



# MetroWest+

## Portishead Branch Line (MetroWest Phase 1)

TR040011

Applicant: North Somerset District Council

2.8.1 - 2.8.10 Engineering Sections

Portishead Station, Portishead Station Proposed Platforms, Trinity Footbridge, S022 Quarry Underbridge 2, Mount Pleasant Embankment, Hardwick Road Cutting, Avon Road Embankment, Pill Station, Pill Station Proposed Typical Sections, Quarry Underbridge No. 2

The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009, 5(2) (o)  
Planning Act 2008

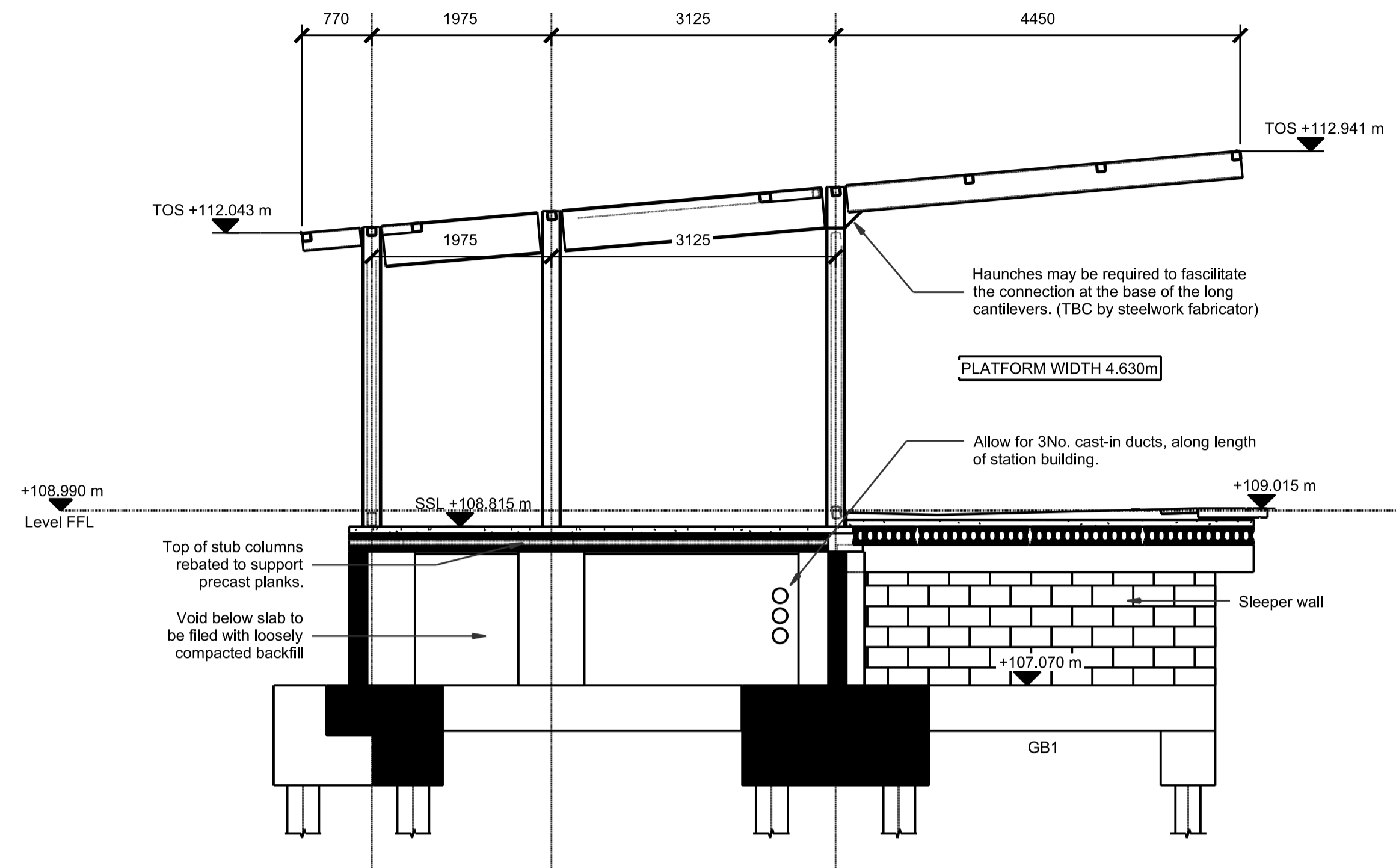
Author: ARUP

Date: September 2021



### Document Index

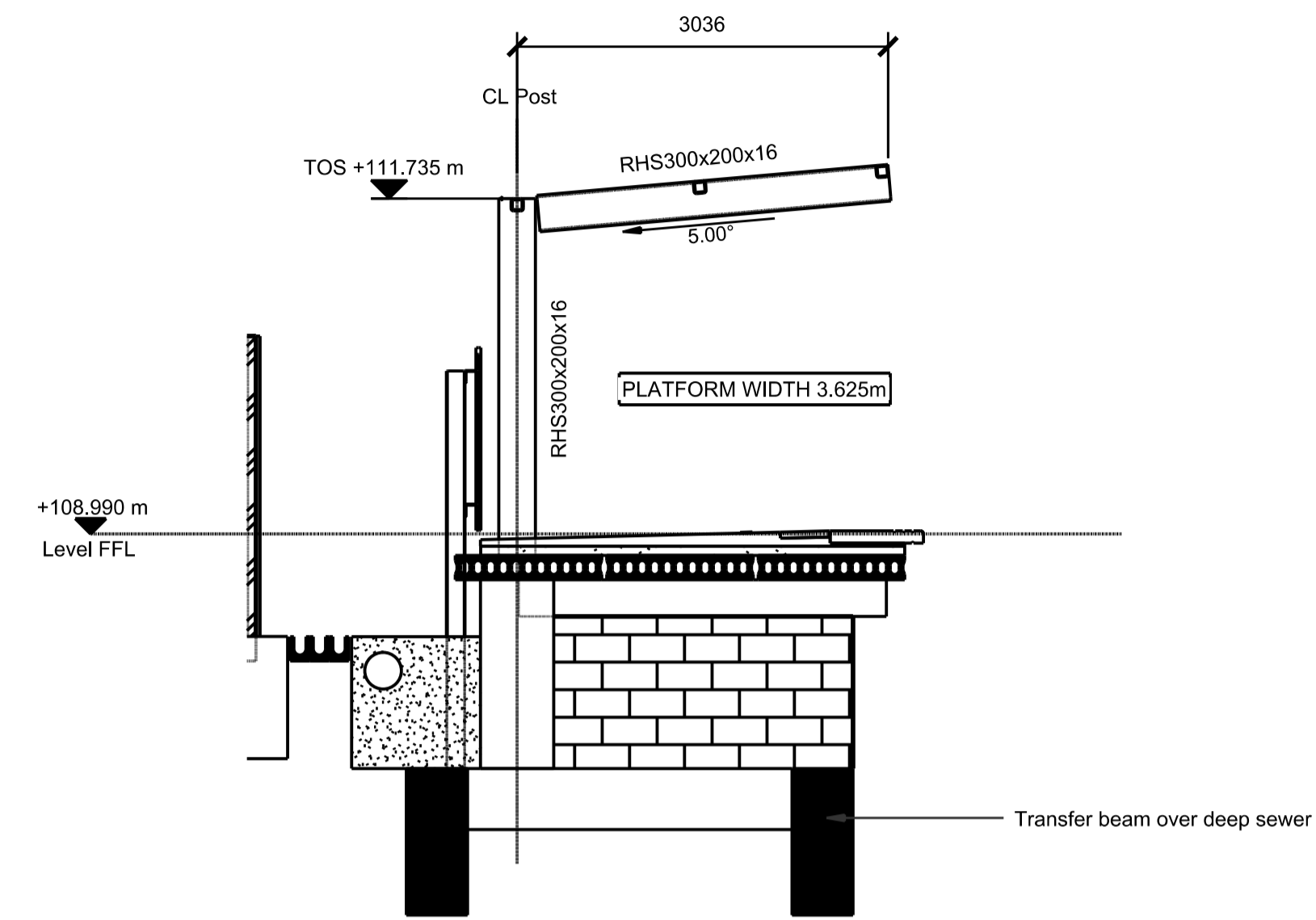
Version	Date	Status of version	Document Index	Document Revision	Changes
1	19 November 2019	Application	2.8.1 Portishead Station Sections - W1097B-ARP-DRG-EST-300003 Rev A02 2.8.2 Portishead Station Proposed Platform Sections(Sheets 1 and 2) - W1097B-ARP-DRG-EST-300004-05 Rev A02 2.8.3 S051 Trinity Footbridge Proposed General Arrangement (sections) - W1097B-ARP-DRG-EST-300007 Rev A01 2.8.4 S022 Quarry Underbridge 2 ProposedSections - W1097B-ARP-DRG-EST-300017 Rev A02 2.8.5 Mount Pleasant Embankment - Typical CrossSections - W1097B-ARP-DRG-EGE-300003 Rev A02 2.8.6 Hardwick Road Cutting Typical Cross Sections - W1097B-ARP-DRG-EGE-300006 Rev A02 2.8.7 Avon Road Embankment Typical CrossSections - W1097B-ARP-DRG-EGE-300009 Rev A02 2.8.8 S050 Pill Station Proposed Station Sections(Sheets 1, 2 and 3) - W1097B-ARP-DRG-EST-300012-14 Rev A01 2.8.9 Pill Station Proposed Station Typical Sections - W1097B-ARP-DRG-EST-300015 Rev A01 2.8.10 S022 Quarry Underbridge 2 Proposed GeneralArrangement - W1097B-ARP-DRG-EST-300016 Rev A02	-	-
2	20 September 2021		2.8.1 Portishead Station Sections - W1097B-ARP-DRG-EST-300003 Rev A02 2.8.2 Portishead Station Proposed Platform Sections(Sheets 1 and 2) - W1097B-ARP-DRG-EST-300004-05 Rev A02 <del>2.8.3 S051 Trinity Footbridge Proposed General Arrangement (sections) - W1097B-ARP-DRG-EST-300007 Rev A01</del> 2.8.4 S022 Quarry Underbridge 2 ProposedSections - W1097B-ARP-DRG-EST-300017 Rev A02 2.8.5 Mount Pleasant Embankment - Typical CrossSections - W1097B-ARP-DRG-EGE-300003 Rev A02 2.8.6 Hardwick Road Cutting Typical Cross Sections - W1097B-ARP-DRG-EGE-300006 Rev A02 2.8.7 Avon Road Embankment Typical CrossSections - W1097B-ARP-DRG-EGE-300009 Rev A02 2.8.8 S050 Pill Station Proposed Station Sections(Sheets 1, 2 and 3) - W1097B-ARP-DRG-EST-300012-14 Rev A01 2.8.9 Pill Station Proposed Station Typical Sections - W1097B-ARP-DRG-EST-300015 Rev A01 2.8.10 S022 Quarry Underbridge 2 Proposed GeneralArrangement - W1097B-ARP-DRG-EST-300016 Rev A02	Removed	Trinity Primary School Bridge and associated works removed.



SECTION 1A (FOR LOCATION SEE DRAWING W1097B-ARP-DRG-EST-300001)

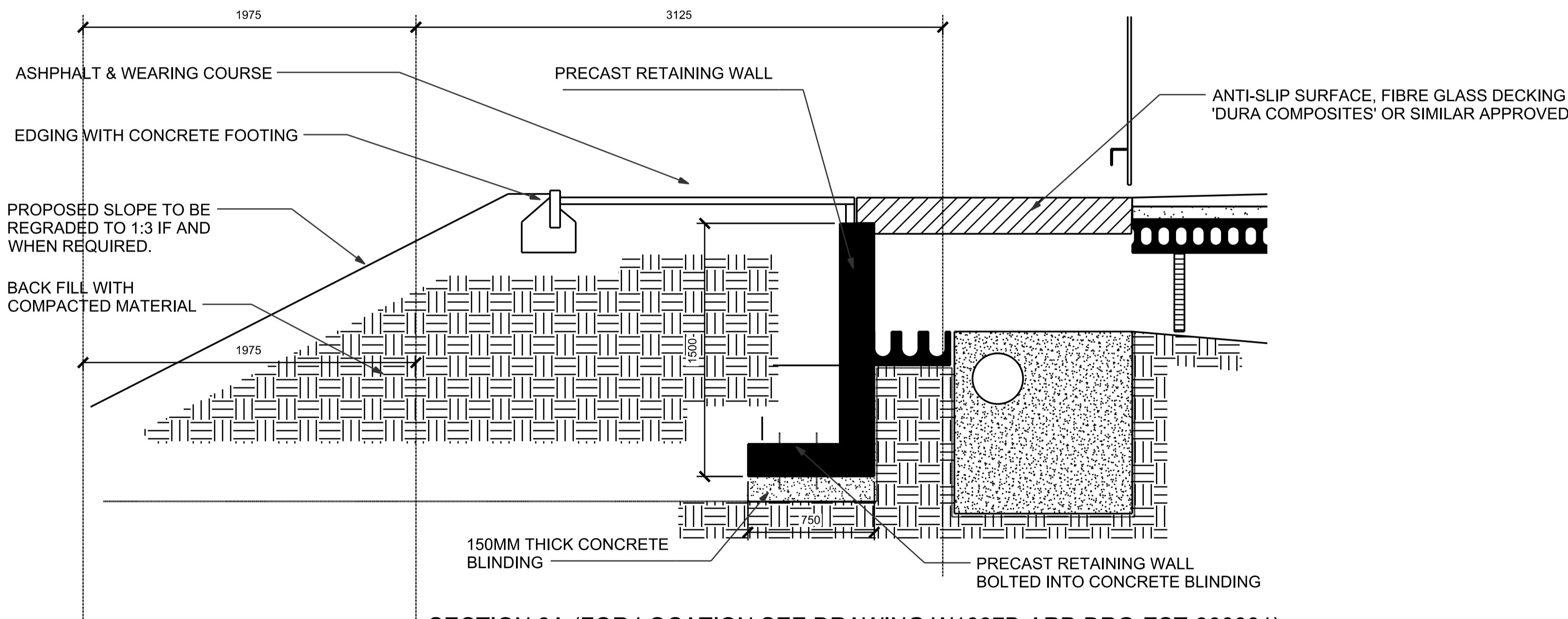
1:50

**NOTE**  
50mm blinding required under all reinforced concrete in contact with ground



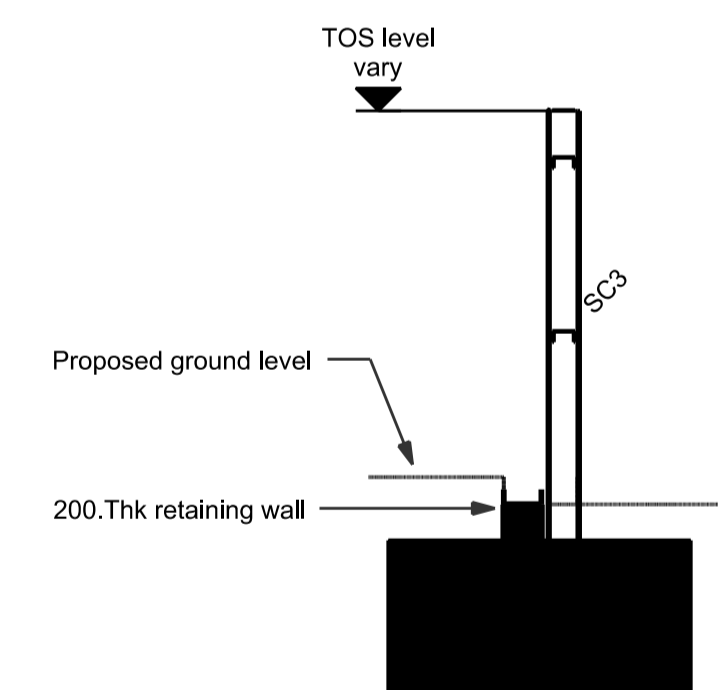
SECTION 2A (FOR LOCATION SEE DRAWING W1097B-ARP-DRG-EST-300001)

1:50



SECTION 3A (FOR LOCATION SEE DRAWING W1097B-ARP-DRG-EST-300001)

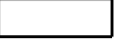

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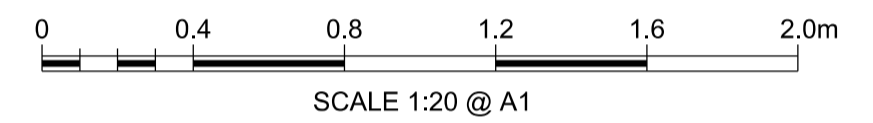


SCREEN WALL SECTION 4A (FOR LOCATION SEE DRAWING W1097B-ARP-DRG-EST-300001)

1:50

**Legend/Notes**

- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ENGINEER'S DRAWINGS, ARCHITECT'S DRAWINGS AND SPECIFICATIONS.
- FOR SETTING OUT INFORMATION, REFER TO THE RELEVANT ARCHITECT'S DRAWING.
- STRUCTURAL LEVELS ARE 100M ABOVE ORDINANCE DATUM. THEY ARE SHOWN THUS:  
ON PLANS M   
ON SECTIONS MM 
- ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
- DRAWINGS SHOULD NOT BE SCALED EITHER BY HAND OR FROM THE COMPUTER DIGITAL DATA, ONLY FIGURED DIMENSIONS ARE TO BE USED.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN, FABRICATION, ERECTION AND REMOVAL OF ALL TEMPORARY WORKS AND SHALL PROVIDE ALL TEMPORARY BRACING AND BACK PROPPING NECESSARY TO MAINTAIN STRUCTURAL STABILITY DURING CONSTRUCTION.
- SPECIFIC TEMPORARY WORKS CONSTRAINTS ARISING FROM THE PERMANENT WORKS DESIGN, IF AND WHERE APPLICABLE, ARE NOTED ON THE ARUP DRAWINGS TO WHICH THEY RELATE.



Rev	Date	Description of Revisions	Drawn	Chkd	Appr	Suitability
A02	24/09/19	FOR DCO APPLICATION		JB	RS	RS
Status						S2

FIT FOR INFORMATION



Contractor(s)

**ARUP**  
63 St Thomas Street  
Bristol BS1 6JZ  
Tel +44(0)117 976 5432 Fax +44(0)117 976 5433  
www.arup.com

Project  
**PORTISHEAD BRANCH LINE (METROWEST PHASE 1)**

Drawing Title  
**PORTISHEAD STATION SECTIONS**

Designed	J. BACINSKI	Signed	Date	24/09/19
Drawn	J. BACINSKI	Signed	Date	24/09/19
Checked	R. SNELL	Signed	Date	24/09/19
Approved	R. SNELL	Signed	Date	24/09/19

Scale(s) As Shown ELR & Mileage POD

Alternative Reference Sheet 1 of 1  
Drawing Number Revision

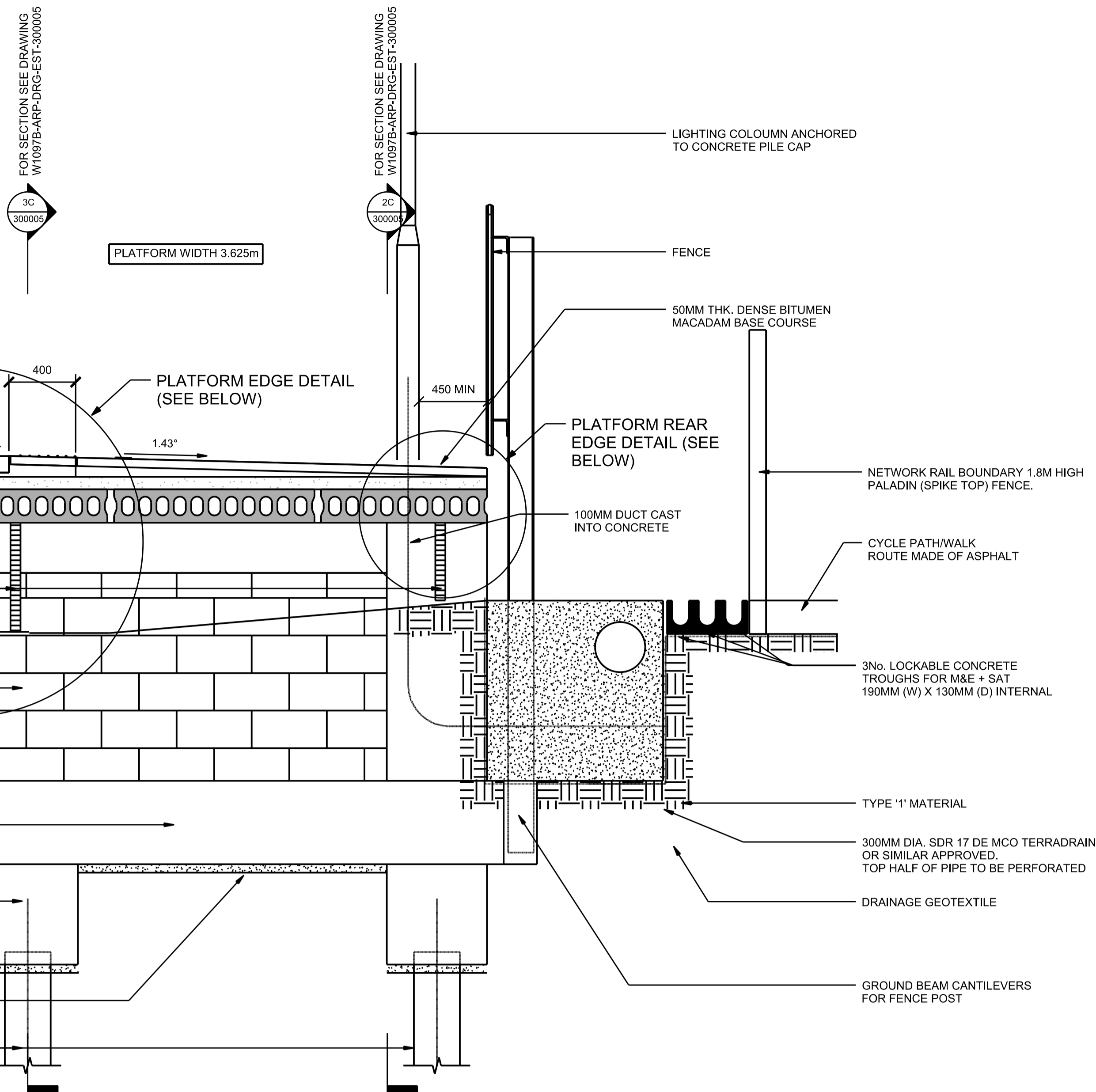
W1097B-ARP-DRG-EST-300003 A02

**Structural Beam Schedule ..**

Type Mark	Type
SR1	PFC150x75x18

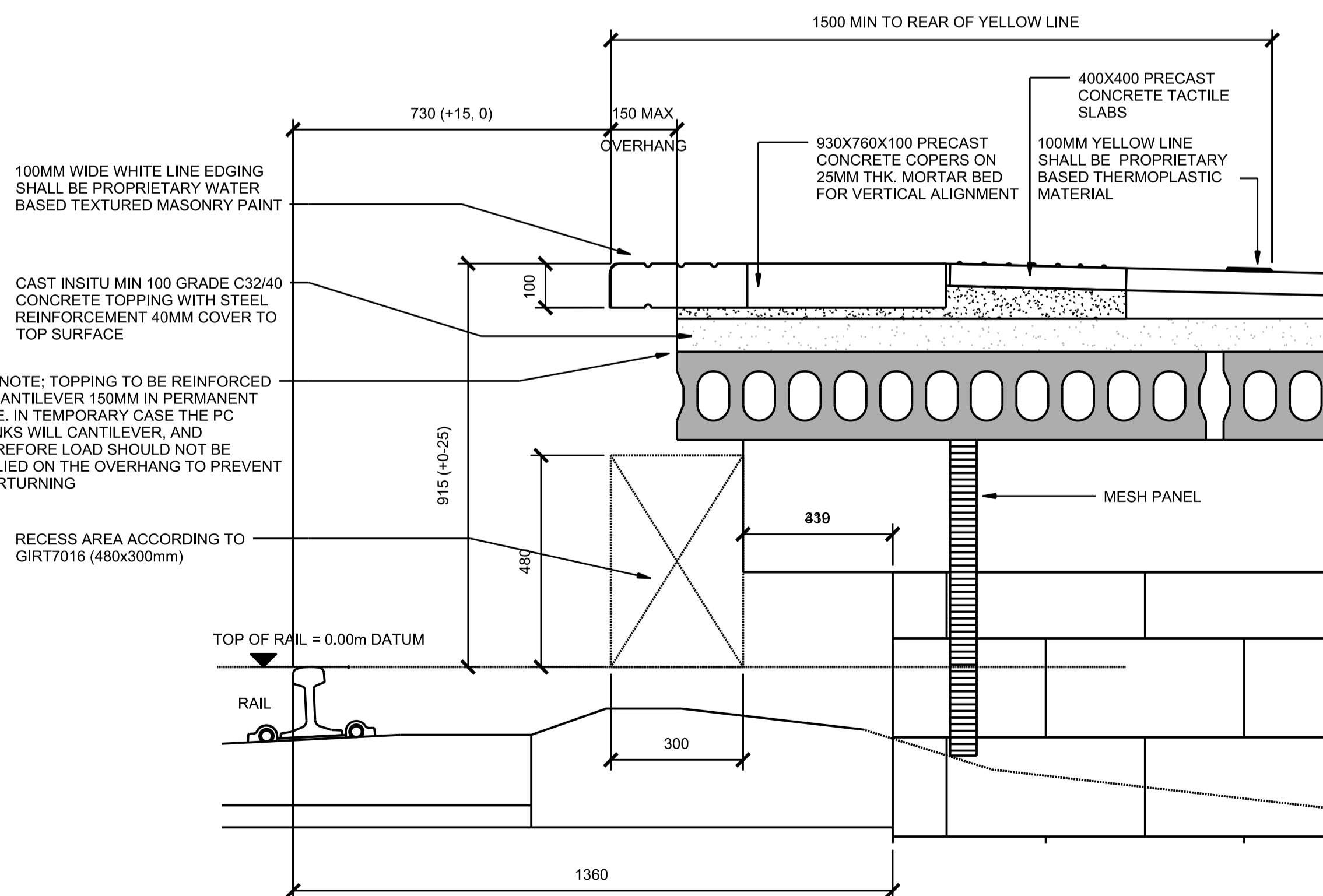
**NOTE**  
Design of platform superstructure to Network Rail typical details.

