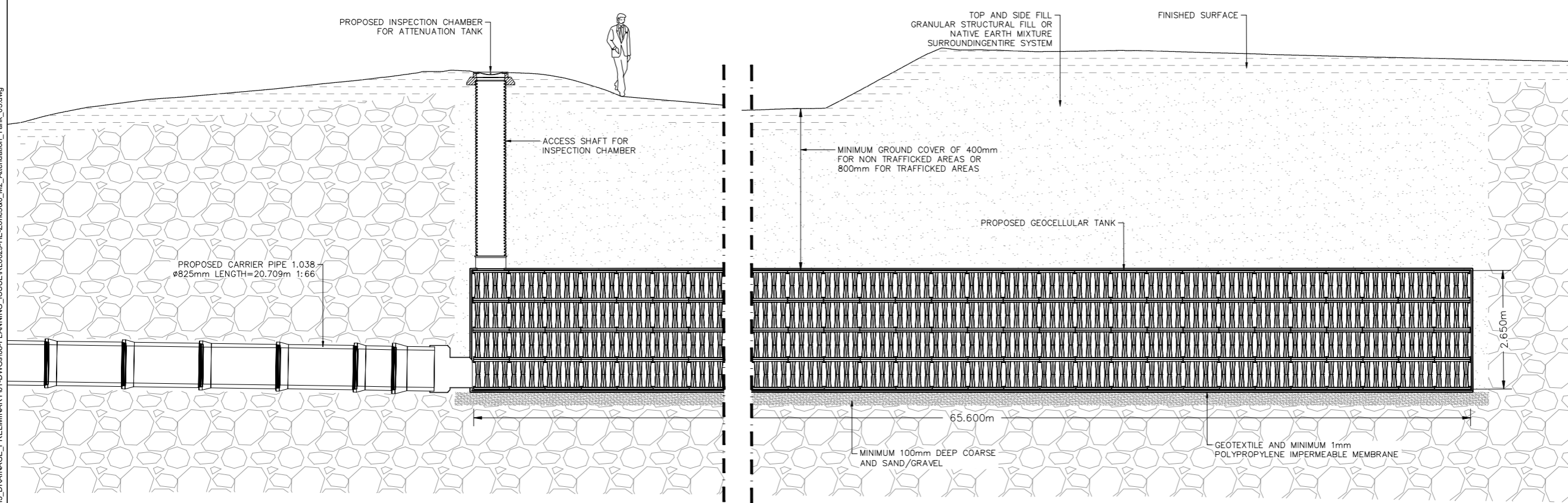


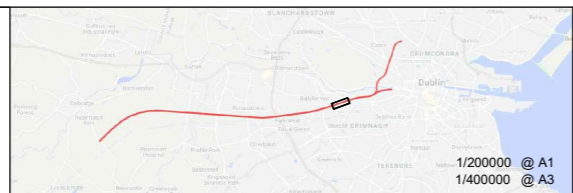
- LEGEND:**
- PROPOSED CARRIER PIPE
 - PROPOSED CIRCULAR MANHOLE
 - PROPOSED RECTANGULAR MANHOLE
 - PROPOSED TANK INSPECTION CHAMBER
 - PROPOSED ATTENUATION TANK

- NOTES:**
1. DESIGN IS BASED ON TOPOGRAPHICAL SURVEY QT-94577-DART-SOUTHWEST SECTION_01 TO 10 (DWG FORMAT) IN ITM COORDINATES.
 2. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS STATED OTHERWISE.
 3. ALL LEVELS ARE IN METERS RELATIVE TO NATIONAL ORDINANCE DATUM UNLESS NOTED OTHERWISE.
 4. DIMENSIONS ARE NOT TO BE SCALED FROM THE DRAWING.
 5. PROPOSED DISCHARGE RATES AND OUTFALL LOCATIONS ARE SUBJECT TO DUBLIN CITY COUNCIL APPROVAL.



LONGITUDINAL SECTION -- A
SCALE 1:50 @A1
SCALE 1:100 @A3

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Rev	Date	Drn	Chk'd	App'd	Description
v01	23/11/2022	MA	AB	JP	PLANNING ISSUE

