- PROPOSED FIXED BOLLARD REFER TO DRG MPT3-TP0-00-LDD-708 DETAIL 01
- PROPOSED DEMOUNTABLE BOLLARD REFER TO DRG MPT3-TP0-00-LDD-708 DETAIL 01
- PROPOSED BENCH REFER TO DRG MPT3-TP0-00-LDD-708 DETAIL 03
- EARTHWORKS GRADIENT BETWEEN 1 in 10 AND 1 in 2.5. REFER TO MODEL FOR SPECIFIC GRADIENT

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- OVERHEAD LINE EQUIPMENT
- PROPOSED KERB LINE REFER TO HIGHWAYS DRAWINGS FOR DETAILS
- PROPOSED PCC TACTILE FLAGS TO CROSSING. REFER TO HIGHWAYS DRAWINGS FOR DETAILS
- PROPOSED PCC TACTILE FLAGS TO CYCLEWAY. REFER TO HIGHWAYS DRAWINGS FOR DETAILS

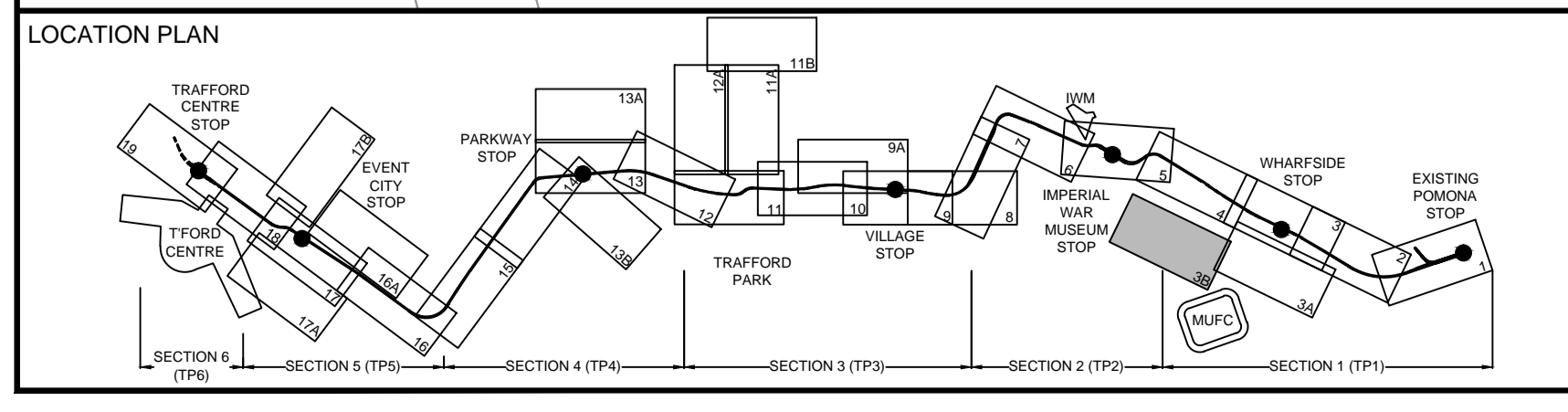
- AMENITY GRASS, GRASS SEEDED AREA. REFER TO DRG MPT3-TP0-00-LDD-706 DETAIL 03
- PROPOSED ORNAMENTAL MIX. REFER TO DRG MPT3-TP0-00-LDD-706 DETAIL 04
- EXISTING SOFT LANDSCAPE RETAINED AS IS / MADE GOOD
- PROPOSED NATIVE HEDGE / POST AND WIRE FENCE REFER TO DRG MPT3-TP0-00-LDD-706 FOR DETAILS
- PROPOSED TREES, SUBJECT TO AGREEMENT WITH TRAFFORD COUNCIL & THIRD PARTIES REFER TO TREE PLANTING DETAILS
- EXISTING TREES RETAINED AND PROTECTED TO BS5837
- PROPOSED BULB PLANTING/REFER TO DRG MPT3-TP0-00-LDD-706
- PROPOSED WOODLAND TREE PLANTING REFER TO DRG MPT3-TP0-00-LDD-706 DETAIL 06

- PROPOSED RETAINING WALL TO ENGINEERS DETAIL
- BOUNDARY TREATMENT. TO BE DEVELOPED AS PER 3RD PARTY AGREEMENTS & TRAFFORD COUNCIL REQUIREMENTS
- PROPOSED PEDESTRIAN GUARDRAIL REFER TO ENGINEERS DETAILS
- PROPOSED POST AND KNEE RAIL REFER TO DRG MPT3-TP0-00-LDD-701 DETAIL 01
- EXISTING PARAPET UNDER REVIEW BY TIGM.
- LIMIT OF DEVIATION (LOD) (THIS ALSO FORMS THE DEEMED PLANNING BOUNDARY WHEN IT IS THE OUTER MOST)
- TEMPORARY LIMIT OF LAND ACQUIRED OR USED (TLLAU) (THIS ALSO FORMS THE DEEMED PLANNING BOUNDARY WHEN IT IS THE OUTER MOST)



SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION - RESIDUAL HAZARD ASSESSMENT		
LOCATION	RESIDUAL HAZARD	SITE MEASURES TO ADDRESS HAZARD
CONSTRUCTION ROUTE WIDE	CONTAMINATION, INVASIVE SPECIES, UXO's, BURIED SERVICES	REFER TO MAIN HERRF REGISTER (MPT3-TP0-00-SRG-601) FOR KEY DOCUMENTS OUTLINING EXTENT OF THESE ISSUES
CDM252	PRESENCE OF CERTAIN ANIMALS (PIGEONS, RATS...) LEADS TO TRANSMISSION OF DISEASE (LEPTOSPIROSIS)	
OPERATION / MAINTENANCE		
DECOMMISSIONING / DEMOLITION		
IT IS ASSUMED THAT ALL WORKS WILL BE CARRIED OUT BY A COMPETENT CONTRACTOR WORKING, WHERE APPROPRIATE, TO AN APPROVED METHOD STATEMENT. DOCUMENT REFERENCE OF THE HERRF: MPT3-TP0-00-SRG-601.		

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FOR CONSTRUCTION

Q01	22.11.16	For Construction	EC	EOG
REV	DATE	DETAIL	MADE	CHKD

CLIENT: Transport for Greater Manchester	DESIGN: EC	MANCHESTER METROLINK TRAFFORD PARK LINE
	CAD: EC	TITLE: URBAN REALM & LANDSCAPE GENERAL ARRANGEMENT SHEET 3B
	CHKD: EOG	DRG No: MPT3-TP1-31-LDG-603
	APPD: ND	REV: Q01
	SCALE: 1:500	
	DATE: 2016-11-22	

NOTES:

1. TO BE READ IN CONJUNCTION WITH OTHER RELEVANT GENERAL ARRANGEMENT DRAWINGS. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE STATED.
2. WORKS TO BE CARRIED OUT IN ACCORDANCE WITH THE DESIGN GUIDE REFER TO DRG MPT3-TP0-00-MGD-600.
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GENERAL ARRANGEMENT KEY:

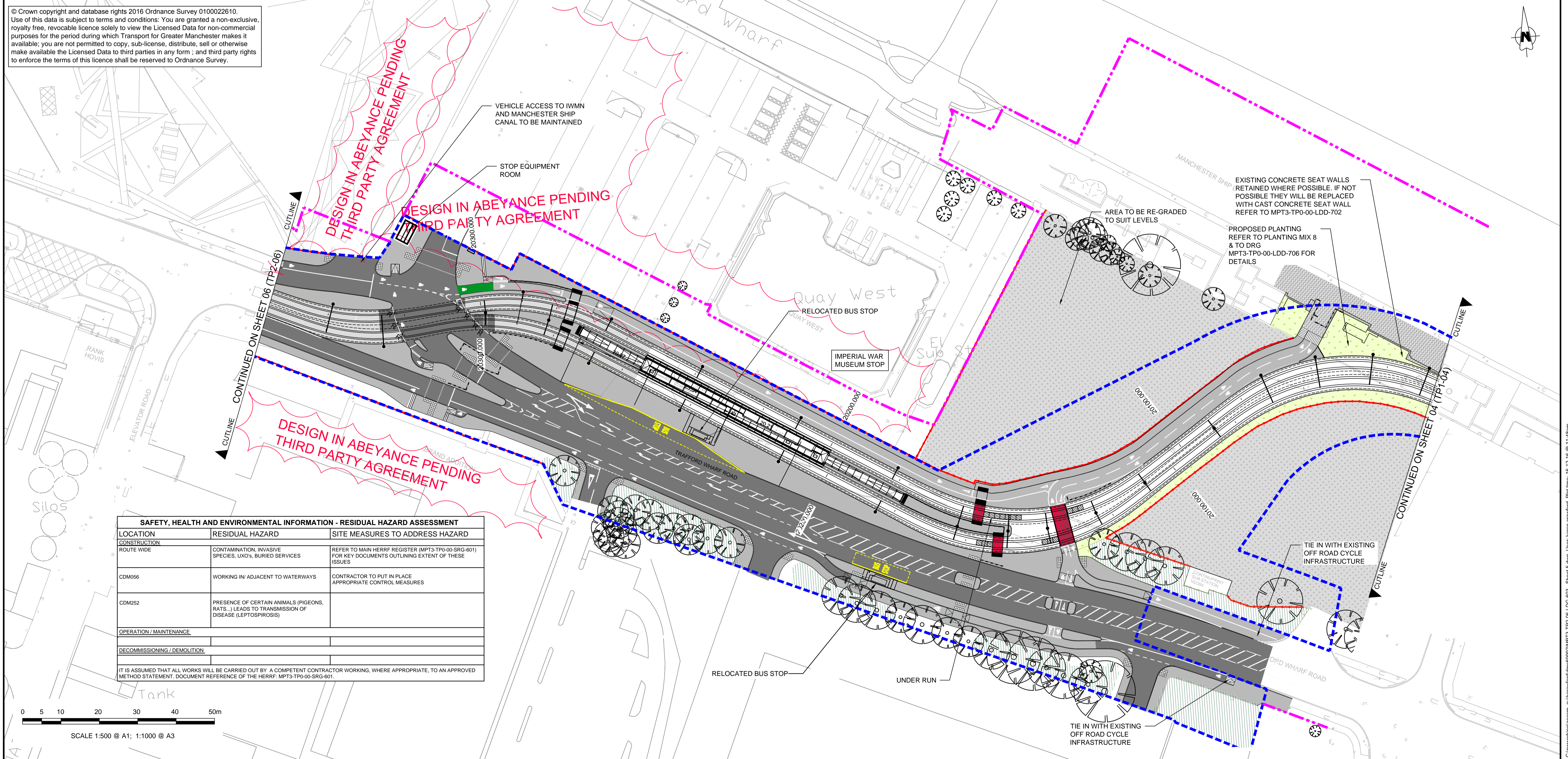
- PROPOSED CARRIAGEWAY WORKS
- PROPOSED WHITE ROAD MARKINGS
- PROPOSED FLEXIBLE MACADAM - BLACK FOOTWAY / CYCLEWAY.
- PROPOSED FLEXIBLE MACADAM - COLOURED FOOTWAY / CYCLEWAY.
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- PROPOSED FIXED BOLLARD REFER TO DRG MPT3-TP0-00-LDD-708 DETAIL 01
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- EARTHWORKS GRADIENT BETWEEN 1 in 10 AND 1 in 2.5. REFER TO MODEL FOR SPECIFIC GRADIENT

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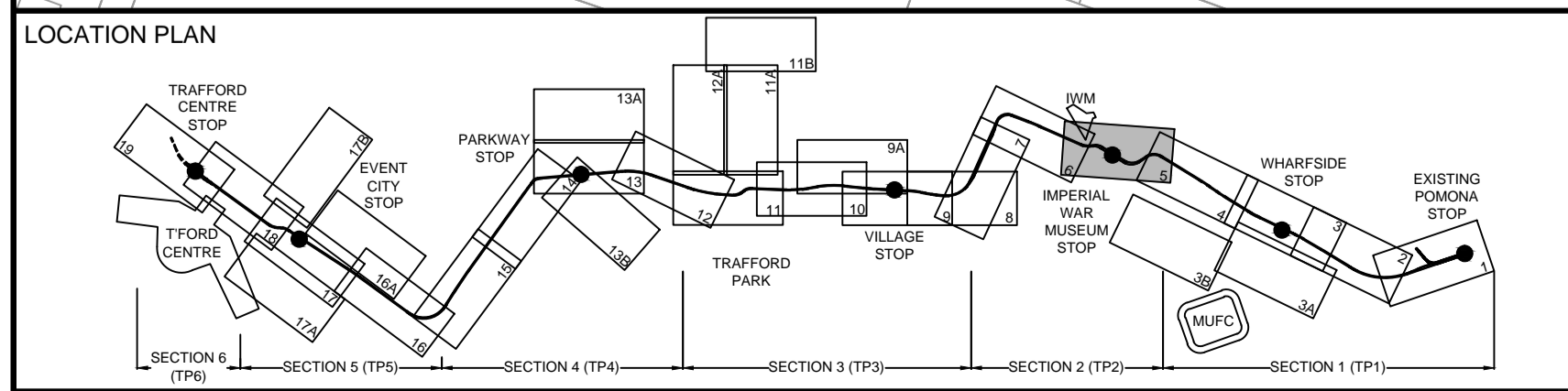
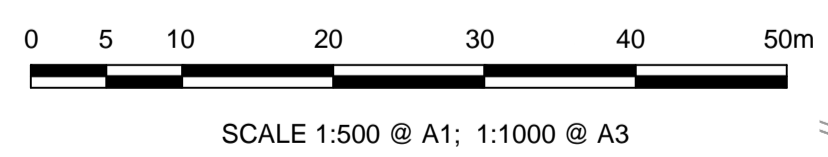
- AMENITY GRASS. GRASS SEEDED AREA. REFER TO DRG MPT3-TP0-00-LDD-706 DETAIL 03
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- EXISTING SOFT LANDSCAPE RETAINED AS IS / MADE GOOD
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- PROPOSED TREES. SUBJECT TO AGREEMENT WITH TRAFFORD COUNCIL & THIRD PARTIES REFER TO TREE PLANTING DETAILS
- EXISTING TREES RETAINED AND PROTECTED TO BS5837
- PROPOSED BULB PLANTING/REFER TO DRG MPT3-TP0-00-LDD-706
- PROPOSED WOODLAND TREE PLANTING REFER TO DRG MPT3-TP0-00-LDD-706 DETAIL 06

- PROPOSED RETAINING WALL TO ENGINEERS DETAIL
- BOUNDARY TREATMENT. TO BE DEVELOPED AS PER 3RD PARTY AGREEMENTS & TRAFFORD COUNCIL REQUIREMENTS
- PROPOSED PEDESTRIAN GUARDRAIL REFER TO ENGINEERS DETAILS
- PROPOSED POST AND KNEE RAIL REFER TO DRG MPT3-TP0-00-LDD-701 DETAIL 01
- EXISTING PARAPET UNDER REVIEW BY TTGM.
- LIMIT OF DEVIATION (LOD) (THIS ALSO FORMS THE DEEMED PLANNING BOUNDARY WHEN IT IS THE OUTER MOST)
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SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION - RESIDUAL HAZARD ASSESSMENT		
LOCATION	RESIDUAL HAZARD	SITE MEASURES TO ADDRESS HAZARD
CONSTRUCTION ROUTE WIDE	CONTAMINATION, INVASIVE SPECIES, UXO's, BURIED SERVICES	REFER TO MAIN HERRF REGISTER (MPT3-TP0-00-SRG-601) FOR KEY DOCUMENTS OUTLINING EXTENT OF THESE ISSUES
CDM056	WORKING IN/ ADJACENT TO WATERWAYS	CONTRACTOR TO PUT IN PLACE APPROPRIATE CONTROL MEASURES
CDM252	PRESENCE OF CERTAIN ANIMALS (PIGEONS, RATS...) LEADS TO TRANSMISSION OF DISEASE (LEPTOSPIROSIS)	
OPERATION / MAINTENANCE		
DECOMMISSIONING / DEMOLITION		
IT IS ASSUMED THAT ALL WORKS WILL BE CARRIED OUT BY A COMPETENT CONTRACTOR WORKING, WHERE APPROPRIATE, TO AN APPROVED METHOD STATEMENT. DOCUMENT REFERENCE OF THE HERRF: MPT3-TP0-00-SRG-601.		



FOR CONSTRUCTION

			MANCHESTER METROLINK TRAFFORD PARK LINE
			URBAN REALM & LANDSCAPE GENERAL ARRANGEMENT SHEET 05
Q01 22.11.16 For Construction REV DATE	EC EOG ND MADE CHECK APPD	DESIGN: EC CAD: EC CHKD: EOG APPD: ND SCALE: 1:500 DATE: 2016-11-22	DRG No: MPT3-TP2-05-LDG-603 REV: Q01

C:\working\mpt3-tp2-05-LDG-603 - Sheet 05.dwg User: karen.crawford Plot time: 16-12-16 @ 11:48am

NOTES:

1. TO BE READ IN CONJUNCTION WITH OTHER RELEVANT GENERAL ARRANGEMENT DRAWINGS. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE STATED.
2. WORKS TO BE CARRIED OUT IN ACCORDANCE WITH THE DESIGN GUIDE REFER TO DRG MPT3-TP0-00-MGD-600.
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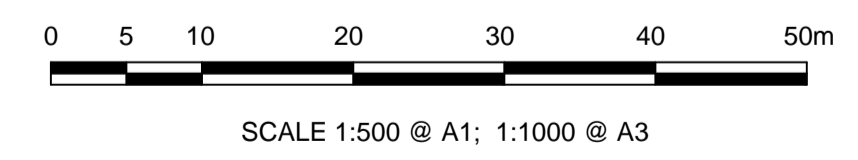
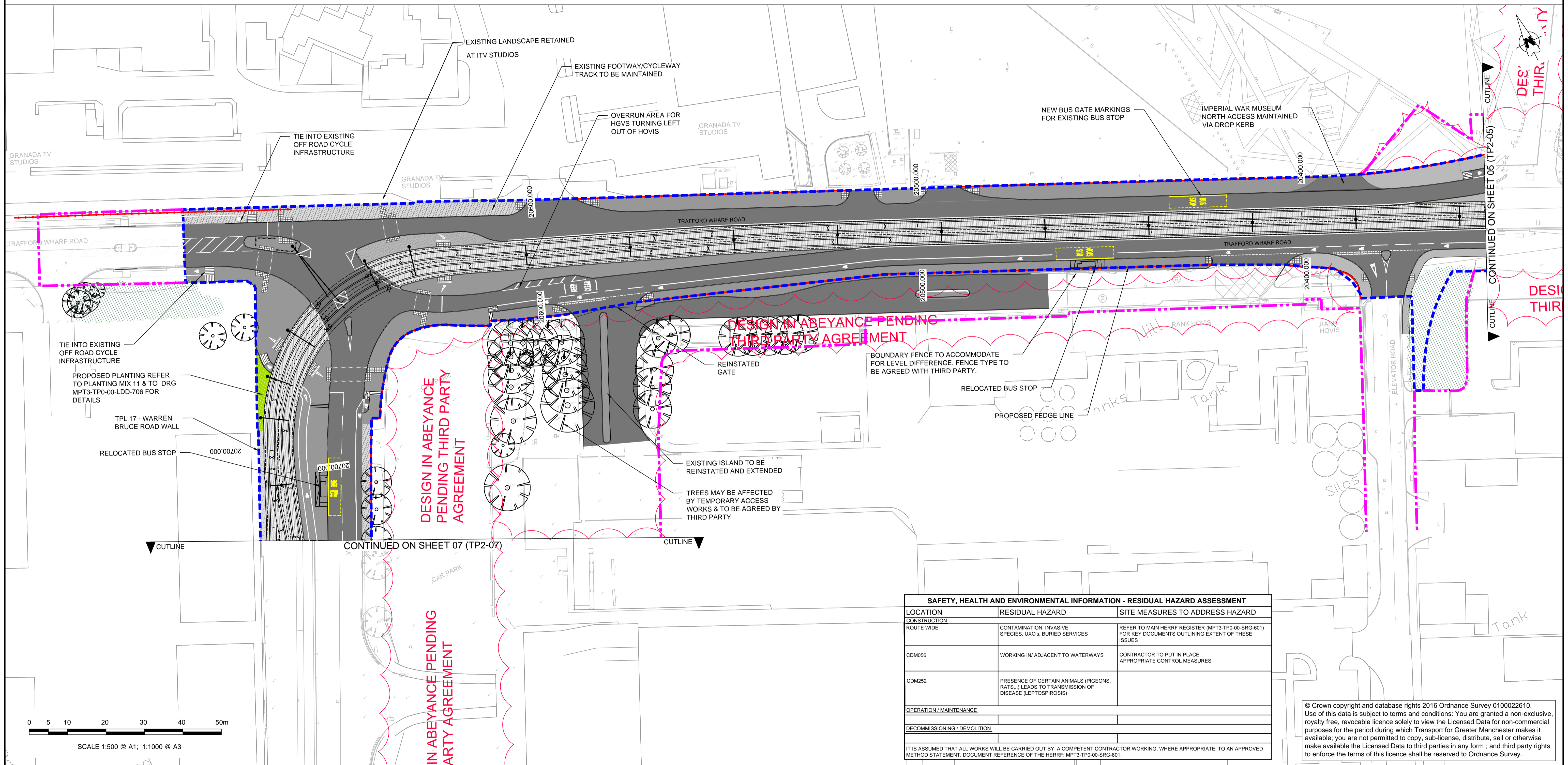
GENERAL ARRANGEMENT KEY:

- PROPOSED CARRIAGEWAY WORKS
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- PROPOSED FLEXIBLE MACADAM - BLACK FOOTWAY / CYCLEWAY.
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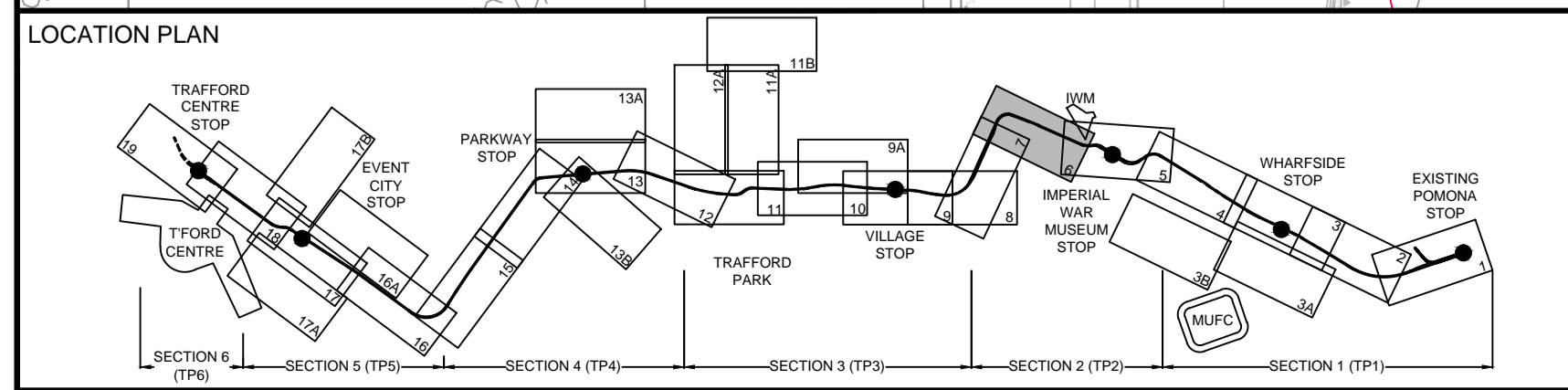
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- EXISTING PARAPET UNDER REVIEW BY TGM.
- LIMIT OF DEVIATION (LOD) (THIS ALSO FORMS THE DEEMED PLANNING BOUNDARY WHEN IT IS THE OUTER MOST)
- TEMPORARY LIMIT OF LAND ACQUIRED OR USED (TLLAU) (THIS ALSO FORMS THE DEEMED PLANNING BOUNDARY WHEN IT IS THE OUTER MOST)



SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION - RESIDUAL HAZARD ASSESSMENT		
LOCATION	RESIDUAL HAZARD	SITE MEASURES TO ADDRESS HAZARD
CONSTRUCTION		
ROUTE WIDE	CONTAMINATION, INVASIVE SPECIES, UXO's, BURIED SERVICES	REFER TO MAIN HERRF REGISTER (MPT3-TP0-00-SRG-601) FOR KEY DOCUMENTS OUTLINING EXTENT OF THESE ISSUES
CDM056	WORKING IN/ ADJACENT TO WATERWAYS	CONTRACTOR TO PUT IN PLACE APPROPRIATE CONTROL MEASURES
CDM252	PRESENCE OF CERTAIN ANIMALS (PIGEONS, RATS,) LEADS TO TRANSMISSION OF DISEASE (LEPTOSPIROSIS)	
OPERATION / MAINTENANCE		
DECOMMISSIONING / DEMOLITION		
IT IS ASSUMED THAT ALL WORKS WILL BE CARRIED OUT BY A COMPETENT CONTRACTOR WORKING, WHERE APPROPRIATE, TO AN APPROVED METHOD STATEMENT. DOCUMENT REFERENCE OF THE HERRF: MPT3-TP0-00-SRG-601.		

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FOR CONSTRUCTION

Q01 22.11.16	For Construction	EC	EOG	ND
REV	DATE	DETAIL	MADE	CHKD

CLIENT: 	DESIGN: EC CAD: EC CHKD: EOG APPD: ND SCALE: 1:500 DATE: 2016-11-22	MANCHESTER METROLINK TRAFFORD PARK LINE TITLE: URBAN REALM & LANDSCAPE GENERAL ARRANGEMENT SHEET 06 DRG No: MPT3-TP2-06-LDG-603 REV: Q01
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NOTES:

1. TO BE READ IN CONJUNCTION WITH OTHER RELEVANT GENERAL ARRANGEMENT DRAWINGS. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE STATED.
2. WORKS TO BE CARRIED OUT IN ACCORDANCE WITH THE DESIGN GUIDE REFER TO DRG MPT3-TP0-00-MGD-600.
3. CHAINAGE INDICATED IS RELATIVE TO PERMANENT WAY ALIGNMENT.
4. FOR DETAILS OF NON-HIGHWAY ELEMENTS REFER TO DISCIPLINE-SPECIFIC LAYOUT DRAWINGS AND DETAILS.
5. FOR SHARED SURFACES, TACTILE PAVING, VEHICLE LOADING AND SURFACES IN UNTRAFFICKED AREAS, ALONG WITH PUBLIC SIGNS, SIGNALS AND OLE POLES REFER TO ENGINEERS AND HIGHWAYS DRAWINGS FOR DETAILS

GENERAL ARRANGEMENT KEY:

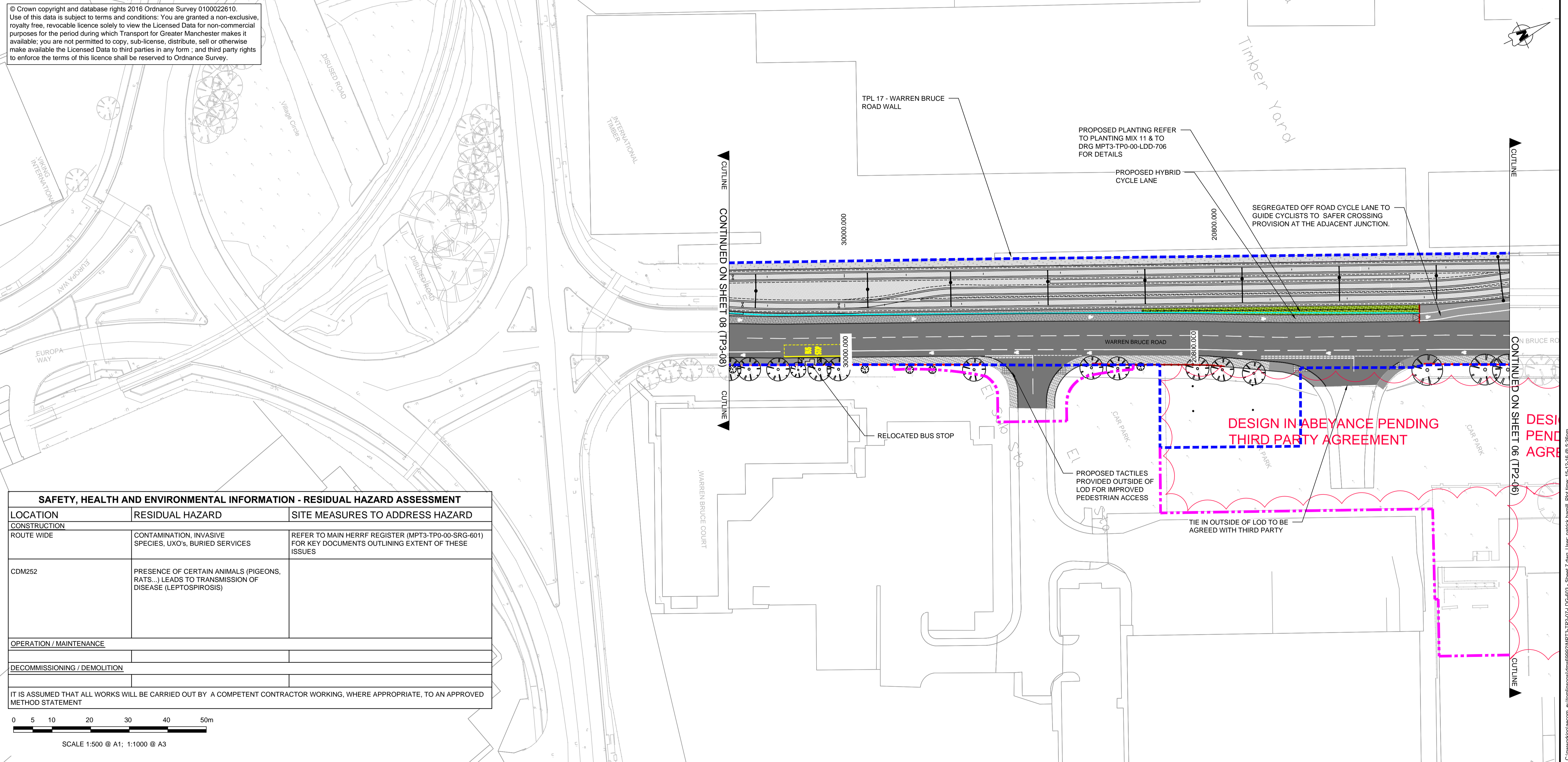
- PROPOSED CARRIAGEWAY WORKS
- PROPOSED WHITE ROAD MARKINGS
- PROPOSED FLEXIBLE MACADAM - BLACK FOOTWAY / CYCLEWAY.
- PROPOSED FLEXIBLE MACADAM - COLOURED FOOTWAY / CYCLEWAY.
- PROPOSED GREEN SURFACING
- PROPOSED AGGREGATE - MOT TYPE 1
- EXISTING FOOTWAY URBAN REALM RETAINED AS IS / MADE GOOD
- PROPOSED CONCRETE SURFACE
- PROPOSED PCC FLAG PAVING (MARSHALLS METROPOLITAN) SIZE: 600x300 300x300 200x300
- PROPOSED BLOCK PAVING / MAINTENANCE STRIP SIZE: 200 X 100 COLOUR TO MATCH EXISTING
- PROPOSED SCOTTISH ROUNDED COBBLES 150-200MM SET IN CONCRETE FOUNDATION
- PROPOSED REINFORCED GRASS SURFACE REFER TO DRG MPT3-TP0-00-LDD-701 DETAIL 02
- PROPOSED FIXED BOLLARD REFER TO DRG MPT3-TP0-00-LDD-708 DETAIL 01
- PROPOSED DEMOUNTABLE BOLLARD REFER TO DRG MPT3-TP0-00-LDD-708 DETAIL 01
- PROPOSED BENCH REFER TO DRG MPT3-TP0-00-LDD-708 DETAIL 03
- EARTHWORKS GRADIENT BETWEEN 1 in 10 AND 1 in 2.5. REFER TO MODEL FOR SPECIFIC GRADIENT

- PROPOSED PERMANENT WAY / TRAM TRACK RAISED RAIL AND EXPOSED AGGREGATE CONCRETE TO PERMANENT WAY DETAILS
- PROPOSED FLUSH RAIL AND EXPOSED AGGREGATE CONCRETE TO PERMANENT WAY DETAILS
- PROPOSED INFILL PANEL TRACK CROSSING WITH/WITHOUT PROPOSED PEDESTRIAN DETERRENT
- OVERHEAD LINE EQUIPMENT
- PROPOSED KERB LINE REFER TO HIGHWAYS DRAWINGS FOR DETAILS
- PROPOSED PCC TACTILE FLAGS TO CROSSING. REFER TO HIGHWAYS DRAWINGS FOR DETAILS
- PROPOSED PCC TACTILE FLAGS TO CYCLEWAY. REFER TO HIGHWAYS DRAWINGS FOR DETAILS

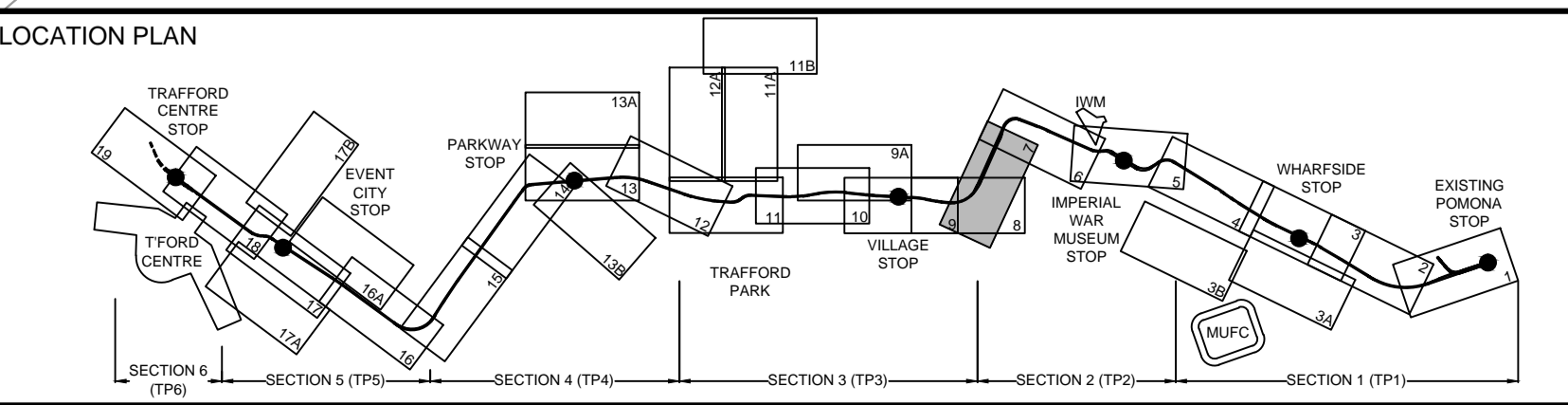
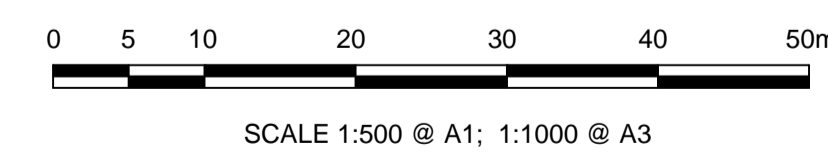
- AMENITY GRASS. GRASS SEEDED AREA. REFER TO DRG MPT3-TP0-00-LDD-706 DETAIL 03
- PROPOSED ORNAMENTAL MIX. REFER TO DRG MPT3-TP0-00-LDD-706 DETAIL 04
- EXISTING SOFT LANDSCAPE RETAINED AS IS / MADE GOOD
- PROPOSED NATIVE HEDGE / POST AND WIRE FENCE REFER TO DRG MPT3-TP0-00-LDD-706 FOR DETAILS
- PROPOSED TREES. SUBJECT TO AGREEMENT WITH TRAFFORD COUNCIL & THIRD PARTIES REFER TO TREE PLANTING DETAILS
- EXISTING TREES RETAINED AND PROTECTED TO BS5837
- PROPOSED BULB PLANTING/REFER TO DRG MPT3-TP0-00-LDD-706
- PROPOSED WOODLAND TREE PLANTING REFER TO DRG MPT3-TP0-00-LDD-706 DETAIL 06

- PROPOSED RETAINING WALL TO ENGINEERS DETAIL
- BOUNDARY TREATMENT. TO BE DEVELOPED AS PER 3RD PARTY AGREEMENTS & TRAFFORD COUNCIL REQUIREMENTS
- PROPOSED PEDESTRIAN GUARDRAIL REFER TO ENGINEERS DETAILS
- PROPOSED POST AND KNEE RAIL REFER TO DRG MPT3-TP0-00-LDD-701 DETAIL 01
- EXISTING PARAPET UNDER REVIEW BY TIGM.
- LIMIT OF DEVIATION (LOD) (THIS ALSO FORMS THE DEEMED PLANNING BOUNDARY WHEN IT IS THE OUTER MOST)
- TEMPORARY LIMIT OF LAND ACQUIRED OR USED (TLLAU) (THIS ALSO FORMS THE DEEMED PLANNING BOUNDARY WHEN IT IS THE OUTER MOST)