Note: Design of precast planks to allow for an additional 40mm of dense finishes to accommodate future track lifts



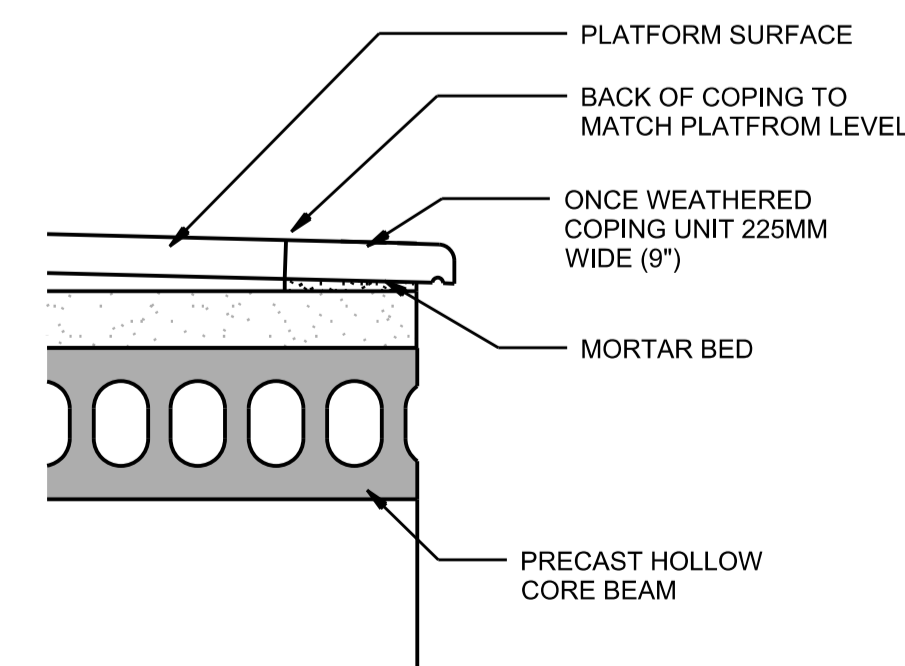
SECTION 1B (FOR LOCATION SEE DRAWING W1097B-ARP-DRG-EST-300001)

1:20



NR APPROVED PLATFORM EDGE DETAIL (FOR LOCATION SEE SECTION 1B ABOVE)

1:10



PLATFORM REAR EDGE DETAIL (FOR LOCATION SEE SECTION 1B ABOVE)

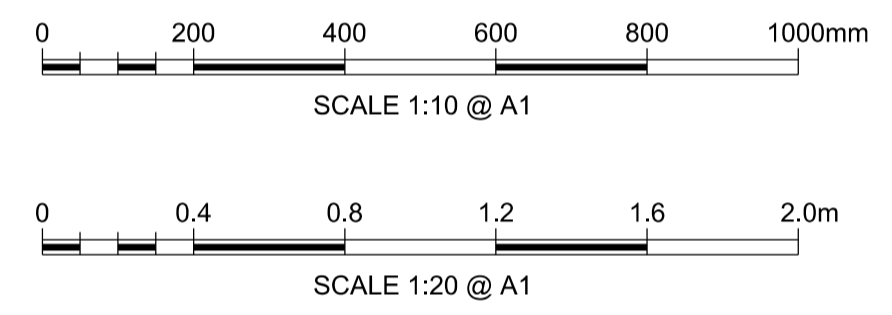
1:10

**SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION:**

In addition to the hazards / risks normally associated with the types of work detailed on this drawing, note the following:

In the temporary case the edge of the platform precast concrete unit adjacent to the track will be unsupported. In order to prevent overturning this edge should not be loaded. In the permanent case the concrete topping will cantilever to carry any load applied at the platform edge.

- Legend/Notes
1. ALL DIMENSIONS ARE IN METRES (m) UNLESS STATED OTHERWISE.
  2. ALL LEVELS ARE IN METRES ABOVE SNAKE GRID RBEPP12 (ORDNANCE DATUM + 100 METRES).
  3. THE PROPOSED RAIL ALIGNMENT IS SUBJECT TO VARIATION, AS DETAILED ON THE DRAWING.
  4. PLATFORM DETAIL DERIVED FROM NR STANDARD DETAIL FOR TYPE 1 CROSSWALL PLATFORM.
  5. STATION NAME SIGNAGE TO BE AGREED AT DETAILED DESIGN STAGE.



Rev	Date	Description of Revisions	Drawn	Chkd	Appr	Suitability
A02	24/09/19	FOR DCO APPLICATION		JB	RS	RS

FIT FOR INFORMATION S2



Contractor(s)

**ARUP** 63 St Thomas Street  
Bristol BS1 6JZ  
Tel +44(0)117 976 5432 Fax +44(0)117 976 5433  
www.arup.com

Project  
**PORTISHEAD BRANCH LINE (METROWEST PHASE 1)**

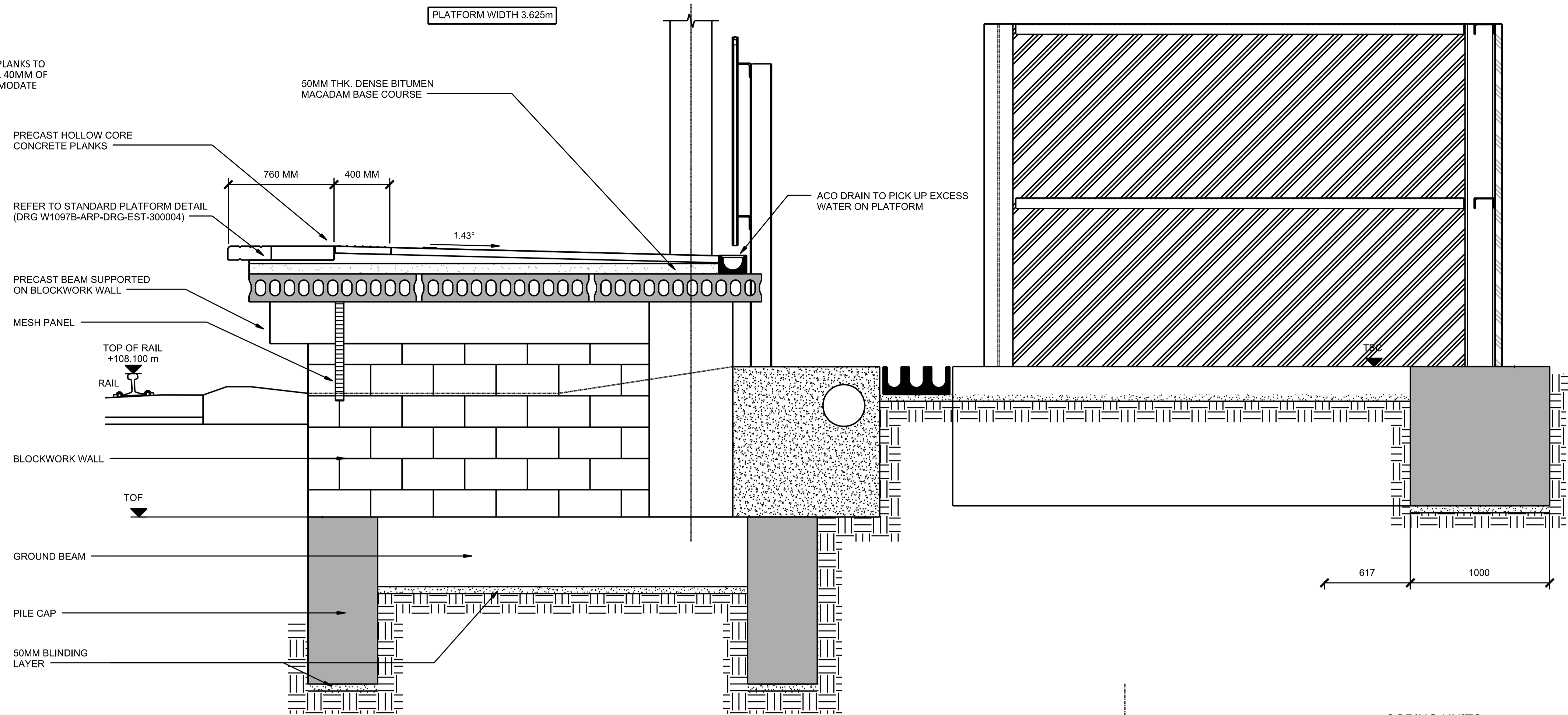
Drawing Title  
**PORTISHEAD STATION PROPOSED PLATFORM SECTIONS SHEET 1 OF 2**

Designed	J. BACINSKI	Signed	Date	24/09/19
Drawn	J. BACINSKI	Signed	Date	24/09/19
Checked	R. SNELL	Signed	Date	24/09/19
Approved	R. SNELL	Signed	Date	24/09/19
Scale(s)	1:20	ELR & Mileage	POD	

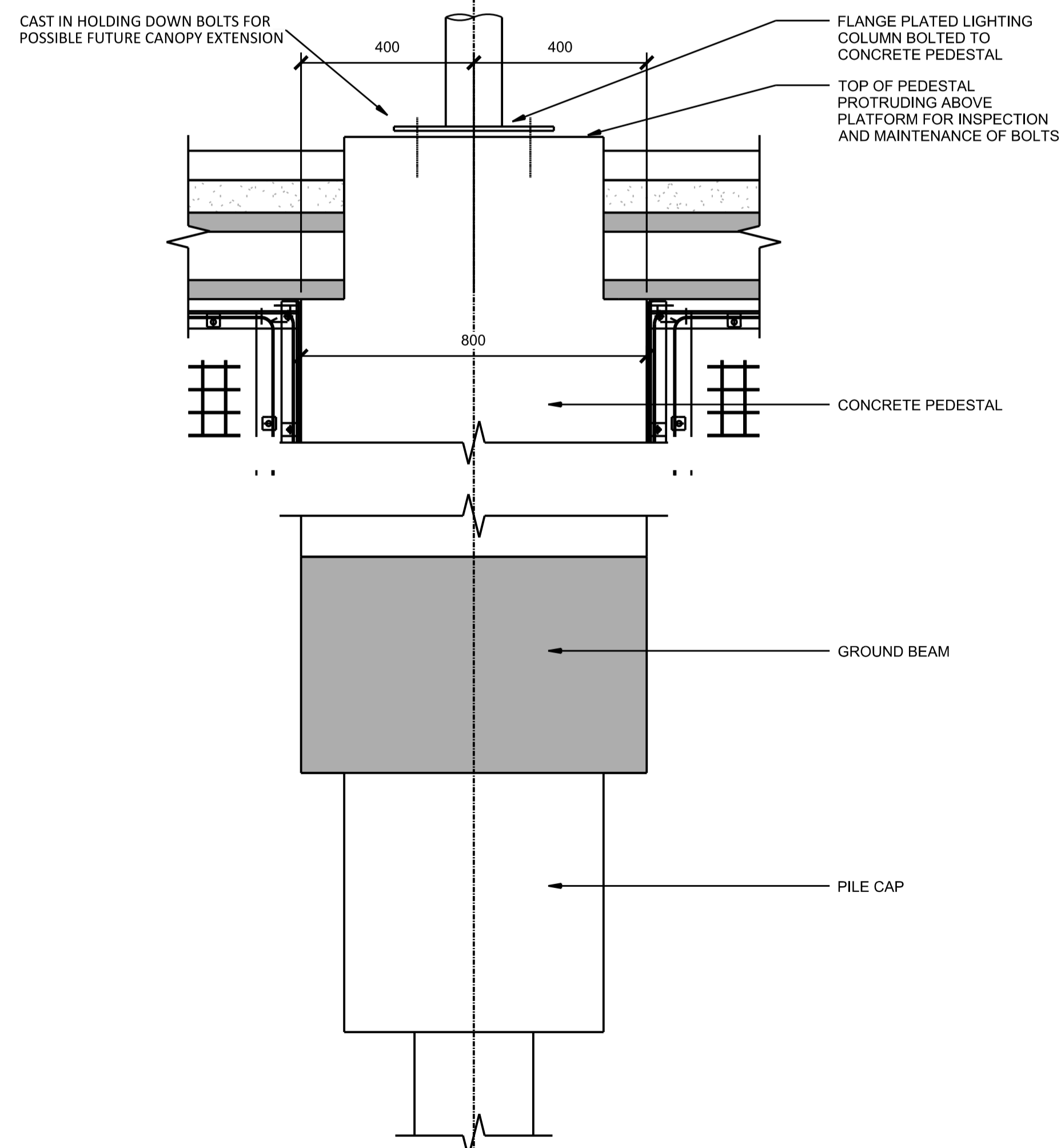
Alternative Reference  
Drawing Number  
W1097B-ARP-DRG-EST-300004

Sheet  
1 of 1  
Revision  
A02

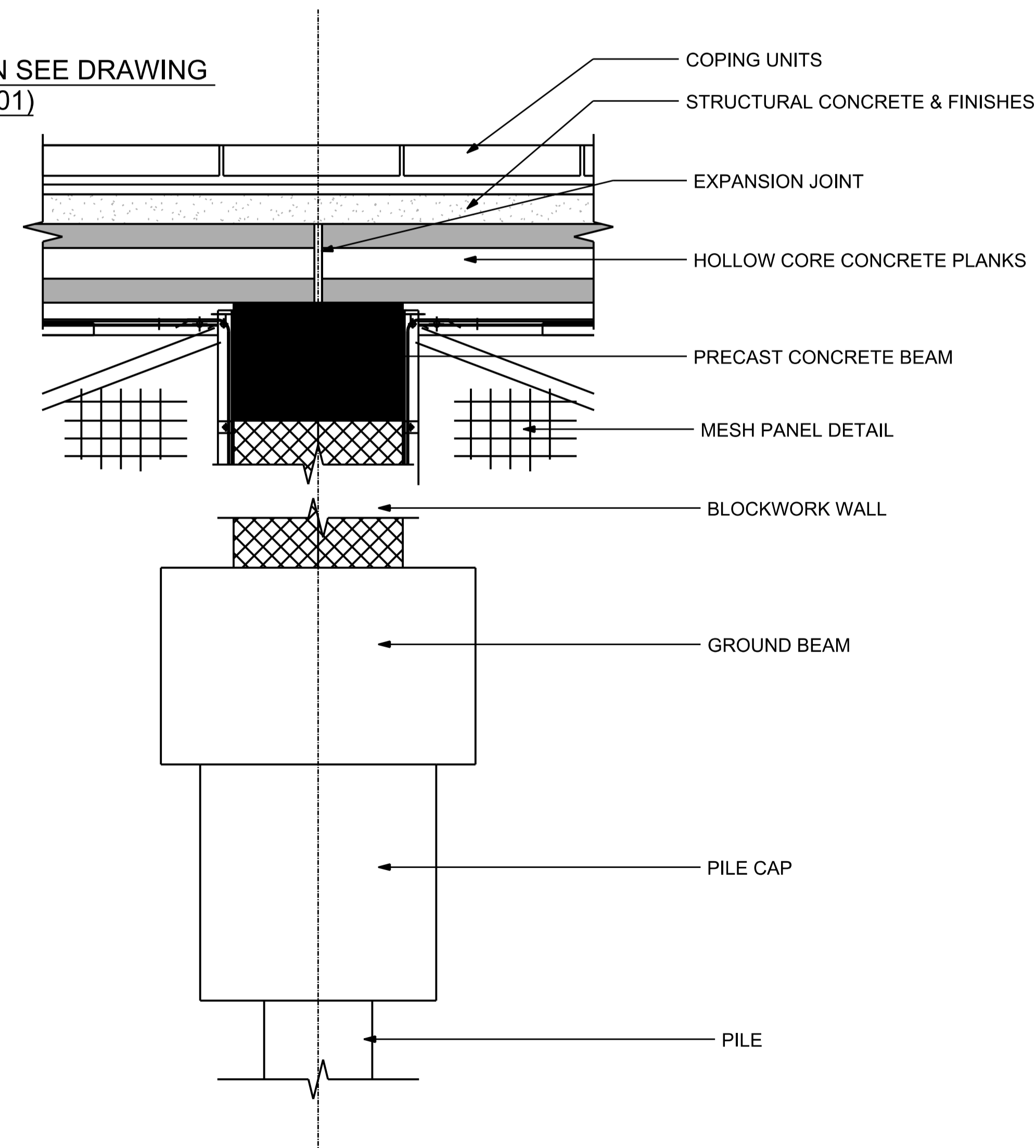
NOTE: DESIGN OF PRECAST PLANKS TO ALLOW FOR AN ADDITIONAL 40MM OF DENSE FINISHES TO ACCOMMODATE FUTURE TRACK LIFTS



SECTION 1C (FOR LOCATION SEE DRAWING W1097B-ARP-DRG-EST-300001)  
1:20

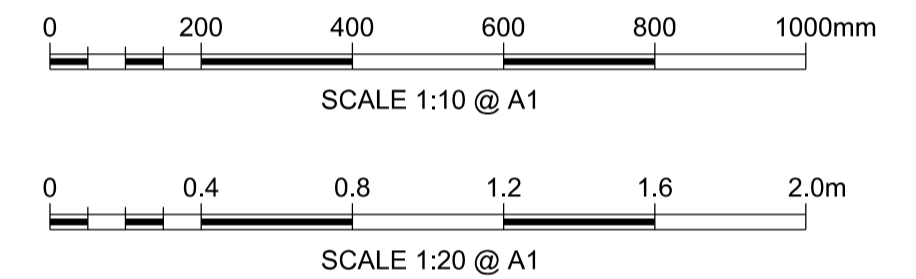


SECTION 2C (FOR LOCATION SEE DRAWING W1097B-ARP-DRG-EST-300004)  
1:10



SECTION 3C (FOR LOCATION SEE DRAWING W1097B-ARP-DRG-EST-300004)  
1:10

- Legend/Notes
1. ALL DIMENSIONS ARE IN METRES (m) UNLESS STATED OTHERWISE.
  2. ALL LEVELS ARE IN METRES ABOVE SNAKE GRID RBEP12 (ORDNANCE DATUM + 100 METRES).
  3. THE PROPOSED RAIL ALIGNMENT IS SUBJECT TO VARIATION, AS DETAILED ON THE DRAWING.
  4. PLATFORM DETAIL DERIVED FROM NR STANDARD DETAIL FOR TYPE 1 CROSSWALL PLATFORM.



Rev	Date	Description of Revisions	Drawn	Chkd	Appr	Suitability
A02	24/09/19	FOR DCO APPLICATION	JB	RS	RS	
Status						S2

FIT FOR INFORMATION



Contractor(s)

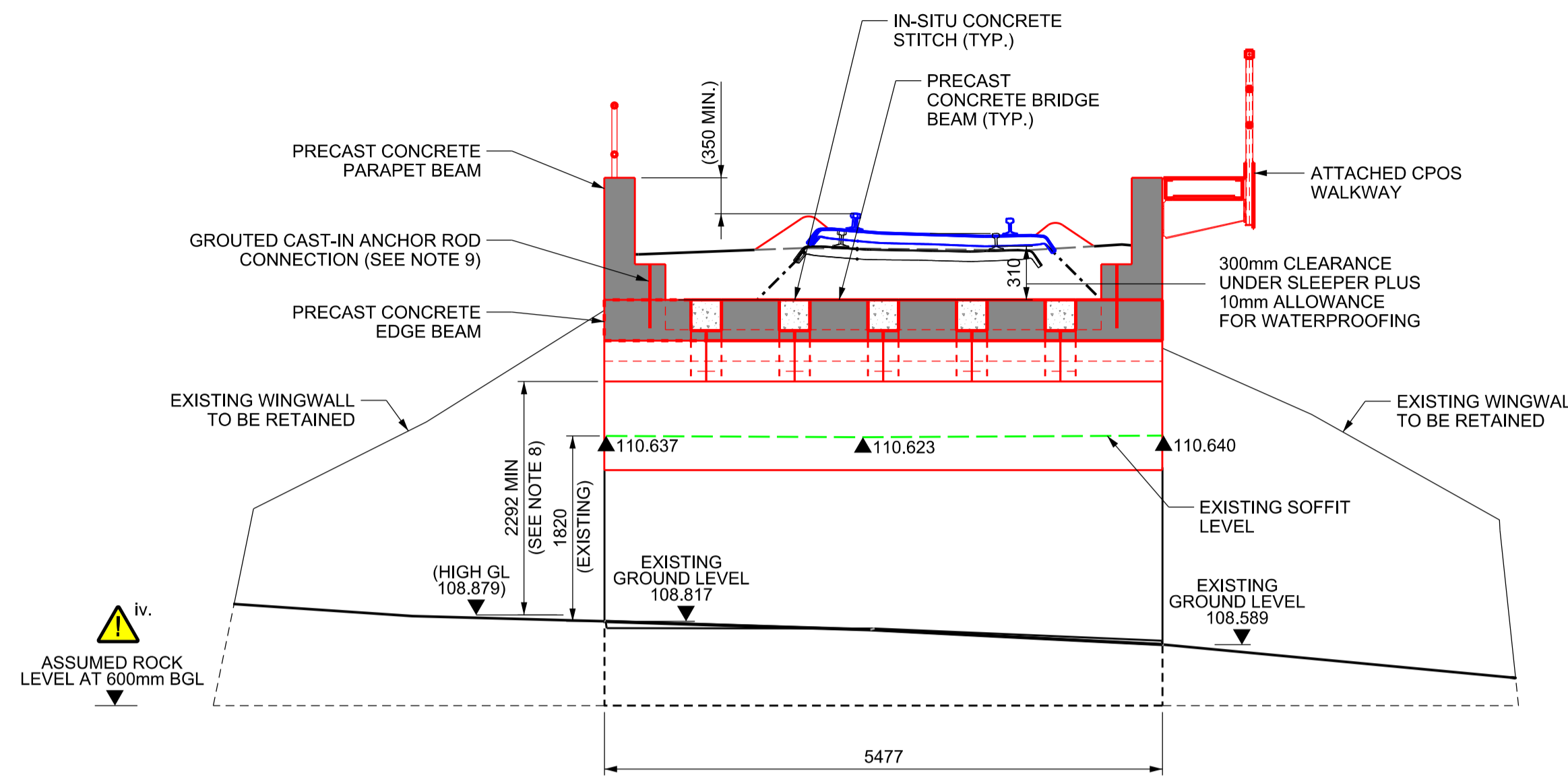
**ARUP** 63 St Thomas Street  
Bristol BS1 6JZ  
Tel +44(0)117 976 5432 Fax +44(0)117 976 5433  
www.arup.com

Project  
PORTISHEAD BRANCH LINE  
(METROWEST PHASE 1)

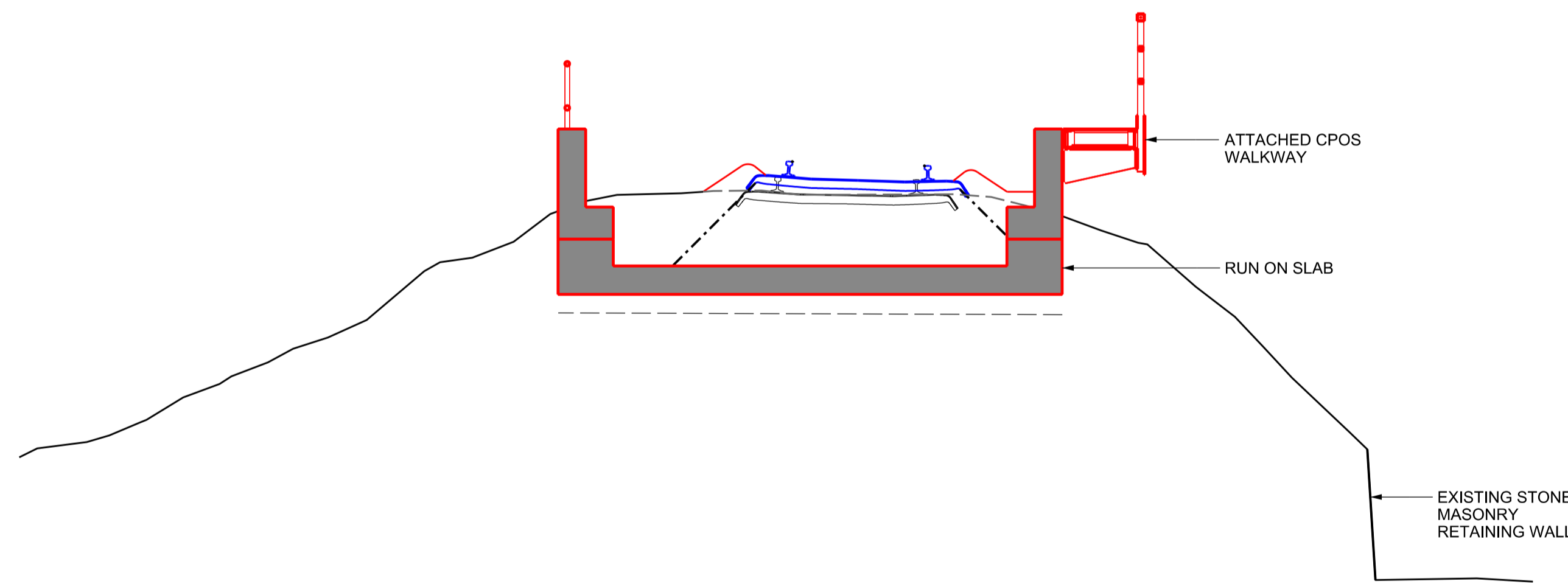
Drawing Title  
PORTISHEAD STATION  
PROPOSED PLATFORM  
SECTIONS  
SHEET 2 OF 2

Designed	J. BACINSKI	Signed	Date	24/09/19
Drawn	J. BACINSKI	Signed	Date	24/09/19
Checked	R. SNELL	Signed	Date	24/09/19
Approved	R. SNELL	Signed	Date	24/09/19
Scale(s)	1:20	ELR & Mileage	POD	