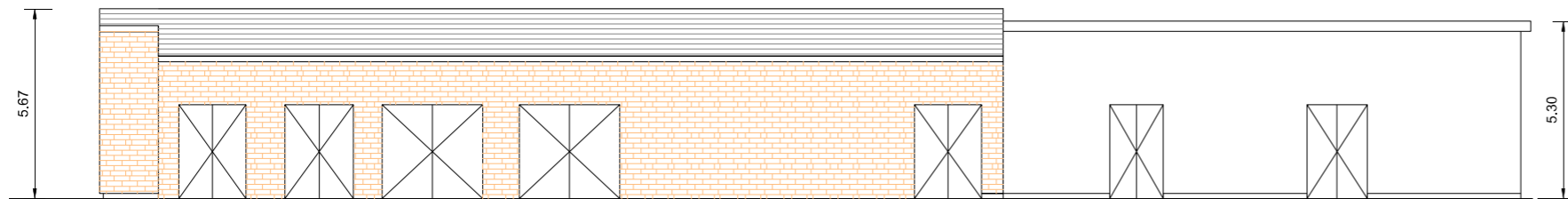
Client Iarnród Éireann Irish Rail		Engineering Designer ATKINS Member of the SNC Lavalin Group		Project Title DART + SOUTH WEST	
Date 23/11/2022	Scale AS SHOWN @ A1 @ A3	Drawn MA	Checked AB	Approved JP	Drawing Title ATTENUATION TANK FOR DRAINAGE NETWORK 1
Project Code 5199586	Issuer TTA	QMS Code			Drawing File Name DP-04-23-DWG-RO-TTA-18866

Version v01	Status S3
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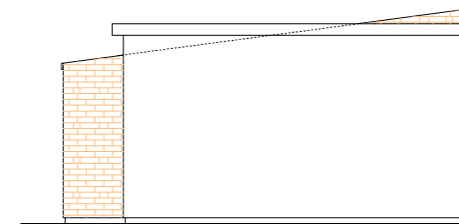
DO NOT SCALE USE FIGURED DIMENSIONS ONLY

\\projector\RL6293-1\WIP\3-1\NOGR\06-HE\09-M3_DRAINAGE_PRELIMINARY\01-DWG\06-PLANNING_ISSUER\RL6293-HE-Zones\86_M2_Attenuation_Tank_03.dwg

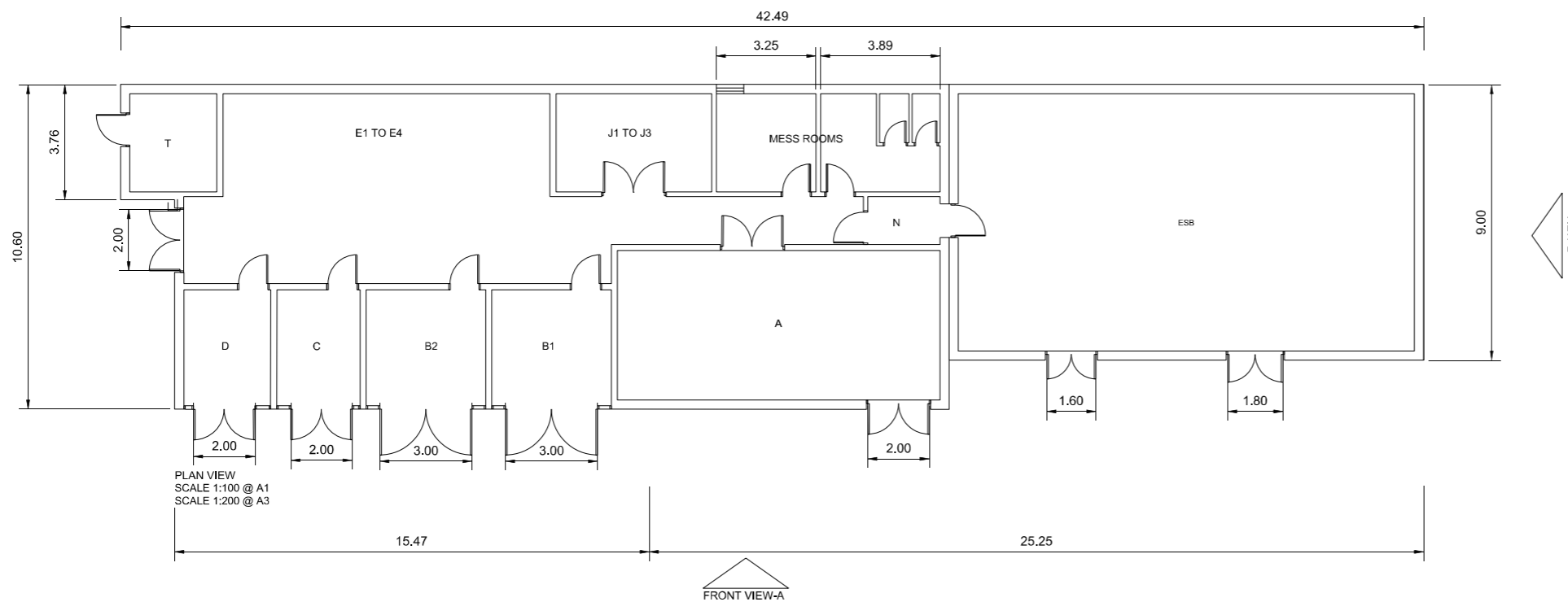
Notes:



FRONT VIEW A
SCALE 1:100 @ A1
SCALE 1:200 @ A3



VIEW B
SCALE 1:100 @ A1
SCALE 1:200 @ A3

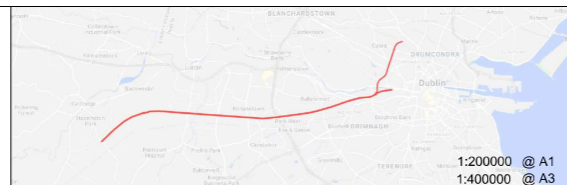


PLAN VIEW
SCALE 1:100 @ A1
SCALE 1:200 @ A3

FRONT VIEW-A

POS.	DESIGNATION
A	HIGH VOLTAGE SWITCHBOARD
B1	TRACTION TRANSFORMER 1
B2	TRACTION TRANSFORMER 2
C	AUXILIARY TRANSFORMER
D	DIESEL GENERATOR
E1	TRACK FEEDER CIRCUIT BREAKERS (HSCB)
E2	RECTIFIER FEEDER BREAKER
E3	RECTIFIER
E4	RECTIFIER RETURN BREAKER
J1	UPS
J2	ESSENTIAL LV PANEL (110 V DC DISTRIBUTION)
J3	BATTERY CABINET
N	ESB METER CABINET
T	TELECOM

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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).



Rev	Date	Drn	Chk'd	App'd	Description
v01	10/11/2022	AA	NF	PT	PLANNING ISSUE

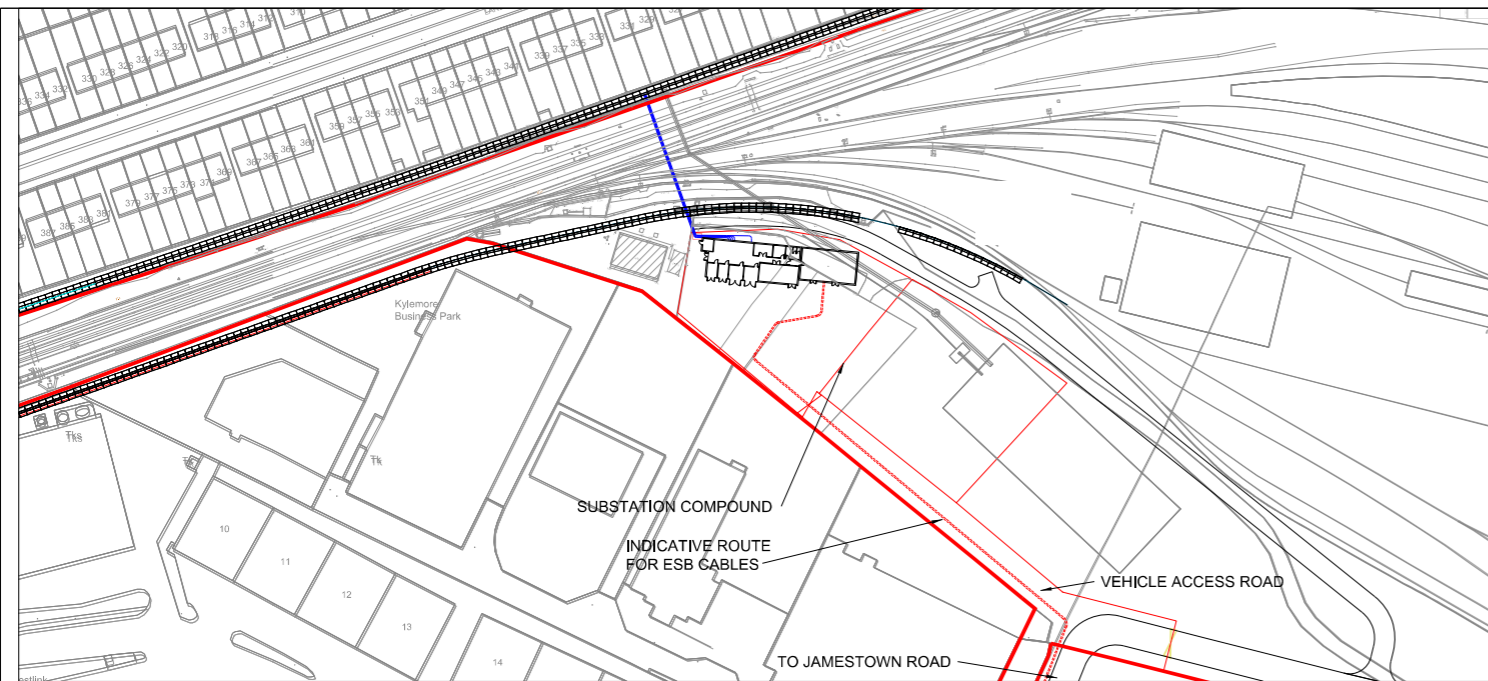
Client
Iarnród Éireann
Irish Rail

Engineering Designer
ATKINS
TYPSA
Member of the SNC-Lavalin Group
Supported by: **rps**

