





NOTES

This design is subject to final approval.

Drawings should be read in conjunction with the conceptual design statement report which presents full and detailed specifications.



GRAPHIC SCALE 1:500



PROJECT TITLE

Construction of a Steep Wall  
Non-Hazardous Waste Cell

PROJECT NUMBER

30499

CLIENT

Wasteserv Malta Ltd.

LOCATION

Maghtab Environmental Complex

DRAWING TITLE

Landfill Excavation Plan

REVISIONS

0	26/08/2021	DB	First Issue
Rev	Date	Chkd	Description

DESIGNED	RWS	DRAWN	RWS
SCALES @ A1	1:500	DATE	26/08/2021



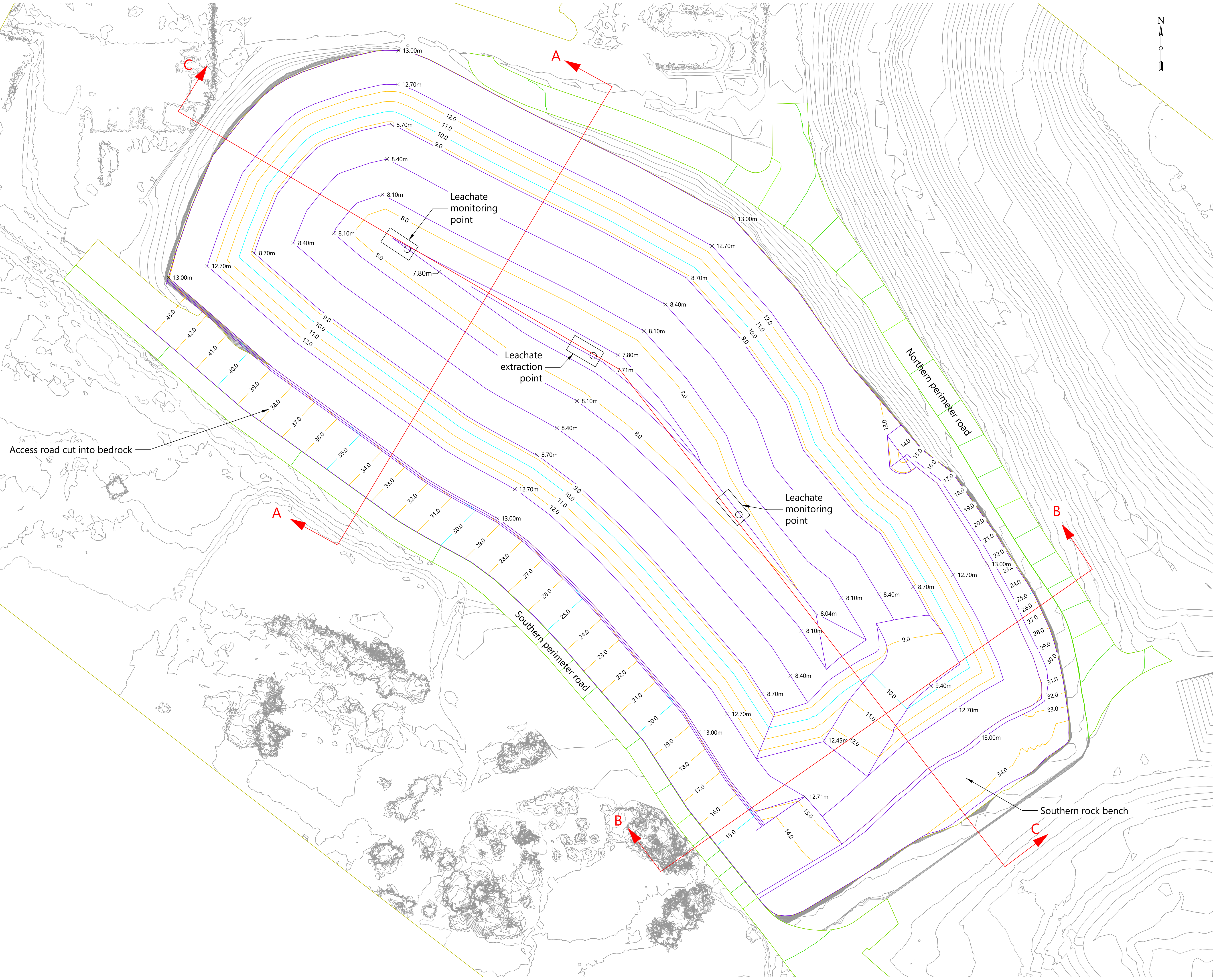
DRAWING NUMBER  
30499/WSM/SW/02

REV  
00









NOTES

This design is subject to final approval.

Drawings should be read in conjunction with the conceptual design statement report which presents full and detailed specifications.

Section shown on drawing 05.



GRAPHIC SCALE 1:500



PROJECT TITLE

Construction of a Steep Wall  
Non-Hazardous Waste Cell

PROJECT NUMBER

30499

CLIENT

Wasteserv Malta Ltd.