Alternative Reference	Sheet	1 of 1
Drawing Number	Revision	
W1097B-ARP-DRG-EST-300005	A02	



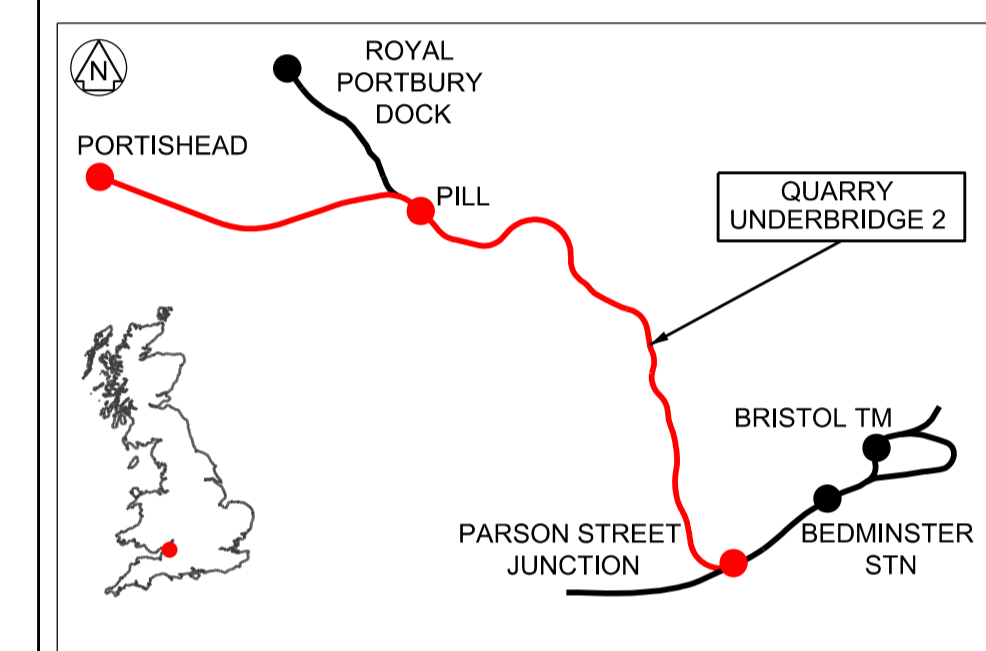
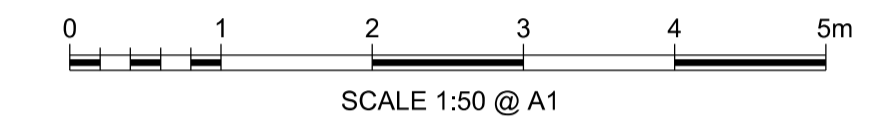
SECTION 1 AT CENTRELINE OF BRIDGE  
(FOR LOCATION SEE DRAWING W1097B-ARP-DRG-EST-300016)  
SCALE 1:50



SECTION 2 AT RUN-ON SLAB  
(FOR LOCATION SEE DRAWING W1097B-ARP-DRG-EST-300016)  
SCALE 1:50

SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION	
i.	PREVIOUS REPAIR DRAWINGS DO NOT CONFIRM ABUTMENT SHAPE, ABUTMENT THICKNESS AND STABILITY TO BE VERIFIED AT DETAILED DESIGN, SITE INVESTIGATION REQUIRED.
ii.	SERVICES ARE PRESENT ON THE BRIDGE BUT ARE NOT SHOWN.
iii.	THE STABILITY OF THE EXISTING ABUTMENTS AND WINGWALLS DURING EXCAVATION SHOULD BE VERIFIED AT DETAILED DESIGN STAGE.
iv.	NO GROUND INVESTIGATION WAS UNDERTAKEN FOR FORM 001 DESIGN. THE DESIGN IS THEREFORE BASED ON THE GROUND CONDITIONS ILLUSTRATED WITHIN THE AS-BUILT DRAWINGS FOR QUARRY UNDERBRIDGE 1, LOCATED APPROXIMATELY 150m FROM THE STRUCTURE. THERE IS A RESIDUAL RISK THAT ANY VARIATIONS IN THE ANTICIPATED ROCK LEVEL COULD SIGNIFICANTLY AFFECT THE FORM OF THE PROPOSED STRUCTURE.
v.	POOR ACCESS TO SITE. TRACK ACCESS MAY BE REQUIRED FOR CONSTRUCTION.

- Legend/Notes
- GENERAL NOTES
- ALL DIMENSIONS ARE IN MILLIMETRES (mm) UNLESS STATED OTHERWISE.
  - ALL LEVELS ARE IN METRES ABOVE SNAKE GRID RBEP12 (ORDNANCE DATUM + 100 METRES).
  - THIS DRAWING IS BASED ON TOPOGRAPHICAL SURVEY UNDERTAKEN BY SEVERN PARTNERSHIP LTD. IN 2015.
  - BURIED SERVICES HAVE BEEN TAKEN FROM NETWORK RAIL SUPPLIED BURIED SERVICES RETURN DATED 2015. NO FURTHER SURVEYS HAVE BEEN UNDERTAKEN BY ARUP.
  - NO GROUND INVESTIGATION HAS BEEN UNDERTAKEN IN THE PREPARATION OF THIS DESIGN. THIS MUST BE UNDERTAKEN AT DETAILED DESIGN TO CONFIRM THAT THE EXISTING ABUTMENTS ARE FOUNDED ON COMPETENT ROCK.
  - REFER TO THE PROPOSED TRACK SUBMISSION FOR SIGNAGE REQUIREMENTS.
  - PROPOSED HEADROOM TO BE EQUAL TO OR GREATER THAN EXISTING MINIMUM HEADROOM AT CENTRELINE OF 1.82m. SUBJECT TO DETAILED DESIGN, UP TO 2.292m MAY BE AVAILABLE
  - THREADED ANCHOR RODS TO BE CAST IN TO PRECAST EDGE BEAM, TO ALLOW BOLTED CONNECTION OF PRECAST PARAPET BEAM, REDUCING THE REQUIRED IN-SITU CONCRETE.



LOCATION PLAN

Rev	Date	Description of Revisions	Drawn	Chkd	Appr	Suitability
A02	20/09/19	FOR DCO APPLICATION				RS
						RS
						RS
Status						S2



Contractor(s)

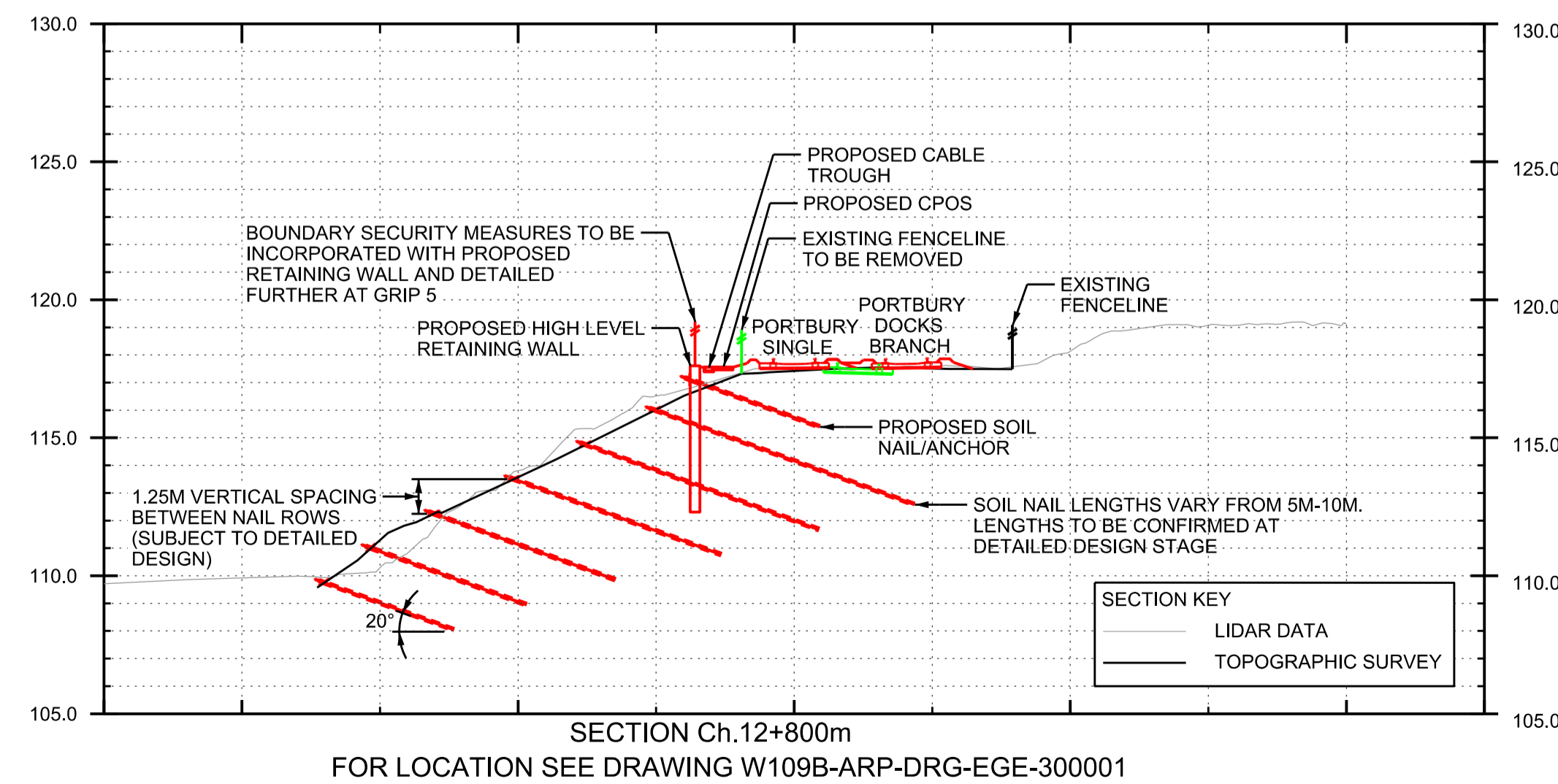
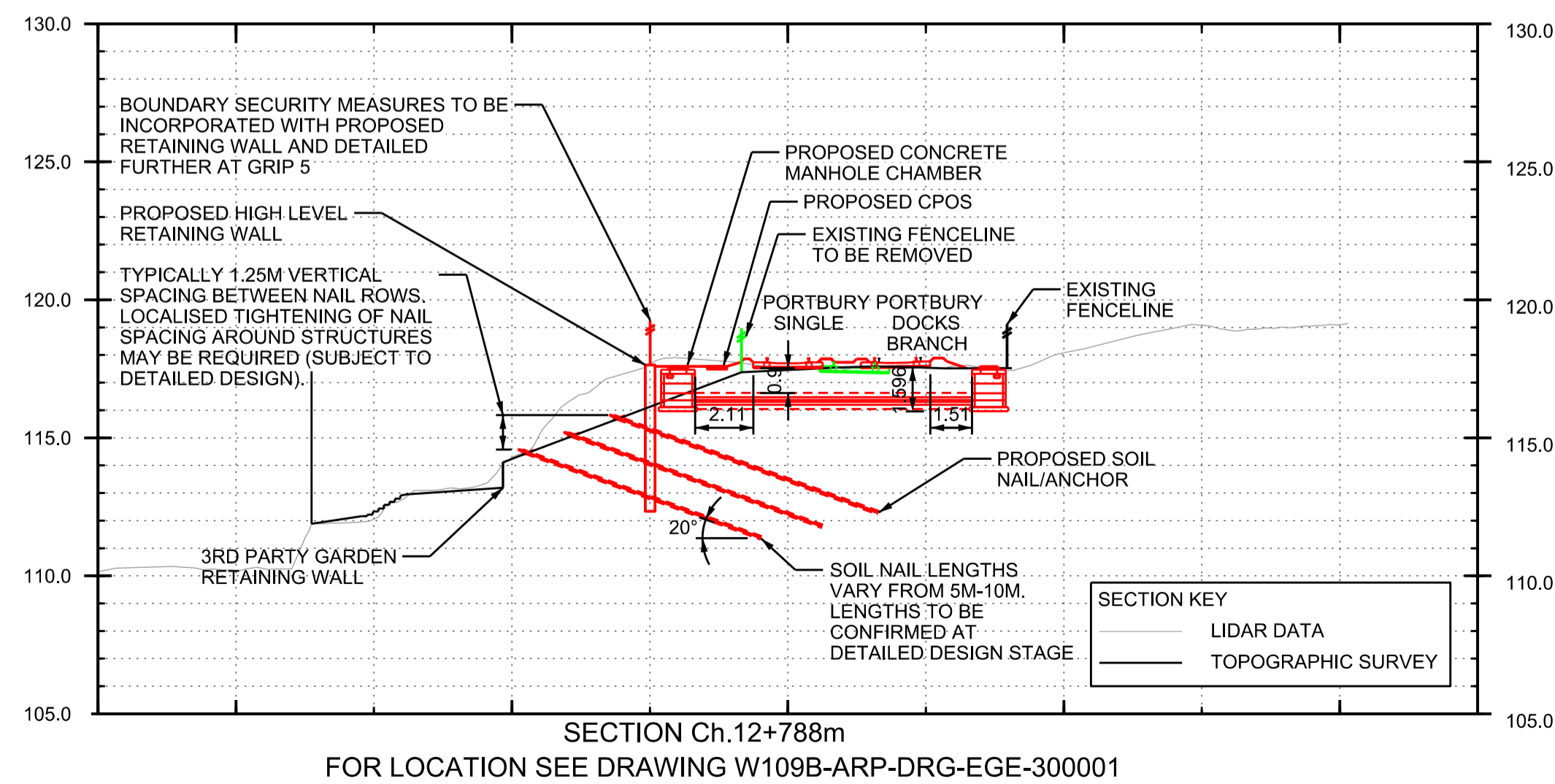
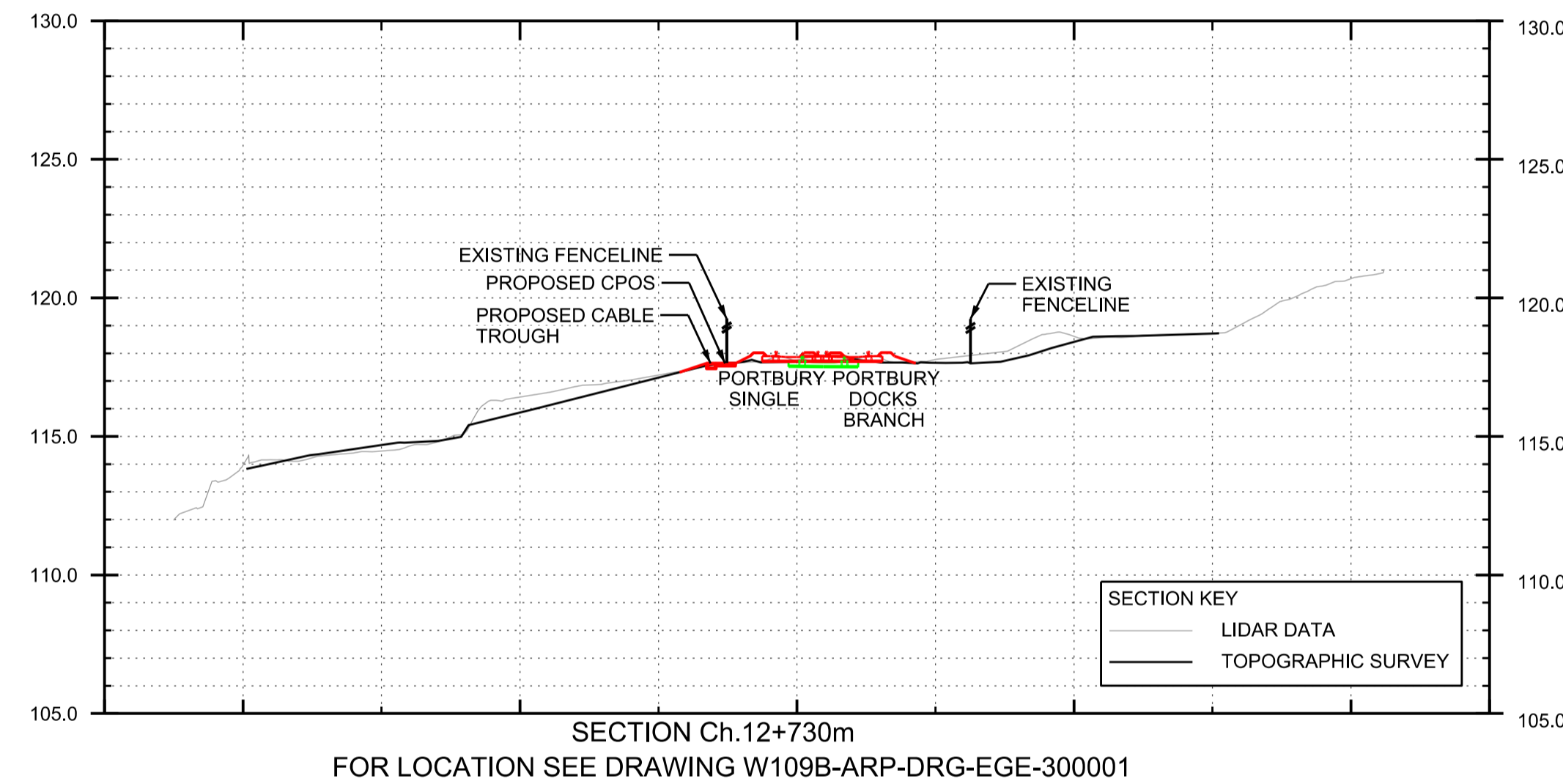
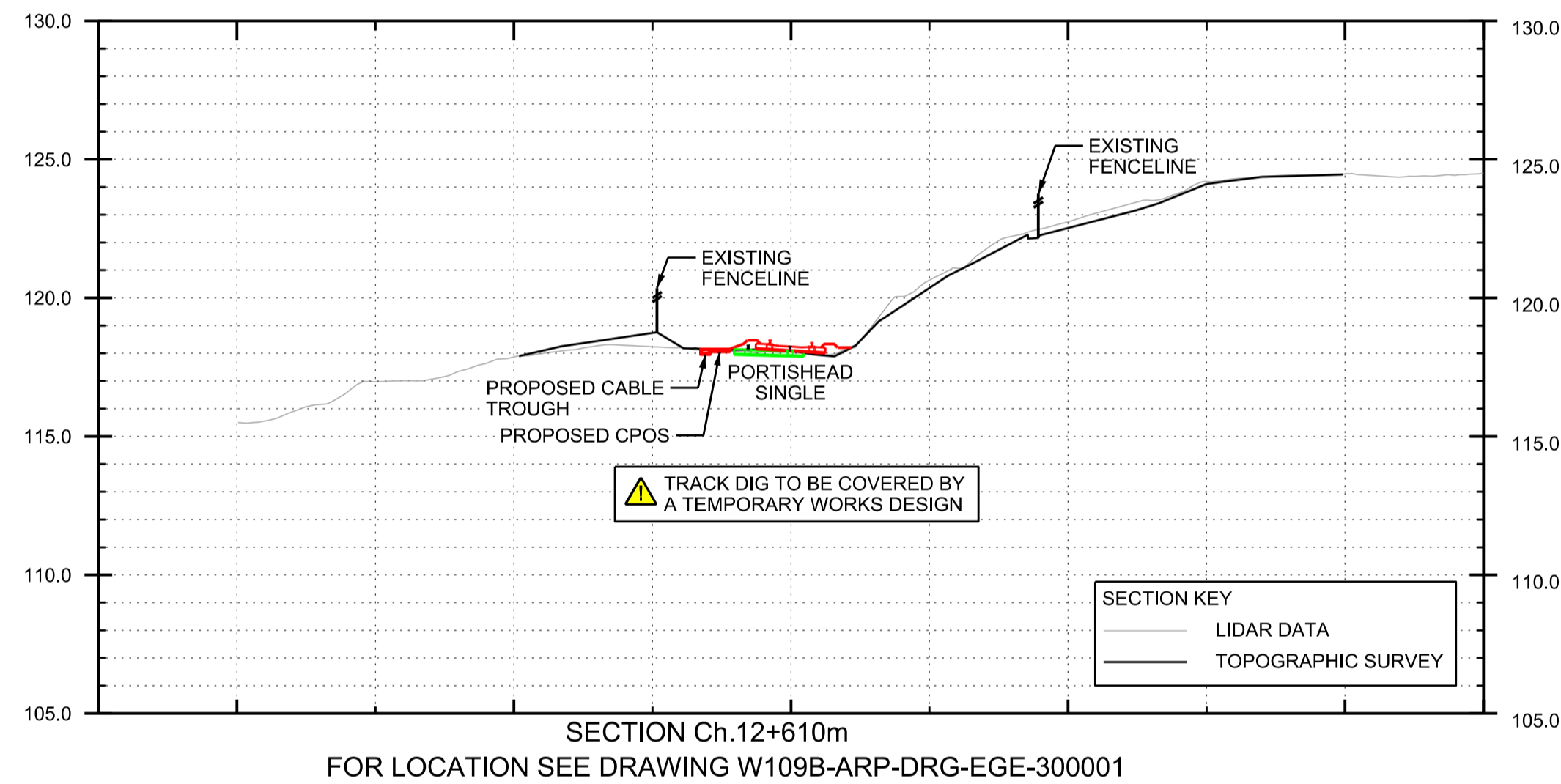
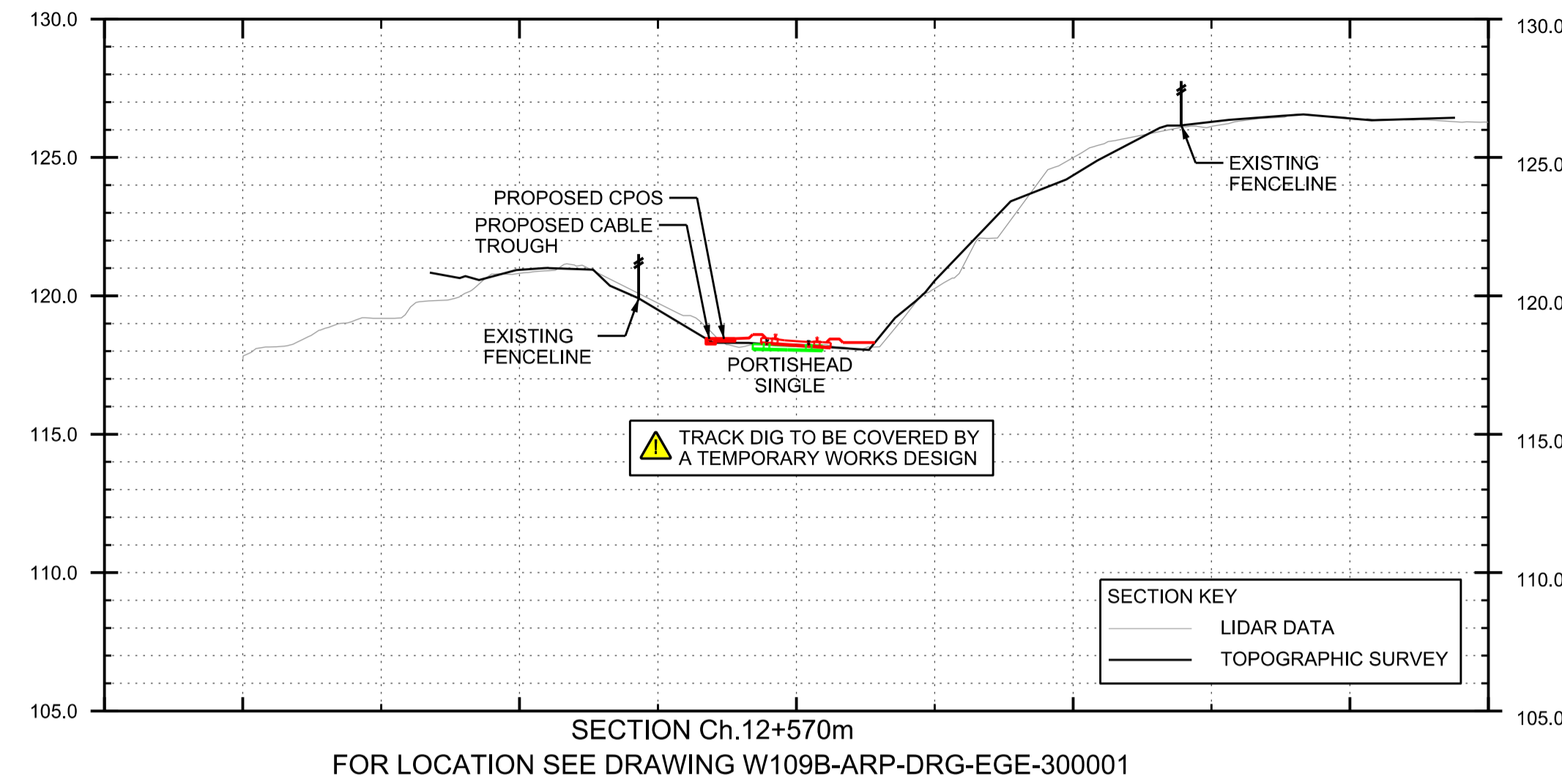
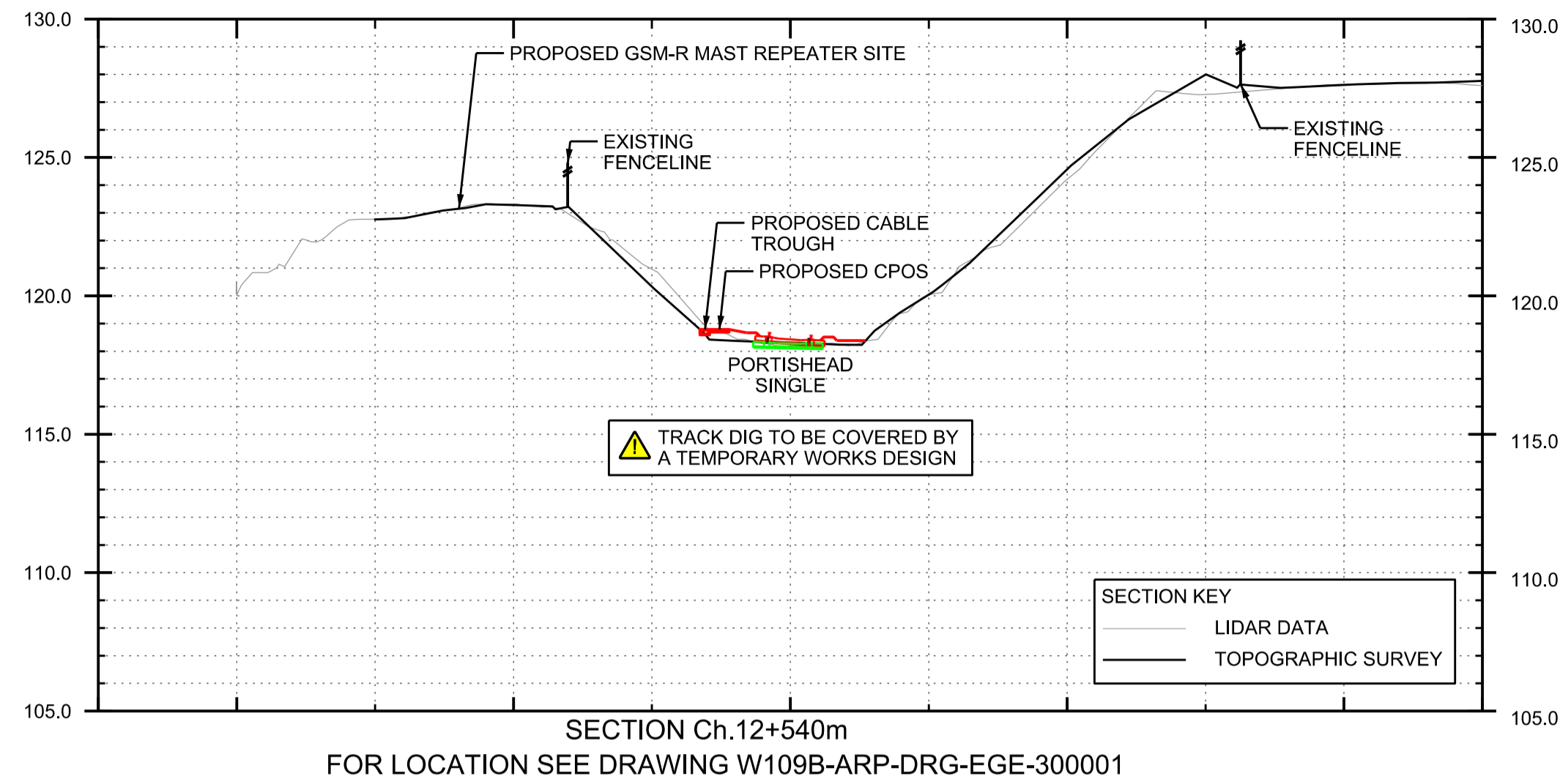
**ARUP**  
63 St Thomas Street  
Bristol BS1 6JZ  
Tel +44(0)117 976 5432 Fax +44(0)117 976 5433  
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Project  
**PORTISHEAD BRANCH LINE  
(METROWEST PHASE 1)**