Project Title	DART + SOUTH WEST		
Drawing Title	INCHICORE SUBSTATION BUILDING PLAN AND ELEVATIONS		
Drawing File Name	DP-04-23-DWG-RO-TTA-18859	Version	v01
Status	S3		

DO NOT SCALE USE FIGURED DIMENSIONS ONLY

Drawing1.dwg



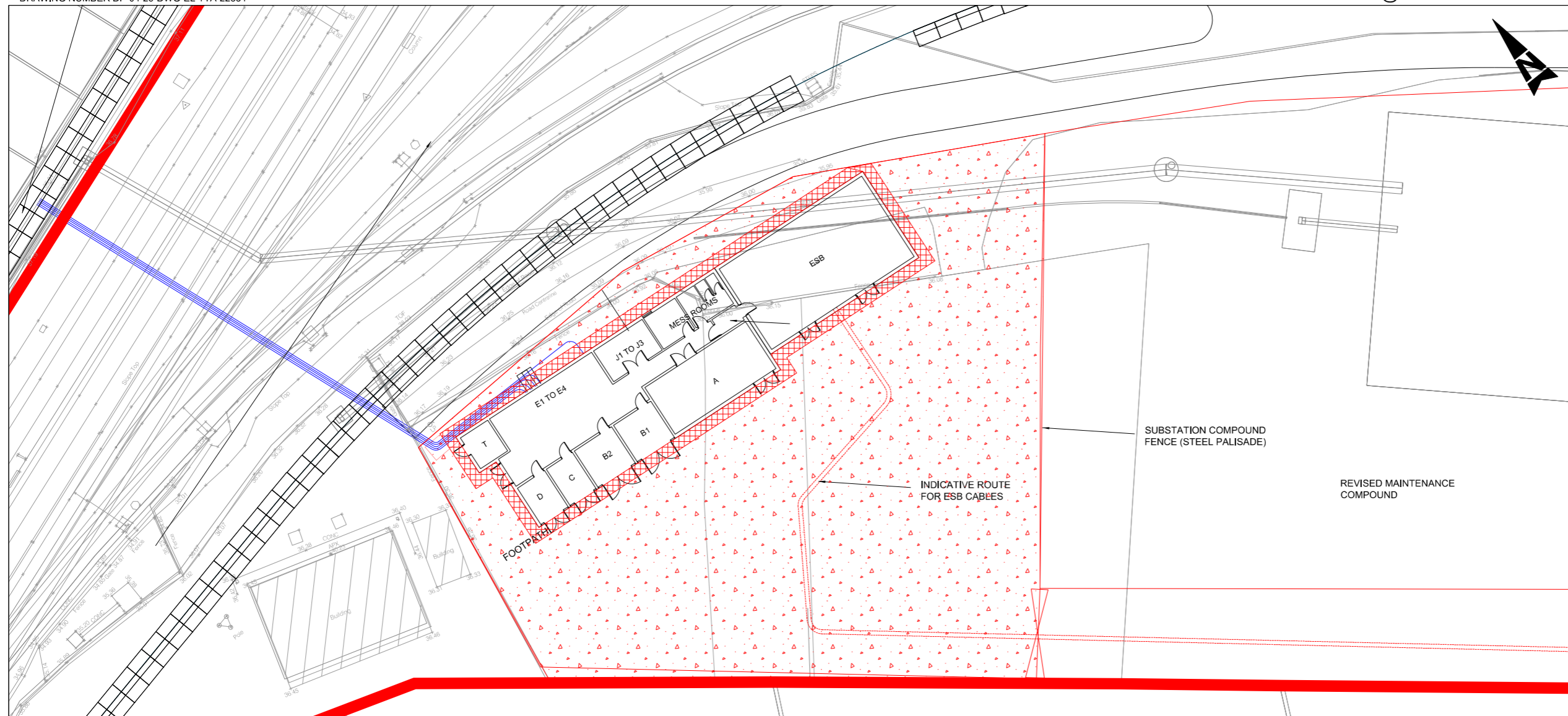
SUBSTATION ACCESS PLAN
 1:1000 @ A1
 1:2000 @A3



SUBSTATION LOCATION PLAN
 GRID REFERENCE
 LATITUDE: 53.337872 LONGITUDE: -6.3415729

FOR DETAILS OF THE CABLE ROUTES SEE
 DRAWING NUMBER DP-04-23-DWG-EL-TTA-22854

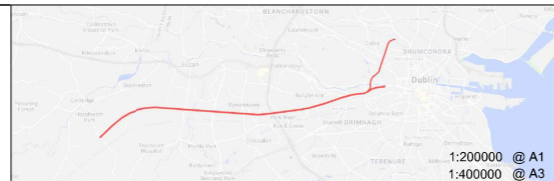
SUBSTATION LAYOUT PLAN
 1:200 @ A1
 1:400 @A3



