

All new height to be topped with 1.1m parapet boundary wall

Reconstruct 2.4m high concrete railway corridor boundary walls on both sides of the road retaining walls topped with an additional 1.2m palisade fence

Reconstruct 2.4m high concrete railway corridor boundary walls on both sides of the road retaining walls topped with an additional 1.2m palisade fence (Include pedestrian access gates)

New piled wall is to be topped with an additional 1.1m parapet in cases where no boundary wall is directly on top of retaining wall.

KYLEMORE ROAD BRIDGE (OBC5A)

LE FANU ROAD BRIDGE (OBC7)

Reconstruct 2.4m high concrete railway corridor boundary wall on both sides of the road retaining walls topped with an additional 1.2m palisade fence (include pedestrian access gate).

New King Post retaining wall is to be topped with an additional 1.1m parapet in cases where no boundary wall is directly on top of retaining wall.

CHERRY ORCHARD FOOTBRIDGE (OBC8B)

NEW FOUR TRACK SECTION

New piled wall is to be topped with an additional 1.1m parapet in cases where no boundary wall is directly on top of retaining wall.

Reconstruct 2.4m high plan concrete render and painted railway corridor boundary wall, topped with an additional 1.2m palisade fence

Reconstruct 2.4m high concrete railway corridor boundary wall on top of new piled (Slow Track) retaining wall. wall is to be topped with an additional 1.2m palisade fence. (include a new pedestrian access gate at cul de sac for maintenance).

New King Post retaining wall is to be topped with an additional 1.1m parapet in cases where no boundary wall is directly on top of retaining wall.

Reconstruct 2.4m high concrete railway corridor boundary wall on own foundation.

New King Post retaining wall is to be topped with an additional 1.1m parapet in cases where no boundary wall is directly on top of retaining wall.

Reconstruct 2.4m high Palisade railway corridor Boundary Fence on own foundation

PARK WEST INDUSTRIAL ESTATE

LEGEND:

	EXISTING CIE PROPERTY OWNERSHIP BOUNDARY
	PROPOSED ATTENUATION TANK
	EXISTING TRACK TO BE RETAINED
	PROPOSED SLAB TRACK & ELECTRIFICATION
	PROPOSED TRACK WORKS & ELECTRIFICATION
	PROPOSED TRACK WORKS, NOT ELECTRIFIED
	PROPOSED RAILWAY ELECTRIFICATION
	PROPOSED PARAPET MODIFICATIONS (INFIL PANELS AND/OR RAISING)
	PROPOSED CANTILEVER RETAINING WALL
	PROPOSED PILED RETAINING WALL
	PROPOSED "KING POST" RETAINING WALL
	PROPOSED GABION RETAINING WALLS
	PROPOSED BOUNDARY WALLS
	PROPOSED BOUNDARY FENCING

NOTES
The boundary treatment drawings should be read in conjunction with the Boundary Treatment Schedule (DP-04-REP-ST-TTA-26905) which is appended to the Boundary Treatment Preliminary Design Report (DP-04-23-REP-ST-TTA-26904). Additional clarification of retaining wall details below certain boundary treatment can be found in the Geotechnical Design Report (DP-04-23-REP-CV-TTA-01276) and drawings.

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All elevations are in metres and relate to OSi Geoid Model (OSG2002) Mean Head as defined by existing Project Control. All Co-ordinates are in Irish Transverse Mercator Grid (ITM) as defined by OSi active GPS station Tallaght College (TLG).



Rev	Date	Drn	Chkd	App'd	Description
V01	10.11.22	RG	JX	JX	PLANNING ISSUE

Client: **Iarnród Éireann Irish Rail**

Engineering Designer: **ATKINS**

Date: 05.07.22 Scale: 1:1250 @ A0
N.T.S. @ A3

Project Code: 199586 Issuer: TTA QMS Code: []

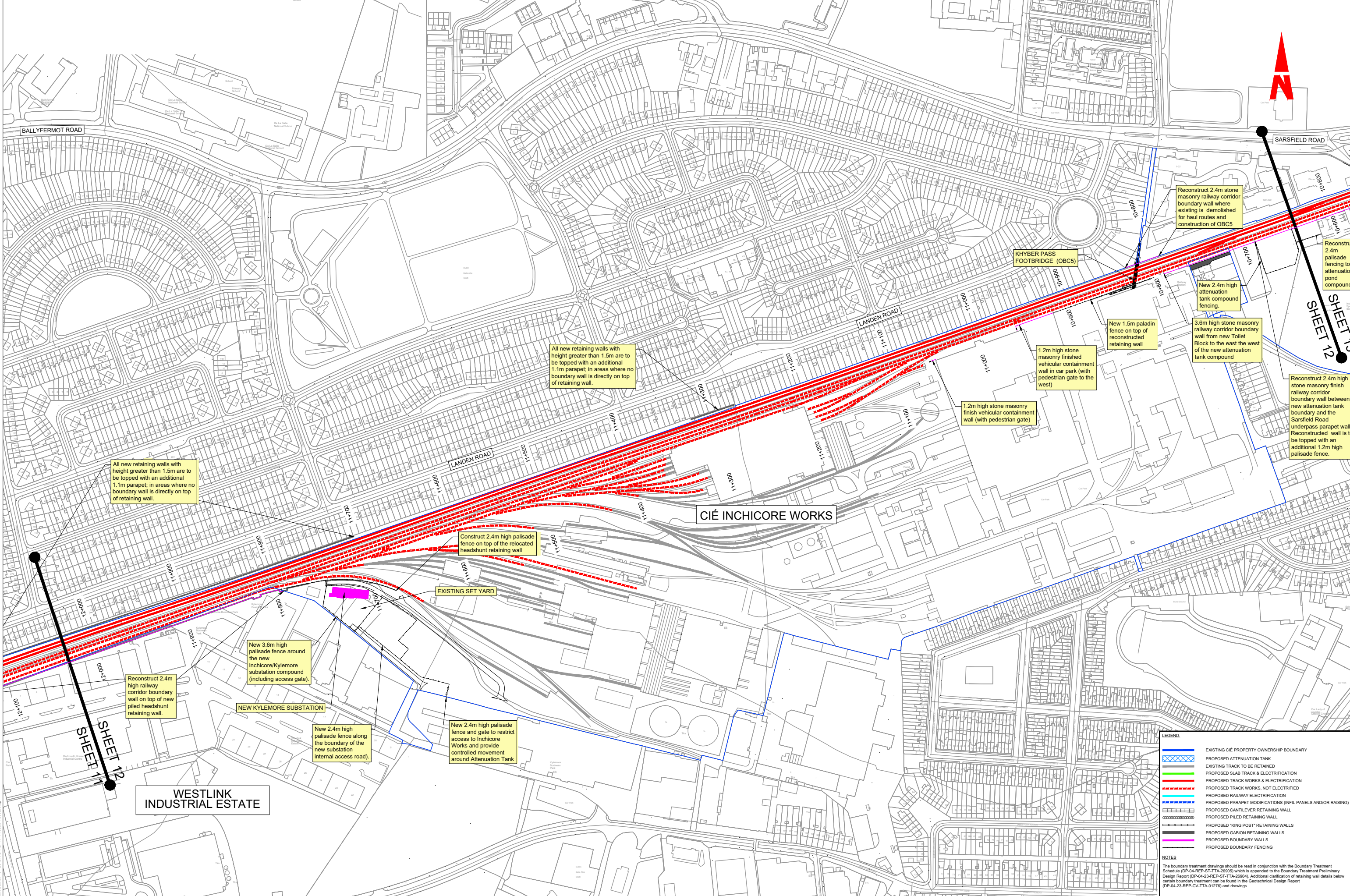
Drawn: RG Checked: JX Approved: JX

Project Title: **DART+ SOUTH WEST**

Drawing Title: **BOUNDARY TREATMENT CHERRY ORCHARD TO KYLEMORE ROAD BRIDGE SHEET 11 OF 17**

Drawing File Name: DP-04-23-DWG-RO-TTA-189586 Version: V01 Status: S3

DO NOT SCALE USE FIGURED DIMENSIONS ONLY



SHEET 12
SHEET 13

All new retaining walls with height greater than 1.5m are to be topped with an additional 1.1m parapet, in areas where no boundary wall is directly on top of retaining wall.

All new retaining walls with height greater than 1.5m are to be topped with an additional 1.1m parapet, in areas where no boundary wall is directly on top of retaining wall.

Reconstruct 2.4m stone masonry railway corridor boundary wall where existing is demolished for haul routes and construction of OBC5

KHYBER PASS FOOTBRIDGE (OBC5)

New 2.4m high attenuation tank compound fencing.

New 1.5m paladin fence on top of reconstructed retaining wall

3.6m high stone masonry railway corridor boundary wall from new Toilet Block to the east of the west of the new attenuation tank compound

1.2m high stone masonry finished vehicular containment wall in car park (with pedestrian gate to the west)

1.2m high stone masonry finish vehicular containment wall (with pedestrian gate)

Reconstruct 2.4m high stone masonry finish railway corridor boundary wall between new attenuation tank boundary and the Sarsfield Road underpass parapet wall. Reconstructed wall is to be topped with an additional 1.2m high palisade fence.

CIÉ INCHICORE WORKS

Construct 2.4m high palisade fence on top of the relocated headshunt retaining wall

EXISTING SET YARD

New 3.6m high palisade fence around the new Inchicore/Kylemore substation compound (including access gate).

NEW KYLEMORE SUBSTATION

Reconstruct 2.4m high railway corridor boundary wall on top of new piled headshunt retaining wall.

New 2.4m high palisade fence along the boundary of the new substation (internal access road).

New 2.4m high palisade fence and gate to restrict access to Inchicore Works and provide controlled movement around Attenuation Tank

WESTLINK INDUSTRIAL ESTATE

LEGEND:

- EXISTING CIÉ PROPERTY OWNERSHIP BOUNDARY
- PROPOSED ATTENUATION TANK
- EXISTING TRACK TO BE RETAINED
- PROPOSED SLAB TRACK & ELECTRIFICATION
- PROPOSED TRACK WORKS & ELECTRIFICATION
- PROPOSED TRACK WORKS, NOT ELECTRIFIED
- PROPOSED RAILWAY ELECTRIFICATION
- PROPOSED PARAPET MODIFICATIONS (INFIL PANELS AND/OR RAISING)
- PROPOSED CANTILEVER RETAINING WALL
- PROPOSED PILED RETAINING WALL
- PROPOSED "KING POST" RETAINING WALLS
- PROPOSED GABION RETAINING WALLS
- PROPOSED BOUNDARY FENCING
- PROPOSED FENCING

NOTES

The boundary treatment drawings should be read in conjunction with the Boundary Treatment Schedule (DP-04-REP-ST-TTA-26005) which is appended to the Boundary Treatment Preliminary Design Report (DP-04-23-REP-ST-TTA-26004). Additional clarification of retaining wall details below certain boundary treatment can be found in the Geotechnical Design Report (DP-04-23-REP-CV-TTA-01276) and drawings.

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V01	10.11.22	RG	JX	JX	PLANNING ISSUE

Client: **Iarnród Éireann Irish Rail**

Engineering Designer: **ATKINS**

Date: 05.07.22 Scale: 1:1250 @ A0 N.T.S. @ A3

Project Code: 1199586 Issuer: TTA QMS Code: []

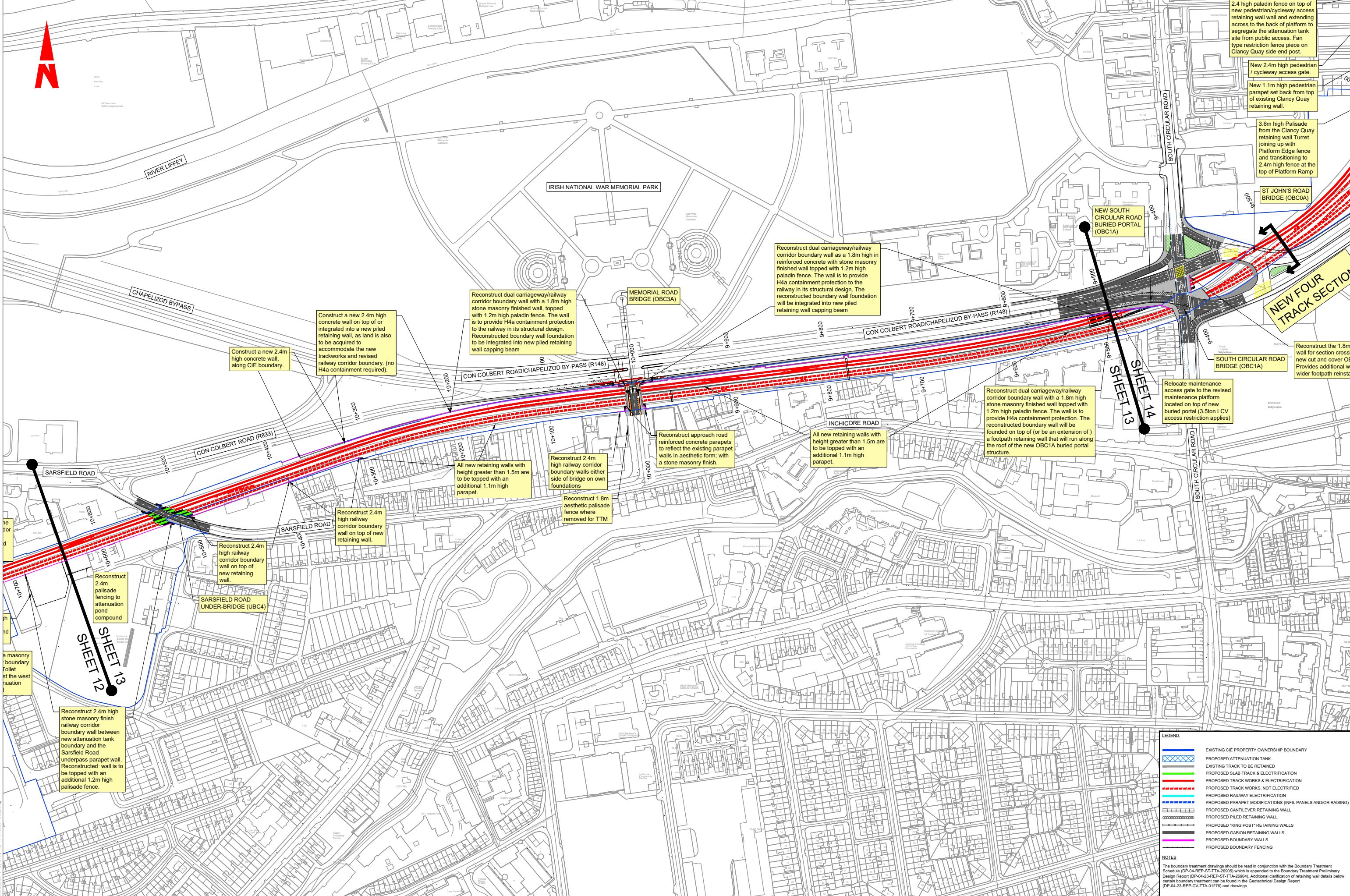
Project Title: **DART+ SOUTH WEST**

Drawing Title: **BOUNDARY TREATMENT KYLEMORE TO INCHICORE WORKS SHEET 12 OF 17**

Drawing File Name: DP-04-23-DWG-RO-TTA-18987

Version: V01 Status: S3

DO NOT SCALE USE FIGURED DIMENSIONS ONLY



Reconstruct 2.4m high stone masonry finish railway corridor boundary wall between new attenuation tank boundary and the Sarsfield Road underpass parapet wall. Reconstructed wall is to be topped with an additional 1.2m high palisade fence.

Reconstruct 2.4m palisade fencing to attenuation pond compound

Reconstruct 2.4m high railway corridor boundary wall on top of new retaining wall.

Reconstruct 2.4m high railway corridor boundary wall on top of new retaining wall.

All new retaining walls with height greater than 1.5m are to be topped with an additional 1.1m high parapet.

Reconstruct 2.4m high railway corridor boundary walls either side of bridge on own foundations

Reconstruct 1.8m aesthetic palisade fence where removed for TTM

Reconstruct approach road reinforced concrete parapets to reflect the existing parapet walls in aesthetic form, with a stone masonry finish.

All new retaining walls with height greater than 1.5m are to be topped with an additional 1.1m high parapet.

Reconstruct dual carriageway/railway corridor boundary wall with a 1.8m high stone masonry finished wall topped with 1.2m high paladin fence. The wall is to provide H4a containment protection. The reconstructed boundary wall will be founded on top of (or be an extension of) a footpath retaining wall that will run along the roof of the new OBC1A buried portal structure.

Reconstruct dual carriageway/railway corridor boundary wall as a 1.8m high in reinforced concrete with stone masonry finished wall topped with 1.2m high paladin fence. The wall is to provide H4a containment protection to the railway in its structural design. The reconstructed boundary wall foundation will be integrated into new piled retaining wall capping beam

Reconstruct dual carriageway/railway corridor boundary wall with a 1.8m high stone masonry finished wall, topped with 1.2m high paladin fence. The wall is to provide H4a containment protection to the railway in its structural design. Reconstructed boundary wall foundation to be integrated into new piled retaining wall capping beam

Construct a new 2.4m high concrete wall on top of or integrated into a new piled retaining wall, as land is also to be acquired to accommodate the new trackworks and revised railway corridor boundary, (no H4a containment required).

Construct a new 2.4m high concrete wall, along CIE boundary.

2.4 high paladin fence on top of new pedestrian/cycleway access retaining wall and extending across to the back of platform to segregate the attenuation tank site from public access. Fan type restriction fence piece on Clancy Quay side end post.

New 2.4m high pedestrian / cycleway access gate.

New 1.1m high pedestrian parapet set back from top of existing Clancy Quay retaining wall.

3.6m high Palisade from the Clancy Quay retaining wall Turret joining up with Platform Edge fence and transitioning to 2.4m high fence at the top of Platform Ramp

ST JOHN'S ROAD BRIDGE (OBC0A)

Reconstruct the 1.8m p wall for section crossing new cut and cover OBC1 Provides additional width wider footpath reinstater

Relocate maintenance access gate to the revised maintenance platform located on top of new buried portal (3.50m LCV access restriction applies)

SOUTH CIRCULAR ROAD BRIDGE (OBC1A)

NEW FOUR TRACK SECTION

SHEET 13

SHEET 14

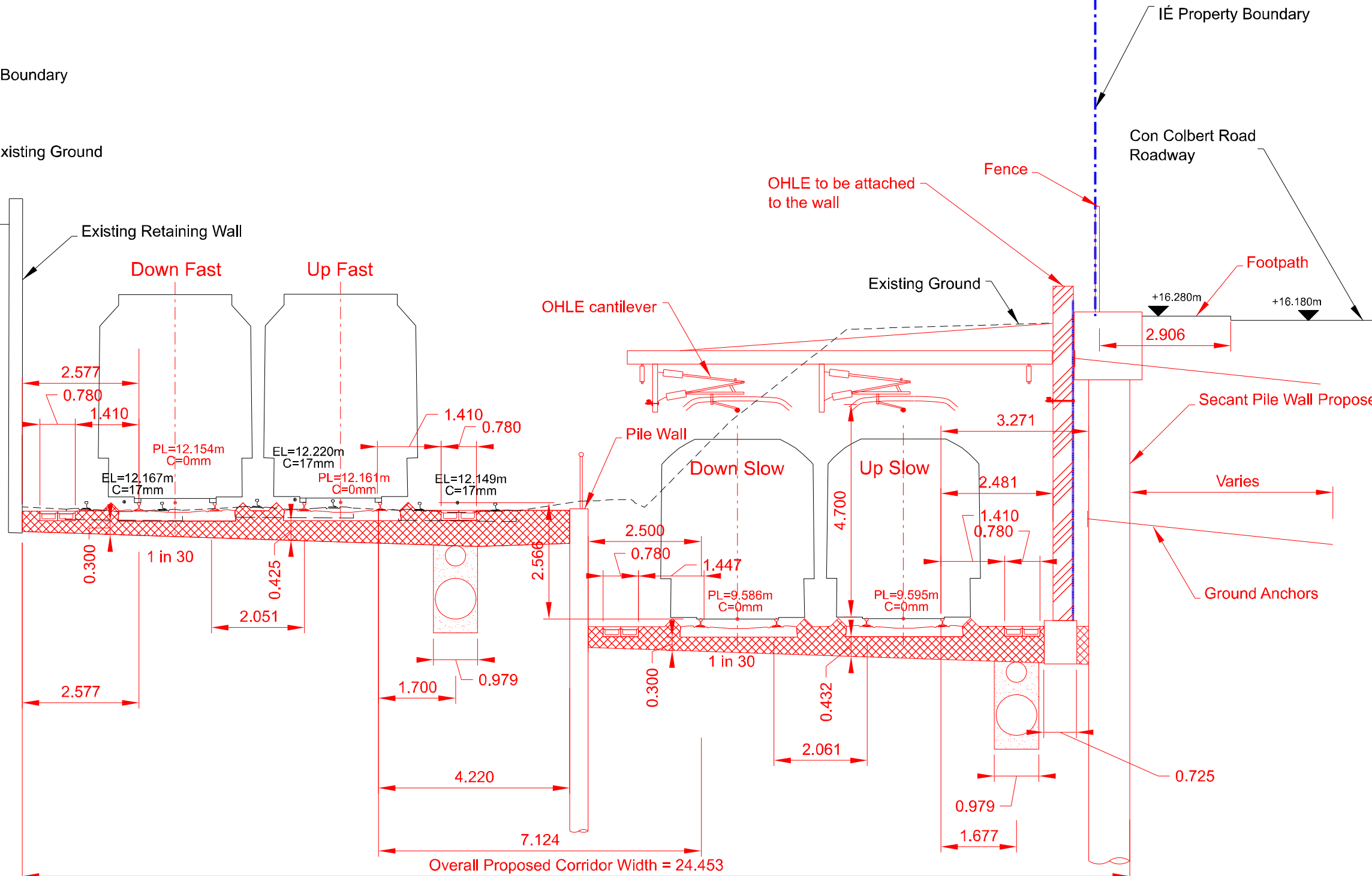
LEGEND

- EXISTING CIE PROPERTY OWNERSHIP BOUNDARY
- PROPOSED ATTENUATION TANK
- EXISTING TRACK TO BE RETAINED
- PROPOSED SLAB TRACK & ELECTRIFICATION
- PROPOSED TRACK WORKS & ELECTRIFICATION
- PROPOSED TRACK WORKS, NOT ELECTRIFIED
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NOTES

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- LEGEND:
- CROSS SECTION
- PROPOSED ELEMENTS
 - EXISTING ELEMENTS TO BE RETAINED
 - EXISTING ELEMENTS TO BE REMOVED
 - - - IÉ PROPERTY BOUNDARY
 - BALLAST
 - ▬ PRESTRESSED CONCRETE SLEEPER
 - VIGNOL RAIL 54E1
 - DRAINAGE
 - ▭ COMBINED WALKWAY / CABLE MANAGEMENT SYSTEM
 - EL= EXISTING LEVEL (ELEVATION)
 - PL= PROPOSED LEVEL (ELEVATION)
 - C= CANT
 - R= RADIUS
 - STR= STRAIGHT LINE



- NOTES
1. CHAINAGES, LEVELS AND COORDINATES ARE SHOWN IN METRES. ALL OTHER DIMENSIONS ARE SHOWN IN MILLIMETRES, UNLESS OTHERWISE STATED. ALL CLEARANCE AND SIX-FOOT INTERVALS ARE QUOTED TO RUNNING EDGES (RE).
 2. THIS DESIGN IS BASED UPON A TOPOGRAPHICAL SURVEY DATED SEPTEMBER 2021, COMPLETED BY MURPHY GEOSPATIAL LTD.
 3. CHAINAGE DATUM 9+906.707 IS LOCATED IN THE DOWN SLOW LINE AT 1 MILEPOST (CORK LINE). DOWN LINE CHAINAGE DATUM IS SHOWN ON THIS DRAWING.
 4. NEGATIVE SLUES ARE TO THE LEFT. POSITIVE SLUES ARE TO THE RIGHT. CANT SHOWN AS POSITIVE THROUGHOUT, EXCEPT WHERE ADVERSE TO THE DIRECTION OF CURVATURE. ALL IN THE DIRECTION OF INCREASING CHAINAGE.
 5. TRACK GAUGE TO BE NOMINAL 1602MM FOR PLAIN LINE AND 1600MM FOR P&C.
 6. RADII QUOTED ARE FROM TRACK CENTRELINE, UNLESS OTHERWISE STATED.
 7. RAIL LEVELS ARE QUOTED FOR THE LOW RAIL.
 8. REFER TO INDIVIDUAL ENGINEERING DISCIPLINES' DESIGN SUBMISSION FOR THEIR RESPECTIVE DETAILS.
 9. REFER TO TRACK PLAN LAYOUT AND LONGITUDINAL PROFILE DRAWINGS FOR FURTHER DETAILS.
 10. MINIMUM DEPTH OF BALLAST (WHERE SHOWN) TO BE 300mm BENEATH SLEEPER IN ACCORDANCE WITH PROPOSED TRACK CATEGORY 1 REQUIREMENTS.
 11. THE DRAINAGE SHOWN IS BASED ON PRELIMINARY DESIGN.
 12. CLEARANCES ASSESSED USING IRL2A ON SLOW & BRANCH LINES, IRL1 ON FAST LINES.

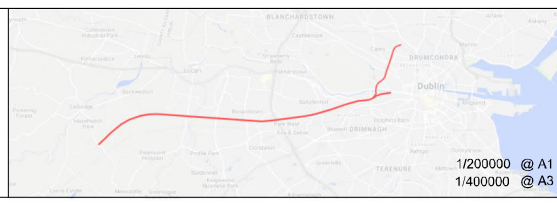
VIEW FROM HEUSTON STATION TO PARKWEST STATION

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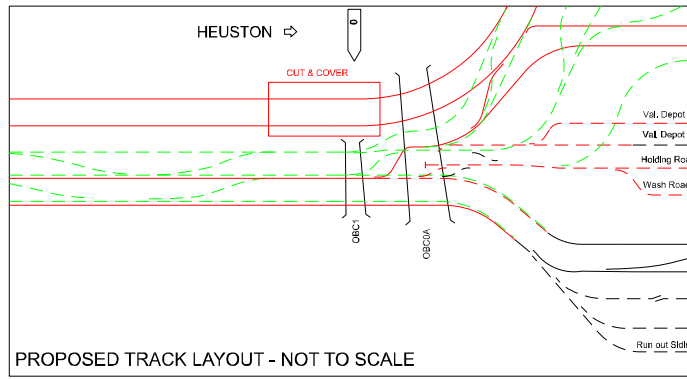
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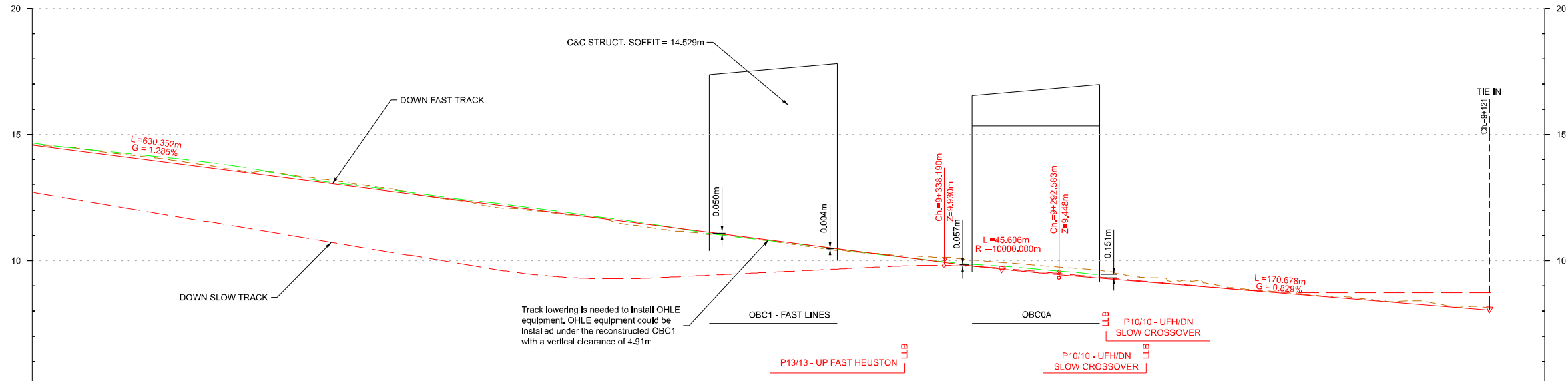
Rev	Date	Drn	Chk'd	App'd	Description
v01	23/11/22	CDM	JYM	PR	PLANNING ISSUE

Client		Engineering Designer		Project Title	
Iarnród Éireann Irish Rail		TYPSA ATKINS Supported by: RPS		DART + SOUTH WEST	
Date	Scale	Drawn	Checked	Approved	Drawing Title
23/11/2022	1/50 @ A1 1/100 @ A3	CMS	JYM	PR	CON COLBERT ROAD CROSS SECTION Ch 9+513
Project Code	Issuer	OMS Code		Drawing File Name	Version
51959586	TTA			DP-04-23-DWG-RO-TTA-18981	v01
					Status
					S3

DO NOT SCALE USE FIGURED DIMENSIONS ONLY



- LEGEND:**
- LONGITUDINAL PROFILE**
- PROPOSED VERTICAL ALIGNMENT
 - - - PROJECTED PROPOSED DOWN SLOW VERTICAL ALIGNMENT
 - EXISTING VERTICAL ALIGNMENT
 - - - EXISTING GROUND
 - ⋈ PROPOSED TANGENT POINT
 - LLB LAST LONG BEARER