Drawing Title  
**S022 QUARRY UNDERBRIDGE 2  
PROPOSED SECTIONS**

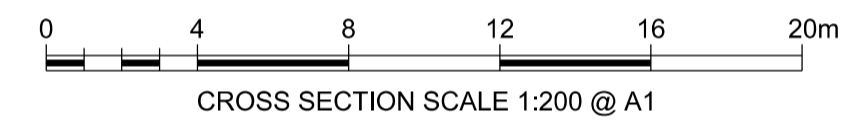
Designed	J. BACINSKI	Signed	Date	20/09/19
Drawn	J. BACINSKI	Signed	Date	20/09/19
Checked	R. SNELL	Signed	Date	20/09/19
Approved	R. SNELL	Signed	Date	20/09/19

Scale(s)	As Shown	ELR & Mileage	POD 122m 74ch
Alternative Reference		Sheet	1 of 1
Drawing Number	W1097B-ARP-DRG-EST-300017	Revision	A02



GENERAL NOTES:

01. THE CONTRACTOR MUST REFER TO THE HAZARD REGISTER FOR RISK CONCERNING THE WORKS. SOME OF THE KEY SITE SPECIFIC RISKS ARE HIGHLIGHTED ON THE DRAWING.
02. ALL LEVELS ARE SHOWN IN METRES ABOVE ORDINANCE DATUM (MAOD). UNLESS NOTED OTHERWISE, ALL DIMENSIONS ARE IN METRES.
03. DO NOT SCALE FROM THIS DRAWING. ONLY FIGURED DIMENSIONS AND LEVELS TO BE USED.
04. DESIGN BASED ON TOPOGRAPHICAL SURVEY CARRIED OUT BETWEEN SEPTEMBER 2015 AND SEPTEMBER 2016 BY SEVERN PARTNERSHIP. IN SOME AREAS WHERE THE FACE OF THE EXISTING EARTHWORK IS STEEP OR INACCESSIBLE THE EXISTING PROFILE OF THE SLOPE HAS BEEN EXTRAPOLATED BASED ON ONE POINT AT THE CREST OF THE SLOPE AND ONE POINT AT THE TOE OF THE SLOPE. THE CONTRACTOR SHOULD BE AWARE OF THE APPROXIMATION OF THIS METHOD WHEN ASSESSING TEMPORARY WORKS AND CUT / FILL VOLUMES.
05. THE CONTRACTOR IS TO ENSURE THE TEMPORARY STABILITY OF ANY CUT SLOPES. IN DOING SO THE CONTRACTOR SHOULD CONSIDER THE EXTENT OF SLOPE (I.E. PARALLEL TO THE TRACK) THAT CAN BE EXCAVATED AT ANY ONE TIME AND THE TIME PERIOD BEFORE BACKFILLING OR STABILISING.
06. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TEMPORARY SUPPORTS AND / OR RESTRICTION ON THE SEQUENCE OF CONSTRUCTION; INCLUDING PROTECTION OF THE TRACK AND ALL EXISTING LINESIDE EQUIPMENT WHICH WILL REMAIN IN OPERATION DURING THE WORKS.
07. POSSESSION REQUIREMENTS FOR THE WORKS ARE TO BE IDENTIFIED AND MANAGED BY THE CONTRACTOR.
08. MONITORING OF THE EMBANKMENT AND THE EXISTING PORTBURY DOCKS LINE IS REQUIRED DURING THE WORKS. THIS IS TO BE AS SPECIFIED DURING DETAILED DESIGN.
09. SEE DRAWING AND W109B-ARP-DRG-EGE-300001 FOR GENERAL ARRANGEMENT, AND W109B-ARP-DRG-EGE-300002 FOR DETAILS OF SOIL NAILS.
10. NO GI UNDERTAKEN AT GRIP 3 - TO BE COMPLETED AHEAD OF DETAILED DESIGN.



A02	20/09/19	FOR DCO APPLICATION	JB	RS	RS
Rev	Date	Description of Revisions	Drawn	Chkd	Appr
Status					Suitability
FIT FOR INFORMATION					S2



Contractor(s)

**ARUP**  
63 St Thomas Street  
Bristol BS1 6JZ  
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Project  
**PORTISHEAD BRANCH LINE  
(METROWEST PHASE 1)**

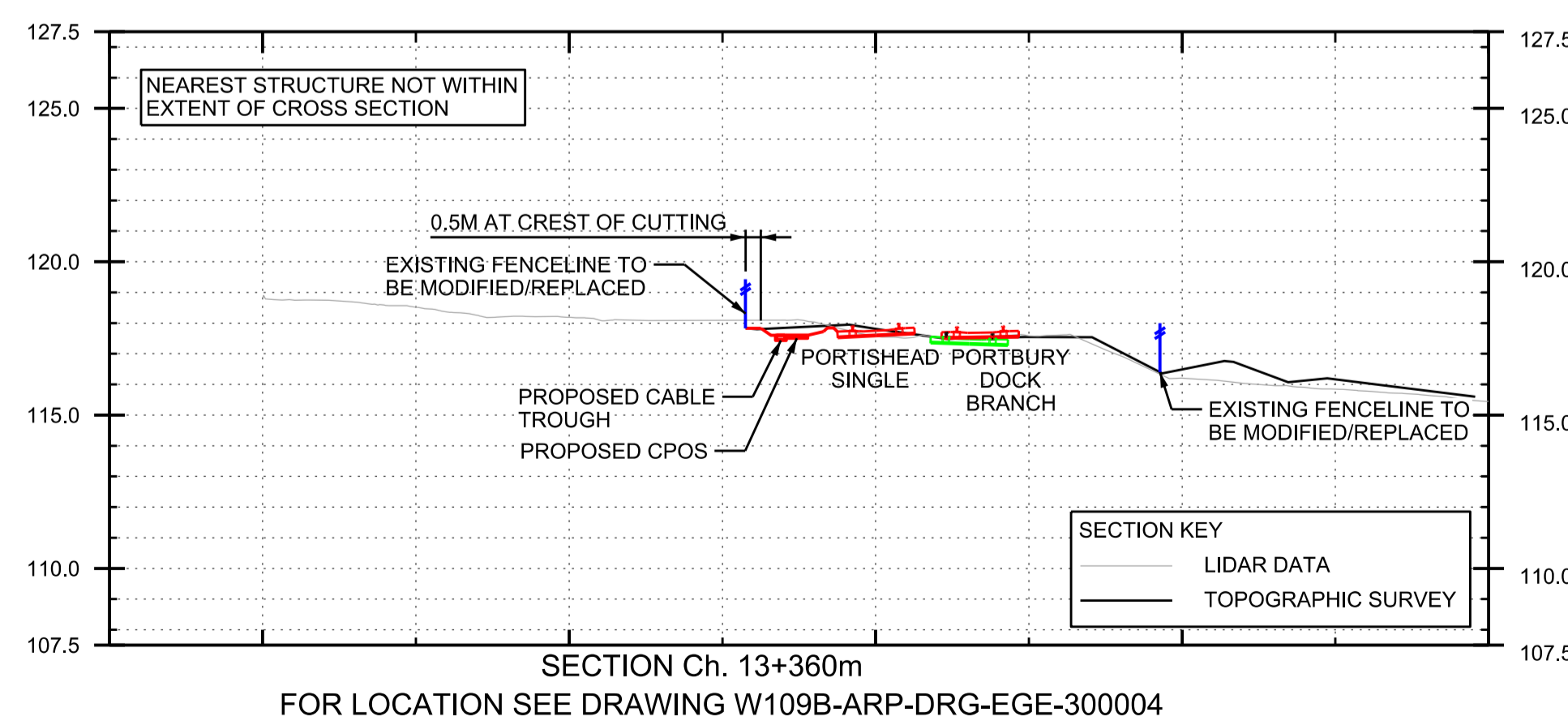
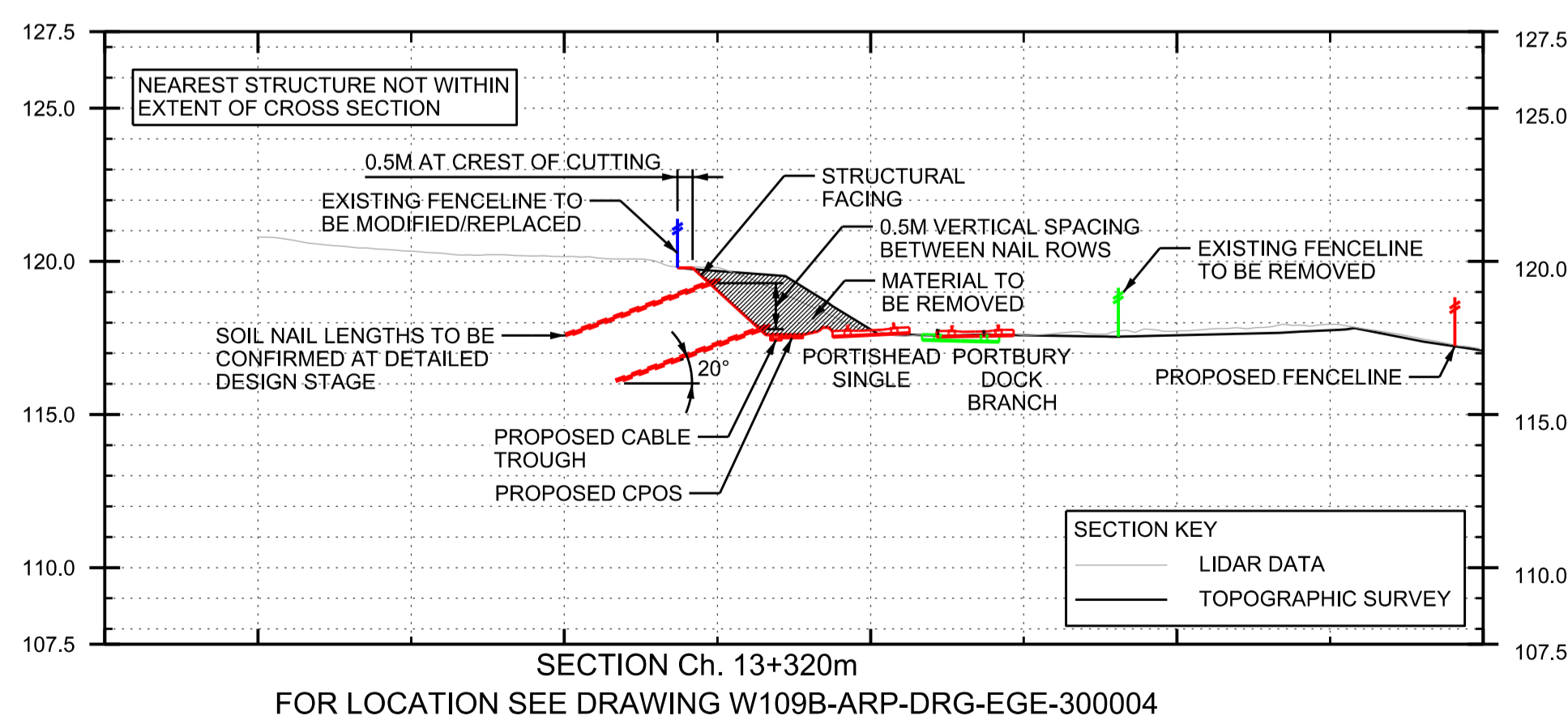
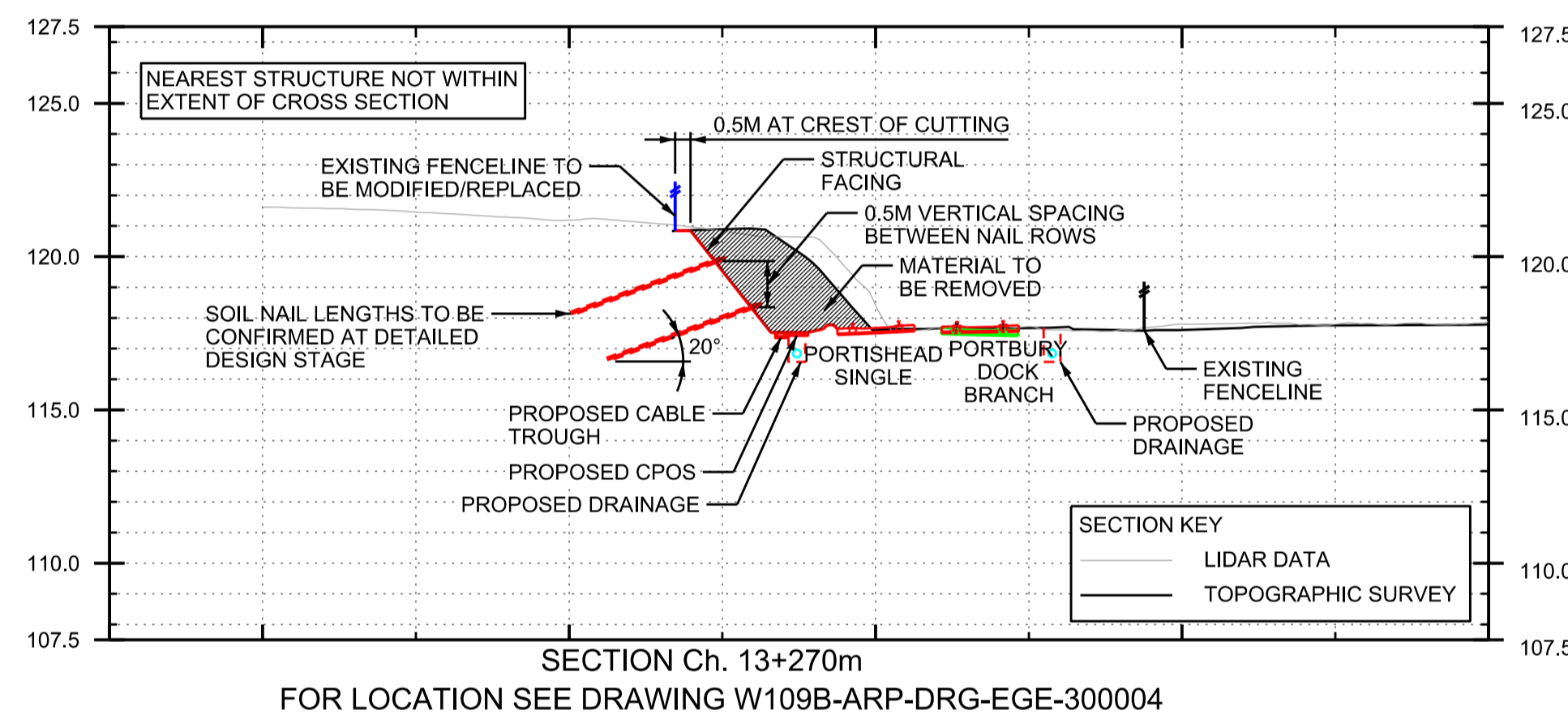
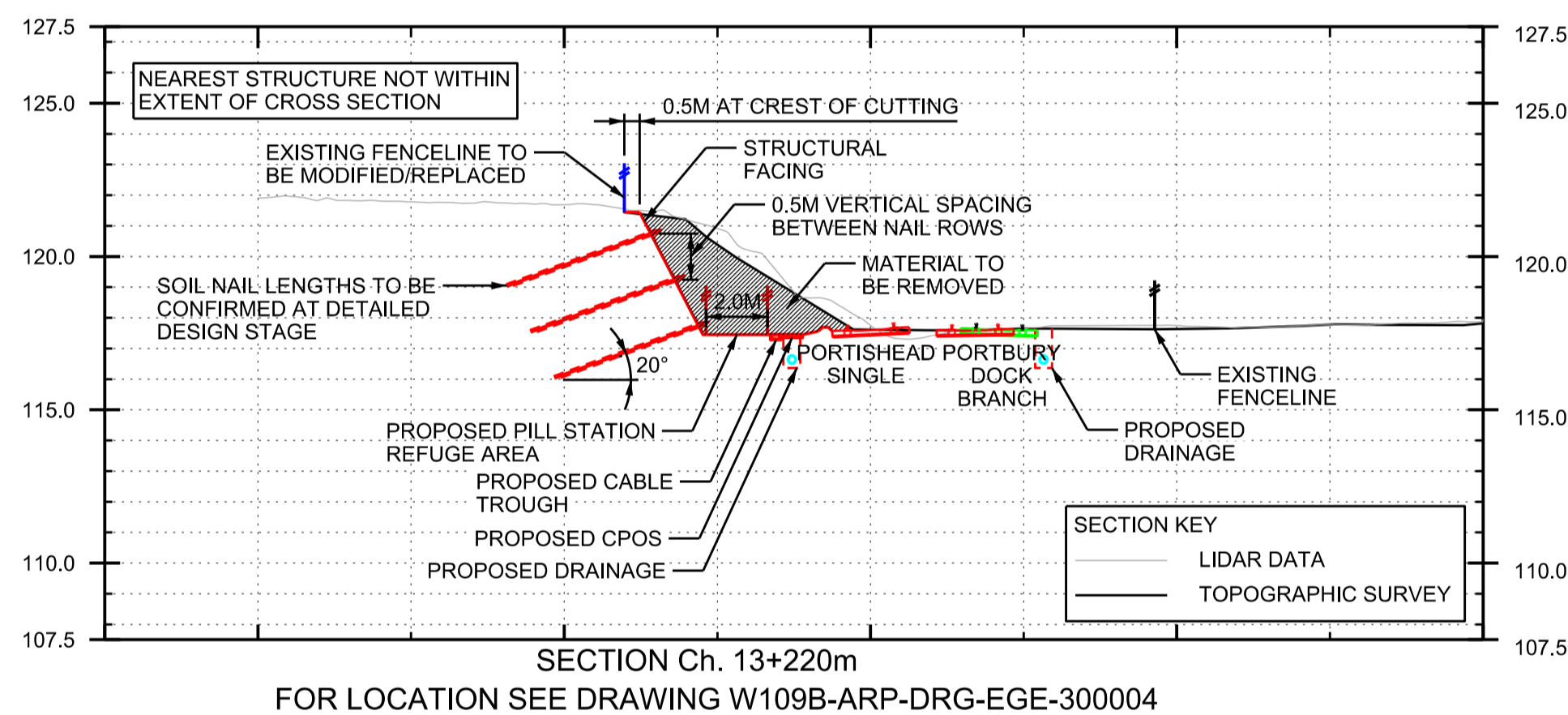
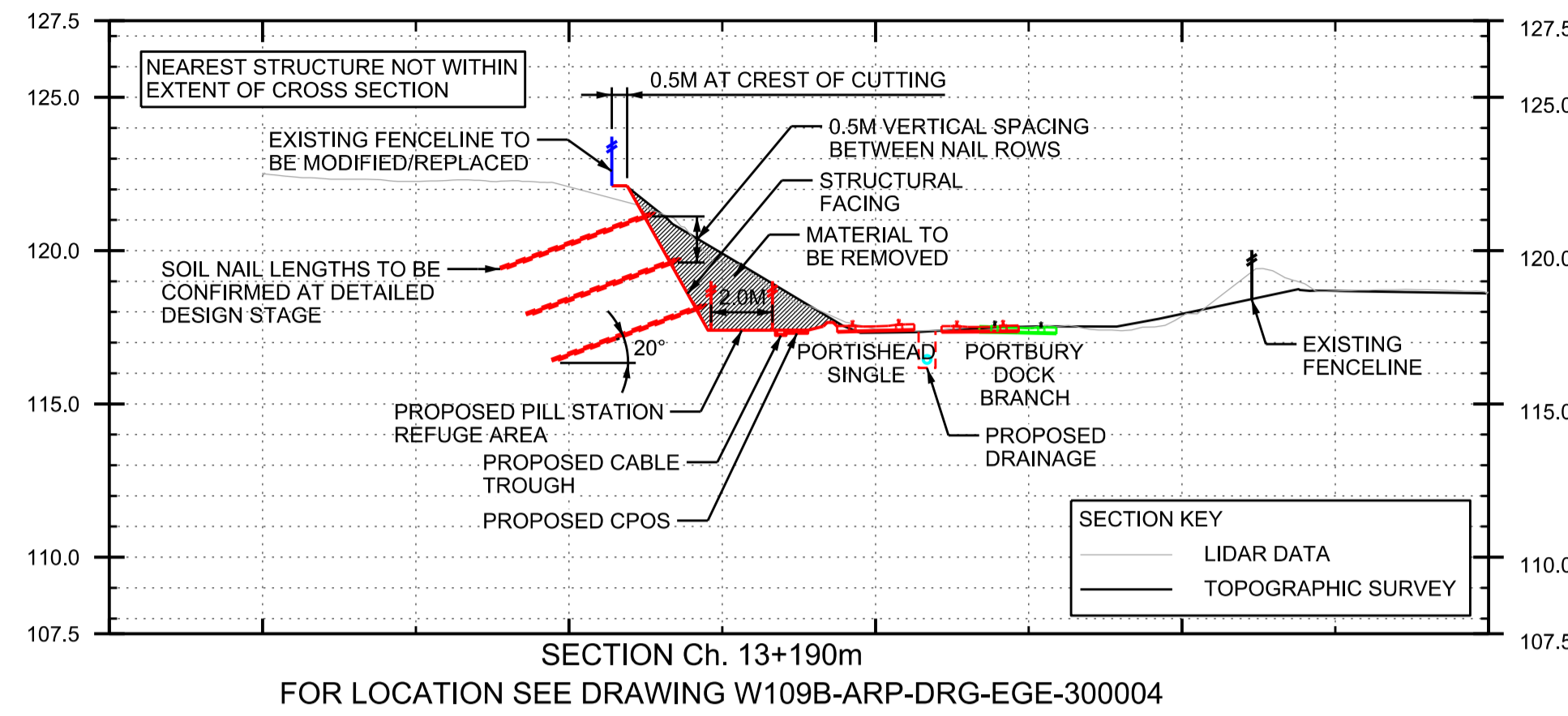
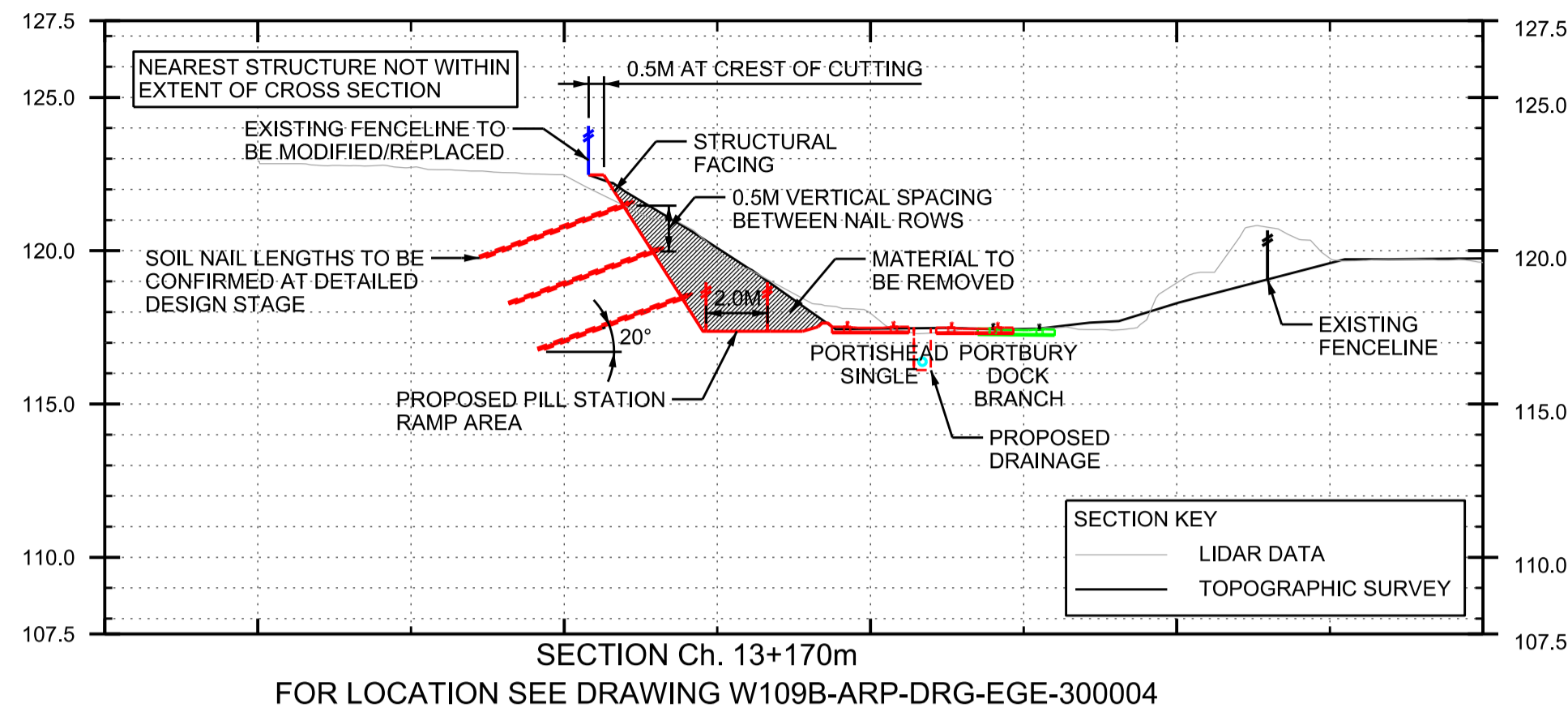
Drawing Title  
**MOUNT PLEASANT EMBANKMENT  
TYPICAL CROSS SECTIONS  
POD 125M 63.5CH TO 125M 77.5CH  
(12510M TO 12830M)**