KEY:
 BLUE - INDICATIVE DC CABLE ROUTE
 RED - NEW EQUIPMENT/LAND BOUNDARIES
 UTX - UNDER TRACK CROSSING
 URX - UNDER ROAD CROSSING
 ESB - ELECTRICITY SUPPLY BOARD

POS.	DESIGNATION
A	HIGH VOLTAGE SWITCHBOARD
B1	TRACTION TRANSFORMER 1
B2	TRACTION TRANSFORMER 2
C	AUXILIARY TRANSFORMER
D	DIESEL GENERATOR
E1	TRACK FEEDER CIRCUIT BREAKERS (HSCB)
E2	RECTIFIER FEEDER BREAKER
E3	RECTIFIER
E4	RECTIFIER RETURN BREAKER
J1	UPS
J2	ESSENTIAL LV PANEL (110 V DC DISTRIBUTION)
J3	BATTERY CABINET
N	ESB METER CABINET
T	TELECOM

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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).



Rev	Date	Dn	Chk'd	App'd	Description
v01	10/11/2022	AA	NF	PT	PLANNING ISSUE

Client
 Iarnród Éireann
 Irish Rail

Engineering Designer
 Atkins
 Member of the SNC-Lavalin Group
 Supported by: FPS

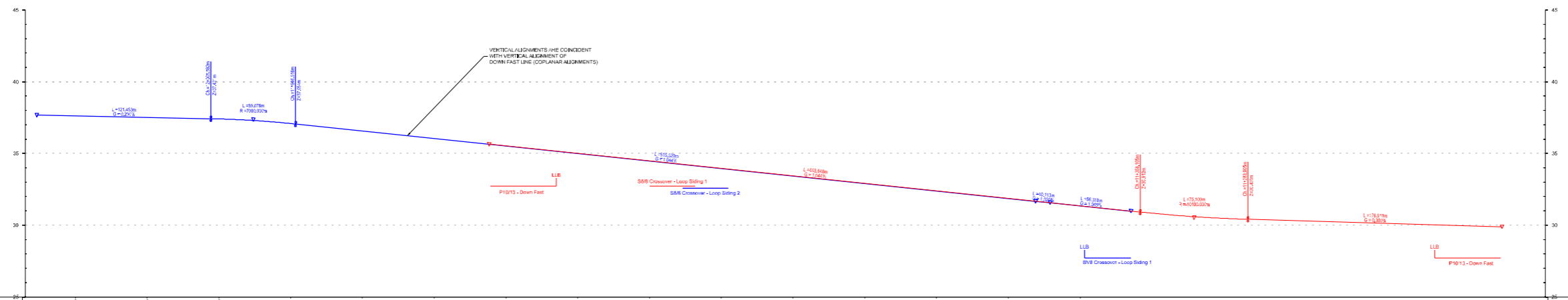
Date 10/11/2022
Scale AS SHOWN @ A1 @ A3
Project Code 5195886
Issuer TTA

Drawn AA
Checked NF
Approved PT

QMS Code

Project Title DART + SOUTH WEST	
Drawing Title INCHICORE SUBSTATION LOCATION AND PLAN LAYOUT	
Drawing File Name DP-04-23-DWG-RO-TTA-18858	Version v01 Status S3

DO NOT SCALE USE FIGURED DIMENSIONS ONLY



VERTICAL ALIGNMENTS ARE COINCIDENT WITH VERTICAL ALIGNMENT OF DOWN FAST LINE (COPLANAR ALIGNMENTS)

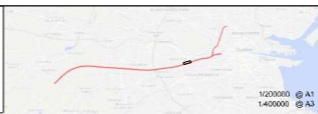
Station	Existing Level (m)	Proposed Level (m)	Horizontal Blue (m)	L/R (+) / Lower (-) (m)	Horizontal Alignment (m)	Vertical Alignment (m)
11200	36.824	37.265	37.265			L=121.45m G=-1.250%
11195	36.824	37.265	37.265			L=182.27m G=-1.700%
11190	36.824	37.265	37.265			L=182.27m G=-1.700%
11185	36.824	37.265	37.265			L=182.27m G=-1.700%
11180	36.824	37.265	37.265			L=182.27m G=-1.700%
11175	36.824	37.265	37.265			L=182.27m G=-1.700%
11170	36.824	37.265	37.265			L=182.27m G=-1.700%
11165	36.824	37.265	37.265			L=182.27m G=-1.700%
11160	36.824	37.265	37.265			L=182.27m G=-1.700%
11155	36.824	37.265	37.265			L=182.27m G=-1.700%
11150	36.824	37.265	37.265			L=182.27m G=-1.700%
11145	36.824	37.265	37.265			L=182.27m G=-1.700%
11140	36.824	37.265	37.265			L=182.27m G=-1.700%
11135	36.824	37.265	37.265			L=182.27m G=-1.700%
11130	36.824	37.265	37.265			L=182.27m G=-1.700%
11125	36.824	37.265	37.265			L=182.27m G=-1.700%
11120	36.824	37.265	37.265			L=182.27m G=-1.700%
11115	36.824	37.265	37.265			L=182.27m G=-1.700%
11110	36.824	37.265	37.265			L=182.27m G=-1.700%