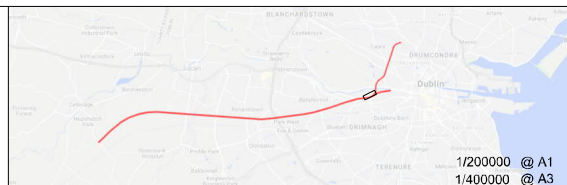


Chainage	Existing Level (m)	Proposed Level (m)	Horizontal Slue (m)	Lift (+) / Lower (-) (m)	Horizontal Alignment (m)	Vertical Alignment (m)	Cant Proposed (mm)	Cant Alignment / Speed
9+700	14.579	14.450	-2.814	-0.076	R=2500.000 L=245.317	L=630.352 G=1.285%	0	C=0mm D=6mm V=40km/h
9+650	14.531	14.322	-2.763	-0.081			0	
9+600	14.424	14.193	-2.713	-0.102	R=525.000 L=180.538	R=10000.000	0	RoCC=0mm/s RoCD=25mm/s CG=110 V=40km/h
9+550	14.322	14.065	-2.653	-0.135			0	
9+500	14.223	13.936	-2.640	-0.158	STR L=35.651	L=45.606 R=10000.000	0	RoCC=0mm/s RoCD=33mm/s CG=110 V=40km/h
9+450	14.117	13.808	-2.617	-0.181			0	
9+400	14.009	13.679	-2.594	-0.201	R=500.000 L=86.568	L=170.678 G=0.829%	0	C=0mm D=42mm V=40km/h
9+350	13.891	13.551	-2.574	-0.212			0	
9+300	13.753	13.422	-2.557	-0.202	STR L=41.997	R=200.000 L=17.084 R=571.669 L=14.500	0	RoCD=56mm/s V=35km/h RoCD=38mm/s V=35km/h
9+250	13.594	13.264	-2.537	-0.171			0	
9+200	13.416	13.084	-2.514	-0.122	R=14.500		0	C=0mm D=0mm V=35km/h
9+150	13.238	12.908	-2.492	-0.072			0	
9+100	13.064	12.712	-2.479	-0.047			0	
9+50	12.891	12.523	-2.481	-0.053			0	
9+0	12.753	12.384	-2.491	-0.060			0	
	12.594	12.226	-2.491	-0.061			0	
	12.443	12.059	-2.507	-0.062			0	
	12.287	11.880	-2.526	-0.055			0	
	12.137	11.752	-2.549	-0.048			0	
	12.001	11.623	-2.586	-0.032			0	
	11.862	11.495	-2.639	-0.064			0	
	11.712	11.366	-2.694	-0.082			0	
	11.562	11.238	-2.734	-0.068			0	
	11.412	11.109	-2.752	-0.056			0	
	11.262	10.981	-2.663	-0.055			0	
	11.112	10.852	-2.513	-0.043			0	
	10.962	10.724	-2.342	-0.016			0	
	10.812	10.595	-2.181	0.019			0	
	10.662	10.467	-2.058	0.049			0	
	10.512	10.338	-2.079	0.042			0	
	10.362	10.210	-2.185	0.026			0	
	10.212	10.081	-2.377	0.010			0	
	10.062	9.953	-2.594	0.000			0	
	9.912	9.828	-2.821	0.004			0	
	9.762	9.667	-3.046	0.009			0	
	9.612	9.512	-3.258	0.007			0	
	9.462	9.426	-3.436	-0.009			0	
	9.312	9.343	-3.580	-0.024			0	
	9.162	9.260	-3.694	-0.045			0	
	9.012	9.177	-3.815	-0.068			0	
	8.862	9.095	-3.775	-0.088			0	
	8.712	9.012	-3.815	-0.135			0	
	8.562	8.929	-3.902	-0.143			0	
	8.412	8.846	-4.072	-0.140			0	
	8.262	8.763	-4.347	-0.131			0	
	8.112	8.680	-4.230	-0.136			0	
	7.962	8.597	-3.947	-0.128			0	
	7.812	8.514	-3.684	-0.116			0	
	7.662	8.431	-3.381	-0.106			0	
	7.512	8.349	-3.098	-0.085			0	
	7.362	8.266	-2.815	-0.085			0	
	7.212	8.183	-2.532	-0.075			0	
	7.062	8.104	-2.250	-0.065			0	
	6.912	8.021	-1.967	-0.054			0	
	6.762	7.938	-1.684	-0.044			0	
	6.612	7.855	-1.460	-0.013			0	
	6.462	7.772	-1.146	0.005			0	
	6.312	7.689	-0.747	-0.005			0	
	6.162	7.606	-0.274	-0.000			0	
	6.012	7.523	0.004	0.001			0	
	5.862	7.440	0.001	0.001			0	

PROFILE Scale H=1:1000 V=1:100

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 - TRACK GAUGE TO BE NOMINAL 1602MM FOR PLAIN LINE AND 1600MM FOR P&C.
 - RADI QUOTED ARE FROM TRACK CENTRELINE, UNLESS OTHERWISE STATED.
 - RAIL LEVELS ARE QUOTED FOR THE LOW RAIL.
 - REFER TO INDIVIDUAL ENGINEERING DISCIPLINES' DESIGN SUBMISSION FOR THEIR RESPECTIVE DETAILS. SEE BIM MODELS FOR INTEGRATION.
 - VERTICAL PROFILE IS SHOWN FOR THE DOWN FAST. DATA OF THE EXISTING TRACK IS REFERRED TO DOWN FAST.
 - DOWN SLOW TRACK PLAN LAYOUT AND LONGITUDINAL PROFILE INCLUDED IN DRAWING NUMBER DP-04-23-DWG-RO-TTA-18969-01-S3.

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v01	23/11/22	CDM	JYM	PR	PLANNING ISSUE

Client
Iarnród Éireann
Irish Rail

Engineering Designer
TYPSA
ATKINS
Supported by: rps

Project Title
DART + SOUTH WEST

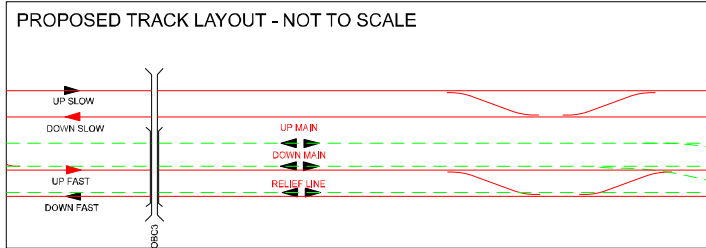
Drawing Title
DOWN FAST LINE
LONGITUDINAL PROFILE
FROM CH 9+100 TO CH 9+700

Drawing File Name
DP-04-23-DWG-RO-TTA-18970

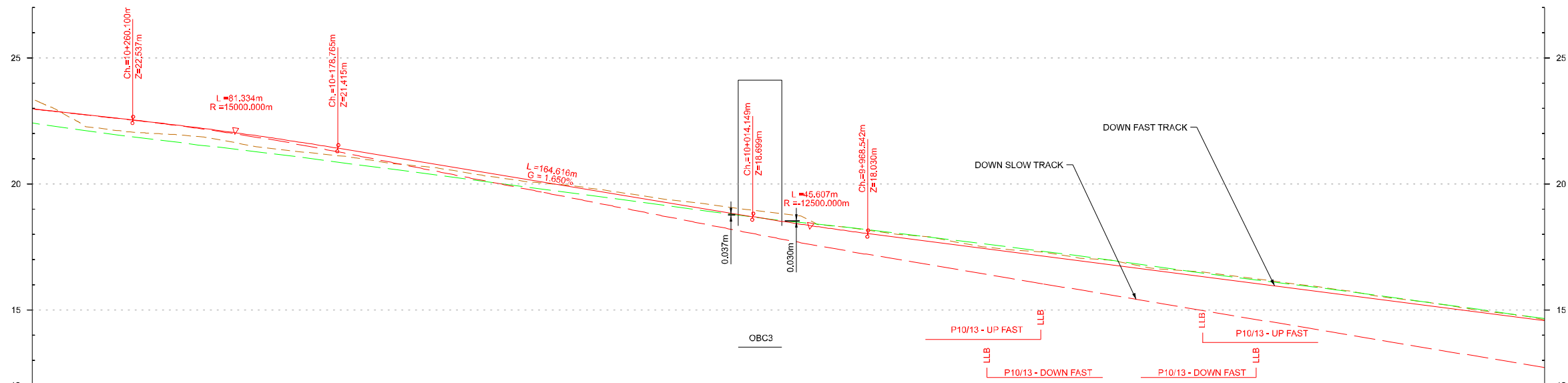
Version
v01

Status
S3

DO NOT SCALE USE FIGURED DIMENSIONS ONLY



- LEGEND:
- LONGITUDINAL PROFILE
- PROPOSED VERTICAL ALIGNMENT
 - - - PROJECTED PROPOSED DOWN SLOW VERTICAL ALIGNMENT
 - - - EXISTING VERTICAL ALIGNMENT
 - - - EXISTING GROUND
 - ⊗ PROPOSED TANGENT POINT
 - LLB LAST LONG BEARER



Chainage	Existing Level (m)	Proposed Level (m)	Horizontal Slue (m)	Lift (+) / Lower (-) (m)	Horizontal Alignment (m)	Vertical Alignment (m)	Cant Proposed (mm)	Cant Alignment / Speed	Chainage
10+300	22.414	22.678	-6.355	0.565	R=1000.000 L=115.485	L=81.334 R=15000.000	85	C=110mm D=79mm V=120km/h	10+250
10+266	22.266	22.668	-6.248	0.602					
10+225	22.125	22.757	-5.629	0.652					
10+189	21.985	22.646	-5.628	0.651					
10+149	21.869	22.536	-5.325	0.667					
10+109	21.745	22.421	-5.026	0.677					
10+69	21.629	22.301	-4.659	0.672					
10+29	21.503	22.173	-4.395	0.670					
10+11	21.389	22.039	-4.071	0.650					
10+100	21.265	21.898	-3.804	0.633			TL=99.885		L=164.616 G=1.650%
10+020	21.138	21.751	-3.579	0.612					
10+000	21.009	21.596	-3.279	0.587					
9+980	20.877	21.436	-3.203	0.558					
9+960	20.747	21.271	-3.054	0.524					
9+940	20.618	21.106	-2.947	0.487					
9+920	20.489	20.941	-2.863	0.452					
9+900	20.358	20.776	-2.806	0.418					
9+880	20.225	20.611	-2.777	0.386					
9+860	20.091	20.446	-2.761	0.355	STR L=287.501	L=45.607 R=12500.000		9+800	
9+840	19.956	20.281	-2.775	0.324					
9+820	19.822	20.116	-2.782	0.293					
9+800	19.686	19.951	-2.827	0.254					
9+780	19.568	19.786	-2.862	0.218					
9+760	19.435	19.621	-2.896	0.185					
9+740	19.308	19.456	-2.921	0.157					
9+720	19.189	19.291	-2.942	0.132					
9+700	19.066	19.126	-2.944	0.105					
9+680	18.943	18.961	-2.942	0.078			TL=40.000	L=630.352 G=1.285%	9+600
9+660	18.823	18.796	-2.955	0.038					
9+640	18.708	18.631	-2.965	-0.004					
9+620	18.598	18.474	-2.949	-0.045					
9+600	18.496	18.324	-2.940	-0.092					
9+580	18.401	18.182	-2.937	-0.127					
9+560	18.310	18.049	-2.934	-0.151					
9+540	18.221	17.920	-2.932	-0.166					
9+520	18.133	17.792	-2.935	-0.173					
9+500	18.048	17.663	-2.938	-0.180	TL=245.317	C=0mm D=0mm V=120km/h			9+400
9+380	17.972	17.534	-2.940	-0.186					
9+360	17.892	17.406	-2.943	-0.190					
9+340	17.817	17.277	-2.948	-0.192					
9+320	17.747	17.149	-2.951	-0.193					
9+300	17.681	17.020	-2.954	-0.189					
9+280	17.619	16.892	-2.958	-0.183					
9+260	17.561	16.763	-2.967	-0.174					
9+240	17.507	16.635	-2.975	-0.163					
9+220	17.457	16.506	-2.981	-0.154			RoCC=0mm/s RoCD=63mm/s CG=1m0 V=120km/h	9+100	
9+200	17.410	16.378	-2.984	-0.144					
9+180	17.367	16.249	-2.987	-0.139					
9+160	17.328	16.121	-2.988	-0.136					
9+140	17.292	15.992	-2.987	-0.140					
9+120	17.259	15.864	-2.984	-0.144					
9+100	17.229	15.735	-2.979	-0.149					
9+080	17.201	15.607	-2.976	-0.148					
9+060	17.174	15.478	-2.975	-0.146					
9+040	17.149	15.350	-2.977	-0.145	9+000				
9+020	17.125	15.221	-2.977	-0.135	9+700				
9+000	17.103	15.093	-2.971	-0.123	9+700				
9+700	17.082	14.964	-2.948	-0.110	9+700				
9+700	17.062	14.836	-2.912	-0.096	9+700				
9+700	17.042	14.707	-2.866	-0.082	9+700				
9+700	17.022	14.579	-2.814	-0.078	9+700				

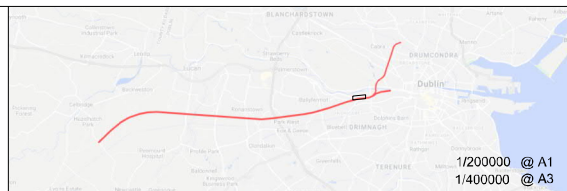
PROFILE Scale H=1:1000 V=1:100

- NOTES
- CHAINAGES, LEVELS AND COORDINATES ARE SHOWN IN METRES. ALL OTHER DIMENSIONS ARE SHOWN IN MILLIMETRES, UNLESS OTHERWISE STATED. ALL CLEARANCE AND SIX-FOOT INTERVALS ARE QUOTED TO RUNNING EDGES (RE).
 - THIS DESIGN IS BASED UPON A TOPOGRAPHICAL SURVEY DATED SEPTEMBER 2021, COMPLETED BY MURPHY GEOSPATIAL LTD.
 - CHAINAGE DATUM 9+906.707 IS LOCATED IN THE DOWN SLOW LINE AT 1 MILEPOST (CORK LINE), DOWN LINE CHAINAGE DATUM IS SHOWN ON THIS DRAWING.
 - NEGATIVE SLUES ARE TO THE LEFT, POSITIVE SLUES ARE TO THE RIGHT, CANT SHOWN AS POSITIVE THROUGHOUT, EXCEPT WHERE ADVERSE TO THE DIRECTION OF CURVATURE, ALL IN THE DIRECTION OF INCREASING CHAINAGE.
 - TRACK GAUGE TO BE NOMINAL 1602MM FOR PLAIN LINE AND 1600MM FOR P&C.
 - RADI QUOTED ARE FROM TRACK CENTRELINE, UNLESS OTHERWISE STATED.
 - RAIL LEVELS ARE QUOTED FOR THE LOW RAIL.
 - REFER TO INDIVIDUAL ENGINEERING DISCIPLINES' DESIGN SUBMISSION FOR THEIR RESPECTIVE DETAILS. SEE BIM MODELS FOR INTEGRATION.
 - VERTICAL PROFILE IS SHOWN FOR THE DOWN FAST. DATA OF THE EXISTING TRACK IS REFERRED TO DOWN FAST.
 - DOWN SLOW TRACK PLAN LAYOUT AND LONGITUDINAL PROFILE INCLUDED IN DRAWING NUMBER DP-04-23-DWG-DP-04-23-DWG-RO-TTA-18971-v01-S3

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All elevations are in metres and relate to OSi Geoid Model (OSGM02) Malin Head as defined by existing Project Control. All Co-ordinates are in Irish Transverse Mercator Grid (ITM) as defined by OSi active GPS station Tallaght College (TLLG).



Rev	Date	Drn	Chkd	App'd	Description
v01	23/11/22	CDM	JYM	PR	PLANNING ISSUE

Client: **Iarnród Éireann Irish Rail**

Engineering Designer: **ATKINS** (Member of the SNC-Lavalin Group) supported by **rps**

Date: 23/11/2022 | Scale: AS SHOWN @ A1 @ A3 | Drawn: CDM | Checked: JYM | Approved: PR

Project Code: 5199586 | Issuer: TTA | OMS Code: [blank]

Project Title: **DART + SOUTH WEST**

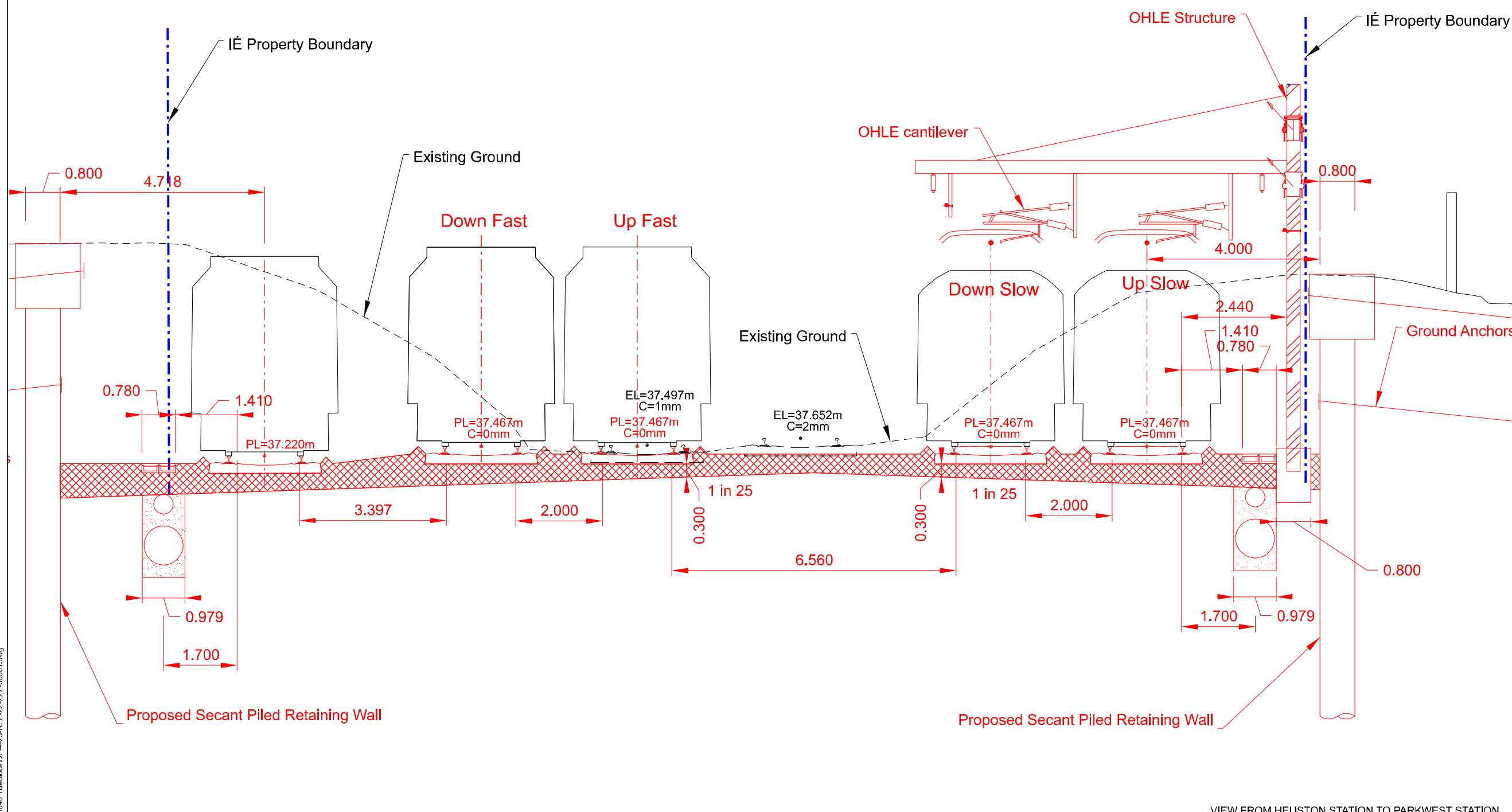
Drawing Title: **DOWN FAST LINE LONGITUDINAL PROFILE FROM Ch 9+700 TO Ch 10+300**

Drawing File Name: **DP-04-23-DWG-RO-TTA-18972** | Version: v01 | Status: S3

LEGEND:

CROSS SECTION

- PROPOSED ELEMENTS
- EXISTING ELEMENTS TO BE RETAINED
- EXISTING ELEMENTS TO BE REMOVED
- - - IÉ PROPERTY BOUNDARY
- BALLAST
- ▬ PRESTRESSED CONCRETE SLEEPER
- VIGNOL RAIL 54E1
- DRAINAGE
- ▭ COMBINED WALKWAY / CABLE MANAGEMENT SYSTEM
- EL= EXISTING LEVEL (ELEVATION)
- PL= PROPOSED LEVEL (ELEVATION)
- C= CANT
- R= RADIUS
- STR= STRAIGHT LINE

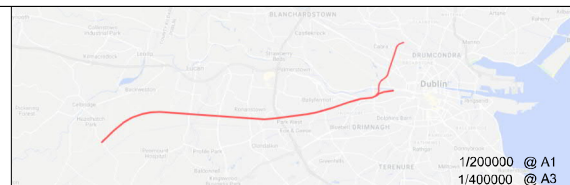


NOTES

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3. CHAINAGE DATUM 9+906.707 IS LOCATED IN THE DOWN SLOW LINE AT 1 MILEPOST (CORK LINE). DOWN LINE CHAINAGE DATUM IS SHOWN ON THIS DRAWING.
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5. TRACK GAUGE TO BE NOMINAL 1602MM FOR PLAIN LINE AND 1600MM FOR P&C.
6. RADII QUOTED ARE FROM TRACK CENTRELINE, UNLESS OTHERWISE STATED.
7. RAIL LEVELS ARE QUOTED FOR THE LOW RAIL.
8. REFER TO INDIVIDUAL ENGINEERING DISCIPLINES' DESIGN SUBMISSION FOR THEIR RESPECTIVE DETAILS.
9. REFER TO TRACK PLAN LAYOUT AND LONGITUDINAL PROFILE DRAWINGS FOR FURTHER DETAILS.
10. MINIMUM DEPTH OF BALLAST (WHERE SHOWN) TO BE 300mm BENEATH SLEEPER IN ACCORDANCE WITH PROPOSED TRACK CATEGORY 1 REQUIREMENTS.
11. THE DRAINAGE SHOWN IS BASED ON PRELIMINARY DESIGN.
12. CLEARANCES ASSESSED USING IRL2A ON SLOW & BRANCH LINES, IRL1 ON FAST LINES.

VIEW FROM HEUSTON STATION TO PARKWEST STATION

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Rev	Date	Drn	Chk'd	App'd	Description
v01	23/11/22	CDM	JYM	PR	PLANNING ISSUE

Client: **Iarnród Éireann Irish Rail**

Date: 23/11/2022
 Scale: 1/50 @ A1, 1/100 @ A3
 Project Code: 5199586
 Issuer: TTA

Engineering Designer: **ATKINS** (TYPSA Member of the SNC-Lavalin Group), **rps**

Drawn: CMS
 Checked: JYM
 Approved: PR

OMS Code

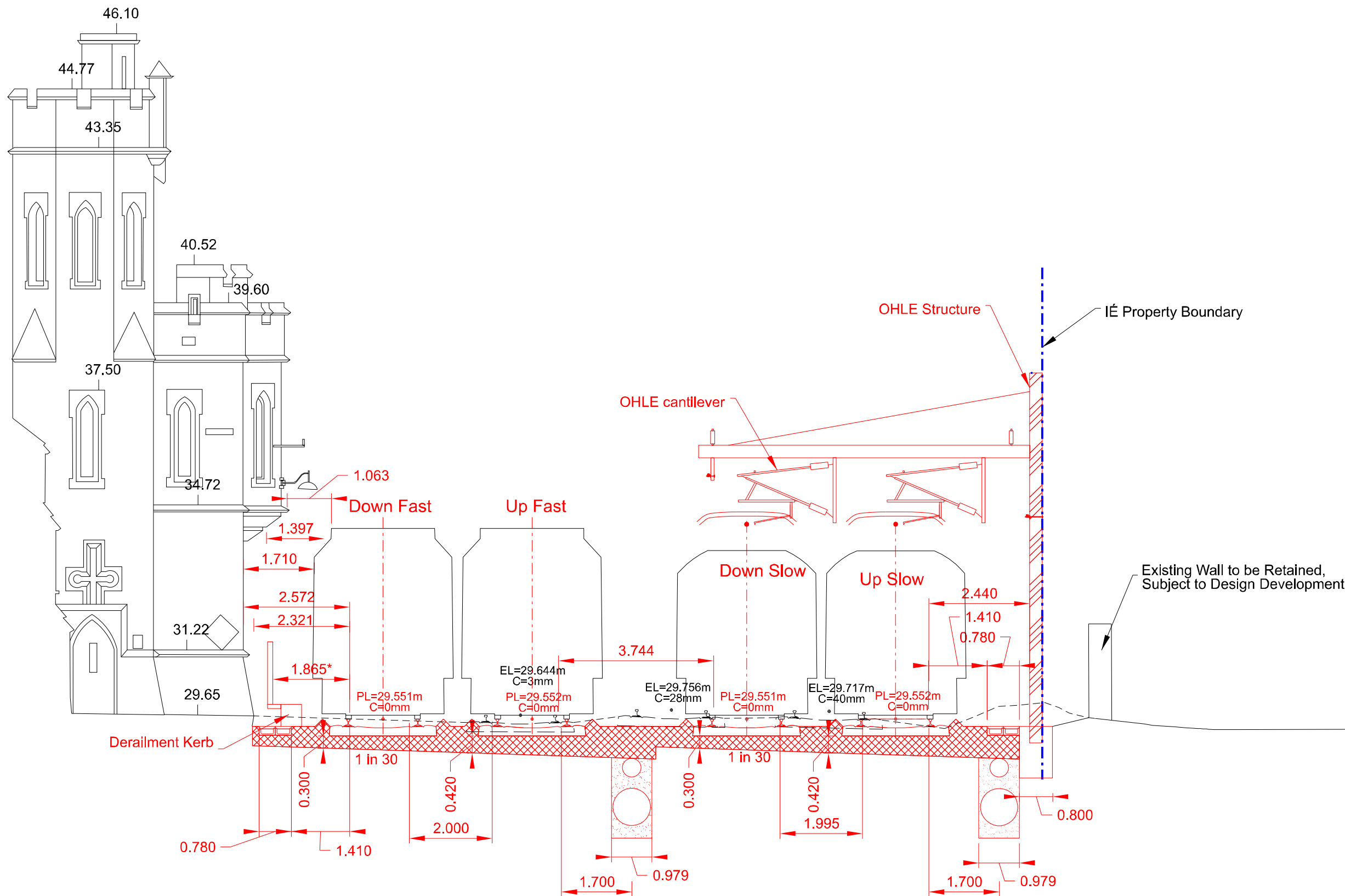
Project Title: **DART + SOUTH WEST**

Drawing Title: **INCHICORE WORKS AND KYLEMORE ROAD BRIDGE (OBC5A) CROSS SECTION Ch 12+030**

Drawing File Name: **DP-04-23-DWG-RO-TTA-18985**

Version: v01
 Status: S3

DO NOT SCALE USE FIGURED DIMENSIONS ONLY



- LEGEND:**
- CROSS SECTION**
- PROPOSED ELEMENTS
 - EXISTING ELEMENTS TO BE RETAINED
 - EXISTING ELEMENTS TO BE REMOVED
 - - - IÉ PROPERTY BOUNDARY
 - BALLAST
 - ▬ PRESTRESSED CONCRETE SLEEPER
 - VIGNOL RAIL 54E1
 - DRAINAGE
 - ▭ COMBINED WALKWAY / CABLE MANAGEMENT SYSTEM
 - EL= EXISTING LEVEL (ELEVATION)
 - PL= PROPOSED LEVEL (ELEVATION)
 - C= CANT
 - R= RADIUS
 - STR= STRAIGHT LINE

- NOTES**
1. CHAINAGES, LEVELS AND COORDINATES ARE SHOWN IN METRES. ALL OTHER DIMENSIONS ARE SHOWN IN MILLIMETRES, UNLESS OTHERWISE STATED. ALL CLEARANCE AND SIX-FOOT INTERVALS ARE QUOTED TO RUNNING EDGES (RE).
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 9. REFER TO TRACK PLAN LAYOUT AND LONGITUDINAL PROFILE DRAWINGS FOR FURTHER DETAILS.
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 11. THE DRAINAGE SHOWN IS BASED ON PRELIMINARY DESIGN.
 12. CLEARANCES ASSESSED USING IRL2A ON SLOW & BRANCH LINES, IRL1 ON FAST LINES.