Designed	J. BACINSKI	Signed		Date	20/09/19
Drawn	J. BACINSKI	Signed		Date	20/09/19
Checked	R. SNELL	Signed		Date	20/09/19
Approved	R. SNELL	Signed		Date	20/09/19

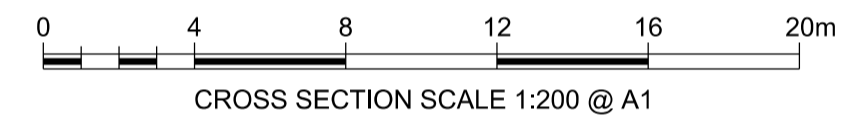
Scale(s)  
1:200  
ELR & Mileage  
POD 125M 63.5CH

Alternative Reference  
Sheet  
1 of 1

Drawing Number  
W1097B-ARP-DRG-EGE-300003 A02



- GENERAL NOTES:
01. THE CONTRACTOR MUST REFER TO THE HAZARD REGISTER FOR RISK CONCERNING THE WORKS. SOME OF THE KEY SITE SPECIFIC RISKS ARE HIGHLIGHTED ON THE DRAWING.
  02. ALL LEVELS ARE SHOWN IN METRES ABOVE ORDNANCE DATUM (MAOD). UNLESS NOTED OTHERWISE, ALL DIMENSIONS ARE IN METRES.
  03. DO NOT SCALE FROM THIS DRAWING, ONLY FIGURED DIMENSIONS AND LEVELS TO BE USED.
  04. DESIGN BASED ON TOPOGRAPHICAL SURVEY CARRIED OUT BETWEEN SEPTEMBER 2015 AND SEPTEMBER 2016 BY SEVERN PARTNERSHIP. IN SOME AREAS WHERE THE FACE OF THE EXISTING EARTHWORK IS STEEP OR INACCESSIBLE THE EXISTING PROFILE OF THE SLOPE HAS BEEN EXTRAPOLATED BASED ON ONE POINT AT THE CREST OF THE SLOPE AND ONE POINT AT THE TOE OF THE SLOPE. THE CONTRACTOR SHOULD BE AWARE OF THE APPROXIMATION OF THIS METHOD WHEN ASSESSING TEMPORARY WORKS AND CUT / FILL VOLUMES.
  05. THE CONTRACTOR IS TO ENSURE THE TEMPORARY STABILITY OF ANY CUT SLOPES. IN DOING SO THE CONTRACTOR SHOULD CONSIDER THE EXTENT OF SLOPE (I.E. PARALLEL TO THE TRACK) THAT CAN BE EXCAVATED AT ANY ONE TIME AND THE TIME PERIOD BEFORE BACKFILLING OR STABILISING.
  06. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TEMPORARY SUPPORTS AND / OR RESTRICTION ON THE SEQUENCE OF CONSTRUCTION; INCLUDING PROTECTION OF THE TRACK AND ALL EXISTING LINESIDE EQUIPMENT WHICH WILL REMAIN IN OPERATION DURING THE WORKS.
  07. POSSESSION REQUIREMENTS FOR THE WORKS ARE TO BE IDENTIFIED AND MANAGED BY THE CONTRACTOR.
  08. SEE DRAWING AND W109B-ARP-DRG-EGE-300004 FOR GENERAL ARRANGEMENT, AND W109B-ARP-DRG-EGE-300005 FOR DETAILS OF SOIL NAILS AND STRUCTURAL FACING.
  09. NO GI UNDERTAKEN AT GRIP 3 - TO BE COMPLETED AHEAD OF DETAILED DESIGN.



Rev	Date	Description of Revisions	Drawn	Chkd	Appr
A01	23/07/19	FOR DCO APPLICATION	RJ	VTW	RP
Status					Suitability
					S2

FIT FOR INFORMATION



Contractor(s)

**ARUP** 63 St Thomas Street  
Bristol BS1 6JZ  
Tel +44(0)117 976 5432 Fax +44(0)117 976 5433  
www.arup.com

Project  
**PORTISHEAD BRANCH LINE  
(METROWEST PHASE 1)**

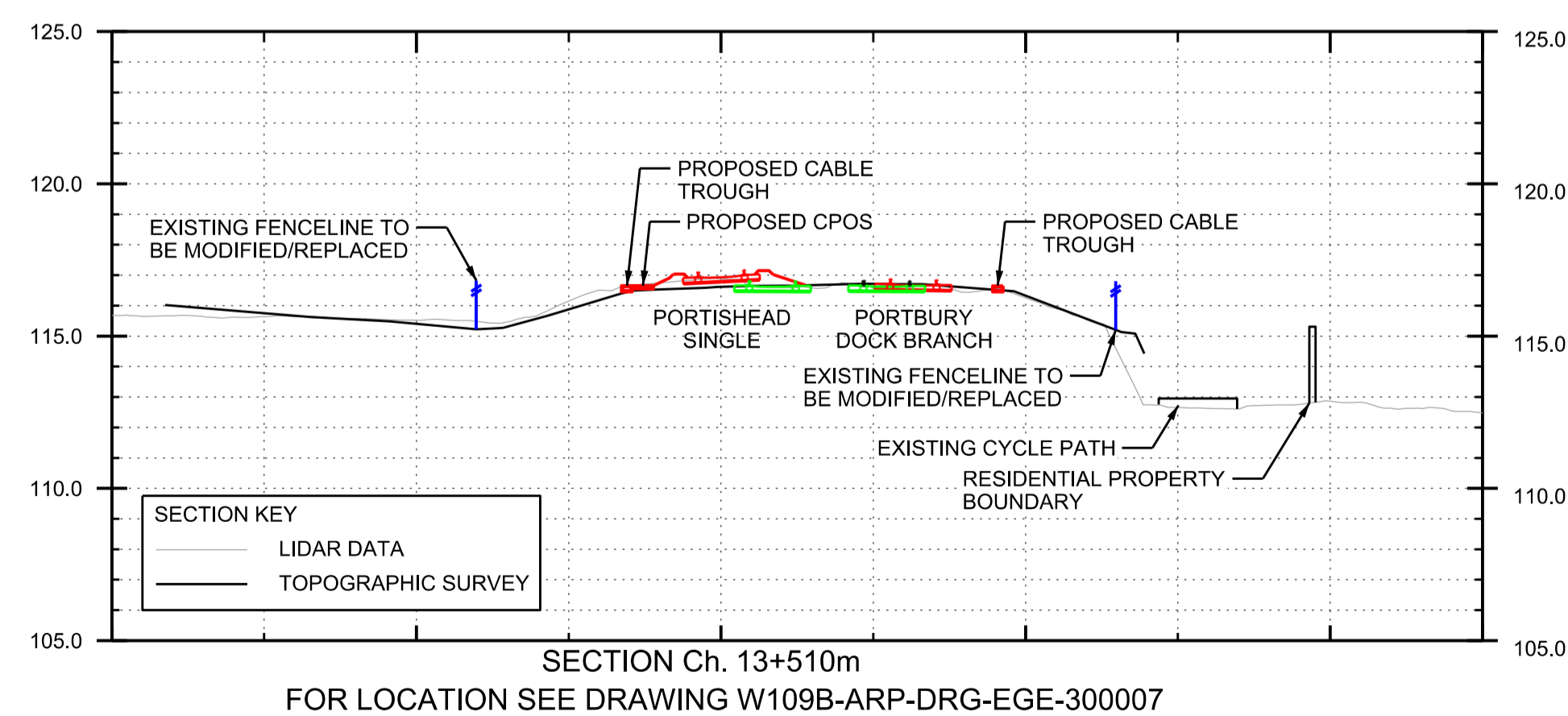
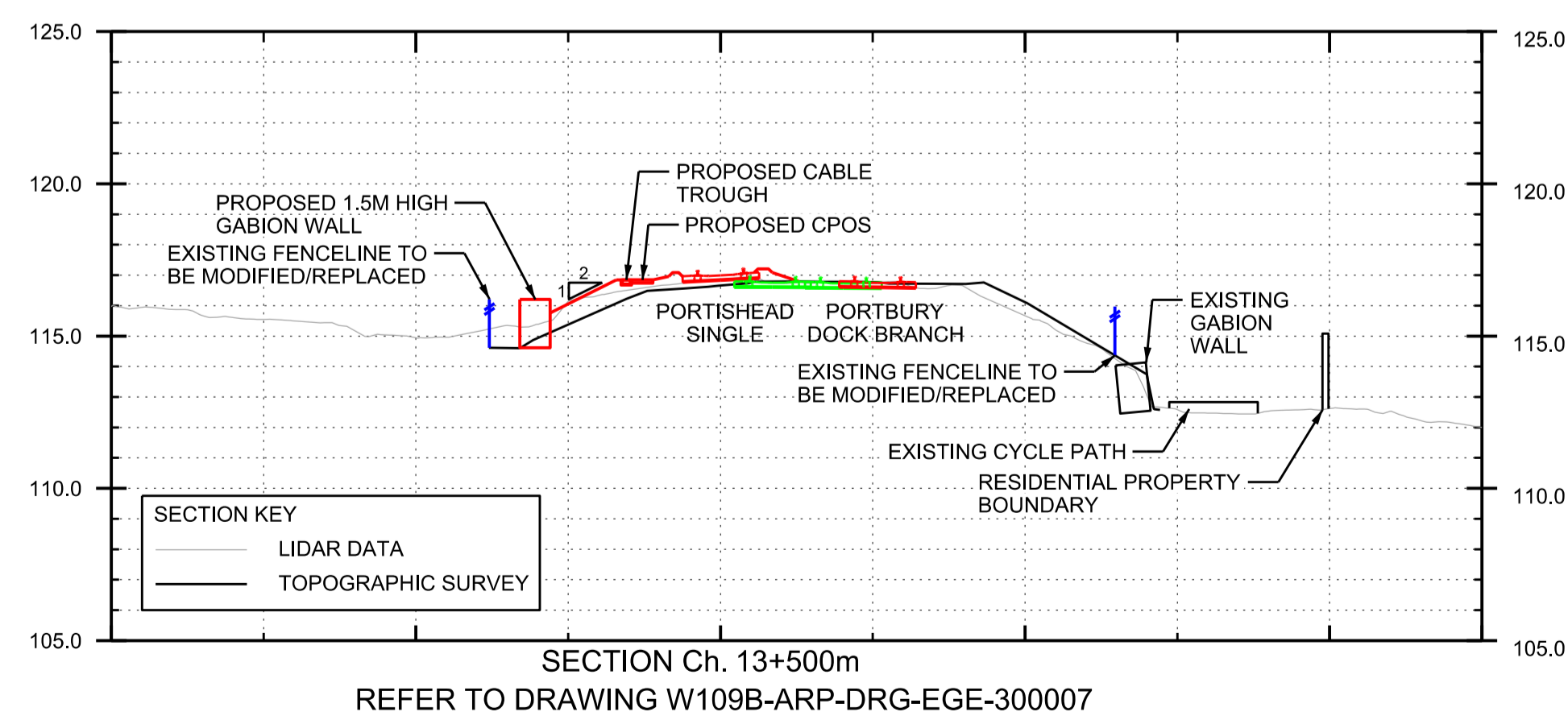
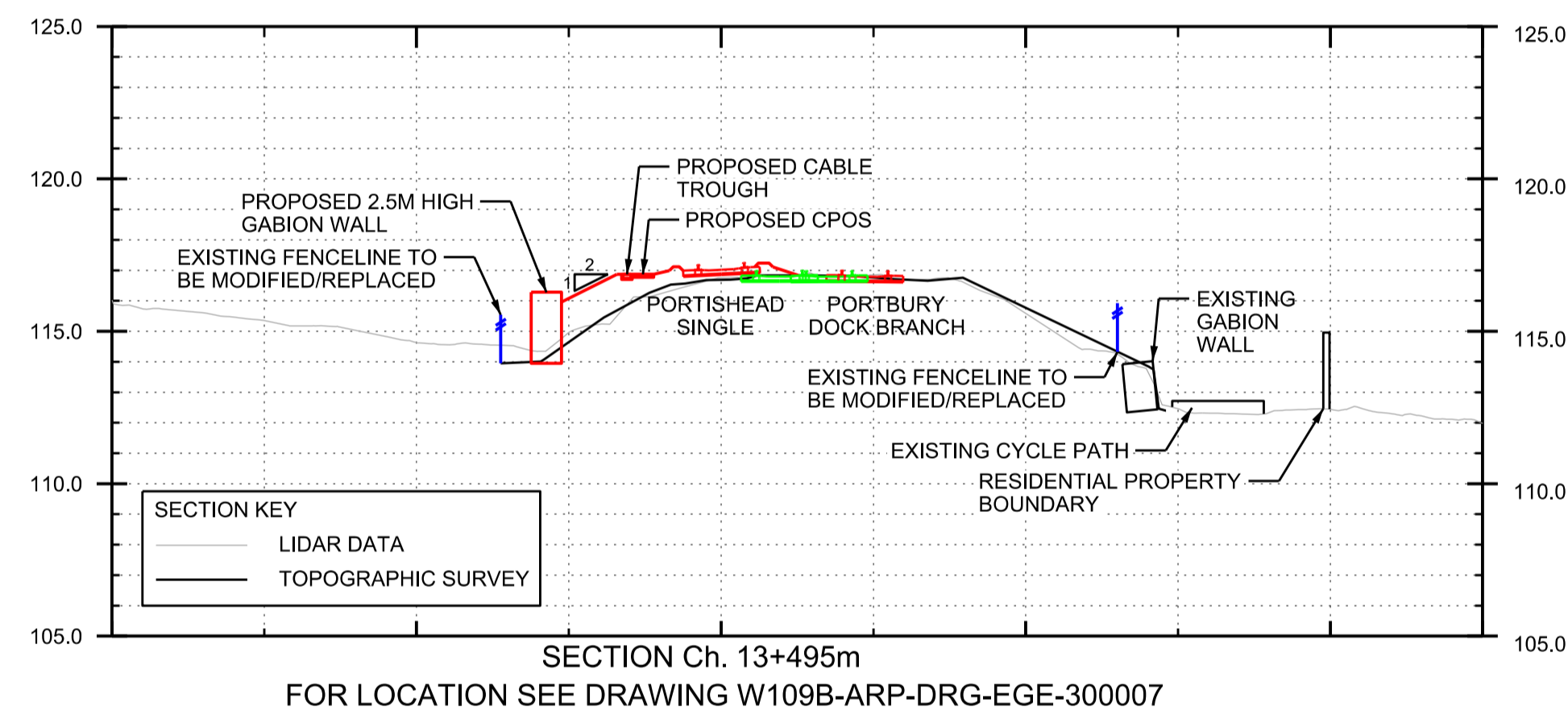
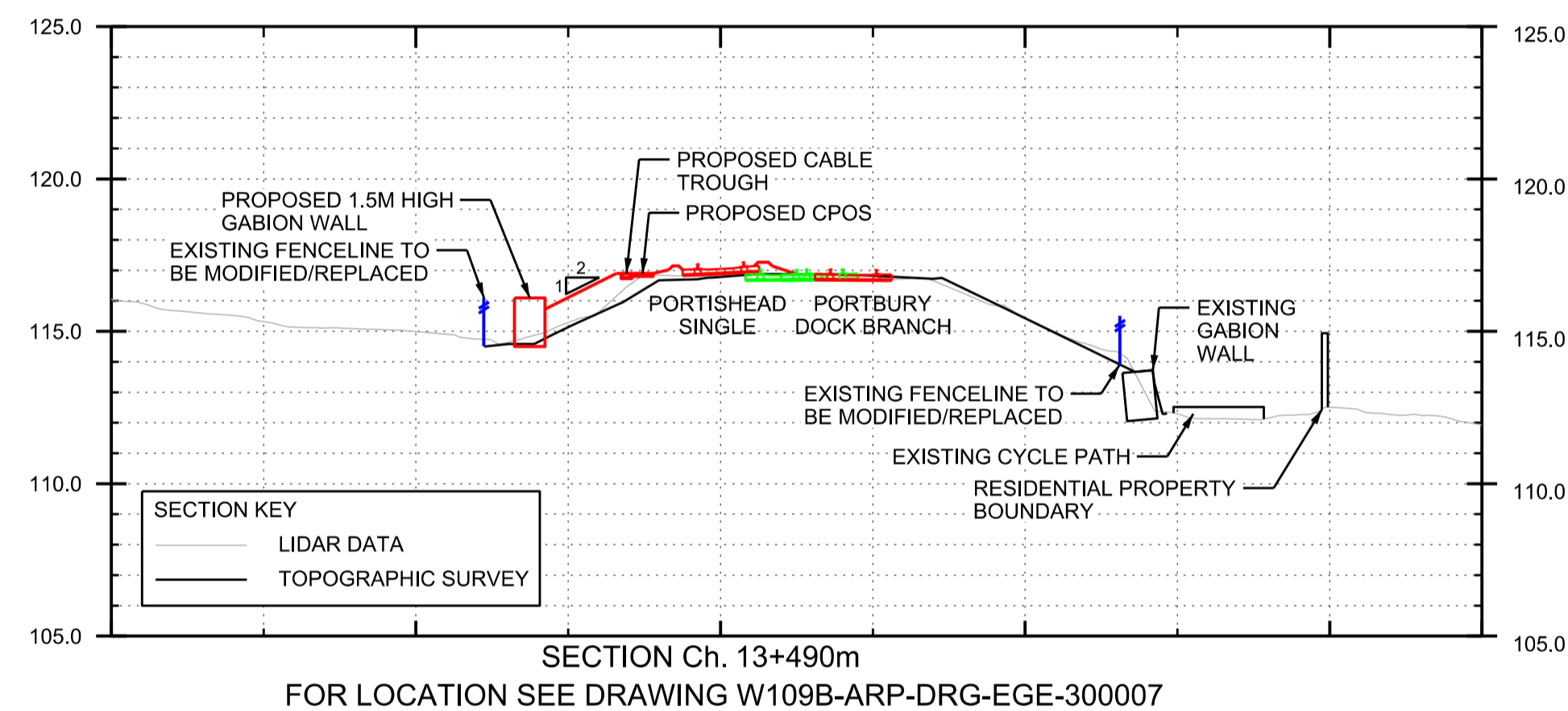
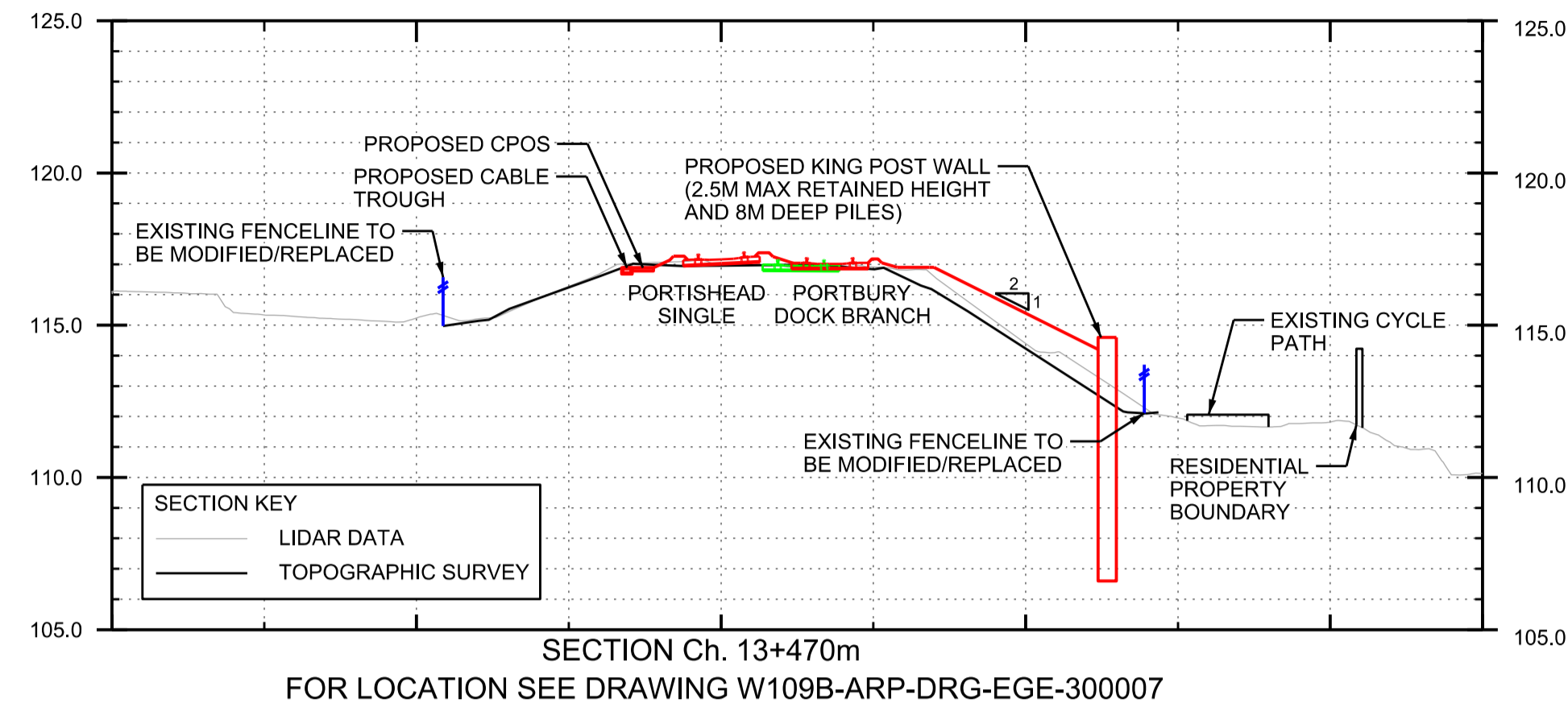
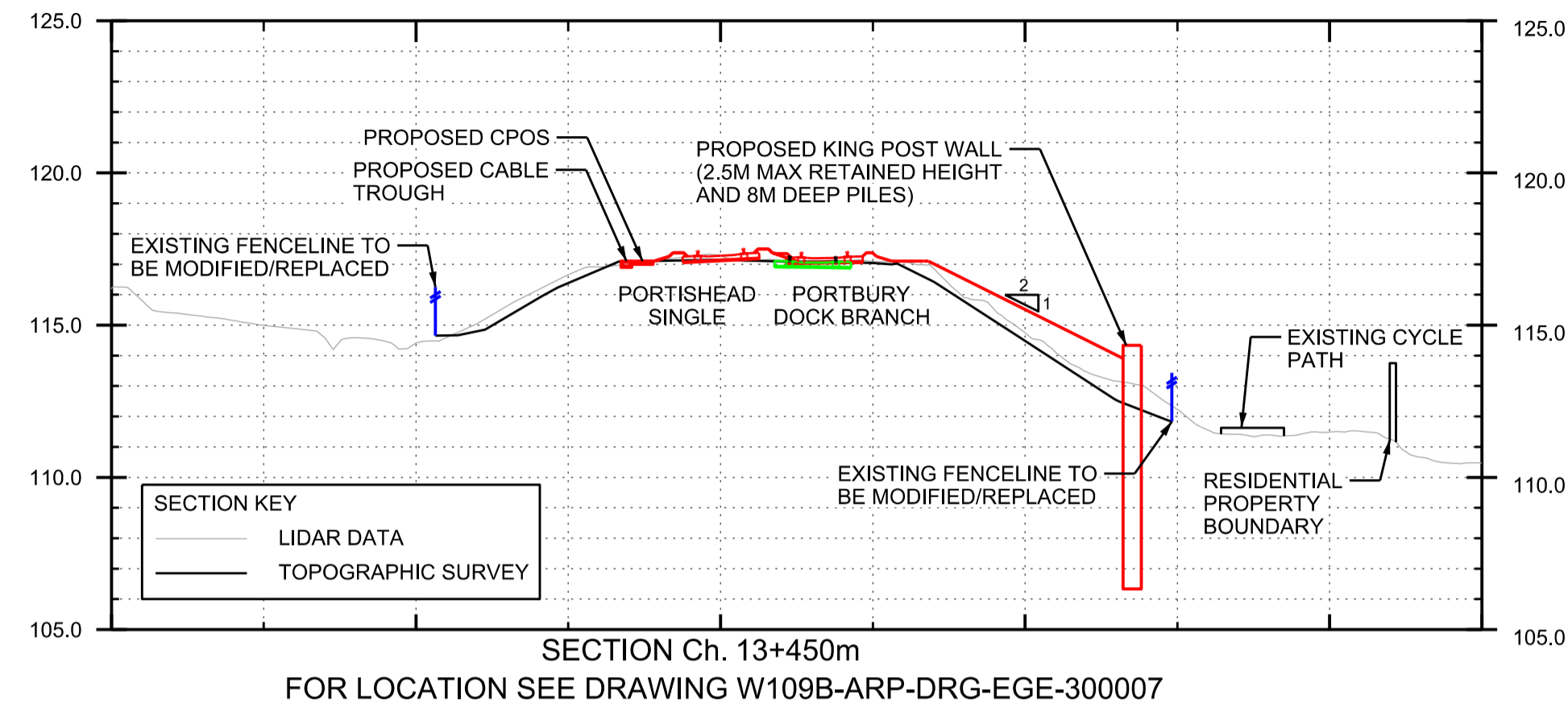
Drawing Title  
**HARDWICK ROAD CUTTING  
TYPICAL CROSS SECTIONS  
POD 126MI 15CH TO 126MI 27CH  
(13150M TO 13370M)**