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

- LEGEND:**
- PROPOSED VERTICAL ALIGNMENT
 - PROJECTED PROPOSED VERTICAL ALIGNMENT
 - EXISTING VERTICAL ALIGNMENT
 - PROPOSED TANGENT POINT
 - LLB LAST LONG BEARER

- NOTES:**
- CHANGES, LEVELS AND COORDINATES ARE SHOWN IN METRES. ALL OTHER DIMENSIONS ARE SHOWN IN MILLIMETRES, UNLESS OTHERWISE STATED. ALL CLEARANCE AND SET-POINT INTERVALS ARE QUOTED TO RUNNING EDGES (R/E).
 - THIS DESIGN IS BASED UPON A TOPOGRAPHICAL SURVEY DATED SEPTEMBER 2021, COMPLETED BY MURPHY GEOSPATIAL LTD.
 - DRAINAGE DATUM (M.S.L.) IS LOCATED IN THE DOWN SLOPE LINE AT 1 MILEPOST (M.P.) MARK. DOWN LINE CHANGING DATUM IS SHOWN ON THIS DRAWING.
 - NEGATIVE SLICES ARE TO THE LEFT, POSITIVE SLICES ARE TO THE RIGHT, EXCEPT WHERE SHOWN OTHERWISE. EXCEPT WHERE ADVERSE TO THE DIRECTION OF CURVATURE, ALL IN THE DIRECTION OF INCREASING CHANGING.
 - TRACK GAUGE TO BE NOMINAL 1922MM FOR PLAIN LINE AND 1930MM FOR S/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 IEM MODELS FOR INTERACTION.
 - INCHEORE TRACK PLAN LAYOUT SHOWN IN DRAWING NUMBER DP-04-23-DWG-RO-TTA-19004-09-03.

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Rev	Date	Des	Chk'd	App'd	Description
001	23/11/22	COM	JYM	FR	PLANNING ISSUE

Client: Iarnród Éireann Irish Rail

Engineering Designer: ATKINS

Scale: AS SHOWN @ A1

Issue: TTA

Drawn: CMU

Checked: zym

Approved: PR

Project Title: DART + SOUTH WEST

Drawing Title: INCHEORE WORKS LONGITUDINAL PROFILE SHEET 1 OF 23

Project Code: S16056

Issue: TTA

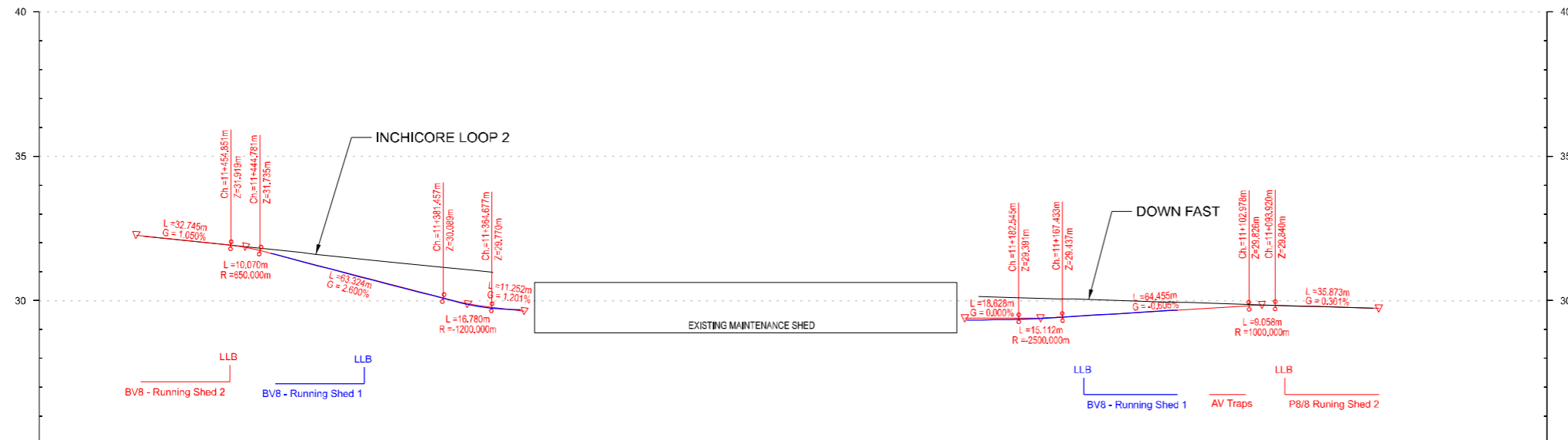
Drawing File Name: DP-04-23-DWG-RO-TTA-19004