LOCATION

Maghtab Environmental Complex

DRAWING TITLE

Basal Mineral Liners Plan & Section  
Locations

REVISIONS

Rev	Date	Chkd	Description
0	26/08/2021	DR	First issue

DESIGNED	RWS	DRAWN	RWS
SCALES @ A1	1:500	DATE	26/08/2021

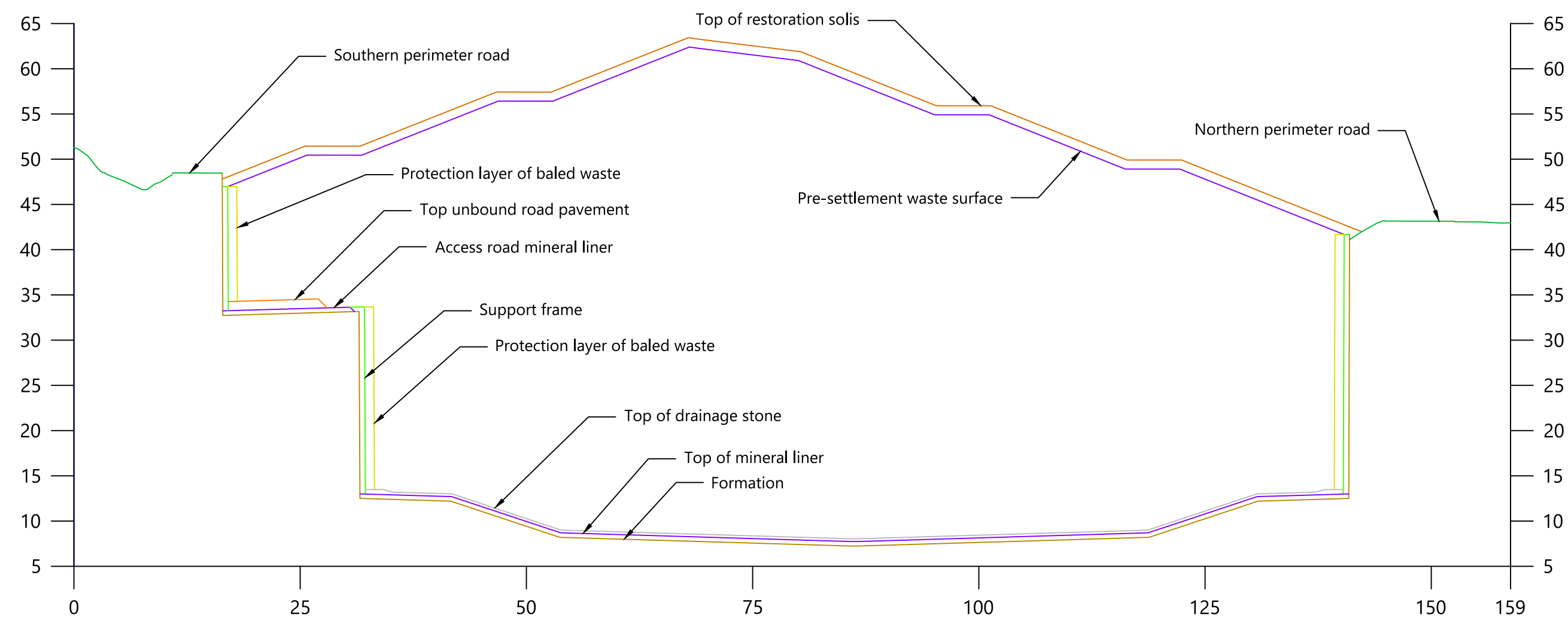


DRAWING NUMBER  
30499/WSM/SW/04

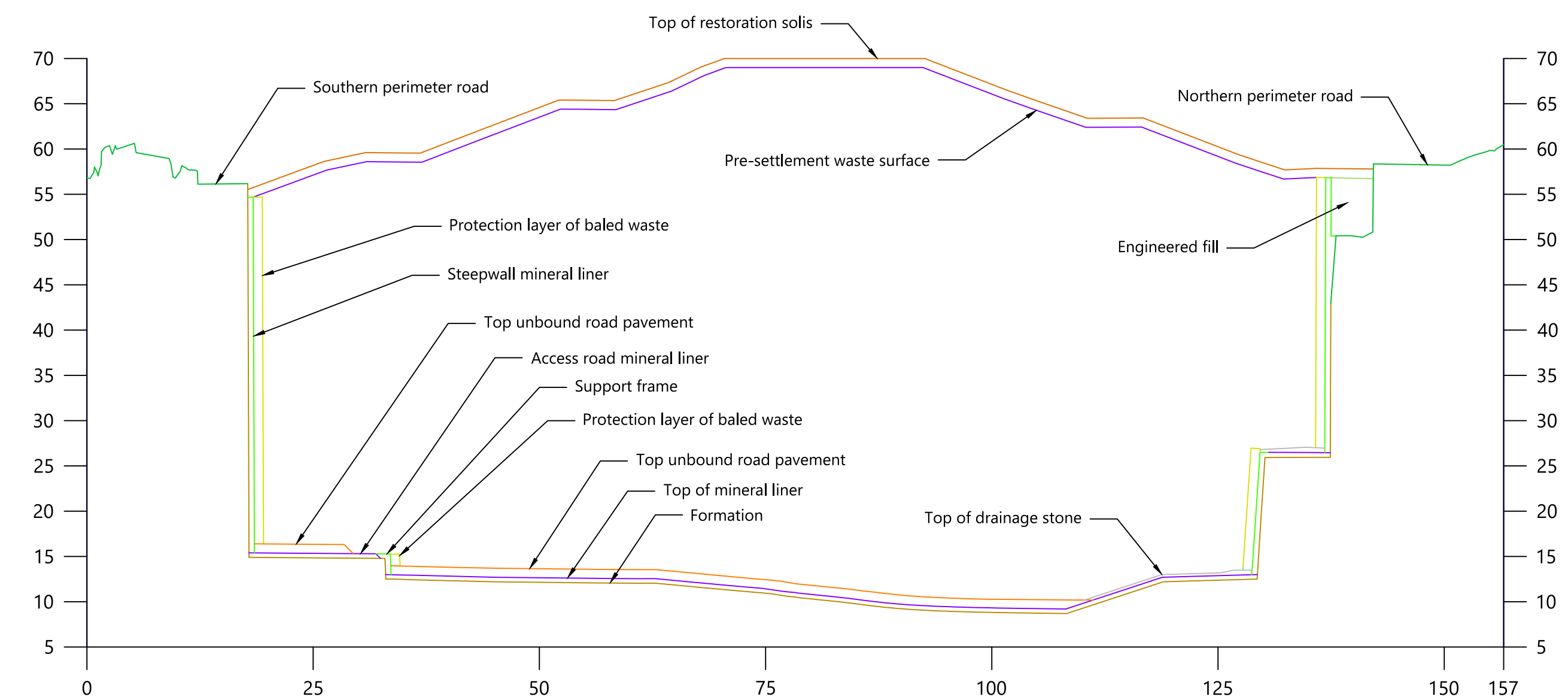
REV  
00



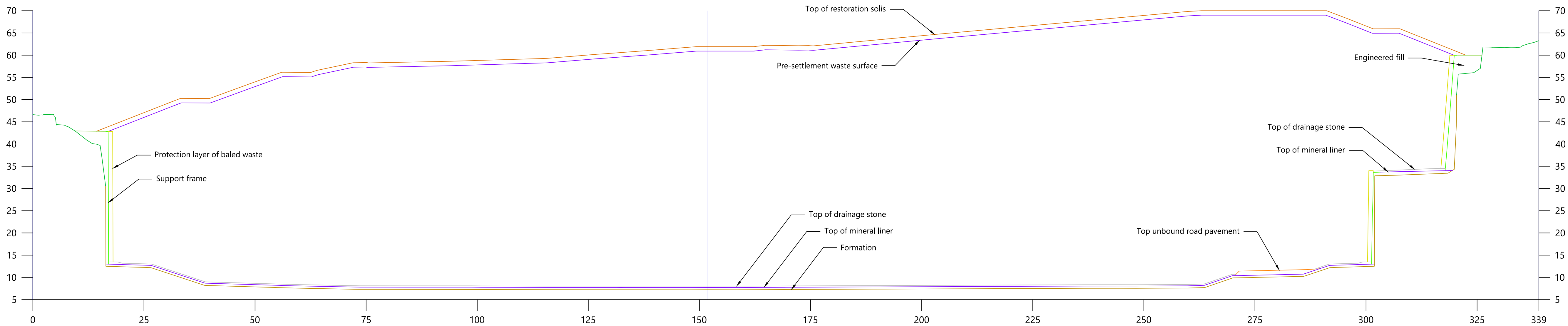
Section A - A



Section B - B



Section C - C



NOTES

This design is subject to final approval.

Drawings should be read in conjunction with the conceptual design statement report which presents full and detailed specifications.



GRAPHIC SCALE 1:500



PROJECT TITLE

Construction of a Steep Wall  
Non-Hazardous Waste Cell

PROJECT NUMBER

30499

CLIENT

Wasteserv Malta Ltd.

LOCATION

Maghtab Environmental Complex

DRAWING TITLE

Landfill Sections

REVISIONS

Rev	Date	Chkd	Description
0	26/08/2021	DB	First Issue

DESIGNED	RWS	DRAWN	RWS
SCALES @ A1	1:500	DATE	26/08/2021



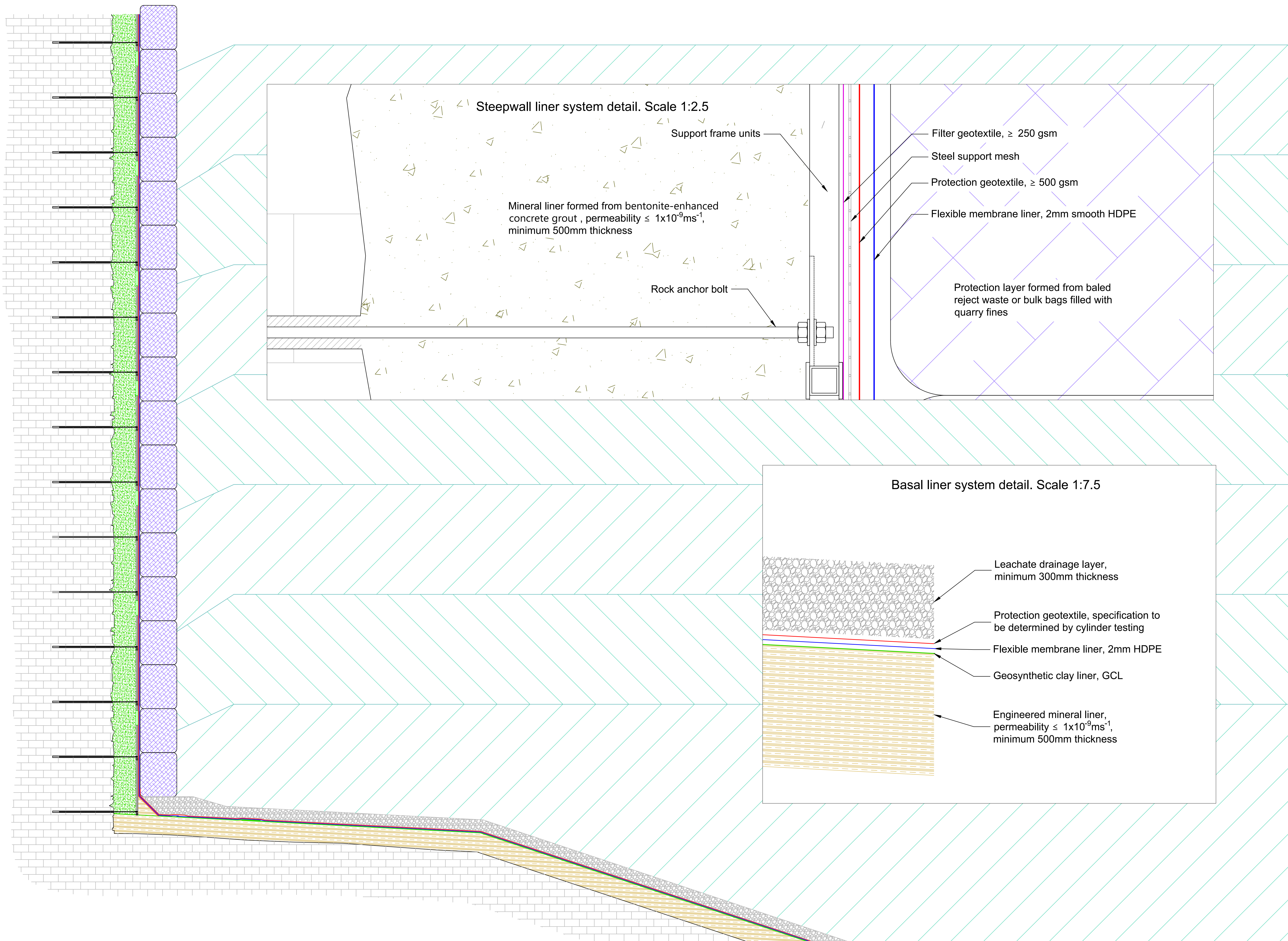
DRAWING NUMBER  
30499/WSM/SW/05

REV  
00



This design is subject to final approval.

Drawings should be read in conjunction with the conceptual design statement report which presents full and detailed specifications.



PROJECT TITLE

## Construction of a Steep Wall Non-Hazardous Waste Landfill

PROJECT NUMBER

30499

CLIENT

Wasteserv Malta Ltd.

LOCATION

## Maghtab Environmental Complex

DRAWING TITLE

## Steepwall & Basal Liner System Construction Details

## REVISION

0	26/08/2021	08	First issue
Rev	Date	Chkd	Description

DESIGNED	RWS	DRAWN	RWS
SCALE @ A1	As Shown	DATE	26/08/2021

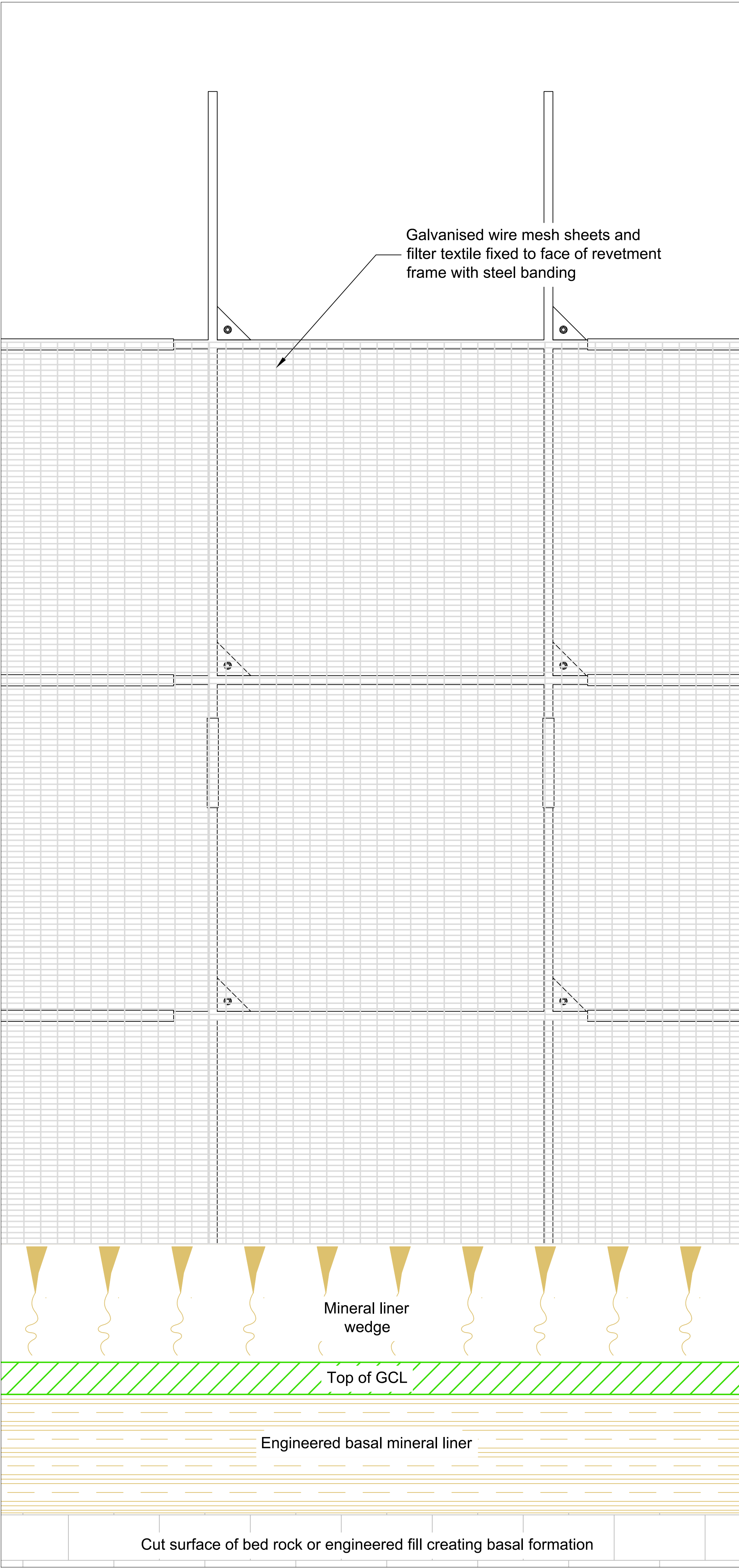
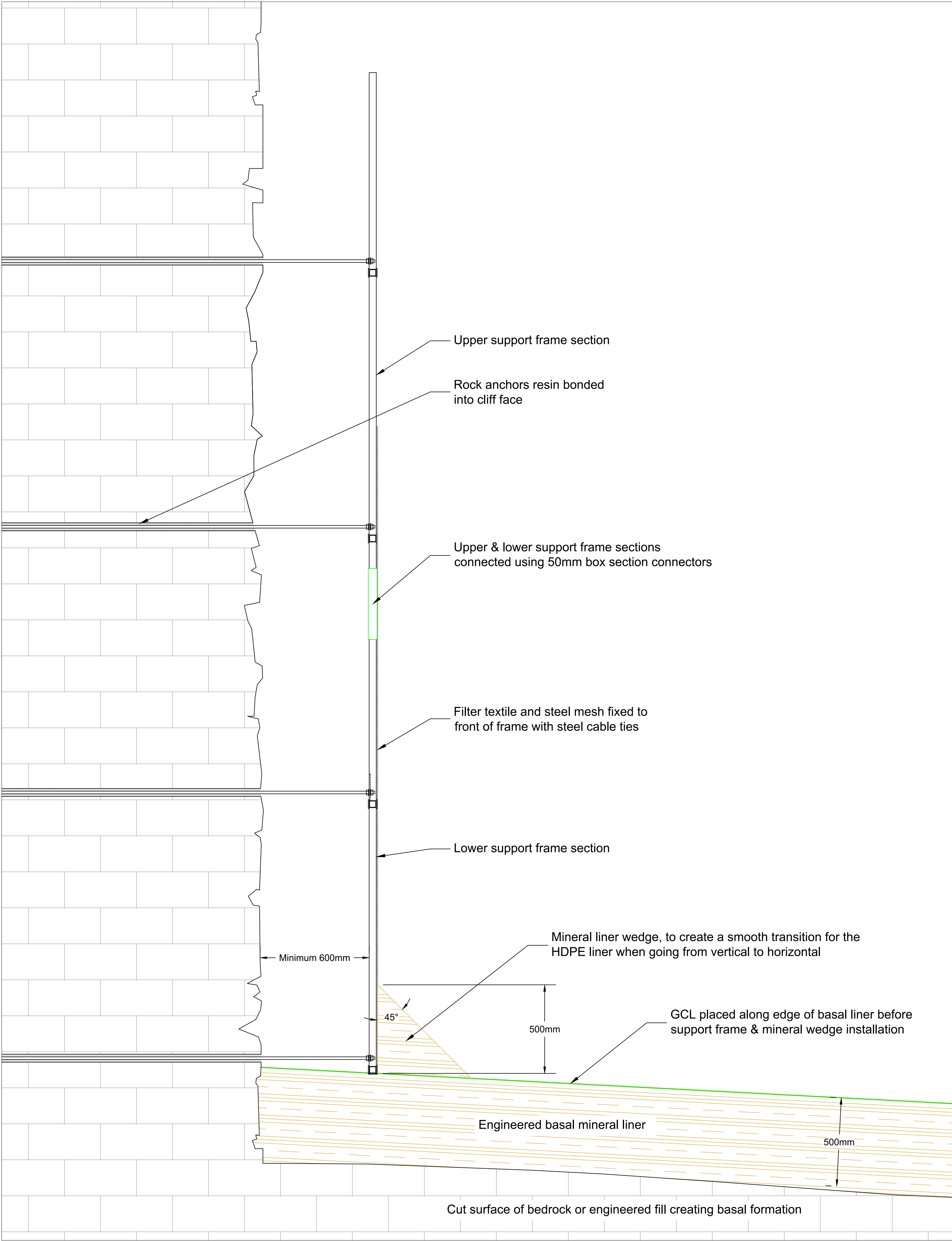
CQA