Designed	J. BACINSKI	Signed	Date	20/09/19
Drawn	J. BACINSKI	Signed	Date	20/09/19
Checked	R. SNELL	Signed	Date	20/09/19
Approved	R. SNELL	Signed	Date	20/09/19

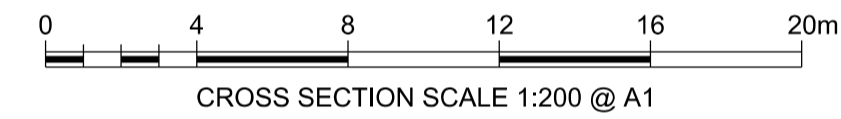
Scale(s)	1:200	ELR & Mileage	POD 126MI20CH
Alternative Reference		Sheet	1 of 1

Drawing Number  
**W1097B-ARP-DRG-EGE-300006 A02**





- GENERAL NOTES:**
01. THE CONTRACTOR MUST REFER TO THE HAZARD REGISTER FOR RISK CONCERNING THE WORKS. SOME OF THE KEY SITE SPECIFIC RISKS ARE HIGHLIGHTED ON THE DRAWING.
  02. ALL LEVELS ARE SHOWN IN METRES ABOVE ORDNANCE DATUM (MAOD). UNLESS NOTED OTHERWISE, ALL DIMENSIONS ARE IN METRES.
  03. DO NOT SCALE FROM THIS DRAWING, ONLY FIGURED DIMENSIONS AND LEVELS TO BE USED.
  04. DESIGN BASED ON TOPOGRAPHICAL SURVEY CARRIED OUT BETWEEN SEPTEMBER 2015 AND SEPTEMBER 2016 BY SEVERN PARTNERSHIP. IN SOME AREAS WHERE THE FACE OF THE EXISTING EARTHWORK IS STEEP OR INACCESSIBLE THE EXISTING PROFILE OF THE SLOPE HAS BEEN EXTRAPOLATED BASED ON ONE POINT AT THE CREST OF THE SLOPE AND ONE POINT AT THE TOE OF THE SLOPE. THE CONTRACTOR SHOULD BE AWARE OF THE APPROXIMATION OF THIS METHOD WHEN ASSESSING TEMPORARY WORKS AND CUT / FILL VOLUMES.
  05. THE CONTRACTOR IS TO ENSURE THE TEMPORARY STABILITY OF ANY CUT SLOPES. IN DOING SO THE CONTRACTOR SHOULD CONSIDER THE EXTENT OF SLOPE (I.E. PARALLEL TO THE TRACK) THAT CAN BE EXCAVATED AT ANY ONE TIME AND THE TIME PERIOD BEFORE BACKFILLING OR STABILISING.
  06. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TEMPORARY SUPPORTS AND / OR RESTRICTION ON THE SEQUENCE OF CONSTRUCTION; INCLUDING PROTECTION OF THE TRACK AND ALL EXISTING LINESIDE EQUIPMENT WHICH WILL REMAIN IN OPERATION DURING THE WORKS.
  07. POSSESSION REQUIREMENTS FOR THE WORKS ARE TO BE IDENTIFIED AND MANAGED BY THE CONTRACTOR.
  08. MONITORING OF THE EMBANKMENT AND THE EXISTING PORTBURY DOCK BRANCH LINE IS REQUIRED DURING THE WORKS. THIS IS TO BE AS SPECIFIED DURING DETAILED DESIGN.
  09. SEE DRAWING AND W109B-ARP-DRG-EGE-300007 FOR GENERAL ARRANGEMENT, AND W109B-ARP-DRG-EGE-300008 FOR DETAILS OF SOIL NAILS.
  10. NO GI SPECIFIC TO THE EARTHWORK UNDERTAKEN - TO BE COMPLETED AHEAD OF DETAIL DESIGN.



A02	20/09/19	FOR DCO APPLICATION	JB	RS	RS
Rev	Date	Description of Revisions	Drawn	Chkd	Appr
Status					Suitability

**FIT FOR INFORMATION**



Contractor(s)

**ARUP**  
63 St Thomas Street  
Bristol BS1 6JZ  
Tel +44(0)117 976 5432 Fax +44(0)117 976 5433  
www.arup.com

Project  
**PORTISHEAD BRANCH LINE  
(METROWEST PHASE 1)**

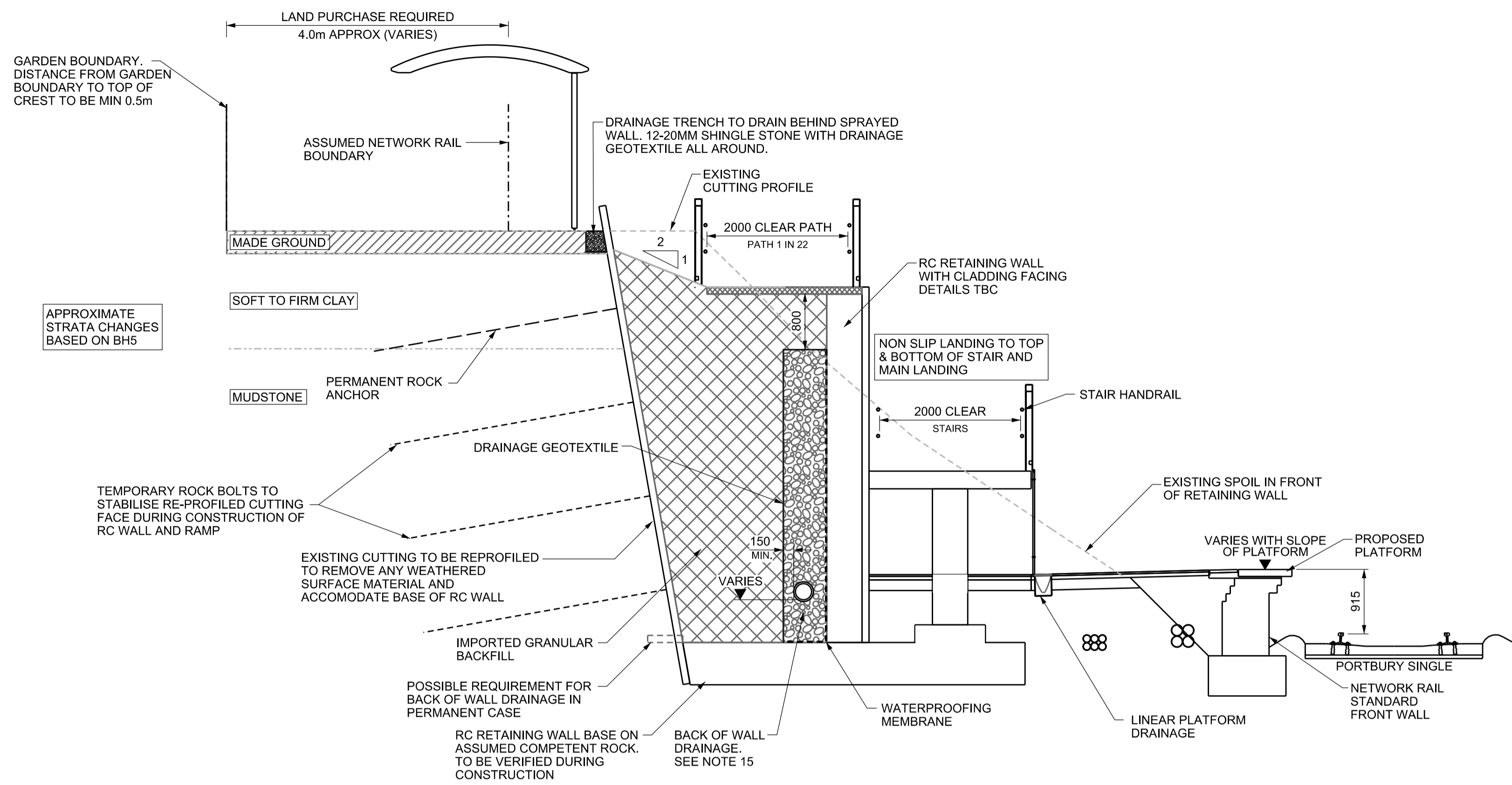
Drawing Title  
**AVON ROAD EMBANKMENT  
TYPICAL CROSS SECTIONS  
POD 126MI 27CH TO 126MI 34CH  
(13390M TO 13510M)**

Designed	J. BACINSKI	Signed		Date	20/09/19
Drawn	J. BACINSKI	Signed		Date	20/09/19
Checked	R. SNELL	Signed		Date	20/09/19
Approved	R. SNELL	Signed		Date	20/09/19

Scale(s) **1:200** ELR & Mileage **POD 126MI 30CH**

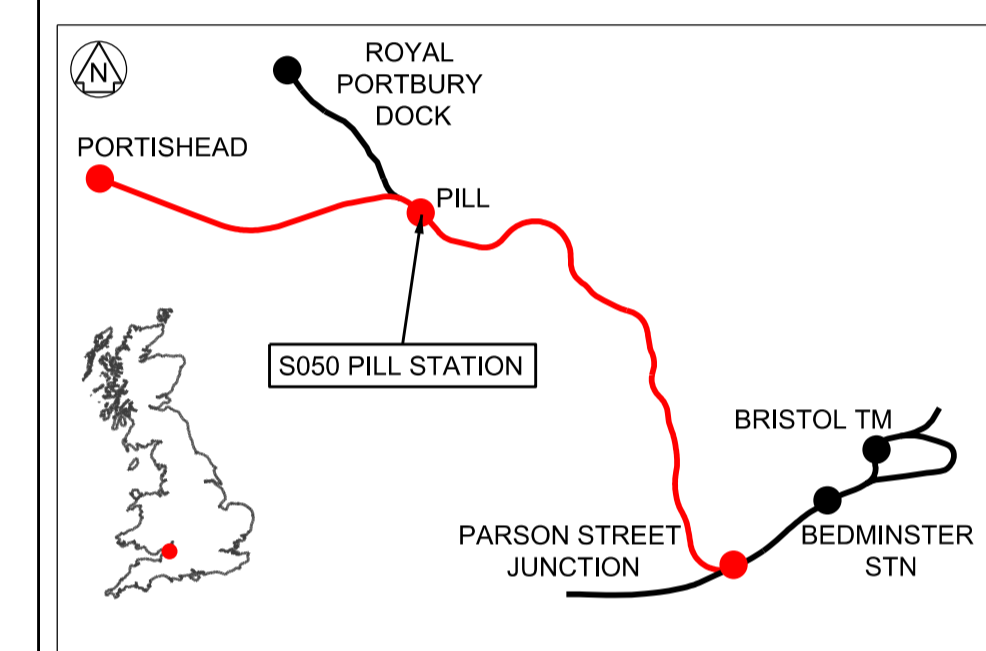
Alternative Reference **1 of 1** Sheet

Drawing Number **W1097B-ARP-DRG-EGE-300009 A02** Revision



**SECTION 1 - (REFER TO DRAWING W1097B-ARP-DRG-EST-300011)**  
SCALE 1:50

- Legend/Notes
1. ALL DIMENSIONS ARE IN MILLIMETRES (mm) UNLESS STATED OTHERWISE.
  2. ALL LEVELS ARE IN METRES ABOVE SNAKE GRID RBEP12 (ORDNANCE DATUM + 100 METRES).
  3. THIS DRAWING IS BASED ON TOPOGRAPHICAL AND LIDAR SURVEYS UNDERTAKEN BY SEVERN PARTNERSHIP LTD. IN 2015. THE PROPOSED RAIL ALIGNMENT IS SUBJECT TO VARIATION, AS DETAILED ON THE DRAWINGS.
  4. DRAWINGS SHOULD NOT BE SCALED, ONLY FIGURED DIMENSIONS ARE TO BE USED.
  5. THE INDICATIVE CUTTING PROFILE SHOWN ON THE SECTIONS IS BASED ON INTERPRETATION OF LIDAR DATA COLLECTED PRIOR TO VEGETATION CLEARANCE. THE CUTTING SHOULD BE CLEARED OF ALL VEGETATION AND RE-SURVEYED PRIOR TO DETAILED DESIGN.
  6. THE OUTLINE PROPOSED WORKS TO THE CUTTING TO ACCOMMODATE THE SLOPING PATH HAVE BEEN DEVELOPED ON THE BASIS OF LIMITED GROUND INVESTIGATIONS. THE DESIGN WILL BE CONFIRMED FOLLOWING RECEIPT OF FURTHER GROUND INVESTIGATION RESULTS, DETAILED TOPOGRAPHIC SURVEY AND SLOPE INSPECTION.
  7. THE CUTTING SLOPE SHOULD BE INSPECTED BY AN APPROPRIATELY EXPERIENCED GEOTECHNICAL ENGINEER PRIOR TO COMMENCEMENT OF DETAILED DESIGN.
  8. THE NETWORK RAIL LAND BOUNDARY INDICATED ON THIS DRAWING HAS BEEN INTERPRETED FROM ORDNANCE SURVEY DATA AND SHOULD BE CONFIRMED PRIOR TO DETAILED DESIGN.
  9. ALL DIMENSIONS SHOWN TO BE CONFIRMED AT DETAILED DESIGN STAGE.
  10. FOR DETAILS OF PLATFORM INFRASTRUCTURE REFER TO DRAWING W1097B-ARP-DRG-EST-300011
  11. FOR LIGHTING COLUMN POSITIONS REFER TO DRAWING W1097B-ARP-DRG-EPT-300002.
  12. BACK OF WALL DRAINAGE TO BE 225mm DIA, FULLY PERFORATED PIPE WRAPPED IN GEOTEXTILE. SURROUND TO BE 12-20mm SHINGLE STONE.
  13. ANTI-CLIMB FINISH TO BE APPLIED TO LIGHTING, CCTV AND PA COLUMNS. DETAILS TO BE AGREED WITH NETWORK RAIL DURING DETAILED DESIGN STAGE



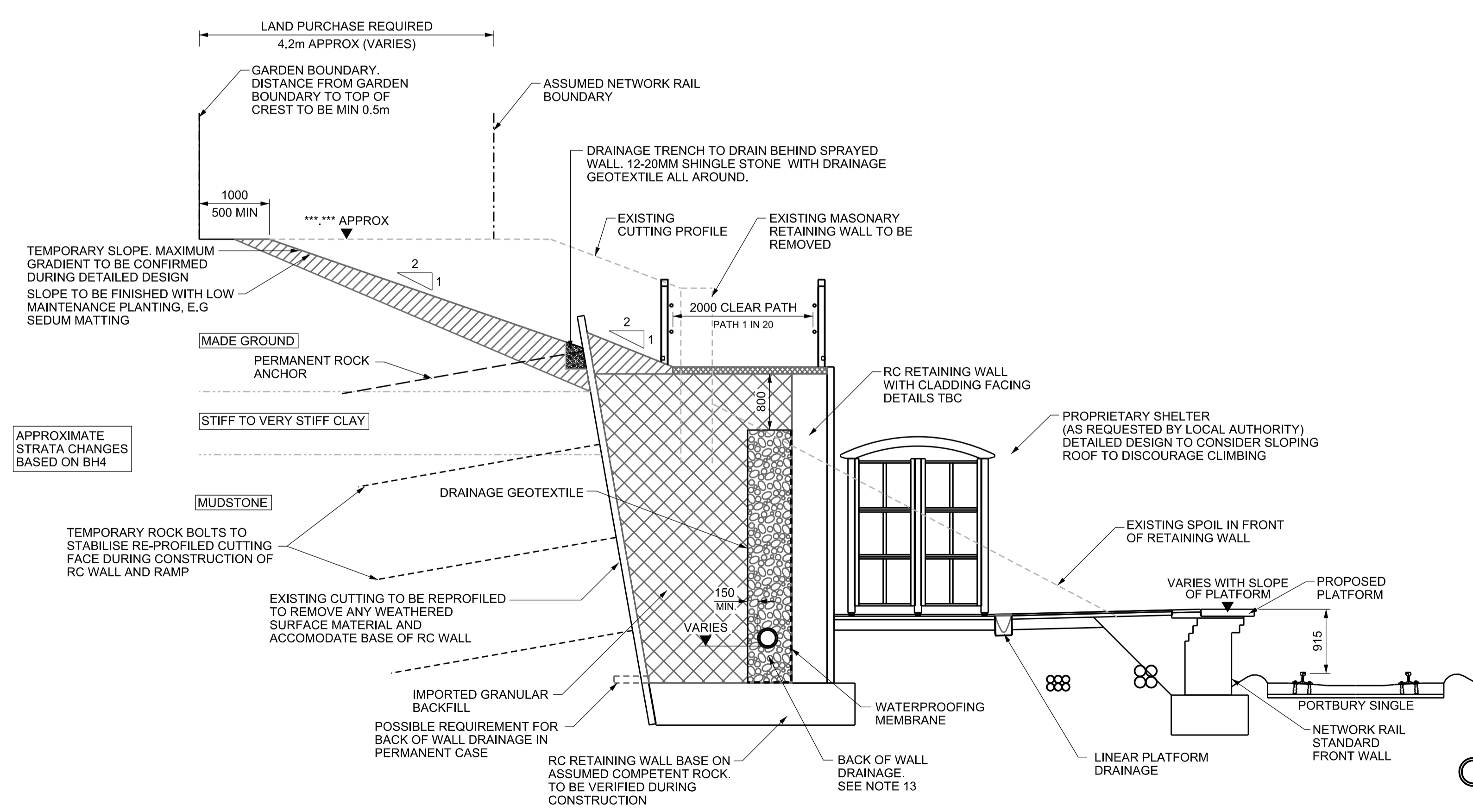
Rev	Date	Description of Revisions	Drawn	Chkd	Appr	Suitability
A01	22/07/19	FOR DCO APPLICATION	JB	RS	RS	S2



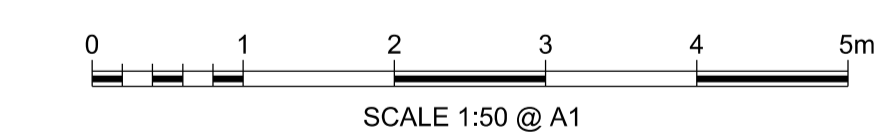
Project  
**PORTISHEAD BRANCH LINE (METROWEST PHASE 1)**

Drawing Title  
**S050 PILL STATION PROPOSED STATION SECTIONS SHEET 1**

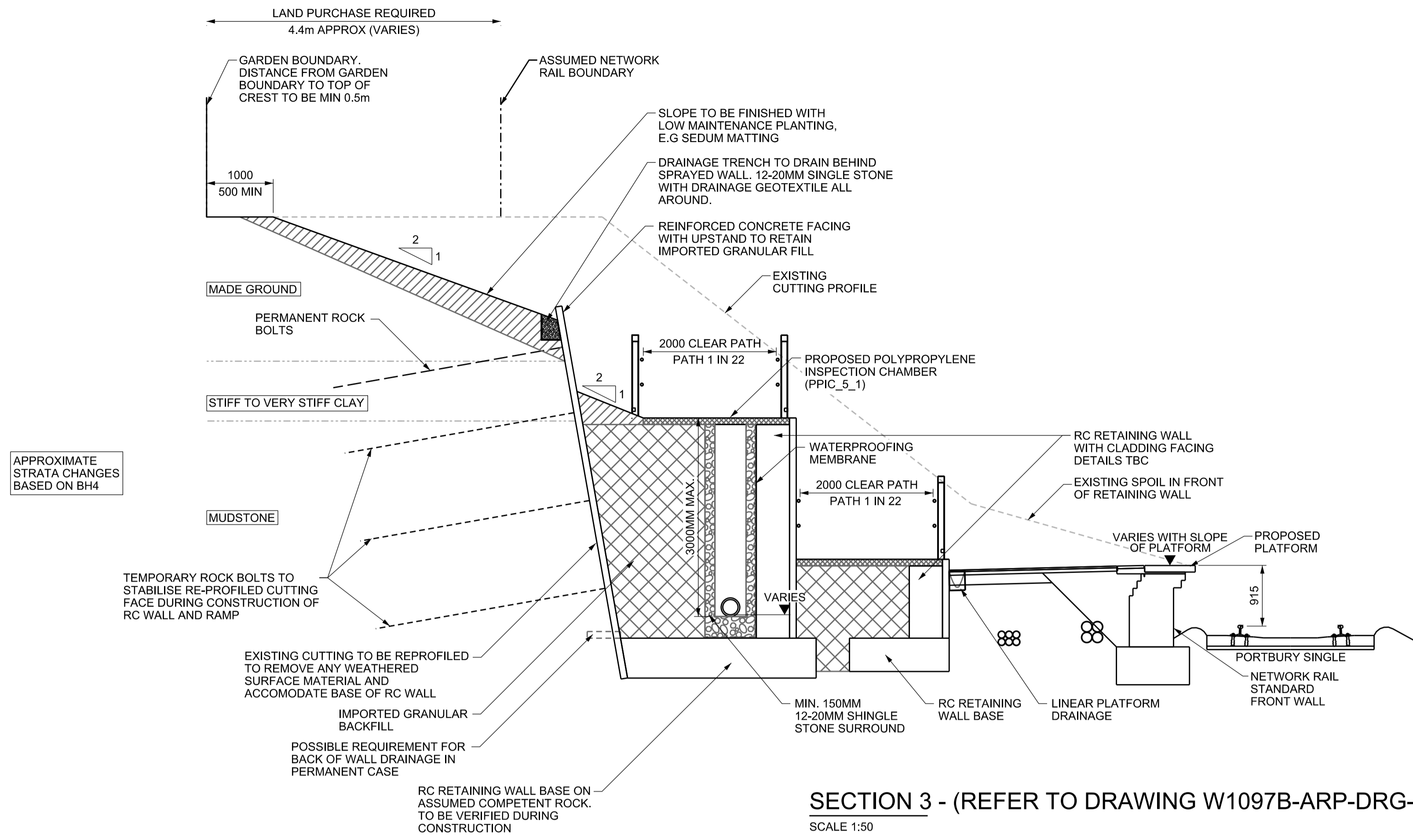
Designed	T. MYNORS	Signed	Date	22/07/19
Drawn	J. BACINSKI	Signed	Date	22/07/19
Checked	R. SNELL	Signed	Date	22/07/19
Approved	R. SNELL	Signed	Date	22/07/19
Scale(s)	1:50	ELR & Mileage	POD 126m 10ch	
Alternative Reference		Sheet	1 of 3	
Drawing Number	W1097B-ARP-DRG-EST-300012	Revision	A01	



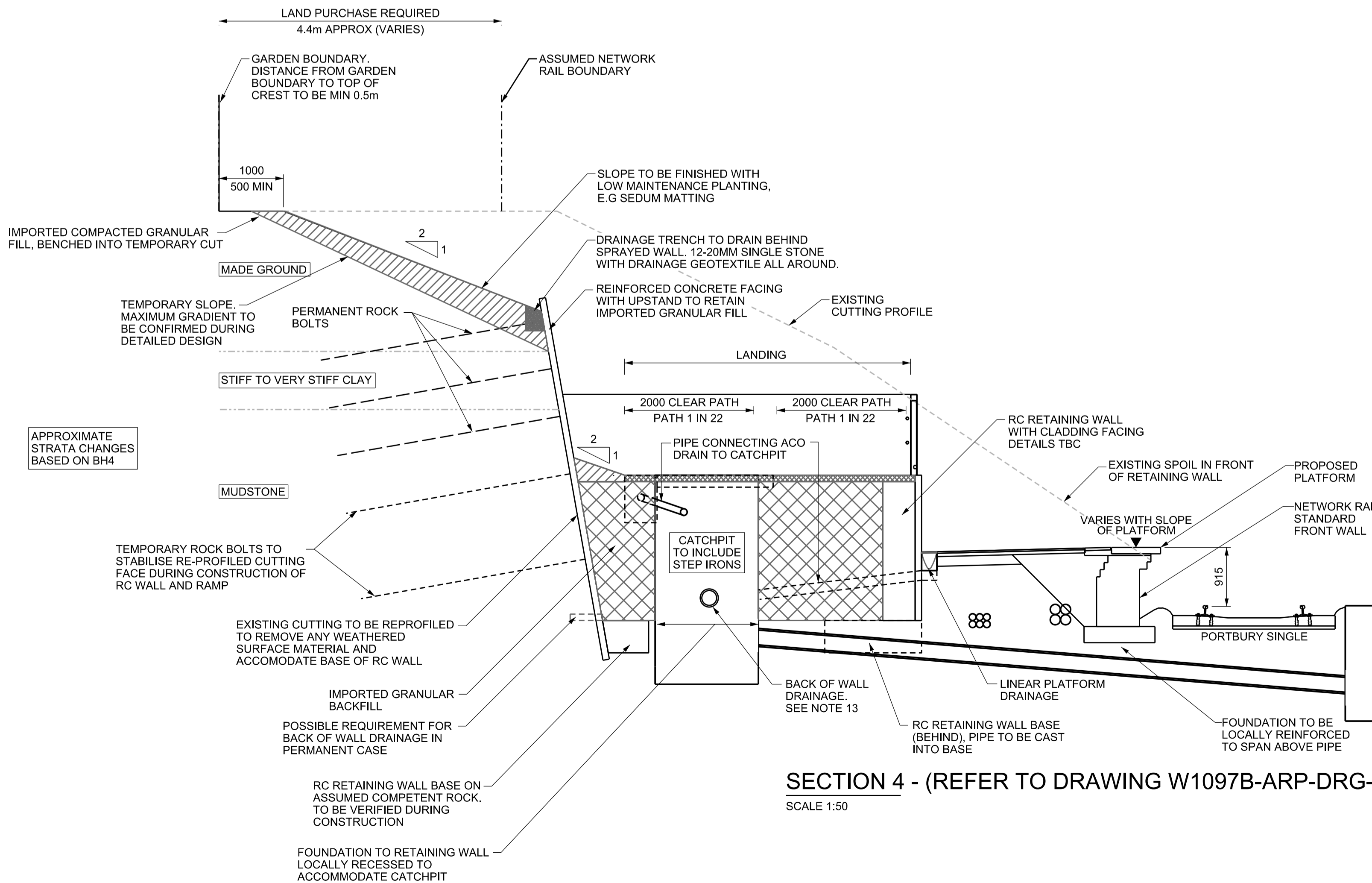
**SECTION 2 - (REFER TO DRAWING W1097B-ARP-DRG-EST-300011)**  
SCALE 1:50



- SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION**
- IN ADDITION TO THE HAZARDS NORMALLY ASSOCIATED WITH THIS TYPE OF WORK, SPECIAL ATTENTION SHOULD BE GIVEN TO:
- i) THE EXISTING CUTTING SLOPES MAY BE UNSTABLE.
  - ii) UNSAFE STRUCTURES MAY BE PRESENT ACROSS THE EXISTING PLATFORM.
  - iii) NO INFORMATION IS AVAILABLE REGARDING THE FORMATION OF THE EAST WALLS.
  - iv) BURIED SERVICES ARE PRESENT ACROSS THE SITE. THE PRECISE POSITIONS OF THESE ARE TO BE VERIFIED BY THE CONTRACTOR PRIOR TO ANY CONSTRUCTION WORKS COMMENCING.
  - v) ELEVATED LEVELS OF CONTAMINANTS, INTRAVENOUS NEEDLES AND OTHER HAZARDOUS SUBSTANCES MAY BE PRESENT ONSITE.
  - vi) THERE IS LIMITED TOPOGRAPHIC SURVEY AVAILABLE AT THIS SITE AND THE FORM 001 DESIGN IS BASED ON INTERPRETATION OF LIDAR DATA. FULL TOPOGRAPHIC SURVEY REQUIRED PRIOR TO DETAILED DESIGN.