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SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION - RESIDUAL HAZARD ASSESSMENT		
LOCATION	RESIDUAL HAZARD	SITE MEASURES TO ADDRESS HAZARD
CONSTRUCTION ROUTE WIDE	CONTAMINATION, INVASIVE SPECIES, UXO's, BURIED SERVICES	REFER TO MAIN HERRF REGISTER (MPT3-TP0-00-SRG-601) FOR KEY DOCUMENTS OUTLINING EXTENT OF THESE ISSUES
CDM252	PRESENCE OF CERTAIN ANIMALS (PIGEONS, RATS, ...) LEADS TO TRANSMISSION OF DISEASE (LEPTOSPIROSIS)	
OPERATION / MAINTENANCE		
DECOMMISSIONING / DEMOLITION		
IT IS ASSUMED THAT ALL WORKS WILL BE CARRIED OUT BY A COMPETENT CONTRACTOR WORKING, WHERE APPROPRIATE, TO AN APPROVED METHOD STATEMENT		



FOR CONSTRUCTION

CLIENT:	Transport for Greater Manchester
DESIGN:	EC
CAD:	EC
CHKD:	EOG
APPD:	ND
SCALE:	1:500
DATE:	2016-11-22

MANCHESTER METROLINK
TRAFFORD PARK LINE

TITLE:
URBAN REALM & LANDSCAPE
GENERAL ARRANGEMENT
SHEET 07

DRG No: MPT3-TP2-07-LDG-603

REV: Q01

NOTES:

1. TO BE READ IN CONJUNCTION WITH OTHER RELEVANT GENERAL ARRANGEMENT DRAWINGS. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE STATED.
2. WORKS TO BE CARRIED OUT IN ACCORDANCE WITH THE DESIGN GUIDE REFER TO DRG MPT3-TP0-00-MGD-600.
3. CHAINAGE INDICATED IS RELATIVE TO PERMANENT WAY ALIGNMENT.
4. FOR DETAILS OF NON-HIGHWAY ELEMENTS REFER TO DISCIPLINE-SPECIFIC LAYOUT DRAWINGS AND DETAILS.
5. FOR SHARED SURFACES, TACTILE PAVING, VEHICLE LOADING AND SURFACES IN UNTRAFFICATED AREAS, ALONG WITH PUBLIC SIGNS, SIGNALS AND OLE POLES REFER TO ENGINEERS AND HIGHWAYS DRAWINGS FOR DETAILS

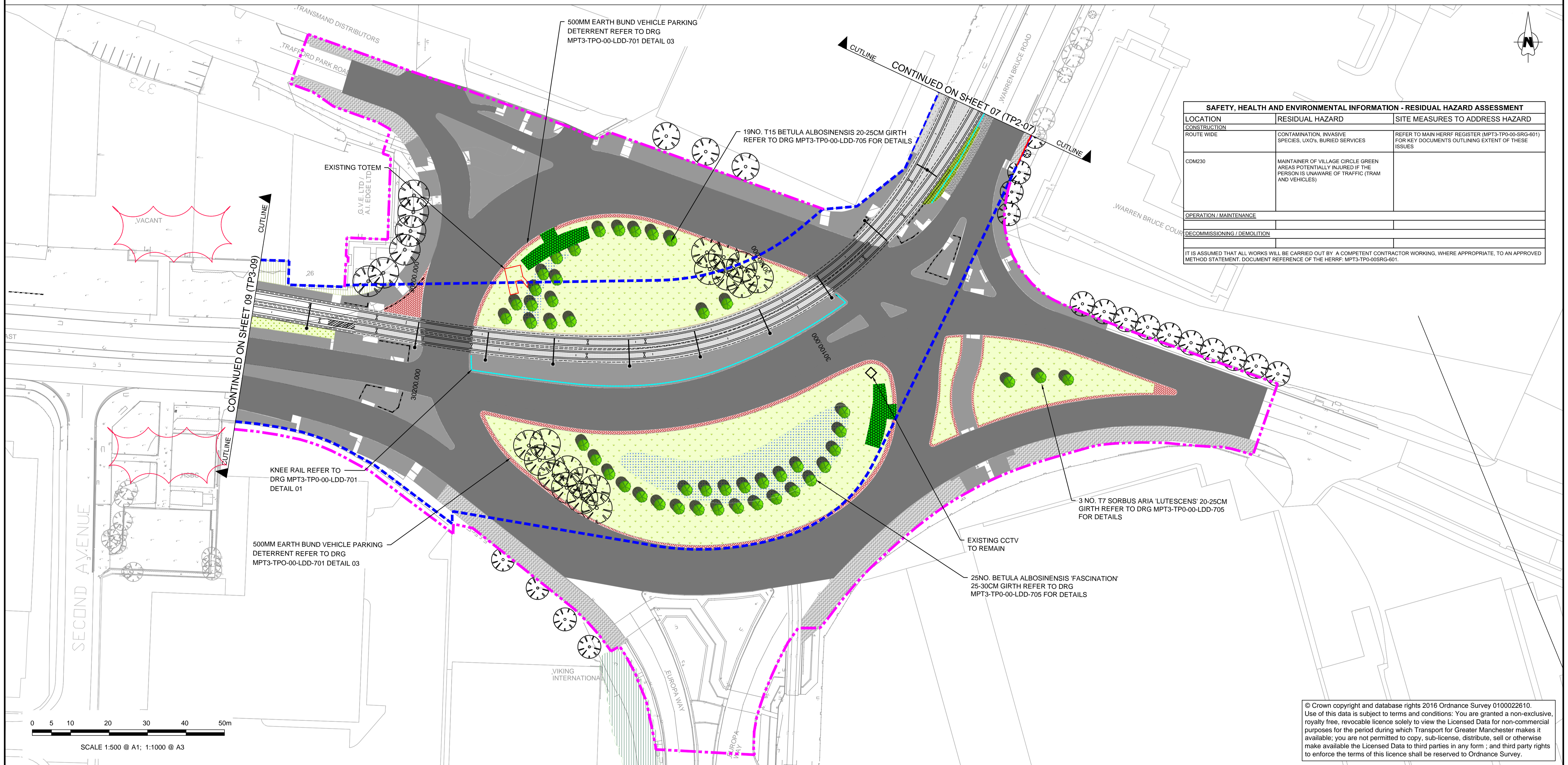
GENERAL ARRANGEMENT KEY:

- PROPOSED CARRIAGEWAY WORKS
- PROPOSED WHITE ROAD MARKINGS
- PROPOSED FLEXIBLE MACADAM - BLACK FOOTWAY / CYCLEWAY.
- PROPOSED FLEXIBLE MACADAM - COLOURED FOOTWAY / CYCLEWAY.
- PROPOSED GREEN SURFACING
- PROPOSED AGGREGATE - MOT TYPE 1
- EXISTING FOOTWAY URBAN REALM RETAINED AS IS / MADE GOOD
- PROPOSED CONCRETE SURFACE
- PROPOSED PCC FLAG PAVING (MARSHALLS METROPOLITAN) SIZE: 600x300 300x300 200x300
- PROPOSED BLOCK PAVING / MAINTENANCE STRIP SIZE: 200 X 100 COLOUR TO MATCH EXISTING
- PROPOSED SCOTTISH ROUNDED COBBLES 150-200MM SET IN CONCRETE FOUNDATION
- PROPOSED REINFORCED GRASS SURFACE REFER TO DRG MPT3-TP0-00-LDD-701 DETAIL 02
- PROPOSED FIXED BOLLARD REFER TO DRG MPT3-TP0-00-LDD-708 DETAIL 01
- PROPOSED DEMOUNTABLE BOLLARD REFER TO DRG MPT3-TP0-00-LDD-708 DETAIL 01
- PROPOSED BENCH REFER TO DRG MPT3-TP0-00-LDD-708 DETAIL 03
- EARTHWORKS GRADIENT BETWEEN 1 in 10 AND 1 in 2.5. REFER TO MODEL FOR SPECIFIC GRADIENT

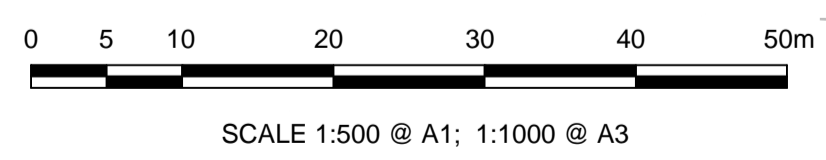
- PROPOSED PERMANENT WAY / TRAM TRACK RAISED RAIL AND EXPOSED AGGREGATE CONCRETE TO PERMANENT WAY DETAILS
- PROPOSED FLUSH RAIL AND EXPOSED AGGREGATE CONCRETE TO PERMANENT WAY DETAILS
- PROPOSED INFILL PANEL TRACK CROSSING WITH/WITHOUT PROPOSED PEDESTRIAN DETERRENT
- OVERHEAD LINE EQUIPMENT
- PROPOSED KERB LINE REFER TO HIGHWAYS DRAWINGS FOR DETAILS
- PROPOSED PCC TACTILE FLAGS TO CROSSING. REFER TO HIGHWAYS DRAWINGS FOR DETAILS
- PROPOSED PCC TACTILE FLAGS TO CYCLEWAY. REFER TO HIGHWAYS DRAWINGS FOR DETAILS

- AMENITY GRASS. GRASS SEEDED AREA. REFER TO DRG MPT3-TP0-00-LDD-706 DETAIL 03
- PROPOSED ORNAMENTAL MIX. REFER TO DRG MPT3-TP0-00-LDD-706 DETAIL 04
- EXISTING SOFT LANDSCAPE RETAINED AS IS / MADE GOOD
- PROPOSED NATIVE HEDGE / POST AND WIRE FENCE REFER TO DRG MPT3-TP0-00-LDD-706 FOR DETAILS
- PROPOSED TREES. SUBJECT TO AGREEMENT WITH TRAFFORD COUNCIL & THIRD PARTIES REFER TO TREE PLANTING DETAILS
- EXISTING TREES RETAINED AND PROTECTED TO BS5837
- PROPOSED BULB PLANTING/REFER TO DRG MPT3-TP0-00-LDD-706
- PROPOSED WOODLAND TREE PLANTING REFER TO DRG MPT3-TP0-00-LDD-706 DETAIL 06

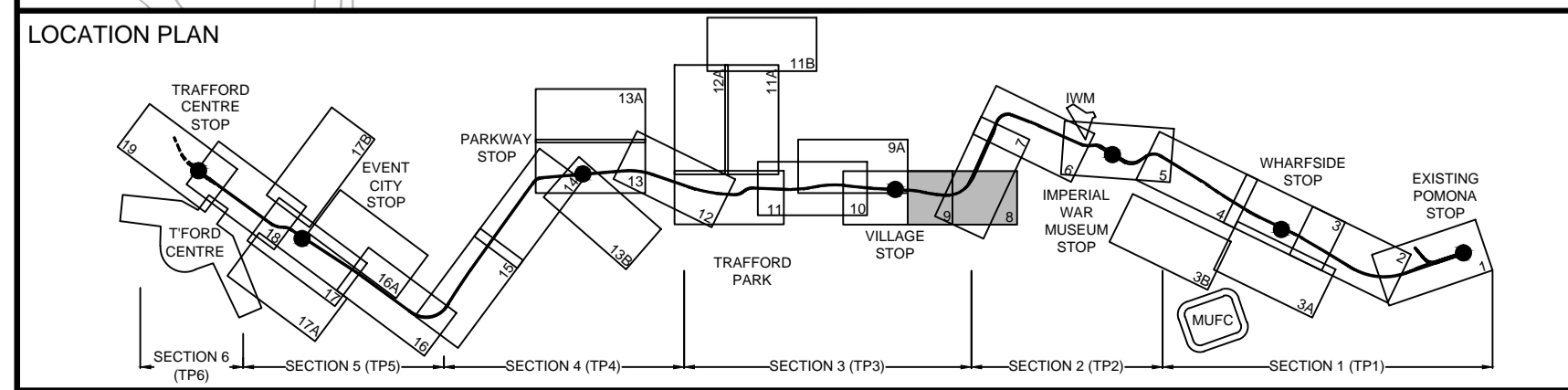
- PROPOSED RETAINING WALL TO ENGINEERS DETAIL
- BOUNDARY TREATMENT. TO BE DEVELOPED AS PER 3RD PARTY AGREEMENTS & TRAFFORD COUNCIL REQUIREMENTS
- PROPOSED PEDESTRIAN GUARDRAIL REFER TO ENGINEERS DETAILS
- PROPOSED POST AND KNEE RAIL REFER TO DRG MPT3-TP0-00-LDD-701 DETAIL 01
- EXISTING PARAPET UNDER REVIEW BY TGM.
- LIMIT OF DEVIATION (LOD) (THIS ALSO FORMS THE DEEMED PLANNING BOUNDARY WHEN IT IS THE OUTER MOST)
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SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION - RESIDUAL HAZARD ASSESSMENT		
LOCATION	RESIDUAL HAZARD	SITE MEASURES TO ADDRESS HAZARD
CONSTRUCTION		
ROUTE WIDE	CONTAMINATION, INVASIVE SPECIES, UXOs, BURIED SERVICES	REFER TO MAIN HERRF REGISTER (MPT3-TP0-00-SRG-601) FOR KEY DOCUMENTS OUTLINING EXTENT OF THESE ISSUES
CDM230	MAINTAINER OF VILLAGE CIRCLE GREEN AREAS POTENTIALLY INJURED IF THE PERSON IS UNAWARE OF TRAFFIC (TRAM AND VEHICLES)	
OPERATION / MAINTENANCE		
DECOMMISSIONING / DEMOLITION		
IT IS ASSUMED THAT ALL WORKS WILL BE CARRIED OUT BY A COMPETENT CONTRACTOR WORKING, WHERE APPROPRIATE, TO AN APPROVED METHOD STATEMENT. DOCUMENT REFERENCE OF THE HERRF: MPT3-TP0-00SRG-601.		



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FOR CONSTRUCTION

Q01	22.11.16	For Construction	EC	EOG
REV	DATE	DETAIL	MADE	CHKD

CLIENT: Transport for Greater Manchester	DESIGN: EC	CAD: EC	CHKD: EOG	APPD: ND	SCALE: 1:500	DATE: 2016-11-22	MANCHESTER METROLINK TRAFFORD PARK LINE
							TITLE: URBAN REALM & LANDSCAPE GENERAL ARRANGEMENT SHEET 08
							DRG No: MPT3-TP3-08-LDG-603
						REV: Q01	cm

NOTES:

1. TO BE READ IN CONJUNCTION WITH OTHER RELEVANT GENERAL ARRANGEMENT DRAWINGS. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE STATED.
2. WORKS TO BE CARRIED OUT IN ACCORDANCE WITH THE DESIGN GUIDE REFER TO DRG MPT3-TP0-00-MGD-600.
3. CHAINAGE INDICATED IS RELATIVE TO PERMANENT WAY ALIGNMENT.
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5. FOR SHARED SURFACES, TACTILE PAVING, VEHICLE LOADING AND SURFACES IN UNTRAFFICKED AREAS, ALONG WITH PUBLIC SIGNS, SIGNALS AND OLE POLES REFER TO ENGINEERS AND HIGHWAYS DRAWINGS FOR DETAILS

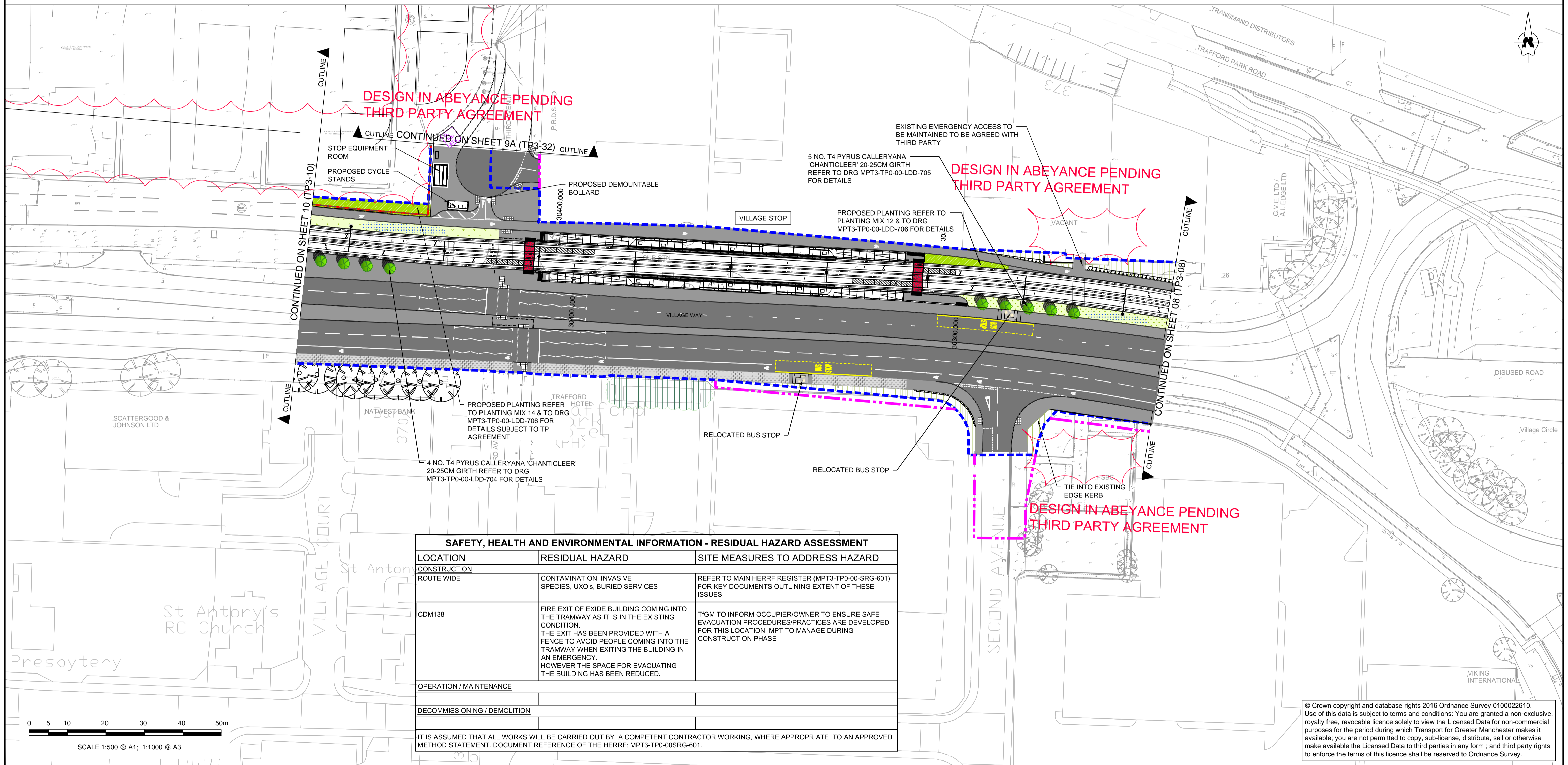
GENERAL ARRANGEMENT KEY:

- PROPOSED CARRIAGEWAY WORKS
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- PROPOSED FLEXIBLE MACADAM - BLACK FOOTWAY / CYCLEWAY.
- PROPOSED FLEXIBLE MACADAM - COLOURED FOOTWAY / CYCLEWAY.
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- PROPOSED AGGREGATE - MOT TYPE 1
- EXISTING FOOTWAY URBAN REALM RETAINED AS IS / MADE GOOD
- PROPOSED CONCRETE SURFACE
- PROPOSED PCC FLAG PAVING (MARSHALLS METROPOLITAN) SIZE: 600x300 300x300 200x300
- PROPOSED BLOCK PAVING / MAINTENANCE STRIP SIZE: 200 X 100 COLOUR TO MATCH EXISTING
- PROPOSED SCOTTISH ROUNDED COBBLES 150-200MM SET IN CONCRETE FOUNDATION
- PROPOSED REINFORCED GRASS SURFACE REFER TO DRG MPT3-TP0-00-LDD-701 DETAIL 02
- PROPOSED FIXED BOLLARD REFER TO DRG MPT3-TP0-00-LDD-708 DETAIL 01
- PROPOSED DEMOUNTABLE BOLLARD REFER TO DRG MPT3-TP0-00-LDD-708 DETAIL 01
- PROPOSED BENCH REFER TO DRG MPT3-TP0-00-LDD-708 DETAIL 03
- EARTHWORKS GRADIENT BETWEEN 1 in 10 AND 1 in 2.5. REFER TO MODEL FOR SPECIFIC GRADIENT

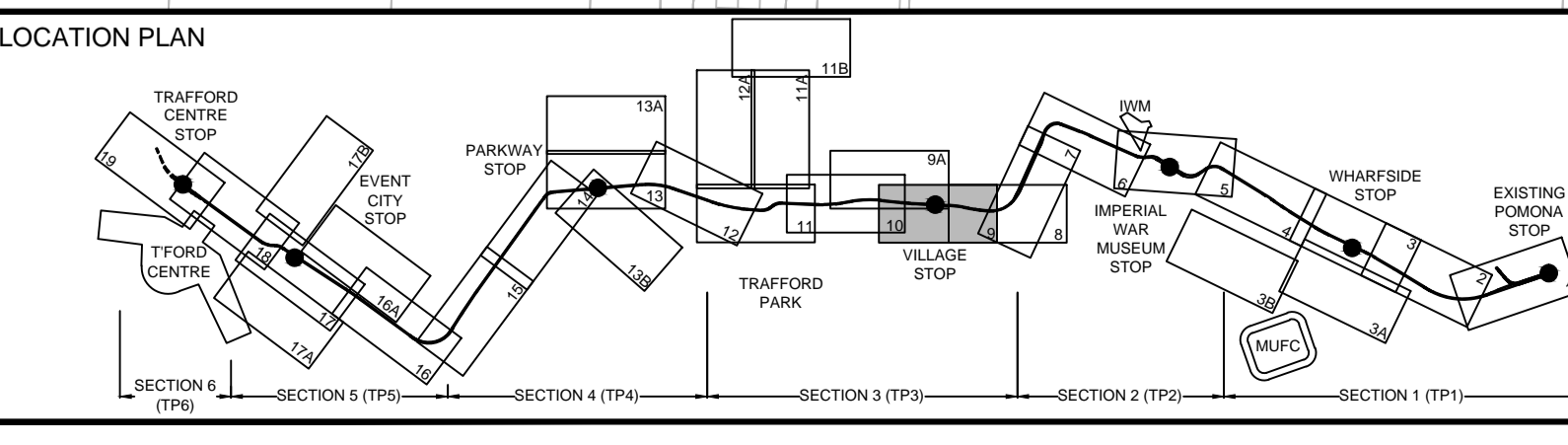
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- PROPOSED PCC TACTILE FLAGS TO CROSSING. REFER TO HIGHWAYS DRAWINGS FOR DETAILS
- PROPOSED PCC TACTILE FLAGS TO CYCLEWAY. REFER TO HIGHWAYS DRAWINGS FOR DETAILS

- AMENITY GRASS. GRASS SEEDED AREA. REFER TO DRG MPT3-TP0-00-LDD-706 DETAIL 03
- PROPOSED ORNAMENTAL MIX. REFER TO DRG MPT3-TP0-00-LDD-706 DETAIL 04
- EXISTING SOFT LANDSCAPE RETAINED AS IS / MADE GOOD
- PROPOSED NATIVE HEDGE / POST AND WIRE FENCE REFER TO DRG MPT3-TP0-00-LDD-706 FOR DETAILS
- PROPOSED TREES. SUBJECT TO AGREEMENT WITH TRAFFORD COUNCIL & THIRD PARTIES REFER TO TREE PLANTING DETAILS
- EXISTING TREES RETAINED AND PROTECTED TO BS5837
- PROPOSED BULB PLANTING/REFER TO DRG MPT3-TP0-00-LDD-706
- PROPOSED WOODLAND TREE PLANTING REFER TO DRG MPT3-TP0-00-LDD-706 DETAIL 06

- PROPOSED RETAINING WALL TO ENGINEERS DETAIL
- BOUNDARY TREATMENT. TO BE DEVELOPED AS PER 3RD PARTY AGREEMENTS & TRAFFORD COUNCIL REQUIREMENTS
- PROPOSED PEDESTRIAN GUARDRAIL REFER TO ENGINEERS DETAILS
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SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION - RESIDUAL HAZARD ASSESSMENT		
LOCATION	RESIDUAL HAZARD	SITE MEASURES TO ADDRESS HAZARD
CONSTRUCTION		
ROUTE WIDE	CONTAMINATION, INVASIVE SPECIES, UXO's, BURIED SERVICES	REFER TO MAIN HERRF REGISTER (MPT3-TP0-00-SRG-601) FOR KEY DOCUMENTS OUTLINING EXTENT OF THESE ISSUES
CDM138	FIRE EXIT OF EXISTING BUILDING COMING INTO THE TRAMWAY AS IT IS IN THE EXISTING CONDITION. THE EXIT HAS BEEN PROVIDED WITH A FENCE TO AVOID PEOPLE COMING INTO THE TRAMWAY WHEN EXITING THE BUILDING IN AN EMERGENCY. HOWEVER THE SPACE FOR EVACUATING THE BUILDING HAS BEEN REDUCED.	TIGM TO INFORM OCCUPIER/OWNER TO ENSURE SAFE EVACUATION PROCEDURES/PRACTICES ARE DEVELOPED FOR THIS LOCATION. MPT TO MANAGE DURING CONSTRUCTION PHASE
OPERATION / MAINTENANCE		
DECOMMISSIONING / DEMOLITION		
IT IS ASSUMED THAT ALL WORKS WILL BE CARRIED OUT BY A COMPETENT CONTRACTOR WORKING, WHERE APPROPRIATE, TO AN APPROVED METHOD STATEMENT. DOCUMENT REFERENCE OF THE HERRF: MPT3-TP0-00SRG-601.		



FOR CONSTRUCTION

Q01	22.11.16	For Construction	EC	EOG	ND
REV	DATE	DETAIL	MADE	CHKD	APPD

CLIENT: Transport for Greater Manchester

DESIGN: EC
CAD: EC
CHKD: EOG
APPD: ND
SCALE: 1:500
DATE: 2016-11-22

MANCHESTER METROLINK TRAFFORD PARK LINE

TITLE: URBAN REALM & LANDSCAPE GENERAL ARRANGEMENT SHEET 09

DRG No: MPT3-TP3-09-LDG-603

REV: Q01

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NOTES:

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GENERAL ARRANGEMENT KEY:

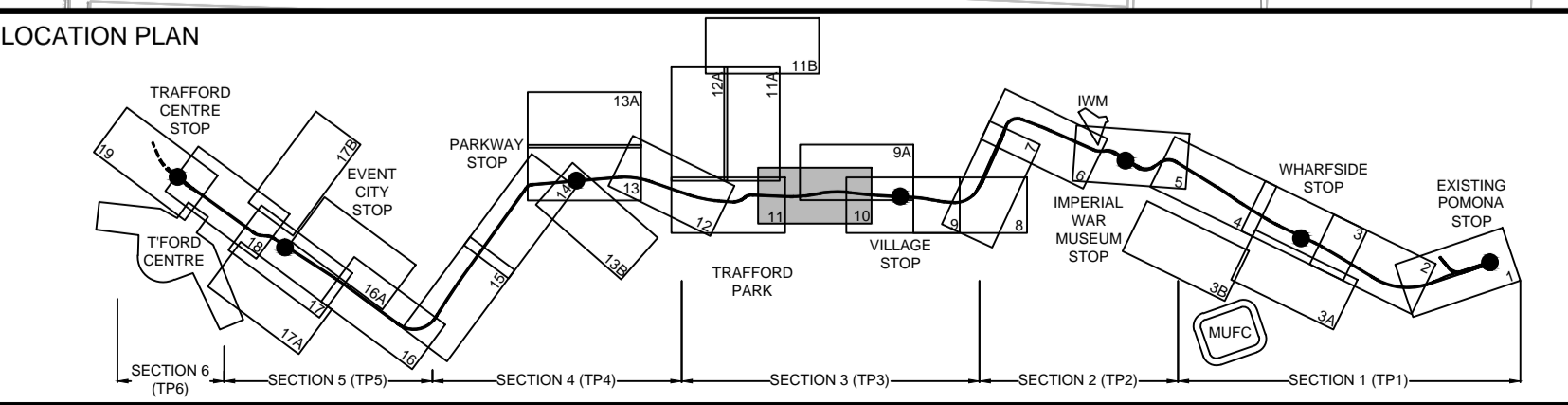
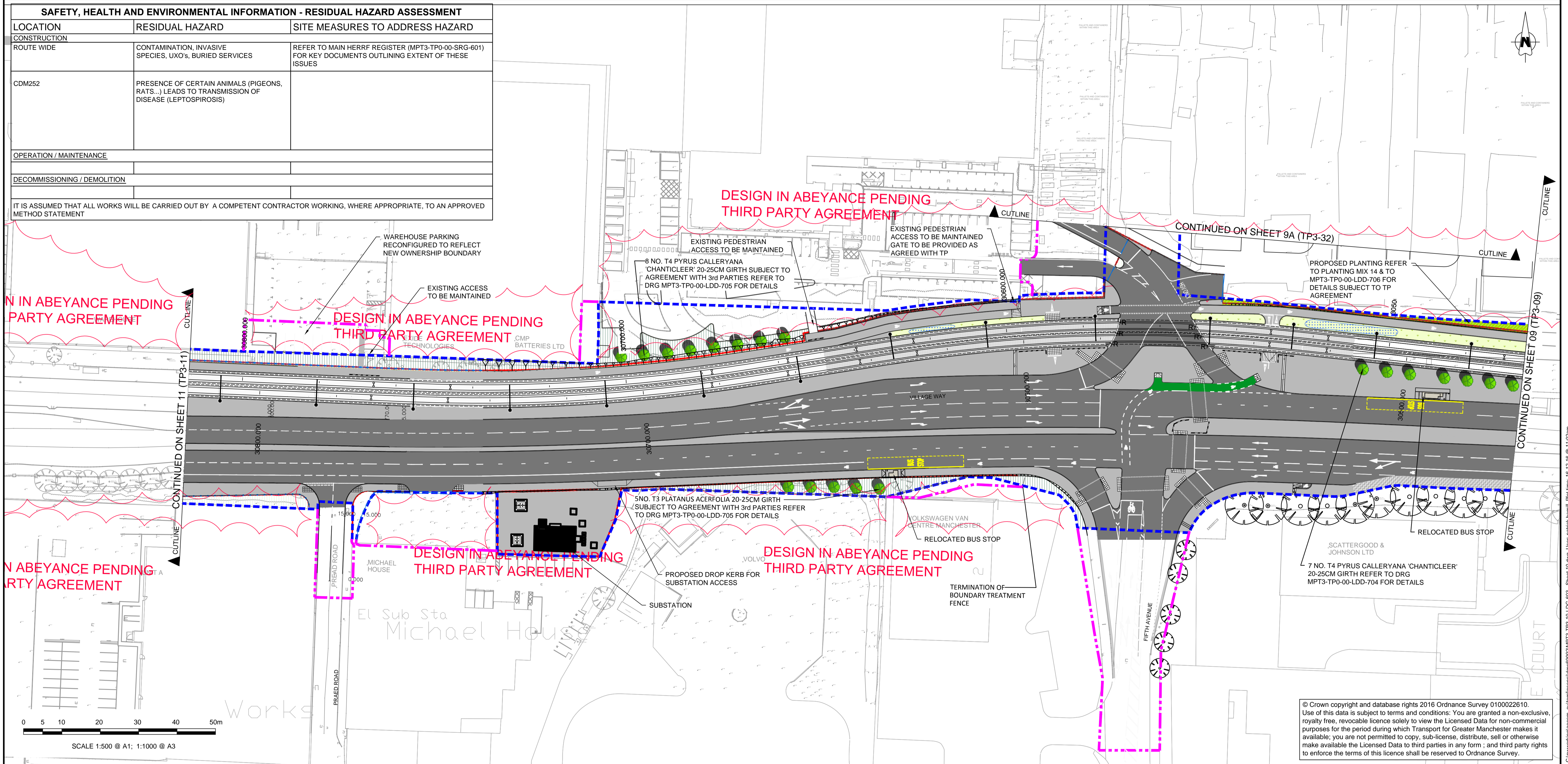
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- PROPOSED SCOTTISH ROUNDED COBBLES 150-200MM SET IN CONCRETE FOUNDATION
- PROPOSED REINFORCED GRASS SURFACE REFER TO DRG MPT3-TP0-00-LDD-701 DETAIL 02
- PROPOSED FIXED BOLLARD REFER TO DRG MPT3-TP0-00-LDD-708 DETAIL 01
- PROPOSED DEMOUNTABLE BOLLARD REFER TO DRG MPT3-TP0-00-LDD-708 DETAIL 01
- PROPOSED BENCH REFER TO DRG MPT3-TP0-00-LDD-708 DETAIL 03
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- EXISTING TREES RETAINED AND PROTECTED TO BS5837
- PROPOSED BULB PLANTING/REFER TO DRG MPT3-TP0-00-LDD-706
- PROPOSED WOODLAND TREE PLANTING REFER TO DRG MPT3-TP0-00-LDD-706 DETAIL 06

- PROPOSED RETAINING WALL TO ENGINEERS DETAIL
- BOUNDARY TREATMENT. TO BE DEVELOPED AS PER 3RD PARTY AGREEMENTS & TRAFFORD COUNCIL REQUIREMENTS
- PROPOSED PEDESTRIAN GUARDRAIL REFER TO ENGINEERS DETAILS
- PROPOSED POST AND KNEE RAIL REFER TO DRG MPT3-TP0-00-LDD-701 DETAIL 01
- EXISTING PARAPET UNDER REVIEW BY TGM.
- LIMIT OF DEVIATION (LOD) (THIS ALSO FORMS THE DEEMED PLANNING BOUNDARY WHEN IT IS THE OUTER MOST)
- TEMPORARY LIMIT OF LAND ACQUIRED OR USED (TLLAU) (THIS ALSO FORMS THE DEEMED PLANNING BOUNDARY WHEN IT IS THE OUTER MOST)

SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION - RESIDUAL HAZARD ASSESSMENT		
LOCATION	RESIDUAL HAZARD	SITE MEASURES TO ADDRESS HAZARD
CONSTRUCTION ROUTE WIDE	CONTAMINATION, INVASIVE SPECIES, UXO's, BURIED SERVICES	REFER TO MAIN HERRF REGISTER (MPT3-TP0-00-SRG-601) FOR KEY DOCUMENTS OUTLINING EXTENT OF THESE ISSUES
CDM252	PRESENCE OF CERTAIN ANIMALS (PIGEONS, RATS...) LEADS TO TRANSMISSION OF DISEASE (LEPTOSPIROSIS)	
OPERATION / MAINTENANCE		
DECOMMISSIONING / DEMOLITION		
IT IS ASSUMED THAT ALL WORKS WILL BE CARRIED OUT BY A COMPETENT CONTRACTOR WORKING, WHERE APPROPRIATE, TO AN APPROVED METHOD STATEMENT		



FOR CONSTRUCTION

REV	DATE	DESCRIPTION	BY	CHECKED	APPD
Q01	22.11.16	For Construction			

CLIENT: Transport for Greater Manchester	DESIGN: EC	MANCHESTER METROLINK TRAFFORD PARK LINE URBAN REALM & LANDSCAPE GENERAL ARRANGEMENT SHEET 10	DRG No:	
	CAD: EC		MPT <small>Lacey O'Rourke VolkerRail Thales</small>	REV:
	CHKD: EOG			MPT3-TP3-10-LDG-603
	APPD: ND		DATE: 2016-11-22	Q01
	SCALE: 1:500			

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DRG Path: C:\working\mpt3-tp3-10-LDG-603-Sheet 10.dwg User: pamickhamill Plot time: 16-12-16 @ 11:02am

NOTES:

1. TO BE READ IN CONJUNCTION WITH OTHER RELEVANT GENERAL ARRANGEMENT DRAWINGS. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE STATED.
2. WORKS TO BE CARRIED OUT IN ACCORDANCE WITH THE DESIGN GUIDE REFER TO DRG MPT3-TP0-00-MGD-600.
3. CHAINAGE INDICATED IS RELATIVE TO PERMANENT WAY ALIGNMENT.
4. FOR DETAILS OF NON-HIGHWAY ELEMENTS REFER TO DISCIPLINE-SPECIFIC LAYOUT DRAWINGS AND DETAILS.
5. FOR SHARED SURFACES, TACTILE PAVING, VEHICLE LOADING AND SURFACES IN UNTRAFFICKED AREAS, ALONG WITH PUBLIC SIGNS, SIGNALS AND OLE POLES REFER TO ENGINEERS AND HIGHWAYS DRAWINGS FOR DETAILS