CQA International limited

DRAWING NUMBER  
30499/WSM/SW/06

REV  
00





NOTES

This design is subject to final approval.

Drawings should be read in conjunction with the conceptual design statement report which presents full and detailed specifications.



PROJECT TITLE

Construction of a Steep Wall  
Non-Hazardous Waste Cell

PROJECT NUMBER

30499

CLIENT

Wasteserv Malta Ltd.

LOCATION

Maghtab Environmental Complex

DRAWING TITLE

Construction Sequence Details 1  
Steep Wall Lift 1

REVISIONS

Rev	Date	Chkd	Description
0	26/08/2021	DB	First issue

DESIGNED	RWS	DRAWN	RWS
SCALES @ A1	1:12.5	DATE	26/08/2021

CQA

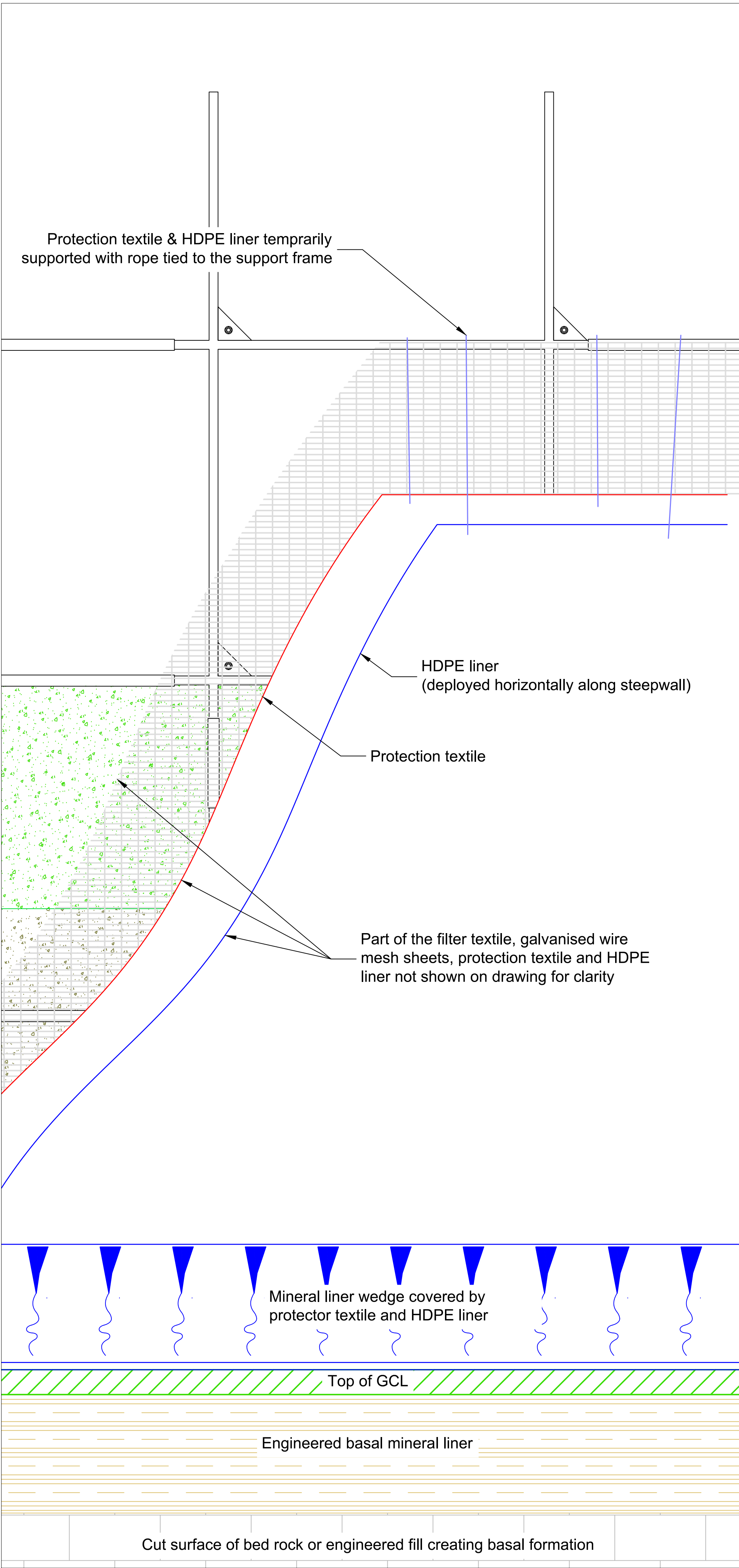
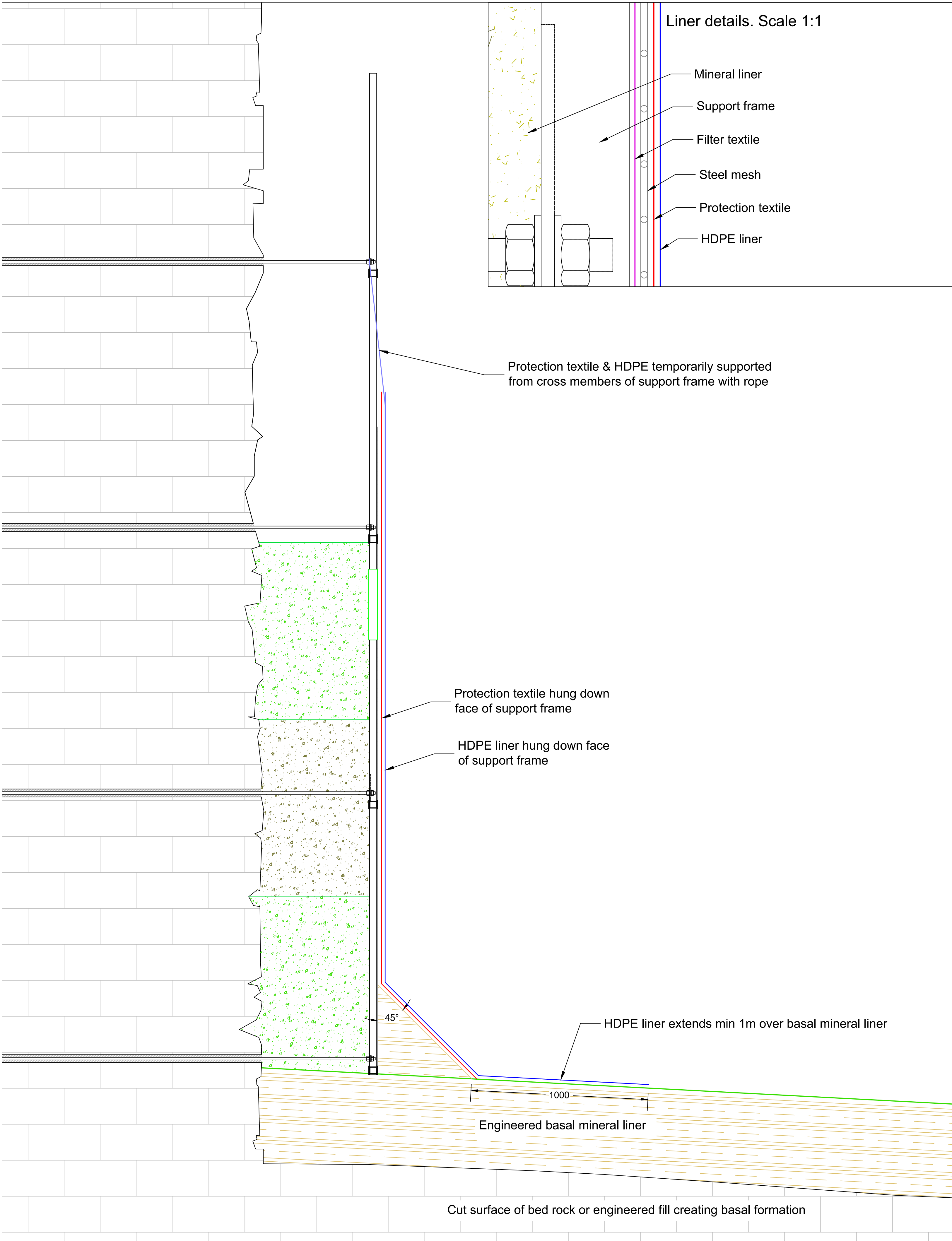
CQA International limited

DRAWING NUMBER	REV
30499/WSM/SW/7	00









NOTES

This design is subject to final approval.

Drawings should be read in conjunction with the conceptual design statement report which presents full and detailed specifications.