**SECTION 3 - (REFER TO DRAWING W1097B-ARP-DRG-EST-300011)**  
SCALE 1:50



**SECTION 4 - (REFER TO DRAWING W1097B-ARP-DRG-EST-300011)**  
SCALE 1:50

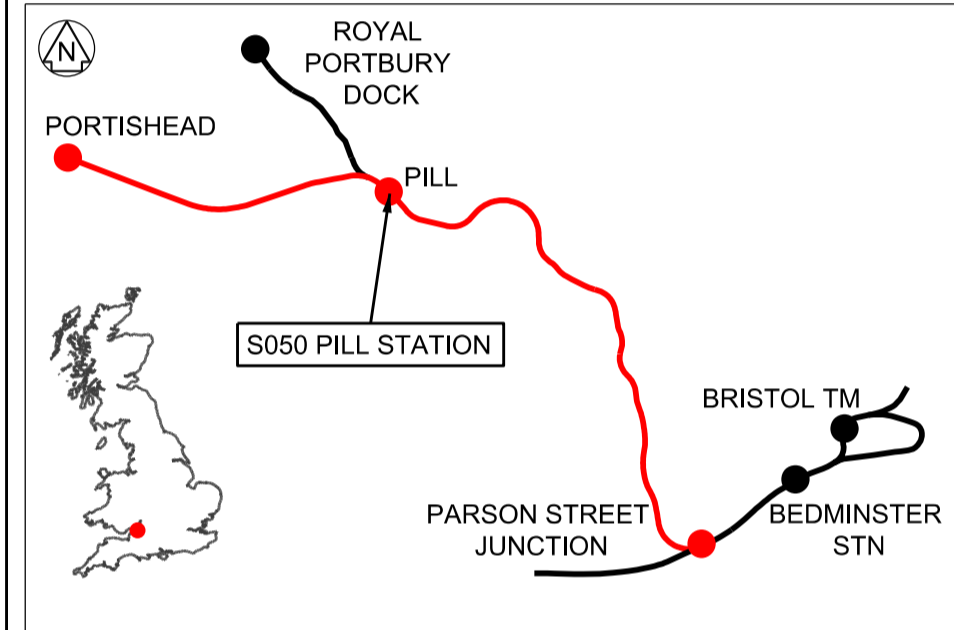


**SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION**

IN ADDITION TO THE HAZARDS NORMALLY ASSOCIATED WITH THIS TYPE OF WORK, SPECIAL ATTENTION SHOULD BE GIVEN TO:

- THE EXISTING CUTTING SLOPES MAY BE UNSTABLE.
- UNSAFE STRUCTURES MAY BE PRESENT ACROSS THE EXISTING PLATFORM.
- NO INFORMATION IS AVAILABLE REGARDING THE FORMATION OF THE EAST WALLS.
- BURIED SERVICES ARE PRESENT ACROSS THE SITE. THE PRECISE POSITIONS OF THESE ARE TO BE VERIFIED BY THE CONTRACTOR PRIOR TO ANY CONSTRUCTION WORKS COMMENCING.
- ELEVATED LEVELS OF CONTAMINANTS, INTRAVENOUS NEEDLES AND OTHER HAZARDOUS SUBSTANCES MAY BE PRESENT ONSITE.
- THERE IS LIMITED TOPOGRAPHIC SURVEY AVAILABLE AT THIS SITE AND THE FORM 001 DESIGN IS BASED ON INTERPRETATION OF LIDAR DATA. FULL TOPOGRAPHIC SURVEY REQUIRED PRIOR TO DETAILED DESIGN.

- Legend/Notes
- ALL DIMENSIONS ARE IN MILLIMETRES (mm) UNLESS STATED OTHERWISE.
  - ALL LEVELS ARE IN METRES ABOVE SNAKE GRID RBEP12 (ORDNANCE DATUM + 100 METRES).
  - THIS DRAWING IS BASED ON TOPOGRAPHICAL AND LIDAR SURVEYS UNDERTAKEN BY SEVERN PARTNERSHIP LTD. IN 2015. THE PROPOSED RAIL ALIGNMENT IS SUBJECT TO VARIATION, AS DETAILED ON THE DRAWINGS.
  - DRAWINGS SHOULD NOT BE SCALED, ONLY FIGURED DIMENSIONS ARE TO BE USED.
  - THE INDICATIVE CUTTING PROFILE SHOWN ON THE SECTIONS IS BASED ON INTERPRETATION OF LIDAR DATA COLLECTED PRIOR TO VEGETATION CLEARANCE. THE CUTTING SHOULD BE CLEARED OF ALL VEGETATION AND RE-SURVEYED PRIOR TO DETAILED DESIGN.
  - THE OUTLINE PROPOSED WORKS TO THE CUTTING TO ACCOMMODATE THE SLOPING PATH HAVE BEEN DEVELOPED ON THE BASIS OF LIMITED GROUND INVESTIGATIONS. THE DESIGN WILL BE CONFIRMED FOLLOWING RECEIPT OF FURTHER GROUND INVESTIGATION RESULTS, DETAILED TOPOGRAPHIC SURVEY AND SLOPE INSPECTION.
  - THE CUTTING SLOPE SHOULD BE INSPECTED BY AN APPROPRIATELY EXPERIENCED GEOTECHNICAL ENGINEER PRIOR TO COMMENCEMENT OF DETAILED DESIGN.
  - THE NETWORK RAIL LAND BOUNDARY INDICATED ON THIS DRAWING HAS BEEN INTERPRETED FROM ORDNANCE SURVEY DATA AND SHOULD BE CONFIRMED PRIOR TO DETAILED DESIGN STAGE.
  - ALL DIMENSIONS SHOWN TO BE CONFIRMED AT DETAILED DESIGN STAGE.
  - FOR DETAILS OF PLATFORM INFRASTRUCTURE REFER TO DRAWING W1097B-ARP-DRG-EST-300011.
  - FOR LIGHTING COLUMN POSITIONS REFER TO DRAWING W1097B-ARP-DRG-EPT-300002.
  - BACK OF WALL DRAINAGE TO BE 225mm DIA, FULLY PERFORATED PIPE WRAPPED IN GEOTEXTILE. SURROUND TO BE 12-20mm SHINGLE STONE.
  - ANTI-CLIMB FINISH TO BE APPLIED TO LIGHTING, CCTV AND PA COLUMNS. DETAILS TO BE AGREED WITH NETWORK RAIL DURING DETAILED DESIGN STAGE.



Rev	Date	Description of Revisions	Drawn	Chkd	Appr	Suitability
A01	22/07/19	FOR DCO APPLICATION	JB	RS	RS	
Status						S2



Contractor(s)

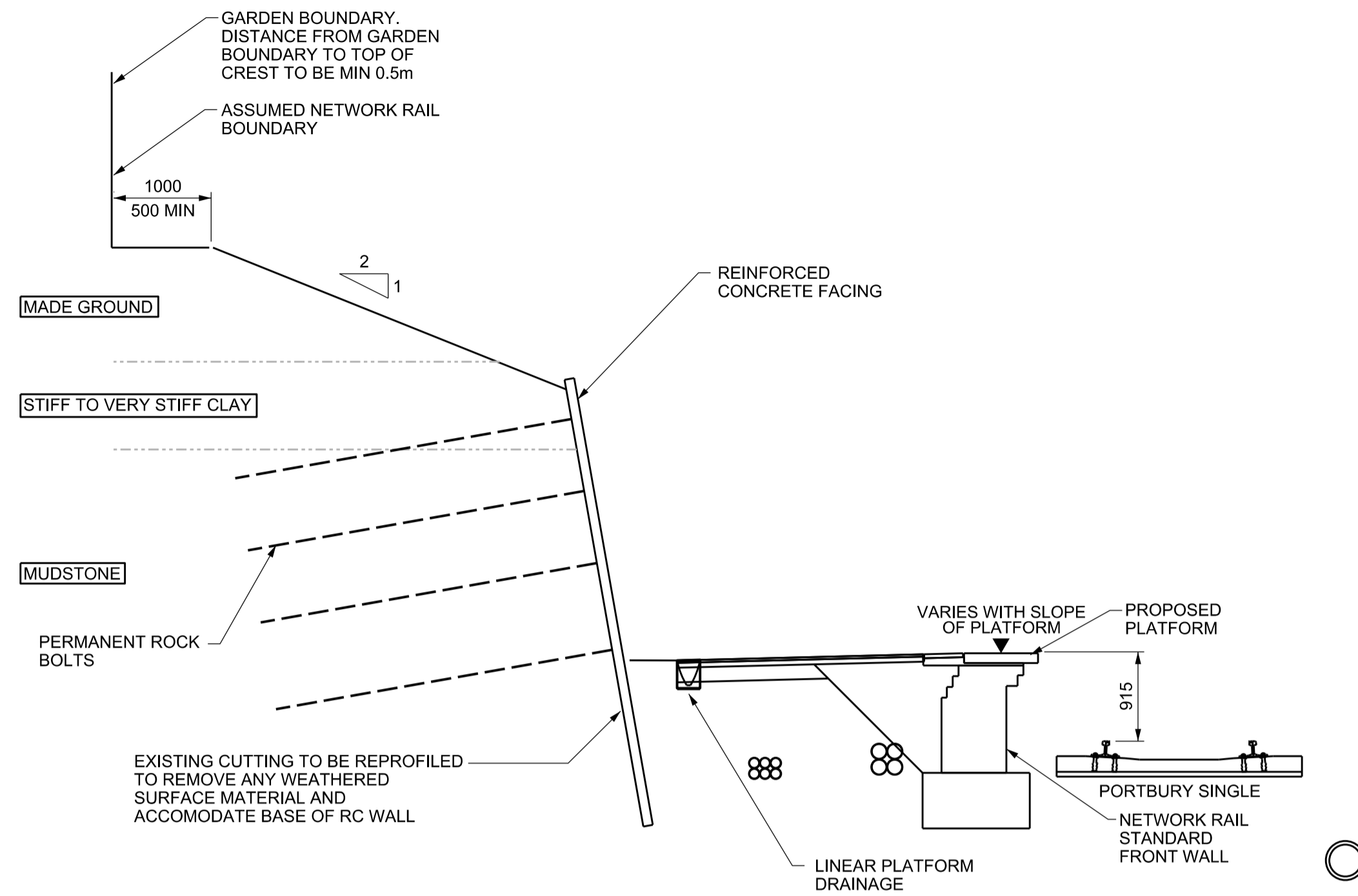
**ARUP**  
63 St Thomas Street  
Bristol BS1 6JZ  
Tel +44(0)117 976 5432 Fax +44(0)117 976 5433  
www.arup.com

Project  
**PORTISHEAD BRANCH LINE (METROWEST PHASE 1)**

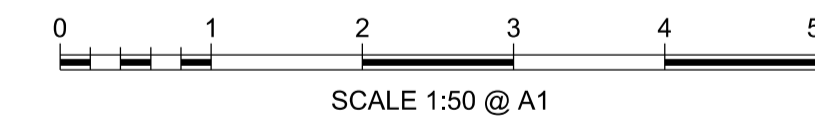
Drawing Title  
**S050 PILL STATION  
PROPOSED STATION SECTIONS  
SHEET 2**

Designed	T. MYNORS	Signed	Date	22/07/19
Drawn	J. BACINSKI	Signed	Date	22/07/19
Checked	R. SNELL	Signed	Date	22/07/19
Approved	R. SNELL	Signed	Date	22/07/19
Scale(s)	1:50	ELR & Mileage	POD 126m 10ch	
Alternative Reference		Sheet	2 of 3	
Drawing Number	W1097B-ARP-DRG-EST-300013	Revision	A01	

APPROXIMATE STRATA CHANGES PRESENTLY BASED ON BH4. TO BE CONFIRMED AS PART OF HARDWICK CUTTING GI



**SECTION 5 - (REFER TO DRAWING W1097B-ARP-DRG-EST-300011)**  
SCALE 1:50

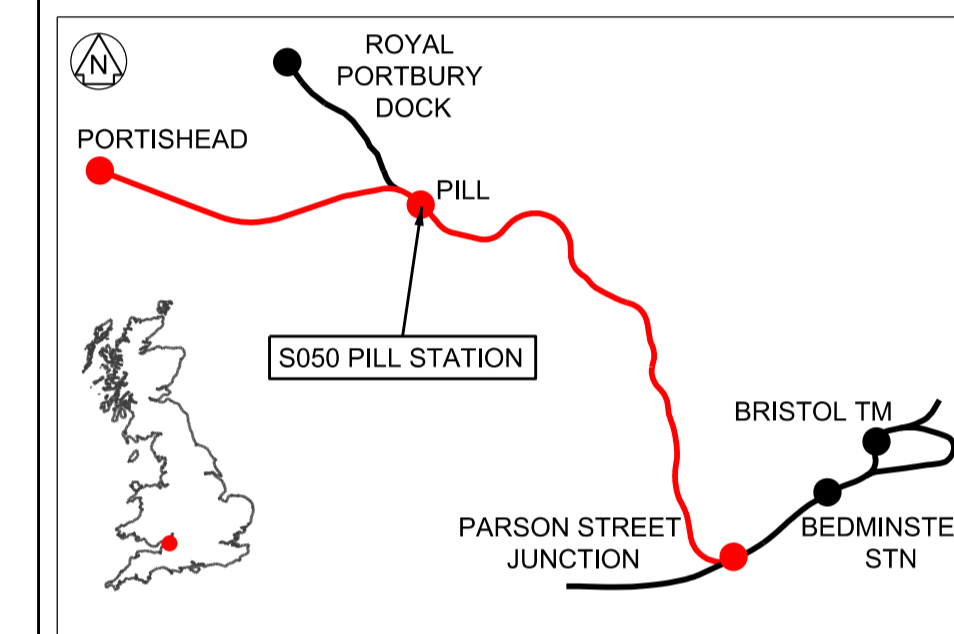


**SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION**

IN ADDITION TO THE HAZARDS NORMALLY ASSOCIATED WITH THIS TYPE OF WORK, SPECIAL ATTENTION SHOULD BE GIVEN TO:

- i) THE EXISTING CUTTING SLOPES MAY BE UNSTABLE.
- ii) UNSAFE STRUCTURES MAY BE PRESENT ACROSS THE EXISTING PLATFORM.
- iii) NO INFORMATION IS AVAILABLE REGARDING THE FORMATION OF THE EAST WALLS.
- iv) BURIED SERVICES ARE PRESENT ACROSS THE SITE. THE PRECISE POSITIONS OF THESE ARE TO BE VERIFIED BY THE CONTRACTOR PRIOR TO ANY CONSTRUCTION WORKS COMMENCING.
- v) ELEVATED LEVELS OF CONTAMINANTS, INTRAVENOUS NEEDLES AND OTHER HAZARDOUS SUBSTANCES MAY BE PRESENT ONSITE.
- vi) THERE IS LIMITED TOPOGRAPHIC SURVEY AVAILABLE AT THIS SITE AND THE FORM 001 DESIGN IS BASED ON INTERPRETATION OF LIDAR DATA. FULL TOPOGRAPHIC SURVEY REQUIRED PRIOR TO DETAILED DESIGN.

- Legend/Notes
- ALL DIMENSIONS ARE IN MILLIMETRES (mm) UNLESS STATED OTHERWISE.
  - ALL LEVELS ARE IN METRES ABOVE SNAKE GRID RBEP12 (ORDNANCE DATUM + 100 METRES).
  - THIS DRAWING IS BASED ON TOPOGRAPHICAL AND LIDAR SURVEYS UNDERTAKEN BY SEVERN PARTNERSHIP LTD. IN 2015. THE PROPOSED RAIL ALIGNMENT IS SUBJECT TO VARIATION, AS DETAILED ON THE DRAWINGS.
  - DRAWINGS SHOULD NOT BE SCALED, ONLY FIGURED DIMENSIONS ARE TO BE USED.
  - THE INDICATIVE CUTTING PROFILE SHOWN ON THE SECTIONS IS BASED ON INTERPRETATION OF LIDAR DATA COLLECTED PRIOR TO VEGETATION CLEARANCE. THE CUTTING SHOULD BE CLEARED OF ALL VEGETATION AND RE-SURVEYED PRIOR TO DETAILED DESIGN.
  - THE OUTLINE PROPOSED WORKS TO THE CUTTING TO ACCOMMODATE THE SLOPING PATH HAVE BEEN DEVELOPED ON THE BASIS OF LIMITED GROUND INVESTIGATIONS. THE DESIGN WILL BE CONFIRMED FOLLOWING RECEIPT OF FURTHER GROUND INVESTIGATION RESULTS, DETAILED TOPOGRAPHIC SURVEY AND SLOPE INSPECTION.
  - THE CUTTING SLOPE SHOULD BE INSPECTED BY AN APPROPRIATELY EXPERIENCED GEOTECHNICAL ENGINEER PRIOR TO COMMENCEMENT OF DETAILED DESIGN.
  - THE NETWORK RAIL LAND BOUNDARY INDICATED ON THIS DRAWING HAS BEEN INTERPRETED FROM ORDANANCE SURVEY DATA AND SHOULD BE CONFIRMED PRIOR TO DETAILED DESIGN STAGE.
  - ALL DIMENSIONS SHOWN TO BE CONFIRMED AT DETAILED DESIGN STAGE.
  - FOR DETAILS OF PLATFORM INFRASTRUCTURE REFER TO DRAWING W1097B-ARP-DRG-EST-300011
  - FOR LIGHTING COLUMN POSITIONS REFER TO DRAWING W1097B-ARP-DRG-EPT-300002.
  - BACK OF WALL DRAINAGE TO BE 225mm DIA, FULLY PERFORATED PIPE WRAPPED IN GEOTEXTILE. SURROUND TO BE 12-20mm SHINGLE STONE.
  - ANTI-CLIMB FINISH TO BE APPLIED TO LIGHTING, CCTV AND PA COLUMNS. DETAILS TO BE AGREED WITH NETWORK RAIL DURING DETAILED DESIGN STAGE



Rev	Date	Description of Revisions	Drawn	Chkd	Appr	Suitability
A01	22/07/19	FOR DCO APPLICATION	JB	RS	RS	
Status						S2



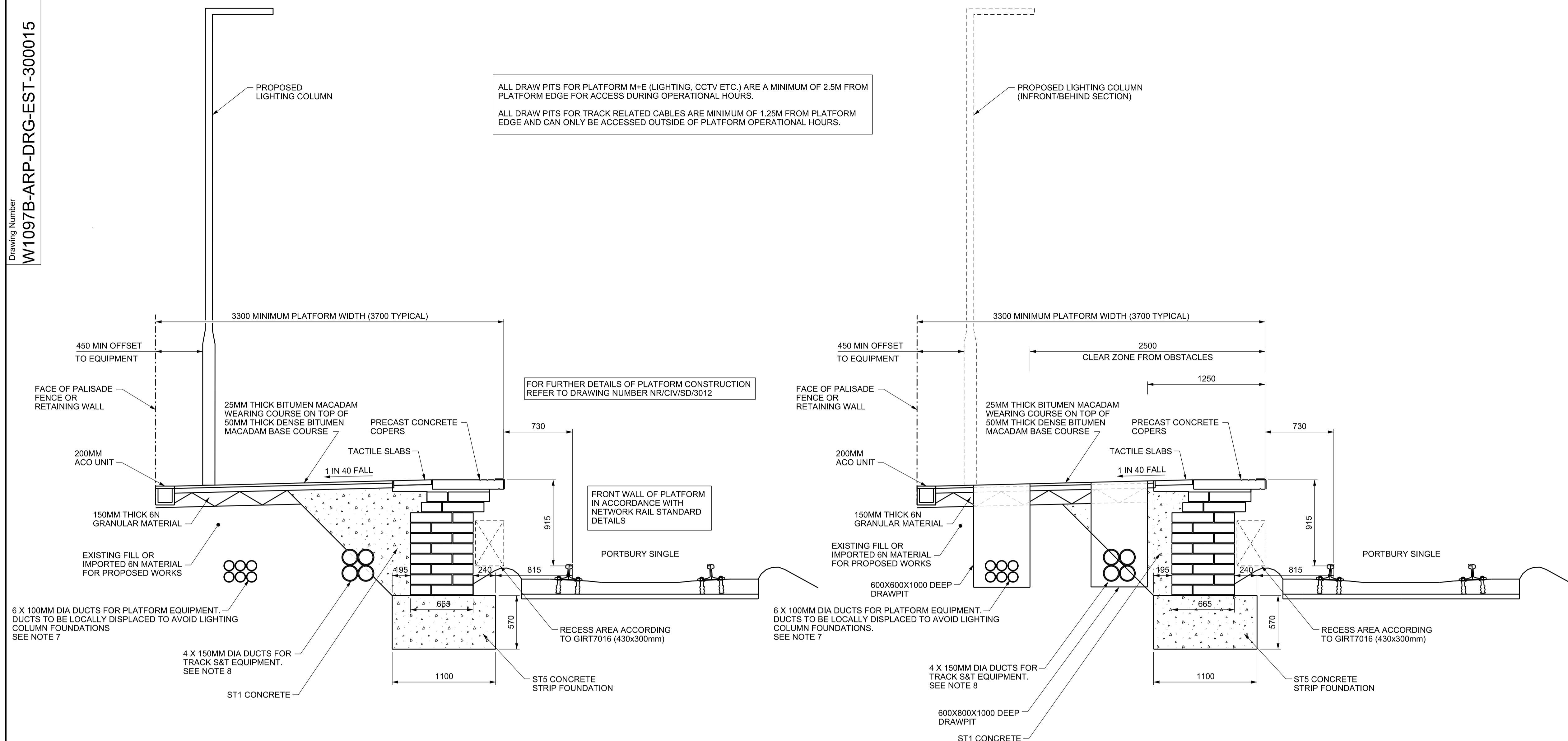
Contractor(s)

**ARUP** 63 St Thomas Street  
Bristol BS1 6JZ  
Tel +44(0)117 976 5432 Fax +44(0)117 976 5433  
www.arup.com

Project  
**PORTISHEAD BRANCH LINE  
(METROWEST PHASE 1)**

Drawing Title  
**S050 PILL STATION  
PROPOSED STATION SECTIONS  
SHEET 3**

Designed	T. MYNORS	Signed	Date	22/07/19
Drawn	J. BACINSKI	Signed	Date	22/07/19
Checked	R. SNELL	Signed	Date	22/07/19
Approved	R. SNELL	Signed	Date	22/07/19
Scale(s)	1:50	ELR & Mileage	POD 126m 10ch	
Alternative Reference		Sheet	3 of 3	
Drawing Number	W1097B-ARP-DRG-EST-300014	Revision	A01	



**TYPICAL PLATFORM SECTION**  
SCALE 1:25

**TYPICAL PLATFORM SECTION AT DRAWPIT LOCATIONS**  
SCALE 1:25

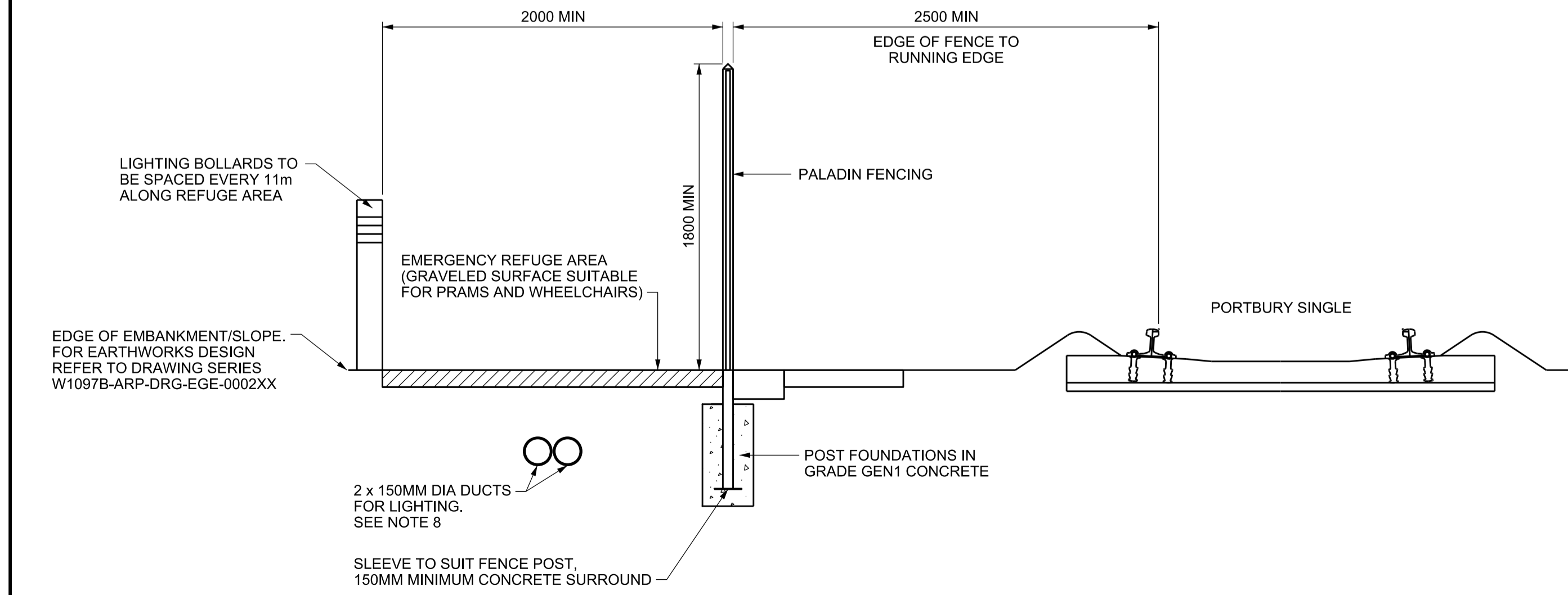
ALL DRAW PITS FOR PLATFORM M+E (LIGHTING, CCTV ETC.) ARE A MINIMUM OF 2.5M FROM PLATFORM EDGE FOR ACCESS DURING OPERATIONAL HOURS.  
ALL DRAW PITS FOR TRACK RELATED CABLES ARE MINIMUM OF 1.25M FROM PLATFORM EDGE AND CAN ONLY BE ACCESSED OUTSIDE OF PLATFORM OPERATIONAL HOURS.