Version: 001

Sheet: 53

DO NOT SCALE USE FIGURED DIMENSIONS ONLY

- LEGEND:
- LONGITUDINAL PROFILE
- PROPOSED VERTICAL ALIGNMENT
 - PROJECTED PROPOSED VERTICAL ALIGNMENT
 - EXISTING VERTICAL ALIGNMENT
 - x PROPOSED TANGENT POINT
 - LLB LAST LONG BEARER



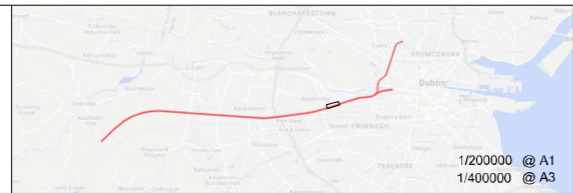
	Chainage																
	11+500	11+450	11+400	11+350	11+300	11+250	11+200	11+150	11+100	11+050		11+000					
RUNNING SHED 2	Existing Level (m)													Existing Level (m)			
	Proposed Level (m)	32.163	32.078	31.973	31.850	31.611	31.551	31.091	30.831	30.319	30.197	30.088	29.962	29.842	29.714	Proposed Level (m)	
	Horizontal Slue (m)																Horizontal Slue (m)
	Lift (+) / Lower (-) (m)																Lift (+) / Lower (-) (m)
	Horizontal Alignment (m)																Horizontal Alignment (m)
	Vertical Alignment (m)																Vertical Alignment (m)
RUNNING SHED 1	Existing Level (m)															Existing Level (m)	
	Proposed Level (m)															Proposed Level (m)	
	Horizontal Slue (m)															Horizontal Slue (m)	
	Lift (+) / Lower (-) (m)															Lift (+) / Lower (-) (m)	
	Horizontal Alignment (m)															Horizontal Alignment (m)	
	Vertical Alignment (m)															Vertical Alignment (m)	

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.
 - INCHICORE TRACK PLAN LAYOUT SHOWN IN DRAWING NUMBER DP-04-23-DWG-RO-TTA-19003-01-S3.

U:\51959586\6 Drawings\Graphics\4-XR6\61640 Titleblock\DP-4-23-REF-ZZ-ZZ-30001.dwg

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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** (Member of the SNC-Lavalin Group)

Supported by: **TPSA**, **TPS**

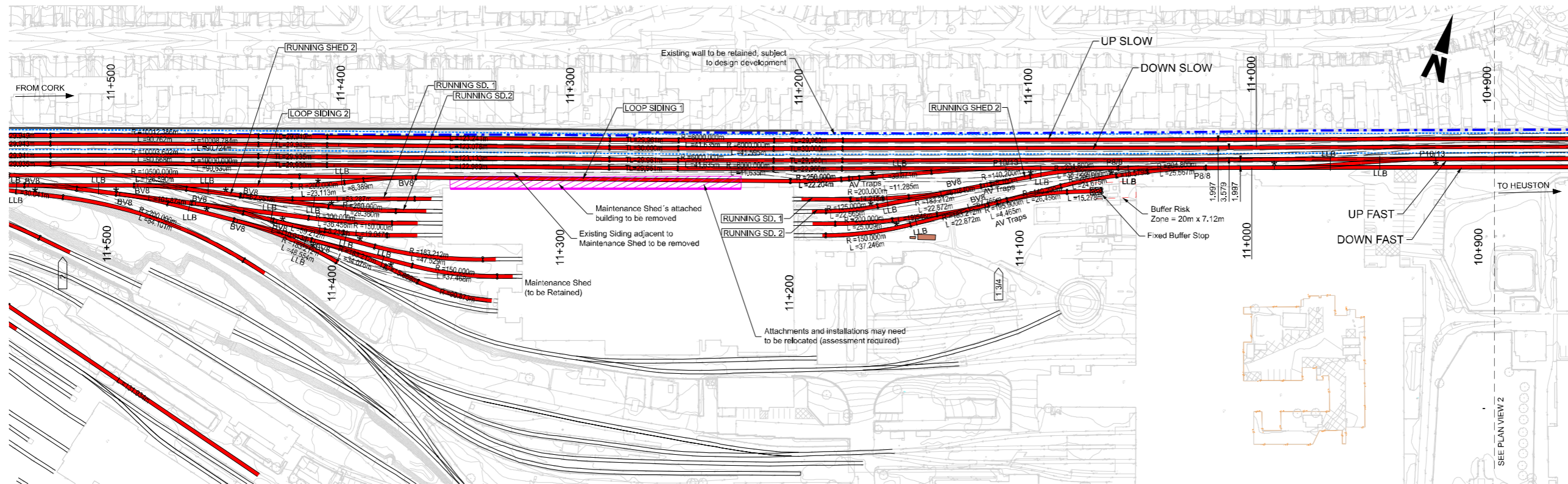
Date: 23/11/2022 | Scale: AS SHOWN @ A1 @ A3