PROJECT TITLE			
Construction of a Steep Wall Non-Hazardous Waste Cell			
PROJECT NUMBER			
30499			
CLIENT			
Wasteserv Malta Ltd.			
LOCATION			
Maghtab Environmental Complex			
DRAWING TITLE			
Construction Sequence Details 3 Steep Wall Lift 1			
REVISIONS			
<input type="checkbox"/>	26/08/2021	DB	First issue
Rev	Date	Chkd	Description

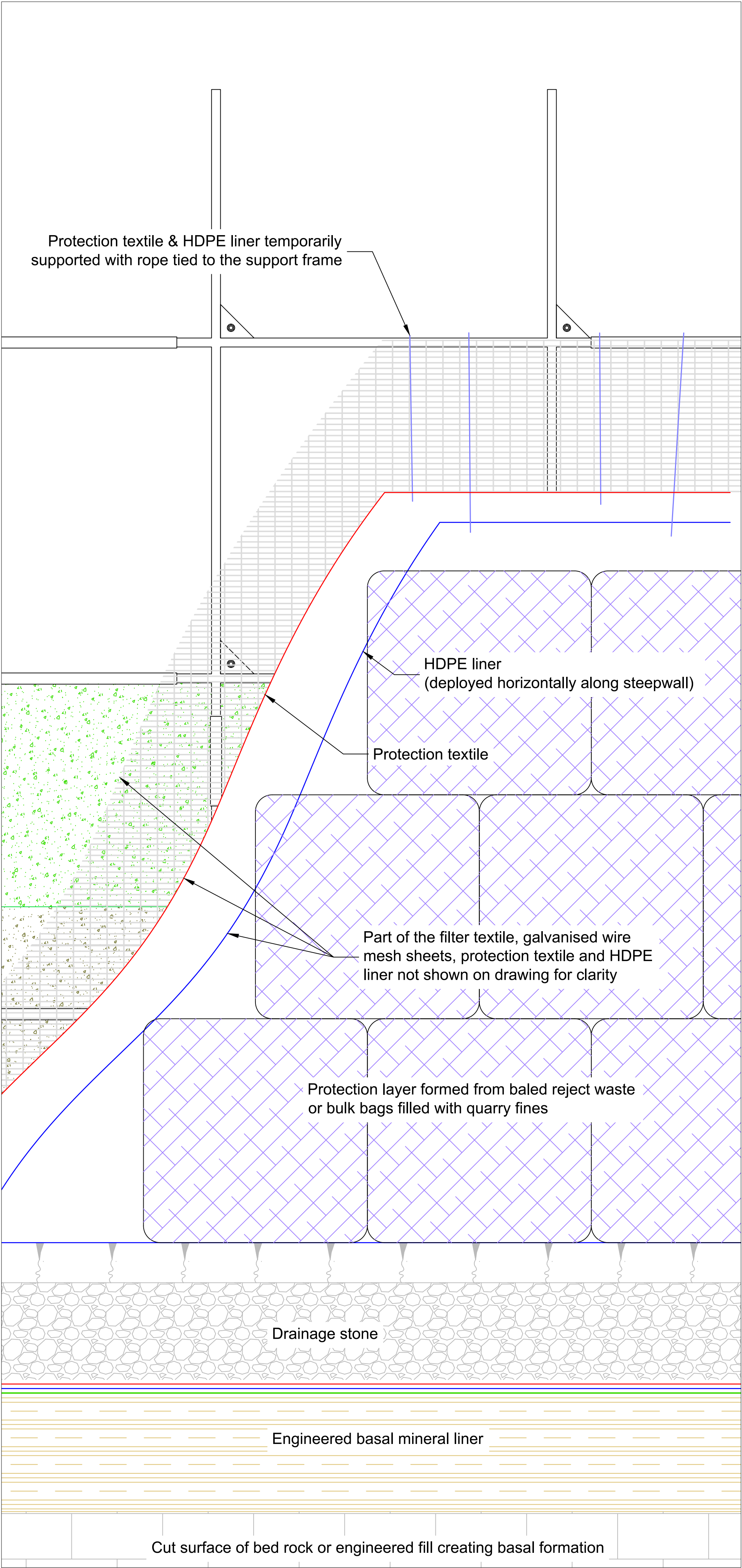
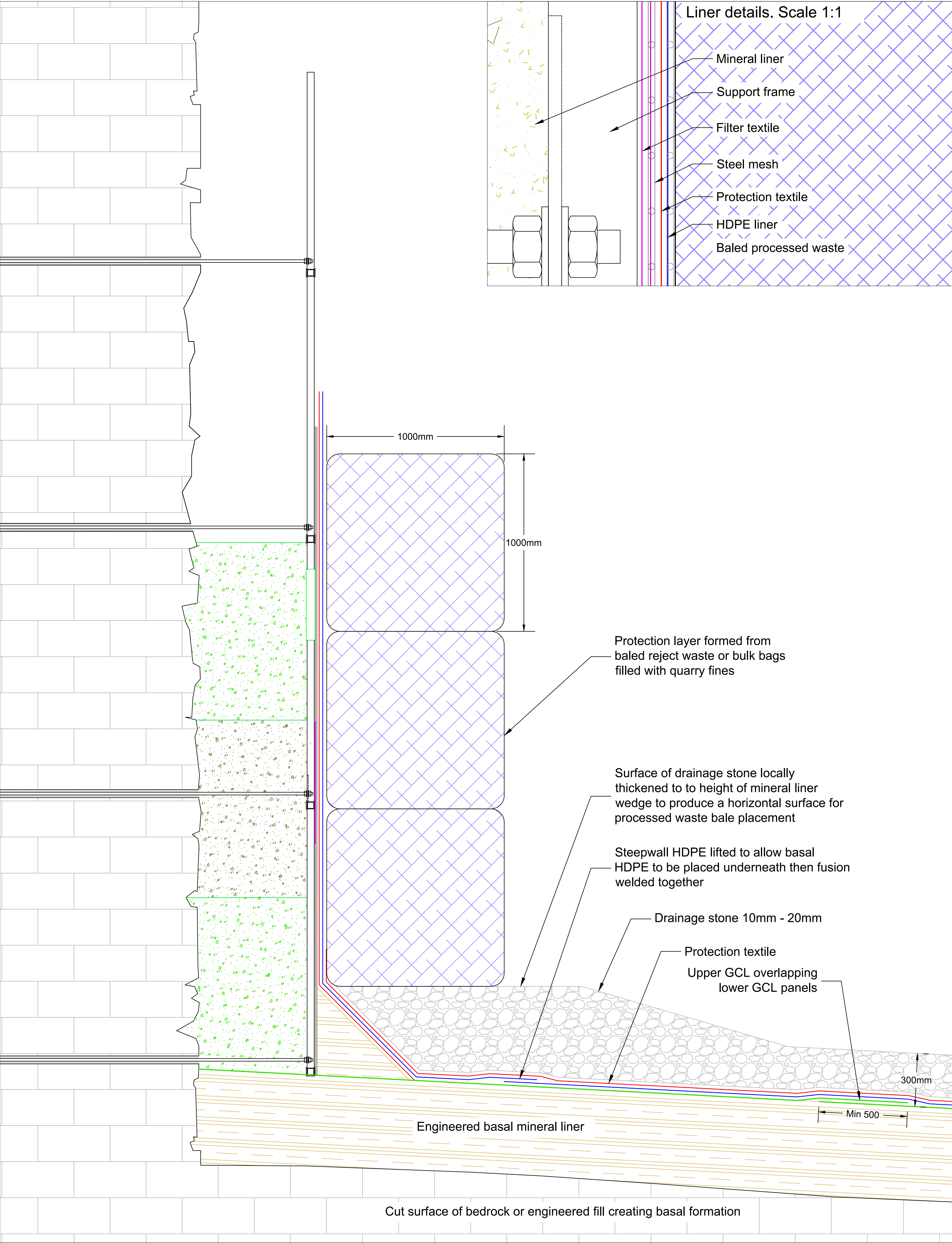
DESIGNED	RWS	DRAWN	RWS
SCALES @ A1	1:12.5	DATE	26/08/2021

CQA

CQA International limited

DRAWING NUMBER	REV
30499/WSM/SW/09	00





NOTES

This design is subject to final approval.

Drawings should be read in conjunction with the conceptual design statement report which presents full and detailed specifications.



CREATING RESOURCES FROM WASTE

PROJECT TITLE

Construction of a Steep Wall Non-Hazardous Waste Landfill

PROJECT NUMBER

30499

CLIENT

Wasteserv Malta Ltd.

LOCATION

Maghtab Environmental Complex

DRAWING TITLE

Construction Sequence Details 4 Steep Wall Lift 1

REVISIONS

Rev	Date	Chkd	Description
0	26/08/2021	DB	First issue

DESIGNED

RWS

DRAWN

RWS

SCALES @ A1

1:12.5

DATE

26/08/2021



CQA International limited

DRAWING NUMBER

30499/WSM/SW/10

REV

00



First Lift  
5.6m High support frame

3000

This diagram shows a cross-section of a retaining wall and its foundation. The wall is a brickwork structure with a rough, irregular top edge. It is supported by a foundation system consisting of a concrete base, a gravel layer, and a sand layer. A vertical dimension line indicates a height of 3000 units. The wall is labeled 'First Lift' and '5.6m High support frame'.

Second Lift  
additional 3m support frame

Third Lift  
additional 3m support frame

3000

This design is subject to final approval.

Drawings should be read in conjunction with the conceptual design statement report which presents full and detailed specifications.

Demonstration of construction sequence which will be repeated to full height of excavation as waste filling progresses.



PROJECT NUMBER \_\_\_\_\_

Wasteserv Malta Ltd.

DRAWING TITLE

Construction Sequence for Steep Wall Lifts 1, 2 & 3

## REVISIONS

O	26/08/2021	OB	First Issue
Rev	Date	Chkd	Description

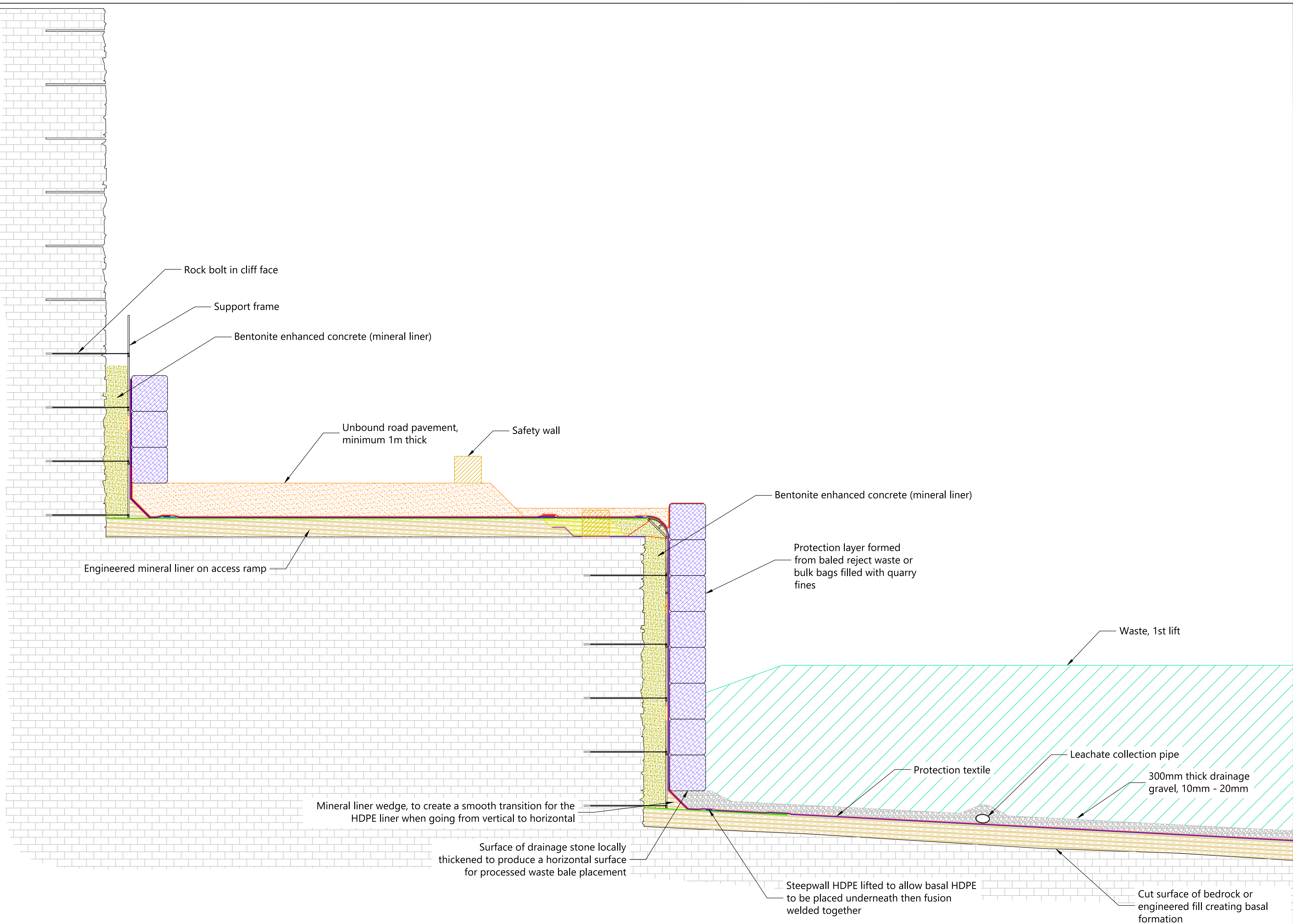
DESIGNED	RWS	DRAWN	RWS
SCALES @ A1	1:400	DATE	26/08/2021