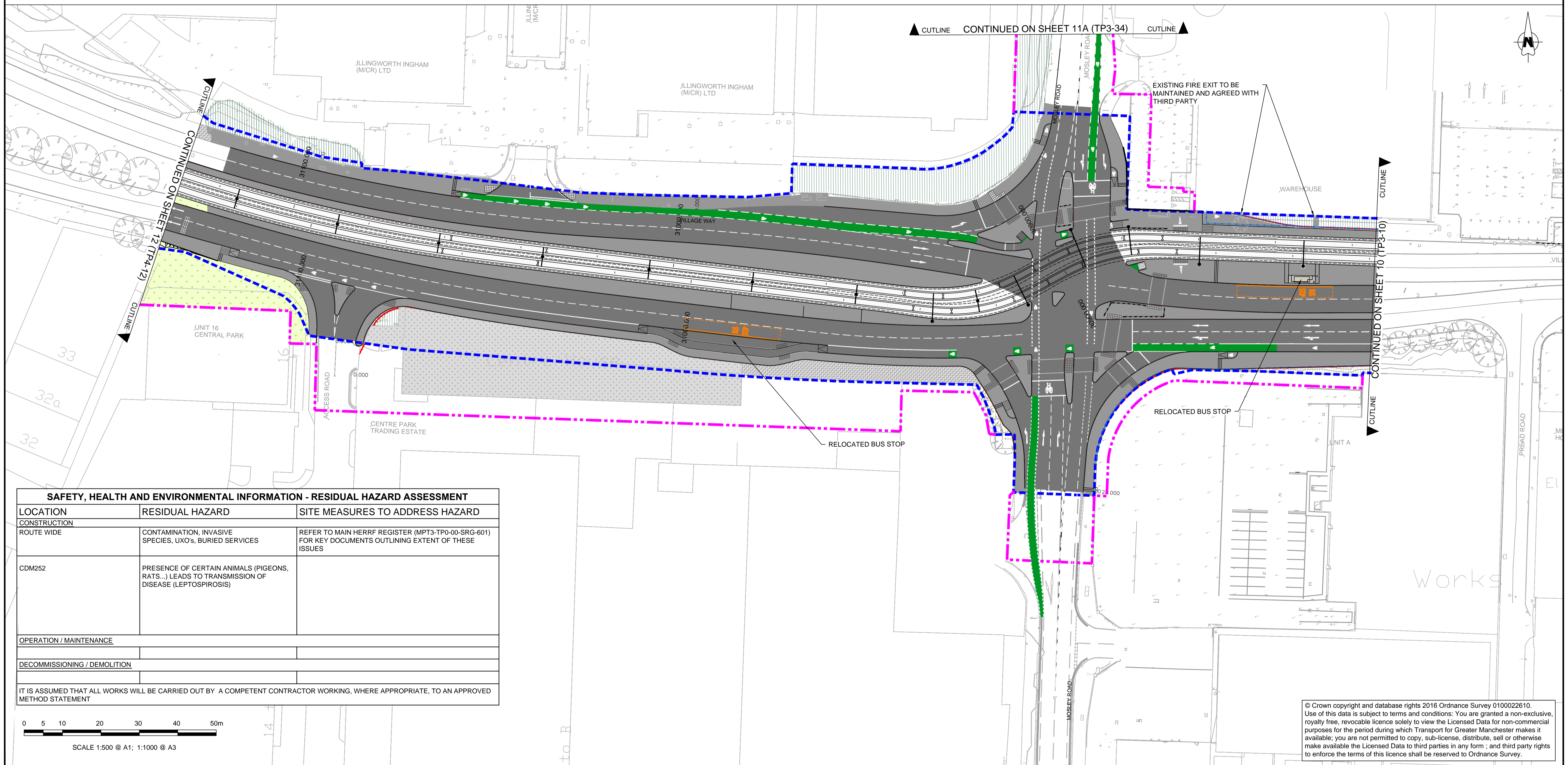
GENERAL ARRANGEMENT KEY:

- PROPOSED CARRIAGEWAY WORKS
- PROPOSED WHITE ROAD MARKINGS
- PROPOSED FLEXIBLE MACADAM - BLACK FOOTWAY / CYCLEWAY.
- PROPOSED FLEXIBLE MACADAM - COLOURED FOOTWAY / CYCLEWAY.
- PROPOSED GREEN SURFACING
- PROPOSED AGGREGATE - MOT TYPE 1
- EXISTING FOOTWAY URBAN REALM RETAINED AS IS / MADE GOOD
- PROPOSED CONCRETE SURFACE
- PROPOSED PCC FLAG PAVING (MARSHALLS METROPOLITAN) SIZE: 600x300 300x300 200x300
- PROPOSED BLOCK PAVING / MAINTENANCE STRIP SIZE: 200 X 100 COLOUR TO MATCH EXISTING
- PROPOSED SCOTTISH ROUNDED COBBLES 150-200MM SET IN CONCRETE FOUNDATION
- PROPOSED REINFORCED GRASS SURFACE REFER TO DRG MPT3-TP0-00-LDD-701 DETAIL 02
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- PROPOSED DEMOUNTABLE BOLLARD REFER TO DRG MPT3-TP0-00-LDD-708 DETAIL 01
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- EARTHWORKS GRADIENT BETWEEN 1 in 10 AND 1 in 2.5. REFER TO MODEL FOR SPECIFIC GRADIENT

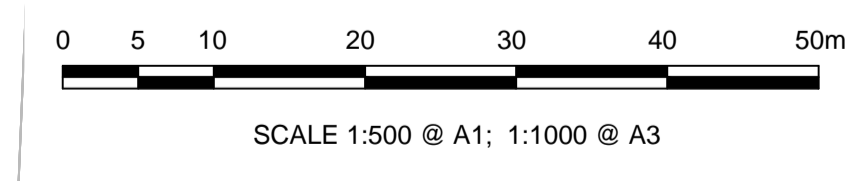
- PROPOSED PERMANENT WAY / TRAM TRACK RAISED RAIL AND EXPOSED AGGREGATE CONCRETE TO PERMANENT WAY DETAILS
- PROPOSED FLUSH RAIL AND EXPOSED AGGREGATE CONCRETE TO PERMANENT WAY DETAILS
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- PROPOSED KERB LINE REFER TO HIGHWAYS DRAWINGS FOR DETAILS
- PROPOSED PCC TACTILE FLAGS TO CROSSING. REFER TO HIGHWAYS DRAWINGS FOR DETAILS
- PROPOSED PCC TACTILE FLAGS TO CYCLEWAY. REFER TO HIGHWAYS DRAWINGS FOR DETAILS

- AMENITY GRASS. GRASS SEEDED AREA. REFER TO DRG MPT3-TP0-00-LDD-706 DETAIL 03
- PROPOSED ORNAMENTAL MIX. REFER TO DRG MPT3-TP0-00-LDD-706 DETAIL 04
- EXISTING SOFT LANDSCAPE RETAINED AS IS / MADE GOOD
- PROPOSED NATIVE HEDGE / POST AND WIRE FENCE REFER TO DRG MPT3-TP0-00-LDD-706 FOR DETAILS
- PROPOSED TREES. SUBJECT TO AGREEMENT WITH TRAFFORD COUNCIL & THIRD PARTIES REFER TO TREE PLANTING DETAILS
- EXISTING TREES RETAINED AND PROTECTED TO BS5837
- PROPOSED BULB PLANTING/REFER TO DRG MPT3-TP0-00-LDD-706
- PROPOSED WOODLAND TREE PLANTING REFER TO DRG MPT3-TP0-00-LDD-706 DETAIL 06

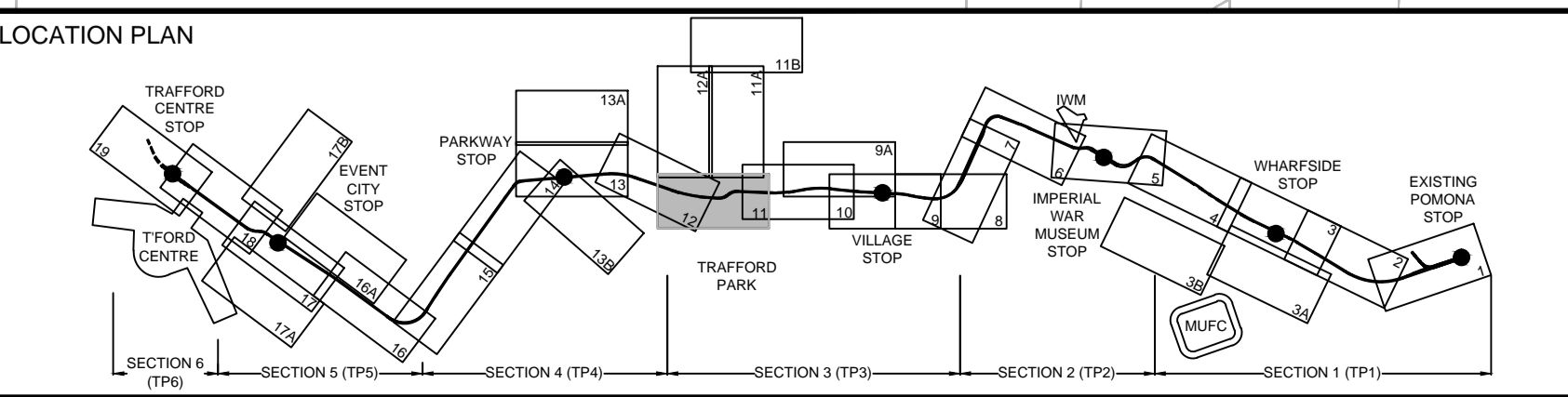
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- EXISTING PARAPET UNDER REVIEW BY TGM.
- LIMIT OF DEVIATION (LOD) (THIS ALSO FORMS THE DEEMED PLANNING BOUNDARY WHEN IT IS THE OUTER MOST)
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SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION - RESIDUAL HAZARD ASSESSMENT		
LOCATION	RESIDUAL HAZARD	SITE MEASURES TO ADDRESS HAZARD
CONSTRUCTION		
ROUTE WIDE	CONTAMINATION, INVASIVE SPECIES, UXO's, BURIED SERVICES	REFER TO MAIN HERRF REGISTER (MPT3-TP0-00-SRG-601) FOR KEY DOCUMENTS OUTLINING EXTENT OF THESE ISSUES
CDM252	PRESENCE OF CERTAIN ANIMALS (PIGEONS, RATS...) LEADS TO TRANSMISSION OF DISEASE (LEPTOSPIROSIS)	
OPERATION / MAINTENANCE		
DECOMMISSIONING / DEMOLITION		
IT IS ASSUMED THAT ALL WORKS WILL BE CARRIED OUT BY A COMPETENT CONTRACTOR WORKING, WHERE APPROPRIATE, TO AN APPROVED METHOD STATEMENT		



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WORK IN PROGRESS
VERIFICATION PROCEDURES NOT COMPLETED

REV	DATE	DETAIL	MADE	CHKD	APPD
D07	16.12.16	Reverted to DD to capture VE design	ST	EOG	ND
D06	21.11.16	Reverted to DD to capture VE design	ST	EOG	ND
D05	03.08.16	Detailed Design Issue	EC	EOG	ND
D04	11.07.16	Detailed Design Issue	EC	EOG	AP
D03	06.07.16	Detailed Design Issue	EC	EOG	AP
D02	28.04.16	Detailed Design Issue	EC	EOG	AP
D01	04.03.16	Detailed Design Issue	EC	EOG	AP

CLIENT:	Transport for Greater Manchester
DESIGN:	EC
CAD:	EC
CHKD:	EOG
APPD:	ND
SCALE:	1:500
DATE:	2016-10-19

MANCHESTER METROLINK TRAFFORD PARK LINE	
TITLE:	URBAN REALM & LANDSCAPE GENERAL ARRANGEMENT SHEET 11
DRG No:	MPT3-TP3-11-LDG-603
REV:	D07

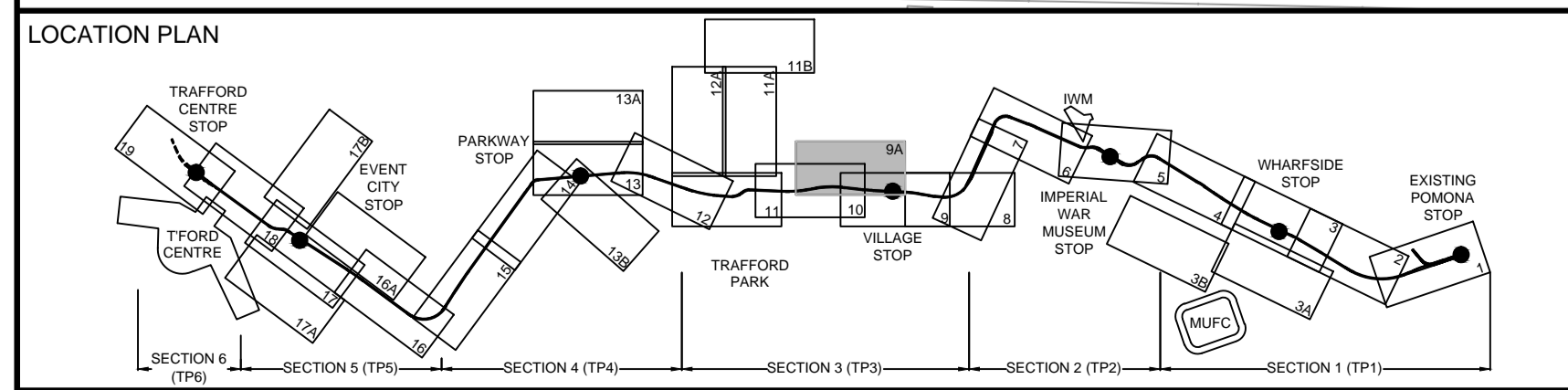
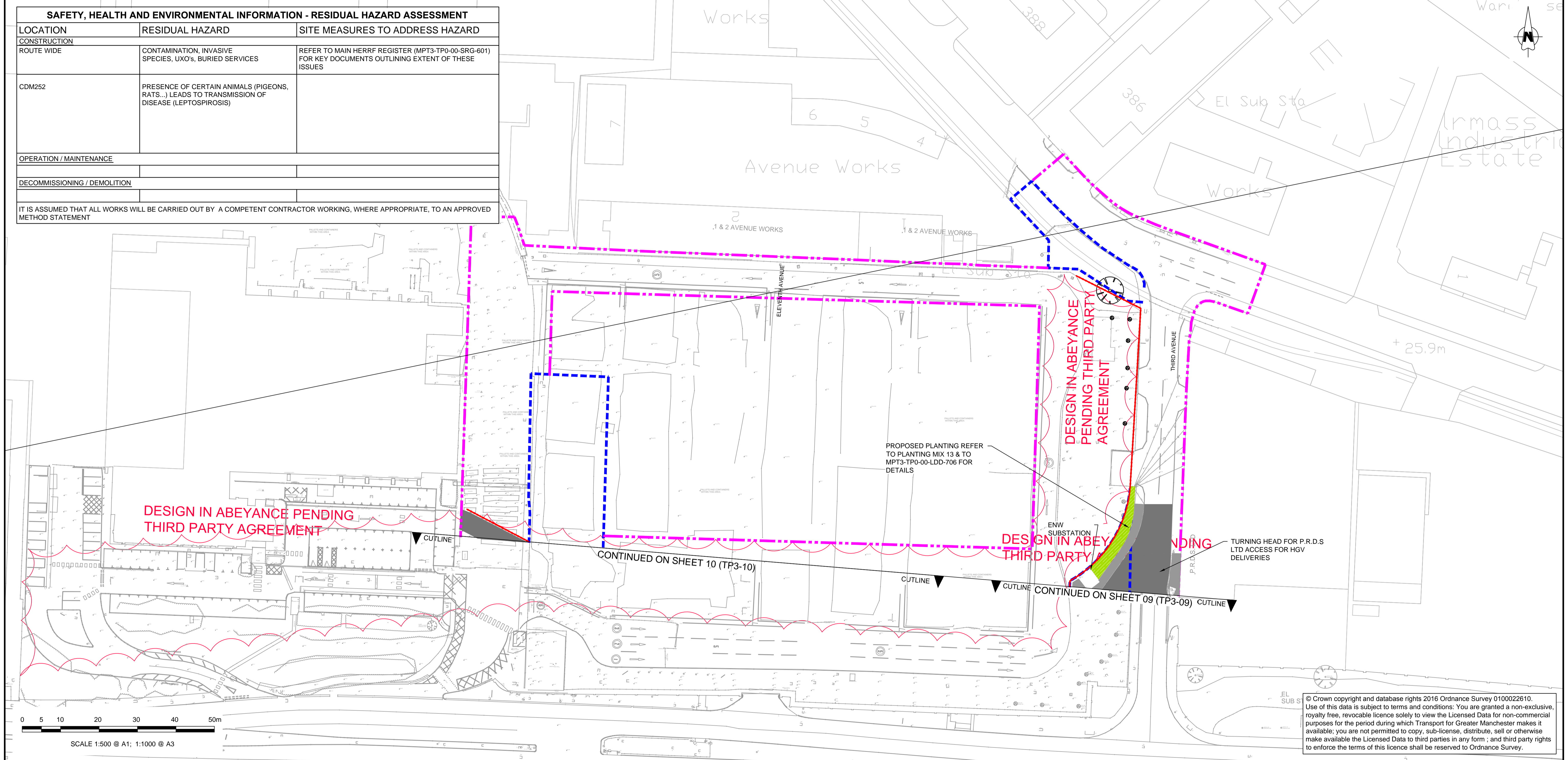
NOTES:

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GENERAL ARRANGEMENT KEY:

	PROPOSED PCC FLAG PAVING (MARSHALLS METROPOLITAN) SIZE: 600x300 300x300 200x300		PROPOSED PERMANENT WAY / TRAM TRACK RAISED RAIL AND EXPOSED AGGREGATE CONCRETE TO PERMANENT WAY DETAILS		AMENITY GRASS. GRASS SEEDING AREA. REFER TO DRG MPT3-TP0-00-LDD-706 DETAIL 03		PROPOSED RETAINING WALL TO ENGINEERS DETAIL
	PROPOSED BLOCK PAVING / MAINTENANCE STRIP SIZE: 200 X 100 COLOUR TO MATCH EXISTING		PROPOSED FLUSH RAIL AND EXPOSED AGGREGATE CONCRETE TO PERMANENT WAY DETAILS		PROPOSED ORNAMENTAL MIX. REFER TO DRG MPT3-TP0-00-LDD-706 DETAIL 04		BOUNDARY TREATMENT. TO BE DEVELOPED AS PER 3RD PARTY AGREEMENTS & TRAFFORD COUNCIL REQUIREMENTS
	PROPOSED SCOTTISH ROUNDED COBBLES 150-200MM SET IN CONCRETE FOUNDATION		PROPOSED INFILL PANEL TRACK CROSSING WITH/WITHOUT PROPOSED PEDESTRIAN DETERRENT		EXISTING SOFT LANDSCAPE RETAINED AS IS / MADE GOOD		PROPOSED PEDESTRIAN GUARDRAIL REFER TO ENGINEERS DETAILS
	PROPOSED REINFORCED GRASS SURFACE REFER TO DRG MPT3-TP0-00-LDD-701 DETAIL 02		PROPOSED BOLLARD REFER TO DRG MPT3-TP0-00-LDD-708 DETAIL 01		PROPOSED NATIVE HEDGE / POST AND WIRE FENCE REFER TO DRG MPT3-TP0-00-LDD-706 FOR DETAILS		PROPOSED POST AND KNEE RAIL REFER TO DRG MPT3-TP0-00-LDD-701 DETAIL 01
	PROPOSED CARRIAGEWAY WORKS		PROPOSED DEMOUNTABLE BOLLARD REFER TO DRG MPT3-TP0-00-LDD-708 DETAIL 01		PROPOSED TREES. SUBJECT TO AGREEMENT WITH TRAFFORD COUNCIL & THIRD PARTIES REFER TO TREE PLANTING DETAILS		EXISTING PARAPET UNDER REVIEW BY TIGM.
	PROPOSED WHITE ROAD MARKINGS		PROPOSED BENCH REFER TO DRG MPT3-TP0-00-LDD-708 DETAIL 03		EXISTING TREES RETAINED AND PROTECTED TO BS5837		LIMIT OF DEVIATION (LOD) (THIS ALSO FORMS THE DEEMED PLANNING BOUNDARY WHEN IT IS THE OUTER MOST)
	PROPOSED FLEXIBLE MACADAM - BLACK FOOTWAY / CYCLEWAY.		EARTHWORKS GRADIENT BETWEEN 1 in 10 AND 1 in 2.5. REFER TO MODEL FOR SPECIFIC GRADIENT		PROPOSED BULB PLANTING/REFER TO DRG MPT3-TP0-00-LDD-706		TEMPORARY LIMIT OF LAND ACQUIRED OR USED (TLLAU) (THIS ALSO FORMS THE DEEMED PLANNING BOUNDARY WHEN IT IS THE OUTER MOST)
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	PROPOSED GREEN SURFACING						
	PROPOSED AGGREGATE - MOT TYPE 1						
	EXISTING FOOTWAY URBAN REALM RETAINED AS IS / MADE GOOD						
	PROPOSED CONCRETE SURFACE						

SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION - RESIDUAL HAZARD ASSESSMENT		
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OPERATION / MAINTENANCE		
DECOMMISSIONING / DEMOLITION		
IT IS ASSUMED THAT ALL WORKS WILL BE CARRIED OUT BY A COMPETENT CONTRACTOR WORKING, WHERE APPROPRIATE, TO AN APPROVED METHOD STATEMENT		



FOR CONSTRUCTION

Q01 22.11.16	For Construction	EC EOG ND	
REV	DATE	MADE	CHKD

CLIENT: 	DESIGN: EC	MANCHESTER METROLINK TRAFFORD PARK LINE	
	CAD: EC	URBAN REALM & LANDSCAPE GENERAL ARRANGEMENT SHEET 9A	
	CHKD: EOG		
	APPD: ND		
	SCALE: 1:500		
	DATE: 2016-11-22	DRG No: MPT3-TP3-32-LDG-603	REV: Q01

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GENERAL ARRANGEMENT KEY:

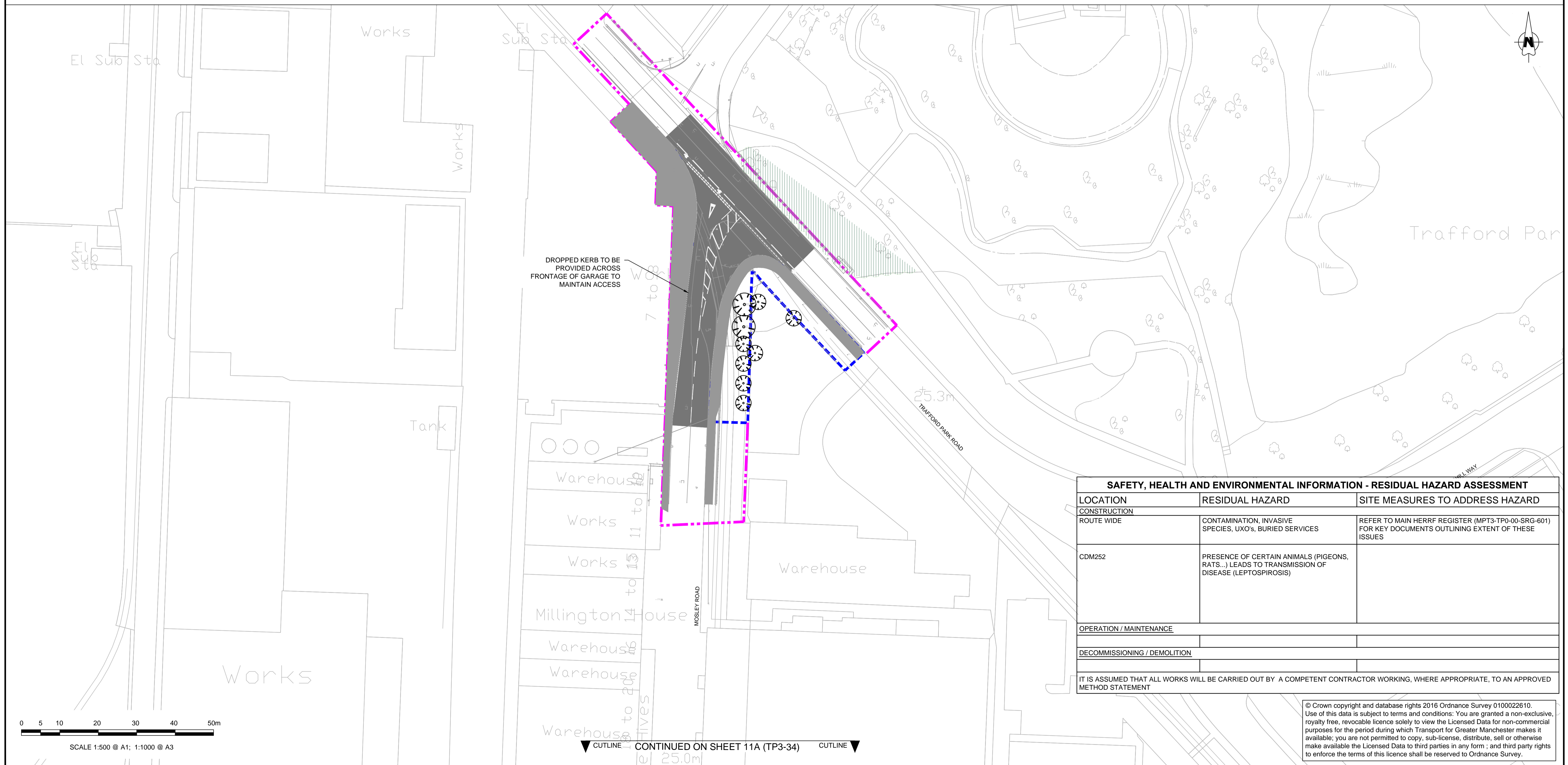
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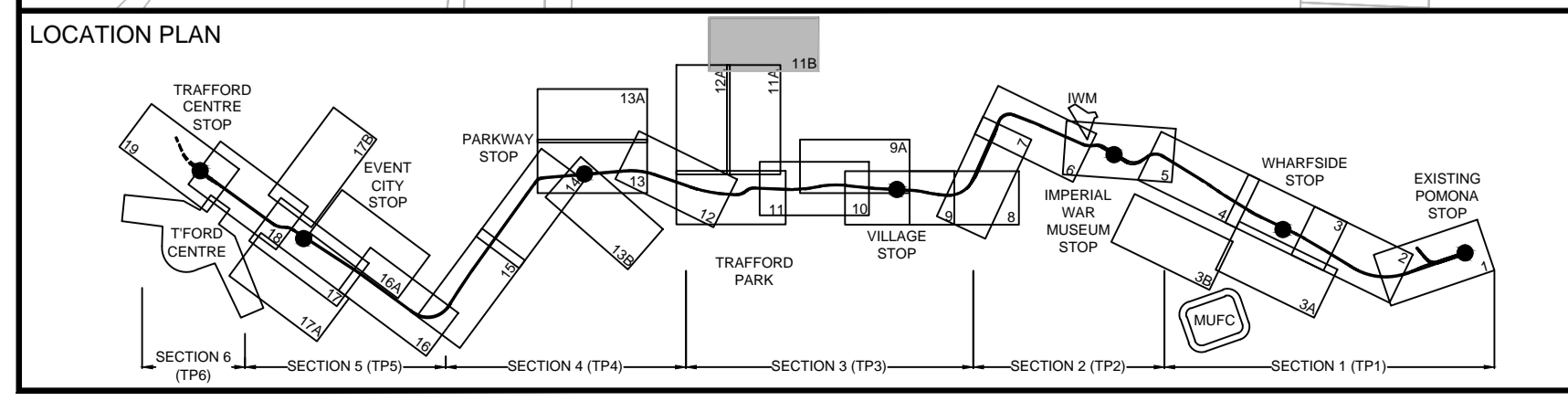
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FOR CONSTRUCTION

Q01	22.11.16	For Construction	EC	EOG	ND
REV	DATE	DETAIL	MADE	CHKD	APPD

CLIENT: Transport for Greater Manchester

DESIGN: EC

CAD: EC

CHKD: EOG

APPD: ND

SCALE: 1:500

DATE: 2016-11-22

MPT
Lainy O'Rourke
VolkerRail | Thales

MANCHESTER METROLINK
TRAFFORD PARK LINE

TITLE:
URBAN REALM & LANDSCAPE
GENERAL ARRANGEMENT
SHEET 11B

DRG No: MPT3-TP3-33-LDG-603

REV: Q01

DRG Path: C:\working\mpt3-tp3-33-LDG-603 - Sheet 11B.dwg User: cgarane Pld time: 20-12-16 @ 9:40am

NOTES:

1. TO BE READ IN CONJUNCTION WITH OTHER RELEVANT GENERAL ARRANGEMENT DRAWINGS. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE STATED.
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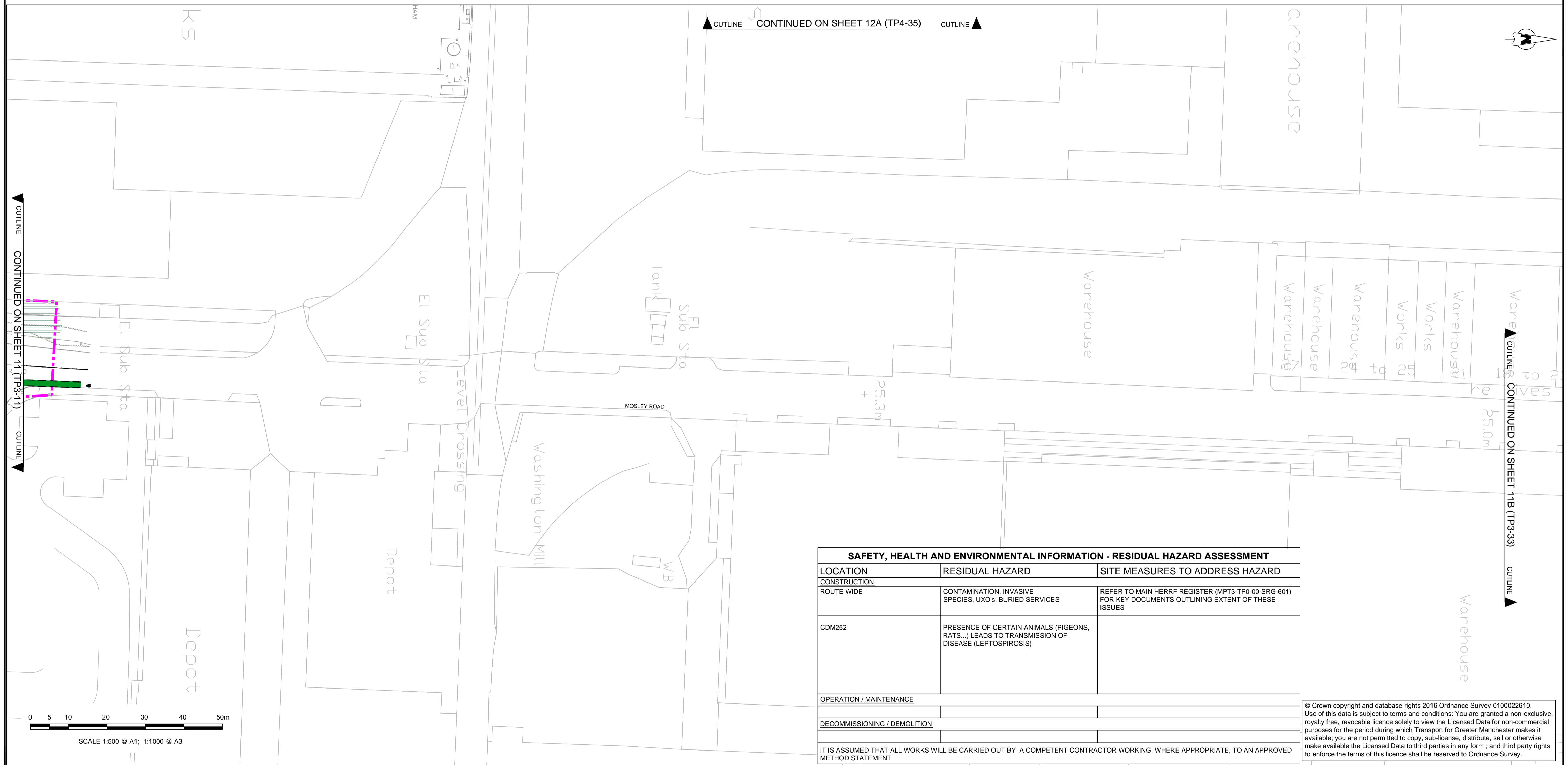
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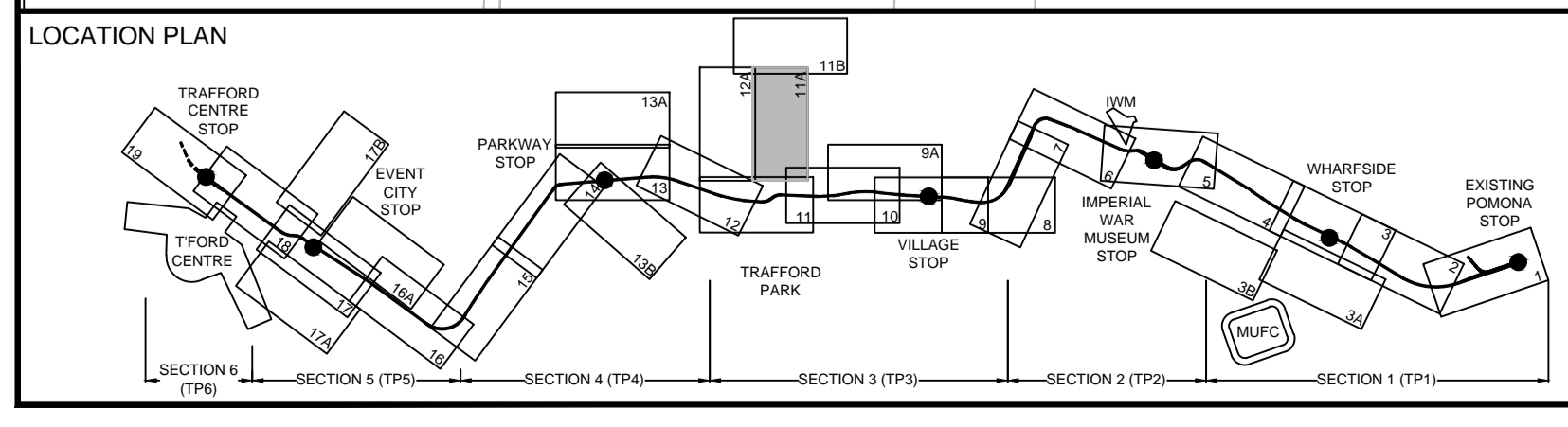
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- EXISTING SOFT LANDSCAPE RETAINED AS IS / MADE GOOD
- PROPOSED NATIVE HEDGE / POST AND WIRE FENCE REFER TO DRG MPT3-TP0-00-LDD-706 FOR DETAILS
- PROPOSED TREES. SUBJECT TO AGREEMENT WITH TRAFFORD COUNCIL & THIRD PARTIES REFER TO TREE PLANTING DETAILS
- EXISTING TREES RETAINED AND PROTECTED TO BS5837
- PROPOSED BULB PLANTING/REFER TO DRG MPT3-TP0-00-LDD-706
- PROPOSED WOODLAND TREE PLANTING REFER TO DRG MPT3-TP0-00-LDD-706 DETAIL 06

- PROPOSED RETAINING WALL TO ENGINEERS DETAIL
- BOUNDARY TREATMENT. TO BE DEVELOPED AS PER 3RD PARTY AGREEMENTS & TRAFFORD COUNCIL REQUIREMENTS
- PROPOSED PEDESTRIAN GUARDRAIL REFER TO ENGINEERS DETAILS
- PROPOSED POST AND KNEE RAIL REFER TO DRG MPT3-TP0-00-LDD-701 DETAIL 01
- EXISTING PARAPET UNDER REVIEW BY TIGM.
- LIMIT OF DEVIATION (LOD) (THIS ALSO FORMS THE DEEMED PLANNING BOUNDARY WHEN IT IS THE OUTER MOST)
- TEMPORARY LIMIT OF LAND ACQUIRED OR USED (TLLAU) (THIS ALSO FORMS THE DEEMED PLANNING BOUNDARY WHEN IT IS THE OUTER MOST)



SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION - RESIDUAL HAZARD ASSESSMENT		
LOCATION	RESIDUAL HAZARD	SITE MEASURES TO ADDRESS HAZARD
CONSTRUCTION ROUTE WIDE	CONTAMINATION, INVASIVE SPECIES, UXO's, BURIED SERVICES	REFER TO MAIN HERRF REGISTER (MPT3-TP0-00-SRG-601) FOR KEY DOCUMENTS OUTLINING EXTENT OF THESE ISSUES
CDM252	PRESENCE OF CERTAIN ANIMALS (PIGEONS, RATS...) LEADS TO TRANSMISSION OF DISEASE (LEPTOSPIROSIS)	
OPERATION / MAINTENANCE		
DECOMMISSIONING / DEMOLITION		
IT IS ASSUMED THAT ALL WORKS WILL BE CARRIED OUT BY A COMPETENT CONTRACTOR WORKING, WHERE APPROPRIATE, TO AN APPROVED METHOD STATEMENT		