VIEW FROM HEUSTON STATION TO PARKWEST STATION

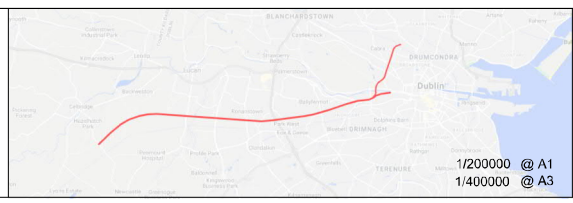
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Rev	Date	Drn	Chk'd	App'd	Description
v01	23/11/22	CDM	JYM	PR	PLANNING ISSUE

Client

Iarnród Éireann
Irish Rail

Engineering Designer

ATKINS
Supported by: **TYPSA**, **rps**

Drawn: CMS, Checked: JYM, Approved: PR

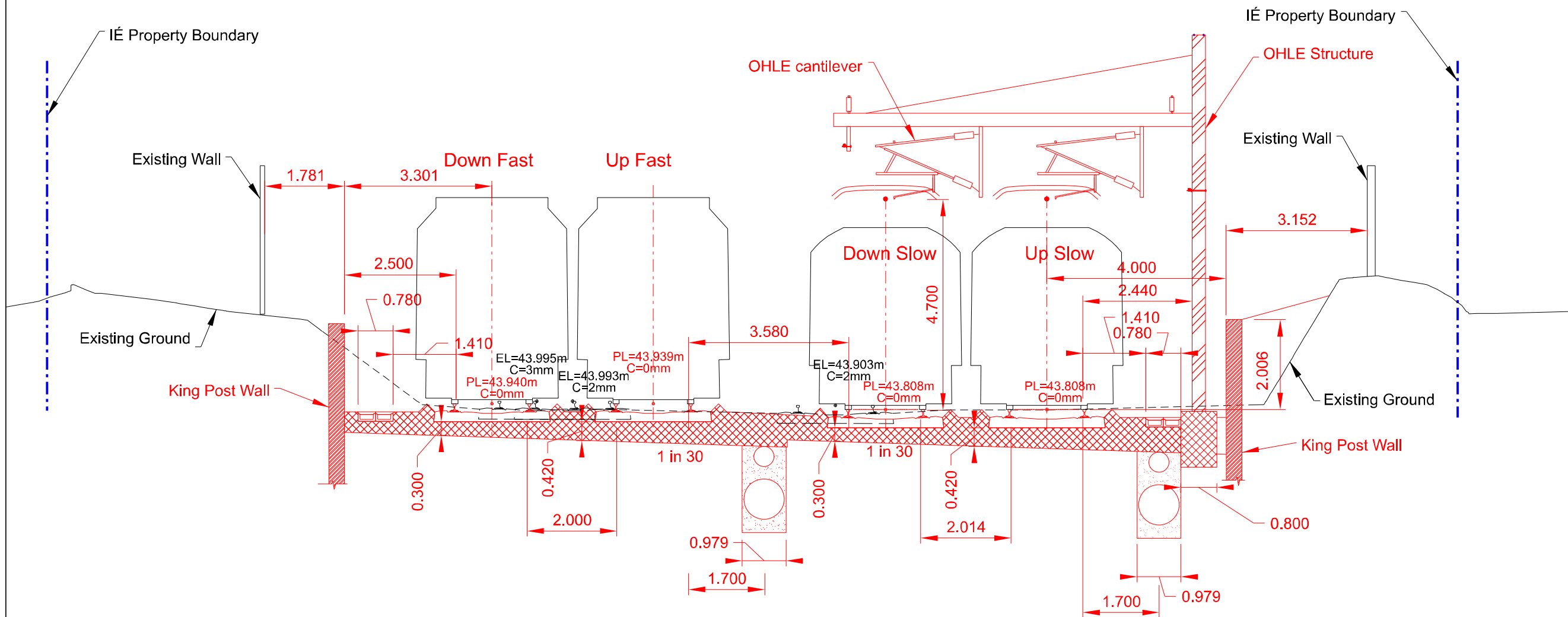
Project Title	DART + SOUTH WEST		
Drawing Title	KHYBER PASS (OBC5) AND INCHICORE WORKS CROSS SECTION Ch 11+000		
Drawing File Name	DP-04-23-DWG-RO-TTA-18984	Version	v01
Status	S3		

DO NOT SCALE USE FIGURED DIMENSIONS ONLY

LEGEND:

CROSS SECTION

- PROPOSED ELEMENTS
- EXISTING ELEMENTS TO BE RETAINED
- EXISTING ELEMENTS TO BE REMOVED
- - - IÉ PROPERTY BOUNDARY
- BALLAST
- ▬ PRESTRESSED CONCRETE SLEEPER
- ⬮ VIGNOL RAIL 54E1
- ⬮ DRAINAGE
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- EL= EXISTING LEVEL (ELEVATION)
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- C= CANT
- R= RADIUS
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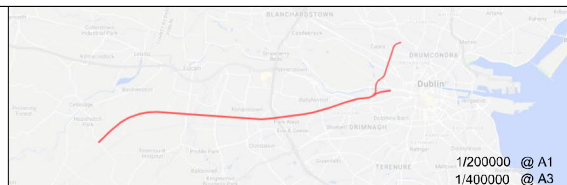


NOTES

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11. THE DRAINAGE SHOWN IS BASED ON PRELIMINARY DESIGN.
12. CLEARANCES ASSESSED USING IRL2A ON SLOW & BRANCH LINES, IRL1 ON FAST LINES.

VIEW FROM HEUSTON STATION TO PARKWEST STATION

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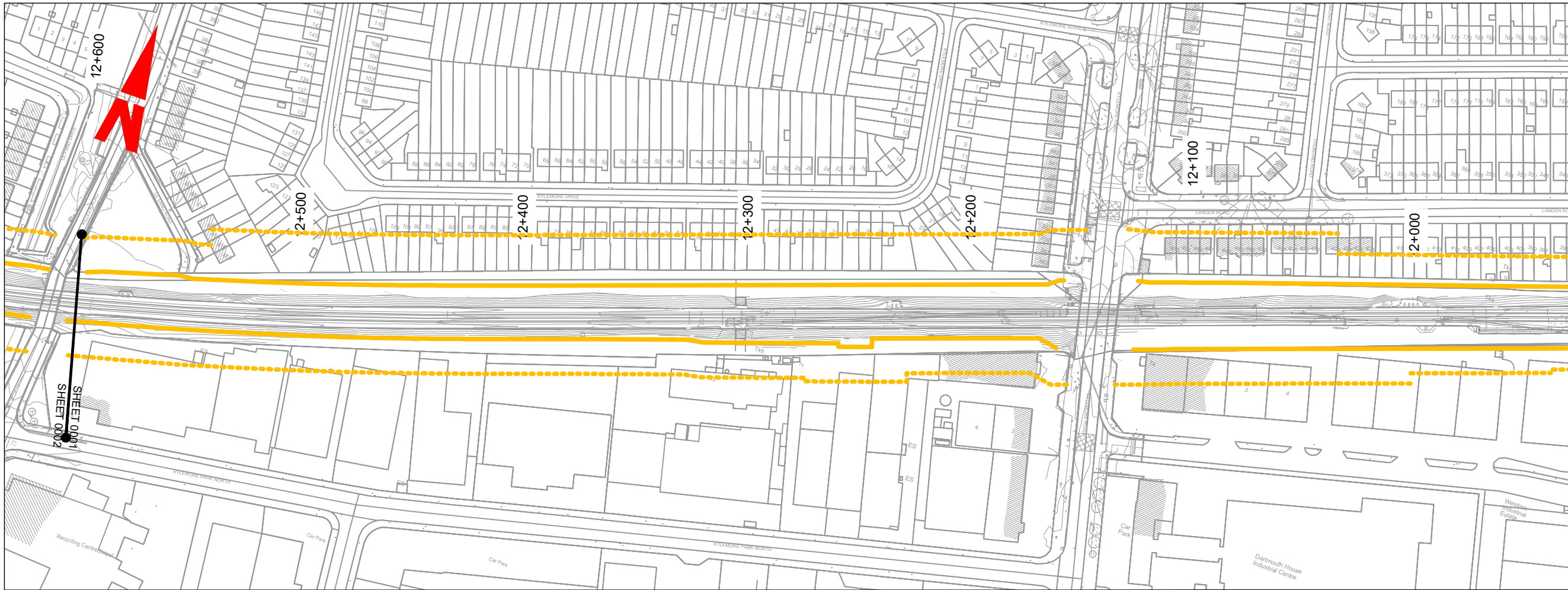
Rev	Date	Drn	Chk'd	App'd	Description
v01	23/11/22	CDM	JYM	PR	PLANNING ISSUE

Client Iarnród Éireann Irish Rail		Engineering Designer ATKINS Supported by: TYPSA Member of the SNC-Lavalin Group rps	
Date 23/11/2022	Scale 1/50 @ A1 1/100 @ A3	Drawn CMS	Checked JYM
Project Code 5199586	Issuer TTA	Approved PR	OMS Code

Project Title DART + SOUTH WEST	
Drawing Title KYLEMORE ROAD BRIDGE (OBC5A) AND LE FANU ROAD BRIDGE (OBC7) CROSS SECTION Ch 12+898	
Drawing File Name DP-04-23-DWG-RO-TTA-18986	Status S3

DO NOT SCALE USE FIGURED DIMENSIONS ONLY

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LEGEND:

- PROPOSED SECANT PILE WALL
- - - PROPOSED SECANT PILE WALL ANCHORS
- - - PROPOSED KING POST WALL
- - - PROPOSED ANCHOR SUBSTANTUM WAYLEAVE
- APPROACH TO EXISTING OVERBRIDGE / TUNNEL (EXTENTS ARE APPROXIMATE AND DESIGN TO BE DEVELOPED AT DETAILED DESIGN)
- PROPOSED GABION WALL
- PROPOSED CANTILEVER WALL
- INDICATIVE EXTENTS OF ADDITIONAL SOIL NAILING AS SLOPE REMEDIATION BEHIND WALL
- INDICATIVE EXTENTS OF SLOPE REGRADING / PROVISION OF GRANULAR SHOULDER AS SLOPE REMEDIATION BEHIND WALL
- ▶ END OF SECTION
- ◀ CONTINUATION OF SECTION
- ↘ EARTHWORK SLOPE
- H INDICATIVE BANK HEIGHT / CUTTING DEPTH

NOTES:

- FOR EARTHWORKS STANDARD DETAILS REFER TO DRAWINGS DP-04-23-DWG-RO-TTA-18960 TO DP-04-23-DWG-RO-TTA-18964.
- WALL ANCHOR LOCATIONS INDICATE ANTICIPATED TEMPORARY OR PERMANENT ANCHORS.
- TRACKBED TREATMENTS MARKED (*) SPECIFIED FOR GREENFIELD SITES. PRELIMINARY ALTERNATIVE TREATMENTS TO BE FURTHER CONSIDERED, FOLLOWING APPROVAL FROM IE, ARE PRESENTED IN TABLE BELOW:

PROPOSED TRACK TREATMENTS	ALTERNATIVE TRACK TREATMENTS
T350g	T150R2g
T350Rg	
T450g	T300R2g
T450Rg	
T525g	T350R2g
T525Rg	



SECANT PILE WALL				SECANT PILE WALL				WALL REFERENCE (W)
RW1				RW1				EARTHWORKS STANDARD DETAILS (W)
3.4	6.5	7.2	7.0	6.4	5.7	4.6	H (m) (W)	
SECANT PILE WALL				SECANT PILE WALL				WALL REFERENCE (E)
RW1				RW1				EARTHWORKS STANDARD DETAILS (E)
4.2	4.3	4.6	4.5	4.6	3.4	3.0	H (m) (E)	
T525g *				T525g *				TRACKBED TREATMENT (UP SLOW)
T525g *				T525Rg *				TRACKBED TREATMENT (DOWN SLOW)
T525g *				T525Rg *				TRACKBED TREATMENT (UP FAST)
T525g *				T525Rg *				TRACKBED TREATMENT (DOWN FAST)
T525g *				T525Rg *				TURNBACK DART
12+600	12+500	12+400	12+300	12+200	12+100	12+000	CHAINAGE (m)	



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Rev	Date	Drn	Chk'd	App'd	Description
v01	10.11.22	KH	PC	PC	PLANNING ISSUE

Client: **Iarnród Éireann**

Engineering Designer: **ATKINS**

Supported by: **TPYSA** Member of the SNC Lavalin Group

Supported by: **RPS**

Date: 29.11.21 **Scale:** 1:1000 @ A1, 1:2000 @ A3

Project Code: 5199586 **Issuer:** TTA

Drawn: RG **Checked:** PC **Approved:** PC

QMS Code:

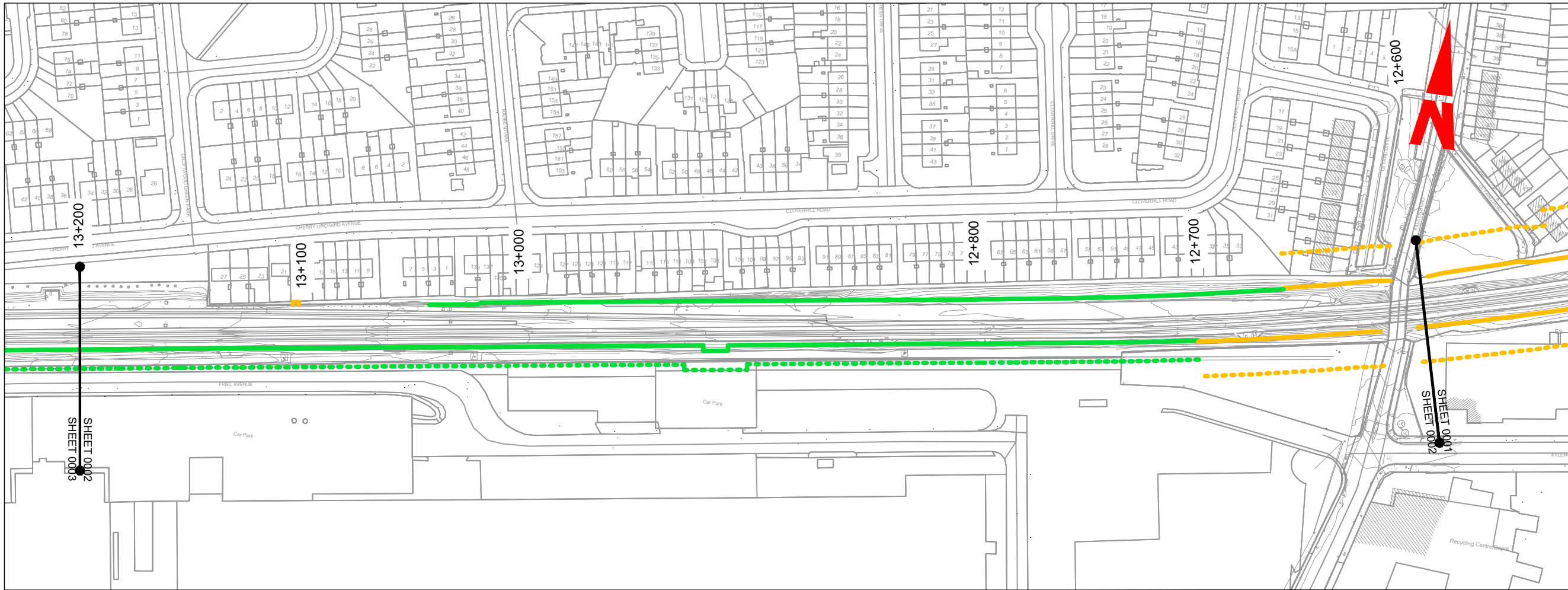
Project Title: **DART + SOUTH WEST**

Drawing Title: **KYLEMORE ROAD BRIDGE TO CHERRY ORCHARD FOOT BRIDGE EARTHWORKS SHEET 1**

Drawing File Name: DP-04-23-DWG-RO-TTA-18957 **Version:** v01 **Status:** S3

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LEGEND:

- PROPOSED SECANT PILE WALL
- - - - PROPOSED SECANT PILE WALL ANCHORS
- PROPOSED KING POST WALL
- - - - PROPOSED ANCHOR SUBSTANTUM WAYLEAVE
- APPROACH TO EXISTING OVERBRIDGE / TUNNEL (EXTENTS ARE APPROXIMATE AND DESIGN TO BE DEVELOPED AT DETAILED DESIGN)
- PROPOSED GABION WALL
- PROPOSED CANTILEVER WALL
- INDICATIVE EXTENTS OF ADDITIONAL SOIL NAILING AS SLOPE REMEDIATION BEHIND WALL
- INDICATIVE EXTENTS OF SLOPE REGRAIDING / PROVISION OF GRANULAR SHOULDER AS SLOPE REMEDIATION BEHIND WALL
- END OF SECTION
- ← CONTINUATION OF SECTION
- / EARTHWORK SLOPE
- H INDICATIVE BANK HEIGHT / CUTTING DEPTH

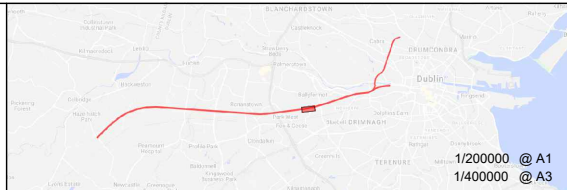
NOTES:

- FOR EARTHWORKS STANDARD DETAILS REFER TO DRAWINGS DP-04-23-DWG-RO-TTA-18960 TO DP-04-23-DWG-RO-TTA-18964.
- WALL ANCHOR LOCATIONS INDICATE ANTICIPATED TEMPORARY OR PERMANENT ANCHORS.
- TRACKBED TREATMENTS MARKED (*) SPECIFIED FOR GREENFIELD SITES. PRELIMINARY ALTERNATIVE TREATMENTS TO BE FURTHER CONSIDERED, FOLLOWING APPROVAL FROM IE, ARE PRESENTED IN TABLE BELOW:

PROPOSED TRACK TREATMENTS	ALTERNATIVE TRACK TREATMENTS
T350g	T150R2g
T350Rg	T300R2g
T450g	T350R2g
T450Rg	
T525g	
T525Rg	

KING POST		SECANT PILE WALL		WALL REFERENCE (W)
←	→	←	→	EARTHWORKS STANDARD DETAILS (W)
2.8	0.5	0.6	2.0	H (m) (W)
←	→	←	→	WALL REFERENCE (E)
0.7	0.8	1.3	1.6	EARTHWORKS STANDARD DETAILS (E)
0.7	0.8	1.3	1.6	H (m) (E)
←	→	←	→	TRACKBED TREATMENT (UP SLOW)
T350Rg	T525Rg *	T525g *	T525g *	TRACKBED TREATMENT (DOWN SLOW)
←	→	←	→	TRACKBED TREATMENT (UP FAST)
T350Rg	T525g *	T525g *	T525g *	TRACKBED TREATMENT (DOWN FAST)
←	→	←	→	TURNBACK DART
T350Rg	T525g *	T525g *	T525g *	CHAINAGE (m)
13+200	13+100	13+000	12+900	12+800
12+700	12+600			

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Rev	Date	Drn	Chk'd	App'd	Description
v01	10.11.22	KH	PC	PC	PLANNING ISSUE

Client: **Iarnród Éireann**

Engineering Designer: **ATKINS**
 Member of the SNC Lavalin Group

Supported by: **FPS**

Date: 29.11.21 | Scale: 1:1000 @ A1, 1:2000 @ A3 | Drawn: RG | Checked: PC | Approved: PC

Project Code: 5199586 | Issuer: TTA | QMS Code: _____

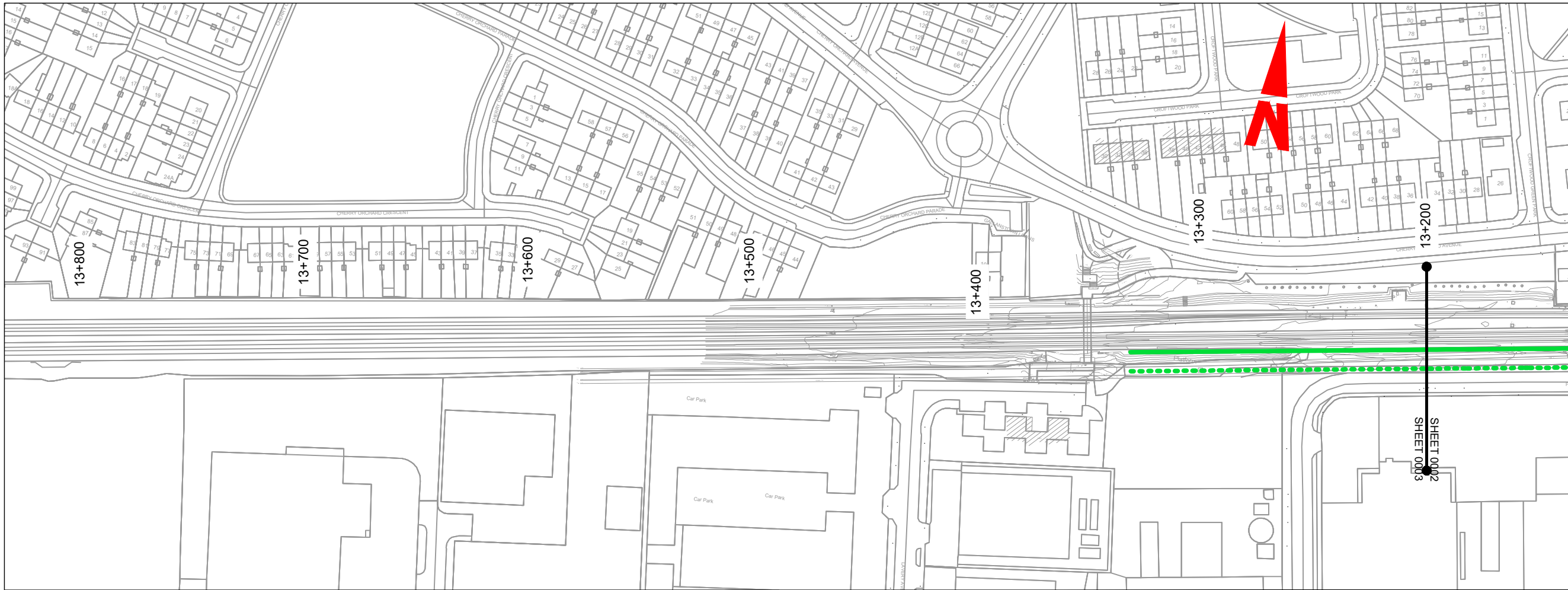
Project Title: **DART + SOUTH WEST**

Drawing Title: **KYLEMORE ROAD BRIDGE TO CHERRY ORCHARD FOOT BRIDGE EARTHWORKS SHEET 2**

Drawing File Name: DP-04-23-DWG-RO-TTA-18958 | **Version:** v01 | **Status:** S3

DO NOT SCALE USE FIGURED DIMENSIONS ONLY

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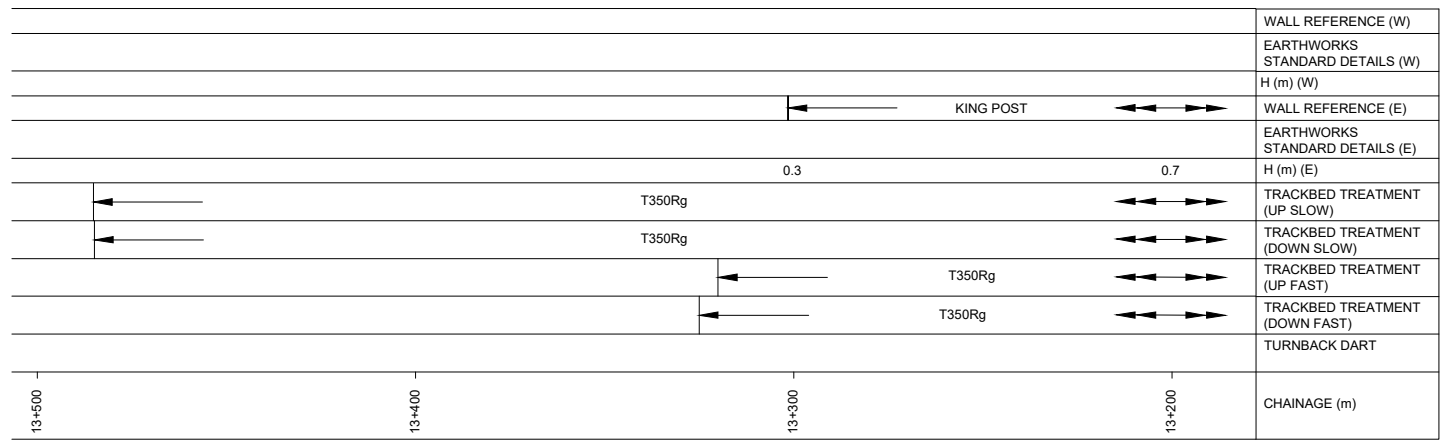
LEGEND:

- PROPOSED SECANT PILE WALL
- - - - PROPOSED SECANT PILE WALL ANCHORS
- PROPOSED KING POST WALL
- - - - PROPOSED ANCHOR SUBSTANTUM WAYLEAVE
- APPROACH TO EXISTING OVERBRIDGE / TUNNEL (EXTENTS ARE APPROXIMATE AND DESIGN TO BE DEVELOPED AT DETAILED DESIGN)
- PROPOSED GABION WALL
- PROPOSED CANTILEVER WALL
- INDICATIVE EXTENTS OF ADDITIONAL SOIL NAILING AS SLOPE REMEDIATION BEHIND WALL
- INDICATIVE EXTENTS OF SLOPE REGRADING / PROVISION OF GRANULAR SHOULDER AS SLOPE REMEDIATION BEHIND WALL
- END OF SECTION
- ← CONTINUATION OF SECTION
- △ EARTHWORK SLOPE
- H INDICATIVE BANK HEIGHT / CUTTING DEPTH

NOTES:

- FOR EARTHWORKS STANDARD DETAILS REFER TO DRAWINGS DP-04-23-DWG-RO-TTA-18960 TO DP-04-23-DWG-RO-TTA-18964.
- WALL ANCHOR LOCATIONS INDICATE ANTICIPATED TEMPORARY OR PERMANENT ANCHORS.
- TRACKBED TREATMENTS MARKED (✱) SPECIFIED FOR GREENFIELD SITES. PRELIMINARY ALTERNATIVE TREATMENTS TO BE FURTHER CONSIDERED, FOLLOWING APPROVAL FROM IE, ARE PRESENTED IN TABLE BELOW:

PROPOSED TRACK TREATMENTS	ALTERNATIVE TRACK TREATMENTS
T350g	T150R2g
T350Rg	
T450g	T300R2g
T450Rg	
T525g	T350R2g
T525Rg	



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Rev	Date	Drn	Chk'd	App'd	Description
v01	10.11.22	KH	PC	PC	PLANNING ISSUE

Client

Engineering Designer

 Supported by:

Date 29.11.21 **Scale** 1:1000 @ A1
 1:2000 @ A3

Drawn RG **Checked** PC **Approved** PC

Project Code 5199586 **Issuer** TTA **QMS Code**

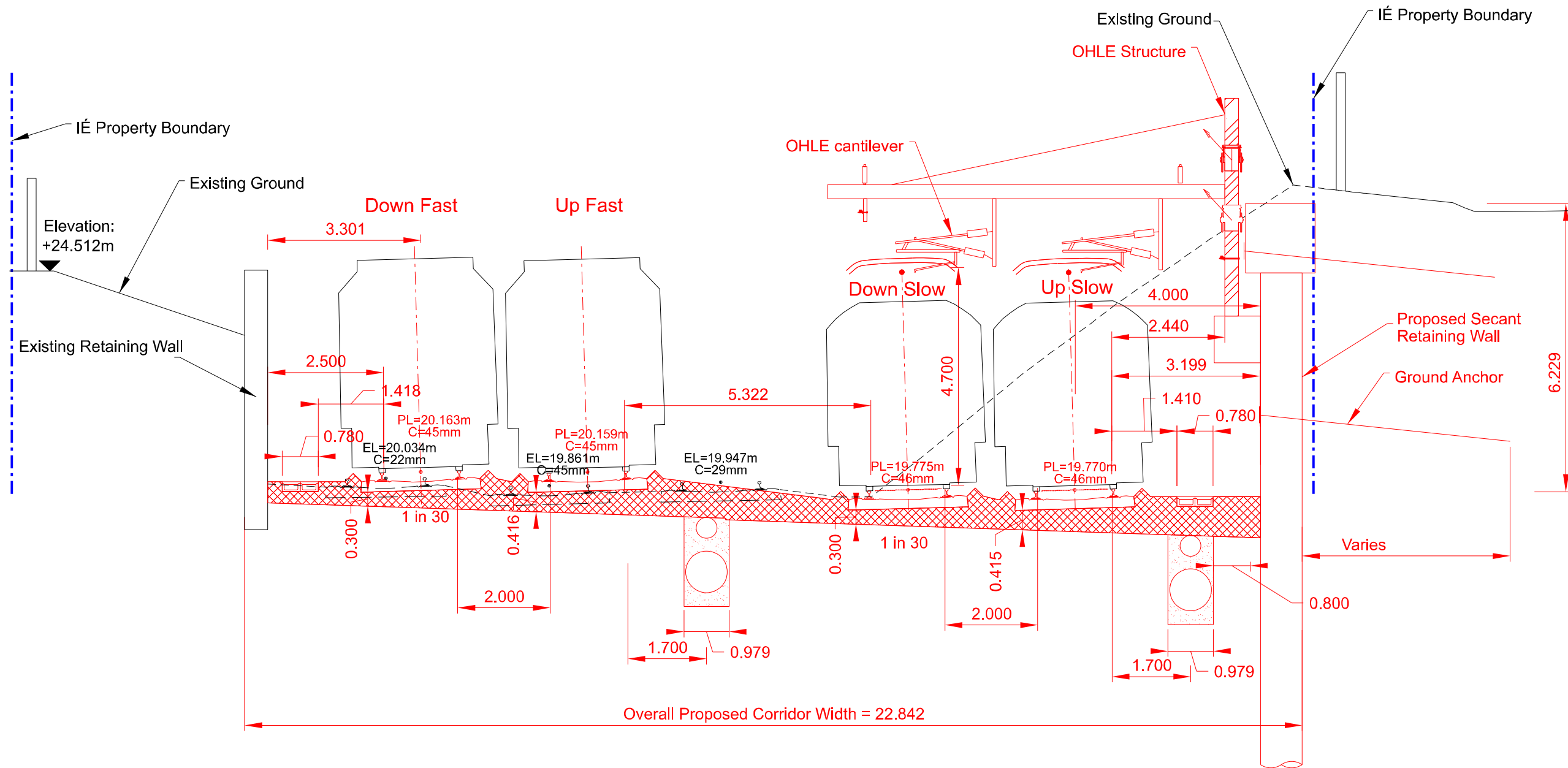
Project Title
 DART + SOUTH WEST

Drawing Title
 KYLEMORE ROAD BRIDGE TO CHERRY ORCHARD FOOT BRIDGE
 EARTHWORKS
 SHEET 3

Drawing File Name DP-04-23-DWG-RO-TTA-18959 **Version** v01 **Status** S3

DO NOT SCALE USE FIGURED DIMENSIONS ONLY

- LEGEND:**
- CROSS SECTION**
- PROPOSED ELEMENTS
 - EXISTING ELEMENTS TO BE RETAINED
 - EXISTING ELEMENTS TO BE REMOVED
 - - - IÉ PROPERTY BOUNDARY
 - BALLAST
 - ▬ PRESTRESSED CONCRETE SLEEPER
 - ⊕ VIGNOL RAIL 54E1
 - ⊕ DRAINAGE
 - ▬ COMBINED WALKWAY / CABLE MANAGEMENT SYSTEM
 - EL= EXISTING LEVEL (ELEVATION)
 - PL= PROPOSED LEVEL (ELEVATION)
 - C= CANT
 - R= RADIUS
 - STR= STRAIGHT LINE

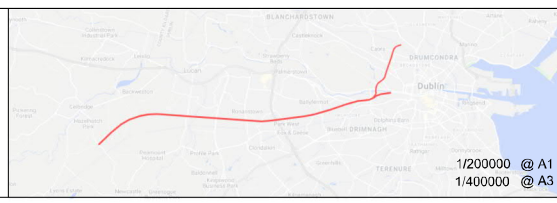


- NOTES**
1. CHAINAGES, LEVELS AND COORDINATES ARE SHOWN IN METRES. ALL OTHER DIMENSIONS ARE SHOWN IN MILLIMETRES, UNLESS OTHERWISE STATED. ALL CLEARANCE AND SIX-FOOT INTERVALS ARE QUOTED TO RUNNING EDGES (RE).
 2. THIS DESIGN IS BASED UPON A TOPOGRAPHICAL SURVEY DATED SEPTEMBER 2021, COMPLETED BY MURPHY GEOSPATIAL LTD.
 3. CHAINAGE DATUM 9+906.707 IS LOCATED IN THE DOWN SLOW LINE AT 1 MILEPOST (CORK LINE). DOWN LINE CHAINAGE DATUM IS SHOWN ON THIS DRAWING.
 4. NEGATIVE SLUES ARE TO THE LEFT. POSITIVE SLUES ARE TO THE RIGHT. CANT SHOWN AS POSITIVE THROUGHOUT, EXCEPT WHERE ADVERSE TO THE DIRECTION OF CURVATURE. ALL IN THE DIRECTION OF INCREASING CHAINAGE.
 5. TRACK GAUGE TO BE NOMINAL 1602MM FOR PLAIN LINE AND 1600MM FOR P&C.
 6. RADII QUOTED ARE FROM TRACK CENTRELINE, UNLESS OTHERWISE STATED.
 7. RAIL LEVELS ARE QUOTED FOR THE LOW RAIL.
 8. REFER TO INDIVIDUAL ENGINEERING DISCIPLINES' DESIGN SUBMISSION FOR THEIR RESPECTIVE DETAILS.
 9. REFER TO TRACK PLAN LAYOUT AND LONGITUDINAL PROFILE DRAWINGS FOR FURTHER DETAILS.
 10. MINIMUM DEPTH OF BALLAST (WHERE SHOWN) TO BE 300mm BENEATH SLEEPER IN ACCORDANCE WITH PROPOSED TRACK CATEGORY 1 REQUIREMENTS.
 11. THE DRAINAGE SHOWN IS BASED ON PRELIMINARY DESIGN.
 12. CLEARANCES ASSESSED USING IRL2A ON SLOW & BRANCH LINES, IRL1 ON FAST LINES.