**CQA**  
CQA International limited

DRAWING NUMBER  
30499/WSM/SW/11

REV  
00





**NOTES**

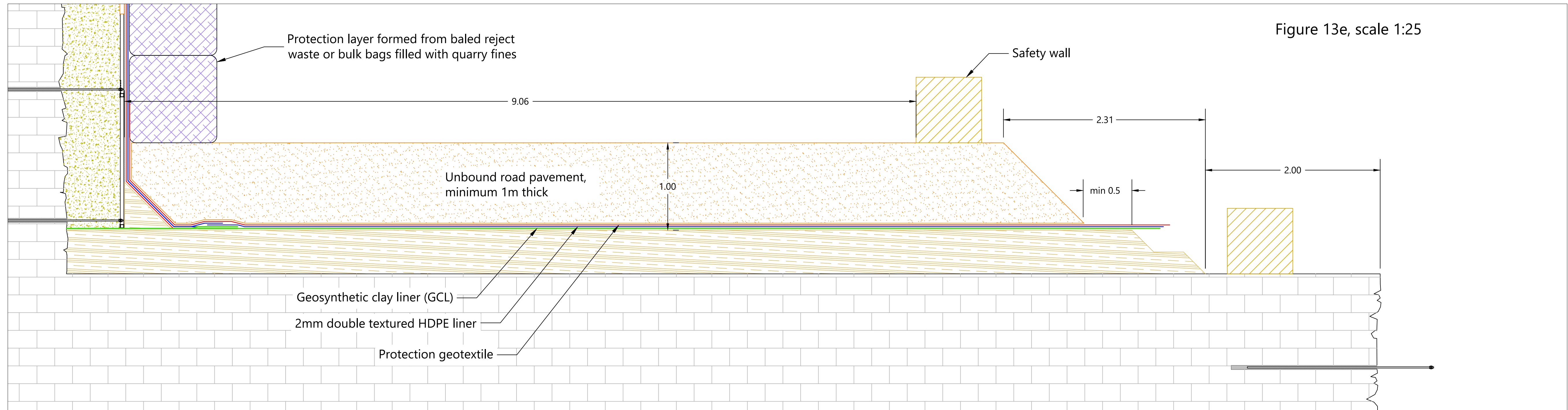
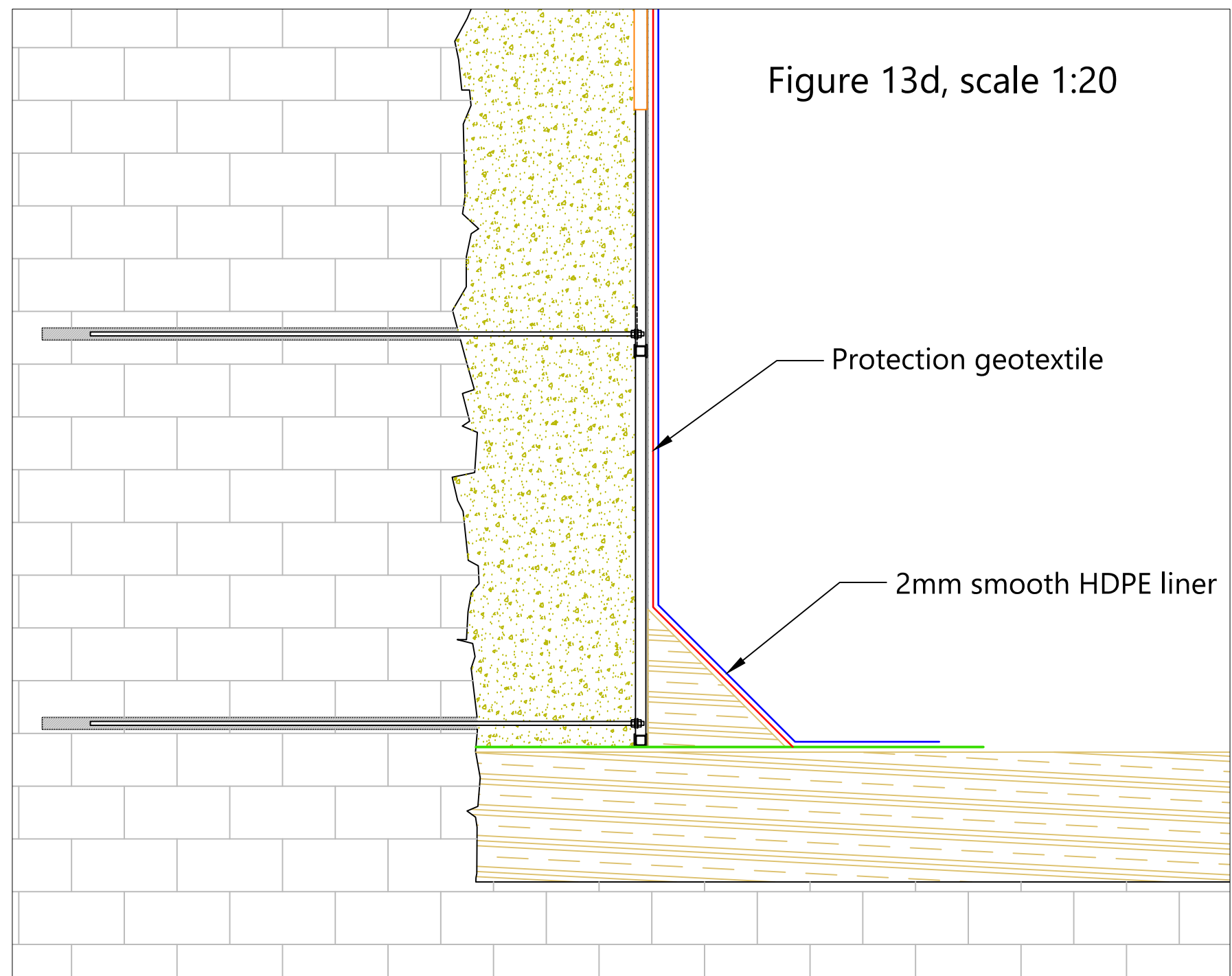
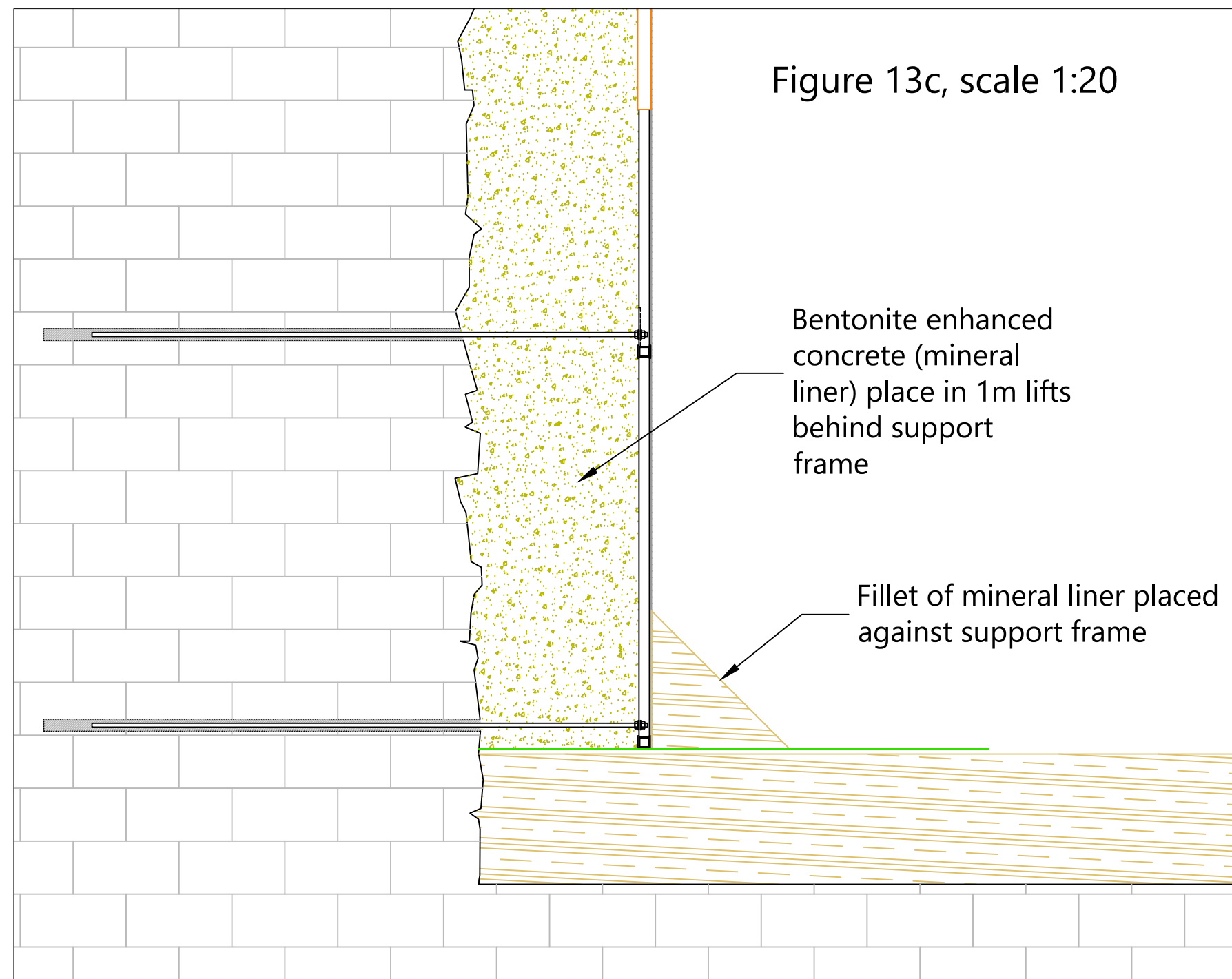
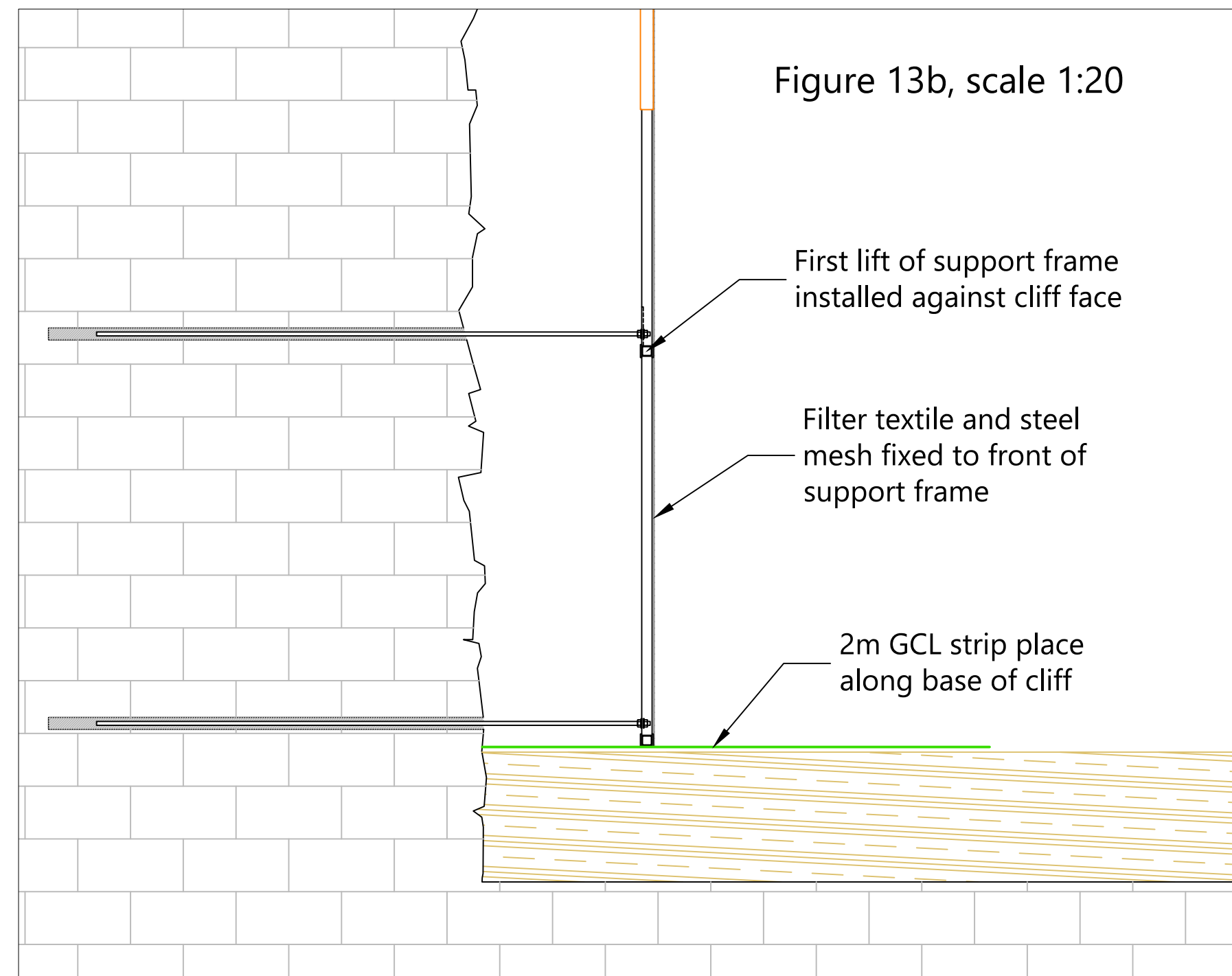
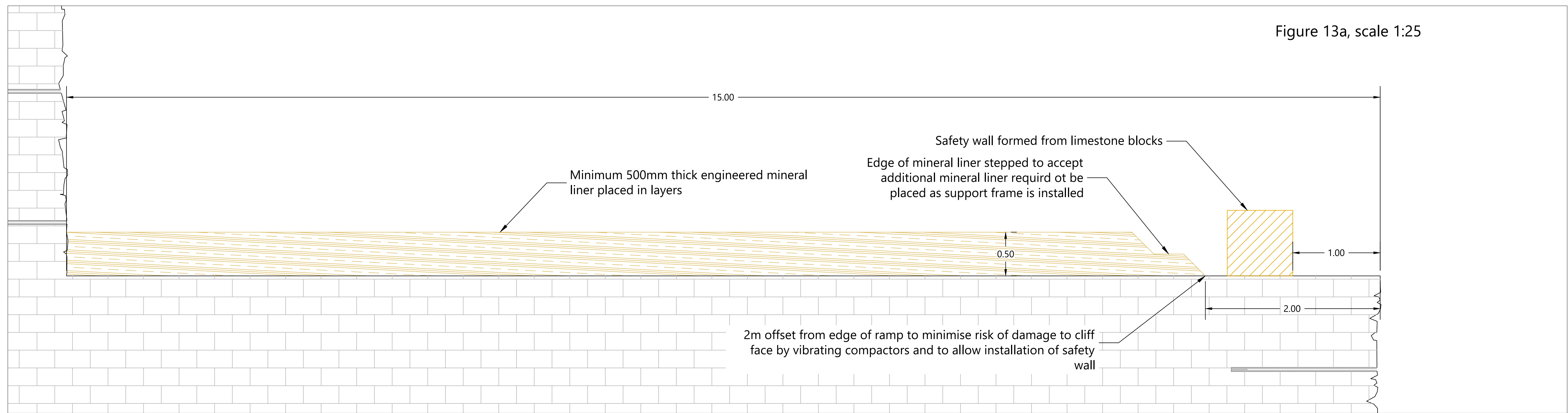
This design is subject to final approval.