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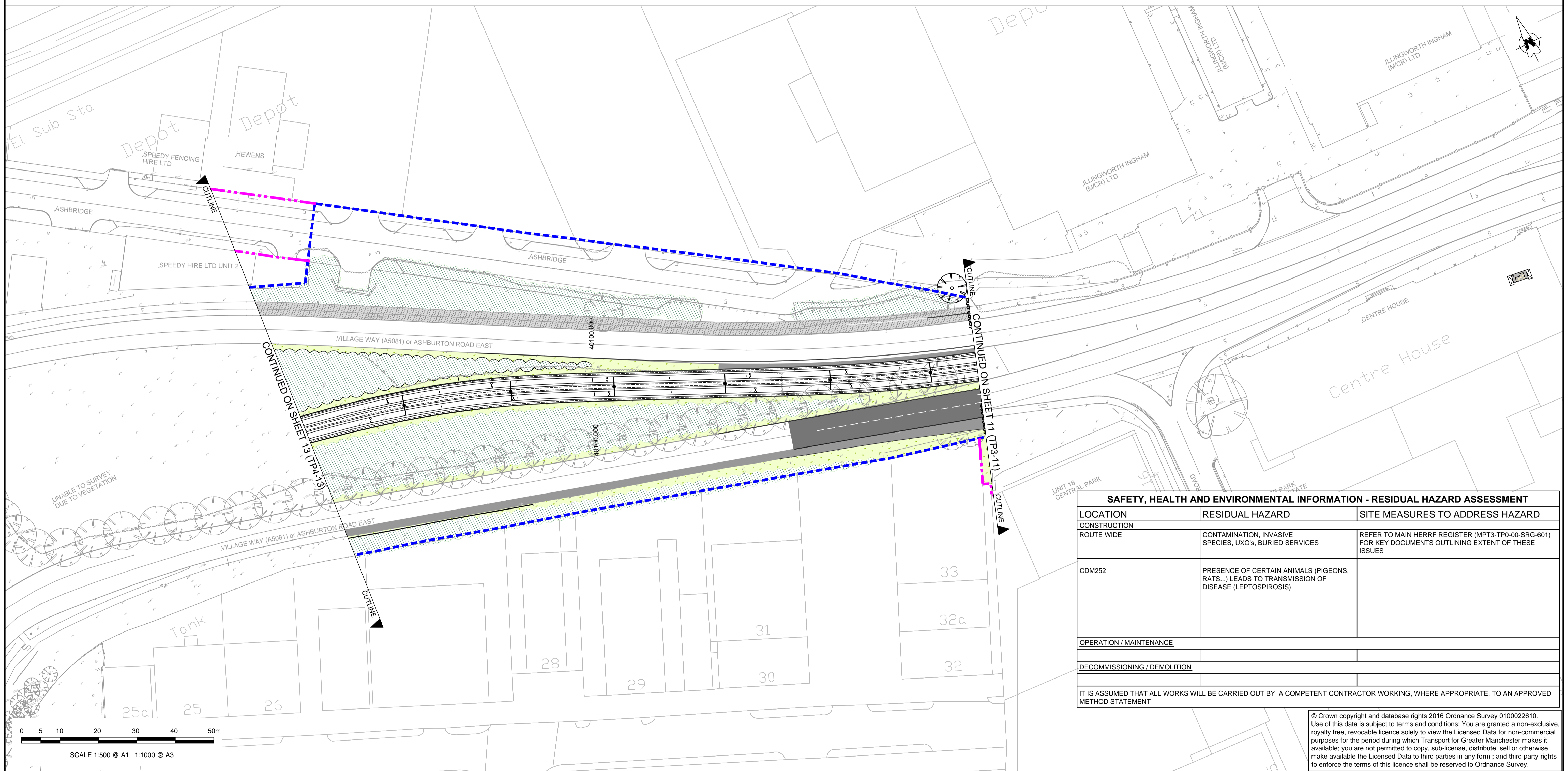


FOR CONSTRUCTION

Q01	22.11.16	For Construction	EC	EOG	ND
REV	DATE	DETAIL	MADE	CHKD	APPD

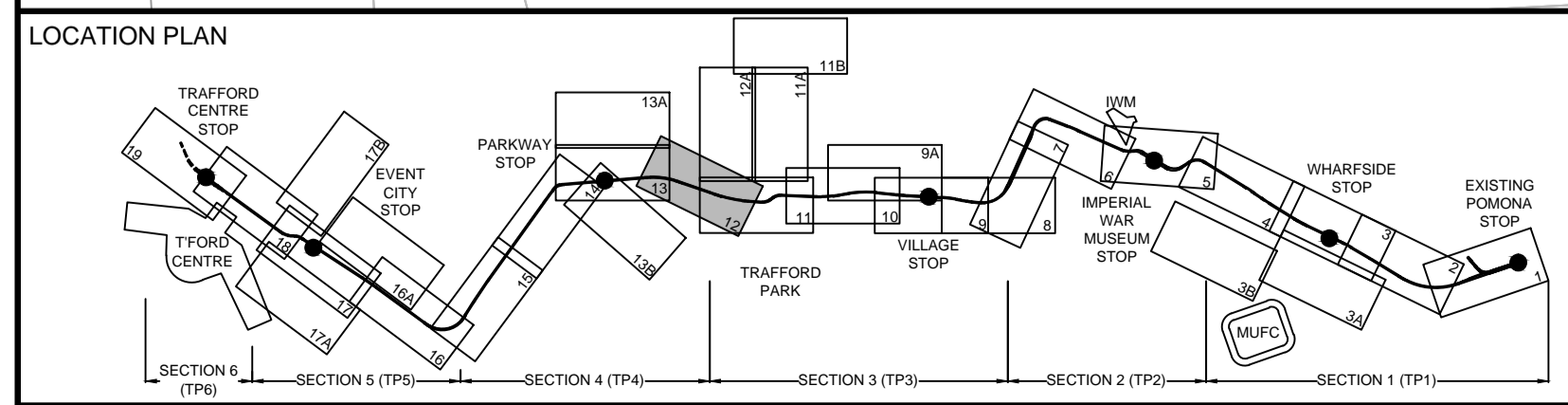
CLIENT: Transport for Greater Manchester	DESIGN: EC	MANCHESTER METROLINK TRAFFORD PARK LINE
MPT (Logo)	CAD: EC	
	CHKD: EOG	TITLE: URBAN REALM & LANDSCAPE GENERAL ARRANGEMENT SHEET 11A
	APPD: ND	DRG No: MPT3-TP3-34-LDG-603
	SCALE: 1:500	REV: Q01
	DATE: 2016-11-22	

- NOTES:**
- TO BE READ IN CONJUNCTION WITH OTHER RELEVANT GENERAL ARRANGEMENT DRAWINGS. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE STATED.
 - WORKS TO BE CARRIED OUT IN ACCORDANCE WITH THE DESIGN GUIDE REFER TO DRG MPT3-TP0-00-MGD-600.
 - CHAINAGE INDICATED IS RELATIVE TO PERMANENT WAY ALIGNMENT.
 - FOR DETAILS OF NON-HIGHWAY ELEMENTS REFER TO DISCIPLINE-SPECIFIC LAYOUT DRAWINGS AND DETAILS.
 - FOR SHARED SURFACES, TACTILE PAVING, VEHICLE LOADING AND SURFACES IN UNTRAFFICKED AREAS, ALONG WITH PUBLIC SIGNS, SIGNALS AND OLE POLES REFER TO ENGINEERS AND HIGHWAYS DRAWINGS FOR DETAILS
- GENERAL ARRANGEMENT KEY:**
- PROPOSED CARRIAGEWAY WORKS
 - PROPOSED WHITE ROAD MARKINGS
 - PROPOSED FLEXIBLE MACADAM - BLACK FOOTWAY / CYCLEWAY.
 - PROPOSED FLEXIBLE MACADAM - COLOURED FOOTWAY / CYCLEWAY.
 - PROPOSED GREEN SURFACING
 - PROPOSED AGGREGATE - MOT TYPE 1
 - EXISTING FOOTWAY URBAN REALM RETAINED AS IS / MADE GOOD
 - PROPOSED CONCRETE SURFACE
 - PROPOSED PCC FLAG PAVING (MARSHALLS METROPOLITAN) SIZE: 600x300 300x300 200x300
 - PROPOSED BLOCK PAVING / MAINTENANCE STRIP SIZE: 200 X 100 COLOUR TO MATCH EXISTING
 - PROPOSED SCOTTISH ROUNDED COBBLES 150-200MM SET IN CONCRETE FOUNDATION
 - PROPOSED REINFORCED GRASS SURFACE REFER TO DRG MPT3-TP0-00-LDD-701 DETAIL 02
 - PROPOSED FIXED BOLLARD REFER TO DRG MPT3-TP0-00-LDD-708 DETAIL 01
 - PROPOSED DEMOUNTABLE BOLLARD REFER TO DRG MPT3-TP0-00-LDD-708 DETAIL 01
 - PROPOSED BENCH REFER TO DRG MPT3-TP0-00-LDD-708 DETAIL 03
 - EARTHWORKS GRADIENT BETWEEN 1 in 10 AND 1 in 2.5. REFER TO MODEL FOR SPECIFIC GRADIENT
 - PROPOSED PERMANENT WAY / TRAM TRACK RAISED RAIL AND EXPOSED AGGREGATE CONCRETE TO PERMANENT WAY DETAILS
 - PROPOSED FLUSH RAIL AND EXPOSED AGGREGATE CONCRETE TO PERMANENT WAY DETAILS
 - PROPOSED INFILL PANEL TRACK CROSSING WITH/WITHOUT PROPOSED PEDESTRIAN DETERRENT
 - OVERHEAD LINE EQUIPMENT
 - PROPOSED KERB LINE REFER TO HIGHWAYS DRAWINGS FOR DETAILS
 - PROPOSED PCC TACTILE FLAGS TO CROSSING. REFER TO HIGHWAYS DRAWINGS FOR DETAILS
 - PROPOSED PCC TACTILE FLAGS TO CYCLEWAY. REFER TO HIGHWAYS DRAWINGS FOR DETAILS
 - AMENITY GRASS. GRASS SEEDED AREA. REFER TO DRG MPT3-TP0-00-LDD-706 DETAIL 03
 - PROPOSED ORNAMENTAL MIX. REFER TO DRG MPT3-TP0-00-LDD-706 DETAIL 04
 - EXISTING SOFT LANDSCAPE RETAINED AS IS / MADE GOOD
 - PROPOSED NATIVE HEDGE / POST AND WIRE FENCE REFER TO DRG MPT3-TP0-00-LDD-706 FOR DETAILS
 - PROPOSED TREES. SUBJECT TO AGREEMENT WITH TRAFFORD COUNCIL & THIRD PARTIES REFER TO TREE PLANTING DETAILS
 - EXISTING TREES RETAINED AND PROTECTED TO BS5837
 - PROPOSED BULB PLANTING/REFER TO DRG MPT3-TP0-00-LDD-706
 - PROPOSED WOODLAND TREE PLANTING REFER TO DRG MPT3-TP0-00-LDD-706 DETAIL 06
 - PROPOSED RETAINING WALL TO ENGINEERS DETAIL
 - BOUNDARY TREATMENT. TO BE DEVELOPED AS PER 3RD PARTY AGREEMENTS & TRAFFORD COUNCIL REQUIREMENTS
 - PROPOSED PEDESTRIAN GUARDRAIL REFER TO ENGINEERS DETAILS
 - PROPOSED POST AND KNEE RAIL REFER TO DRG MPT3-TP0-00-LDD-701 DETAIL 01
 - EXISTING PARAPET UNDER REVIEW BY TGM.
 - LIMIT OF DEVIATION (LOD) (THIS ALSO FORMS THE DEEMED PLANNING BOUNDARY WHEN IT IS THE OUTER MOST)
 - TEMPORARY LIMIT OF LAND ACQUIRED OR USED (TLLAU) (THIS ALSO FORMS THE DEEMED PLANNING BOUNDARY WHEN IT IS THE OUTER MOST)



SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION - RESIDUAL HAZARD ASSESSMENT		
LOCATION	RESIDUAL HAZARD	SITE MEASURES TO ADDRESS HAZARD
CONSTRUCTION		
ROUTE WIDE	CONTAMINATION, INVASIVE SPECIES, UXO's, BURIED SERVICES	REFER TO MAIN HERRF REGISTER (MPT3-TP0-00-SRG-601) FOR KEY DOCUMENTS OUTLINING EXTENT OF THESE ISSUES
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WORK IN PROGRESS
VERIFICATION PROCEDURES NOT COMPLETED

REV	DATE	DETAIL	MADE	CHKD	APPD
D07	16.12.16	Value Engineering: Detailed Design	EC	EOG	ND
D06	21.11.16	Value Engineering: Preliminary Design	EC	EOG	ND
D05	03.08.16	Detailed Design Issue	EC	EOG	ND
D04	11.07.16	Detailed Design Issue	EC	EOG	AP
D03	06.07.16	Detailed Design Issue	EC	EOG	AP
D02	28.04.16	Detailed Design Issue	EC	EOG	AP
D01	14.03.16	Detailed Design Issue	EC	EOG	AP

CLIENT: Transport for Greater Manchester

DESIGN: EC

CAD: EC

CHKD: EOG

APPD: AP

SCALE: 1:500

DATE: 2016-07-11

MANCHESTER METROLINK TRAFFORD PARK LINE

TITLE: URBAN REALM & LANDSCAPE GENERAL ARRANGEMENT SHEET 12

DRG No: MPT3-TP4-12-LDG-603

REV: D07

- NOTES:**
- TO BE READ IN CONJUNCTION WITH OTHER RELEVANT GENERAL ARRANGEMENT DRAWINGS. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE STATED.
 - WORKS TO BE CARRIED OUT IN ACCORDANCE WITH THE DESIGN GUIDE REFER TO DRG MPT3-TP0-00-MGD-600.
 - CHAINAGE INDICATED IS RELATIVE TO PERMANENT WAY ALIGNMENT.
 - FOR DETAILS OF NON-HIGHWAY ELEMENTS REFER TO DISCIPLINE-SPECIFIC LAYOUT DRAWINGS AND DETAILS.
 - FOR SHARED SURFACES, TACTILE PAVING, VEHICLE LOADING AND SURFACES IN UNTRAFFICKED AREAS, ALONG WITH PUBLIC SIGNS, SIGNALS AND OLE POLES REFER TO ENGINEERS AND HIGHWAYS DRAWINGS FOR DETAILS

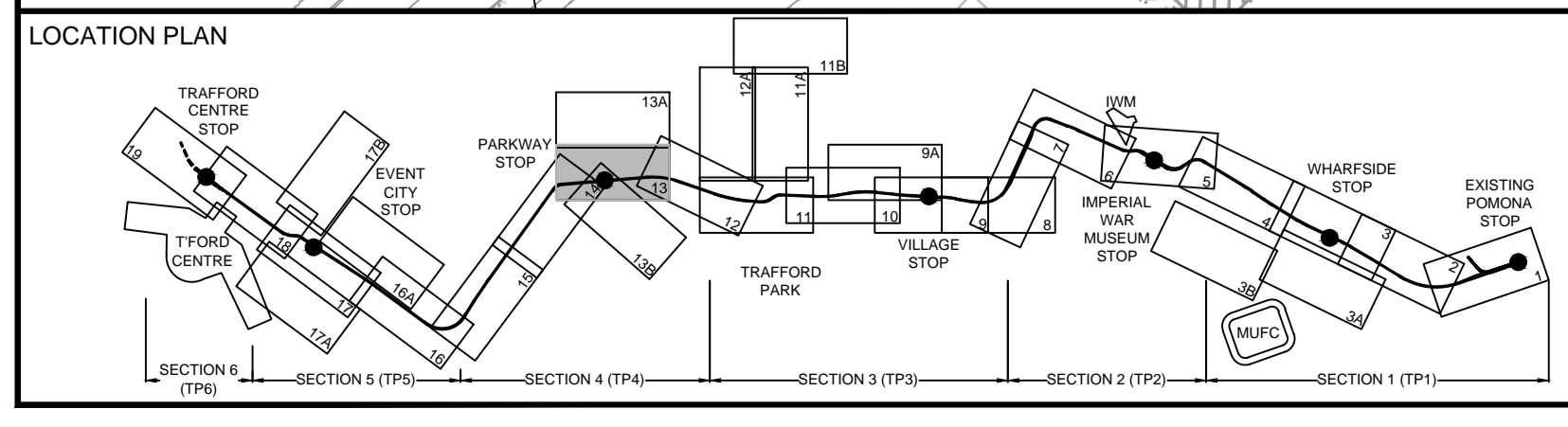
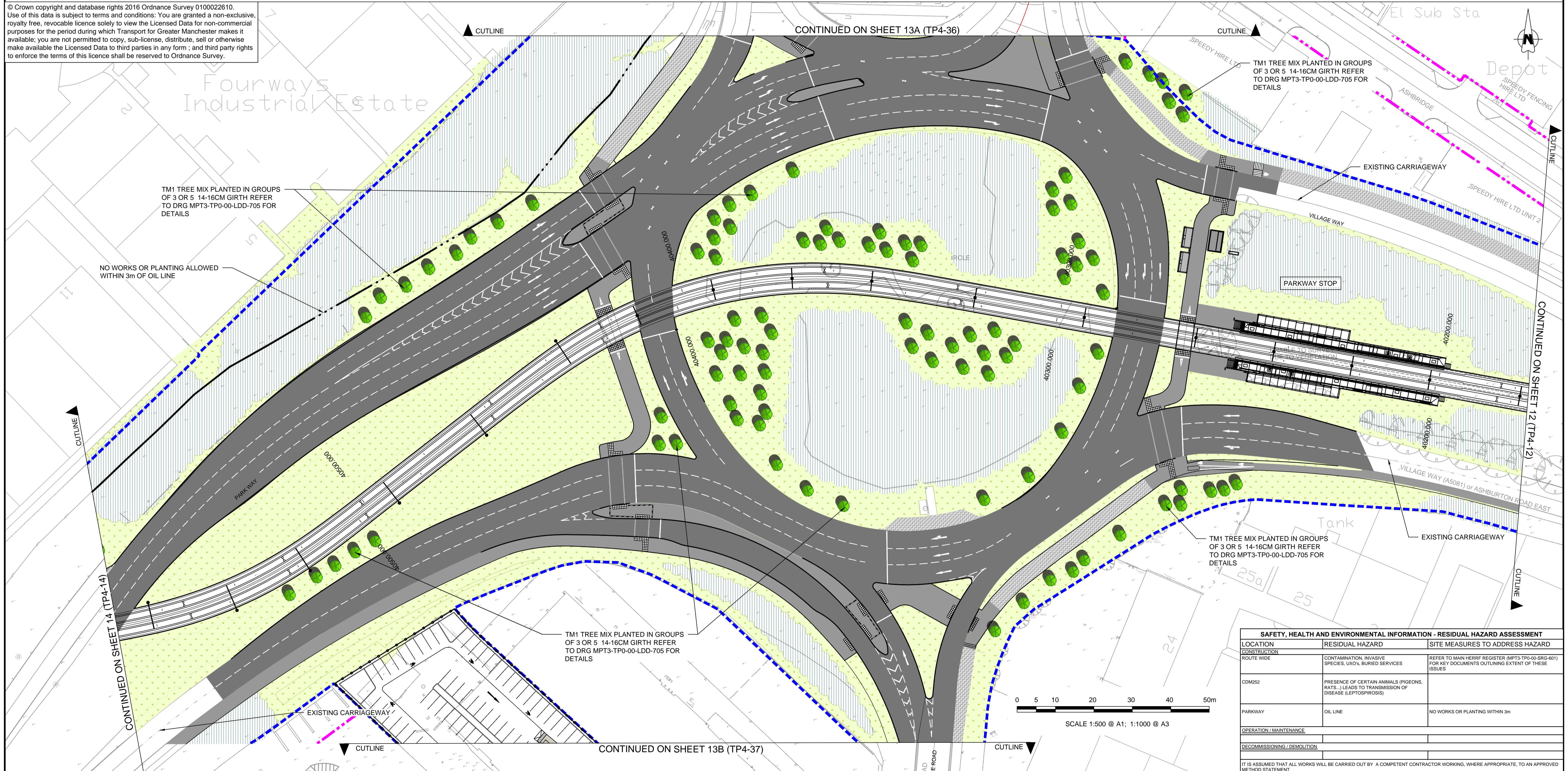
- GENERAL ARRANGEMENT KEY:**
- PROPOSED CARRIAGEWAY WORKS
 - PROPOSED WHITE ROAD MARKINGS
 - PROPOSED FLEXIBLE MACADAM - BLACK FOOTWAY / CYCLEWAY.
 - PROPOSED FLEXIBLE MACADAM - COLOURED FOOTWAY / CYCLEWAY.
 - PROPOSED GREEN SURFACING
 - PROPOSED AGGREGATE - MOT TYPE 1
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 - PROPOSED CONCRETE SURFACE
 - PROPOSED PCC FLAG PAVING (MARSHALLS METROPOLITAN) SIZE: 600x300 300x300 200x300
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 - PROPOSED SCOTTISH ROUNDED COBBLES 150-200MM SET IN CONCRETE FOUNDATION
 - PROPOSED REINFORCED GRASS SURFACE REFER TO DRG MPT3-TP0-00-LDD-701 DETAIL 02
 - PROPOSED FIXED BOLLARD REFER TO DRG MPT3-TP0-00-LDD-708 DETAIL 01
 - PROPOSED DEMOUNTABLE BOLLARD REFER TO DRG MPT3-TP0-00-LDD-708 DETAIL 01
 - PROPOSED BENCH REFER TO DRG MPT3-TP0-00-LDD-708 DETAIL 03
 - EARTHWORKS GRADIENT BETWEEN 1 in 10 AND 1 in 2.5. REFER TO MODEL FOR SPECIFIC GRADIENT

- PROPOSED PERMANENT WAY / TRAM TRACK RAISED RAIL AND EXPOSED AGGREGATE CONCRETE TO PERMANENT WAY DETAILS
- PROPOSED FLUSH RAIL AND EXPOSED AGGREGATE CONCRETE TO PERMANENT WAY DETAILS
- PROPOSED INFILL PANEL TRACK CROSSING WITH/WITHOUT PROPOSED PEDESTRIAN DETERRENT
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- PROPOSED PCC TACTILE FLAGS TO CROSSING. REFER TO HIGHWAYS DRAWINGS FOR DETAILS
- PROPOSED PCC TACTILE FLAGS TO CYCLEWAY. REFER TO HIGHWAYS DRAWINGS FOR DETAILS

- AMENITY GRASS. GRASS SEEDED AREA. REFER TO DRG MPT3-TP0-00-LDD-706 DETAIL 03
- PROPOSED ORNAMENTAL MIX. REFER TO DRG MPT3-TP0-00-LDD-706 DETAIL 04
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- PROPOSED RETAINING WALL TO ENGINEERS DETAIL
- BOUNDARY TREATMENT. TO BE DEVELOPED AS PER 3RD PARTY AGREEMENTS & TRAFFORD COUNCIL REQUIREMENTS
- PROPOSED PEDESTRIAN GUARDRAIL REFER TO ENGINEERS DETAILS
- PROPOSED POST AND KNEE RAIL REFER TO DRG MPT3-TP0-00-LDD-701 DETAIL 01
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WORK IN PROGRESS
VERIFICATION PROCEDURES NOT COMPLETED

REV	DATE	DETAIL	MADE	CHKD	APPD
D07	16.12.16	Value Engineering: Detailed Design	ST	EOG	ND
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D05	03.08.16	Detailed Design Issue	EC	EOG	ND
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D02	28.04.16	Detailed Design Issue	EC	EOG	AP
D01	04.03.16	Detailed Design Issue	EC	EOG	AP

CLIENT:	Transport for Greater Manchester	DESIGN:	EC	MANCHESTER METROLINK TRAFFORD PARK LINE
CAD:	EC	TITLE:	URBAN REALM & LANDSCAPE GENERAL ARRANGEMENT SHEET 13	
CHKD:	EOG	APPD:	AP	
SCALE:	1:500	DATE:	2016-07-11	
DRG No:	MPT3-TP4-13-LDG-603	REV:	D07	

NOTES:

1. TO BE READ IN CONJUNCTION WITH OTHER RELEVANT GENERAL ARRANGEMENT DRAWINGS. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE STATED.
2. WORKS TO BE CARRIED OUT IN ACCORDANCE WITH THE DESIGN GUIDE REFER TO DRG MPT3-TP0-00-MGD-600.
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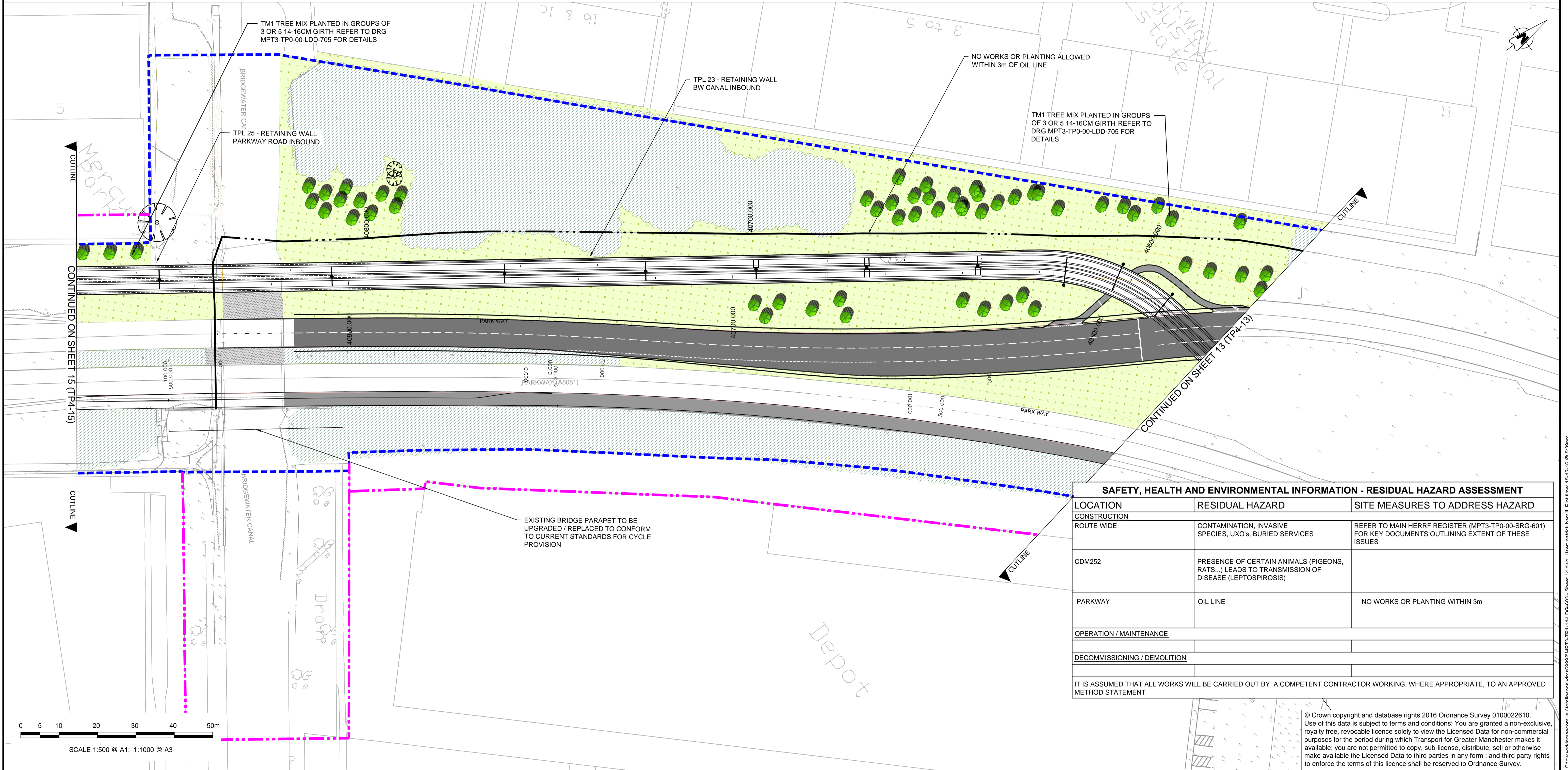
GENERAL ARRANGEMENT KEY:

- PROPOSED CARRIAGEWAY WORKS
- PROPOSED WHITE ROAD MARKINGS
- PROPOSED FLEXIBLE MACADAM - BLACK FOOTWAY / CYCLEWAY.
- PROPOSED FLEXIBLE MACADAM - COLOURED FOOTWAY / CYCLEWAY.
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- PROPOSED REINFORCED GRASS SURFACE REFER TO DRG MPT3-TP0-00-LDD-701 DETAIL 02
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- PROPOSED DEMOUNTABLE BOLLARD REFER TO DRG MPT3-TP0-00-LDD-708 DETAIL 01
- PROPOSED BENCH REFER TO DRG MPT3-TP0-00-LDD-708 DETAIL 03
- EARTHWORKS GRADIENT BETWEEN 1 in 10 AND 1 in 2.5. REFER TO MODEL FOR SPECIFIC GRADIENT

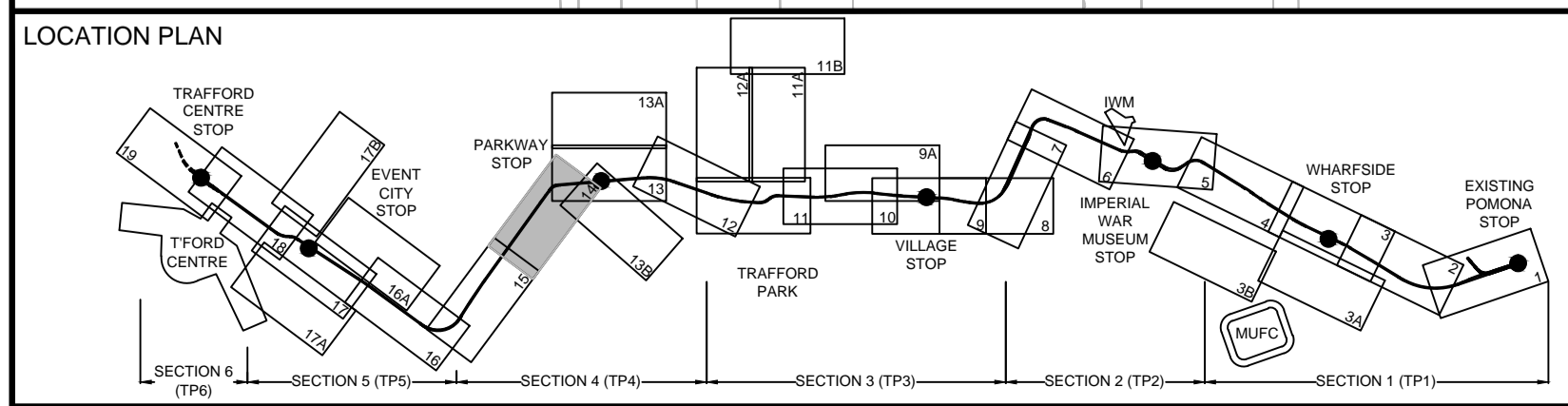
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- PROPOSED KERB LINE REFER TO HIGHWAYS DRAWINGS FOR DETAILS
- PROPOSED PCC TACTILE FLAGS TO CROSSING. REFER TO HIGHWAYS DRAWINGS FOR DETAILS
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- AMENITY GRASS. GRASS SEEDED AREA. REFER TO DRG MPT3-TP0-00-LDD-706 DETAIL 03
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SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION - RESIDUAL HAZARD ASSESSMENT		
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CDM252	PRESENCE OF CERTAIN ANIMALS (PIGEONS, RATS...) LEADS TO TRANSMISSION OF DISEASE (LEPTOSPIROSIS)	
PARKWAY	OIL LINE	NO WORKS OR PLANTING WITHIN 3m
OPERATION / MAINTENANCE		
DECOMMISSIONING / DEMOLITION		
IT IS ASSUMED THAT ALL WORKS WILL BE CARRIED OUT BY A COMPETENT CONTRACTOR WORKING, WHERE APPROPRIATE, TO AN APPROVED METHOD STATEMENT		



WORK IN PROGRESS
 VERIFICATION PROCEDURES NOT COMPLETED

REV	DATE	DETAIL	MADE	CHKD	APPD
D07	16.12.16	Reverted to DD to capture VE design	EC	EOG	ND
D06	22.11.16	Reverted to DD to capture VE design	EC	EOG	ND
D05	11.07.16	Detailed Design Issue	EC	EOG	ND
D04	11.07.16	Detailed Design Issue	EC	EOG	AP
D03	06.07.16	Detailed Design Issue	EC	EOG	AP
D02	28.04.16	Detailed Design Issue	EC	EOG	AP
D01	04.03.16	Detailed Design Issue	EC	EOG	AP

CLIENT:	Transport for Greater Manchester
DESIGN:	EC
CAD:	EC
CHKD:	EOG
APPD:	ND
SCALE:	1:500
DATE:	2016-11-22

MANCHESTER METROLINK TRAFFORD PARK LINE	
TITLE: URBAN REALM & LANDSCAPE GENERAL ARRANGEMENT SHEET 14	
DRG No:	MPT3-TP4-14-LDG-603
REV:	D07

NOTES:

1. TO BE READ IN CONJUNCTION WITH OTHER RELEVANT GENERAL ARRANGEMENT DRAWINGS. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE STATED.
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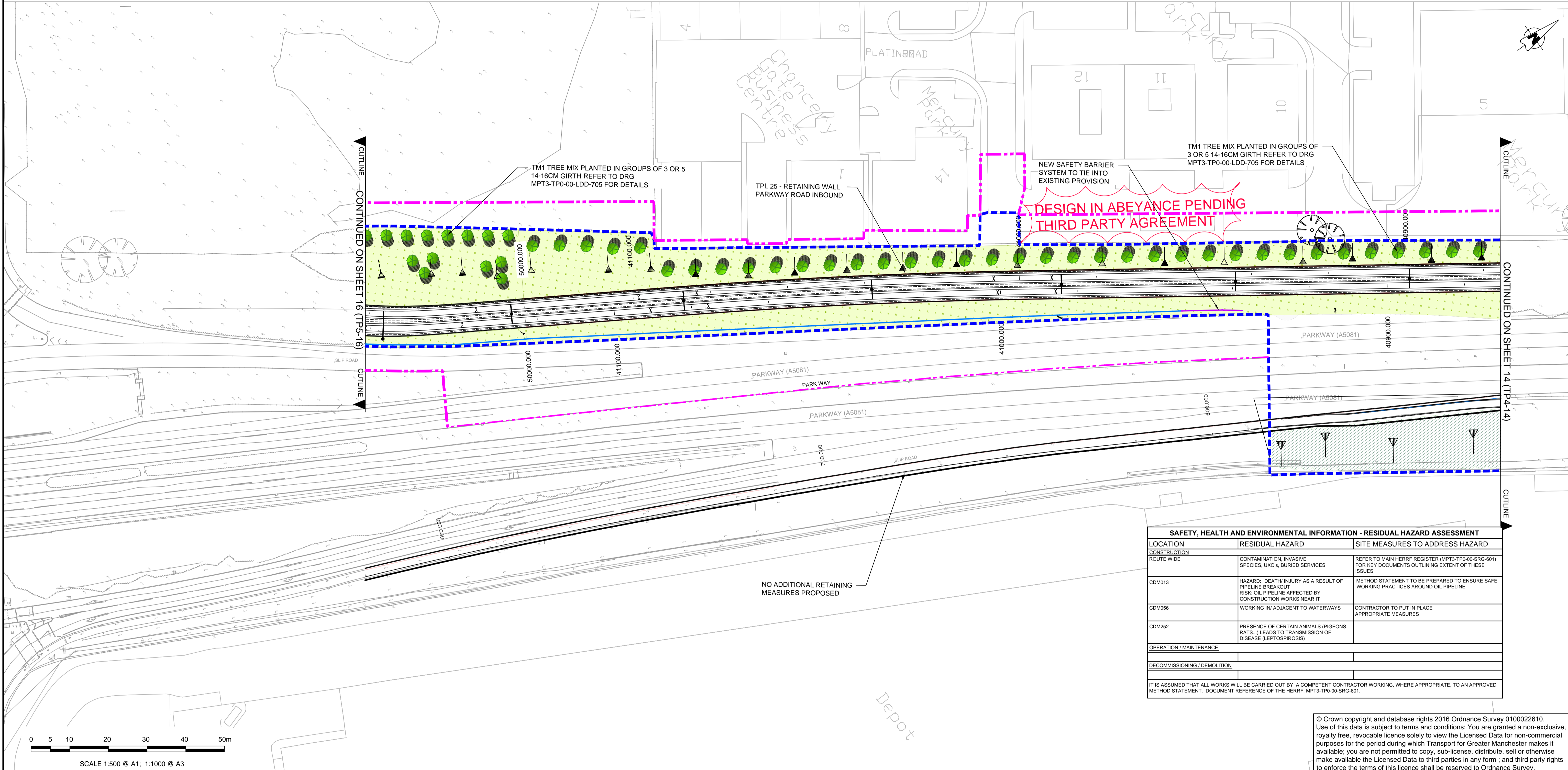
GENERAL ARRANGEMENT KEY:

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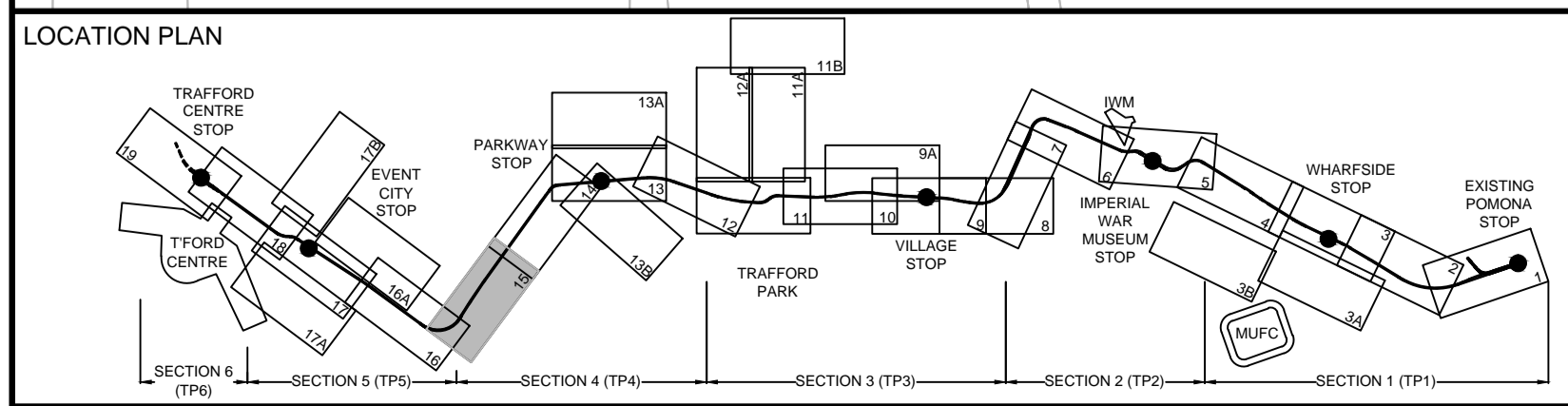
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- EXISTING SOFT LANDSCAPE RETAINED AS IS / MADE GOOD
- PROPOSED NATIVE HEDGE / POST AND WIRE FENCE REFER TO DRG MPT3-TP0-00-LDD-706 FOR DETAILS
- PROPOSED TREES. SUBJECT TO AGREEMENT WITH TRAFFORD COUNCIL & THIRD PARTIES REFER TO TREE PLANTING DETAILS
- EXISTING TREES RETAINED AND PROTECTED TO BS5837
- PROPOSED BULB PLANTING/REFER TO DRG MPT3-TP0-00-LDD-706
- PROPOSED WOODLAND TREE PLANTING REFER TO DRG MPT3-TP0-00-LDD-706 DETAIL 06

- PROPOSED RETAINING WALL TO ENGINEERS DETAIL
- BOUNDARY TREATMENT. TO BE DEVELOPED AS PER 3RD PARTY AGREEMENTS & TRAFFORD COUNCIL REQUIREMENTS
- PROPOSED PEDESTRIAN GUARDRAIL REFER TO ENGINEERS DETAILS
- PROPOSED POST AND KNEE RAIL REFER TO DRG MPT3-TP0-00-LDD-701 DETAIL 01
- EXISTING PARAPET UNDER REVIEW BY TGM.
- LIMIT OF DEVIATION (LOD) (THIS ALSO FORMS THE DEEMED PLANNING BOUNDARY WHEN IT IS THE OUTER MOST)
- TEMPORARY LIMIT OF LAND ACQUIRED OR USED (TLLAU) (THIS ALSO FORMS THE DEEMED PLANNING BOUNDARY WHEN IT IS THE OUTER MOST)



SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION - RESIDUAL HAZARD ASSESSMENT		
LOCATION	RESIDUAL HAZARD	SITE MEASURES TO ADDRESS HAZARD
CONSTRUCTION		
ROUTE WIDE	CONTAMINATION, INVASIVE SPECIES, UXOs, BURIED SERVICES	REFER TO MAIN HERRF REGISTER (MPT3-TP0-00-SRG-601) FOR KEY DOCUMENTS OUTLINING EXTENT OF THESE ISSUES
CDM013	HAZARD: DEATH/ INJURY AS A RESULT OF PIPELINE BREAKOUT RISK: OIL PIPELINE AFFECTED BY CONSTRUCTION WORKS NEAR IT	METHOD STATEMENT TO BE PREPARED TO ENSURE SAFE WORKING PRACTICES AROUND OIL PIPELINE
CDM056	WORKING IN/ ADJACENT TO WATERWAYS	CONTRACTOR TO PUT IN PLACE APPROPRIATE MEASURES
CDM252	PRESENCE OF CERTAIN ANIMALS (PIGEONS, RATS...) LEADS TO TRANSMISSION OF DISEASE (LEPTOSPIROSIS)	
OPERATION / MAINTENANCE		
DECOMMISSIONING / DEMOLITION		
IT IS ASSUMED THAT ALL WORKS WILL BE CARRIED OUT BY A COMPETENT CONTRACTOR WORKING, WHERE APPROPRIATE, TO AN APPROVED METHOD STATEMENT. DOCUMENT REFERENCE OF THE HERRF: MPT3-TP0-00-SRG-601.		