VIEW FROM HEUSTON STATION TO PARKWEST STATION

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Rev	Date	Drn	Chk'd	App'd	Description
v01	23/11/2022	CDM	JYM	PR	PLANNING ISSUE

Client
 Iarnród Éireann
 Irish Rail

Engineering Designer
 TYPESA
 Atkins
 rps

Supported by:
 Member of the SNC-Lavalin Group

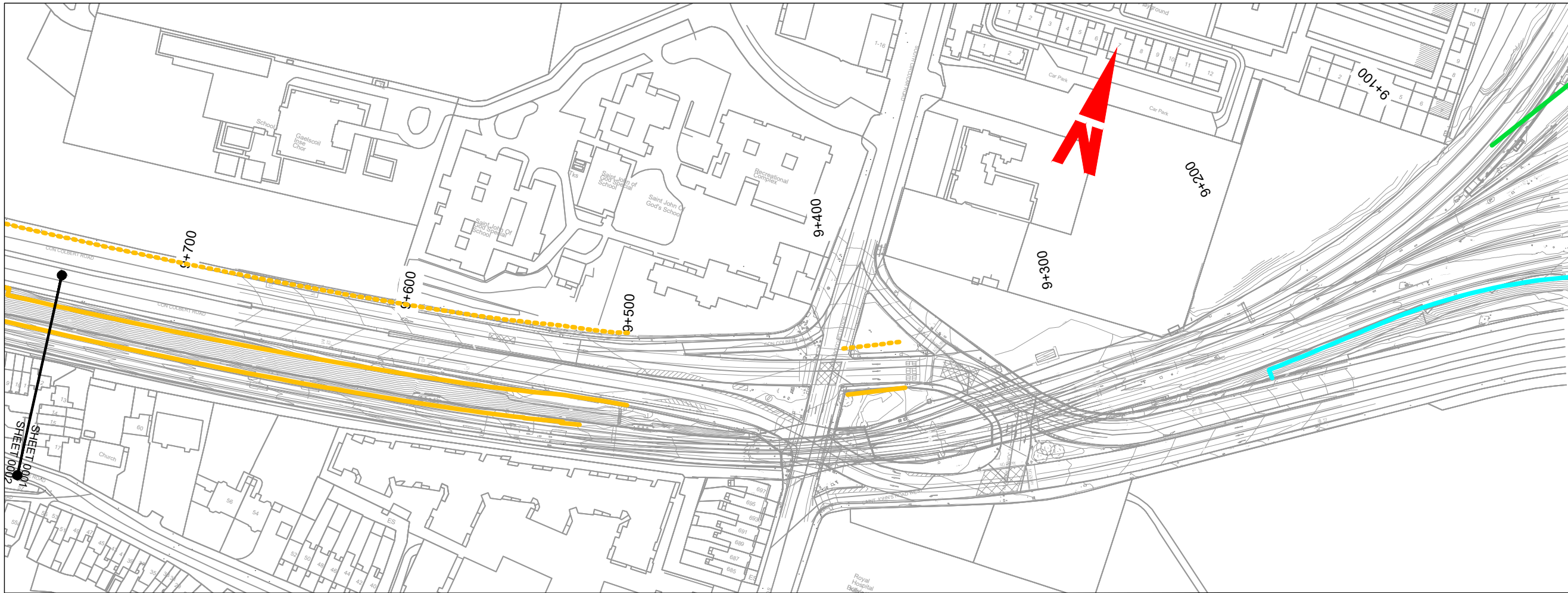
Date: 23/11/2022
Scale: 1/50 @ A1, 1/100 @ A3
Project Code: 5199586
Issuer: TTA

Drawn: CMS
Checked: JYM
Approved: PR

QMS Code:

Project Title	DART + SOUTH WEST		
Drawing Title	MEMORIAL ROAD BRIDGE (OBC3) AND SANSFIELD ROAD BRIDGE (UBC4) CROSS SECTION Ch 10+103		
Drawing File Name	DP-04-23-DWG-RO-TTA-18982	Version	v01
Status			S3

DO NOT SCALE USE FIGURED DIMENSIONS ONLY



LEGEND:

- PROPOSED SECANT PILE WALL
- PROPOSED SECANT PILE WALL ANCHORS
- PROPOSED KING POST WALL
- PROPOSED ANCHOR SUBSTANTUM WAYLEAVE
- APPROACH TO EXISTING OVERBRIDGE / TUNNEL (EXTENTS ARE APPROXIMATE AND DESIGN TO BE DEVELOPED AT DETAILED DESIGN)
- PROPOSED GABION WALL
- PROPOSED CANTILEVER WALL
- INDICATIVE EXTENTS OF ADDITIONAL SOIL NAILING AS SLOPE REMEDIATION BEHIND WALL
- INDICATIVE EXTENTS OF SLOPE REGRADING / PROVISION OF GRANULAR SHOULDER AS SLOPE REMEDIATION BEHIND WALL
- END OF SECTION
- CONTINUATION OF SECTION
- EARTHWORK SLOPE
- INDICATIVE BANK HEIGHT / CUTTING DEPTH

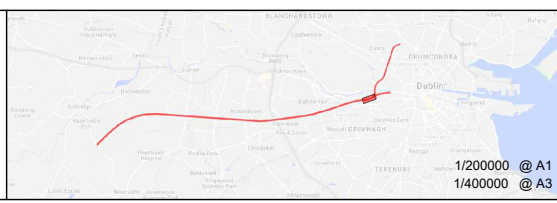
NOTES:

- FOR EARTHWORKS STANDARD DETAILS REFER TO DRAWINGS DP-04-23-DWG-RO-TTA-18960 TO DP-04-23-DWG-RO-TTA-18964.
- WALL ANCHOR LOCATIONS INDICATE ANTICIPATED TEMPORARY OR PERMANENT ANCHORS.
- TRACKBED TREATMENTS MARKED (*) SPECIFIED FOR GREENFIELD SITES. PRELIMINARY ALTERNATIVE TREATMENTS TO BE FURTHER CONSIDERED, FOLLOWING APPROVAL FROM IE, ARE PRESENTED IN TABLE BELOW:

PROPOSED TRACK TREATMENTS	ALTERNATIVE TRACK TREATMENTS
T350g	T150R2g
T350Rg	T300R2g
T450g	T350R2g
T450Rg	
T525g	
T525Rg	

←←←←	SECANT PILE WALL	→→→→	WALL REFERENCE (W)					
	RW1		EARTHWORKS STANDARD DETAILS (W)					
	10.2		H (m) (W)					
←←←←	SECANT PILE WALL	→→→→	WALL REFERENCE (C)					
	RW1	RW1	EARTHWORKS STANDARD DETAILS (C)					
			H (m) (C)					
			WALL REFERENCE (E)					
			EARTHWORKS STANDARD DETAILS (E)					
			H (m) (E)					
←	T350g *	→	TRACKBED TREATMENT (UP SLOW)					
←	T350g *	→	TRACKBED TREATMENT (DOWN SLOW)					
←	T150Rg	→	TRACKBED TREATMENT (UP FAST)					
←	T150Rg	→	TRACKBED TREATMENT (DOWN FAST)					
			TURNBACK DART					
9+750	9+700	9+600	9+500	9+400	9+300	9+200	9+120	CHAINAGE (m)

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Rev	Date	Drn	Chk'd	App'd	Description
v01	10.11.22	KH	PC	PC	PLANNING ISSUE

Client: **Iarnród Éireann Irish Rail**

Engineering Designer: **ATKINS** (Member of the SNC Lavalin Group)

Supported by: **rps**

Date: 29.11.21 | Scale: 1:1000 @ A1, 1:2000 @ A3 | Drawn: RG | Checked: PC | Approved: PC

Project Code: 5199586 | Issuer: TTA | QMS Code:

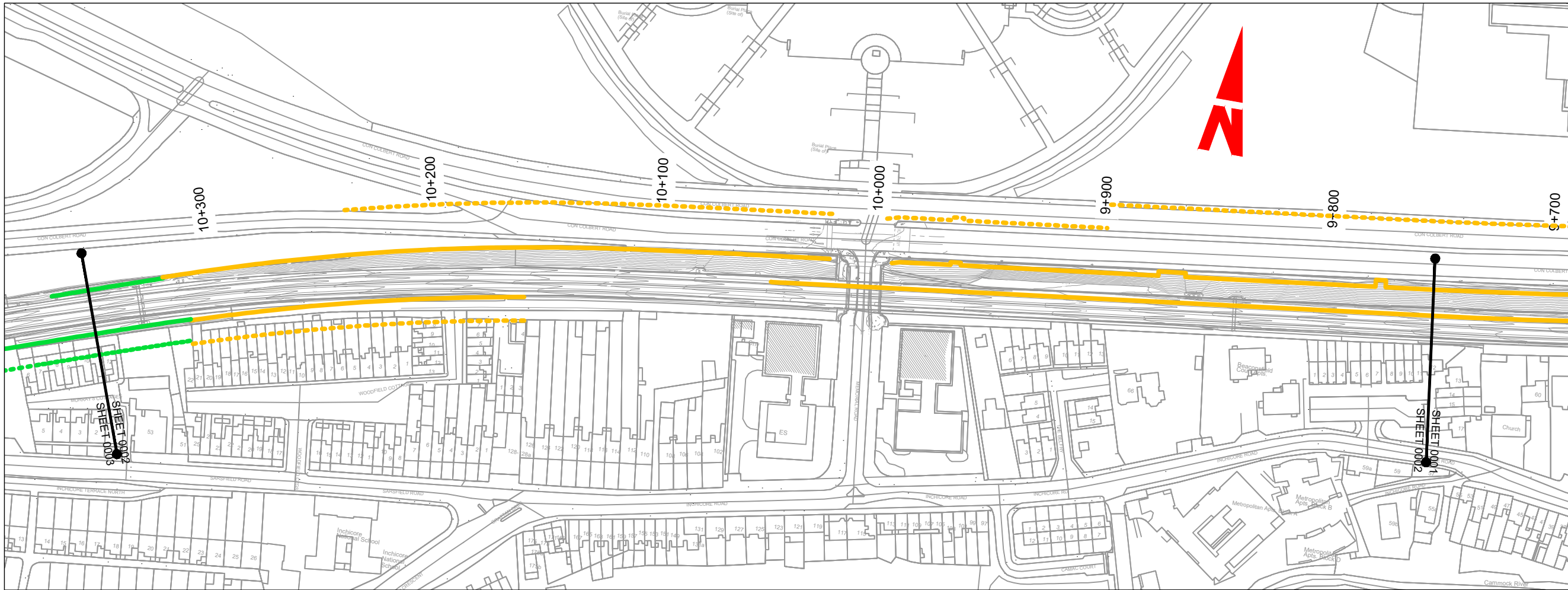
Project Title: **DART + SOUTH WEST**

Drawing Title: **OBC1 BRIDGE TO KYLEMORE ROAD BRIDGE EARTHWORKS SHEET 1**

Drawing File Name: DP-04-23-DWG-RO-TTA-18952 | Version: v01 | Status: S3

DO NOT SCALE USE FIGURED DIMENSIONS ONLY

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LEGEND:

- PROPOSED SECANT PILE WALL
- PROPOSED SECANT PILE WALL ANCHORS
- PROPOSED KING POST WALL
- PROPOSED ANCHOR SUBSTATION WAYLEAVE
- APPROACH TO EXISTING OVERBRIDGE / TUNNEL (EXTENTS ARE APPROXIMATE AND DESIGN TO BE DEVELOPED AT DETAILED DESIGN)
- PROPOSED GABION WALL
- PROPOSED CANTILEVER WALL
- INDICATIVE EXTENTS OF ADDITIONAL SOIL NAILING AS SLOPE REMEDIATION BEHIND WALL
- INDICATIVE EXTENTS OF SLOPE REGRADING / PROVISION OF GRANULAR SHOULDER AS SLOPE REMEDIATION BEHIND WALL
- END OF SECTION
- CONTINUATION OF SECTION
- EARTHWORK SLOPE
- INDICATIVE BANK HEIGHT / CUTTING DEPTH

NOTES:

- FOR EARTHWORKS STANDARD DETAILS REFER TO DRAWINGS DP-04-23-DWG-RO-TTA-18960 TO DP-04-23-DWG-RO-TTA-18964.
- WALL ANCHOR LOCATIONS INDICATE ANTICIPATED TEMPORARY OR PERMANENT ANCHORS.
- TRACKBED TREATMENTS MARKED (*) SPECIFIED FOR GREENFIELD SITES. PRELIMINARY ALTERNATIVE TREATMENTS TO BE FURTHER CONSIDERED, FOLLOWING APPROVAL FROM IE, ARE PRESENTED IN TABLE BELOW:

PROPOSED TRACK TREATMENTS	ALTERNATIVE TRACK TREATMENTS
T350g	T150R2g
T350Rg	
T450g	T300R2g
T450Rg	
T525g	
T525Rg	T350R2g

← KING POST	← SECANT PILE WALL	← SECANT PILE WALL	← WALL REFERENCE (W)
RW2	RW1	RW1	EARTHWORKS STANDARD DETAILS (W)
4.6	6.6	7.1	H (m) (W)
			← SECANT PILE WALL
			RW1
			← WALL REFERENCE (C)
			EARTHWORKS STANDARD DETAILS (C)
			H (m) (C)
← KING POST	← SECANT PILE WALL		← WALL REFERENCE (E)
RW2	RW1		EARTHWORKS STANDARD DETAILS (E)
3.0	1.6	1.0	H (m) (E)
← T150Rg		← T350g *	← T350Rg *
	← T150Rg	← T350g *	← T350Rg *
	← T150Rg		← T150R2g
← T350g *		← T150Rg	← T150R2g
			← TURNBACK DART
10+350	10+300	10+200	10+100
			10+000
			9+900
			9+800
			9+750
			CHAINAGE (m)

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Rev	Date	Drn	Chk'd	App'd	Description
v01	10.11.22	KH	PC	PC	PLANNING ISSUE

Client: **Iarnród Éireann Irish Rail**

Engineering Designer: **ATKINS** (Member of the SNC Lavalin Group)

Supported by: **rps**

Date: 29.11.21 | Scale: 1:1000 @ A1, 1:2000 @ A3 | Drawn: RG | Checked: PC | Approved: PC

Project Code: 5199586 | Issuer: TTA | QMS Code: _____

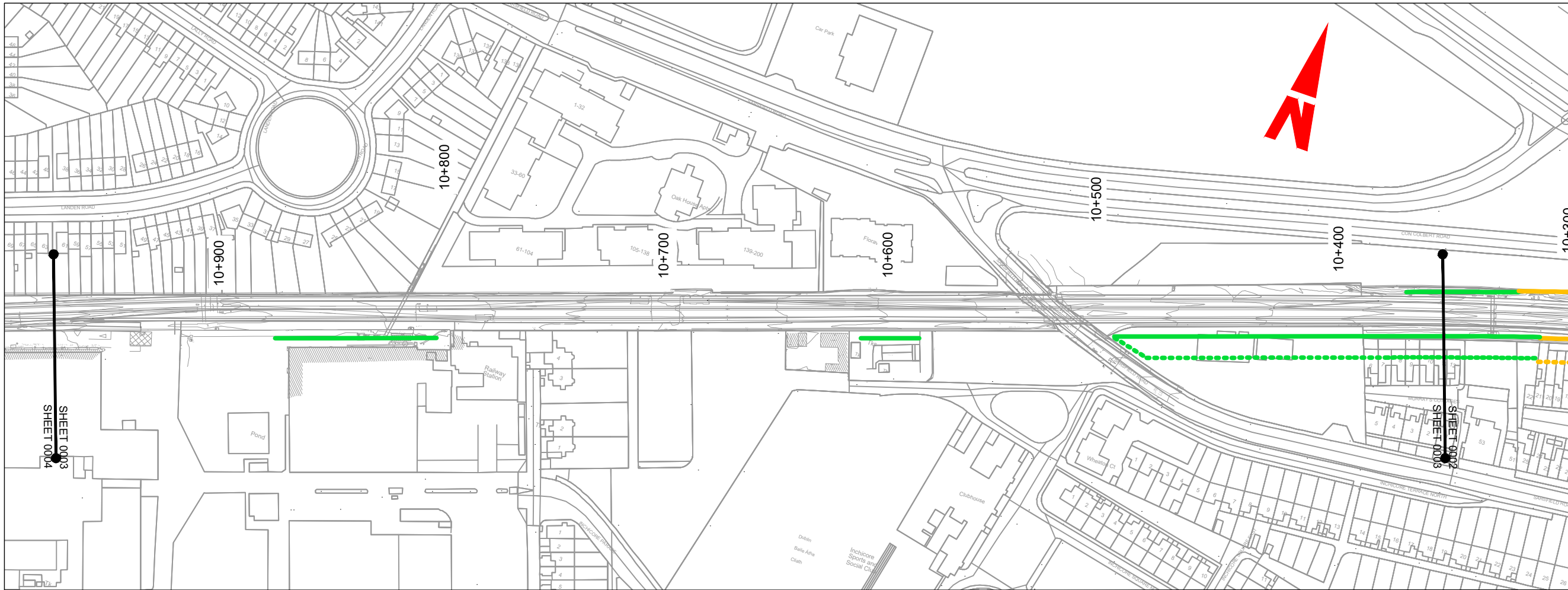
Project Title: **DART + SOUTH WEST**

Drawing Title: **OBC1 BRIDGE TO KYLEMORE ROAD BRIDGE EARTHWORKS SHEET 2**

Drawing File Name: DP-04-23-DWG-RO-TTA-18953 | Version: v01 | Status: S3

DO NOT SCALE USE FIGURED DIMENSIONS ONLY

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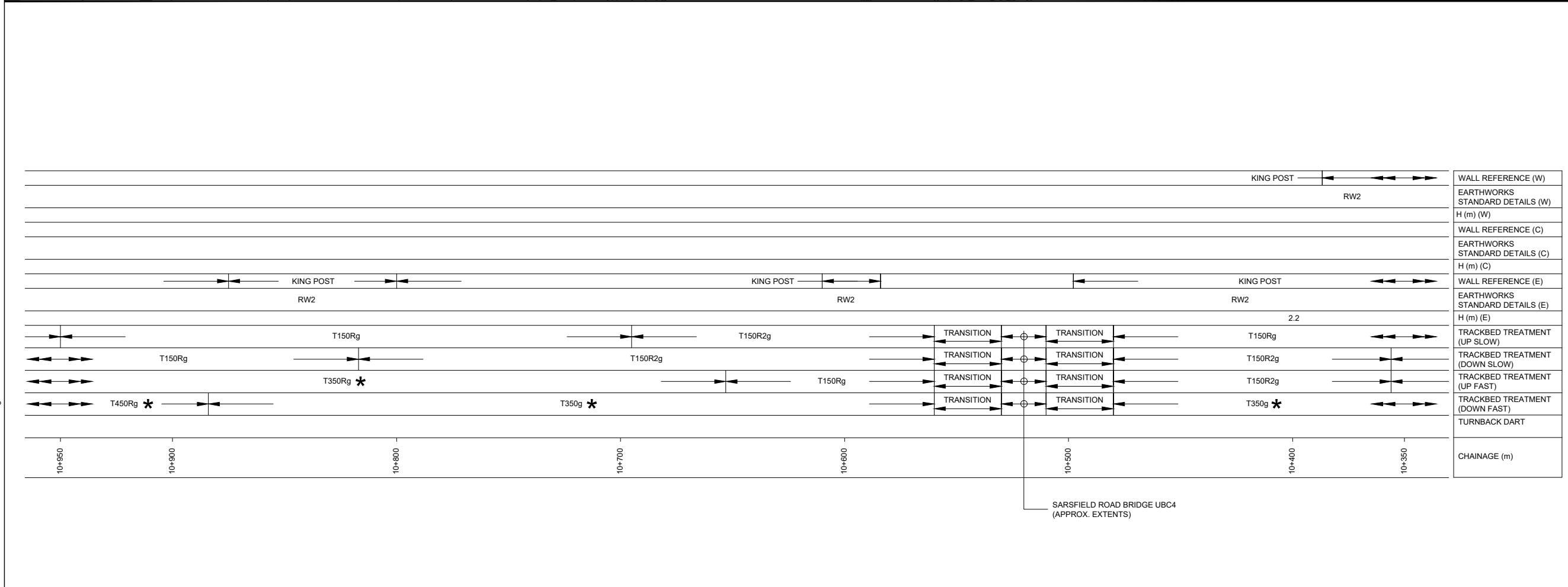
LEGEND:

- PROPOSED SECANT PILE WALL
- PROPOSED SECANT PILE WALL ANCHORS
- PROPOSED KING POST WALL
- - - PROPOSED ANCHOR SUBSTANTUM WAYLEAVE
- APPROACH TO EXISTING OVERBRIDGE / TUNNEL (EXTENTS ARE APPROXIMATE AND DESIGN TO BE DEVELOPED AT DETAILED DESIGN)
- PROPOSED GABION WALL
- PROPOSED CANTILEVER WALL
- INDICATIVE EXTENTS OF ADDITIONAL SOIL NAILING AS SLOPE REMEDIATION BEHIND WALL
- INDICATIVE EXTENTS OF SLOPE REGRADEING / PROVISION OF GRANULAR SHOULDER AS SLOPE REMEDIATION BEHIND WALL
- END OF SECTION
- ← CONTINUATION OF SECTION
- / EARTHWORK SLOPE
- H INDICATIVE BANK HEIGHT / CUTTING DEPTH

NOTES:

- FOR EARTHWORKS STANDARD DETAILS REFER TO DRAWINGS DP-04-23-DWG-RO-TTA-18960 TO DP-04-23-DWG-RO-TTA-18964.
- WALL ANCHOR LOCATIONS INDICATE ANTICIPATED TEMPORARY OR PERMANENT ANCHORS.
- TRACKBED TREATMENTS MARKED (*) SPECIFIED FOR GREENFIELD SITES. PRELIMINARY ALTERNATIVE TREATMENTS TO BE FURTHER CONSIDERED, FOLLOWING APPROVAL FROM IE, ARE PRESENTED IN TABLE BELOW:

PROPOSED TRACK TREATMENTS	ALTERNATIVE TRACK TREATMENTS
T350g	T150R2g
T350Rg	
T450g	T300R2g
T450Rg	
T525g	
T525Rg	T350R2g



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Rev	Date	Drn	Chk'd	App'd	Description
v01	10.11.22	KH	PC	PC	PLANNING ISSUE

Client: **Iarnród Éireann**

Engineering Designer: **ATKINS**

Supported by: **TYPESA** **FPS**

Date: 29.11.21 **Scale:** 1:1000 @ A1, 1:2000 @ A3 **Drawn:** RG **Checked:** PC **Approved:** PC

Project Code: 5199586 **Issuer:** TTA **QMS Code:**

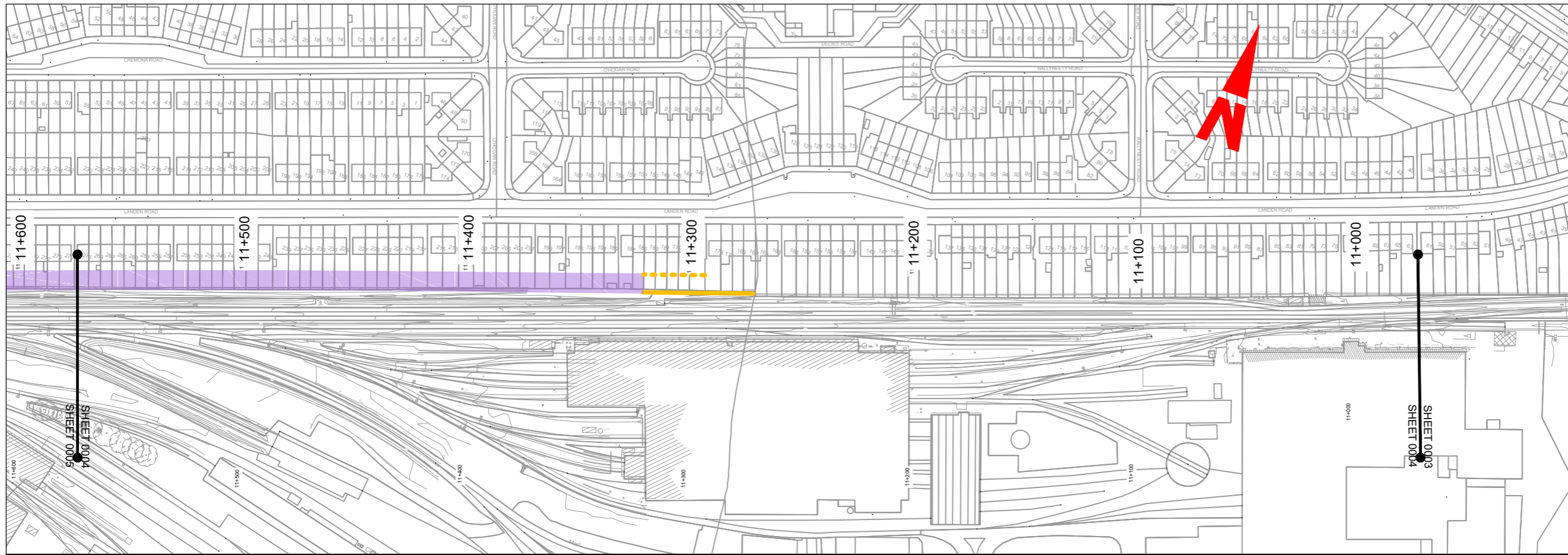
Project Title: DART + SOUTH WEST

Drawing Title: OBC1 BRIDGE TO KYLEMORE ROAD BRIDGE EARTHWORKS SHEET 3

Drawing File Name: DP-04-23-DWG-RO-TTA-18954 **Version:** v01 **Status:** S3

DO NOT SCALE USE FIGURED DIMENSIONS ONLY

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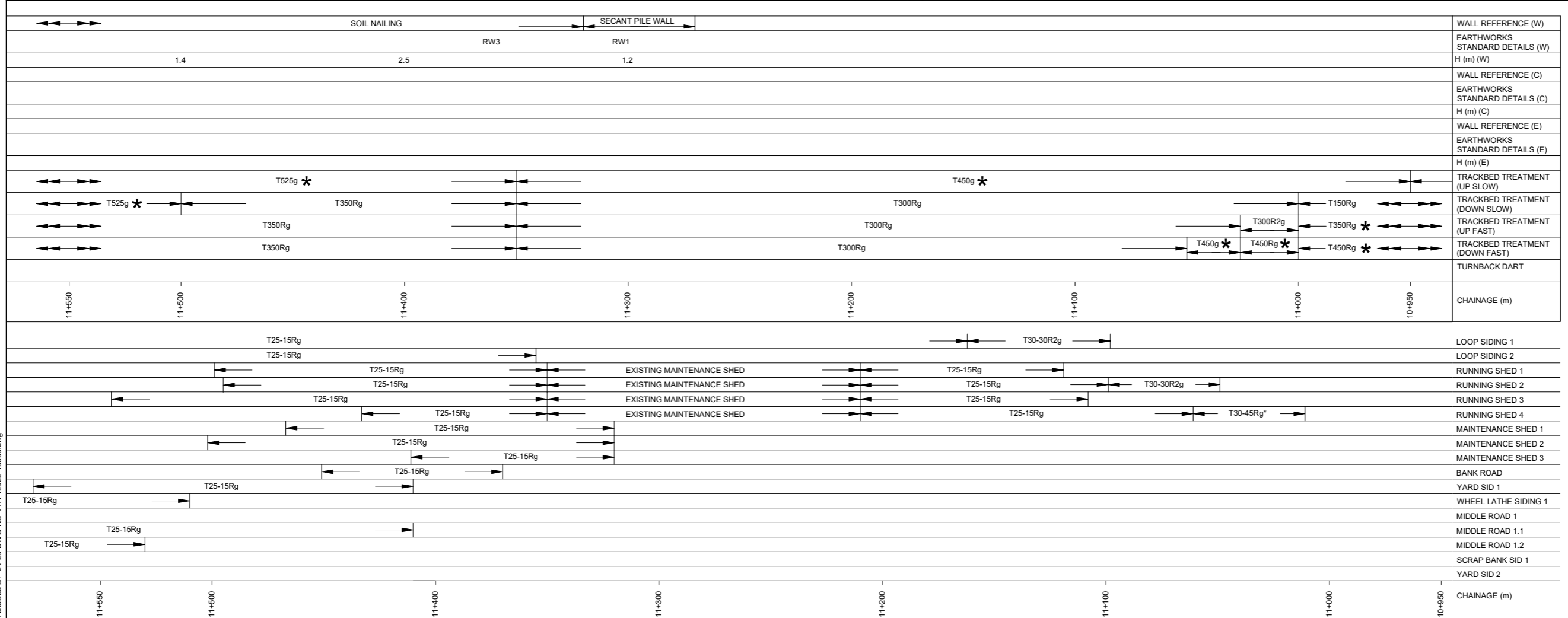
LEGEND:

- PROPOSED SECANT PILE WALL
- PROPOSED SECANT PILE WALL ANCHORS
- PROPOSED KING POST WALL
- PROPOSED ANCHOR SUBSTANTIUM WAYLEAVE
- APPROACH TO EXISTING OVERBRIDGE / TUNNEL (EXTENTS ARE APPROXIMATE AND DESIGN TO BE DEVELOPED AT DETAILED DESIGN)
- PROPOSED GABION WALL
- PROPOSED CANTILEVER WALL
- INDICATIVE EXTENTS OF ADDITIONAL SOIL NAILING AS SLOPE REMEDIATION BEHIND WALL
- INDICATIVE EXTENTS OF SLOPE REGRADING / PROVISION OF GRANULAR SHOULDER AS SLOPE REMEDIATION BEHIND WALL
- END OF SECTION
- CONTINUATION OF SECTION
- EARTHWORK SLOPE
- INDICATIVE BANK HEIGHT / CUTTING DEPTH

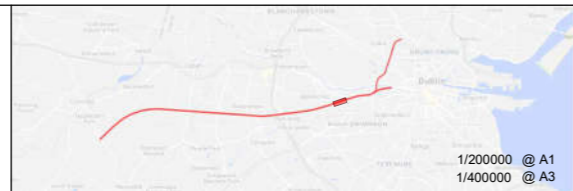
NOTES:

- FOR EARTHWORKS STANDARD DETAILS REFER TO DRAWINGS DP-04-23-DWG-RO-TTA-18960 TO DP-04-23-DWG-RO-TTA-18964.
- WALL ANCHOR LOCATIONS INDICATE ANTICIPATED TEMPORARY OR PERMANENT ANCHORS.
- TRACKBED TREATMENTS MARKED (*) SPECIFIED FOR GREENFIELD SITES. PRELIMINARY ALTERNATIVE TREATMENTS TO BE FURTHER CONSIDERED, FOLLOWING APPROVAL FROM IE, ARE PRESENTED IN TABLE BELOW:

PROPOSED TRACK TREATMENTS	ALTERNATIVE TRACK TREATMENTS
T350g	T150R2g
T350Rg	T300R2g
T450g	T300R2g
T450Rg	T300R2g
T525g	T350R2g
T525Rg	T350R2g



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Rev	Date	Drn	Chk'd	App'd	Description
v01	10.11.22	KH	PC	PC	PLANNING ISSUE

Client: **Iarnród Éireann Irish Rail**

Engineering Designer: **ATKINS**

Supported by: **TYPSA** and **rps**

Date: 29.11.21 | Scale: 1:1000 @ A1, 1:2000 @ A3

Project Code: 5199586 | Issuer: TTA

Drawn: RG | Checked: PC | Approved: PC

QMS Code

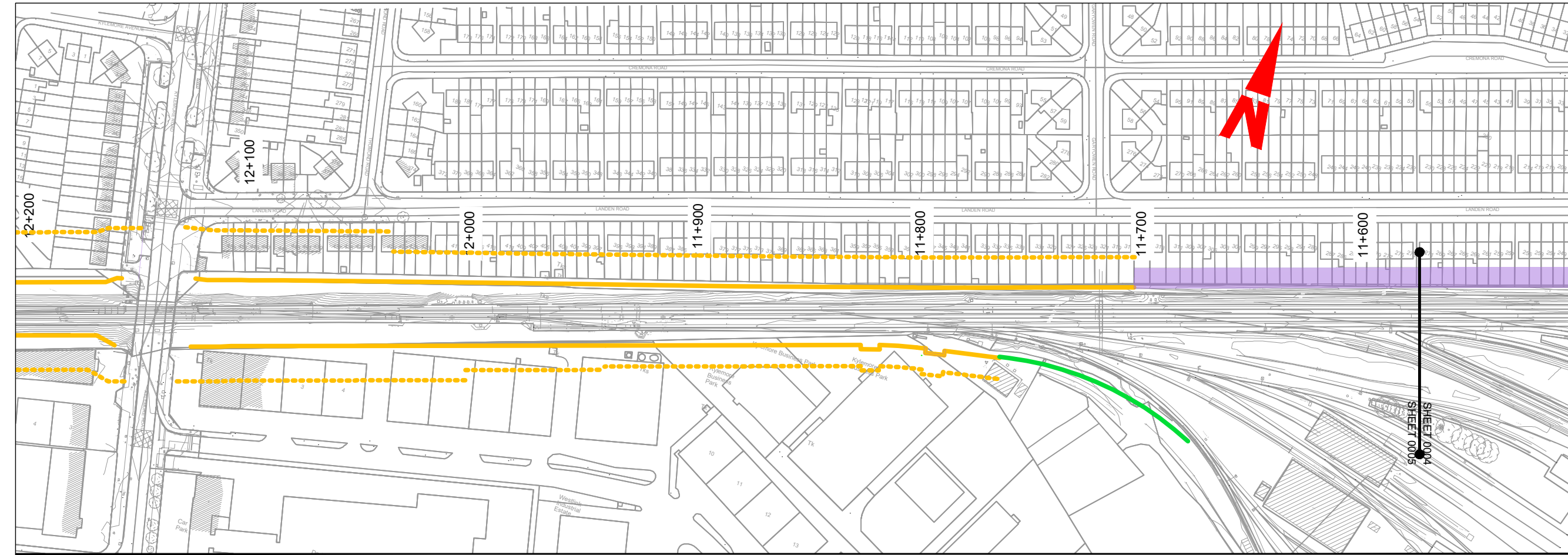
Project Title: **DART + SOUTH WEST**

Drawing Title: **OBC1 BRIDGE TO KYLEMORE ROAD BRIDGE EARTHWORKS SHEET 4**

Drawing File Name: DP-04-23-DWG-RO-TTA-18955 | Version: v01 | Status: S3

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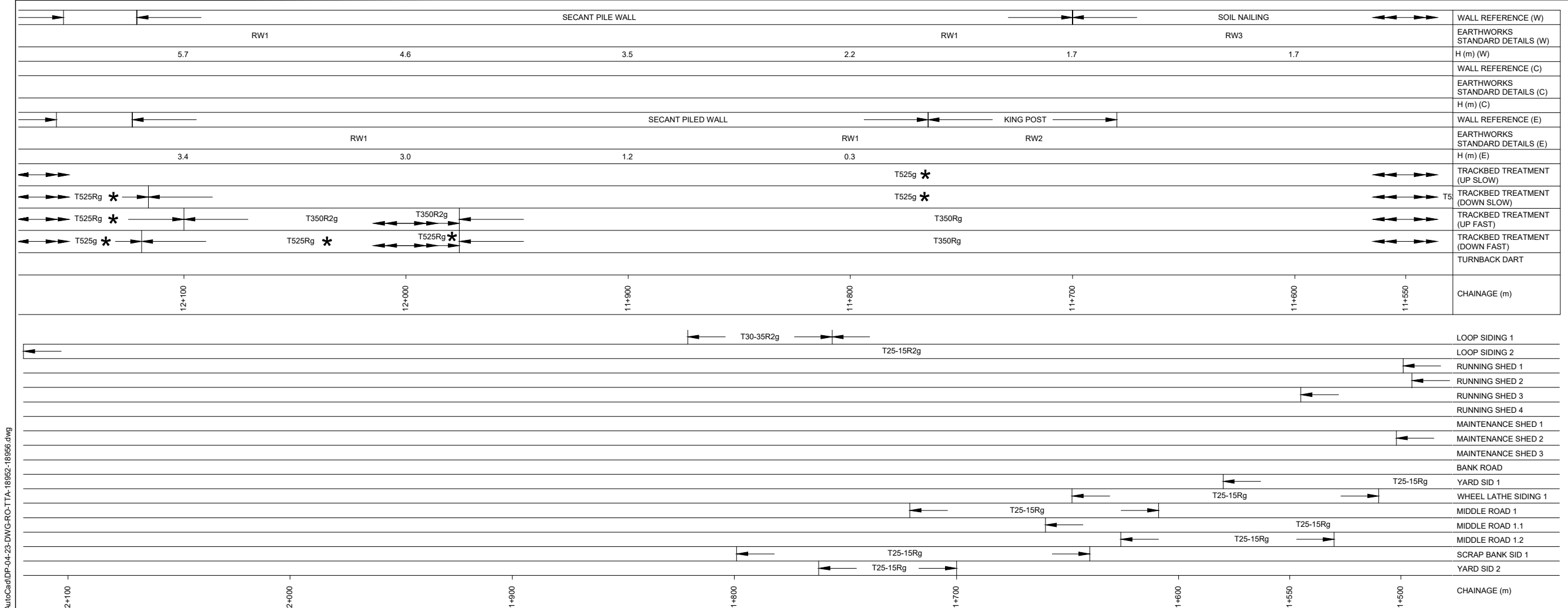
LEGEND:

- PROPOSED SECANT PILE WALL
- PROPOSED SECANT PILE WALL ANCHORS
- PROPOSED KING POST WALL
- PROPOSED ANCHOR SUBSTATUM WAYLEAVE
- APPROACH TO EXISTING OVERBRIDGE / TUNNEL (EXTENTS ARE APPROXIMATE AND DESIGN TO BE DEVELOPED AT DETAILED DESIGN)
- PROPOSED GABION WALL
- PROPOSED CANTILEVER WALL
- INDICATIVE EXTENTS OF ADDITIONAL SOIL NAILING AS SLOPE REMEDIATION BEHIND WALL
- INDICATIVE EXTENTS OF SLOPE REGRAIDING / PROVISION OF GRANULAR SHOULDER AS SLOPE REMEDIATION BEHIND WALL
- END OF SECTION
- CONTINUATION OF SECTION
- EARTHWORK SLOPE
- INDICATIVE BANK HEIGHT / CUTTING DEPTH

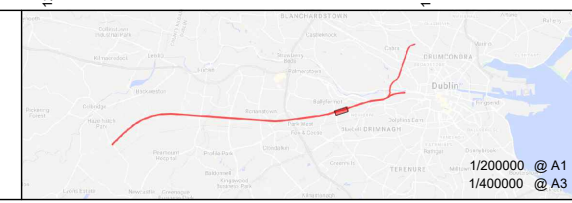
NOTES:

- FOR EARTHWORKS STANDARD DETAILS REFER TO DRAWINGS DP-04-23-DWG-RO-TTA-18960 TO DP-04-23-DWG-RO-TTA-18964.
- WALL ANCHOR LOCATIONS INDICATE ANTICIPATED TEMPORARY OR PERMANENT ANCHORS.
- TRACKBED TREATMENTS MARKED (*) SPECIFIED FOR GREENFIELD SITES. PRELIMINARY ALTERNATIVE TREATMENTS TO BE FURTHER CONSIDERED, FOLLOWING APPROVAL FROM IE, ARE PRESENTED IN TABLE BELOW:

PROPOSED TRACK TREATMENTS	ALTERNATIVE TRACK TREATMENTS
T350g	T150R2g
T350Rg	
T450g	T300R2g
T450Rg	
T525g	T350R2g
T525Rg	



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Rev	Date	Drn	Chk'd	App'd	Description
v01	10.11.22	KH	PC	PC	PLANNING ISSUE

Client: **Iarnród Éireann Irish Rail**

Engineering Designer: **ATKINS** (Member of the SNC Lavalin Group)

Supported by: **rps**

Date: 29.11.21 | Scale: 1:1000 @ A1, 1:2000 @ A3 | Drawn: RG | Checked: PC | Approved: PC

Project Code: 5199586 | Issuer: TTA | QMS Code: []

Project Title: **DART + SOUTH WEST**

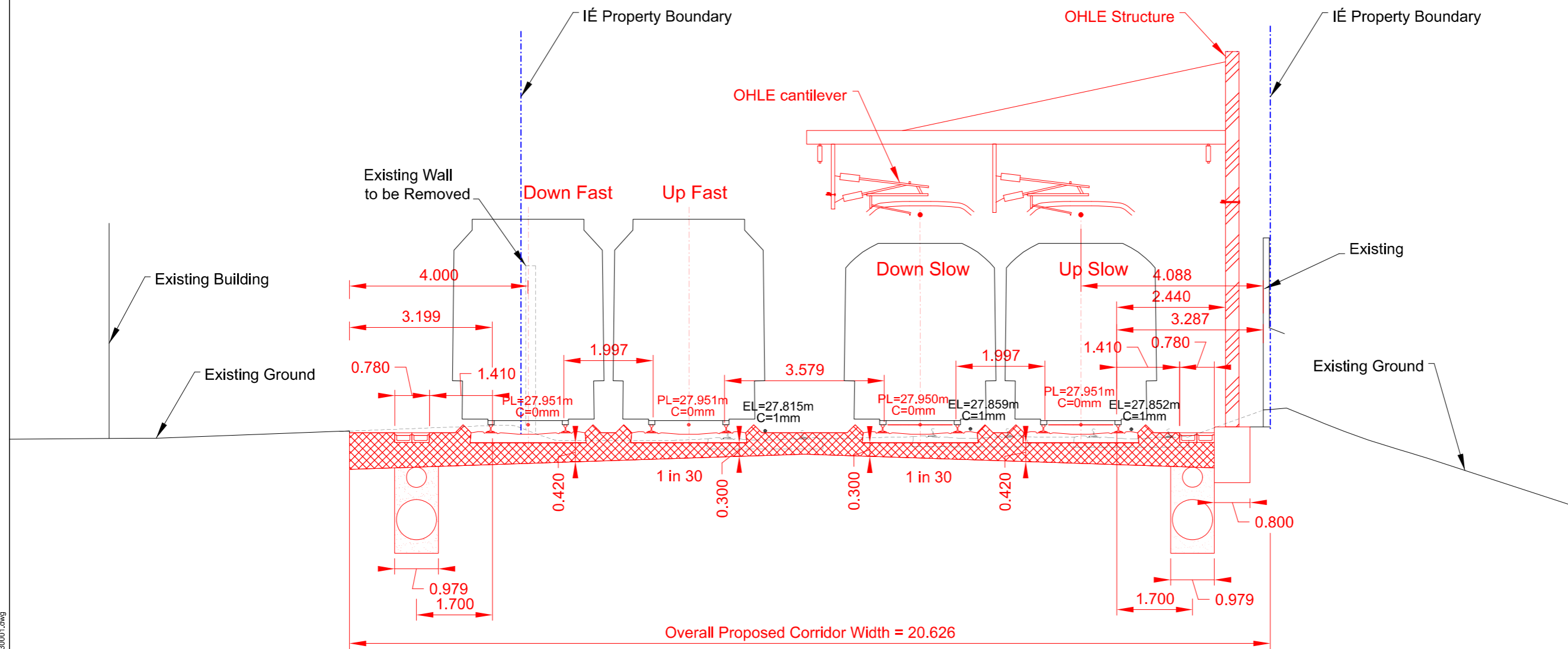
Drawing Title: **OBC1 BRIDGE TO KYLEMORE ROAD BRIDGE EARTHWORKS SHEET 5**

Drawing File Name: DP-04-23-DWG-RO-TTA-18956 | Version: v01 | Status: S3

DO NOT SCALE USE FIGURED DIMENSIONS ONLY

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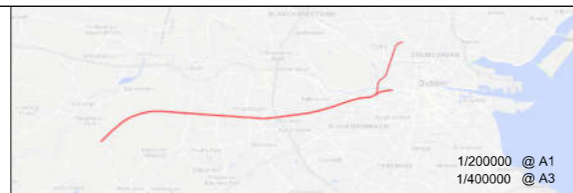
- LEGEND:**
- CROSS SECTION**
- PROPOSED ELEMENTS
 - EXISTING ELEMENTS TO BE RETAINED
 - - - EXISTING ELEMENTS TO BE REMOVED
 - - - IÉ PROPERTY BOUNDARY
 - ▨ BALLAST
 - ▭ PRESTRESSED CONCRETE SLEEPER
 - ⊥ VIGNOL RAIL 54E1
 - ⊥ DRAINAGE
 - ▭ COMBINED WALKWAY / CABLE MANAGEMENT SYSTEM
- EL= EXISTING LEVEL (ELEVATION)
 PL= PROPOSED LEVEL (ELEVATION)
 C= CANT
 R= RADIUS
 STR= STRAIGHT LINE



- NOTES**
1. CHAINAGES, LEVELS AND COORDINATES ARE SHOWN IN METRES. ALL OTHER DIMENSIONS ARE SHOWN IN MILLIMETRES, UNLESS OTHERWISE STATED. ALL CLEARANCE AND SIX-FOOT INTERVALS ARE QUOTED TO RUNNING EDGES (RE).
 2. THIS DESIGN IS BASED UPON A TOPOGRAPHICAL SURVEY DATED SEPTEMBER 2021, COMPLETED BY MURPHY GEOSPATIAL LTD.
 3. CHAINAGE DATUM 9+906.707 IS LOCATED IN THE DOWN SLOW LINE AT 1 MILEPOST (CORK LINE). DOWN LINE CHAINAGE DATUM IS SHOWN ON THIS DRAWING.
 4. NEGATIVE SLUES ARE TO THE LEFT. POSITIVE SLUES ARE TO THE RIGHT. CANT SHOWN AS POSITIVE THROUGHOUT, EXCEPT WHERE ADVERSE TO THE DIRECTION OF CURVATURE. ALL IN THE DIRECTION OF INCREASING CHAINAGE.
 5. TRACK GAUGE TO BE NOMINAL 1602MM FOR PLAIN LINE AND 1600MM FOR P&C.
 6. RADI QUOTED ARE FROM TRACK CENTRELINE, UNLESS OTHERWISE STATED.
 7. RAIL LEVELS ARE QUOTED FOR THE LOW RAIL.
 8. REFER TO INDIVIDUAL ENGINEERING DISCIPLINES' DESIGN SUBMISSION FOR THEIR RESPECTIVE DETAILS.
 9. REFER TO TRACK PLAN LAYOUT AND LONGITUDINAL PROFILE DRAWINGS FOR FURTHER DETAILS.
 10. MINIMUM DEPTH OF BALLAST (WHERE SHOWN) TO BE 300mm BENEATH SLEEPER IN ACCORDANCE WITH PROPOSED TRACK CATEGORY 1 REQUIREMENTS.
 11. THE DRAINAGE SHOWN IS BASED ON PRELIMINARY DESIGN.
 12. CLEARANCES ASSESSED USING IRL2A ON SLOW & BRANCH LINES, IRL1 ON FAST LINES.

VIEW FROM HEUSTON STATION TO PARKWEST STATION

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Rev	Date	Drn	Chk'd	App'd	Description
v01	23/11/22	CDM	JYM	PR	PLANNING ISSUE

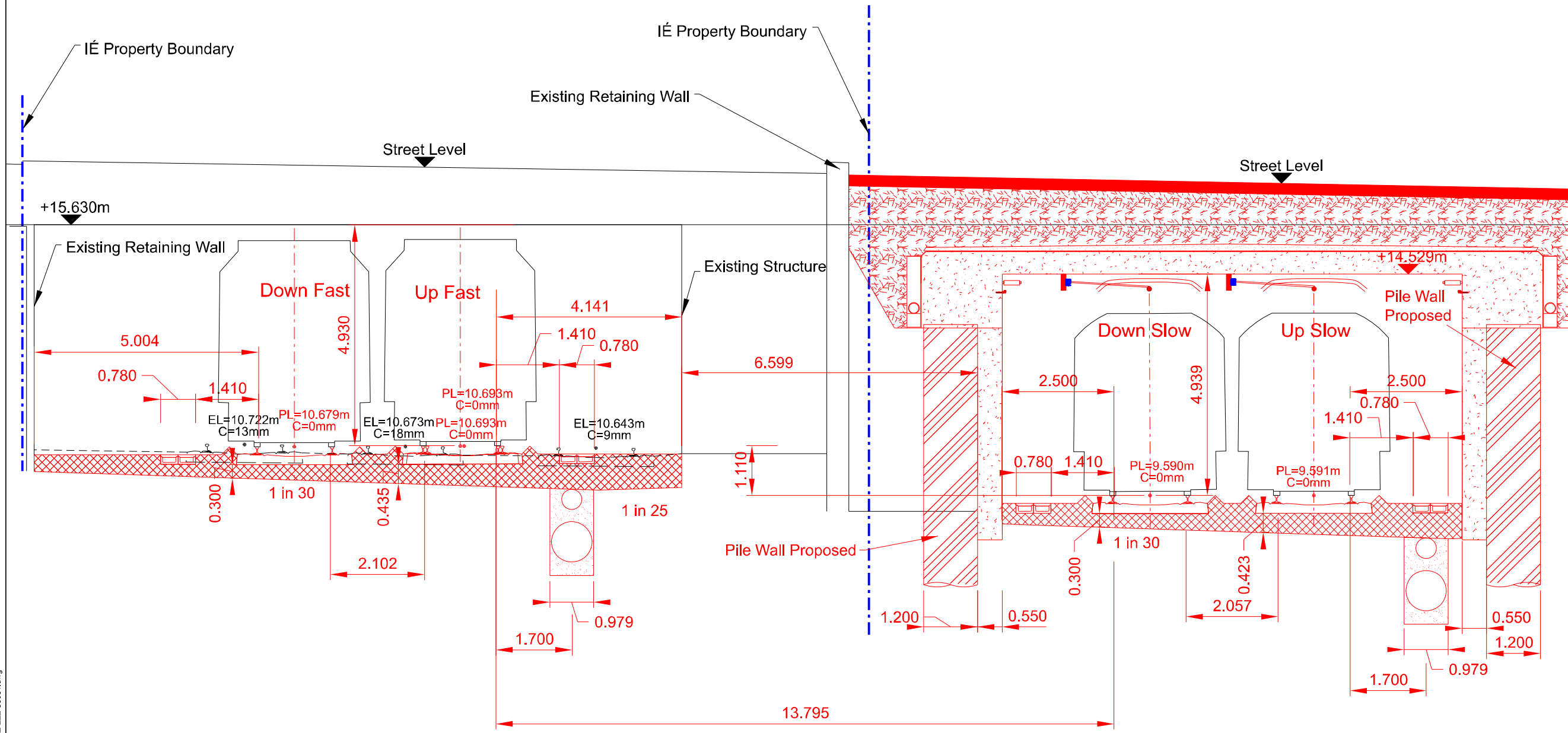
Client Iarnród Éireann Irish Rail		Engineering Designer ATKINS	
Date 23/11/2022	Scale 1/50 @ A1 1/100 @ A3	Drawn CMS	Checked JYM
Project Code 5199586	Issuer TTA	Approved PR	QMS Code

Project Title DART + SOUTH WEST	
Drawing Title SARSFIELD ROAD BRIDGE (UBC4) AND KHYBER PASS (OBC5) CROSS SECTION Ch 10+751	
Drawing File Name DP-04-23-DWG-RO-TTA-18983	Status S3

DO NOT SCALE USE FIGURED DIMENSIONS ONLY

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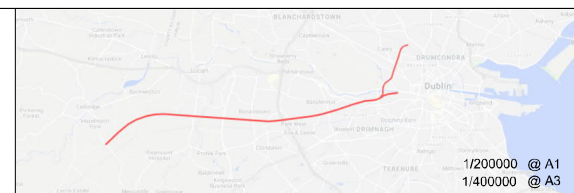
- LEGEND:**
- CROSS SECTION**
- PROPOSED ELEMENTS
 - EXISTING ELEMENTS TO BE RETAINED
 - EXISTING ELEMENTS TO BE REMOVED
 - - - IÉ PROPERTY BOUNDARY
 - BALLAST
 - ▬ PRESTRESSED CONCRETE SLEEPER
 - VIGNOL RAIL 54E1
 - DRAINAGE
 - ▭ COMBINED WALKWAY / CABLE MANAGEMENT SYSTEM
 - EL= EXISTING LEVEL (ELEVATION)
 - PL= PROPOSED LEVEL (ELEVATION)
 - C= CANT
 - R= RADIUS
 - STR= STRAIGHT LINE



- NOTES**
1. CHAINAGES, LEVELS AND COORDINATES ARE SHOWN IN METRES. ALL OTHER DIMENSIONS ARE SHOWN IN MILLIMETRES, UNLESS OTHERWISE STATED. ALL CLEARANCE AND SIX-FOOT INTERVALS ARE QUOTED TO RUNNING EDGES (RE).
 2. THIS DESIGN IS BASED UPON A TOPOGRAPHICAL SURVEY DATED SEPTEMBER 2021, COMPLETED BY MURPHY GEOSPATIAL LTD.
 3. CHAINAGE DATUM 9+906.707 IS LOCATED IN THE DOWN SLOW LINE AT 1 MILEPOST (CORK LINE). DOWN LINE CHAINAGE DATUM IS SHOWN ON THIS DRAWING.
 4. NEGATIVE SLUES ARE TO THE LEFT. POSITIVE SLUES ARE TO THE RIGHT. CANT SHOWN AS POSITIVE THROUGHOUT, EXCEPT WHERE ADVERSE TO THE DIRECTION OF CURVATURE. ALL IN THE DIRECTION OF INCREASING CHAINAGE.
 5. TRACK GAUGE TO BE NOMINAL 1602MM FOR PLAIN LINE AND 1600MM FOR P&C.
 6. RADII QUOTED ARE FROM TRACK CENTRELINE, UNLESS OTHERWISE STATED.
 7. RAIL LEVELS ARE QUOTED FOR THE LOW RAIL.
 8. REFER TO INDIVIDUAL ENGINEERING DISCIPLINES' DESIGN SUBMISSION FOR THEIR RESPECTIVE DETAILS.
 9. REFER TO TRACK PLAN LAYOUT AND LONGITUDINAL PROFILE DRAWINGS FOR FURTHER DETAILS.
 10. MINIMUM DEPTH OF BALLAST (WHERE SHOWN) TO BE 300mm BENEATH SLEEPER IN ACCORDANCE WITH PROPOSED TRACK CATEGORY 1 REQUIREMENTS.
 11. THE DRAINAGE SHOWN IS BASED ON PRELIMINARY DESIGN.
 12. CLEARANCES ASSESSED USING IRL2A ON SLOW & BRANCH LINES, IRL1 ON FAST LINES.