Drawings should be read in conjunction with the conceptual design statement report which presents full and detailed specifications.



PROJECT TITLE															
Construction of a Steep Wall Non-Hazardous Waste Cell															
PROJECT NUMBER															
30499															
CLIENT															
Wasteserv Malta Ltd.															
LOCATION															
Maghtab Environmental Complex															
DRAWING TITLE															
Access Ramp Section															
REVISIONS															
<table><tr><td></td><td></td><td></td><td></td></tr><tr><td>0</td><td>17/08/2021</td><td>DB</td><td>First Issue</td></tr><tr><td>Rev</td><td>Date</td><td>Chkd</td><td>Description</td></tr></table>								0	17/08/2021	DB	First Issue	Rev	Date	Chkd	Description
0	17/08/2021	DB	First Issue												
Rev	Date	Chkd	Description												
DESIGNED	RWS	DRAWN	RWS												
SCALES @ A1	1:500	DATE	17/08/2021												
<div><div>CQA</div><div>CQA INTERNATIONAL LTD</div></div>															
DRAWING NUMBER			REV												
30499/WSM/SW/12			00												





**NOTES**

This design is subject to final approval.

Drawings should be read in conjunction with the conceptual design statement report which presents full and detailed specifications.



PROJECT TITLE

Construction of a Steep Wall  
Non-Hazardous Waste Cell

PROJECT NUMBER

30499

CLIENT

Wasteserv Malta Ltd.