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FOR CONSTRUCTION

Q01	22.11.16	For Construction	EC	EOG	ND
REV	DATE	DETAIL	MADE	CHKD	APPD

CLIENT: Transport for Greater Manchester	DESIGN: EC	MANCHESTER METROLINK TRAFFORD PARK LINE
	CAD: EC	
	CHKD: EOG	TITLE: URBAN REALM & LANDSCAPE GENERAL ARRANGEMENT SHEET 15
	APPD: ND	DRG No: MPT3-TP4-15-LDG-603
	SCALE: 1:500	REV: Q01
	DATE: 2016-11-22	

- NOTES:**
- TO BE READ IN CONJUNCTION WITH OTHER RELEVANT GENERAL ARRANGEMENT DRAWINGS. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE STATED.
 - WORKS TO BE CARRIED OUT IN ACCORDANCE WITH THE DESIGN GUIDE REFER TO DRG MPT3-TP0-00-MGD-600.
 - CHAINAGE INDICATED IS RELATIVE TO PERMANENT WAY ALIGNMENT.
 - FOR DETAILS OF NON-HIGHWAY ELEMENTS REFER TO DISCIPLINE-SPECIFIC LAYOUT DRAWINGS AND DETAILS.
 - FOR SHARED SURFACES, TACTILE PAVING, VEHICLE LOADING AND SURFACES IN UNTRAFFICKED AREAS, ALONG WITH PUBLIC SIGNS, SIGNALS AND OLE POLES REFER TO ENGINEERS AND HIGHWAYS DRAWINGS FOR DETAILS

- GENERAL ARRANGEMENT KEY:**
- PROPOSED CARRIAGEWAY WORKS
 - PROPOSED WHITE ROAD MARKINGS
 - PROPOSED FLEXIBLE MACADAM - BLACK FOOTWAY / CYCLEWAY.
 - PROPOSED FLEXIBLE MACADAM - COLOURED FOOTWAY / CYCLEWAY.
 - PROPOSED GREEN SURFACING
 - PROPOSED AGGREGATE - MOT TYPE 1
 - EXISTING FOOTWAY URBAN REALM RETAINED AS IS / MADE GOOD
 - PROPOSED CONCRETE SURFACE

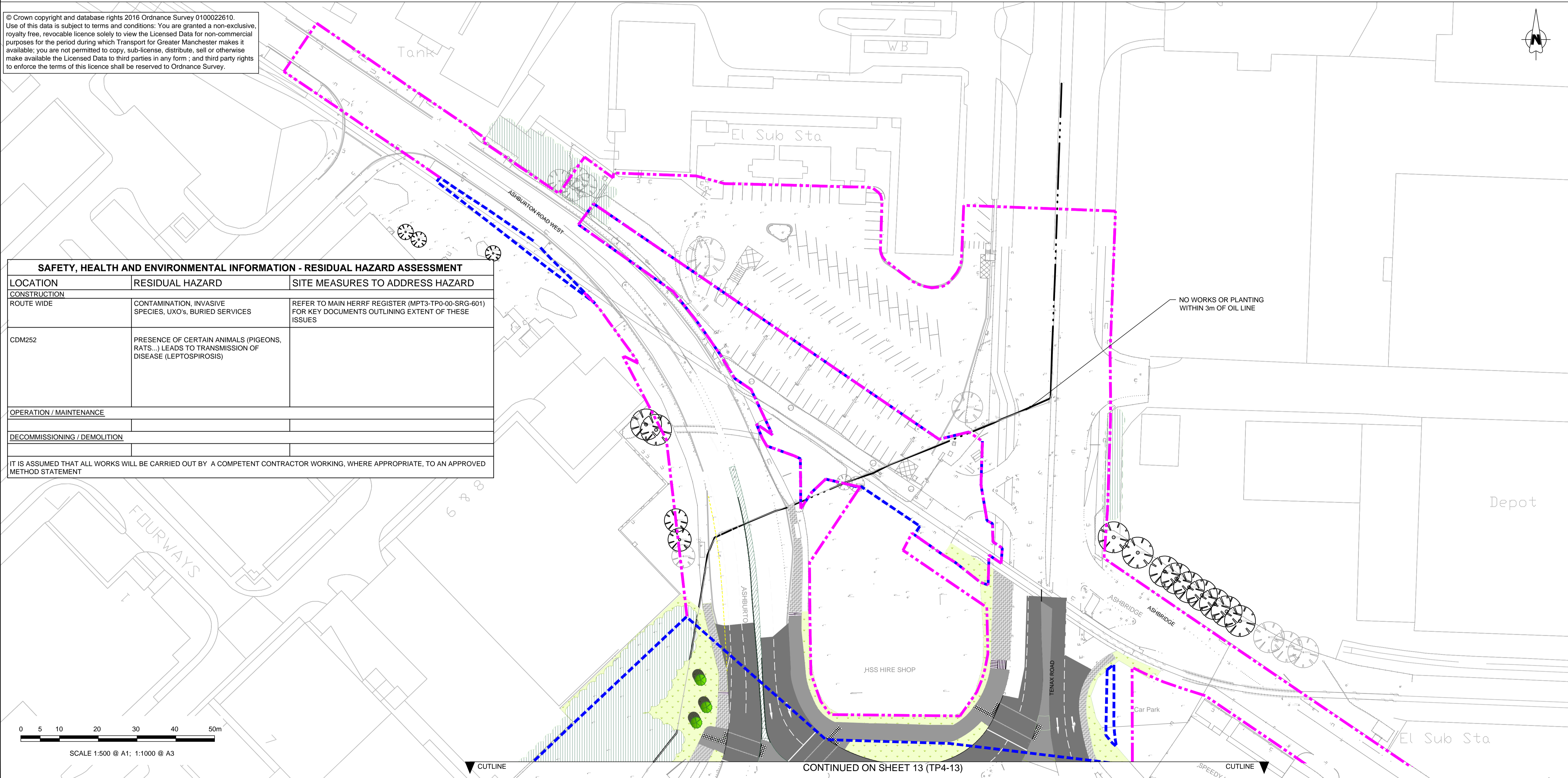
- PROPOSED PCC FLAG PAVING (MARSHALLS METROPOLITAN) SIZE: 600x300 300x300 200x300
- PROPOSED BLOCK PAVING / MAINTENANCE STRIP SIZE: 200 X 100 COLOUR TO MATCH EXISTING
- PROPOSED SCOTTISH ROUNDED COBBLES 150-200MM SET IN CONCRETE FOUNDATION
- PROPOSED REINFORCED GRASS SURFACE REFER TO DRG MPT3-TP0-00-LDD-701 DETAIL 02
- PROPOSED FIXED BOLLARD REFER TO DRG MPT3-TP0-00-LDD-708 DETAIL 01
- PROPOSED DEMOUNTABLE BOLLARD REFER TO DRG MPT3-TP0-00-LDD-708 DETAIL 01
- PROPOSED BENCH REFER TO DRG MPT3-TP0-00-LDD-708 DETAIL 03
- EARTHWORKS GRADIENT BETWEEN 1 in 10 AND 1 in 2.5. REFER TO MODEL FOR SPECIFIC GRADIENT

- PROPOSED PERMANENT WAY / TRAM TRACK RAISED RAIL AND EXPOSED AGGREGATE CONCRETE TO PERMANENT WAY DETAILS
- PROPOSED FLUSH RAIL AND EXPOSED AGGREGATE CONCRETE TO PERMANENT WAY DETAILS
- PROPOSED INFILL PANEL TRACK CROSSING WITH/WITHOUT PROPOSED PEDESTRIAN DETERRENT
- OVERHEAD LINE EQUIPMENT
- PROPOSED KERB LINE REFER TO HIGHWAYS DRAWINGS FOR DETAILS
- PROPOSED PCC TACTILE FLAGS TO CROSSING. REFER TO HIGHWAYS DRAWINGS FOR DETAILS
- PROPOSED PCC TACTILE FLAGS TO CYCLEWAY. REFER TO HIGHWAYS DRAWINGS FOR DETAILS

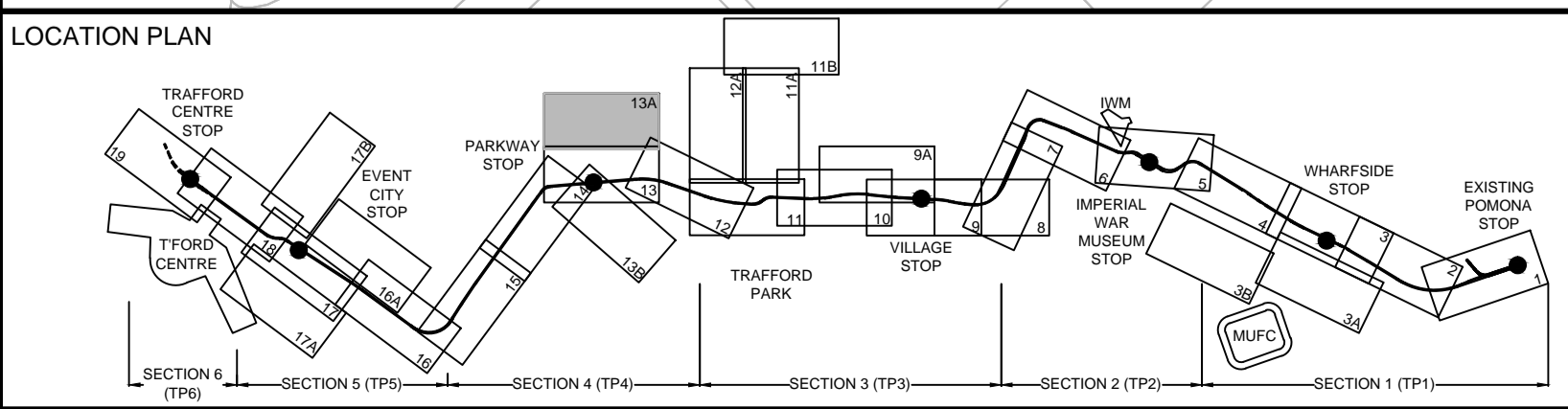
- AMENITY GRASS, GRASS SEEDED AREA. REFER TO DRG MPT3-TP0-00-LDD-706 DETAIL 03
- PROPOSED ORNAMENTAL MIX. REFER TO DRG MPT3-TP0-00-LDD-706 DETAIL 04
- EXISTING SOFT LANDSCAPE RETAINED AS IS / MADE GOOD
- PROPOSED NATIVE HEDGE / POST AND WIRE FENCE REFER TO DRG MPT3-TP0-00-LDD-706 FOR DETAILS
- PROPOSED TREES. SUBJECT TO AGREEMENT WITH TRAFFORD COUNCIL & THIRD PARTIES REFER TO TREE PLANTING DETAILS
- EXISTING TREES RETAINED AND PROTECTED TO BS5837
- PROPOSED BULB PLANTING/REFER TO DRG MPT3-TP0-00-LDD-706
- PROPOSED WOODLAND TREE PLANTING REFER TO DRG MPT3-TP0-00-LDD-706 DETAIL 06

- PROPOSED RETAINING WALL TO ENGINEERS DETAIL
- BOUNDARY TREATMENT. TO BE DEVELOPED AS PER 3RD PARTY AGREEMENTS & TRAFFORD COUNCIL REQUIREMENTS
- PROPOSED PEDESTRIAN GUARDRAIL REFER TO ENGINEERS DETAILS
- PROPOSED POST AND KNEE RAIL REFER TO DRG MPT3-TP0-00-LDD-701 DETAIL 01
- EXISTING PARAPET UNDER REVIEW BY TGM.
- LIMIT OF DEVIATION (LOD) (THIS ALSO FORMS THE DEEMED PLANNING BOUNDARY WHEN IT IS THE OUTER MOST)
- TEMPORARY LIMIT OF LAND ACQUIRED OR USED (TLLAU) (THIS ALSO FORMS THE DEEMED PLANNING BOUNDARY WHEN IT IS THE OUTER MOST)

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SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION - RESIDUAL HAZARD ASSESSMENT		
LOCATION	RESIDUAL HAZARD	SITE MEASURES TO ADDRESS HAZARD
CONSTRUCTION		
ROUTE WIDE	CONTAMINATION, INVASIVE SPECIES, UXO's, BURIED SERVICES	REFER TO MAIN HERRF REGISTER (MPT3-TP0-00-SRG-601) FOR KEY DOCUMENTS OUTLINING EXTENT OF THESE ISSUES
CDM252	PRESENCE OF CERTAIN ANIMALS (PIGEONS, RATS...) LEADS TO TRANSMISSION OF DISEASE (LEPTOSPIROSIS)	
OPERATION / MAINTENANCE		
DECOMMISSIONING / DEMOLITION		
IT IS ASSUMED THAT ALL WORKS WILL BE CARRIED OUT BY A COMPETENT CONTRACTOR WORKING, WHERE APPROPRIATE, TO AN APPROVED METHOD STATEMENT		

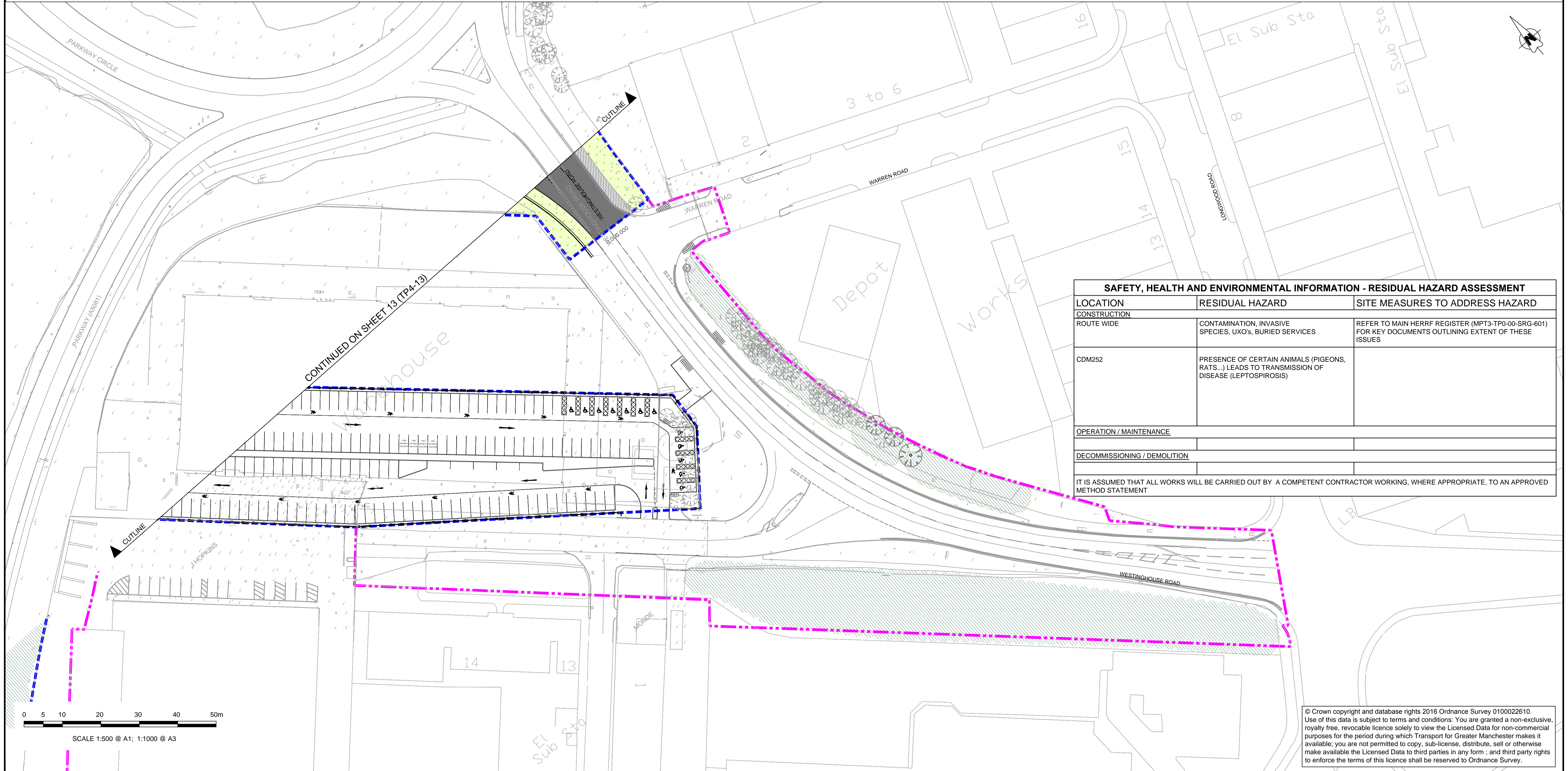


WORK IN PROGRESS
VERIFICATION PROCEDURES NOT COMPLETED

REV	DATE	DETAIL	MADE	CHKD	APPD
D07	16.12.16	Value Engineering: Detailed Design	ST	EOG	ND
D06	21.11.16	Value Engineering: Preliminary Design	ST	EOG	ND
D06	03.08.16	Detailed Design Issue	EC	EOG	ND
D04	11.07.16	Detailed Design Issue	EC	EOG	AP
D03	06.07.16	Detailed Design Issue	EC	EOG	AP
D02	28.04.16	Detailed Design Issue	EC	EOG	AP
D01	04.03.16	Detailed Design Issue	EC	EOG	AP

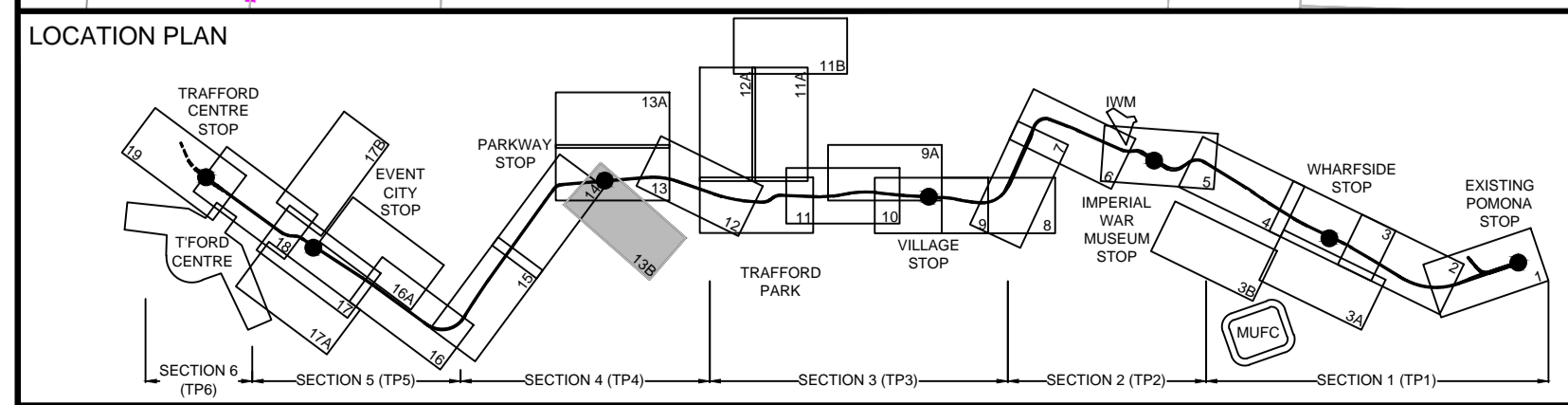
CLIENT: Transport for Greater Manchester	DESIGN: EC	MANCHESTER METROLINK TRAFFORD PARK LINE
	CAD: EC	
	CHKD: EOG	TITLE: URBAN REALM & LANDSCAPE GENERAL ARRANGEMENT SHEET 13A
	APPD: AP	DRG No: MPT3-TP4-36-LDG-603
	SCALE: 1:500	REV: D07
	DATE: 2016-07-11	

NOTES:		GENERAL ARRANGEMENT KEY:																																								
1. TO BE READ IN CONJUNCTION WITH OTHER RELEVANT GENERAL ARRANGEMENT DRAWINGS. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE STATED.	2. WORKS TO BE CARRIED OUT IN ACCORDANCE WITH THE DESIGN GUIDE REFER TO DRG MPT3-TP0-00-MGD-600.	3. CHAINAGE INDICATED IS RELATIVE TO PERMANENT WAY ALIGNMENT.	4. FOR DETAILS OF NON-HIGHWAY ELEMENTS REFER TO DISCIPLINE-SPECIFIC LAYOUT DRAWINGS AND DETAILS.	5. FOR SHARED SURFACES, TACTILE PAVING, VEHICLE LOADING AND SURFACES IN UNTRAFFICKED AREAS, ALONG WITH PUBLIC SIGNS, SIGNALS AND OLE POLES REFER TO ENGINEERS AND HIGHWAYS DRAWINGS FOR DETAILS	PROPOSED CARRIAGEWAY WORKS	PROPOSED WHITE ROAD MARKINGS	PROPOSED FLEXIBLE MACADAM - BLACK FOOTWAY / CYCLEWAY.	PROPOSED FLEXIBLE MACADAM - COLOURED FOOTWAY / CYCLEWAY.	PROPOSED GREEN SURFACING	PROPOSED AGGREGATE - MOT TYPE 1	EXISTING FOOTWAY URBAN REALM RETAINED AS IS / MADE GOOD	PROPOSED CONCRETE SURFACE	PROPOSED PCC FLAG PAVING (MARSHALLS METROPOLITAN) SIZE: 600x300 300x300 200x300	PROPOSED BLOCK PAVING / MAINTENANCE STRIP SIZE: 200 X 100 COLOUR TO MATCH EXISTING	PROPOSED SCOTTISH ROUNDED COBBLES 150-200MM SET IN CONCRETE FOUNDATION	PROPOSED REINFORCED GRASS SURFACE REFER TO DRG MPT3-TP0-00-LDD-701 DETAIL 02	PROPOSED FIXED BOLLARD REFER TO DRG MPT3-TP0-00-LDD-708 DETAIL 01	PROPOSED DEMOUNTABLE BOLLARD REFER TO DRG MPT3-TP0-00-LDD-708 DETAIL 01	PROPOSED BENCH REFER TO DRG MPT3-TP0-00-LDD-708 DETAIL 03	EARTHWORKS GRADIENT BETWEEN 1 in 10 AND 1 in 2.5. REFER TO MODEL FOR SPECIFIC GRADIENT	PROPOSED PERMANENT WAY / TRAM TRACK RAISED RAIL AND EXPOSED AGGREGATE CONCRETE TO PERMANENT WAY DETAILS	PROPOSED FLUSH RAIL AND EXPOSED AGGREGATE CONCRETE TO PERMANENT WAY DETAILS	PROPOSED INFILL PANEL TRACK CROSSING WITH/WITHOUT PROPOSED PEDESTRIAN DETERRENT	OVERHEAD LINE EQUIPMENT	PROPOSED KERB LINE REFER TO HIGHWAYS DRAWINGS FOR DETAILS	PROPOSED PCC TACTILE FLAGS TO CROSSING. REFER TO HIGHWAYS DRAWINGS FOR DETAILS	PROPOSED PCC TACTILE FLAGS TO CYCLEWAY. REFER TO HIGHWAYS DRAWINGS FOR DETAILS	AMENITY GRASS, GRASS SEEDED AREA. REFER TO DRG MPT3-TP0-00-LDD-706 DETAIL 03	PROPOSED ORNAMENTAL MIX. REFER TO DRG MPT3-TP0-00-LDD-706 DETAIL 04	EXISTING SOFT LANDSCAPE RETAINED AS IS / MADE GOOD	PROPOSED NATIVE HEDGE / POST AND WIRE FENCE REFER TO DRG MPT3-TP0-00-LDD-706 FOR DETAILS	PROPOSED TREES. SUBJECT TO AGREEMENT WITH TRAFFORD COUNCIL & THIRD PARTIES REFER TO TREE PLANTING DETAILS	EXISTING TREES RETAINED AND PROTECTED TO BS5837	PROPOSED BULB PLANTING/REFER TO DRG MPT3-TP0-00-LDD-706	PROPOSED WOODLAND TREE PLANTING REFER TO DRG MPT3-TP0-00-LDD-706 DETAIL 06	PROPOSED RETAINING WALL TO ENGINEERS DETAIL	BOUNDARY TREATMENT. TO BE DEVELOPED AS PER 3RD PARTY AGREEMENTS & TRAFFORD COUNCIL REQUIREMENTS	PROPOSED PEDESTRIAN GUARDRAIL REFER TO ENGINEERS DETAILS	PROPOSED POST AND KNEE RAIL REFER TO DRG MPT3-TP0-00-LDD-701 DETAIL 01	EXISTING PARAPET UNDER REVIEW BY TGM.	LIMIT OF DEVIATION (LOD) (THIS ALSO FORMS THE DEEMED PLANNING BOUNDARY WHEN IT IS THE OUTER MOST)	TEMPORARY LIMIT OF LAND ACQUIRED OR USED (TLLAU) (THIS ALSO FORMS THE DEEMED PLANNING BOUNDARY WHEN IT IS THE OUTER MOST)



SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION - RESIDUAL HAZARD ASSESSMENT		
LOCATION	RESIDUAL HAZARD	SITE MEASURES TO ADDRESS HAZARD
CONSTRUCTION		
ROUTE WIDE	CONTAMINATION, INVASIVE SPECIES, UXO's, BURIED SERVICES	REFER TO MAIN HERRF REGISTER (MPT3-TP0-00-SRG-601) FOR KEY DOCUMENTS OUTLINING EXTENT OF THESE ISSUES
CDM252	PRESENCE OF CERTAIN ANIMALS (PIGEONS, RATS...) LEADS TO TRANSMISSION OF DISEASE (LEPTOSPIROSIS)	
OPERATION / MAINTENANCE		
DECOMMISSIONING / DEMOLITION		
IT IS ASSUMED THAT ALL WORKS WILL BE CARRIED OUT BY A COMPETENT CONTRACTOR WORKING, WHERE APPROPRIATE, TO AN APPROVED METHOD STATEMENT		

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WORK IN PROGRESS
VERIFICATION PROCEDURES NOT COMPLETED

		CLIENT: Transport for Greater Manchester DESIGN: EC CAD: EC CHKD: EOG APPD: AP SCALE: 1:500 DATE: 2016-07-11	MANCHESTER METROLINK TRAFFORD PARK LINE TITLE: URBAN REALM & LANDSCAPE GENERAL ARRANGEMENT SHEET 13B
DRG No: MPT3-TP4-37-LDG-603 REV: D07			

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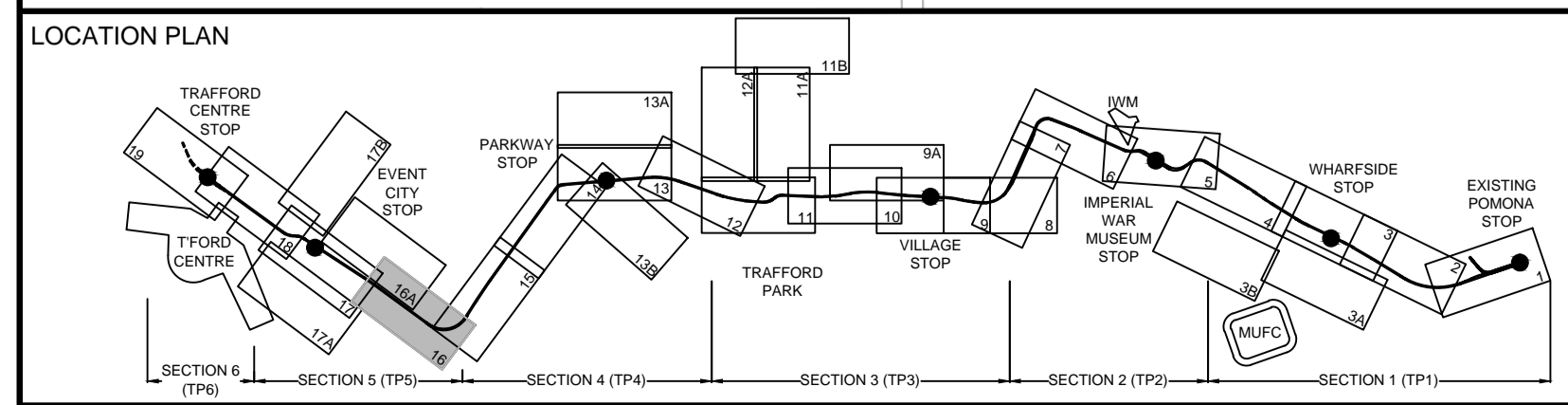
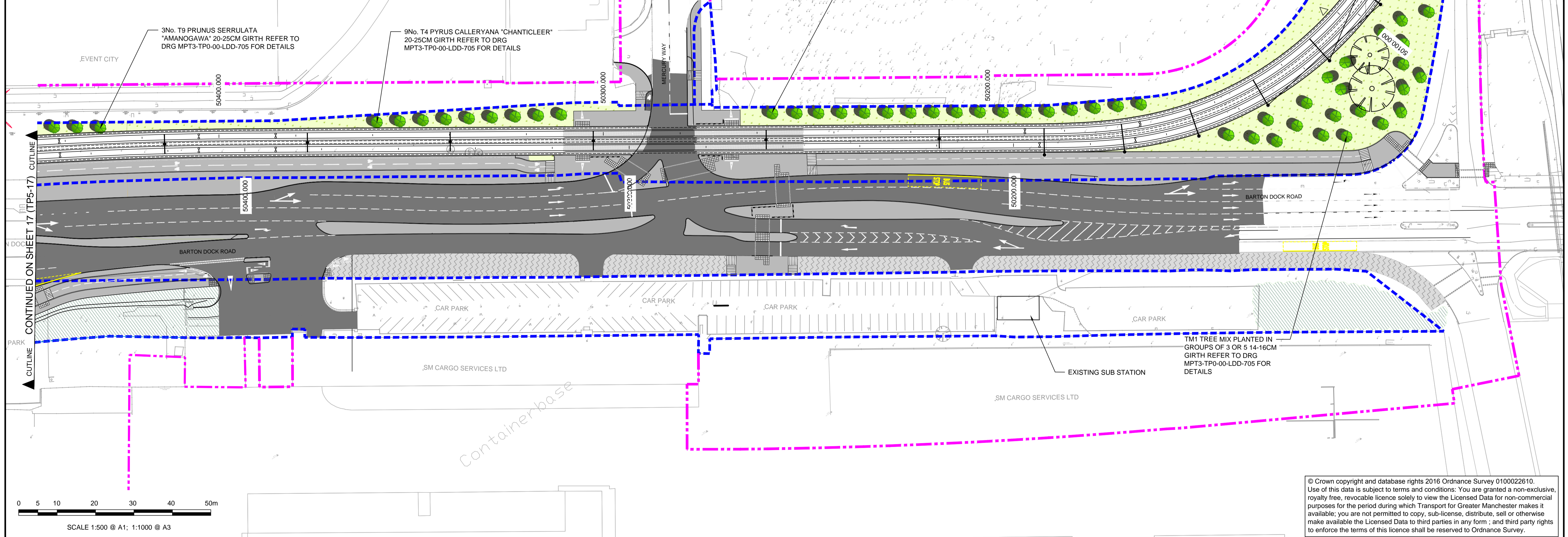
NOTES:

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- WORKS TO BE CARRIED OUT IN ACCORDANCE WITH THE DESIGN GUIDE REFER TO DRG MPT3-TP0-00-MGD-600.
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GENERAL ARRANGEMENT KEY:

	PROPOSED CARRIAGEWAY WORKS		PROPOSED PCC FLAG PAVING (MARSHALLS METROPOLITAN) SIZE: 600x300 300x300 200x300		PROPOSED PERMANENT WAY / TRAM TRACK RAISED RAIL AND EXPOSED AGGREGATE CONCRETE TO PERMANENT WAY DETAILS		AMENITY GRASS. GRASS SEEDED AREA. REFER TO DRG MPT3-TP0-00-LDD-706 DETAIL 03		PROPOSED RETAINING WALL TO ENGINEERS DETAIL
	PROPOSED WHITE ROAD MARKINGS		PROPOSED BLOCK PAVING / MAINTENANCE STRIP SIZE: 200 X 100 COLOUR TO MATCH EXISTING		PROPOSED FLUSH RAIL AND EXPOSED AGGREGATE CONCRETE TO PERMANENT WAY DETAILS		PROPOSED ORNAMENTAL MIX. REFER TO DRG MPT3-TP0-00-LDD-706 DETAIL 04		BOUNDARY TREATMENT. TO BE DEVELOPED AS PER 3RD PARTY AGREEMENTS & TRAFFORD COUNCIL REQUIREMENTS
	PROPOSED FLEXIBLE MACADAM - BLACK FOOTWAY / CYCLEWAY.		PROPOSED SCOTTISH ROUNDED COBBLES 150-200MM SET IN CONCRETE FOUNDATION		PROPOSED INFILL PANEL TRACK CROSSING WITH/WITHOUT PROPOSED PEDESTRIAN DETERRENT		EXISTING SOFT LANDSCAPE RETAINED AS IS / MADE GOOD		PROPOSED PEDESTRIAN GUARDRAIL REFER TO ENGINEERS DETAILS
	PROPOSED FLEXIBLE MACADAM - COLOURED FOOTWAY / CYCLEWAY.		PROPOSED REINFORCED GRASS SURFACE REFER TO DRG MPT3-TP0-00-LDD-701 DETAIL 02		OVERHEAD LINE EQUIPMENT		PROPOSED NATIVE HEDGE / POST AND WIRE FENCE REFER TO DRG MPT3-TP0-00-LDD-706 FOR DETAILS		PROPOSED POST AND KNEE RAIL REFER TO DRG MPT3-TP0-00-LDD-701 DETAIL 01
	PROPOSED GREEN SURFACING		PROPOSED FIXED BOLLARD REFER TO DRG MPT3-TP0-00-LDD-708 DETAIL 01		PROPOSED KERB LINE REFER TO HIGHWAYS DRAWINGS FOR DETAILS		PROPOSED TREES. SUBJECT TO AGREEMENT WITH TRAFFORD COUNCIL & THIRD PARTIES REFER TO TREE PLANTING DETAILS		EXISTING PARAPET UNDER REVIEW BY TIGM.
	PROPOSED AGGREGATE - MOT TYPE 1		PROPOSED DEMOUNTABLE BOLLARD REFER TO DRG MPT3-TP0-00-LDD-708 DETAIL 01		PROPOSED PCC TACTILE FLAGS TO CROSSING. REFER TO HIGHWAYS DRAWINGS FOR DETAILS		PROPOSED BULB PLANTING/REFER TO DRG MPT3-TP0-00-LDD-706		LIMIT OF DEVIATION (LOD) (THIS ALSO FORMS THE DEEMED PLANNING BOUNDARY WHEN IT IS THE OUTER MOST)
	EXISTING FOOTWAY URBAN REALM RETAINED AS IS / MADE GOOD		PROPOSED BENCH REFER TO DRG MPT3-TP0-00-LDD-708 DETAIL 03		PROPOSED PCC TACTILE FLAGS TO CYCLEWAY. REFER TO HIGHWAYS DRAWINGS FOR DETAILS		PROPOSED WOODLAND TREE PLANTING REFER TO DRG MPT3-TP0-00-LDD-706 DETAIL 06		TEMPORARY LIMIT OF LAND ACQUIRED OR USED (TLLAU) (THIS ALSO FORMS THE DEEMED PLANNING BOUNDARY WHEN IT IS THE OUTER MOST)
	PROPOSED CONCRETE SURFACE		EARTHWORKS GRADIENT BETWEEN 1 in 10 AND 1 in 2.5. REFER TO MODEL FOR SPECIFIC GRADIENT						

SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION - RESIDUAL HAZARD ASSESSMENT		
LOCATION	RESIDUAL HAZARD	SITE MEASURES TO ADDRESS HAZARD
CONSTRUCTION ROUTE WIDE	CONTAMINATION, INVASIVE SPECIES, UXO's, BURIED SERVICES	REFER TO MAIN HERRF REGISTER (MPT3-TP0-00-SRG-601) FOR KEY DOCUMENTS OUTLINING EXTENT OF THESE ISSUES
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OPERATION / MAINTENANCE		
DECOMMISSIONING / DEMOLITION		
IT IS ASSUMED THAT ALL WORKS WILL BE CARRIED OUT BY A COMPETENT CONTRACTOR WORKING, WHERE APPROPRIATE, TO AN APPROVED METHOD STATEMENT		



WORK IN PROGRESS
VERIFICATION PROCEDURES NOT COMPLETED

REV	DATE	DETAIL	MADE	CHKD	APPD
D07	16.12.16	Value Engineering: Detailed Design	ST	EOG	ND
D06	21.11.16	Value Engineering: Preliminary Design	ST	EOG	ND
D05	03.08.16	Detailed Design Issue	EC	EOG	ND
D04	11.07.16	Detailed Design Issue	EC	EOG	AP
D03	06.07.16	Detailed Design Issue	EC	EOG	AP
D02	28.04.16	Detailed Design Issue	EC	EOG	AP
D01	04.03.16	Detailed Design Issue	EC	EOG	AP

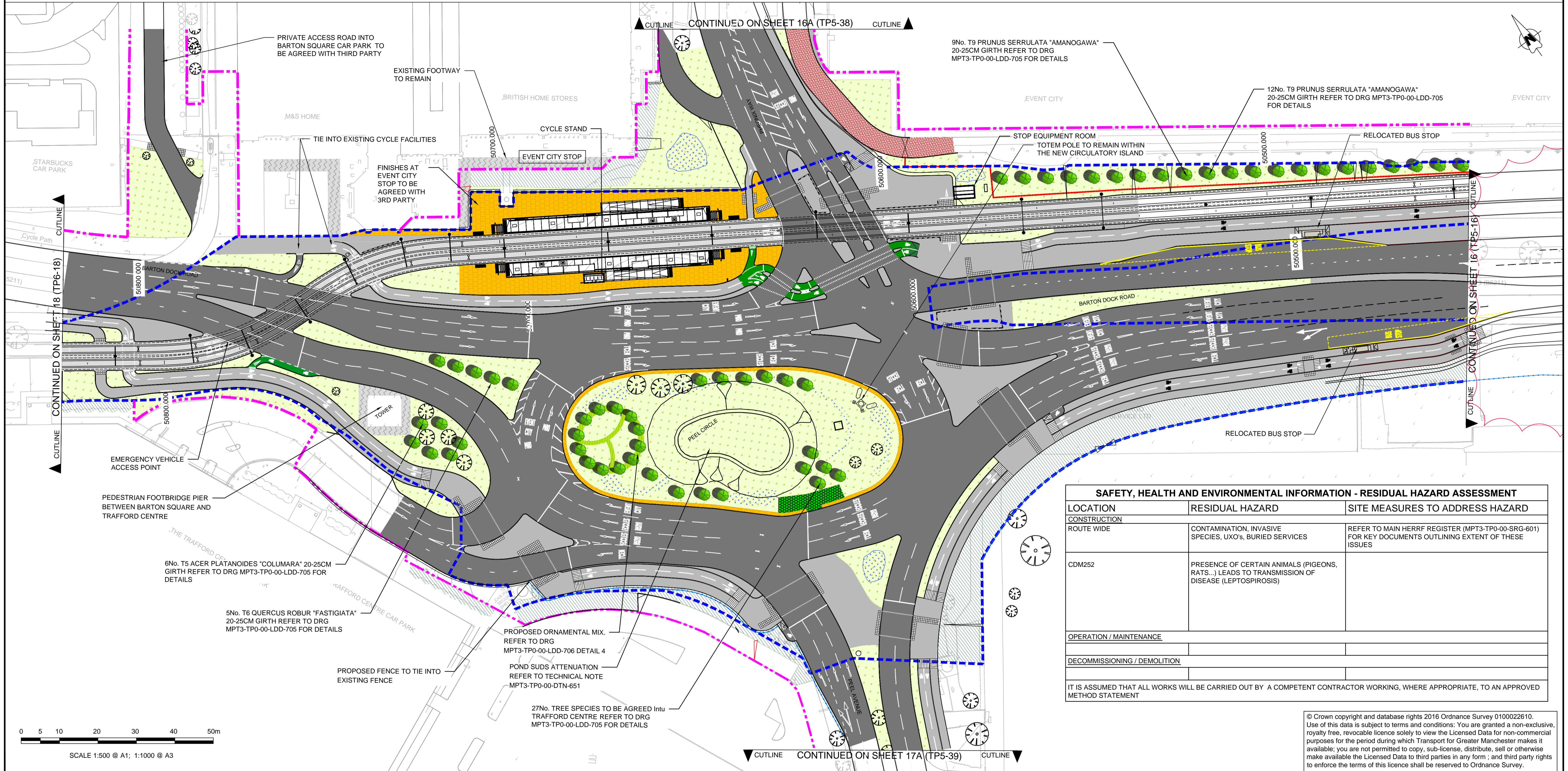
CLIENT: Transport for Greater Manchester	DESIGN: EC	MANCHESTER METROLINK TRAFFORD PARK LINE
	CAD: EC	
	CHKD: EOG	TITLE: URBAN REALM & LANDSCAPE GENERAL ARRANGEMENT SHEET 16
	APPD: AP	DRG No: MPT3-TP5-16-LDG-603
	SCALE: 1:500	REV: D07
	DATE: 2016-07-11	

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 - PROPOSED BLOCK PAVING / MAINTENANCE STRIP SIZE: 200 X 100 COLOUR TO MATCH EXISTING
 - PROPOSED SCOTTISH ROUNDED COBBLES 150-200MM SET IN CONCRETE FOUNDATION
 - PROPOSED REINFORCED GRASS SURFACE REFER TO DRG MPT3-TP0-00-LDD-701 DETAIL 02
 - PROPOSED FIXED BOLLARD REFER TO DRG MPT3-TP0-00-LDD-708 DETAIL 01
 - PROPOSED DEMOUNTABLE BOLLARD REFER TO DRG MPT3-TP0-00-LDD-708 DETAIL 01
 - PROPOSED BENCH REFER TO DRG MPT3-TP0-00-LDD-708 DETAIL 03
 - EARTHWORKS GRADIENT BETWEEN 1 in 10 AND 1 in 2.5. REFER TO MODEL FOR SPECIFIC GRADIENT
 - PROPOSED PERMANENT WAY / TRAM TRACK RAISED RAIL AND EXPOSED AGGREGATE CONCRETE TO PERMANENT WAY DETAILS
 - PROPOSED FLUSH RAIL AND EXPOSED AGGREGATE CONCRETE TO PERMANENT WAY DETAILS
 - PROPOSED INFILL PANEL TRACK CROSSING WITH/WITHOUT PROPOSED PEDESTRIAN DETERRENT
 - OVERHEAD LINE EQUIPMENT
 - PROPOSED KERB LINE REFER TO HIGHWAYS DRAWINGS FOR DETAILS
 - PROPOSED PCC TACTILE FLAGS TO CROSSING. REFER TO HIGHWAYS DRAWINGS FOR DETAILS
 - PROPOSED PCC TACTILE FLAGS TO CYCLEWAY. REFER TO HIGHWAYS DRAWINGS FOR DETAILS

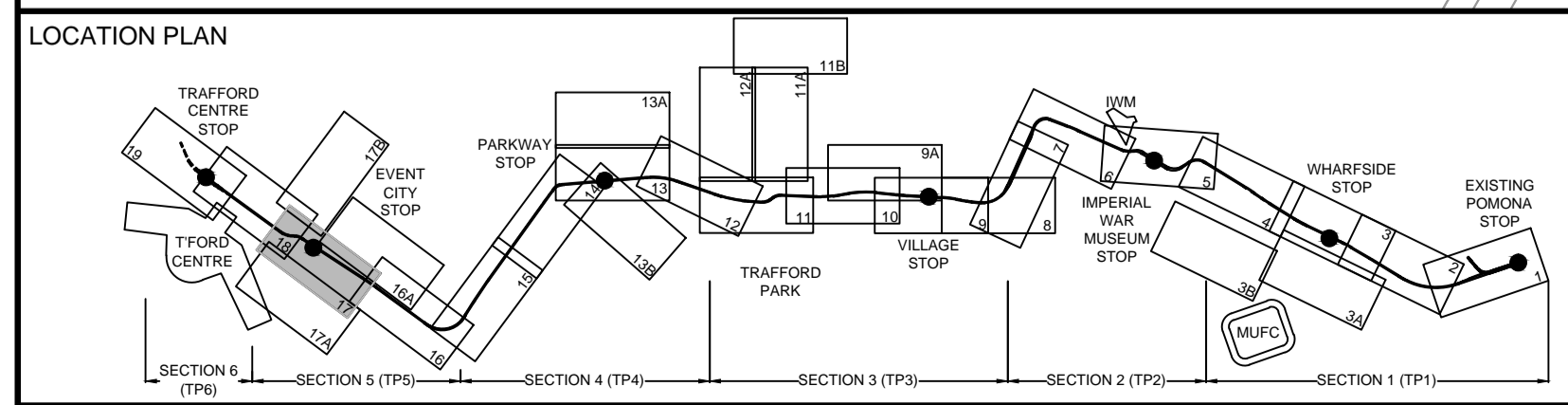
- AMENITY GRASS. GRASS SEEDED AREA. REFER TO DRG MPT3-TP0-00-LDD-706 DETAIL 03
- PROPOSED ORNAMENTAL MIX. REFER TO DRG MPT3-TP0-00-LDD-706 DETAIL 04
- EXISTING SOFT LANDSCAPE RETAINED AS IS / MADE GOOD
- PROPOSED NATIVE HEDGE / POST AND WIRE FENCE REFER TO DRG MPT3-TP0-00-LDD-706 FOR DETAILS
- PROPOSED TREES. SUBJECT TO AGREEMENT WITH TRAFFORD COUNCIL & THIRD PARTIES REFER TO TREE PLANTING DETAILS
- EXISTING TREES RETAINED AND PROTECTED TO BS5837
- PROPOSED BULB PLANTING/REFER TO DRG MPT3-TP0-00-LDD-706
- PROPOSED WOODLAND TREE PLANTING REFER TO DRG MPT3-TP0-00-LDD-706 DETAIL 06
- PROPOSED RETAINING WALL TO ENGINEERS DETAIL
- BOUNDARY TREATMENT. TO BE DEVELOPED AS PER 3RD PARTY AGREEMENTS & TRAFFORD COUNCIL REQUIREMENTS
- PROPOSED PEDESTRIAN GUARDRAIL REFER TO ENGINEERS DETAILS
- PROPOSED POST AND KNEE RAIL REFER TO DRG MPT3-TP0-00-LDD-701 DETAIL 01
- EXISTING PARAPET UNDER REVIEW BY TGM.
- LIMIT OF DEVIATION (LOD) (THIS ALSO FORMS THE DEEMED PLANNING BOUNDARY WHEN IT IS THE OUTER MOST)
- TEMPORARY LIMIT OF LAND ACQUIRED OR USED (TLLAU) (THIS ALSO FORMS THE DEEMED PLANNING BOUNDARY WHEN IT IS THE OUTER MOST)



SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION - RESIDUAL HAZARD ASSESSMENT

LOCATION	RESIDUAL HAZARD	SITE MEASURES TO ADDRESS HAZARD
CONSTRUCTION ROUTE WIDE	CONTAMINATION, INVASIVE SPECIES, UXO's, BURIED SERVICES	REFER TO MAIN HERRF REGISTER (MPT3-TP0-00-SRG-601) FOR KEY DOCUMENTS OUTLINING EXTENT OF THESE ISSUES
CDM252	PRESENCE OF CERTAIN ANIMALS (PIGEONS, RATS..) LEADS TO TRANSMISSION OF DISEASE (LEPTOSPIROSIS)	
OPERATION / MAINTENANCE		
DECOMMISSIONING / DEMOLITION		
IT IS ASSUMED THAT ALL WORKS WILL BE CARRIED OUT BY A COMPETENT CONTRACTOR WORKING, WHERE APPROPRIATE, TO AN APPROVED METHOD STATEMENT		

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FOR CONSTRUCTION

Q01	22.11.16	For Construction	EC	EOG	ND
REV	DATE	DETAIL	MADE	CHKD	APPD

CLIENT:	DESIGN:	EC	MANCHESTER METROLINK TRAFFORD PARK LINE	
Transport for Greater Manchester	CAD:	EC		
	CHKD:	EOG		
	APPD:	ND		
	SCALE:	1:500		
	DATE:	2016-11-22	DRG No:	MPT3-TP5-17-LDG-603
			REV:	D07

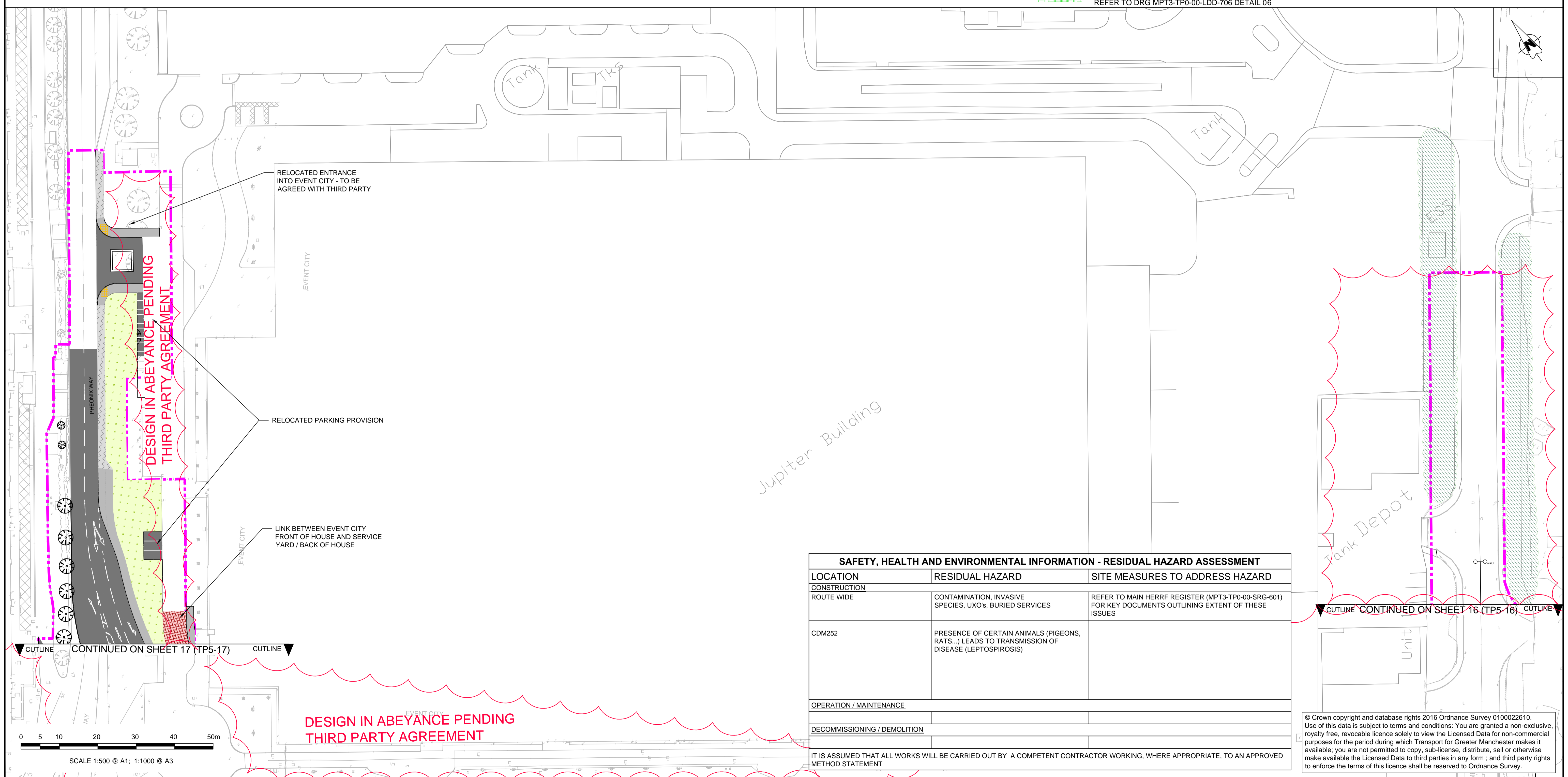
- NOTES:**
1. TO BE READ IN CONJUNCTION WITH OTHER RELEVANT GENERAL ARRANGEMENT DRAWINGS. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE STATED.
 2. WORKS TO BE CARRIED OUT IN ACCORDANCE WITH THE DESIGN GUIDE REFER TO DRG MPT3-TP0-00-MGD-600.
 3. CHAINAGE INDICATED IS RELATIVE TO PERMANENT WAY ALIGNMENT.
 4. FOR DETAILS OF NON-HIGHWAY ELEMENTS REFER TO DISCIPLINE-SPECIFIC LAYOUT DRAWINGS AND DETAILS.
 5. FOR SHARED SURFACES, TACTILE PAVING, VEHICLE LOADING AND SURFACES IN UNTRAFFICKED AREAS, ALONG WITH PUBLIC SIGNS, SIGNALS AND OLE POLES REFER TO ENGINEERS AND HIGHWAYS DRAWINGS FOR DETAILS

- GENERAL ARRANGEMENT KEY:**
- PROPOSED CARRIAGEWAY WORKS
 - PROPOSED WHITE ROAD MARKINGS
 - PROPOSED FLEXIBLE MACADAM - BLACK FOOTWAY / CYCLEWAY.
 - PROPOSED FLEXIBLE MACADAM - COLOURED FOOTWAY / CYCLEWAY.
 - PROPOSED GREEN SURFACING
 - PROPOSED AGGREGATE - MOT TYPE 1
 - EXISTING FOOTWAY URBAN REALM RETAINED AS IS / MADE GOOD
 - PROPOSED CONCRETE SURFACE
 - PROPOSED PCC FLAG PAVING (MARSHALLS METROPOLITAN) SIZE: 600x300 300x300 200x300
 - PROPOSED BLOCK PAVING / MAINTENANCE STRIP SIZE: 200 X 100 COLOUR TO MATCH EXISTING
 - PROPOSED SCOTTISH ROUNDED COBBLES 150-200MM SET IN CONCRETE FOUNDATION
 - PROPOSED REINFORCED GRASS SURFACE REFER TO DRG MPT3-TP0-00-LDD-701 DETAIL 02
 - PROPOSED FIXED BOLLARD REFER TO DRG MPT3-TP0-00-LDD-708 DETAIL 01
 - PROPOSED DEMOUNTABLE BOLLARD REFER TO DRG MPT3-TP0-00-LDD-708 DETAIL 01
 - PROPOSED BENCH REFER TO DRG MPT3-TP0-00-LDD-708 DETAIL 03
 - EARTHWORKS GRADIENT BETWEEN 1 in 10 AND 1 in 2.5. REFER TO MODEL FOR SPECIFIC GRADIENT

- PROPOSED PERMANENT WAY / TRAM TRACK RAISED RAIL AND EXPOSED AGGREGATE CONCRETE TO PERMANENT WAY DETAILS
- PROPOSED FLUSH RAIL AND EXPOSED AGGREGATE CONCRETE TO PERMANENT WAY DETAILS
- PROPOSED INFILL PANEL TRACK CROSSING WITH/WITHOUT PROPOSED PEDESTRIAN DETERRENT
- OVERHEAD LINE EQUIPMENT
- PROPOSED KERB LINE REFER TO HIGHWAYS DRAWINGS FOR DETAILS
- PROPOSED PCC TACTILE FLAGS TO CROSSING. REFER TO HIGHWAYS DRAWINGS FOR DETAILS
- PROPOSED PCC TACTILE FLAGS TO CYCLEWAY. REFER TO HIGHWAYS DRAWINGS FOR DETAILS

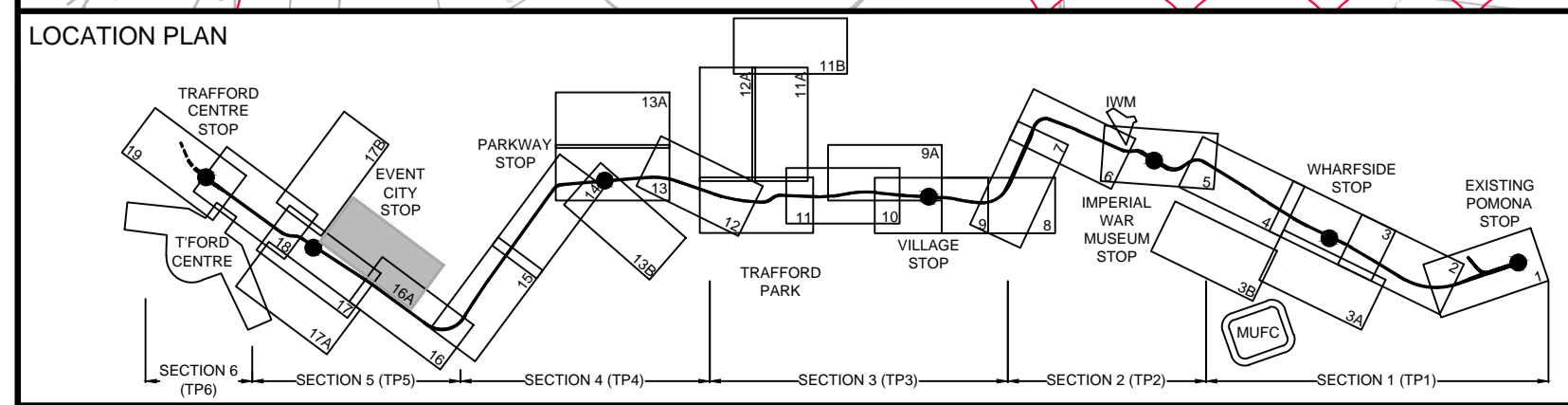
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- PROPOSED ORNAMENTAL MIX. REFER TO DRG MPT3-TP0-00-LDD-706 DETAIL 04
- EXISTING SOFT LANDSCAPE RETAINED AS IS / MADE GOOD
- PROPOSED NATIVE HEDGE / POST AND WIRE FENCE REFER TO DRG MPT3-TP0-00-LDD-706 FOR DETAILS
- PROPOSED TREES. SUBJECT TO AGREEMENT WITH TRAFFORD COUNCIL & THIRD PARTIES REFER TO TREE PLANTING DETAILS
- EXISTING TREES RETAINED AND PROTECTED TO BS5837
- PROPOSED BULB PLANTING/REFER TO DRG MPT3-TP0-00-LDD-706
- PROPOSED WOODLAND TREE PLANTING REFER TO DRG MPT3-TP0-00-LDD-706 DETAIL 06

- PROPOSED RETAINING WALL TO ENGINEERS DETAIL
- BOUNDARY TREATMENT. TO BE DEVELOPED AS PER 3RD PARTY AGREEMENTS & TRAFFORD COUNCIL REQUIREMENTS
- PROPOSED PEDESTRIAN GUARDRAIL REFER TO ENGINEERS DETAILS
- PROPOSED POST AND KNEE RAIL REFER TO DRG MPT3-TP0-00-LDD-701 DETAIL 01
- EXISTING PARAPET UNDER REVIEW BY TGM.
- LIMIT OF DEVIATION (LOD) (THIS ALSO FORMS THE DEEMED PLANNING BOUNDARY WHEN IT IS THE OUTER MOST)
- TEMPORARY LIMIT OF LAND ACQUIRED OR USED (TLLAU) (THIS ALSO FORMS THE DEEMED PLANNING BOUNDARY WHEN IT IS THE OUTER MOST)



SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION - RESIDUAL HAZARD ASSESSMENT		
LOCATION	RESIDUAL HAZARD	SITE MEASURES TO ADDRESS HAZARD
CONSTRUCTION		
ROUTE WIDE	CONTAMINATION, INVASIVE SPECIES, UXO's, BURIED SERVICES	REFER TO MAIN HERRF REGISTER (MPT3-TP0-00-SRG-601) FOR KEY DOCUMENTS OUTLINING EXTENT OF THESE ISSUES
CDM252	PRESENCE OF CERTAIN ANIMALS (PIGEONS, RATS...) LEADS TO TRANSMISSION OF DISEASE (LEPTOSPIROSIS)	
OPERATION / MAINTENANCE		
DECOMMISSIONING / DEMOLITION		
IT IS ASSUMED THAT ALL WORKS WILL BE CARRIED OUT BY A COMPETENT CONTRACTOR WORKING, WHERE APPROPRIATE, TO AN APPROVED METHOD STATEMENT		

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FOR CONSTRUCTION

Q01	22.11.16	For Construction	EC	EOG	ND
REV	DATE	DETAIL	MADE	CHKD	APPD

CLIENT: Transport for Greater Manchester	DESIGN: EC	MANCHESTER METROLINK TRAFFORD PARK LINE
	CAD: EC	
	CHKD: EOG	TITLE: URBAN REALM & LANDSCAPE GENERAL ARRANGEMENT SHEET 16A
	APPD: ND	DRG No: MPT3-TP5-38-LDG-603
	SCALE: 1:500	REV: Q01
	DATE: 2016-11-22	

NOTES:

1. TO BE READ IN CONJUNCTION WITH OTHER RELEVANT GENERAL ARRANGEMENT DRAWINGS. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE STATED.
2. WORKS TO BE CARRIED OUT IN ACCORDANCE WITH THE DESIGN GUIDE REFER TO DRG MPT3-TP0-00-MGD-600.
3. CHAINAGE INDICATED IS RELATIVE TO PERMANENT WAY ALIGNMENT.
4. FOR DETAILS OF NON-HIGHWAY ELEMENTS REFER TO DISCIPLINE-SPECIFIC LAYOUT DRAWINGS AND DETAILS.
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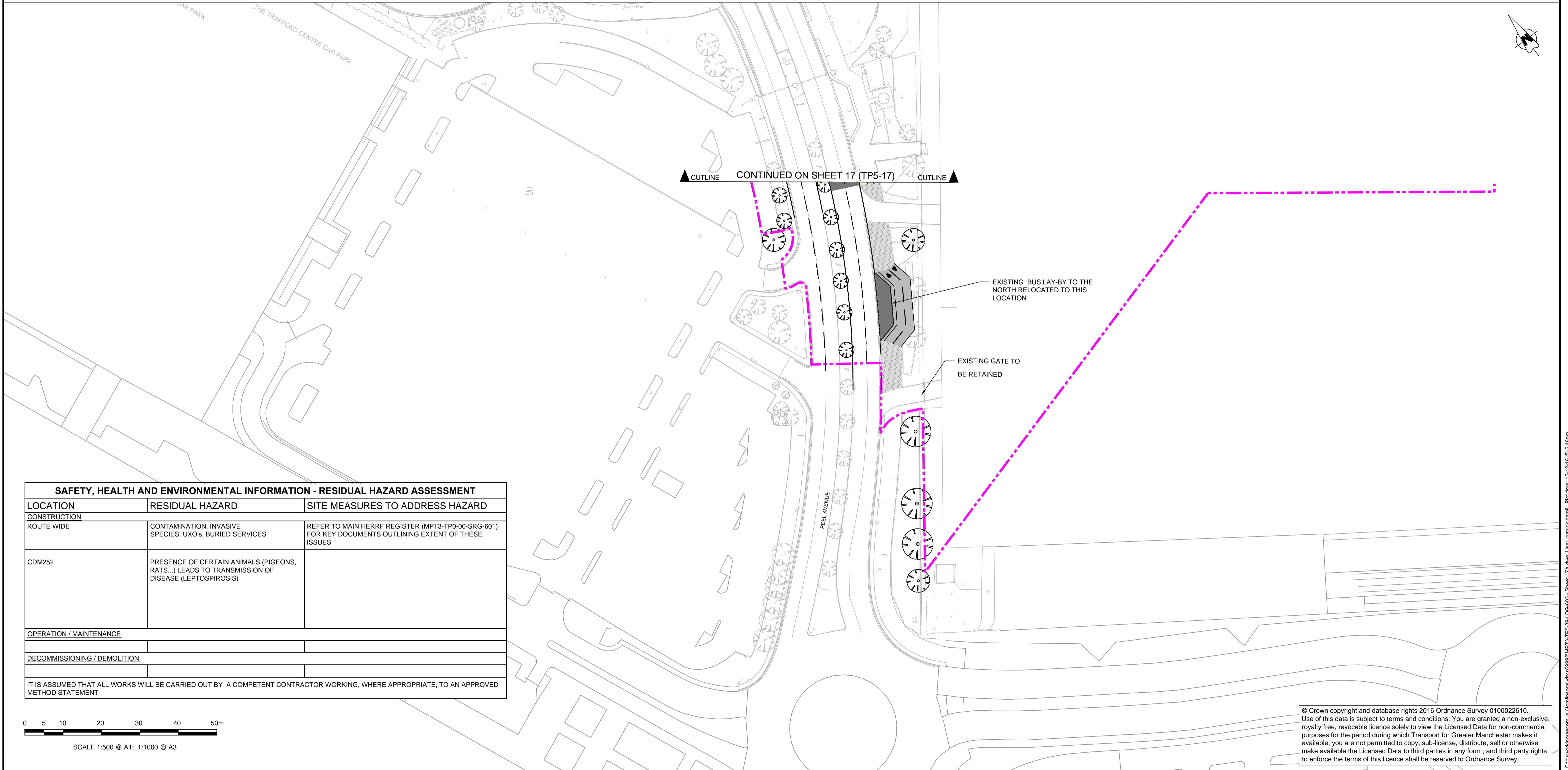
GENERAL ARRANGEMENT KEY:

- PROPOSED CARRIAGEWAY WORKS
- PROPOSED WHITE ROAD MARKINGS
- PROPOSED FLEXIBLE MACADAM - BLACK FOOTWAY / CYCLEWAY.
- PROPOSED FLEXIBLE MACADAM - COLOURED FOOTWAY / CYCLEWAY.
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- PROPOSED AGGREGATE - MOT TYPE 1
- EXISTING FOOTWAY URBAN REALM RETAINED AS IS / MADE GOOD
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- PROPOSED REINFORCED GRASS SURFACE REFER TO DRG MPT3-TP0-00-LDD-701 DETAIL 02
- PROPOSED FIXED BOLLARD REFER TO DRG MPT3-TP0-00-LDD-708 DETAIL 01
- PROPOSED DEMOUNTABLE BOLLARD REFER TO DRG MPT3-TP0-00-LDD-708 DETAIL 01
- PROPOSED BENCH REFER TO DRG MPT3-TP0-00-LDD-708 DETAIL 03
- EARTHWORKS GRADIENT BETWEEN 1 in 10 AND 1 in 2.5. REFER TO MODEL FOR SPECIFIC GRADIENT

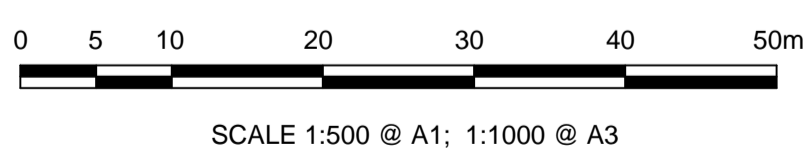
- PROPOSED PERMANENT WAY / TRAM TRACK RAISED RAIL AND EXPOSED AGGREGATE CONCRETE TO PERMANENT WAY DETAILS
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- PROPOSED ORNAMENTAL MIX. REFER TO DRG MPT3-TP0-00-LDD-706 DETAIL 04
- EXISTING SOFT LANDSCAPE RETAINED AS IS / MADE GOOD
- PROPOSED NATIVE HEDGE / POST AND WIRE FENCE REFER TO DRG MPT3-TP0-00-LDD-706 FOR DETAILS
- PROPOSED TREES. SUBJECT TO AGREEMENT WITH TRAFFORD COUNCIL & THIRD PARTIES REFER TO TREE PLANTING DETAILS
- EXISTING TREES RETAINED AND PROTECTED TO BS5837
- PROPOSED BULB PLANTING/REFER TO DRG MPT3-TP0-00-LDD-706
- PROPOSED WOODLAND TREE PLANTING REFER TO DRG MPT3-TP0-00-LDD-706 DETAIL 06

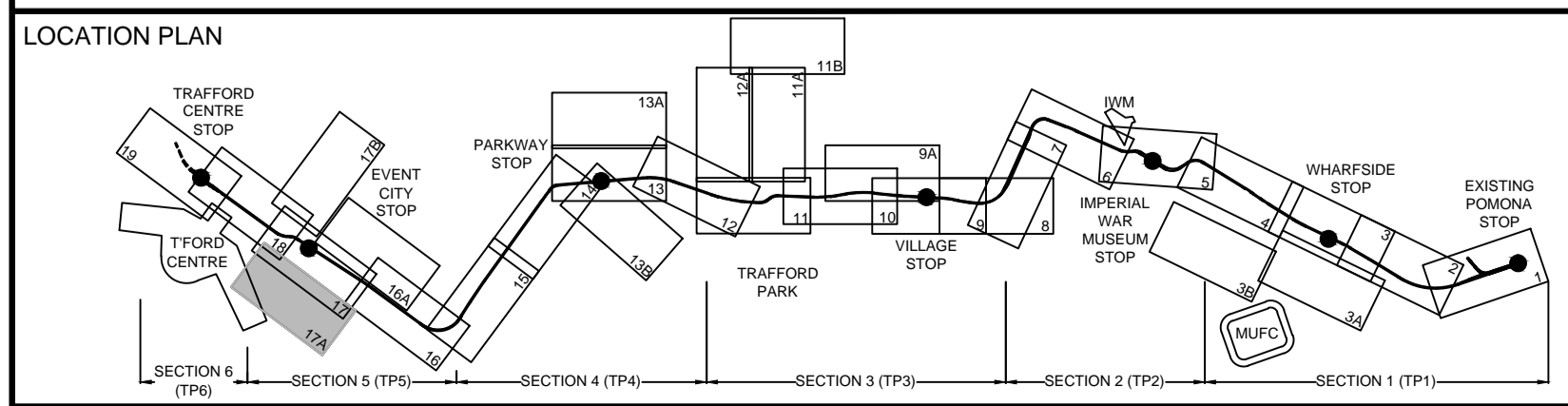
- PROPOSED RETAINING WALL TO ENGINEERS DETAIL
- BOUNDARY TREATMENT. TO BE DEVELOPED AS PER 3RD PARTY AGREEMENTS & TRAFFORD COUNCIL REQUIREMENTS
- PROPOSED PEDESTRIAN GUARDRAIL REFER TO ENGINEERS DETAILS
- PROPOSED POST AND KNEE RAIL REFER TO DRG MPT3-TP0-00-LDD-701 DETAIL 01
- EXISTING PARAPET UNDER REVIEW BY TIGM.
- LIMIT OF DEVIATION (LOD) (THIS ALSO FORMS THE DEEMED PLANNING BOUNDARY WHEN IT IS THE OUTER MOST)
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SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION - RESIDUAL HAZARD ASSESSMENT		
LOCATION	RESIDUAL HAZARD	SITE MEASURES TO ADDRESS HAZARD
CONSTRUCTION		
ROUTE WIDE	CONTAMINATION, INVASIVE SPECIES, UXO's, BURIED SERVICES	REFER TO MAIN HERRF REGISTER (MPT3-TP0-00-SRG-601) FOR KEY DOCUMENTS OUTLINING EXTENT OF THESE ISSUES
CDM252	PRESENCE OF CERTAIN ANIMALS (PIGEONS, RATS...) LEADS TO TRANSMISSION OF DISEASE (LEPTOSPIROSIS)	
OPERATION / MAINTENANCE		
DECOMMISSIONING / DEMOLITION		
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FOR CONSTRUCTION