VIEW FROM HEUSTON STATION TO PARKWEST STATION

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Rev	Date	Drn	Chk'd	App'd	Description
v01	23/11/22	CDM	JYM	PR	PLANNING ISSUE

Client
 Iarnród Éireann
 Irish Rail

Engineering Designer
 TYPSA
 Atkins
 rps

Supported by:
 CMS
 JYM
 PR

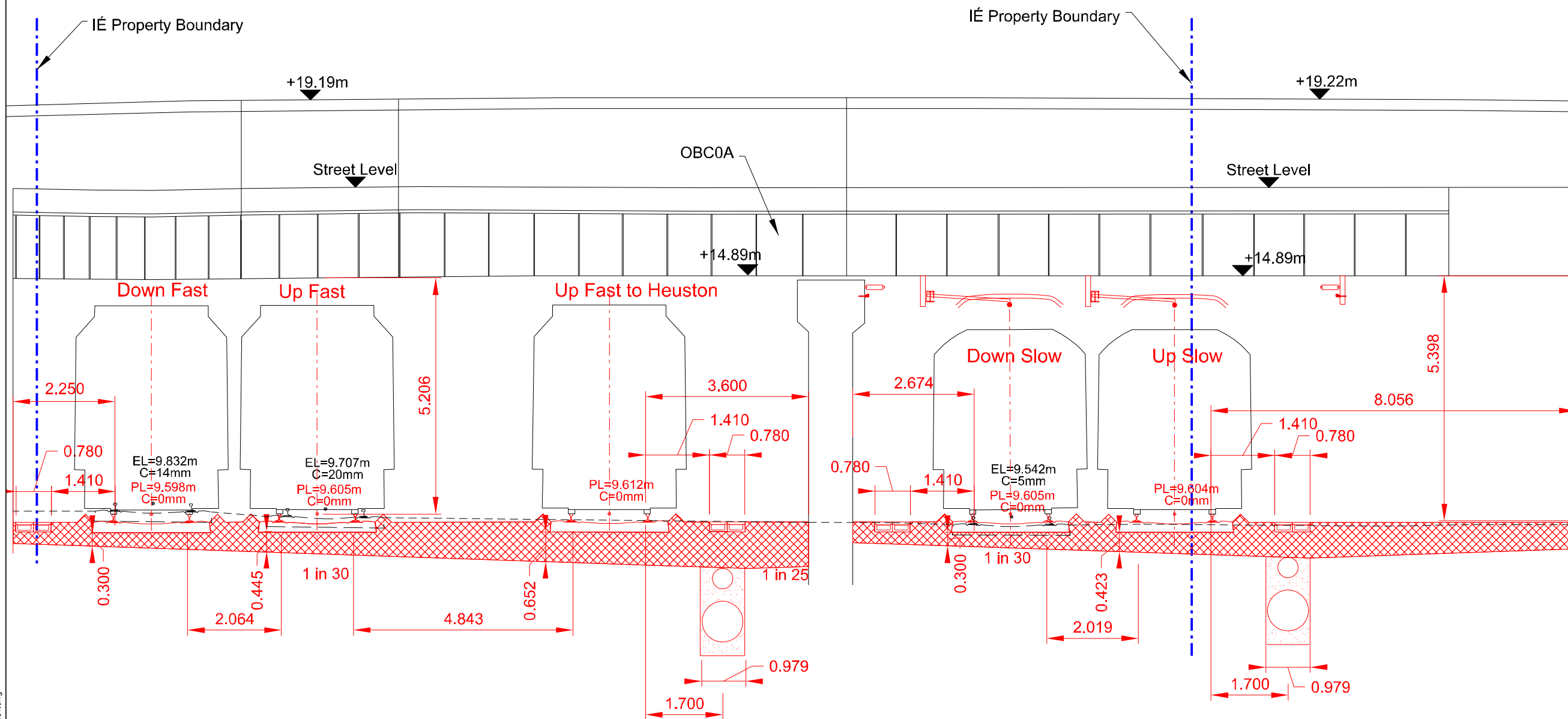
Date: 23/11/2022
Scale: 1/50 @ A1, 1/100 @ A3
Project Code: 5199586
Issuer: TTA

Project Title	DART + SOUTH WEST		
Drawing Title	SOUTH CIRCULAR ROAD (OBC1) CROSS SECTION Ch 9+401		
Drawing File Name	DP-04-23-DWG-RO-TTA-18980	Version	v01
Status	S3		

DO NOT SCALE USE FIGURED DIMENSIONS ONLY

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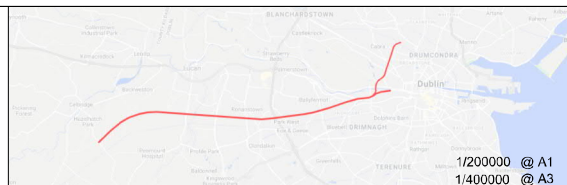
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- CROSS SECTION**
- PROPOSED ELEMENTS
 - EXISTING ELEMENTS TO BE RETAINED
 - EXISTING ELEMENTS TO BE REMOVED
 - - - IÉ PROPERTY BOUNDARY
 - BALLAST
 - ▬ PRESTRESSED CONCRETE SLEEPER
 - VIGNOL RAIL 54E1
 - DRAINAGE
 - ▭ COMBINED WALKWAY / CABLE MANAGEMENT SYSTEM
 - EL= EXISTING LEVEL (ELEVATION)
 - PL= PROPOSED LEVEL (ELEVATION)
 - C= CANT
 - R= RADIUS
 - STR= STRAIGHT LINE



- NOTES**
1. CHAINAGES, LEVELS AND COORDINATES ARE SHOWN IN METRES. ALL OTHER DIMENSIONS ARE SHOWN IN MILLIMETRES, UNLESS OTHERWISE STATED. ALL CLEARANCE AND SIX-FOOT INTERVALS ARE QUOTED TO RUNNING EDGES (RE).
 2. THIS DESIGN IS BASED UPON A TOPOGRAPHICAL SURVEY DATED SEPTEMBER 2021, COMPLETED BY MURPHY GEOSPATIAL LTD.
 3. CHAINAGE DATUM 9+906.707 IS LOCATED IN THE DOWN SLOW LINE AT 1 MILEPOST (CORK LINE). DOWN LINE CHAINAGE DATUM IS SHOWN ON THIS DRAWING.
 4. NEGATIVE SLUES ARE TO THE LEFT. POSITIVE SLUES ARE TO THE RIGHT. CANT SHOWN AS POSITIVE THROUGHOUT, EXCEPT WHERE ADVERSE TO THE DIRECTION OF CURVATURE. ALL IN THE DIRECTION OF INCREASING CHAINAGE.
 5. TRACK GAUGE TO BE NOMINAL 1602MM FOR PLAIN LINE AND 1600MM FOR P&C.
 6. RADII QUOTED ARE FROM TRACK CENTRELINE, UNLESS OTHERWISE STATED.
 7. RAIL LEVELS ARE QUOTED FOR THE LOW RAIL.
 8. REFER TO INDIVIDUAL ENGINEERING DISCIPLINES' DESIGN SUBMISSION FOR THEIR RESPECTIVE DETAILS.
 9. REFER TO TRACK PLAN LAYOUT AND LONGITUDINAL PROFILE DRAWINGS FOR FURTHER DETAILS.
 10. MINIMUM DEPTH OF BALLAST (WHERE SHOWN) TO BE 300mm BENEATH SLEEPER IN ACCORDANCE WITH PROPOSED TRACK CATEGORY 1 REQUIREMENTS.
 11. THE DRAINAGE SHOWN IS BASED ON PRELIMINARY DESIGN.
 12. CLEARANCES ASSESSED USING IRL2A ON SLOW & BRANCH LINES, IRL1 ON FAST LINES.

VIEW FROM HEUSTON STATION TO PARKWEST STATION

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Rev	Date	Drn	Chk'd	App'd	Description
v01	23/11/22	CDM	JYM	PR	PLANNING ISSUE

Client

Engineering Designer

 Supported by:

Date 23/11/2022 **Scale** 1/50 @ A1
 1/100 @ A3

Project Code 5199586 **Issuer** TTA

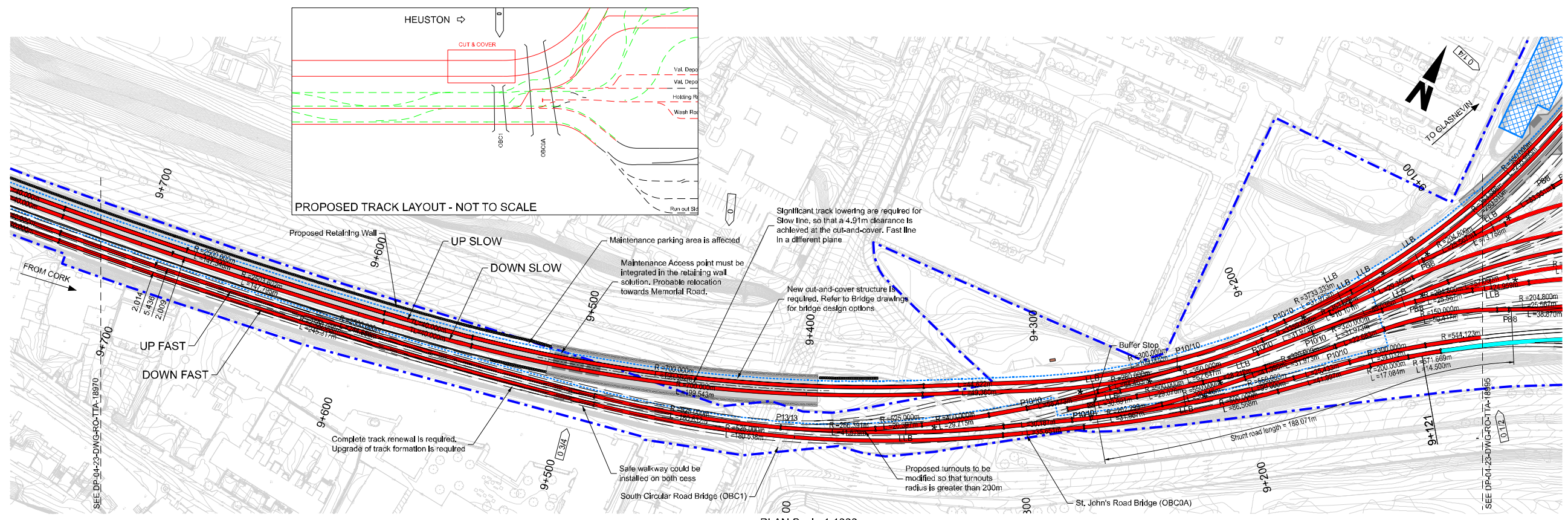
Drawn CMS **Checked** JYM **Approved** PR

QMS Code

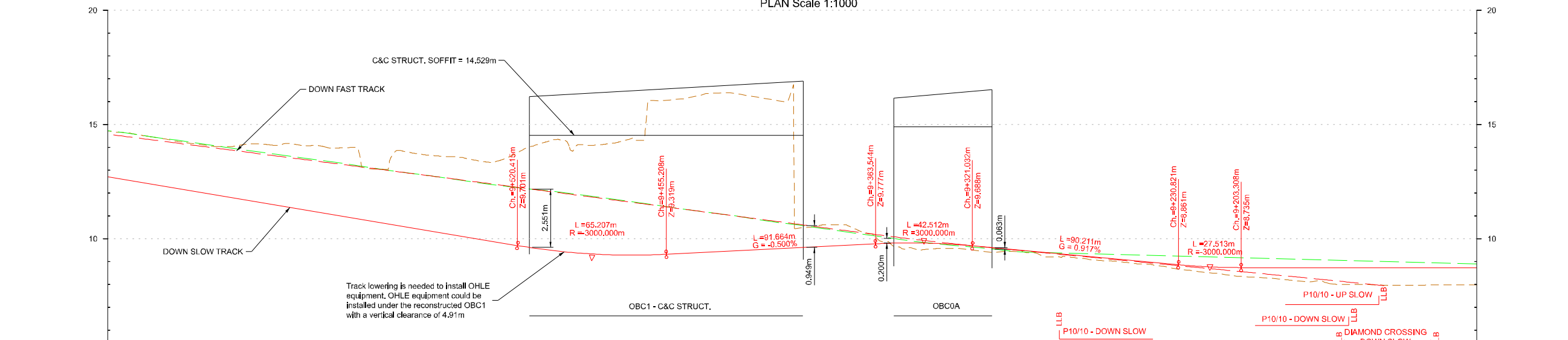
Project Title	DART + SOUTH WEST		
Drawing Title	ST. JOHN'S ROAD BRIDGE (OBC0A) CROSS SECTION Ch 9+312		
Drawing File Name	DP-04-23-DWG-RO-TTA-18979	Version	v01
Status	S3		

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- LEGEND:**
- PROPOSED TRACK LAYOUT**
- RENEWED TRACK / SLUED TRACK
 - EXISTING TRACK TO BE RETAINED
 - EXISTING TRACK TO BE REMOVED
- PLAN**
- RENEWED TRACK / SLUED TRACK
 - EXISTING TRACK TO BE RETAINED (MAIN LINES)
 - EXISTING TRACK TO BE RETAINED (NOT MAIN LINES)
 - EXISTING TRACK TO BE REMOVED
 - IE PROPERTY BOUNDARY
 - PROPOSED RETAINING WALL
 - P8/8 TYPE OF TURNOUT
 - ATTENUATION TANK
 - PROPOSED TRACK DRAINAGE
 - LOW VOLTAGE/TELECOMMUNICATIONS/SIGNALLING CABINETS
 - PROPOSED TANGENT POINT
 - FOULING POINT
 - LLB LAST LONG BEARER
 - MILEPOST
- LONGITUDINAL PROFILE**
- PROPOSED VERTICAL ALIGNMENT
 - PROJECTED PROPOSED DOWN FAST VERTICAL ALIGNMENT
 - EXISTING VERTICAL ALIGNMENT
 - EXISTING GROUND
 - PROPOSED TANGENT POINT
 - LLB LAST LONG BEARER



- NOTES**
- CHAINAGES, LEVELS AND COORDINATES ARE SHOWN IN METRES. ALL OTHER DIMENSIONS ARE SHOWN IN MILLIMETRES, UNLESS OTHERWISE STATED. ALL CLEARANCE AND SIX-FOOT INTERVALS ARE QUOTED TO RUNNING EDGES (RE).
 - THIS DESIGN IS BASED UPON A TOPOGRAPHICAL SURVEY DATED SEPTEMBER 2021, COMPLETED BY MURPHY GEOSPATIAL LTD.
 - CHAINAGE DATUM 9+906.707 IS LOCATED IN THE DOWN SLOW LINE AT 1 MILEPOST (CORK LINE), DOWN LINE CHAINAGE DATUM IS SHOWN ON THIS DRAWING.
 - NEGATIVE SLUES ARE TO THE LEFT, POSITIVE SLUES ARE TO THE RIGHT. CANT SHOWN AS POSITIVE THROUGHOUT, EXCEPT WHERE ADVERSE TO THE DIRECTION OF CURVATURE, ALL IN THE DIRECTION OF INCREASING CHAINAGE.
 - TRACK GAUGE TO BE NOMINAL 1602MM FOR PLAIN LINE AND 1600MM FOR P&C.
 - RADI QUOTED ARE FROM TRACK CENTRELINE, UNLESS OTHERWISE STATED.
 - RAIL LEVELS ARE QUOTED FOR THE LOW RAIL.
 - REFER TO INDIVIDUAL ENGINEERING DISCIPLINES' DESIGN SUBMISSION FOR THEIR RESPECTIVE DETAILS. SEE BIM MODELS FOR INTEGRATION.
 - VERTICAL PROFILE IS SHOWN FOR THE DOWN SLOW. DATA OF THE EXISTING TRACK IS REFERRED TO DOWN SLOW.
 - DOWN FAST TRACK LONGITUDINAL PROFILE INCLUDED IN DRAWING NUMBER DP-04-23-DWG-RO-TTA-18970-V01-S3

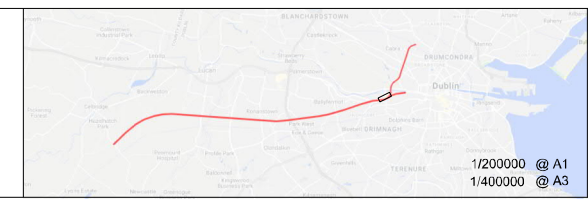
Chainage	Existing Level (m)	Proposed Level (m)	Horizontal Slue (m)	Lift (+) / Lower (-) (m)	Horizontal Alignment (m)	Vertical Alignment (m)	Cant Proposed (mm)	Cant Alignment / Speed
9+700	14.736	12.707	-4.175	-2.029	R=2503.602 L=147.795	L=449.222 G=1.674%	40	C=40mm D=23mm V=110km/h
9+650	14.595	12.540	-4.228	-2.065	TL=40.000		40	RoCC=11mm/s RoCD=2mm/s CG=1in 1000 V=40km/h
9+600	14.452	12.372	-4.285	-2.080			40	C=0mm D=30mm V=40km/h
9+550	14.311	12.205	-4.367	-2.113			40	RoCC=0mm/s RoCD=24mm/s CG=1in 6 V=40km/h
9+500	14.171	12.038	-4.418	-2.134			40	C=0mm D=0mm V=40km/h
9+450	14.029	11.870	-4.457	-2.159			40	RoCC=0mm/s RoCD=59mm/s CG=1in 6 V=40km/h
9+400	13.890	11.703	-4.491	-2.187			40	C=0mm D=75mm V=40km/h
9+350	13.750	11.535	-4.523	-2.221			40	C=0mm D=59mm V=40km/h
9+300	13.617	11.368	-4.549	-2.249			40	C=0mm D=59mm V=40km/h
9+250	13.480	11.201	-4.573	-2.279			40	C=0mm D=59mm V=40km/h
9+200	13.346	11.033	-4.596	-2.313			40	C=0mm D=59mm V=40km/h
9+150	13.197	10.866	-4.621	-2.331			40	C=0mm D=59mm V=40km/h
9+100	13.046	10.699	-4.641	-2.348			40	C=0mm D=59mm V=40km/h

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All elevations are in metres and relate to OSI Geoid Model (OSGM02) Mean Head as defined by existing Project Control.

All Co-ordinates are in Irish Transverse Mercator Grid (ITM) as defined by OSI active GPS station Tallaght College (TLLG).



DART+ South West

NTA National Transport Authority

2040

Rev	Date	Drn	Chkd	App'd	Description
v01	23/11/22	CDM	JYM	PR	PLANNING ISSUE

Client
Iarnród Éireann
Irish Rail

Engineering Designer
TYPASA
ATKINS
Member of the SNC-Lavalin Group

Supported by
RPS

Project Title
DART + SOUTH WEST

Drawing Title
TRACK PLAN LAYOUT AND LONGITUDINAL PROFILE
FROM CH 9+100 TO CH 9+700

Date
23/11/2022

Scale
AS SHOWN @ A1 @ A3

Drawn
CDM

Checked
JYM

Approved
PR

Project Code
5199586

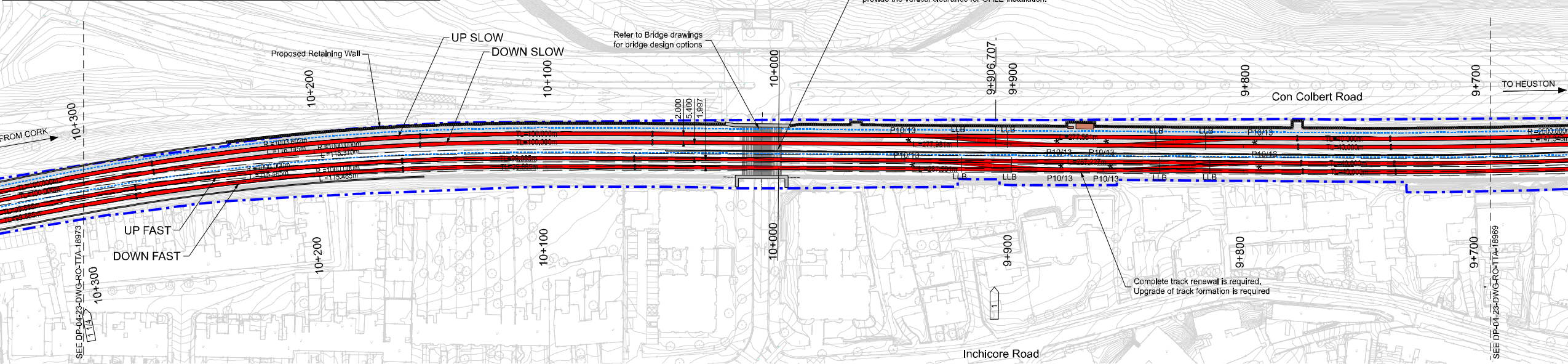
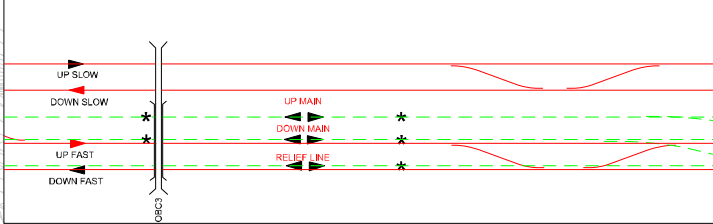
Issuer
TTA

QMS Code

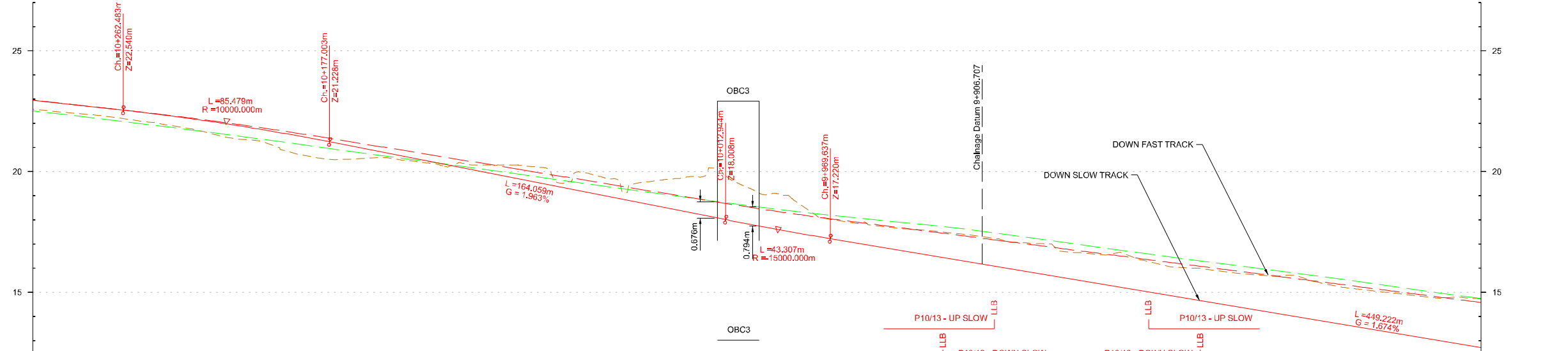
Drawing File Name	DP-04-23-DWG-RO-TTA-18969	Version	v01	Status	S3
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DO NOT SCALE USE FIGURED DIMENSIONS ONLY

PROPOSED TRACK LAYOUT - NOT TO SCALE



PLAN Scale 1:1000



PROFILE Scale H=1:1000 V=1:100

Chainage	Existing Level (m)	Proposed Level (m)	Horizontal Slue (m)	Lift (+) / Lower (-) (m)	Horizontal Alignment (m)	Vertical Alignment (m)	Cant Proposed (mm)	Cant Alignment / Speed
10+300	22.903	22.955	-1.351	0.452	TL=100.000	L=545.807 G=1.108%	66	RoCC=29mm/s RoCD=19mm/s CG=11n1053 V=110km/h
10+250	22.392	22.845	-0.934	0.463	R=1000.000 L=115.370	L=85.479 R=10000.000	76	C=95mm Ø=64mm V=110km/h
10+200	22.276	22.734	-0.513	0.465		L=164.059 G=1.963%	85	RoCC=29mm/s RoCD=19mm/s CG=11n1053 V=110km/h
10+150	22.162	22.623	-0.088	0.461		L=43.307 R=15000.000	95	
10+100	22.042	22.512	0.327	0.470			95	
10+050	21.920	22.394	0.737	0.473			95	
10+000	21.800	22.266	1.196	0.466			95	
9+950	21.667	22.127	1.566	0.460			81	
9+900	21.540	21.979	1.956	0.459			72	
9+850	21.405	21.821	2.303	0.416			62	
9+800	21.270	21.653	2.692	0.383			53	
9+750	21.130	21.474	2.876	0.344			43	
9+700	20.987	21.286	3.129	0.289			34	
9+650	20.849	21.090	3.355	0.241			24	
9+600	20.716	20.894	3.545	0.176			15	
9+550	20.587	20.698	3.697	0.110			5	
9+500	20.457	20.504	3.820	0.044			0	
9+450	20.323	20.305	3.907	-0.018			0	
9+400	20.186	20.109	3.978	-0.079			0	
9+350	20.046	19.913	4.011	-0.134			0	
9+300	19.904	19.716	4.042	-0.188			0	
9+250	19.766	19.520	4.04	-0.246			0	
9+200	19.630	19.324	4.038	-0.306			0	
9+150	19.494	19.128	4.024	-0.367			0	
9+100	19.356	18.931	4.012	-0.425			0	
9+050	19.216	18.735	4.001	-0.481			0	
9+000	19.082	18.539	3.998	-0.543			0	
8+950	18.949	18.342	3.997	-0.606			0	
8+900	18.802	18.146	3.996	-0.665			0	
8+850	18.677	17.950	4.004	-0.721			0	
8+800	18.547	17.759	4.013	-0.788			0	
8+750	18.423	17.575	4.020	-0.848			0	
8+700	18.305	17.397	4.020	-0.911			0	
8+650	18.186	17.226	4.023	-0.972			0	
8+600	18.063	17.059	4.028	-1.034			0	
8+550	17.943	16.892	4.024	-1.101			0	
8+500	17.827	16.724	4.020	-1.172			0	
8+450	17.705	16.557	4.019	-1.248			0	
8+400	17.589	16.389	4.018	-1.300			0	
8+350	17.469	16.222	4.016	-1.347			0	
8+300	17.350	16.055	4.011	-1.388			0	
8+250	17.230	15.887	4.008	-1.418			0	
8+200	17.107	15.720	4.005	-1.447			0	
8+150	16.990	15.553	4.001	-1.477			0	
8+100	16.880	15.385	3.994	-1.505			0	
8+050	16.752	15.216	3.990	-1.534			0	
8+000	16.615	15.050	3.987	-1.565			0	
7+950	16.476	14.883	3.986	-1.595			0	
7+900	16.342	14.716	3.985	-1.626			0	
7+850	16.216	14.548	3.988	-1.668			0	
7+800	16.090	14.381	3.991	-1.709			0	
7+750	15.964	14.214	3.995	-1.751			0	
7+700	15.833	14.046	3.997	-1.787			0	
7+650	15.700	13.879	3.997	-1.821			0	
7+600	15.566	13.711	3.998	-1.855			0	
7+550	15.425	13.544	4.003	-1.884			0	
7+500	15.289	13.377	4.015	-1.913			0	
7+450	15.151	13.209	4.040	-1.942			0	
7+400	15.014	13.042	4.070	-1.972			0	
7+350	14.875	12.874	4.125	-2.001			0	
7+300	14.745	12.707	4.175	-2.029			0	

- LEGEND:
- PROPOSED TRACK LAYOUT
- RENEWED TRACK / SLUED TRACK
 - EXISTING TRACK TO BE RETAINED
 - EXISTING TRACK TO BE REMOVED
- PLAN
- RENEWED TRACK / SLUED TRACK
 - EXISTING TRACK TO BE RETAINED (MAIN LINES)
 - EXISTING TRACK TO BE RETAINED (NOT MAIN LINES)
 - EXISTING TRACK TO BE REMOVED
 - IE PROPERTY BOUNDARY
 - PROPOSED RETAINING WALL
- P8/8 TYPE OF TURNOUT
- ATTENUATION TANK
 - PROPOSED TRACK DRAINAGE
 - LOW VOLTAGE/TELECOMMUNICATIONS/SIGNALLING CABINETS
 - PROPOSED TANGENT POINT
 - FOULING POINT
 - LAST LONG BEARER
 - MILEPOST
- LONGITUDINAL PROFILE
- PROPOSED VERTICAL ALIGNMENT
 - PROJECTED PROPOSED DOWN FAST VERTICAL ALIGNMENT
 - EXISTING VERTICAL ALIGNMENT
 - EXISTING GROUND
 - PROPOSED TANGENT POINT
 - LAST LONG BEARER

- NOTES
- CHAINAGES, LEVELS AND COORDINATES ARE SHOWN IN METRES. ALL OTHER DIMENSIONS ARE SHOWN IN MILLIMETRES, UNLESS OTHERWISE STATED. ALL CLEARANCE AND SIX-FOOT INTERVALS ARE QUOTED TO RUNNING EDGES (RE).
 - THIS DESIGN IS BASED UPON A TOPOGRAPHICAL SURVEY DATED SEPTEMBER 2021, COMPLETED BY MURPHY GEOSPATIAL LTD.
 - CHAINAGE DATUM 9+906.707 IS LOCATED IN THE DOWN SLOW LINE AT 1 MILEPOST (CORK LINE). DOWN LINE CHAINAGE DATUM IS SHOWN ON THIS DRAWING.
 - NEGATIVE SLUES ARE TO THE LEFT, POSITIVE SLUES ARE TO THE RIGHT. CANT SHOWN AS POSITIVE THROUGHOUT, EXCEPT WHERE ADVERSE TO THE DIRECTION OF CURVATURE. ALL IN THE DIRECTION OF INCREASING CHAINAGE.
 - TRACK GAUGE TO BE NOMINAL 1602MM FOR PLAIN LINE AND 1600MM FOR P&C.
 - RADII QUOTED ARE FROM TRACK CENTRELINE, UNLESS OTHERWISE STATED.
 - RAIL LEVELS ARE QUOTED FOR THE LOW RAIL.
 - REFER TO INDIVIDUAL ENGINEERING DISCIPLINES' DESIGN SUBMISSION FOR THEIR RESPECTIVE DETAILS. SEE BIM MODELS FOR INTEGRATION.
 - VERTICAL PROFILE IS SHOWN FOR THE DOWN SLOW. DATA OF THE EXISTING TRACK IS REFERRED TO DOWN SLOW.
 - DOWN FAST TRACK LONGITUDINAL PROFILE INCLUDED IN DRAWING NUMBER DP-04-23-DWG-RO-TTA-18972-V01-S03

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DART+ South West

NTA National Transport Authority

2040

Rev	Date	Drn	Chkd	App'd	Description
v01	23/11/22	CDM	JYM	PR	PLANNING ISSUE

Client: **Iarnród Éireann Irish Rail**

Engineering Designer: **TYPASA**, **ATKINS**, **rps**

Project Title: **DART + SOUTH WEST**

Drawing Title: **TRACK PLAN LAYOUT AND LONGITUDINAL PROFILE FROM Ch 9+700 TO Ch 10+300**