Project Code: 5199586 | Issuer: TTA

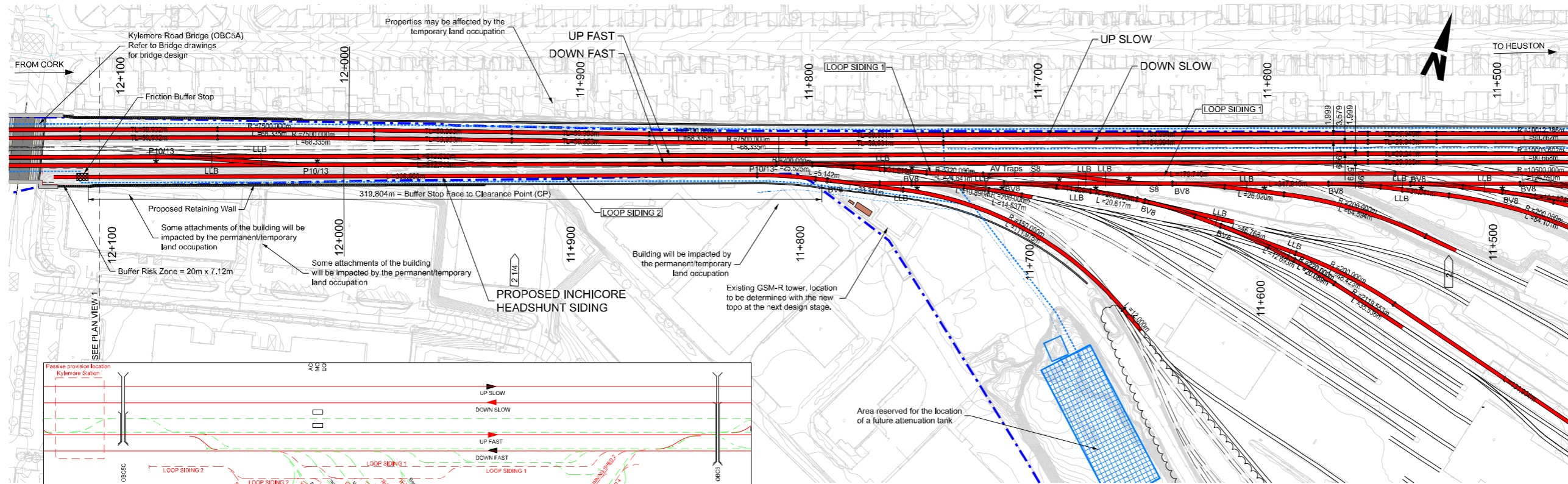
Drawn: CDM | Checked: JYM | Approved: PR

Project Title	DART + SOUTH WEST		
Drawing Title	INCHICORE WORKS LONGITUDINAL PROFILE (SHEET 2 OF 2)		
Drawing File Name	DP-04-23-DWG-RO-TTA-19005	Version	v01
Status	S3		

DO NOT SCALE USE FIGURED DIMENSIONS ONLY



PLAN VIEW 1 Scale 1:1000



PLAN VIEW 2 Scale 1:1000

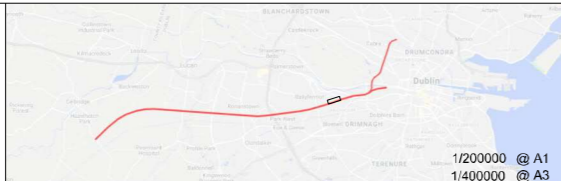
LEGEND:

- 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
 - X XX MILEPOST

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. SEE BIM MODELS FOR INTEGRATION.
9. VERTICAL PROFILES FOR INCHICORE WORKS ARE SHOWN ON DRAWINGS DP-04-23-DWG-RO-TTA-19004 TO 19005

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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

Date 23/11/2022
 Project Code 5199586

Scale 1/1000 @ A1
 1/2000 @ A3

Issuer TTA

Engineering Designer
ATKINS
 TYPSA Member of the SNC-Lavalin Group
 Supported by: **fps**

Drawn CDM
 Checked JYM
 Approved PR

QMS Code

Project Title DART + SOUTH WEST	Drawing Title INCHICORE WORKS TRACK PLAN LAYOUT	Drawing File Name DP-04-23-DWG-RO-TTA-19003	Version v01	Status S3
-------------------------------------------	-------------------------------------------------------	------------------------------------------------	----------------	--------------

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