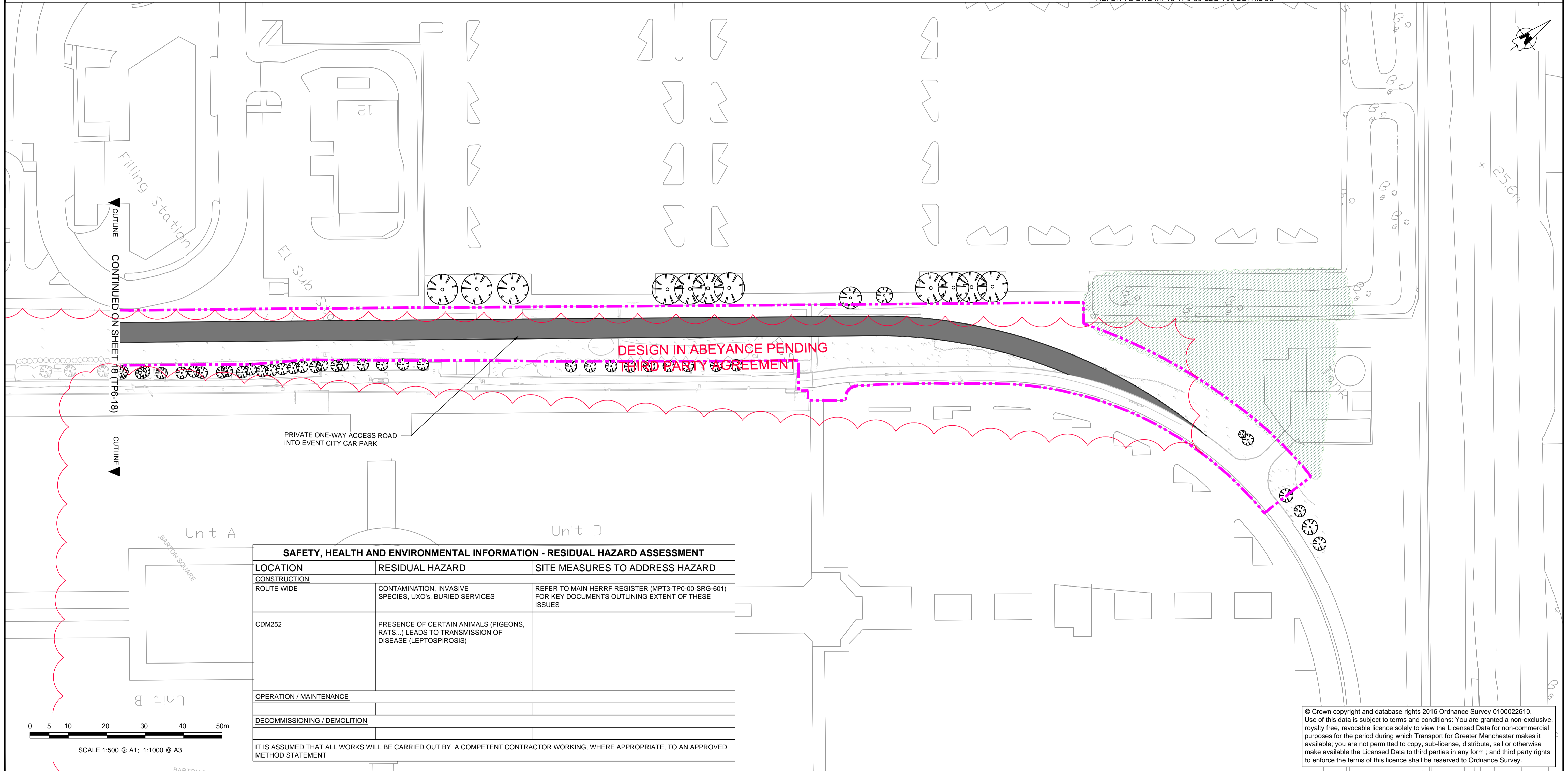
Q01	22.11.16	For Construction		EC	EOG
REV	DATE	DETAIL	MADE	CHKD	APPD

CLIENT: Transport for Greater Manchester	DESIGN: EC	MANCHESTER METROLINK TRAFFORD PARK LINE
	CAD: EC	TITLE: URBAN REALM & LANDSCAPE GENERAL ARRANGEMENT SHEET 17A
	CHKD: EOG	
	APPD: ND	
	SCALE: 1:500	
	DATE: 2016-11-22	
	DRG No: MPT3-TP5-39-LDG-603	REV: Q01

- NOTES:**
1. TO BE READ IN CONJUNCTION WITH OTHER RELEVANT GENERAL ARRANGEMENT DRAWINGS. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE STATED.
 2. WORKS TO BE CARRIED OUT IN ACCORDANCE WITH THE DESIGN GUIDE REFER TO DRG MPT3-TP0-00-MGD-600.
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GENERAL ARRANGEMENT KEY:

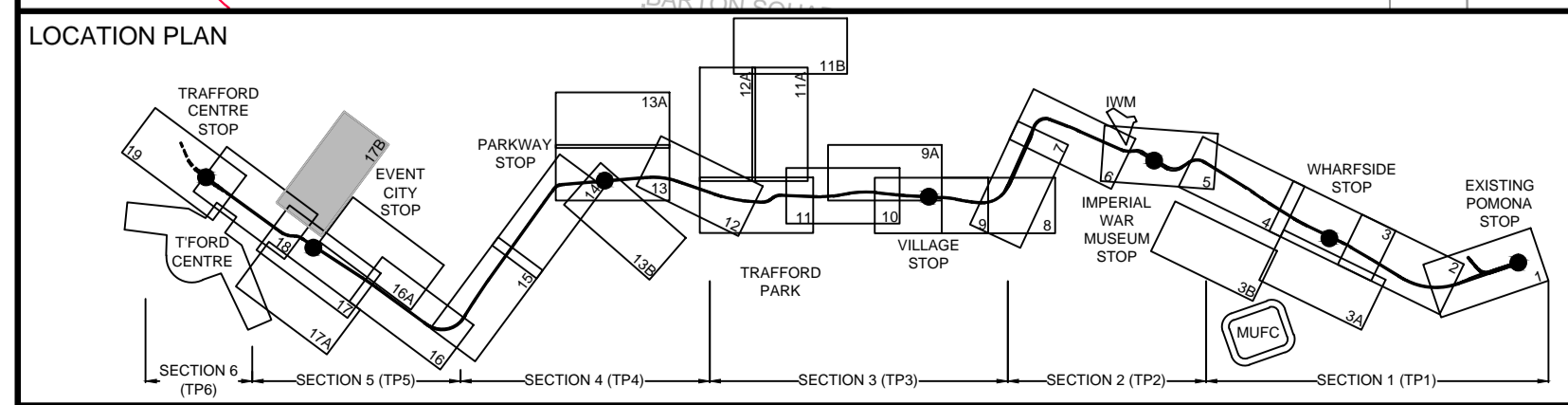
	PROPOSED CARRIAGEWAY WORKS		PROPOSED PCC FLAG PAVING (MARSHALLS METROPOLITAN) SIZE: 600x300 300x300 200x300		PROPOSED PERMANENT WAY / TRAM TRACK RAISED RAIL AND EXPOSED AGGREGATE CONCRETE TO PERMANENT WAY DETAILS		AMENITY GRASS. GRASS SEEDING AREA. REFER TO DRG MPT3-TP0-00-LDD-706 DETAIL 03		PROPOSED RETAINING WALL TO ENGINEERS DETAIL
	PROPOSED WHITE ROAD MARKINGS		PROPOSED BLOCK PAVING / MAINTENANCE STRIP SIZE: 200 X 100 COLOUR TO MATCH EXISTING		PROPOSED FLUSH RAIL AND EXPOSED AGGREGATE CONCRETE TO PERMANENT WAY DETAILS		PROPOSED ORNAMENTAL MIX. REFER TO DRG MPT3-TP0-00-LDD-706 DETAIL 04		BOUNDARY TREATMENT. TO BE DEVELOPED AS PER 3RD PARTY AGREEMENTS & TRAFFORD COUNCIL REQUIREMENTS
	PROPOSED FLEXIBLE MACADAM - BLACK FOOTWAY / CYCLEWAY.		PROPOSED SCOTTISH ROUNDED COBBLES 150-200MM SET IN CONCRETE FOUNDATION		PROPOSED INFILL PANEL TRACK CROSSING WITH/WITHOUT PROPOSED PEDESTRIAN DETERRENT		EXISTING SOFT LANDSCAPE RETAINED AS IS / MADE GOOD		PROPOSED PEDESTRIAN GUARDRAIL REFER TO ENGINEERS DETAILS
	PROPOSED FLEXIBLE MACADAM - COLOURED FOOTWAY / CYCLEWAY.		PROPOSED REINFORCED GRASS SURFACE REFER TO DRG MPT3-TP0-00-LDD-701 DETAIL 02		OVERHEAD LINE EQUIPMENT		PROPOSED NATIVE HEDGE / POST AND WIRE FENCE REFER TO DRG MPT3-TP0-00-LDD-706 FOR DETAILS		PROPOSED POST AND KNEE RAIL REFER TO DRG MPT3-TP0-00-LDD-701 DETAIL 01
	PROPOSED GREEN SURFACING		PROPOSED FIXED BOLLARD REFER TO DRG MPT3-TP0-00-LDD-708 DETAIL 01		PROPOSED KERB LINE REFER TO HIGHWAYS DRAWINGS FOR DETAILS		PROPOSED TREES. SUBJECT TO AGREEMENT WITH TRAFFORD COUNCIL & THIRD PARTIES REFER TO TREE PLANTING DETAILS		EXISTING PARAPET UNDER REVIEW BY TIGM.
	PROPOSED AGGREGATE - MOT TYPE 1		PROPOSED DEMOUNTABLE BOLLARD REFER TO DRG MPT3-TP0-00-LDD-708 DETAIL 01		PROPOSED PCC TACTILE FLAGS TO CROSSING. REFER TO HIGHWAYS DRAWINGS FOR DETAILS		EXISTING TREES RETAINED AND PROTECTED TO BS5837		LIMIT OF DEVIATION (LOD) (THIS ALSO FORMS THE DEEMED PLANNING BOUNDARY WHEN IT IS THE OUTER MOST)
	EXISTING FOOTWAY URBAN REALM RETAINED AS IS / MADE GOOD		PROPOSED BENCH REFER TO DRG MPT3-TP0-00-LDD-708 DETAIL 03		PROPOSED PCC TACTILE FLAGS TO CYCLEWAY. REFER TO HIGHWAYS DRAWINGS FOR DETAILS		PROPOSED BULB PLANTING/REFER TO DRG MPT3-TP0-00-LDD-706		TEMPORARY LIMIT OF LAND ACQUIRED OR USED (TLLAU) (THIS ALSO FORMS THE DEEMED PLANNING BOUNDARY WHEN IT IS THE OUTER MOST)
	PROPOSED CONCRETE SURFACE		EARTHWORKS GRADIENT BETWEEN 1 in 10 AND 1 in 2.5. REFER TO MODEL FOR SPECIFIC GRADIENT				PROPOSED WOODLAND TREE PLANTING REFER TO DRG MPT3-TP0-00-LDD-706 DETAIL 06		



SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION - RESIDUAL HAZARD ASSESSMENT

LOCATION	RESIDUAL HAZARD	SITE MEASURES TO ADDRESS HAZARD
CONSTRUCTION ROUTE WIDE	CONTAMINATION, INVASIVE SPECIES, UXO's, BURIED SERVICES	REFER TO MAIN HERRF REGISTER (MPT3-TP0-00-SRG-601) FOR KEY DOCUMENTS OUTLINING EXTENT OF THESE ISSUES
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OPERATION / MAINTENANCE		
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IT IS ASSUMED THAT ALL WORKS WILL BE CARRIED OUT BY A COMPETENT CONTRACTOR WORKING, WHERE APPROPRIATE, TO AN APPROVED METHOD STATEMENT		

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FOR CONSTRUCTION

Q01	22.11.16	For Construction	EC	EOG	ND
REV	DATE	DETAIL	MADE	CHKD	APPD

CLIENT: Transport for Greater Manchester	DESIGN: EC	MANCHESTER METROLINK TRAFFORD PARK LINE
	CAD: EC	
	CHKD: EOG	TITLE: URBAN REALM & LANDSCAPE GENERAL ARRANGEMENT SHEET 17B
	APPD: ND	DRG No: MPT3-TP5-40-LDG-603
	SCALE: 1:500	REV: Q01
	DATE: 2016-11-22	

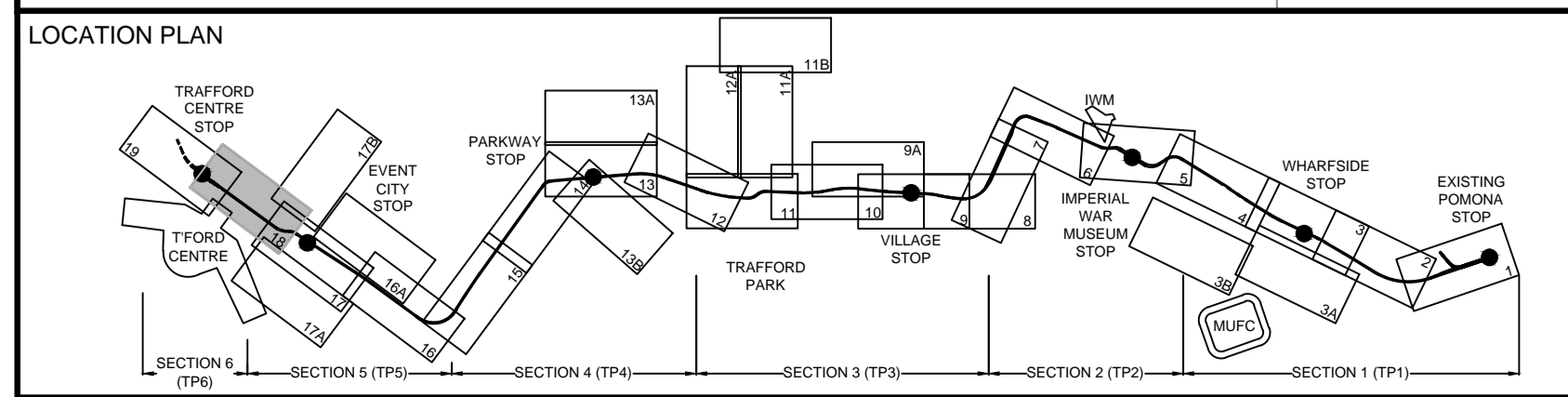
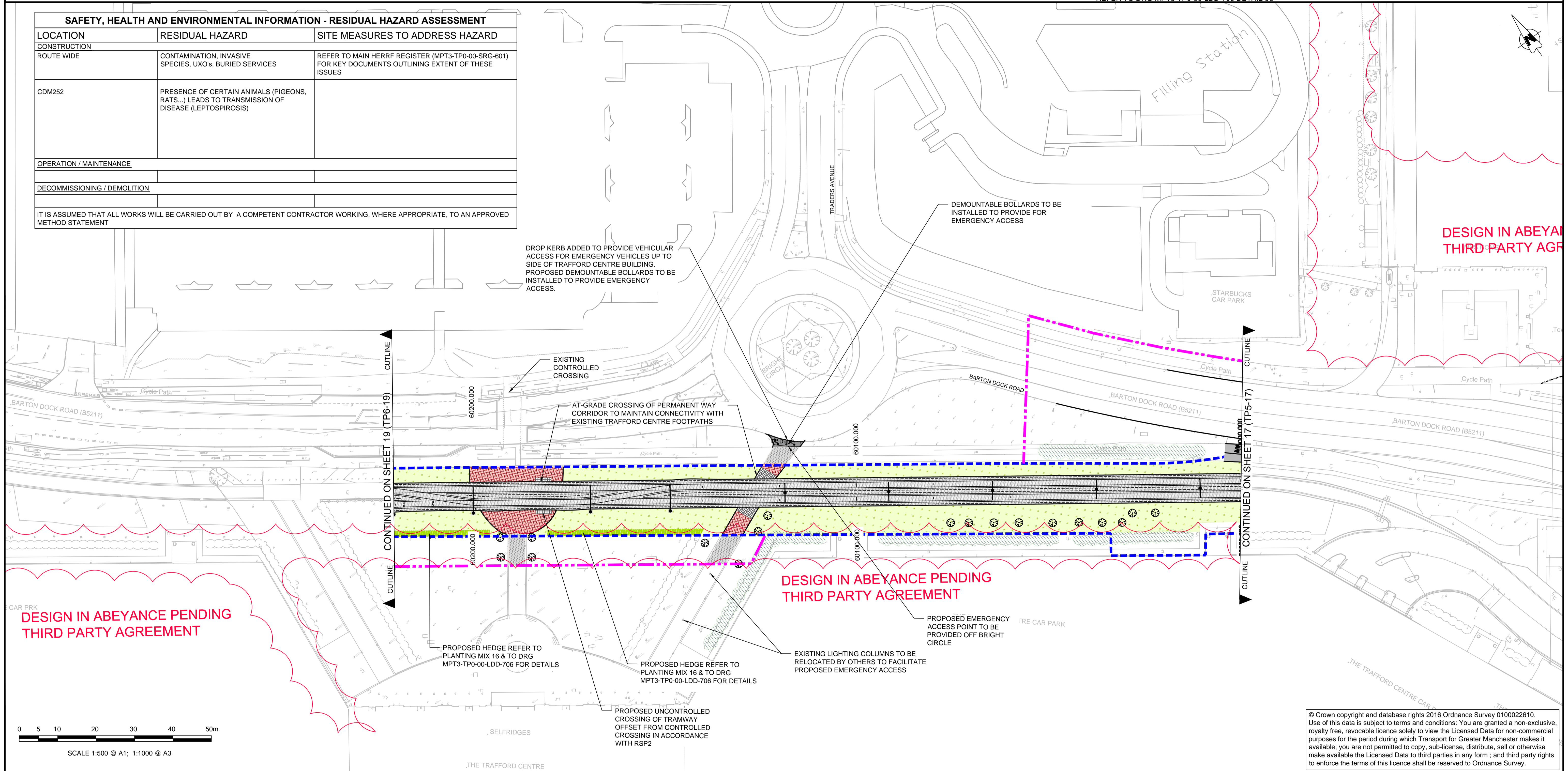
NOTES:

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GENERAL ARRANGEMENT KEY:

	PROPOSED CARRIAGEWAY WORKS		PROPOSED PCC FLAG PAVING (MARSHALLS METROPOLITAN) SIZE: 600x300 300x300 200x300		PROPOSED PERMANENT WAY / TRAM TRACK RAISED RAIL AND EXPOSED AGGREGATE CONCRETE TO PERMANENT WAY DETAILS		AMENITY GRASS, GRASS SEEDING AREA. REFER TO DRG MPT3-TP0-00-LDD-706 DETAIL 03		PROPOSED RETAINING WALL TO ENGINEERS DETAIL
	PROPOSED WHITE ROAD MARKINGS		PROPOSED BLOCK PAVING / MAINTENANCE STRIP SIZE: 200 X 100 COLOUR TO MATCH EXISTING		PROPOSED FLUSH RAIL AND EXPOSED AGGREGATE CONCRETE TO PERMANENT WAY DETAILS		PROPOSED ORNAMENTAL MIX. REFER TO DRG MPT3-TP0-00-LDD-706 DETAIL 04		BOUNDARY TREATMENT. TO BE DEVELOPED AS PER 3RD PARTY AGREEMENTS & TRAFFORD COUNCIL REQUIREMENTS
	PROPOSED FLEXIBLE MACADAM - BLACK FOOTWAY / CYCLEWAY.		PROPOSED SCOTTISH ROUNDED COBBLES 150-200MM SET IN CONCRETE FOUNDATION		PROPOSED INFILL PANEL TRACK CROSSING WITH/WITHOUT PROPOSED PEDESTRIAN DETERRENT		EXISTING SOFT LANDSCAPE RETAINED AS IS / MADE GOOD		PROPOSED PEDESTRIAN GUARDRAIL REFER TO ENGINEERS DETAILS
	PROPOSED FLEXIBLE MACADAM - COLOURED FOOTWAY / CYCLEWAY.		PROPOSED REINFORCED GRASS SURFACE REFER TO DRG MPT3-TP0-00-LDD-701 DETAIL 02		OVERHEAD LINE EQUIPMENT		PROPOSED NATIVE HEDGE / POST AND WIRE FENCE REFER TO DRG MPT3-TP0-00-LDD-706 FOR DETAILS		PROPOSED POST AND KNEE RAIL REFER TO DRG MPT3-TP0-00-LDD-701 DETAIL 01
	PROPOSED GREEN SURFACING		PROPOSED FIXED BOLLARD REFER TO DRG MPT3-TP0-00-LDD-708 DETAIL 01		PROPOSED KERB LINE REFER TO HIGHWAYS DRAWINGS FOR DETAILS		PROPOSED TREES, SUBJECT TO AGREEMENT WITH TRAFFORD COUNCIL & THIRD PARTIES REFER TO TREE PLANTING DETAILS		EXISTING PARAPET UNDER REVIEW BY TIGM.
	PROPOSED AGGREGATE - MOT TYPE 1		PROPOSED DEMOUNTABLE BOLLARD REFER TO DRG MPT3-TP0-00-LDD-708 DETAIL 01		PROPOSED PCC TACTILE FLAGS TO CROSSING. REFER TO HIGHWAYS DRAWINGS FOR DETAILS		EXISTING TREES RETAINED AND PROTECTED TO BS5837		LIMIT OF DEVIATION (LOD) (THIS ALSO FORMS THE DEEMED PLANNING BOUNDARY WHEN IT IS THE OUTER MOST)
	EXISTING FOOTWAY URBAN REALM RETAINED AS IS / MADE GOOD		PROPOSED BENCH REFER TO DRG MPT3-TP0-00-LDD-708 DETAIL 03		PROPOSED PCC TACTILE FLAGS TO CYCLEWAY. REFER TO HIGHWAYS DRAWINGS FOR DETAILS		PROPOSED BULB PLANTING/REFER TO DRG MPT3-TP0-00-LDD-706		TEMPORARY LIMIT OF LAND ACQUIRED OR USED (TLLAU) (THIS ALSO FORMS THE DEEMED PLANNING BOUNDARY WHEN IT IS THE OUTER MOST)
	PROPOSED CONCRETE SURFACE		EARTHWORKS GRADIENT BETWEEN 1 in 10 AND 1 in 2.5. REFER TO MODEL FOR SPECIFIC GRADIENT				PROPOSED WOODLAND TREE PLANTING REFER TO DRG MPT3-TP0-00-LDD-706 DETAIL 06		

SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION - RESIDUAL HAZARD ASSESSMENT		
LOCATION	RESIDUAL HAZARD	SITE MEASURES TO ADDRESS HAZARD
CONSTRUCTION		
ROUTE WIDE	CONTAMINATION, INVASIVE SPECIES, UXO's, BURIED SERVICES	REFER TO MAIN HERRF REGISTER (MPT3-TP0-00-SRG-601) FOR KEY DOCUMENTS OUTLINING EXTENT OF THESE ISSUES
CDM252	PRESENCE OF CERTAIN ANIMALS (PIGEONS, RATS...) LEADS TO TRANSMISSION OF DISEASE (LEPTOSPIROSIS)	
OPERATION / MAINTENANCE		
DECOMMISSIONING / DEMOLITION		
IT IS ASSUMED THAT ALL WORKS WILL BE CARRIED OUT BY A COMPETENT CONTRACTOR WORKING, WHERE APPROPRIATE, TO AN APPROVED METHOD STATEMENT		



FOR CONSTRUCTION

CLIENT: Transport for Greater Manchester	DESIGN: EC	MANCHESTER METROLINK TRAFFORD PARK LINE
MPT Laying O'Rourke VolkerRail Trilias	CAD: EC	TITLE: URBAN REALM & LANDSCAPE GENERAL ARRANGEMENT SHEET 18
Q01 22.11.16 For Construction	CHKD: EOG	DRG No: MPT3-TP6-18-LDG-603
REV DATE DETAIL	APPD: ND	REV: Q01
EC EOG ND	SCALE: 1:500	
MADE CHKD APPD	DATE: 2016-11-22	

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NOTES:

1. TO BE READ IN CONJUNCTION WITH OTHER RELEVANT GENERAL ARRANGEMENT DRAWINGS. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE STATED.
2. WORKS TO BE CARRIED OUT IN ACCORDANCE WITH THE DESIGN GUIDE REFER TO DRG MPT3-TP0-00-MGD-600.
3. CHAINAGE INDICATED IS RELATIVE TO PERMANENT WAY ALIGNMENT.
4. FOR DETAILS OF NON-HIGHWAY ELEMENTS REFER TO DISCIPLINE-SPECIFIC LAYOUT DRAWINGS AND DETAILS.
5. FOR SHARED SURFACES, TACTILE PAVING, VEHICLE LOADING AND SURFACES IN UNTRAFFICKED AREAS, ALONG WITH PUBLIC SIGNS, SIGNALS AND OLE POLES REFER TO ENGINEERS AND HIGHWAYS DRAWINGS FOR DETAILS

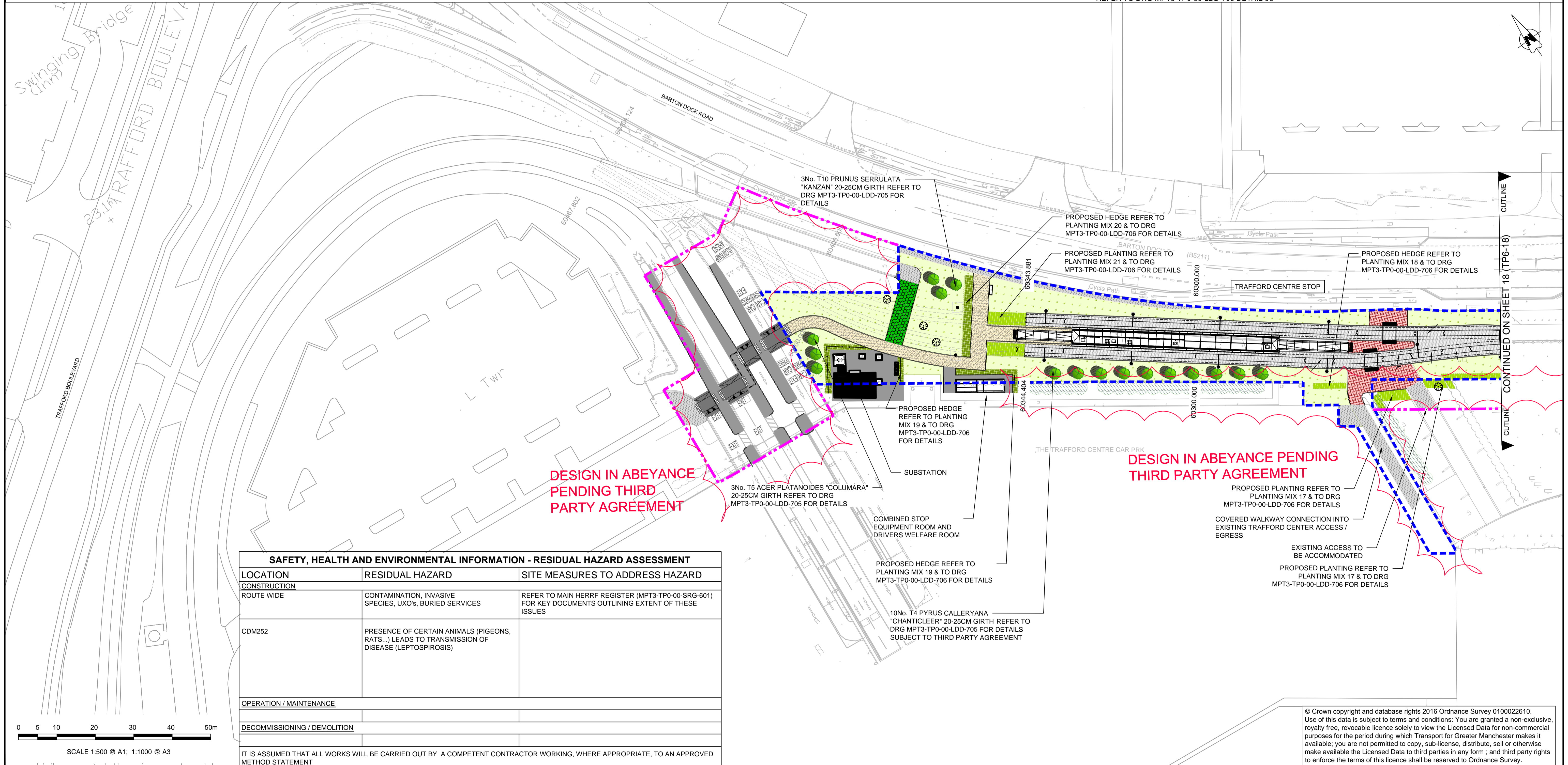
GENERAL ARRANGEMENT KEY:

- PROPOSED CARRIAGEWAY WORKS
- PROPOSED WHITE ROAD MARKINGS
- PROPOSED FLEXIBLE MACADAM - BLACK FOOTWAY / CYCLEWAY.
- PROPOSED FLEXIBLE MACADAM - COLOURED FOOTWAY / CYCLEWAY.
- PROPOSED GREEN SURFACING
- PROPOSED AGGREGATE - MOT TYPE 1
- EXISTING FOOTWAY URBAN REALM RETAINED AS IS / MADE GOOD
- PROPOSED CONCRETE SURFACE
- PROPOSED PCC FLAG PAVING (MARSHALLS METROPOLITAN) SIZE: 600x300 300x300 200x300
- PROPOSED BLOCK PAVING / MAINTENANCE STRIP SIZE: 200 X 100 COLOUR TO MATCH EXISTING
- PROPOSED SCOTTISH ROUNDED COBBLES 150-200MM SET IN CONCRETE FOUNDATION
- PROPOSED REINFORCED GRASS SURFACE REFER TO DRG MPT3-TP0-00-LDD-701 DETAIL 02
- PROPOSED FIXED BOLLARD REFER TO DRG MPT3-TP0-00-LDD-708 DETAIL 01
- PROPOSED DEMOUNTABLE BOLLARD REFER TO DRG MPT3-TP0-00-LDD-708 DETAIL 01
- PROPOSED BENCH REFER TO DRG MPT3-TP0-00-LDD-708 DETAIL 03
- EARTHWORKS GRADIENT BETWEEN 1 in 10 AND 1 in 2.5. REFER TO MODEL FOR SPECIFIC GRADIENT

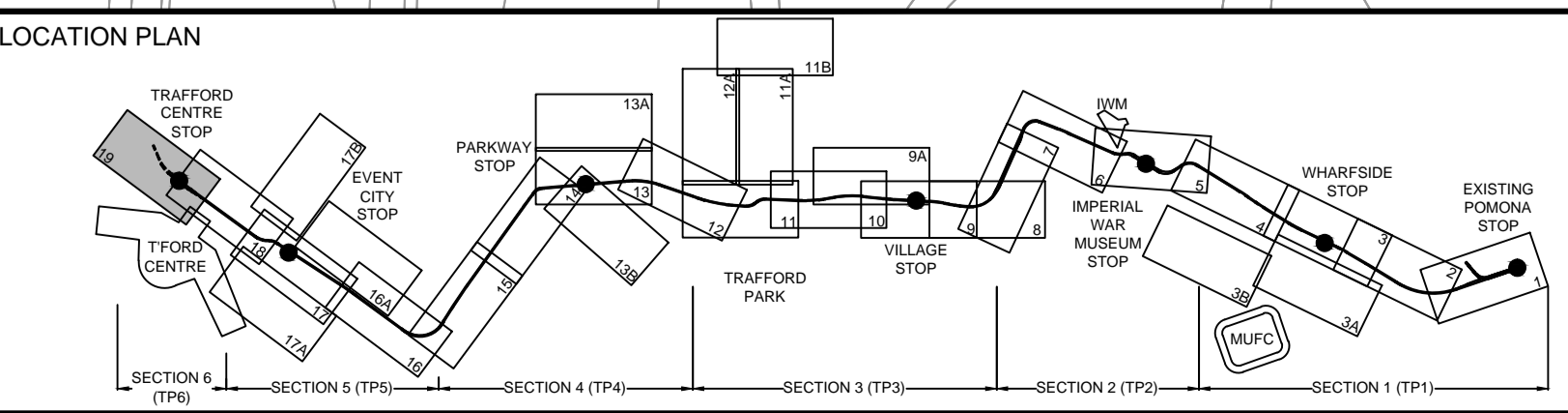
- PROPOSED PERMANENT WAY / TRAM TRACK RAISED RAIL AND EXPOSED AGGREGATE CONCRETE TO PERMANENT WAY DETAILS
- PROPOSED FLUSH RAIL AND EXPOSED AGGREGATE CONCRETE TO PERMANENT WAY DETAILS
- PROPOSED INFILL PANEL TRACK CROSSING WITH/WITHOUT PROPOSED PEDESTRIAN DETERRENT
- OVERHEAD LINE EQUIPMENT
- PROPOSED KERB LINE REFER TO HIGHWAYS DRAWINGS FOR DETAILS
- PROPOSED PCC TACTILE FLAGS TO CROSSING. REFER TO HIGHWAYS DRAWINGS FOR DETAILS
- PROPOSED PCC TACTILE FLAGS TO CYCLEWAY. REFER TO HIGHWAYS DRAWINGS FOR DETAILS

- AMENITY GRASS. GRASS SEEDING AREA. REFER TO DRG MPT3-TP0-00-LDD-706 DETAIL 03
- PROPOSED ORNAMENTAL MIX. REFER TO DRG MPT3-TP0-00-LDD-706 DETAIL 04
- EXISTING SOFT LANDSCAPE RETAINED AS IS / MADE GOOD
- PROPOSED NATIVE HEDGE / POST AND WIRE FENCE REFER TO DRG MPT3-TP0-00-LDD-706 FOR DETAILS
- PROPOSED TREES. SUBJECT TO AGREEMENT WITH TRAFFORD COUNCIL & THIRD PARTIES REFER TO TREE PLANTING DETAILS
- EXISTING TREES RETAINED AND PROTECTED TO BS5837
- PROPOSED BULB PLANTING/REFER TO DRG MPT3-TP0-00-LDD-706
- PROPOSED WOODLAND TREE PLANTING REFER TO DRG MPT3-TP0-00-LDD-706 DETAIL 06

- PROPOSED RETAINING WALL TO ENGINEERS DETAIL
- BOUNDARY TREATMENT. TO BE DEVELOPED AS PER 3RD PARTY AGREEMENTS & TRAFFORD COUNCIL REQUIREMENTS
- PROPOSED PEDESTRIAN GUARDRAIL REFER TO ENGINEERS DETAILS
- PROPOSED POST AND KNEE RAIL REFER TO DRG MPT3-TP0-00-LDD-701 DETAIL 01
- EXISTING PARAPET UNDER REVIEW BY TIGM.
- LIMIT OF DEVIATION (LOD) (THIS ALSO FORMS THE DEEMED PLANNING BOUNDARY WHEN IT IS THE OUTER MOST)
- TEMPORARY LIMIT OF LAND ACQUIRED OR USED (TLLAU) (THIS ALSO FORMS THE DEEMED PLANNING BOUNDARY WHEN IT IS THE OUTER MOST)



SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION - RESIDUAL HAZARD ASSESSMENT		
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OPERATION / MAINTENANCE		
DECOMMISSIONING / DEMOLITION		
IT IS ASSUMED THAT ALL WORKS WILL BE CARRIED OUT BY A COMPETENT CONTRACTOR WORKING, WHERE APPROPRIATE, TO AN APPROVED METHOD STATEMENT		



FOR CONSTRUCTION

<p>CLIENT: Transport for Greater Manchester</p> <p>MPT</p> <p>DATE: 2016-11-22</p> <p>REV: Q01</p> <p>22.11.16 For Construction</p>	<p>DESIGN: EC</p> <p>CAD: EC</p> <p>CHKD: EOG</p> <p>APPD: ND</p> <p>SCALE: 1:500</p> <p>DATE: 2016-11-22</p>	<p>MANCHESTER METROLINK TRAFFORD PARK LINE</p> <p>URBAN REALM & LANDSCAPE GENERAL ARRANGEMENT SHEET 19</p> <p>DRG No: MPT3-TP6-19-LDG-603</p> <p>REV: Q01</p>
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5.0 | Appendix 2: Tram Stop Signage Strategy

TRANSPORT FOR GREATER MANCHESTER

METROLINK INTEGRATED DELIVERY TEAM

Phase 3 Tram Stop Signage Strategy


Prepared for
TfGM
2 Piccadilly Place
Manchester
M1 3BG



AUTHORISATION SHEET (Version 3)

Client: Transport for Greater Manchester
Project: Metrolink Phase 3
Address: 2 Piccadilly Place, Manchester, M1 3BG

PREPARED BY

Name: M Gillespy / Alan Lowe
Position: Design Manager / Approvals & Consents Manager
Signature: 

Date: 12th October 2016

CHECKED BY

Name: Alan Dolan
Position: Integration Manager
Signature: 

Date: 12th October 2016

AUTHORISED FOR ISSUE

Name: David Bray
Position: Metrolink Programme Director
Signature: 

Date: 12th October 2016

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3	11/10/16	Updated for TPL (section 5.9.1) and Appendix A, Statutory Signs Added (section 5.10) and client name change GMPTE to TfGM	M.K. Gillespy / A Lowe

Distribution

Version	Date	Name	Role	Company

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Executive Summary

The Metrolink Phase 3 Extensions will introduce more than 60 new tram stops to the Metrolink Network (in addition to the recently completed tram stop at Media City and new stop at Abraham Moss being procured via a separate contract). The purpose of this strategy is to provide guidance on the application of stop signage to the proposed Phase 3. The strategy is intended to complement both the Phase 3 Design & Construction Specification and the Design Guide (Contract Version) which incorporates the Metrolink Visual Identity Standards (MVIS).