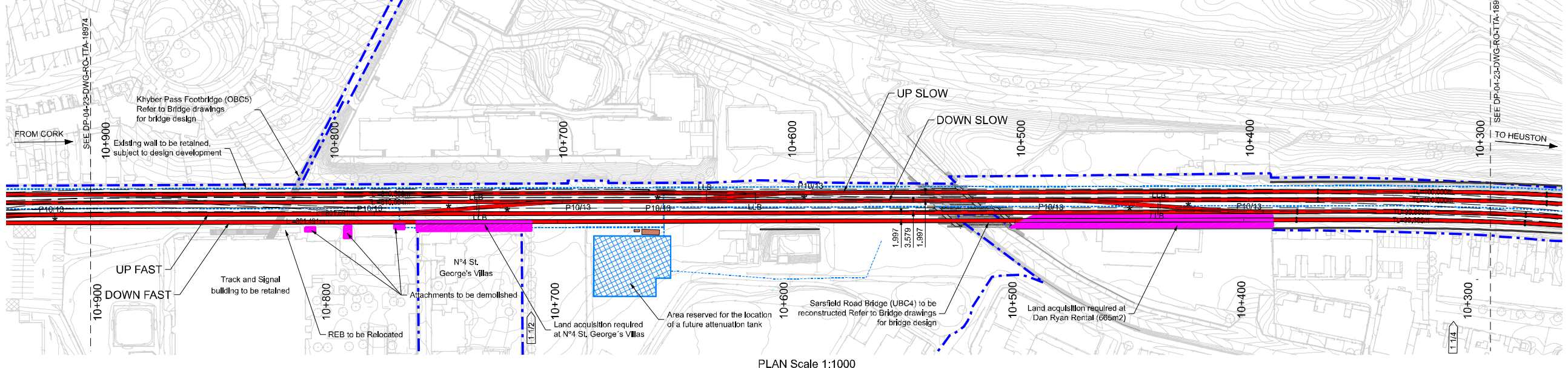
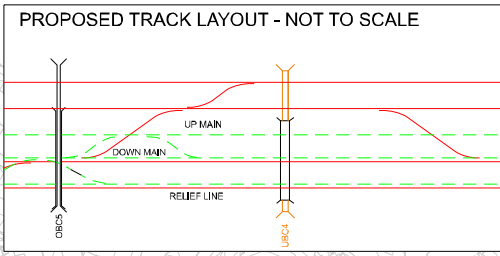
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Date: 23/11/2022 | Scale: AS SHOWN @ A1, @ A3 | Drawn: CDM | Checked: JYM | Approved: PR

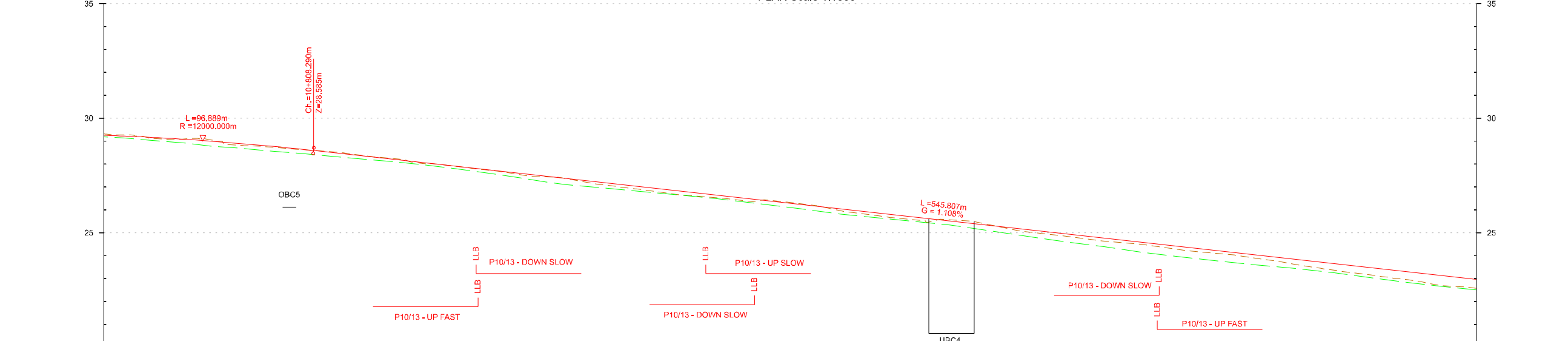
Project Code: 5199586 | Issuer: TTA | OMS Code: CDM

Version: v01 | Status: S3

DO NOT SCALE USE FIGURED DIMENSIONS ONLY



- LEGEND:**
- PROPOSED TRACK LAYOUT**
- RENEWED TRACK / SLUED TRACK
 - EXISTING TRACK TO BE RETAINED
 - EXISTING TRACK TO BE REMOVED
- PLAN**
- RENEWED TRACK / SLUED TRACK
 - EXISTING TRACK TO BE RETAINED (MAIN LINES)
 - EXISTING TRACK TO BE RETAINED (NOT MAIN LINES)
 - EXISTING TRACK TO BE REMOVED
 - IE PROPERTY BOUNDARY
 - PROPOSED RETAINING WALL
 - P8/8 TYPE OF TURNOUT
 - ATTENUATION TANK
 - PROPOSED TRACK DRAINAGE
 - LOW VOLTAGE/TELECOMMUNICATIONS/SIGNALLING CABINETS
 - PROPOSED TANGENT POINT
 - FOULING POINT
 - LAST LONG BEARER
 - MILEPOST
- LONGITUDINAL PROFILE**
- PROPOSED VERTICAL ALIGNMENT
 - EXISTING VERTICAL ALIGNMENT
 - EXISTING GROUND
 - PROPOSED TANGENT POINT
 - LAST LONG BEARER



Chainage	Existing Level (m)	Proposed Level (m)	Horizontal Slue (m)	Lift (+) / Lower (-) (m)	Horizontal Alignment (m)	Vertical Alignment (m)	Cant Proposed (mm)	Cant Alignment / Speed
10+900	29.188	29.256	-4.837	0.063	STR L=910.664	L=96.889 R=12000.000	0	C=0mm D=0mm V=110km/h
10+850	29.125	29.212	-4.946	0.087				
10+800	28.945	29.165	-5.018	0.120				
10+750	28.756	29.110	-5.048	0.152				
10+700	28.562	29.046	-5.060	0.187				
10+650	28.374	28.974	-5.047	0.217				
10+600	28.176	28.894	-5.024	0.216				
10+550	27.974	28.806	-5.000	0.214				
10+500	27.769	28.709	-4.974	0.200				
10+450	27.562	28.604	-4.947	0.179				
10+400	27.355	28.493	-4.914	0.158	TL=100.000	L=545.807 G=1.108%	0	
10+350	27.148	28.382	-4.883	0.137				
10+300	26.941	28.272	-4.851	0.112				
10+250	26.734	28.161	-4.813	0.083				
10+200	26.527	28.050	-4.764	0.088				
10+150	26.320	27.939	-4.725	0.100				
10+100	26.113	27.828	-4.684	0.121				
10+50	25.906	27.718	-4.667	0.149				
10+0	25.699	27.607	-4.649	0.184				
10+300	25.492	27.496	-4.628	0.230				
10+250	25.285	27.386	-4.551	0.260				
10+200	25.078	27.275	-4.531	0.248				
10+150	24.871	27.164	-4.514	0.228				
10+100	24.664	27.053	-4.490	0.209				
10+50	24.457	26.943	-4.467	0.190				
10+0	24.250	26.832	-4.445	0.170				
10+300	24.043	26.721	-4.428	0.156				
10+250	23.836	26.610	-4.414	0.152				
10+200	23.629	26.500	-4.400	0.160				
10+150	23.422	26.389	-4.385	0.167				
10+100	23.215	26.278	-4.367	0.181				
10+50	23.008	26.167	-4.349	0.189				
10+0	22.801	26.057	-4.333	0.220				
10+300	22.594	25.946	-4.320	0.210				
10+250	22.387	25.835	-4.309	0.195				
10+200	22.180	25.724	-4.288	0.188				
10+150	21.973	25.614	-4.269	0.179				
10+100	21.766	25.503	-4.284	0.166				
10+50	21.559	25.392	-4.275	0.201				
10+0	21.352	25.281	-4.265	0.235				
10+300	21.145	25.170	-4.246	0.269				
10+250	20.938	25.060	-4.229	0.303				
10+200	20.731	24.949	-4.205	0.340				
10+150	20.524	24.838	-4.184	0.360				
10+100	20.317	24.727	-4.186	0.381				
10+50	20.110	24.617	-4.181	0.411				
10+0	19.903	24.506	-4.171	0.428				
10+300	19.696	24.395	-4.158	0.438				
10+250	19.489	24.284	-4.130	0.439				
10+200	19.282	24.174	-4.088	0.437				
10+150	19.075	24.063	-4.027	0.432				
10+100	18.868	23.952	-3.925	0.416				
10+50	18.661	23.841	-3.807	0.398				
10+0	18.454	23.731	-3.816	0.396				
10+300	18.247	23.620	-3.405	0.399				
10+250	18.040	23.509	-3.140	0.420				
10+200	17.833	23.398	-2.837	0.441				
10+150	17.626	23.288	-2.508	0.462				
10+100	17.419	23.177	-2.133	0.460				
10+50	17.212	23.066	-1.747	0.457				
10+0	17.005	22.955	-1.351	0.452				

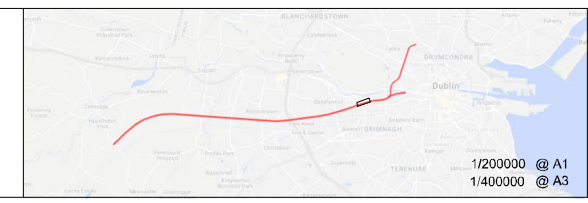
- NOTES**
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 - THIS DESIGN IS BASED UPON A TOPOGRAPHICAL SURVEY DATED SEPTEMBER 2021, COMPLETED BY MURPHY GEOSPATIAL LTD.
 - CHAINAGE DATUM 9+906.707 IS LOCATED IN THE DOWN SLOW LINE AT 1 MILEPOST (CORK LINE). DOWN LINE CHAINAGE DATUM IS SHOWN ON THIS DRAWING.
 - NEGATIVE SLUES ARE TO THE LEFT. POSITIVE SLUES ARE TO THE RIGHT. CANT SHOWN AS POSITIVE THROUGHOUT, EXCEPT WHERE ADVERSE TO THE DIRECTION OF CURVATURE. ALL IN THE DIRECTION OF INCREASING CHAINAGE.
 - TRACK GAUGE TO BE NOMINAL 1602MM FOR PLAIN LINE AND 1600MM FOR P&C.
 - RADII QUOTED ARE FROM TRACK CENTRELINE, UNLESS OTHERWISE STATED.
 - RAIL LEVELS ARE QUOTED FOR THE LOW RAIL.
 - REFER TO INDIVIDUAL ENGINEERING DISCIPLINES' DESIGN SUBMISSION FOR THEIR RESPECTIVE DETAILS. SEE BIM MODELS FOR INTEGRATION.
 - VERTICAL PROFILE IS SHOWN FOR THE DOWN SLOW. DATA OF THE EXISTING TRACK IS REFERRED TO DOWN SLOW.

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All elevations are in metres and relate to OSi Geoid Model (OSGM02) Mean Head as defined by existing Project Control.

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Rev	Date	Drn	Chkd	App'd	Description
v01	23/11/22	CDM	JYM	PR	PLANNING ISSUE

Client
Iarnród Éireann
Irish Rail

Engineering Designer
TYPASA
ATKINS
Supported by: rps

Project Title
DART + SOUTH WEST

Drawing Title
TRACK PLAN LAYOUT AND LONGITUDINAL PROFILE
FROM Ch 10+300 TO Ch 10+900

Drawing File Name
DP-04-23-DWG-RO-TTA-18973

Date
23/11/2022

Scale
AS SHOWN @ A1
@ A3

Drawn
CDM

Checked
JYM

Approved
PR

Project Code
5199586

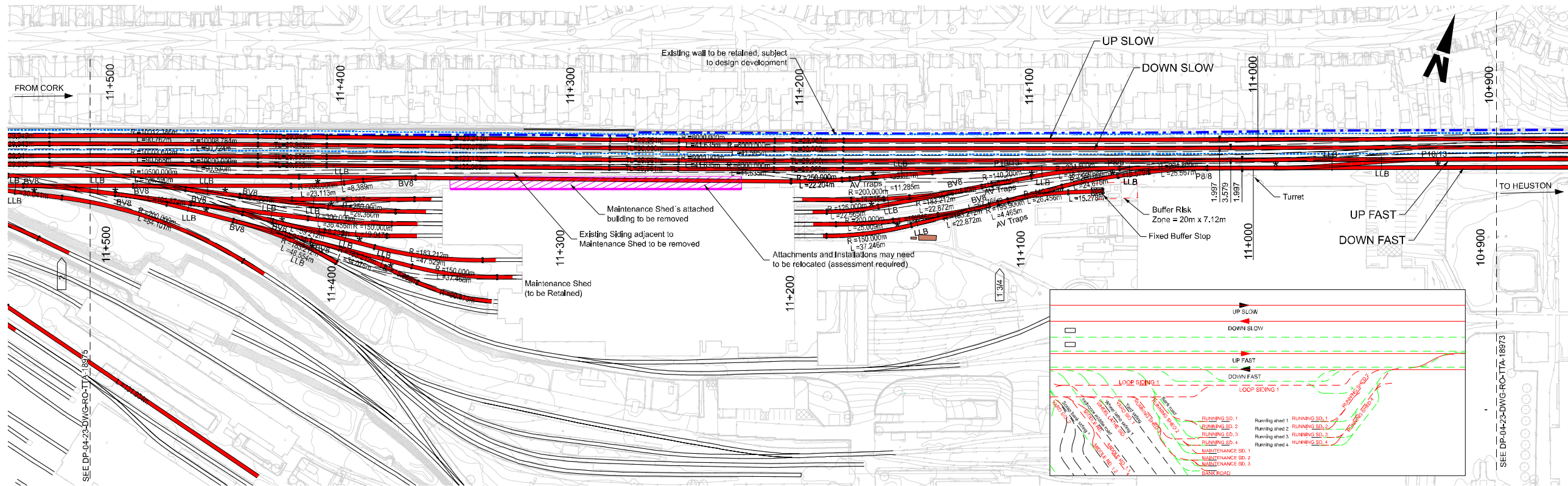
Issuer
TTA

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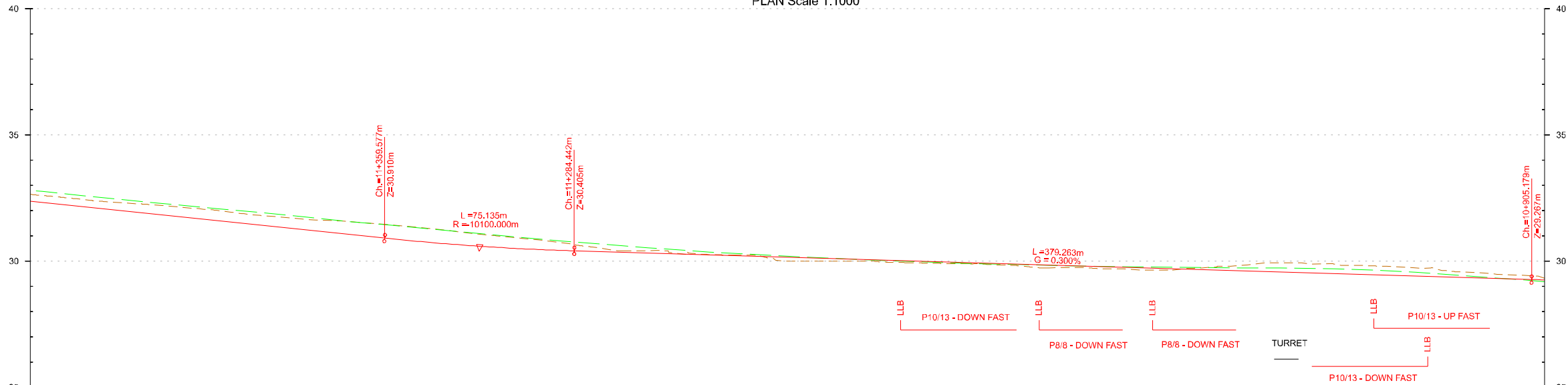
Version
v01

Status
S3

DO NOT SCALE USE FIGURED DIMENSIONS ONLY



PLAN Scale 1:1000



PROFILE Scale H=1:1000 V=1:100

Chainage	Existing Level (m)	Proposed Level (m)	Horizontal Slue (m)	Lift (+) / Lower (-) (m)	Horizontal Alignment (m)	Vertical Alignment (m)	Cant Proposed (mm)	Cant Alignment / Speed
11+500	32.803	32.376	1.299	-0.427	R=10008.784 L=90.724	L=571.583 G=1.044%	0	C=0mm D=16mm V=110km/h
11+450	32.116	31.645	0.789	-0.473	TL=29.943		0	RoCC=0mm/s RoCD=16mm/s CG=110 V=110km/h
11+400	31.733	31.228	0.331	-0.506			0	C=0mm D=0mm V=110km/h
11+350	31.351	30.815	-0.130	-0.536			0	
11+300	30.980	30.464	-0.753	-0.427			0	
11+250	30.607	30.192	-0.874	-0.383	TL=30.000		0	RoCC=0mm/s RoCD=27mm/s CG=110 V=110km/h
11+200	30.234	29.724	-1.108	-0.281	R=6000.000 L=41.595		0	C=0mm D=26mm V=110km/h
11+150	29.861	29.351	-1.440	-0.115			0	RoCC=0mm/s RoCD=27mm/s CG=110 V=110km/h
11+100	29.488	28.978	-1.787	0.021			0	
11+050	29.115	28.605	-2.125	0.020			0	
11+000	28.742	28.232	-2.460	0.011			0	
10+950	28.369	27.859	-2.799	0.006	STR L=610.664	L=379.263 G=0.300%	0	C=0mm D=0mm V=110km/h
10+900	27.996	27.486	-3.139	-0.072			0	

- LEGEND:**
- PROPOSED TRACK LAYOUT**
- RENEWED TRACK / SLUED TRACK
 - EXISTING TRACK TO BE RETAINED
 - EXISTING TRACK TO BE REMOVED
- PLAN**
- RENEWED TRACK / SLUED TRACK
 - EXISTING TRACK TO BE RETAINED (MAIN LINES)
 - EXISTING TRACK TO BE RETAINED (NOT MAIN LINES)
 - EXISTING TRACK TO BE REMOVED
 - IE PROPERTY BOUNDARY
 - PROPOSED RETAINING WALL
 - P8/8 TYPE OF TURNOUT
 - ATTENUATION TANK
 - PROPOSED TRACK DRAINAGE
 - LOW VOLTAGE/TELECOMMUNICATIONS/SIGNALLING CABINETS
 - PROPOSED TANGENT POINT
 - FOULING POINT
 - LLB LAST LONG BEARER
 - MILEPOST
- LONGITUDINAL PROFILE**
- PROPOSED VERTICAL ALIGNMENT
 - EXISTING VERTICAL ALIGNMENT
 - EXISTING GROUND
 - PROPOSED TANGENT POINT
 - LLB LAST LONG BEARER

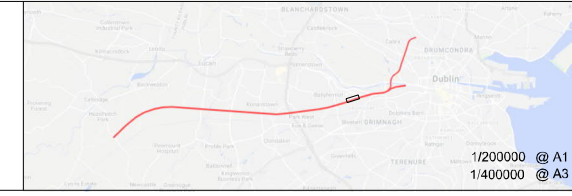
- NOTES**
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 - RAIL LEVELS ARE QUOTED FOR THE LOW RAIL.
 - REFER TO INDIVIDUAL ENGINEERING DISCIPLINES' DESIGN SUBMISSION FOR THEIR RESPECTIVE DETAILS. SEE BIM MODELS FOR INTEGRATION.
 - VERTICAL PROFILE IS SHOWN FOR THE DOWN SLOW. DATA OF THE EXISTING TRACK IS REFERRED TO DOWN SLOW.

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All Co-ordinates are in Irish Transverse Mercator Grid (ITM) as defined by OSi active GPS station Tallaght College (TLLG).



Rev	Date	Drn	Chkd	App'd	Description
v01	23/11/22	CDM	JYM	PR	PLANNING ISSUE

Client
Iarnród Éireann
Irish Rail

Engineering Designer
TYPASA
ATKINS
Supported by: rps

Date 23/11/2022
Scale AS SHOWN @ A1 @ A3
Project Code 5199586
Issuer TTA

Drawn CDM
Checked JYM
Approved PR

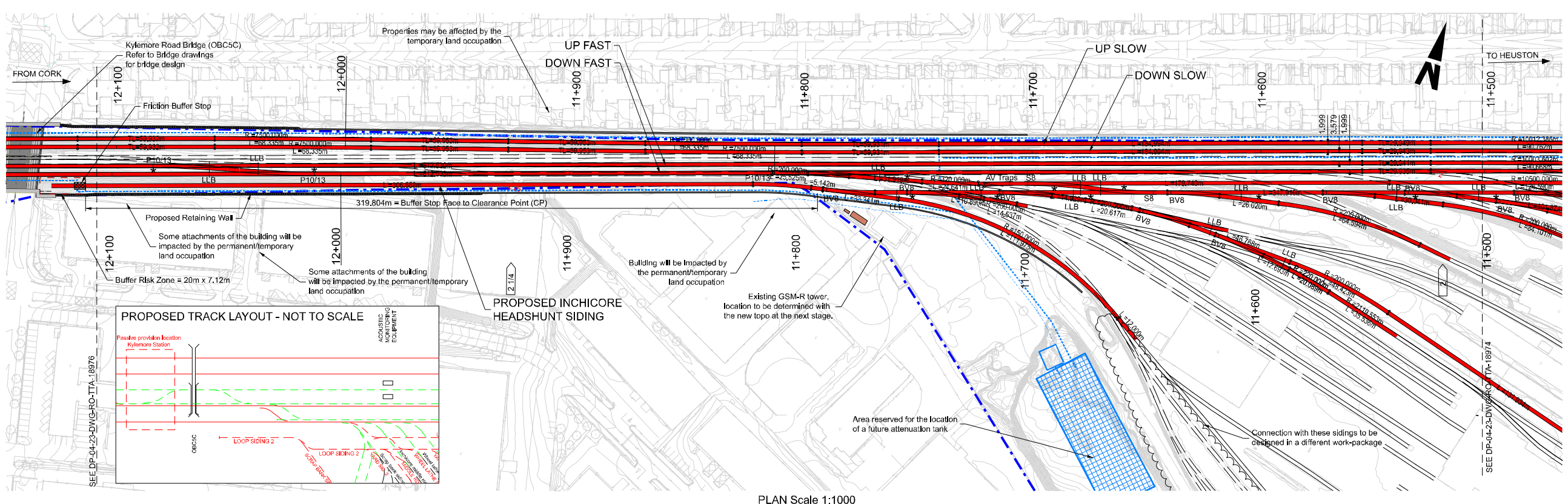
Project Title
DART + SOUTH WEST

Drawing Title
TRACK PLAN LAYOUT AND LONGITUDINAL PROFILE
FROM Ch 10+900 TO Ch 11+500

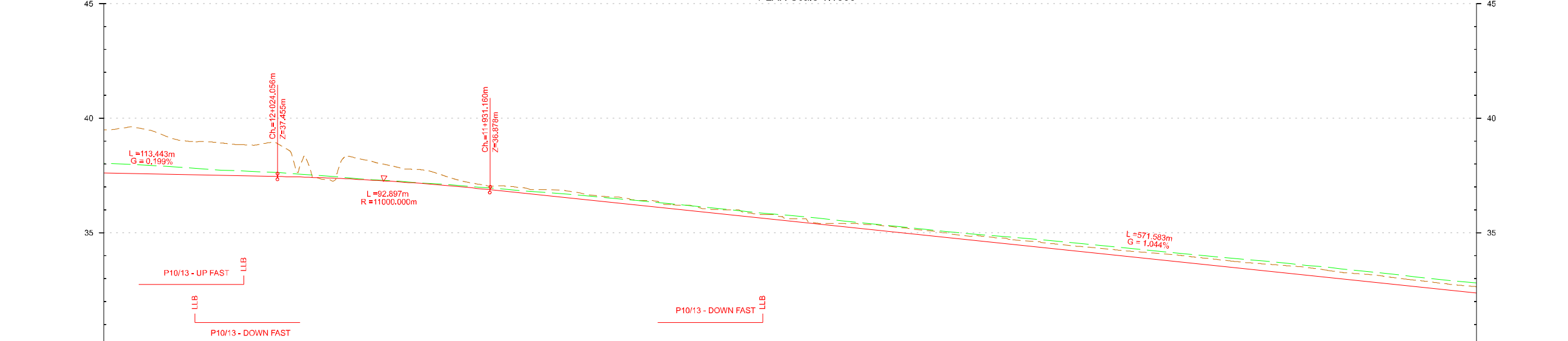
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Version v01
Status S3

DO NOT SCALE USE FIGURED DIMENSIONS ONLY



PLAN Scale 1:1000



PROFILE Scale H=1:1000 V=1:100

Chainage	12+100	12+050	12+000	11+950	11+900	11+850	11+800	11+750	11+700	11+650	11+600	11+550	11+500	
Existing Level (m)	38.028	37.980	37.940	37.885	37.814	37.745	37.697	37.652	37.598	37.530	37.449	37.368	37.283	
Proposed Level (m)	37.607	37.567	37.567	37.547	37.527	37.507	37.487	37.467	37.447	37.427	37.407	37.387	37.367	
Horizontal Slue (m)	-4.593	-4.593	-4.576	-4.566	-4.549	-4.512	-4.461	-4.393	-4.311	-4.216	-4.105	-3.978	-3.838	
Lift (+) / Lower (-) (m)	-0.422	-0.402	-0.373	-0.336	-0.287	-0.238	-0.210	-0.185	-0.162	-0.142	-0.126	-0.109	-0.089	
Horizontal Alignment (m)	TL=59.932 R=7500.000 L=68.335			TL=59.953 R=7500.000 L=68.335			TL=59.931 R=7500.000 L=68.335			STR L=184.994			TL=29.943 R=10008.784 L=90.724	
Vertical Alignment (m)	L=113.443 G=0.199%			L=92.897 R=11000.000			L=571.583 G=1.044%							
Cant Proposed (mm)	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cant Alignment / Speed	RoCC=0mm/s RoCD=11mm/s CG=110 V=110km/h			C=0mm D=21mm V=110km/h			RoCC=0mm/s RoCD=11mm/s CG=110 V=110km/h			C=0mm D=21mm V=110km/h			RoCC=0mm/s RoCD=11mm/s CG=110 V=110km/h	

LEGEND:

PROPOSED TRACK LAYOUT

- RENEWED TRACK / SLUED TRACK
- EXISTING TRACK TO BE RETAINED
- EXISTING TRACK TO BE REMOVED

PLAN

- RENEWED TRACK / SLUED TRACK
- EXISTING TRACK TO BE RETAINED (MAIN LINES)
- EXISTING TRACK TO BE RETAINED (NOT MAIN LINES)
- EXISTING TRACK TO BE REMOVED
- IE PROPERTY BOUNDARY
- PROPOSED RETAINING WALL
- P8/8 TYPE OF TURNOUT
- ATTENUATION TANK
- PROPOSED TRACK DRAINAGE
- LOW VOLTAGE/TELECOMMUNICATIONS/SIGNALLING CABINETS
- PROPOSED TANGENT POINT
- FOULING POINT
- LAST LONG BEARER
- MILEPOST

LONGITUDINAL PROFILE

- PROPOSED VERTICAL ALIGNMENT
- EXISTING VERTICAL ALIGNMENT
- EXISTING GROUND
- PROPOSED TANGENT POINT
- LAST LONG BEARER

- NOTES**
- CHAINAGES, LEVELS AND COORDINATES ARE SHOWN IN METRES. ALL OTHER DIMENSIONS ARE SHOWN IN MILLIMETRES, UNLESS OTHERWISE STATED. ALL CLEARANCE AND SIX-FOOT INTERVALS ARE QUOTED TO RUNNING EDGES (RE).
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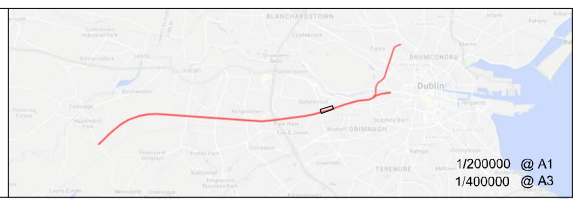
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Rev	Date	Drn	Chkd	App'd	Description
v01	23/11/22	CDM	JYM	PR	PLANNING ISSUE