LOCATION

Maghtab Environmental Complex

DRAWING TITLE

Access Ramp Liner System  
Construction Sequence 1

REVISIONS

Rev	Date	Chkd	Description
0	17/08/2021	DB	First Issue

DESIGNED	RWS	DRAWN	RWS
SCALES @ A1	As Shown	DATE	17/08/2021



DRAWING NUMBER	REV
30499/WSM/SW/13	00



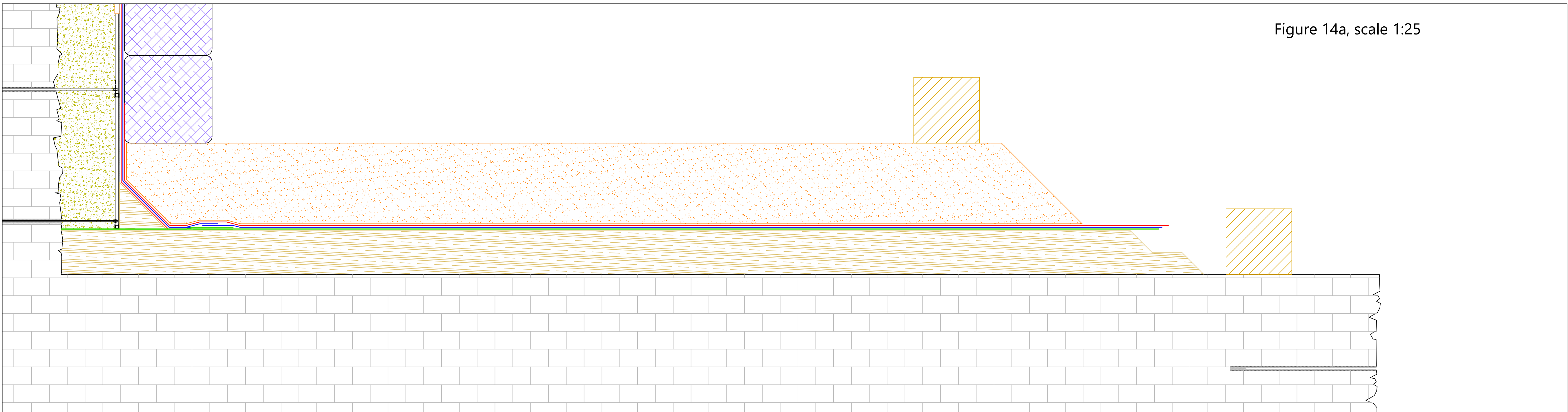


Figure 14a, scale 1:25

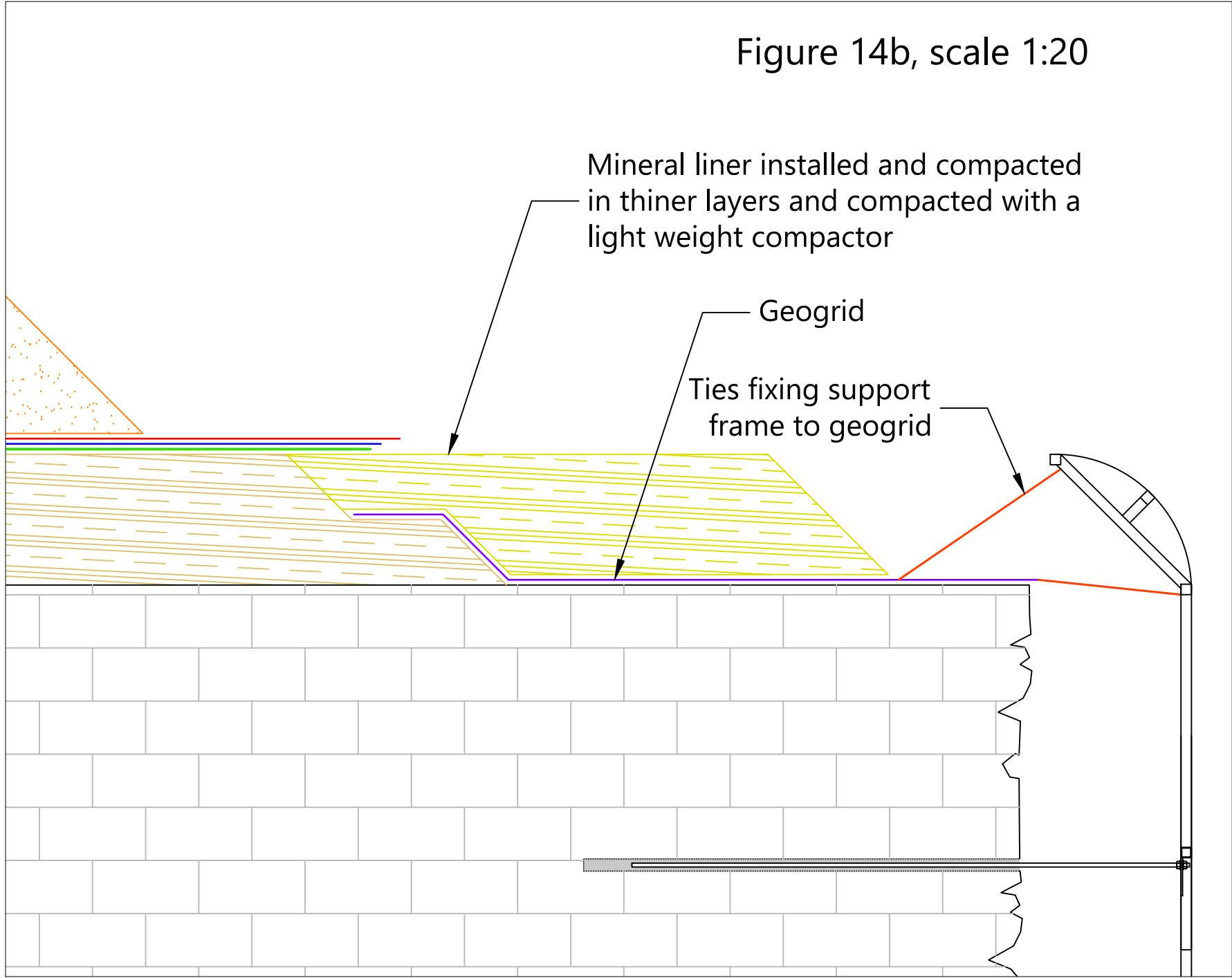


Figure 14b, scale 1:20

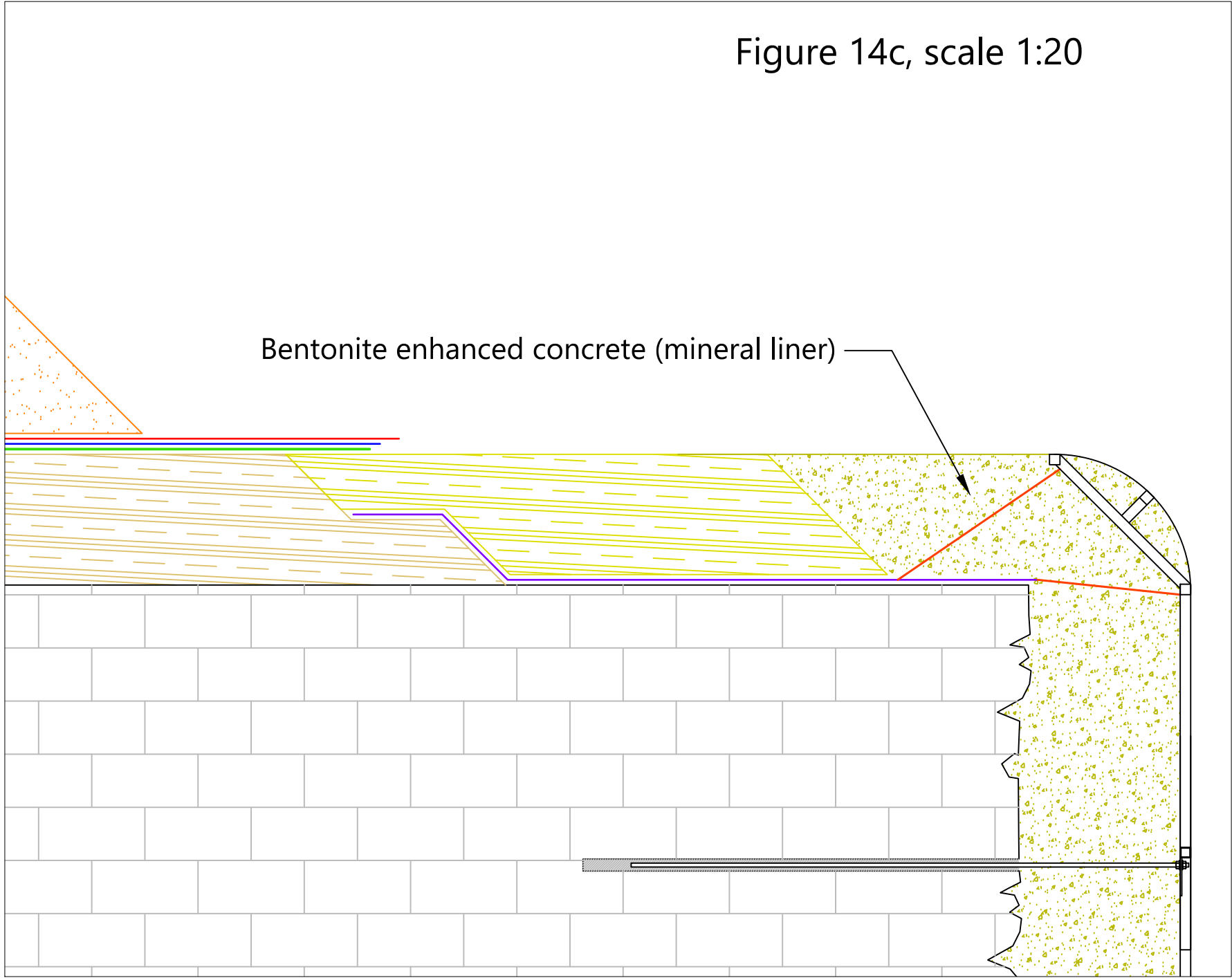


Figure 14c, scale 1:20

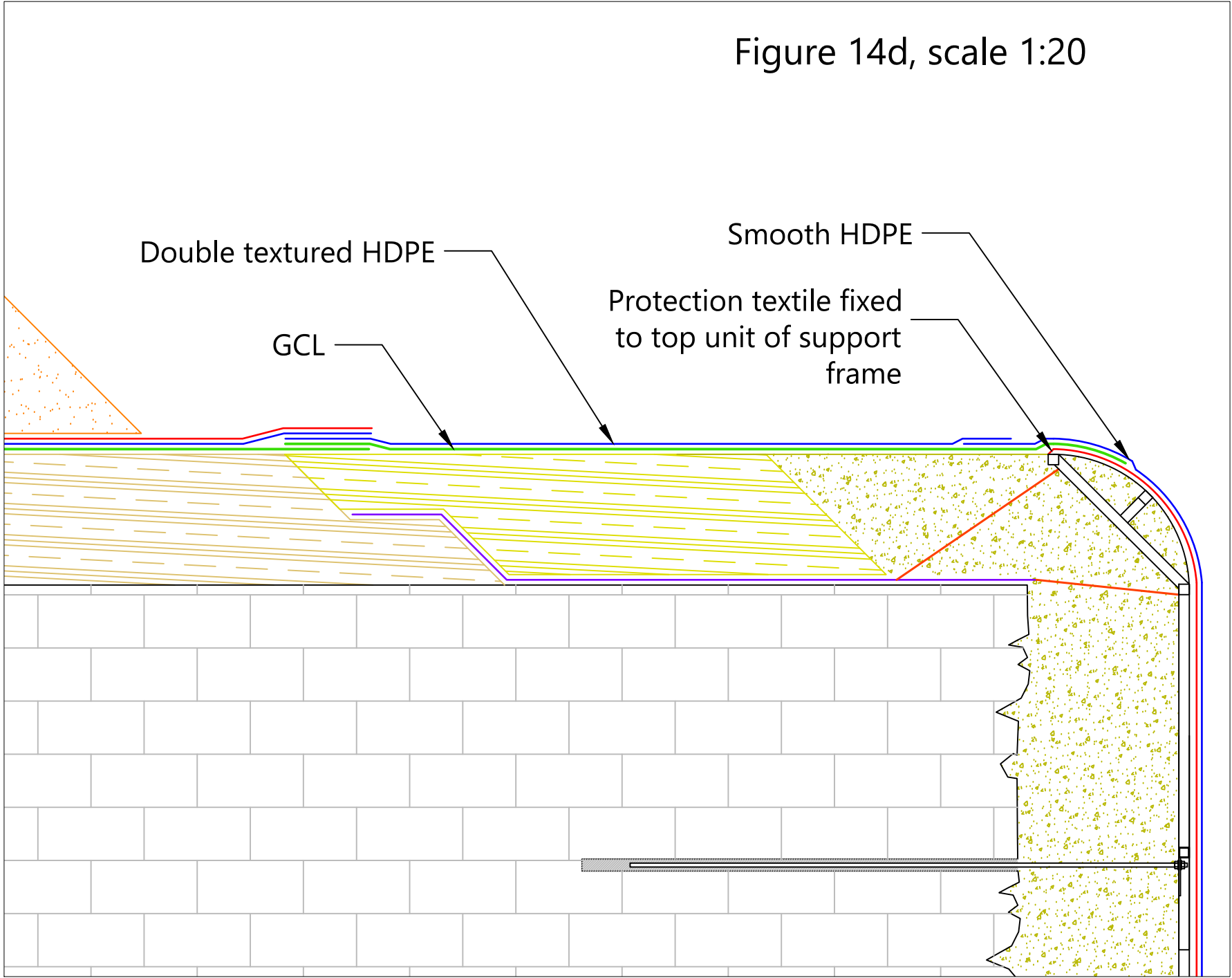


Figure 14d, scale 1:20

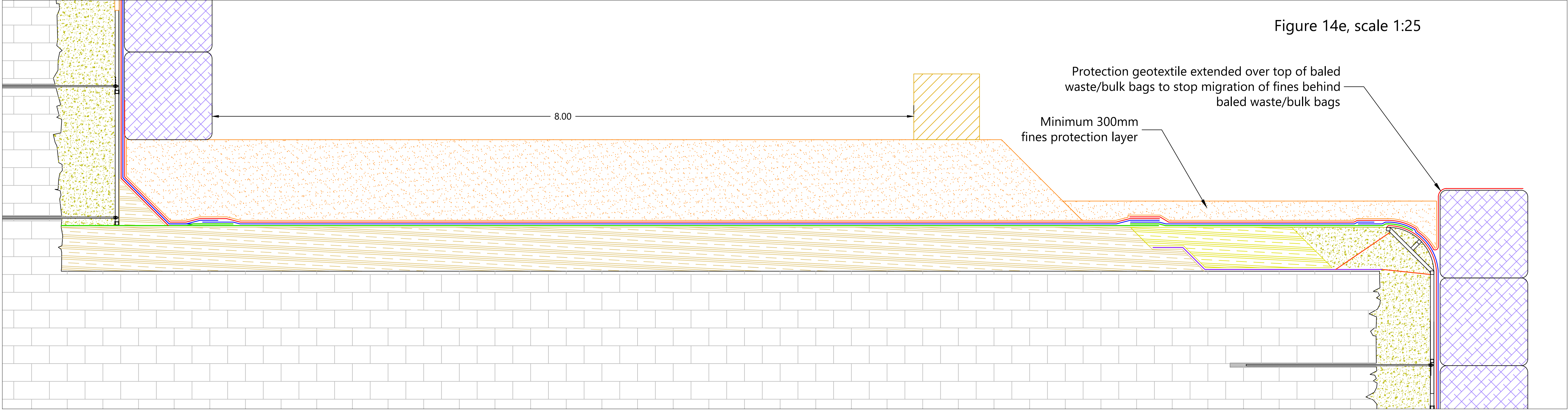


Figure 14e, scale 1:25

**NOTES**

This design is subject to final approval.

Drawings should be read in conjunction with the conceptual design statement report which presents full and detailed specifications.