6 X 100MM DIA DUCTS FOR PLATFORM EQUIPMENT. DUCTS TO BE LOCALLY DISPLACED TO AVOID LIGHTING COLUMN FOUNDATIONS SEE NOTE 7

6 X 100MM DIA DUCTS FOR PLATFORM EQUIPMENT. DUCTS TO BE LOCALLY DISPLACED TO AVOID LIGHTING COLUMN FOUNDATIONS. SEE NOTE 7

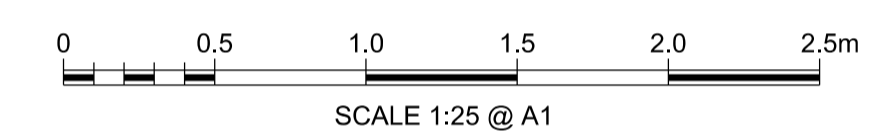
4 X 150MM DIA DUCTS FOR TRACK S&T EQUIPMENT. SEE NOTE 8

4 X 150MM DIA DUCTS FOR TRACK S&T EQUIPMENT. SEE NOTE 8



**TYPICAL EMERGENCY REFUGE AREA SECTION**  
SCALE 1:25

- Legend/Notes
1. ALL DIMENSIONS ARE IN MILLIMETRES (mm) UNLESS STATED OTHERWISE.
  2. ALL LEVELS ARE IN METRES ABOVE SNAKE GRID RBEP12 (ORDNANCE DATUM + 100 METRES).
  3. THIS DRAWING IS BASED ON TOPOGRAPHICAL AND LIDAR SURVEYS UNDERTAKEN BY SEVERN PARTNERSHIP LTD. IN 2015. PROPOSED RAIL ALIGNMENT IS SUBJECT TO VARIATION.
  4. DRAWINGS SHOULD NOT BE SCALED, ONLY FIGURED DIMENSIONS SHOULD BE USED.
  5. ALL DIMENSIONS SHOWN TO BE CONFIRMED AT DETAILED DESIGN STAGE.
  6. ALL DIMENSIONS SHOWN TO BE CONFIRMED AT DETAILED DESIGN STAGE.
  7. NUMBER OF DUCTS TO BE CONFIRMED AT DETAILED DESIGN STAGE.



Rev	Date	Description of Revisions	Drawn	Chkd	Appr
A01	22/07/18	FOR DCO APPLICATION	JB	RS	RS

**FIT FOR INFORMATION** S2



**ARUP**  
63 St Thomas Street  
Bristol BS1 6JZ  
Tel +44(0)117 976 5432 Fax +44(0)117 976 5433  
www.arup.com

Project  
**PORTISHEAD BRANCH LINE (METROWEST PHASE 1)**

Drawing Title  
**S050 PILL STATION PROPOSED STATION TYPICAL SECTIONS**

Designed	T. MYNORS	Signed	Date	22/07/18
Drawn	J. BACINSKI	Signed	Date	22/07/18
Checked	R. SNELL	Signed	Date	22/07/18
Approved	R. SNELL	Signed	Date	22/07/18

Scale(s)  
As Shown ELR & Mileage  
POD 126m 10ch

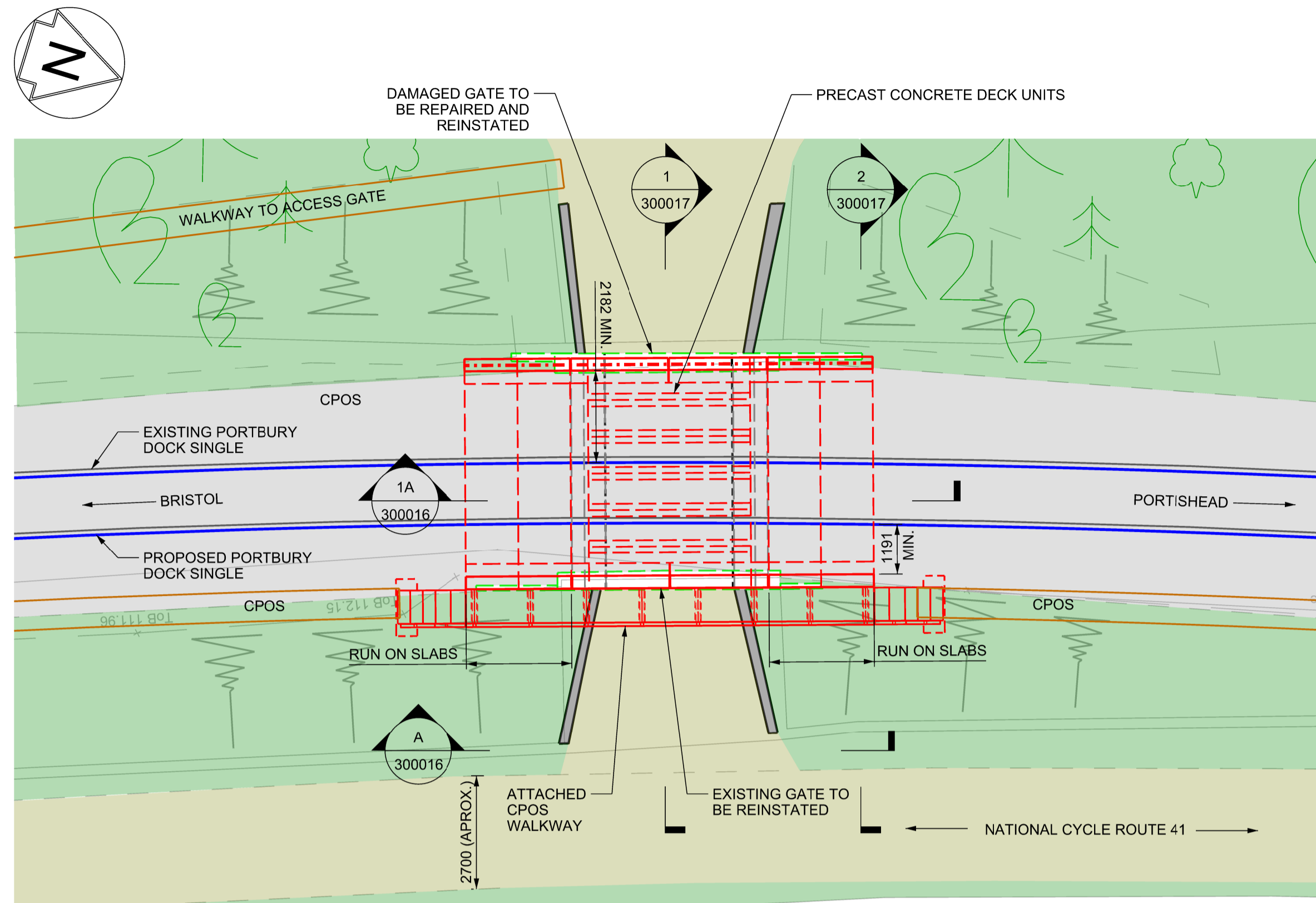
Alternative Reference  
Drawing Number  
W1097B-ARP-DRG-EST-300015

Sheet  
1 of 1  
Revision

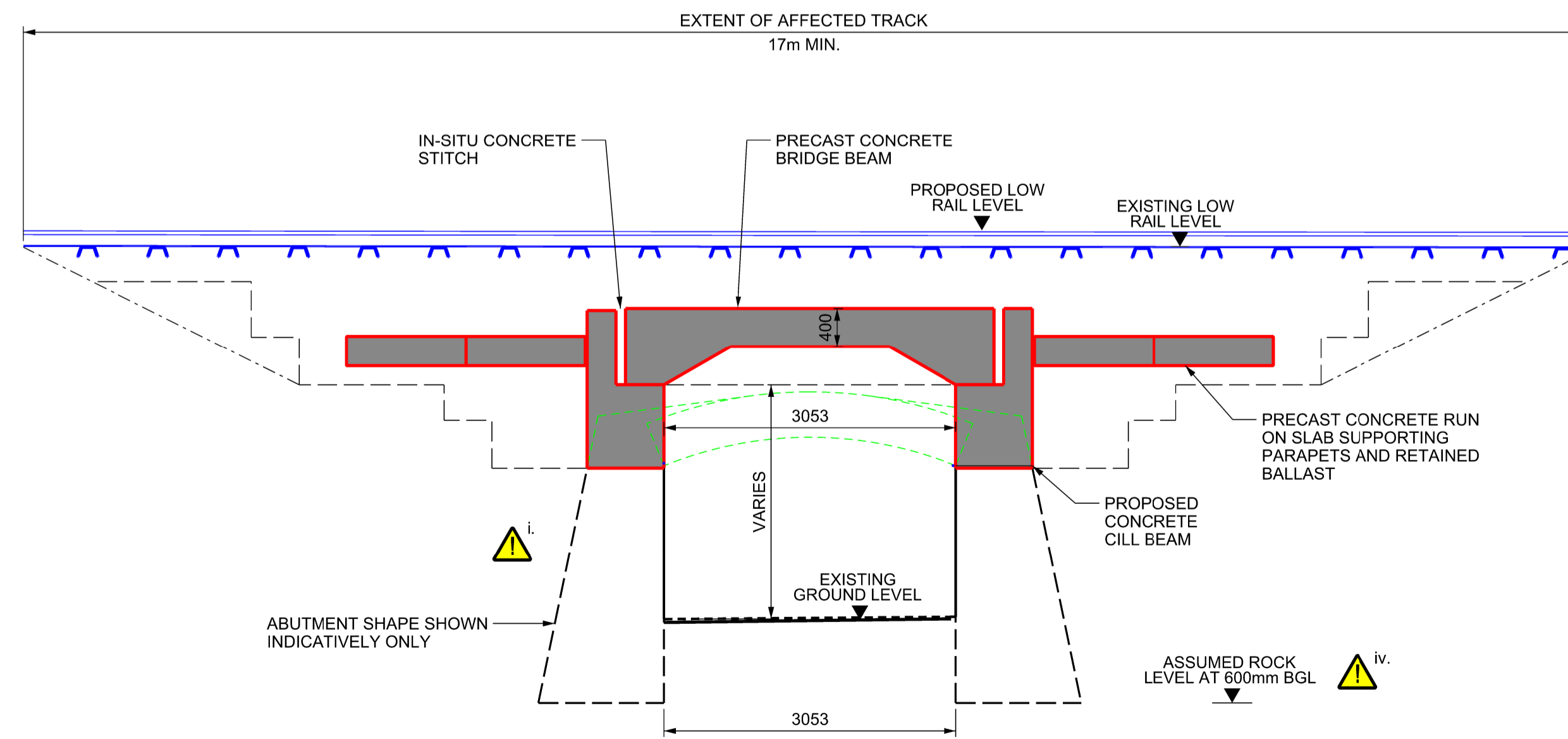
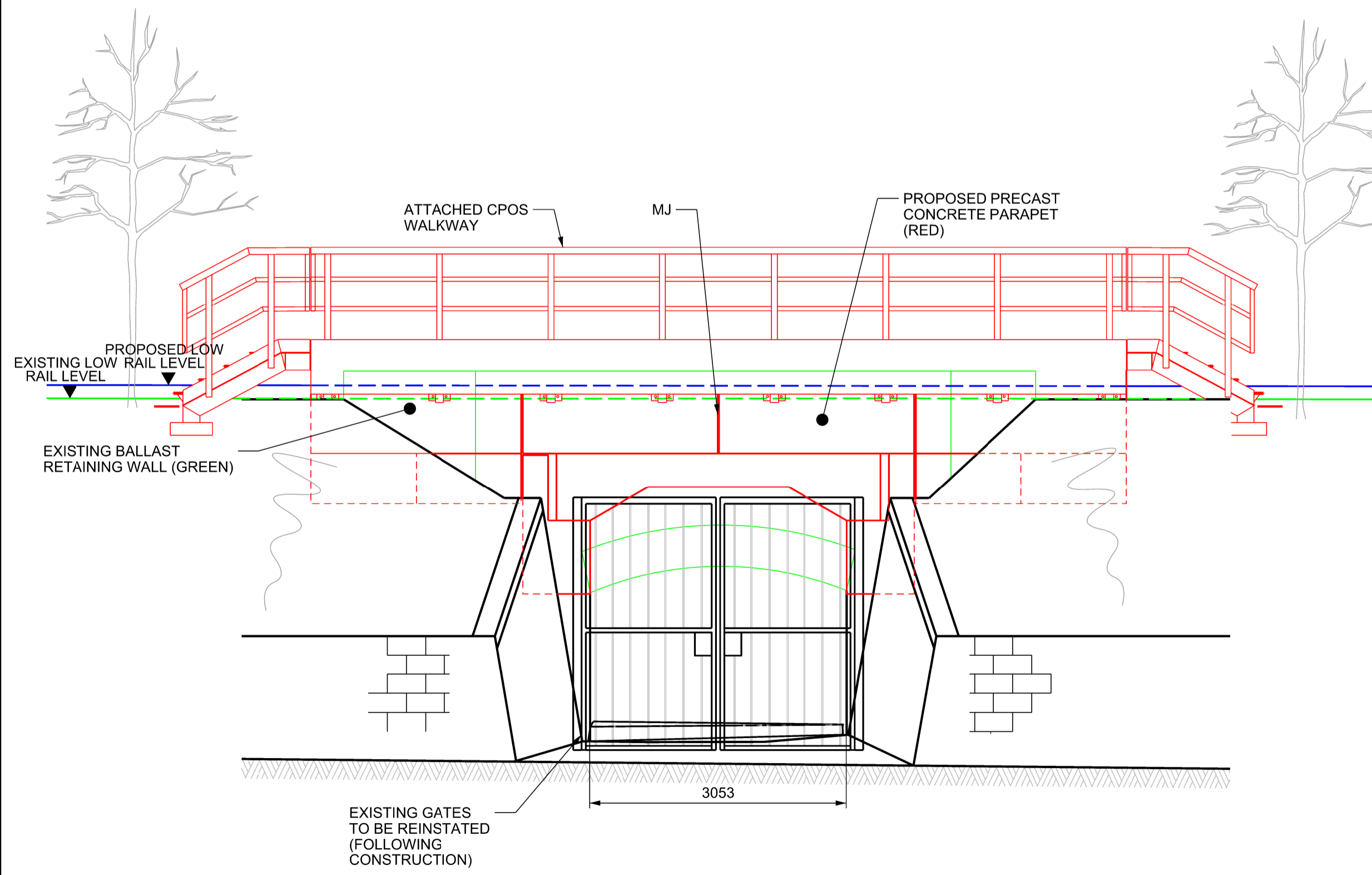
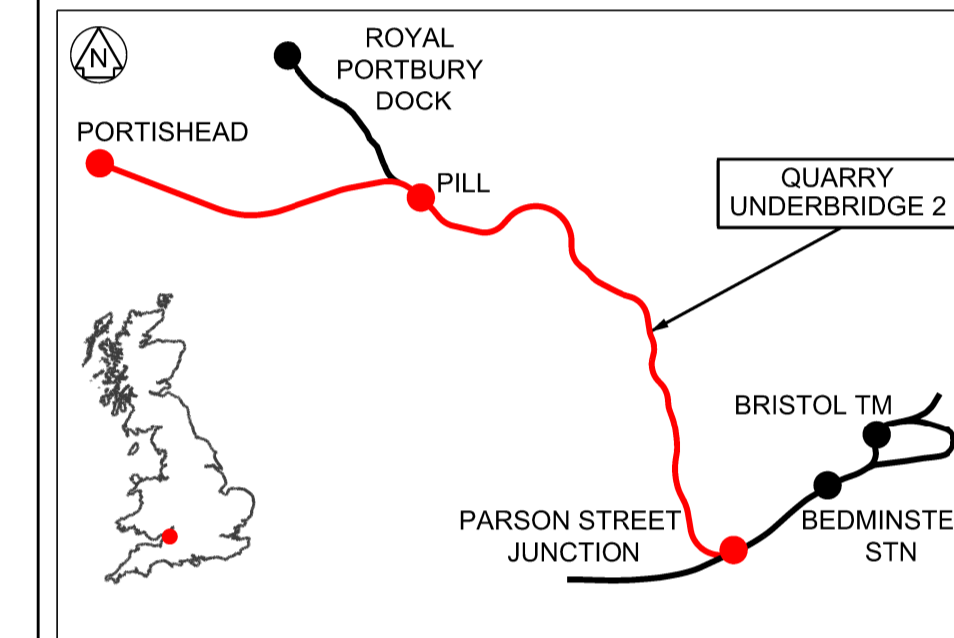
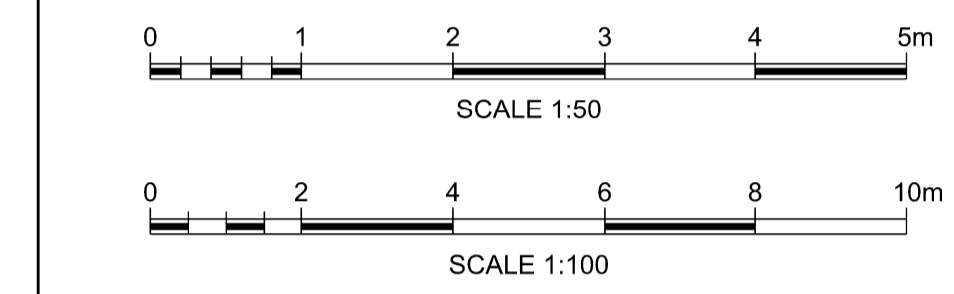
**SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION**

IN ADDITION TO THE HAZARDS NORMALLY ASSOCIATED WITH THIS TYPE OF WORK, SPECIAL ATTENTION SHOULD BE GIVEN TO:

- THE EXISTING CUTTING SLOPES MAY BE UNSTABLE.
- UNSAFE STRUCTURES MAY BE PRESENT ACROSS THE EXISTING PLATFORM.
- NO INFORMATION IS AVAILABLE REGARDING THE FORMATION OF THE EAST WALLS.
- BURIED SERVICES ARE PRESENT ACROSS THE SITE. THE PRECISE POSITIONS OF THESE ARE TO BE VERIFIED BY THE CONTRACTOR PRIOR TO ANY CONSTRUCTION WORKS COMMENCING.
- ELEVATED LEVELS OF CONTAMINANTS, INTRAVENOUS NEEDLES AND OTHER HAZARDOUS SUBSTANCES MAY BE PRESENT ONSITE.
- THERE IS LIMITED TOPOGRAPHIC SURVEY AVAILABLE AT THIS SITE AND THE FORM 001 DESIGN IS BASED ON INTERPRETATION OF LIDAR DATA. FULL TOPOGRAPHIC SURVEY REQUIRED PRIOR TO DETAILED DESIGN.



SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION	
i.	PREVIOUS REPAIR DRAWINGS DO NOT CONFIRM ABUTMENT SHAPE. ABUTMENT THICKNESS AND STABILITY TO BE VERIFIED AT DETAILED DESIGN. SITE INVESTIGATION REQUIRED.
ii.	SINGLE DI-SAC TELECOMS CABLE LAID ON SURFACE TO BE PROTECTED DURING WORKS AND RE-LAID INTO PROPOSED CONTAINMENT ROUTE.
iii.	THE STABILITY OF THE EXISTING ABUTMENTS AND WINGWALLS DURING EXCAVATION SHOULD BE VERIFIED AT DETAILED DESIGN STAGE.
iv.	NO GROUND INVESTIGATION WAS UNDERTAKEN FOR FORM 001 DESIGN. THE DESIGN IS THEREFORE BASED ON THE GROUND CONDITIONS ILLUSTRATED WITHIN THE AS-BUILT DRAWINGS FOR QUARRY UNDERBRIDGE 1, LOCATED APPROXIMATELY 150m FROM THE STRUCTURE. THERE IS A RESIDUAL RISK THAT ANY VARIATIONS IN THE ANTICIPATED ROCK LEVEL COULD SIGNIFICANTLY AFFECT THE FORM OF THE PROPOSED STRUCTURE.
v.	POOR ACCESS TO SITE. TRACK ACCESS MAY BE REQUIRED FOR CONSTRUCTION.
vi.	AS DRAWN, THE NOMINAL WEIGHT OF THE LARGEST SINGLE PRECAST CONCRETE ELEMENT TO BE LIFTED IS 7 TONNES. TO BE CONFIRMED FOLLOWING DETAILED DESIGN.



- Legend/Notes
- ALL DIMENSIONS ARE IN MILLIMETRES (mm) UNLESS STATED OTHERWISE.
  - ALL LEVELS ARE IN METRES ABOVE SNAKE GRID RBEP12 (ORDNANCE DATUM + 100 METRES).
  - THIS DRAWING IS BASED ON TOPOGRAPHICAL SURVEY UNDERTAKEN BY SEVERN PARTNERSHIP LTD. IN 2015.
  - BURIED SERVICES HAVE BEEN TAKEN FROM NETWORK RAIL SUPPLIED BURIED SERVICES RETURN DATED 2015. NO FURTHER SURVEYS HAVE BEEN UNDERTAKEN BY ARUP.
  - NO GROUND INVESTIGATION HAS BEEN UNDERTAKEN IN THE PREPARATION OF THIS DESIGN. THIS MUST BE UNDERTAKEN AT DETAILED DESIGN TO CONFIRM THAT THE EXISTING ABUTMENTS ARE FOUNDED ON COMPETENT ROCK.
  - PROPOSED HEADROOM TO BE EQUAL TO OR GREATER THAN EXISTING MINIMUM HEADROOM AT CENTRELINE OF 1.82m. SUBJECT TO DETAILED DESIGN, UP TO 2.292m MAY BE AVAILABLE.
  - FOR SECTION 1&2 SEE DRAWING NO. W1097B-ARP-DRG-EST-300017.

Rev	Date	Description of Revisions	Drawn	Chkd	Appr	Suitability
A02	20/09/19	FOR DCO APPLICATION	JB	RS	RS	
Status						S2



Project  
**PORTISHEAD BRANCH LINE (METROWEST PHASE 1)**

Drawing Title  
**S022 QUARRY UNDERBRIDGE 2  
GENERAL ARRANGEMENT  
PROPOSED**

Designed	J. BACINSKI	Signed		Date	20/09/19
Drawn	J. BACINSKI	Signed		Date	20/09/19
Checked	R. SNELL	Signed		Date	20/09/19
Approved	R. SNELL	Signed		Date	20/09/19
Scale(s)	As Shown	ELR & Mileage	POD	122m	74ch
Alternative Reference		Sheet	1 of 1		
Drawing Number	W1097B-ARP-DRG-EST-300016	Revision	A02		