Client

Engineering Designer

Project Title

DART + SOUTH WEST

Drawing Title

TRACK PLAN LAYOUT AND LONGITUDINAL PROFILE
FROM Ch 11+500 TO Ch 12+100

Drawing File Name

DP-04-23-DWG-RO-TTA-18975

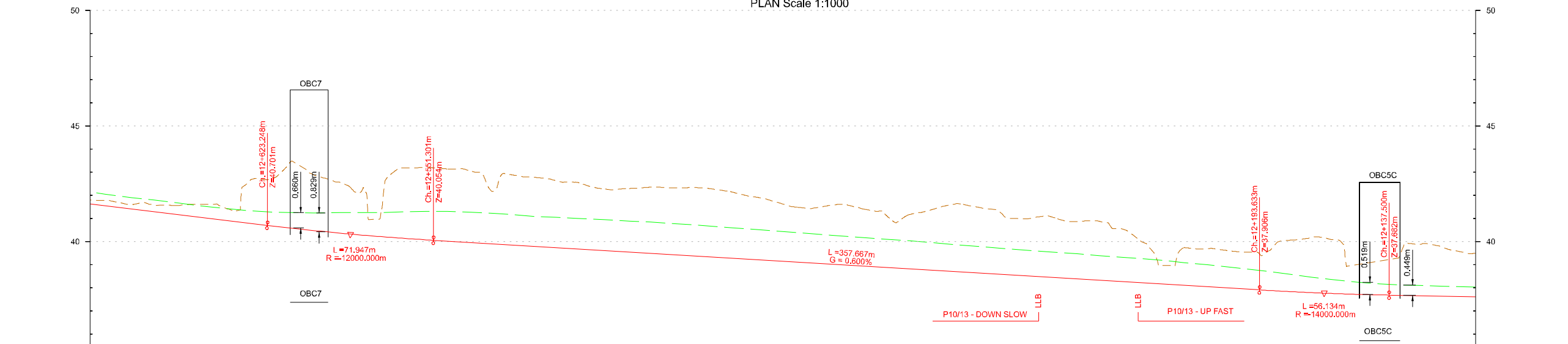
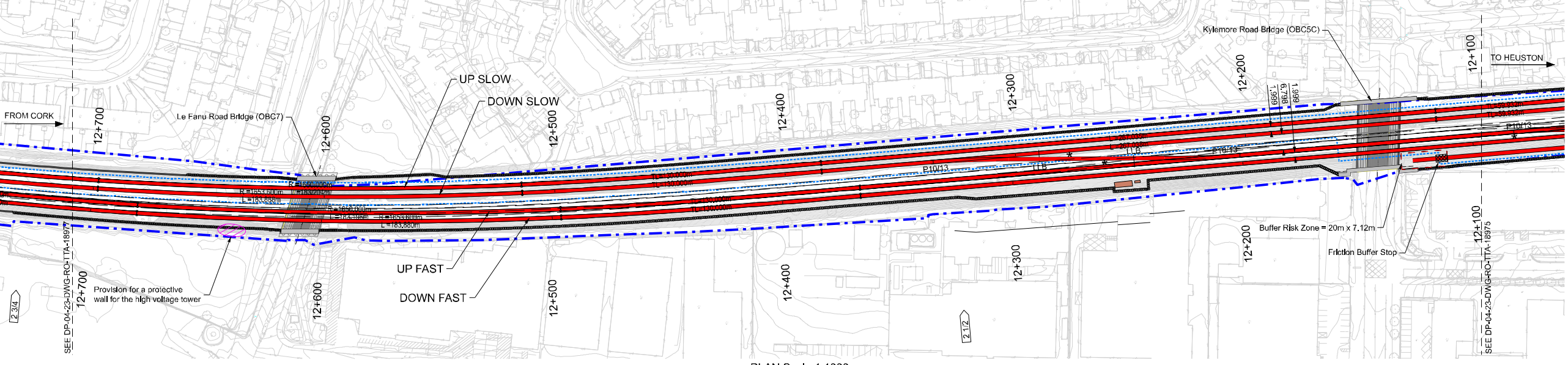
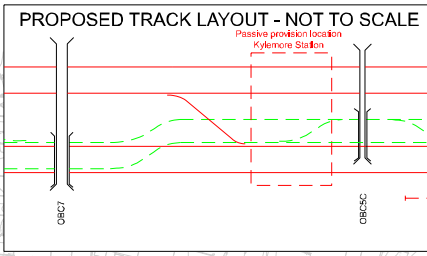
Version

v01

Status

S3

DO NOT SCALE USE FIGURED DIMENSIONS ONLY



Chainage	Existing Level (m)	Proposed Level (m)	Horizontal Slue (m)	Lift (+) / Lower (-) (m)	Horizontal Alignment (m)	Vertical Alignment (m)	Cant Proposed (mm)	Cant Alignment / Speed
12+700	42.145	41.622	3.702	-0.522	R=1653.600 L=183.888	L=205.317 G=1.200%	59	C=50mm D=36mm V=110km/h
12+750	42.004	41.502	3.754	-0.502			TL=130.000	
12+800	41.875	41.382	3.809	-0.485	STRI=267.038	L=71.947 R=12000.000		60
12+850	41.760	41.262	3.870	-0.488			TL=59.932	60
12+900	41.640	41.142	3.932	-0.487	TL=59.932	60		60
12+950	41.523	41.022	4.004	-0.501		60	60	60
12+1000	41.414	40.902	4.073	-0.511	60	60	60	
12+1050	41.325	40.782	4.147	-0.543	60	60	60	
12+1100	41.269	40.663	4.217	-0.606	60	60	60	
12+1150	41.242	40.590	4.291	-0.692	60	60	60	
12+1200	41.239	40.445	4.348	-0.794	60	60	60	
12+1250	41.249	40.348	4.390	-0.901	60	60	60	
12+1300	41.251	40.280	4.418	-0.980	60	60	60	
12+1350	41.266	40.180	4.422	-1.088	60	60	60	
12+1400	41.289	40.109	4.430	-1.182	60	60	60	
12+1450	41.301	40.046	4.432	-1.255	60	60	60	
12+1500	41.307	39.986	4.440	-1.300	60	60	60	
12+1550	41.285	39.926	4.450	-1.319	60	60	60	
12+1600	41.184	39.886	4.448	-1.319	60	60	60	
12+1650	41.109	39.806	4.455	-1.303	60	60	60	
12+1700	41.051	39.746	4.455	-1.305	60	60	60	
12+1750	41.001	39.686	4.473	-1.316	60	60	60	
12+1800	40.953	39.626	4.494	-1.328	60	60	60	
12+1850	40.906	39.565	4.512	-1.341	60	60	60	
12+1900	40.853	39.505	4.538	-1.348	60	60	60	
12+1950	40.795	39.445	4.571	-1.349	60	60	60	
12+2000	40.729	39.385	4.586	-1.344	60	60	60	
12+2050	40.662	39.325	4.614	-1.337	60	60	60	
12+2100	40.585	39.265	4.646	-1.319	60	60	60	
12+2150	40.509	39.205	4.688	-1.304	60	60	60	
12+2200	40.429	39.145	4.688	-1.284	60	60	60	
12+2250	40.351	39.085	4.711	-1.266	60	60	60	
12+2300	40.281	39.025	4.706	-1.256	60	60	60	
12+2350	40.205	38.965	4.686	-1.240	60	60	60	
12+2400	40.130	38.905	4.680	-1.225	60	60	60	
12+2450	40.059	38.845	4.688	-1.214	60	60	60	
12+2500	39.985	38.785	4.657	-1.200	60	60	60	
12+2550	39.905	38.725	4.636	-1.180	60	60	60	
12+2600	39.824	38.665	4.617	-1.159	60	60	60	
12+2650	39.740	38.605	4.602	-1.135	60	60	60	
12+2700	39.665	38.545	4.584	-1.120	60	60	60	
12+2750	39.593	38.485	4.592	-1.109	60	60	60	
12+2800	39.515	38.425	4.590	-1.091	60	60	60	
12+2850	39.444	38.365	4.584	-1.080	60	60	60	
12+2900	39.370	38.305	4.583	-1.065	60	60	60	
12+2950	39.299	38.244	4.582	-1.054	60	60	60	
12+3000	39.222	38.184	4.573	-1.038	60	60	60	
12+3050	39.129	38.124	4.576	-1.004	60	60	60	
12+3100	39.037	38.064	4.568	-0.973	60	60	60	
12+3150	38.934	38.004	4.554	-0.930	60	60	60	
12+3200	38.816	37.944	4.546	-0.874	60	60	60	
12+3250	38.701	37.885	4.536	-0.816	60	60	60	
12+3300	38.575	37.831	4.535	-0.744	60	60	60	
12+3350	38.447	37.784	4.532	-0.663	60	60	60	
12+3400	38.326	37.744	4.550	-0.581	60	60	60	
12+3450	38.225	37.712	4.569	-0.517	60	60	60	
12+3500	38.156	37.687	4.582	-0.470	60	60	60	
12+3550	38.111	37.667	4.576	-0.445	60	60	60	
12+3600	38.086	37.647	4.580	-0.440	60	60	60	
12+3650	38.060	37.627	4.593	-0.433	60	60	60	
12+3700	38.025	37.607	4.593	-0.422	60	60	60	

PROFILE Scale H=1:1000 V=1:100

- LEGEND:**
- PROPOSED TRACK LAYOUT**
- RENEWED TRACK / SLUED TRACK
 - EXISTING TRACK TO BE RETAINED
 - EXISTING TRACK TO BE REMOVED
- PLAN**
- RENEWED TRACK / SLUED TRACK
 - EXISTING TRACK TO BE RETAINED (MAIN LINES)
 - EXISTING TRACK TO BE RETAINED (NOT MAIN LINES)
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 - P8/8 TYPE OF TURNOUT
 - ATTENUATION TANK
 - PROPOSED TRACK DRAINAGE
 - LOW VOLTAGE/TELECOMMUNICATIONS/SIGNALLING CABINETS
 - PROPOSED TANGENT POINT
 - FOULING POINT
 - LLB LAST LONG BEARER
 - MILEPOST
- LONGITUDINAL PROFILE**
- PROPOSED VERTICAL ALIGNMENT
 - EXISTING VERTICAL ALIGNMENT
 - EXISTING GROUND
 - PROPOSED TANGENT POINT
 - LLB LAST LONG BEARER

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1/200000 @ A1
1/400000 @ A3

DART+ South West

NTA
National Transport Authority

2040
Transportation

Rev	Date	Drn	Chkd	App'd	Description
v01	23/11/22	CDM	JYM	PR	PLANNING ISSUE

Client
Iarnród Éireann
Irish Rail

Engineering Designer
TYPASA
ATKINS
Member of the SNC-Lavalin Group
Supported by
RPS

Project Title
DART + SOUTH WEST

Drawing Title
TRACK PLAN LAYOUT AND LONGITUDINAL PROFILE
FROM CH 12+100 TO CH 12+700

Drawing File Name
DP-04-23-DWG-RO-TTA-18976

Version
v01

Status
S3

Date
23/11/2022

Scale
AS SHOWN @ A1 @ A3

Drawn
CDM

Checked
JYM

Approved
PR

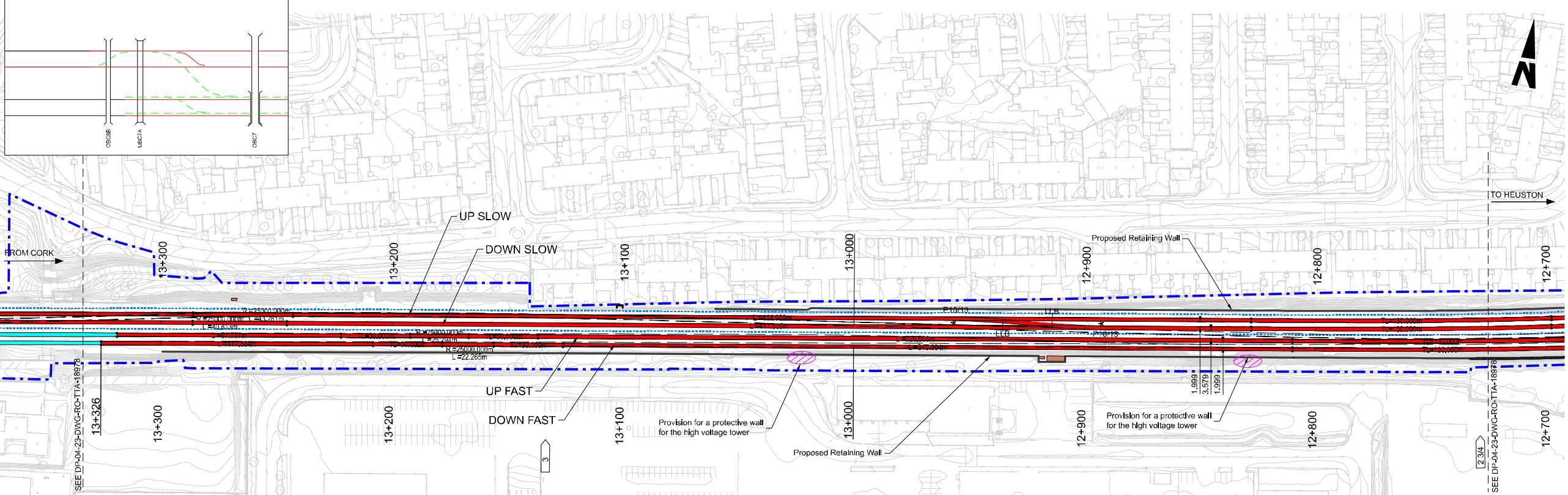
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Issuer
TTA

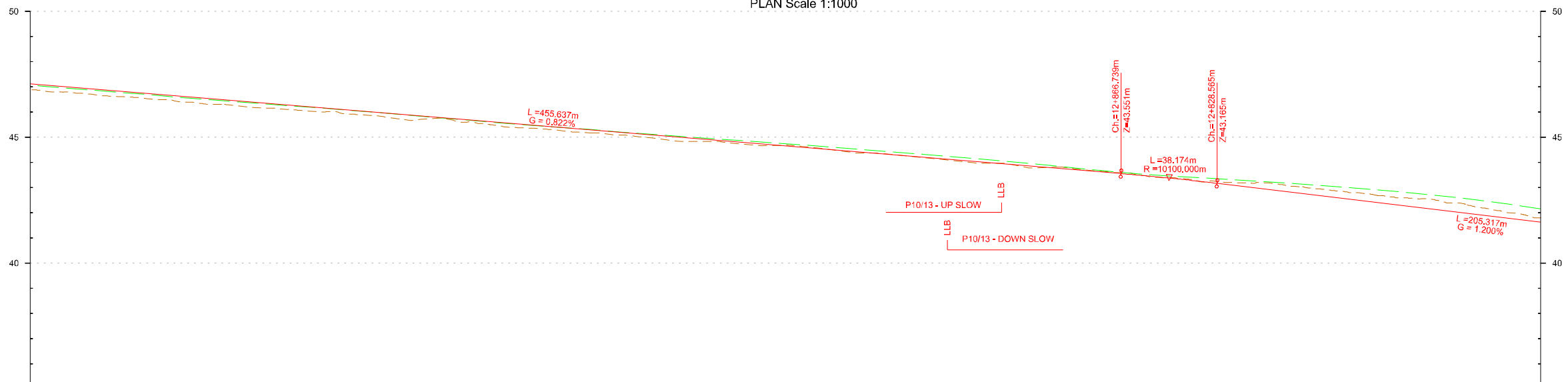
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DO NOT SCALE USE FIGURED DIMENSIONS ONLY

PROPOSED TRACK LAYOUT - NOT TO SCALE



PLAN Scale 1:1000



PROFILE Scale H=1:1000 V=1:100

Chainage	Existing Level (m)	Proposed Level (m)	Horizontal Slue (m)	Lift (+) / Lower (-) (m)	Horizontal Alignment (m)	Vertical Alignment (m)	Cant Proposed (mm)	Cant Alignment / Speed
13+300	47.0657	47.1131	-2.617	0.044	STR L=220.976		0	RoCC=0mm/s RoCD=14mm/s Co=1in0 V=110km/h
13+250	46.9867	47.0311	-2.8178	0.045	R=25000.000 L=40.813		0	C=0mm RoCC=0mm/s RoCD=14mm/s Co=1in0 V=110km/h
13+200	46.9077	46.9494	-3.102	0.041			0	
13+150	46.8277	46.8667	-3.286	0.040			0	
13+100	46.7444	46.7844	-3.446	0.040			0	
13+050	46.6622	46.7022	-3.550	0.040			0	
13+000	46.5800	46.6200	-3.629	0.040			0	
12+950	46.5055	46.5398	-3.666	0.033			0	
12+900	46.4288	46.4554	-3.830	0.027			0	
12+850	46.3571	46.3734	-3.882	0.022			0	
12+800	46.2771	46.2911	-3.885	0.020			0	
12+750	46.1977	46.2094	-3.898	0.012			0	
12+700	46.1233	46.1267	-3.899	0.004			0	
12+650	46.0465	46.0444	-3.887	-0.002			0	
12+600	45.9655	45.9622	-3.844	-0.003			0	
12+550	45.8877	45.8880	-3.790	0.003			0	
12+500	45.7984	45.7984	-3.709	0.004			0	
12+450	45.7057	45.7157	-3.607	0.010			0	
12+400	45.6233	45.6334	-3.481	0.013			0	
12+350	45.5433	45.5554	-3.330	0.008			0	
12+300	45.4667	45.4669	-3.163	-0.002			0	
12+250	45.3994	45.3987	-2.980	-0.012			0	
12+200	45.3222	45.3204	-2.785	-0.018			0	
12+150	45.2433	45.2222	-2.597	-0.021			0	
12+100	45.1655	45.1404	-2.394	-0.025			0	
12+050	45.0889	45.0589	-2.173	-0.031			0	
12+000	45.0157	44.9767	-1.945	-0.039			0	
11+950	44.9465	44.8934	-1.717	-0.065			0	
11+900	44.8794	44.8111	-1.488	-0.068			0	
11+850	44.8094	44.7294	-1.259	-0.080			0	
11+800	44.7377	44.6474	-1.031	-0.089			0	
11+750	44.6664	44.5654	-0.804	-0.089			0	
11+700	44.5966	44.4824	-0.580	-0.106			0	
11+650	44.5100	44.4004	-0.359	-0.110			0	
11+600	44.4300	44.3184	-0.139	-0.112			0	
11+550	44.3500	44.2364	0.073	-0.114			0	
11+500	44.2700	44.1544	0.280	-0.116			0	
11+450	44.1877	44.0714	0.485	-0.116			0	
11+400	44.1044	43.9894	0.690	-0.115			0	
11+350	44.0184	43.9077	0.886	-0.111			0	
11+300	43.9323	43.8254	1.080	-0.088			0	
11+250	43.8466	43.7434	1.272	-0.083			0	
11+200	43.7600	43.6604	1.464	-0.070			0	
11+150	43.6739	43.5784	1.659	-0.058			0	
11+100	43.5894	43.4964	1.851	-0.046			0	
11+050	43.5077	43.4004	2.041	-0.077			0	
11+000	43.4194	43.2994	2.238	-0.120			0	
10+950	43.3357	43.1824	2.433	-0.175			0	
10+900	43.2507	43.0663	2.619	-0.235			0	
10+850	43.1655	42.9434	2.776	-0.285			0	
10+800	43.0817	42.8234	2.929	-0.349			0	
10+750	43.0004	42.7034	3.065	-0.402			0	
10+700	42.9222	42.5834	3.178	-0.449			0	
10+650	42.8462	42.4662	3.279	-0.490			0	
10+600	42.7733	42.3424	3.370	-0.520			0	
10+550	42.6977	42.2224	3.448	-0.551			0	
10+500	42.6272	42.1024	3.512	-0.570			0	
10+450	42.5594	41.9824	3.561	-0.576			0	
10+400	42.4939	41.8624	3.607	-0.577			0	
10+350	42.4300	41.7424	3.654	-0.550			0	
10+300	42.3684	41.6224	3.702	-0.522			0	

- LEGEND:
- PROPOSED TRACK LAYOUT
- RENEWED TRACK / SLUED TRACK
 - EXISTING TRACK TO BE RETAINED
 - EXISTING TRACK TO BE REMOVED
- PLAN
- RENEWED TRACK / SLUED TRACK
 - EXISTING TRACK TO BE RETAINED (MAIN LINES)
 - EXISTING TRACK TO BE RETAINED (NOT MAIN LINES)
 - EXISTING TRACK TO BE REMOVED
 - IE PROPERTY BOUNDARY
 - PROPOSED RETAINING WALL
 - P8/8 TYPE OF TURNOUT
 - ATTENUATION TANK
 - PROPOSED TRACK DRAINAGE
 - LOW VOLTAGE/TELECOMMUNICATIONS/SIGNALLING CABINETS
 - PROPOSED TANGENT POINT
 - FOULING POINT
 - LAST LONG BEARER
 - MILEPOST
- LONGITUDINAL PROFILE
- PROPOSED VERTICAL ALIGNMENT
 - EXISTING VERTICAL ALIGNMENT
 - EXISTING GROUND
 - PROPOSED TANGENT POINT
 - LAST LONG BEARER

- NOTES
- CHAINAGES, LEVELS AND COORDINATES ARE SHOWN IN METRES. ALL OTHER DIMENSIONS ARE SHOWN IN MILLIMETRES, UNLESS OTHERWISE STATED. ALL CLEARANCE AND SIX-FOOT INTERVALS ARE QUOTED TO RUNNING EDGES (RE).
 - THIS DESIGN IS BASED UPON A TOPOGRAPHICAL SURVEY DATED SEPTEMBER 2021, COMPLETED BY MURPHY GEOSPATIAL LTD.
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 - NEGATIVE SLUES ARE TO THE LEFT. POSITIVE SLUES ARE TO THE RIGHT. CANT SHOWN AS POSITIVE THROUGHOUT, EXCEPT WHERE ADVERSE TO THE DIRECTION OF CURVATURE. ALL IN THE DIRECTION OF INCREASING CHAINAGE.
 - TRACK GAUGE TO BE NOMINAL 1602MM FOR PLAIN LINE AND 1600MM FOR P&C.
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 - RAIL LEVELS ARE QUOTED FOR THE LOW RAIL.
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 - VERTICAL PROFILE IS SHOWN FOR THE DOWN SLOW. DATA OF THE EXISTING TRACK IS REFERRED TO DOWN SLOW.

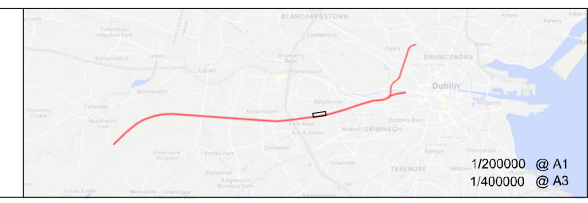
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Rev	Date	Drn	Chkd	App'd	Description
v01	23/11/22	CDM	JYM	PR	PLANNING ISSUE

Client: **Iarnród Éireann Irish Rail**

Engineering Designer: **ATKINS** (Member of the SNC-Lavalin Group)

Supported by: **rps**

Date: 23/11/2022 | Scale: AS SHOWN @ A1 | Drawn: CDM | Checked: JYM | Approved: PR

Project Code: 5199586 | Issuer: TTA | OMS Code: []

Project Title: **DART + SOUTH WEST**

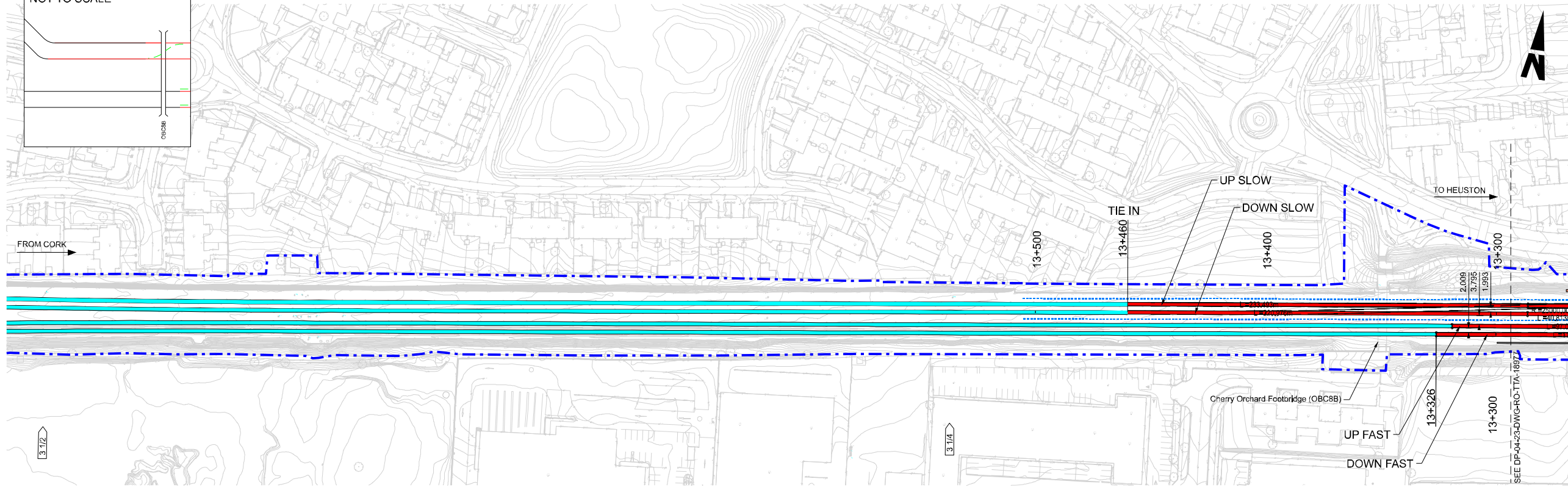
Drawing Title: **TRACK PLAN LAYOUT AND LONGITUDINAL PROFILE FROM Ch 12+700 To Ch 13+300**

Drawing File Name: **DP-04-23-DWG-RO-TTA-18977**

Version: v01 | Status: S3

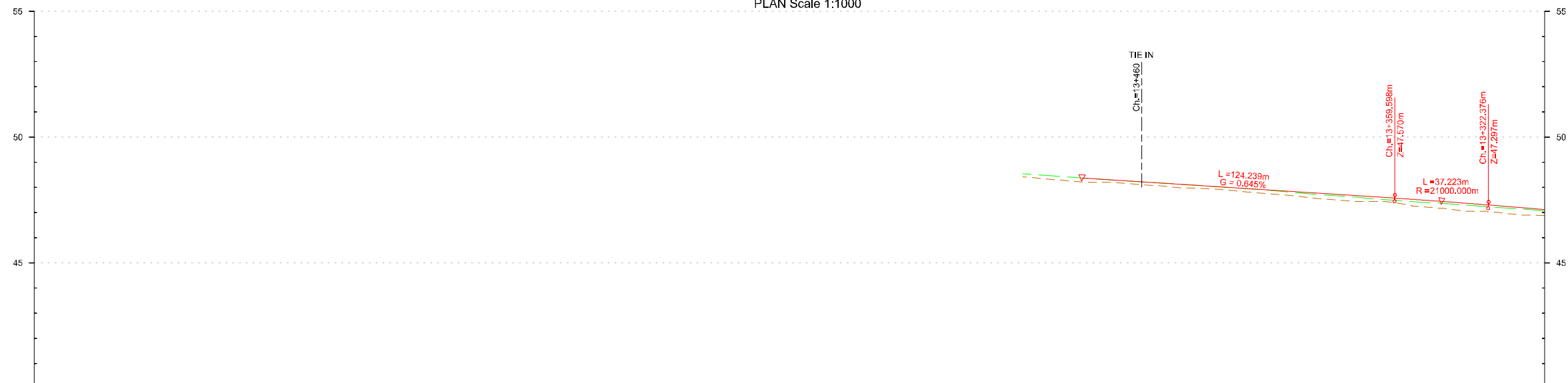
DO NOT SCALE USE FIGURED DIMENSIONS ONLY

PROPOSED TRACK LAYOUT
NOT TO SCALE



LEGEND:

- PROPOSED TRACK LAYOUT**
- RENEWED TRACK / SLUED TRACK
 - EXISTING TRACK TO BE RETAINED
 - EXISTING TRACK TO BE REMOVED
- PLAN**
- RENEWED TRACK / SLUED TRACK
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 - FOULING POINT
 - LAST LONG BEARER
 - MILEPOST
- LONGITUDINAL PROFILE**
- PROPOSED VERTICAL ALIGNMENT
 - EXISTING VERTICAL ALIGNMENT
 - EXISTING GROUND
 - PROPOSED TANGENT POINT
 - LAST LONG BEARER



Chainage	Existing Level (m)	Proposed Level (m)	Horizontal Slue (m)	Lift (+) / Lower (-) (m)	Horizontal Alignment (m)	Vertical Alignment (m)	Cant Proposed (mm)	Cant Alignment / Speed
13+900								
13+850								
13+800								
13+750								
13+700								
13+650								
13+600								
13+550								
13+500								
13+450	48.346	48.346	-0.002	0.000			0	
	48.282	48.282	0.001	0.001			0	
	48.218	48.218	0.000	-0.000			0	
	48.153	48.153	0.002	-0.000			0	
	48.088	48.088	0.000	0.000			0	
	48.022	48.022	0.002	0.002			0	
	47.953	47.953	0.008	0.008			0	
	47.884	47.884	0.011	0.011			0	
	47.815	47.815	0.025	0.025			0	
	47.746	47.746	0.046	0.046			0	
	47.677	47.677	0.060	0.060			0	
	47.608	47.608	0.072	0.072			0	
	47.539	47.539	0.081	0.081			0	
	47.470	47.470	0.088	0.088			0	
	47.401	47.401	0.077	0.077			0	
	47.332	47.332	0.072	0.072			0	
	47.263	47.263	0.063	0.063			0	
	47.194	47.194	0.047	0.047			0	
	47.125	47.125	0.044	0.044			0	
13+300	47.056	47.056	-2.617	0.044			0	

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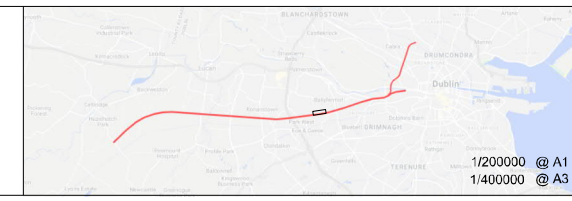
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v01	23/11/22	CDM	JYM	PR	PLANNING ISSUE

Client
Iarnród Éireann
Irish Rail

Engineering Designer
ATKINS
Supported by: rps

Project Title
DART + SOUTH WEST

Drawing Title
TRACK PLAN LAYOUT AND LONGITUDINAL PROFILE
FROM Ch 13+300 TO Ch 13+900

Drawing File Name
DP-04-23-DWG-RO-TTA-18978

Version
v01

Status
S3

Date
23/11/2022

Scale
AS SHOWN @ A1 @ A3

Drawn
CDM

Checked
JYM

Approved
PR

Project Code
51959586

Issuer
TTA

QMS Code

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