This document has been produced at the request of MPT to assist in the delivery of the Phase 3 Works.

One of the objectives of this signage strategy is to rationalise and simplify application of tram stop signage across the Phase 3 stops. This has the benefits of reducing the clutter caused by signage, producing consistent signage at all Phase 3 stops, reducing to a minimum the number of bespoke or “one-off” signs to be provided at Phase 3 stops.

To this end a hierarchy of Phase 3 Stop Signage is recommended as described below. The hierarchy extends across the “Metrolink Signage Family” and provides for the categorisation of signs dependant on whether the same sign can be applied:

- at multiple applications across all of the Phase 3 System (System wide)
- at multiple applications on tram stops across a specific line (Line wide)
- only at a specific tram stop (Stop specific)

The “Metrolink Signage Family” is introduced and explained in the MVIS. This strategy explains the application of the signage family to the Phase 3 tram stops, each sign type is considered in turn, pictorial examples are included and summaries given for each sign type.

To simplify the stop layout design, procurement, site storage and installation of stop signage a rationale for sign referencing is recommended. This is based on the Hieratical Category of the sign and its Metrolink Signage Family group.

In applying this strategy it is anticipated that the DCM contractor will develop a library of sign face drawings together with stop specific signage layout drawings (i.e. plans) indicating the proposed location of each sign.

1. Introduction

The Metrolink Phase 3 Extensions will introduce more than 60 new tram stops to the Metrolink Network (in addition to the recently completed tram stop at Media City and new stop at Abraham Moss being procured via a separate contract). The purpose of this strategy is to provide guidance on the application of stop signage to the proposed Phase 3 tram stops by the Design Construct and Maintain (DCM) Contractor, MPact Thales (MPT).

This strategy is intended to complement both the Phase 3 Design & Construction Specification and the Design Guide (Contract Version) which incorporates the Metrolink Visual Identity Standards (MVIS).

This document has been produced at the request of MPT to assist in the delivery of the Phase 3 Works. It details the strategy for the application of the advice in the MVIS to the stop signage required under the DCM Contract for Phase 3. This strategy is not intended to change or extend any of MPT's contractual obligations in respect of tram stop signage. In the event that MPT believes that any of the advice contained in this strategy goes beyond their contractual obligations they should advise TFGM of this, in writing at the earliest opportunity.

2. Scope

This strategy is applicable to the signage for all Phase 3 tram stops associated with the Metrolink Phase 3 DCM contract.

The general principle being to simplify the signage designs proposed for these stops rather than add to them.

3. Abbreviations

The meanings of abbreviations used in this strategy document are listed below:-

TPL	Trafford Park Line
DCM	Design Construct (and) Maintain
TfGM	Transport for Greater Manchester
MPT	MPact-Thales consortium i.e. the appointed DCM Contractor for Phase 3
MVIS	Metrolink Visual Identity Standards
EA	Equality Act 2010
TLA	Three Letter Acronym (Tram stop name code)
SER	Stop Equipment Room

4. Hierarchy of Stop Signs

One of the objectives of this signage strategy is to rationalise and simplify the application of tram stop signage across the Phase 3 stops. This has the benefits of reducing the clutter caused by signage, producing consistent signage at all Phase 3 stops, reducing to a minimum the number of bespoke or “one-off” signs to be provided at Phase 3 stops.

To this end a hierarchy of Phase Stop Signage is recommended as described below. The hierarchy extends across the “Metrolink Signage Family” (refer to Section 5 of this document) and provides for the categorisation of signs dependant on whether the same sign can be applied:

- at multiple applications across all of the Phase 3 System (System wide)
- at multiple applications on tram stops across a specific line (Line wide)
- only at a specific tram stop (Stop specific)

4.1. System (Phase 3) Wide Signs

System wide signs are those that can be applied without further modification or amendment to multiple locations across the Phase 3 works. In order to rationalise and simplify the Phase 3 tram stop signage, this strategy proposes to maximise the use of this category of sign and (in Section 5 of this document) identifies those signs which fall into this category.

4.2. Line Wide Signs

Line wide signs are those that can be applied at multiple locations across a particular Phase 3 line. In some instances, particularly for wayfinding at the entrances to tram stops, local variations on a particular line wide sign are likely to be necessary, typically in relation to the application of direction arrows or pictograms, however the basic wording and layout of line wide signs will be the same for multiple applications.

Again in order to rationalise and simplify the Phase 3 tram stop signage, this strategy proposes to maximise the use of this category of sign and (in Section 5 of this document) identifies those signs which fall into this category, either as identical line wide signs or as local variants.

4.3. Stop Specific Signs

Stop specific signs are individual “one-off” signs required at specific locations on specific tram stops. The format of these signs should still follow the MVIS but these signs will only have an application at a specific tram stop.

The most prevalent example of this category of sign will be the “Stop Identifiers”. In order to rationalise and simplify the Phase 3 tram stop signage, this strategy proposes to

reduce to a minimum the use of this category of sign, by using system wide and line wide signs wherever feasible. Section 5 of this document identifies those signs which are envisaged to be required to be stop specific.

5. Application of Signage to Phase 3 Tram Stops

The “Metrolink Signage Family” is introduced and explained in the MVIS. This section explains the application of the signage family to the Phase 3 tram stops, each sign type is considered in turn. It is anticipated that this guidance will be followed on all Phase 3 tram stops.

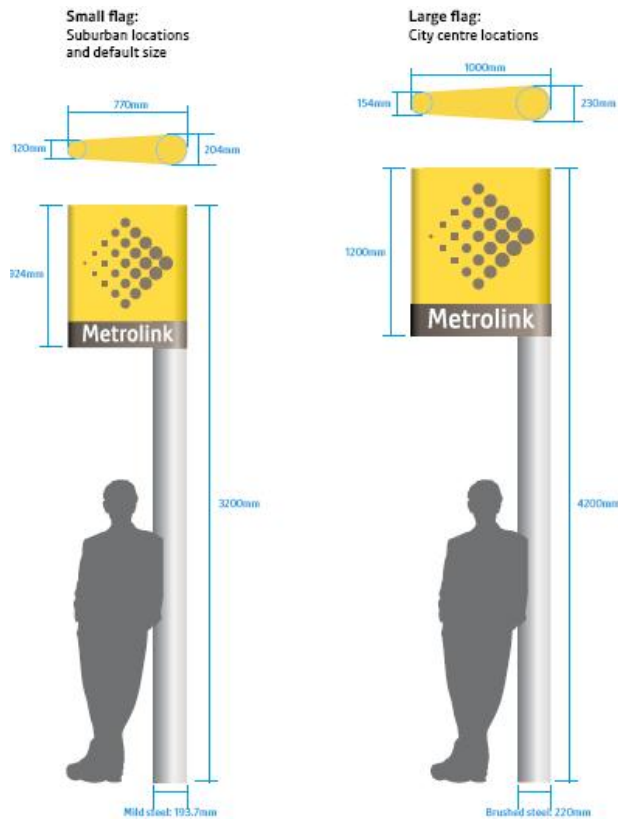
Departures from this strategy should only take place at tram stops where on-site constraints make it inappropriate or otherwise preclude the application of this guidance. Any such situations should be identified by the DCM Contractor as soon as possible and alternative signage design discussed agreed with TFGM. Any alternative signage design should still comply with the MVIS even if a departure from this strategy is required.

5.1. Metrolink Flag (system wide)

These system wide signs should be provided at all Phase 3 tram stops in accordance with MVIS Sec 10.9.1. The default type for Phase 3 works is the Upright (pole mounted) Flag. The projecting flag should only be considered in situations where onsite constraints preclude the use of the upright version. In accordance with the MVIS the large flag should be used at town centre locations (i.e. Rochdale, Oldham, Ashton and Droylsden), with the small flag being the default at sub-urban locations.

Where there are multiple access points in close proximity, a flag should be placed at the principle access. Where different access points are distant from each other (typically on different roads), a flag should be placed at the principle access with consideration to provision of a second flag at the alternative access. The minimum alternative to a second flag is a boundary or pole mounted Metrolink Service Identifier.

5.1.1. Example Picture



5.1.2. Guidance

Mounting: Upright pole. Projecting flag by exception.

Text: Specific art work to be used

Pictogram: None; Specific artwork to be used.

Directional arrow: None.

5.2. Stop Entrance Portals (stop specific (front) system wide (rear))

Stop Entrance Portals should be provided where stop platforms are not visible from adjacent public areas (typically in segregated areas e.g. cuttings). The front face (outward elevation) will be stop specific and display the stop name and in the “warm grey band”, the appropriate ‘Trams to X’. The rear face (inward elevation) will be systemwide and NOT display any text in the yellow band and in the “warm grey band”, the word ‘Exit’.

Where a portal is not appropriate or can't be fitted a Metrolink Service Identifier (see below) may be substituted.

5.2.1. Example Picture



5.2.2. Guidance

Mounting: Portal.

Text: Portal outward elevation – ‘*Stop name*’ + ‘Trams to X’. Portal inward elevation – ‘Exit’.

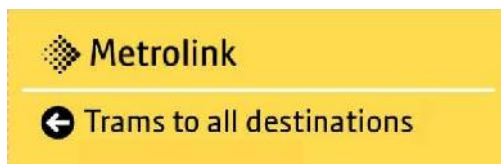
Pictogram: ‘Via staircase (down or up as appropriate)’, ‘Via lift (down or up as appropriate)’, ‘Mobility Impaired Route’ (i.e. wheelchair) when appropriate i.e. where step free and stepped routes are not provided from the same entrance.

Directional arrow: None

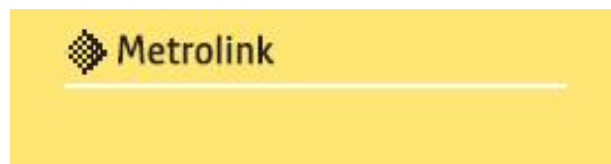
5.3. Metrolink Service Identifiers (system wide)

Metrolink Service Identifiers should be provided at those off street tram stop thresholds not provided with entrance portals. In the majority of cases the Metrolink Service Identifier will be incorporated as header to the Wayfinding Signs (see below) at stop entrances. In exceptional cases a standalone Metrolink Service Identifier sign may be required. Metrolink Service Identifiers will always be of the format required by the MVIS and comprise of the ‘Metrolink Speed Diamond’ to the left of the ‘Metrolink’ logo.

5.3.1. Example Pictures



With wayfinding



Without wayfinding

5.3.2. Guidance

Mounting: Generally incorporated as header to Wayfinding Signs. Exceptionally separate double pole or wall mounted.

Text: “Metrolink Speed Diamond” to the left of the ‘Metrolink’ logo as per MVIS.

Pictogram: None

Directional arrow: None (direction arrows not to be incorporated within the Metrolink Service Identifier element only the wayfinding under the white dividing line).

5.4. Stop Identifiers (stop specific)

Stop Identifiers shall be either pole mounted on dedicated twin poles i.e. stop name plates or mounted above pole mounted poster cases. The locations of both of stop name plates and poster cases are determined as part of the tram stop furniture layout design. The Stop Identifier signs shall be added to these, it is important that the designed locations of both stop name plates and poster cases are not altered by the signage design.

On platform route wayfinding or destination information (see Section 5.7 below) where required will be incorporated in the frieze below the stop name plates. Destination information should NOT be included on the signs provided at the extremities of the platform at the arrival end, this is because the first stop identifier sign is intended primarily for the benefit of passengers on the trams and as single units will depart from the opposite end platform it is preferable to encourage waiting passengers to stand at the departure end of the platform.

5.4.1. Example Pictures



Without additional information



With destination information



With route wayfinding

5.4.2. Guidance

Mounting: Double pole mounted on dedicated poles or above poster cases.

Text: 'Stop name'

Pictogram: None.

Directional arrow: None (direction arrows not to be incorporated within the Stop Identifier element).

5.5. Wayfinding general

The MVIS provides for a wide variety of wayfinding signage to accommodate a variety of architectural and environmental situations. For Phase 3 this has been rationalised to a smaller number of "standards" as described in Sections 5.6 to 5.8 below. It should be noted that for the Phase 3 DCM contract the wayfinding is limited to wayfinding within the Metrolink stop environment; there is no requirement to provide wayfinding to off-stop locations or local attractions.

It should also be noted that though the MVIS provides for the option to provide comprehensive wayfinding to all on stop facilities for example the way out, ticket vending machines etc. The rationale adopted in this strategy is to concentrate the wayfinding to helping the passengers to locate the correct platform and to only provide wayfinding to other features if these are not self evident. This takes cognisance of the fact that Phase 3 platforms are only 58m or 54m long and so in many cases the way out and location of on stop facilities will be self-evident.

5.5.1. Trams to “X” wording

Wayfinding towards both platforms at a stop shall utilise the wording “*Trams to all destinations*”. Wayfinding towards or on Inbound platforms shall utilise the wording “*Trams to Manchester*”. Wayfinding towards or on Outbound platforms will be line specific and shall utilise the wording identified in Appendix A.

5.5.2. Wayfinding via track crossings.

In the majority of cases the pedestrian track crossings serve as an alternative route in the event of mechanical failure of the tram stop lift. In most cases the track crossing will be self evident and consequently there is no need routinely to provide wayfinding signage via the track crossings except in cases where these form part of a specific route for example the step free route to Manchester platform at Chorlton which is via the track crossing

5.6. Wayfinding off platforms (line wide)

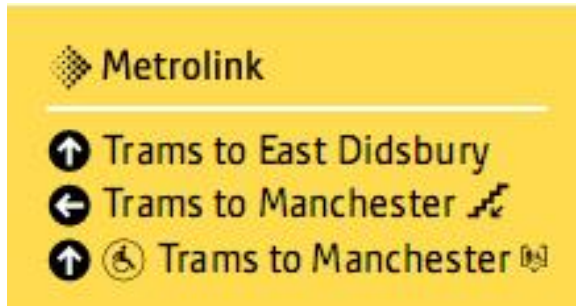
Wayfinding Signs will be provided between the stop threshold (i.e. where the stop access meets the adjacent public realm) and the platform areas, to direct passengers on to the correct platform (utilising the wording formats identified in 5.5.1 above); and exceptionally where necessary back to the stop egress point (for example at St Werburgh’s Road). In the case of off-street tram stops not provided with entrance portals, the Metrolink Service Identifier (see above) will be incorporated as header to those Wayfinding Signs provided at the threshold as shown in the pictorial example below.

Pictograms and directional arrows will be incorporated into off-platform Wayfinding Signs where appropriate for example to identify staircases, lifts and if necessary a separate step-free route. Where the same route will provide step free access; the specific use of the mobility impaired and pushchair pictograms is NOT required on the wayfinding for those routes and the directional arrows alone will suffice.

5.6.1. Example Pictures



Standalone (without Metrolink Service Identifier)



With Metrolink Service Identifier

5.6.2. Guidance

Mounting: Double pole.

Text: 'Trams to all destinations' (at general stop access point) or 'Trams to X' (at platform specific access point), 'Way out to...' (where necessary at egress points).

Pictogram: 'Via staircase (down or up as appropriate)', 'Via lift (down or up as appropriate)' and 'Mobility Impaired Route' (i.e. wheelchair) + Pushchair Route' as appropriate if step-free and stepped routes are different.

Directional arrow: Yes.

5.7. Wayfinding on platform

5.7.1. Destination signing i.e. trams to X (line wide)

Destination wayfinding will be provided on platforms utilising the wording formats identified in 5.5.1 above. This signing will be incorporated in the frieze below the Stop Identifier in accordance with the advice in MVIS Sec 10.9.3.

Destination wayfinding will generally be included below those Stop Identifiers located at tram departure end of platform but not under the Stop Identifiers located at the extreme arrival end of the platform on the basis that it would be inappropriate to encourage passengers to await the arrival of tram services at this location given that the tram will generally be departing from the opposite end of the platform. The exception to this rationale would be termini stops where the trams will arrive and depart from the same end of the platform.



5.7.2. On platform route finding (stop specific)

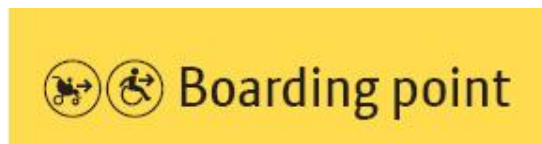
In view of the short length of Phase 3 platforms; the provision of additional on platform route finding is not anticipated to be widely required. However where this is necessary this signing should be incorporated in the frieze below the Stop Identifier in accordance with the advice in MVIS Sec 10.9.3.

Where required, on platform route finding signage may be appropriate below those Stop Identifiers located at tram arrival end of platform particularly where the route requires the use of the track crossing, for example the step-free route to Manchester-bound platform at Chorlton.



5.7.3. Boarding Point (system wide)

One of these signs is to be provided at each Phase 3 tram stop platform. The boarding point sign is to be; a single level, double sided, perpendicular shelter hung sign. This is a system wide sign with no other variations, for application across all of the Phase 3 tram stops.



5.7.4. Guidance

DESTINATION SIGNING

Mounting: In the frieze below the Stop Identifier

Text: 'Trams to X'. 'X' is stop specific, as detailed in Appendix A. Note: not to be included on Stop Identifier at tram arrival end of platform.

Pictogram: None.

Directional arrow: None.

ON PLATFORM ROUTE FINDING

Mounting: In the frieze below the Stop Identifier

Text: Text as required to format identified in MVIS.

Pictogram: Yes as required

Directional arrow: Yes.

Other info: This signage provided only where necessary and on stop specific basis, e.g. the signing of the step free route to Manchester platform at Chorlton via track crossing.

BOARDING POINT

Mounting: Shelter hung, double sided, perpendicular to platform edge and above foremost Accessibility Compliant Boarding Point.

Text: 'Boarding point'

Pictogram: "Mobility Impaired Boarding Point" (i.e. wheelchair with arrow) + 'Pushchair Boarding Point' (i.e. pushchair with arrow)

Directional arrow: None.

5.8. Wayfinding lift portals (line specific (street level) system wide (platform level))

Door portals should be fitted to both entrances to each Phase 3 tram stop lift. These portals shall be with in accordance with the advice in MVIS Sec 10.9.5 with header bearing the lift pictogram and the words 'Passenger lift'. For Phase 3 the street level portal will incorporate 'Trams to X' wayfinding and at platform level all lift portals will incorporate 'Way out' wayfinding with appropriate directional arrow.

No other text or pictograms are envisaged to be incorporated into the Phase 3 lift portals.

5.8.1. Example Picture



5.8.2. Guidance

Mounting: Applied to external surround to lift doors both top and bottom.

Text: at street level (public area) – 'Passenger lift' + 'Trams to X'. at platform level – 'Passenger lift' + 'Way out'.

Pictogram: 'Passenger lift'

Directional arrow: Yes ('ascend via lift' or 'descend via lift' arrow as appropriate).

5.9. Information Signs (system wide (with optional stop specific wayfinding))

For Phase 3 tram stops a minimal level of Information signage is envisaged. System wide information signage shall be limited to the following signs:

- Before You Board Sign
- Bicycle park Sign
- Lift breakdown notices
- Alternative to ramp notices

These signs should be formatted in accordance with the advice in MVIS Sec 10.9.6 and be either double pole mounted or wall mounted.

The MVIS provides for the option of identifying numerous on-platform facilities on these Information Signs where appropriate but extensive use of this option is not envisaged on Phase 3 stops including TPL

5.9.1. Before You Board Sign

These signs previously referred to as “Ticket Purchase and Validity Signs” are now known as “Before You Board Signs”. The wording on the sign having been updated to include the use of Smart Ticket readers. An example of the basic sign is included below.

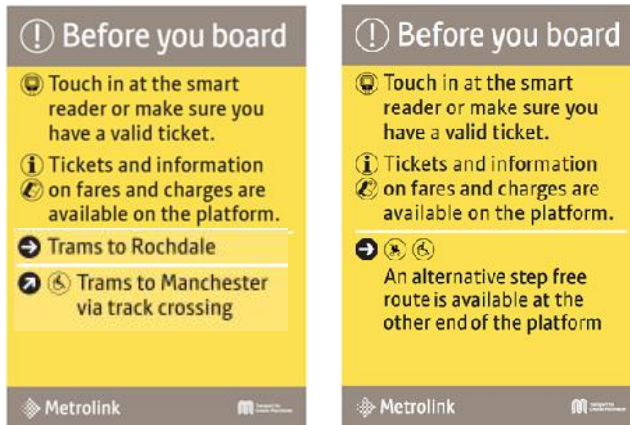


Above the white dividing line, these signs should incorporate only the text and pictograms identified in the images and guidance below. These signs have a legal significance and should be strategically positioned such that passengers have the opportunity to see them before they access the platforms or board a tram. Usually and where appropriate these signs will be double sided.

To reduce clutter and the need for additional signage it is acceptable for a limited amount of wayfinding information to also be incorporated into these Information Signs. Where this is the case the wayfinding should be added on a stop specific basis with the wayfinding below the information text and separated by a white dividing line. Basic

directional wayfinding utilising the wording formats identified in Section 5.5 above should be used with the minimal appropriate application of pictograms and directional arrows.

The MVIS provides for the option of identifying numerous on-platform facilities on these Information Signs where appropriate but extensive use of this option is not envisaged on Phase 3 stops including TPL. Below are examples of wayfinding and access information provided below the white dividing line.



5.9.2. Bicycle Park Sign

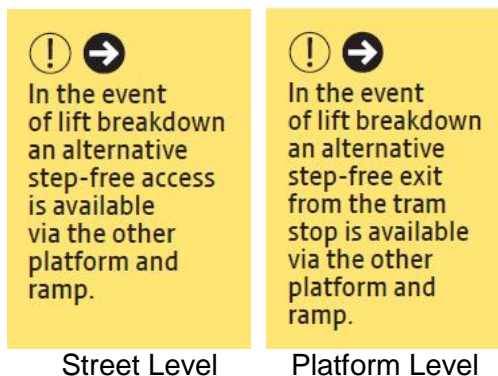
These will be system wide signs employed adjacent to all tram stop cycle parking facilities.



5.9.3. Lift Breakdown Notice

These will be system wide signs provided adjacent to all lift entrances. The text height should be based on the MVIS guidance related to a viewing distance from the sign of not more than 2m. The sign should be located at a level that allows it to read by either standing or seated (wheel chair bound) readers. The signs will provide clarification that an alternative step free route is available via the track crossing.

Anticipating that these signs will be small, they will usually be wall mounted adjacent to the lift entrance. The wording of these signs will be dependent on if they are situated at the street level or platform level, lift entrance. The suggested wording is included in the guidance summary below.



In some limited instances where the access to the opposite platform is remote from the lift, a specific map sign may also need be located adjacent to the notice for example Monsall Tram Stop.

5.9.4. Alternative to Ramp Notices

Please note that these signs are only anticipated to be necessary at long tram stop access ramps and NOT at track crossing ramps at the end of platforms.

These will be system wide signs provided adjacent to the low end of all tram stop access ramps. The text height should be based on the MVIS guidance related to a viewing distance from the sign of not more than 2m. The signs should be located at a level that allows them to read by either standing or seated (wheel chair bound) readers. The signs will provide clarification that an alternative step free route is also available via the lift.



Anticipating that these signs will be small these will usually be wall mounted or affixed to the ramp guard rail at the bottom of the ramp. The suggested wording is included in the guidance summary below.

5.9.5. Guidance

BEFORE YOU BOARD

Mounting: Double pole or wall mounted.

Text: 'Before you board' + 'Touch in at the smart reader or make sure you have a valid ticket' + 'Tickets and information on fares and charges are available on the platform'.

Pictogram: 'Smart reader' + 'Warning', 'Travel information' + 'Tickets & passes', as detailed in MVIS.

Directional arrow: Only if required for wayfinding (see below).

Other info: Additionally wayfinding information and limited on-platform facilities information may be added to these signs where appropriate. For example to avoid the need for additional separate Wayfinding Signs and where step-free access to a platform is via the track crossing.

BICYCLE PARK

Mounting: Double pole mounted or boundary mounted.

Text: 'Bicycle Park' + 'Bicycles are not allowed on Metrolink' + 'Please use this bicycle park to store your bicycle while you travel' + 'Please note that all bicycles are left at their owner's risk'.

Pictogram: 'Bike park/lockers' + 'Warning', as detailed in MVIS.

Directional arrow: None.

LIFT BREAKDOWN NOTICE (STREET LEVEL)

Mounting: Wall mounted.

Text: 'In the Event of Lift Breakdown an alternative step free access is available via the other platform and track crossing'.

Pictogram: 'Warning', as detailed in MVIS.

Directional arrow: As required.

LIFT BREAKDOWN NOTICE (PLATFORM LEVEL)

Mounting: Wall mounted.

Text: 'In the Event of Lift Breakdown an alternative step free exit from the tram stop is available via the track crossing'.

Pictogram: 'Warning', as detailed in MVIS.

Directional arrow: As required.

ALTERNATIVE TO RAMP NOTICE

Mounting: Guardrail or Wall mounted at low end of tram stop access ramps only.

Text: 'Alternative Route' + 'An alternative step free route is available via the track crossing and the lift on the other platform'.

Pictogram: 'Warning', as detailed in MVIS.

Directional arrow: As required.

5.10. Statutory Signs

Statutory signage is required to prohibit smoking on tramstops, limit pedestrian access (where appropriate) and to provide warnings of live overhead wires and of CCTV operation. Specific Metrolink artwork is available for these signs as illustrated. Only these should be used on all Metrolink stops. 'Off the shelf' alternatives should not be used.

5.10.1. No Smoking

These signs are required system wide on all platforms and other Metrolink specific passenger infrastructure (for example corralling areas). The design of the sign has been updated to include electronic cigarettes. They should be provided in sufficient numbers to ensure that the statutory requirement is clearly conveyed.



5.10.2. Passengers Must Not Pass This Point

These signs are only required where pedestrian facilities are provided that are intended ONLY for the use of Metrolink Operations or Maintenance staff. For example access gates and steps leading from platforms to trackside cess walkways and non-public areas of stops and platforms.



5.10.3. Danger Overhead Wires

These signs should be provided where determined by designers risk assessments for example where OLE is lower than recommended in guidance and on features or equipment which if climbed would bring members of the public closer to the live overhead wires than distances recommended in RSP2 and other Guidance.



5.10.4. CCTV In Operation

These signs are a statutory requirement system wide on all platforms and other Metrolink infrastructure (for example SERs) where CCTV coverage is provided. They should be provided in sufficient numbers to ensure that the statutory obligation to advise that images are being recorded is clearly conveyed within areas covered by CCTV.



5.10.5. Guidance

NO SMOKING

Mounting: Strap mounted to lighting columns, OLE Poles or similar.

Text: Text Layout and graphics to be as illustrated, this is a Metrolink specific statutory sign.

Pictogram: Not Applicable

Directional arrow: Not Applicable

PASSENGERS MUST NOT PASS THIS POINT

Mounting: Strap mounted to gate or fence at or adjacent to restricted access point.

Text: Text Layout and graphics to be as illustrated, this is a Metrolink specific statutory sign.

Pictogram: Not Applicable

Directional arrow: Not Applicable

DANGER OVERHEAD WIRES

Mounting: Strap mounted to lighting columns, OLE Poles or similar, or to their own pole at pedestrian track crossings with substandard wire height. Mounted on or adjacent to features or equipment which if climbed would bring members of the public closer to the live overhead wires.

Text: Text Layout and graphics to be as illustrated, this is a Metrolink specific statutory sign.

Pictogram: Not Applicable

Directional arrow: Not Applicable

CCTV IN OPERATION

Mounting: Strap mounted to lighting columns, OLE Poles or similar in areas covered by CCTV.

Text: Text Layout and graphics to be as illustrated, this is a Metrolink specific statutory sign.

Pictogram: Not Applicable

Directional arrow: Not Applicable

6. Sign Referencing

In order to simplify the stop layout design, procurement, site storage and installation of stop signage the following rationale for sign referencing is recommended. This referencing is based on the Hierarchical Category of the sign (see Section 4), i.e. system wide, or the specific tram line to which the sign relates, or in the case of Stop specific signs, the tram stop at which the sign is to be installed and its Metrolink Signage Family group (see Section 5).

Where wayfinding signage is to be incorporated into other sign types (i.e. Service Identifiers, Stop Identifiers or Information Signs) the sign should be referenced based on the parent sign type.

As a general principle the application of different sign referencing to the same Phase 3 sign face is not recommended so the same sign used at several separate locations would have the same sign reference at each location.

Consequently the application of a different and individual reference to each and every sign to be applied at each Phase 3 tram stop is not envisaged, when the same sign is used several times either system wide or line wide.

6.1. Sign Referencing Structure

<Hierarchical Category>/<Family Group>/<Line (where applicable)>/<Stop (where applicable)>/<Number Ref>-<Variant (where appropriate AtoZ)>.

6.1.1. Hierarchical Category Abbreviations

SW System (Phase 3) Wide
LW Line Wide
SS Stop Specific

6.1.2. Metrolink Signage Family Group Abbreviations

MF Metrolink Flag
EP Entrance Portal
MSI Metrolink Service Identifier
SI Stop Identifiers
WF Wayfinding (for stand alone wayfinding signs only)
IN Information
ST Statutory Signs

6.1.3. Phase 3 Tramline Abbreviations

TPL Trafford Park Line
ORL Oldham Rochdale Line (including Oldham & Rochdale town centres).
EML East Manchester Line (incl Ashton Section, Droylsden to Ashton U Lyne)
SML South Manchester Line (to St Werburgh's Rd)
DID Didsbury Section (St Werburgh's Rd to East Didsbury)

AIR Airport Section

6.1.4. Phase 3 Tram stop Abbreviations

Please refer to Appendix A for details of tram stop name abbreviations. Please note that these are the same three letter acronym (TLA) stop codes identified in the Metrolink Stop and Substation Nomenclature document.

6.2. Examples of Sign Referencing

SW/MF/001 System wide Metrolink Flag. e.g. could be applied to small flag

SW/MF/002 System wide Metrolink Flag. e.g. could be applied to large flag

SW/EP/001 System wide Entrance portal. e.g. could be applied to rear face of entrance portal bearing word "Exit".

SW/ST/001 Systemwide Statutory Sign . e.g. could be applied to no smoking sign.

SS/EP/TPL/WSD/001 Stop specific Entrance portal at Wharfside Stop

LW/MSI/TPL/001 Line Wide Metrolink Service Identifier for Trafford Park Line

SS/MSI/TPL/VLG/001A Variant of above relating specifically to Village Stop

SS/MSI/TPL/PAR/001A Variant of above relating specifically to Parkway Stop

SS/SI/TPL/IWM/001 Stop Identifier (type 1) at Imperial War Museum Stop

SS/SI/TPL/IWM/002 Stop Identifier (type 2) at Imperial War Museum Stop

SS/WF/TPL/IWM/001 Wayfinding Sign at Imperial War Museum Stop

SW/WF/001 System wide Wayfinding Sign. e.g. could be applied to boarding point sign.

SW/IN/001 System wide Information Sign. e.g. could be applied to Before You Board Sign.

SW/IN/002 Another system wide Information Sign. e.g. could be applied to Bicycle Park Sign.

SS/IN/TPL/IWM/001A Variant of SW/IN/001 above relating specifically to Imperial War Museum Stop. e.g. could be applied to Ticket Purchase and Validity Sign with wayfinding added for Imperial War Museum Stop.

7. Conclusions and Further Work

7.1. Conclusion

This strategy document provides the basis for the application of the necessary signage to Phase 3 tramstops to ensure compliance with the guidance in MVIS. The strategy seeks to maximise the scope to use system wide and line wide standard signs. By adoption of a system wide rationale for sign referencing it should be possible to communicate the signage proposals for each tram stop by production of a signage layout drawing (i.e. a plan) for each tram stop to be read in conjunction with a minimum number of sign face drawings.

7.2. Further Work

In applying this strategy it is anticipated that the DCM contractor will develop a library of sign face drawings together with stop specific signage layout drawings (i.e. plans) indicating the proposed location of each sign.

7.2.1. Sign Face Library

The production of a system wide library of sign face drawings is recommended. This would comprise separate groups of drawings under the headings of System (Phase 3) Wide, Line Wide and Stop Specific. Each sign face would be given a unique reference following the rationale for sign referencing recommended in Section 6 of this document.

7.2.2. Stop Signage Layouts

For each tram stop a signage layout drawing based on the general arrangement drawing for the stop is anticipated. This drawing will identify the location and mounting arrangement for each sign with the appropriate sign reference also being indicated.

The signage layout drawings should be consistent with the stop furniture layout design developed for the tram stop. As previously stated the proposed stop signage; particularly Stop Identifiers and wayfinding on platform, need to be consistent with the stop name plate and poster case locations determined by the stop's furniture layout design.

In view of the necessary integration between the signage design and the furniture layout it is anticipated the signage layouts will not be completed until after the furniture layout for a particular stop has been finalised.

Appendix A: Tram Stop Abbreviations Codes and Destination Referencing

Stop Name	Code	Inbound	Outbound
TPL			
Wharfside	WSD	Trams to Manchester	Trams to Trafford Centre
Imperial War Museum	IWM	Trams to Manchester	Trams to Trafford Centre
Village	VLG	Trams to Manchester	Trams to Trafford Centre
Parkway	PAR	Trams to Manchester	Trams to Trafford Centre
Event City	EVC	Trams to Manchester	Trams to Trafford Centre
Trafford Centre	TRC	Trams to Manchester	Trams to Manchester
ORL			
Monsall	MON	Trams to Manchester	Trams to Rochdale
Central Park	CEP	Trams to Manchester	Trams to Rochdale
Newton Heath & Moston	NHM	Trams to Manchester	Trams to Rochdale
Failsworth	FAL	Trams to Manchester	Trams to Rochdale
Hollinwood	HOL	Trams to Manchester	Trams to Rochdale
South Chadderton	SOC	Trams to Manchester	Trams to Rochdale
Freehold	FRE	Trams to Manchester	Trams to Rochdale
Westwood	WWD	Trams to Manchester	Trams to Rochdale
Oldham Kings Street	OHK	Trams to Manchester	Trams to Rochdale
Oldham Central	OHC	Trams to Manchester	Trams to Rochdale
Oldham Mumps	OHM	Trams to Manchester	Trams to Rochdale
Derker	DER	Trams to Manchester	Trams to Rochdale
Shaw & Crompton	SHC	Trams to Manchester	Trams to Rochdale
Newhey	NEH	Trams to Manchester	Trams to Rochdale
Milnrow	MIL	Trams to Manchester	Trams to Rochdale

Kingsway Business Park	KIN	Trams to Manchester	Trams to Rochdale
Newbold	NEB	Trams to Manchester	Trams to Rochdale
Rochdale Railway Station	ROC	Trams to Manchester	Trams to Rochdale
Rochdale Town Centre	RTC	Trams to Manchester	Trams to Manchester
EML			
New Islington	NIS	Trams to Manchester	Trams to Ashton-under-Lyne
Holt Town	HOT	Trams to Manchester	Trams to Ashton-under-Lyne
Sportcity – Stadium	SPC	Trams to Manchester	Trams to Ashton-under-Lyne
Sportcity – Velodrome	VEL	Trams to Manchester	Trams to Ashton-under-Lyne
Clayton	CLA	Trams to Manchester	Trams to Ashton-under-Lyne
Edge Lane	EDL	Trams to Manchester	Trams to Ashton-under-Lyne
Cemetery Road	CER	Trams to Manchester	Trams to Ashton-under-Lyne
Droylsden	DYL	Trams to Manchester	Trams to Ashton-under-Lyne
Audenshaw	AUD	Trams to Manchester	Trams to Ashton-under-Lyne
Ashton Moss	ASM	Trams to Manchester	Trams to Ashton-under-Lyne
Ashton West	ASW	Trams to Manchester	Trams to Ashton-under-Lyne
Ashton-under-Lyne	ASH	Trams to Manchester	Trams to Manchester
SML			
Firwood	FIR	Trams to Manchester	Trams to East Didsbury & Airport
Chorlton	CHO	Trams to Manchester	Trams to East Didsbury & Airport
St.Werburgh's Road	SWR	Trams to Manchester	Trams to East Didsbury & Airport
DID			
Withington	WTH	Trams to Manchester	Trams to East Didsbury
Burton Road	BRT	Trams to Manchester	Trams to East Didsbury
West Didsbury	WDD	Trams to Manchester	Trams to East Didsbury
Didsbury Village	DDV	Trams to Manchester	Trams to East Didsbury
East Didsbury	EDD	Trams to	Trams to Manchester

		Manchester	
AIR			
Barlow Moor Road	BMR	Trams to Manchester	Trams to Airport
Sale Water Park	SWP	Trams to Manchester	Trams to Airport
Northern Moor	NMR	Trams to Manchester	Trams to Airport
Wythenshawe Park	WPK	Trams to Manchester	Trams to Airport
Moor Road	MRD	Trams to Manchester	Trams to Airport
Baguley	BAG	Trams to Manchester	Trams to Airport
Roundthorn	RTH	Trams to Manchester	Trams to Airport
Martinscroft	MAR	Trams to Manchester	Trams to Airport
Haveley	HAV	Trams to Manchester	Trams to Airport
Benchill	BCH	Trams to Manchester	Trams to Airport
Crossacres	CRO	Trams to Manchester	Trams to Airport
Wythenshawe Town Centre	WYC	Trams to Manchester	Trams to Airport
Robinswood Road	RBN	Trams to Manchester	Trams to Airport
Peel Hall	PLH	Trams to Manchester	Trams to Airport
Shadowmoss	SHD	Trams to Manchester	Trams to Airport
Manchester Airport	AIR	Trams to Manchester	-