PROJECT TITLE

Construction of a Steep Wall  
Non-Hazardous Waste Cell

PROJECT NUMBER

30499

CLIENT

Wasteserv Malta Ltd.

LOCATION

Maghtab Environmental Complex

DRAWING TITLE

Access Ramp Liner system  
Construction Sequence 2

REVISIONS

Rev	Date	Chkd	Description
0	17/08/2021	DB	First Issue

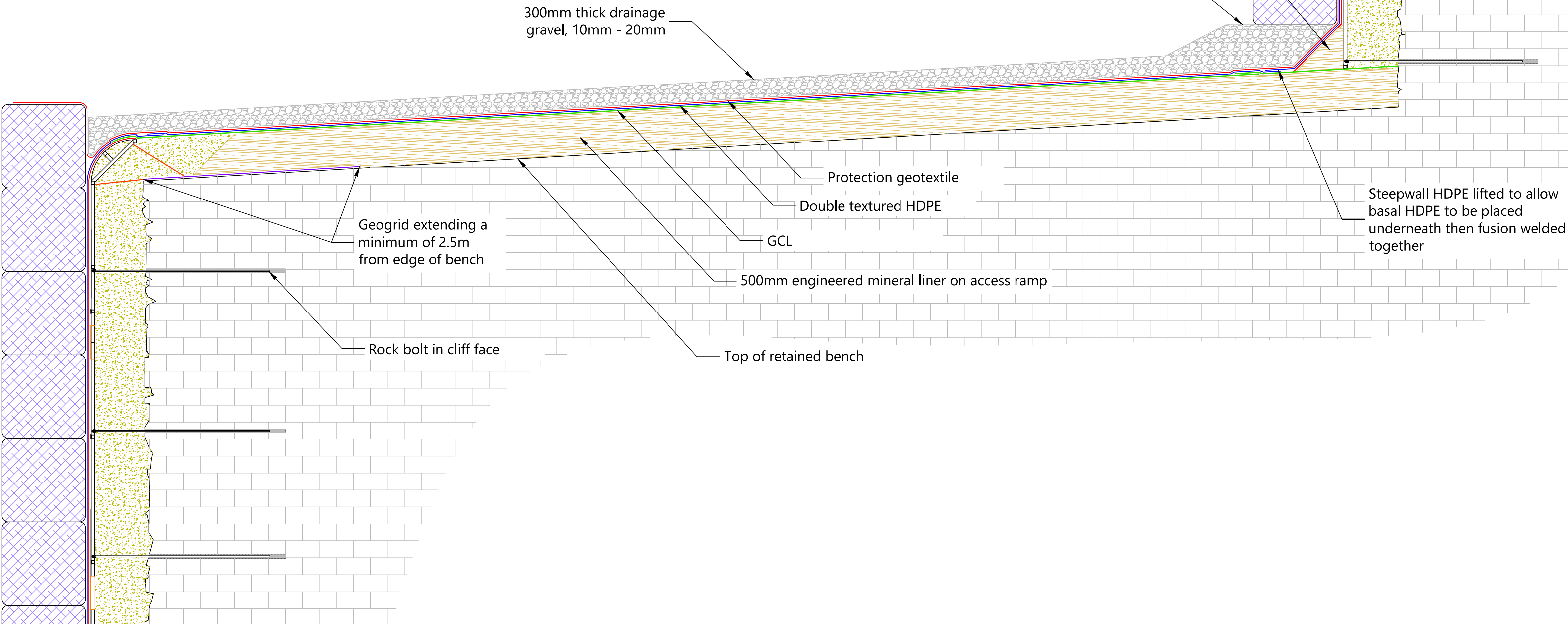
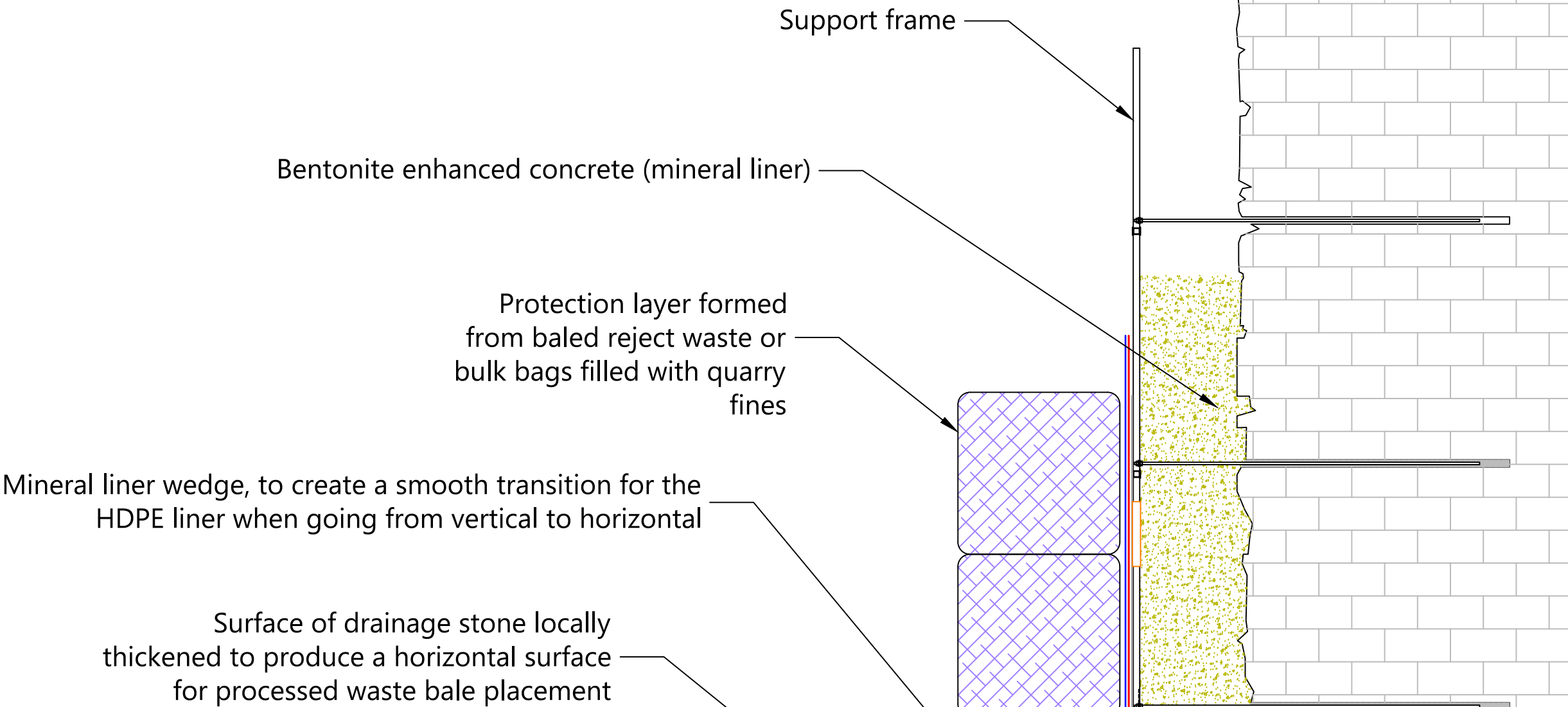
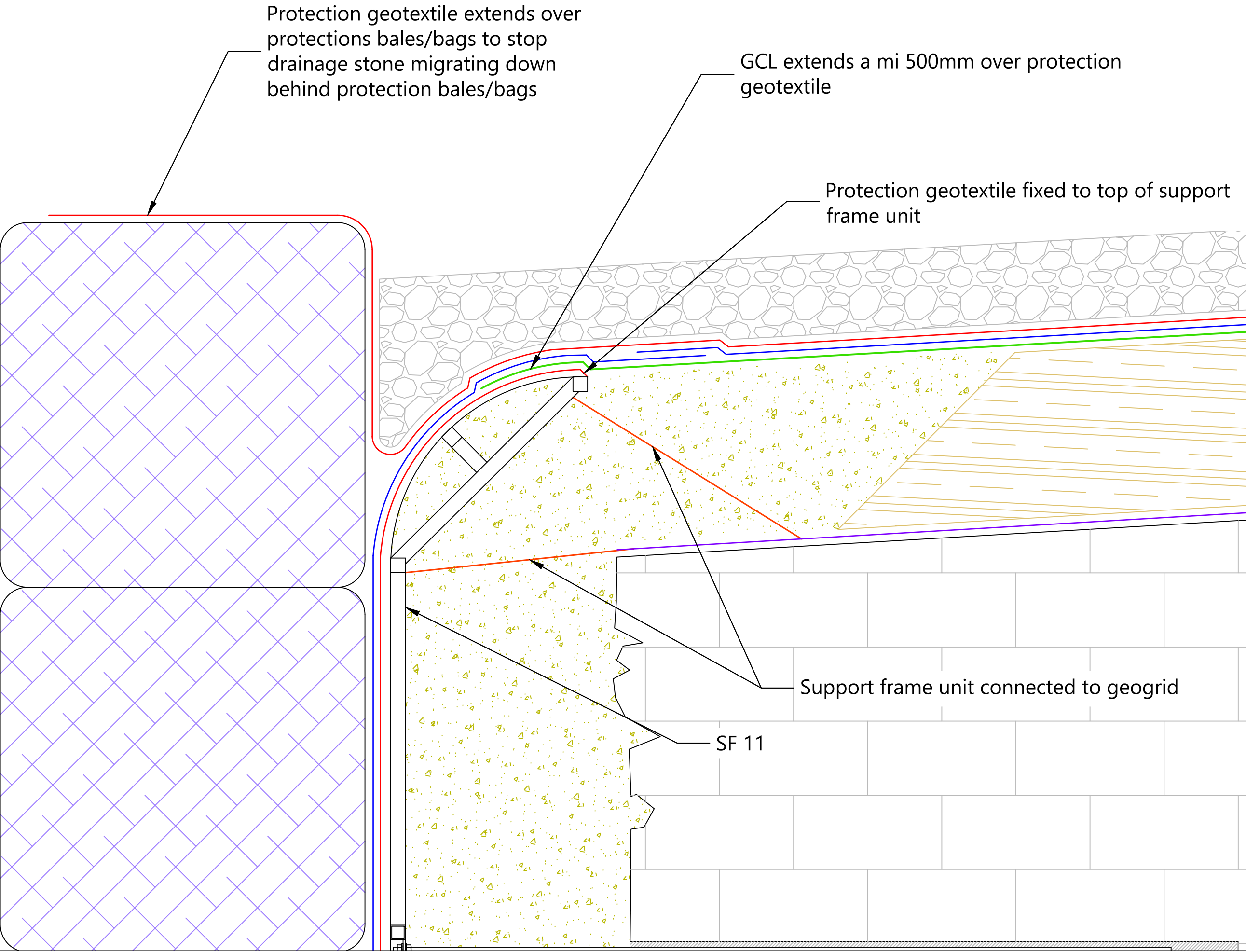
DESIGNED	RWS	DRAWN	RWS
SCALES @ A1	As Shown	DATE	17/08/2021



DRAWING NUMBER	REV
30499/WSM/SW/14	00



Detail of front of retained bench. Scale 1:10



NOTES

This design is subject to final approval.

Drawings should be read in conjunction with the conceptual design statement report which presents full and detailed specifications.



PROJECT TITLE

Construction of a Steep Wall  
Non-Hazardous Waste Cell

PROJECT NUMBER

30499

CLIENT

Wasteserv Malta Ltd.

LOCATION

Maghtab Environmental Complex

DRAWING TITLE

Section Through Southern Bench

REVISIONS

Rev	Date	Chkd	Description
0	17/08/2021	DB	First Issue

DESIGNED	RWS	DRAWN	RWS
SCALES @ A1	1:30	DATE	17/08/2021

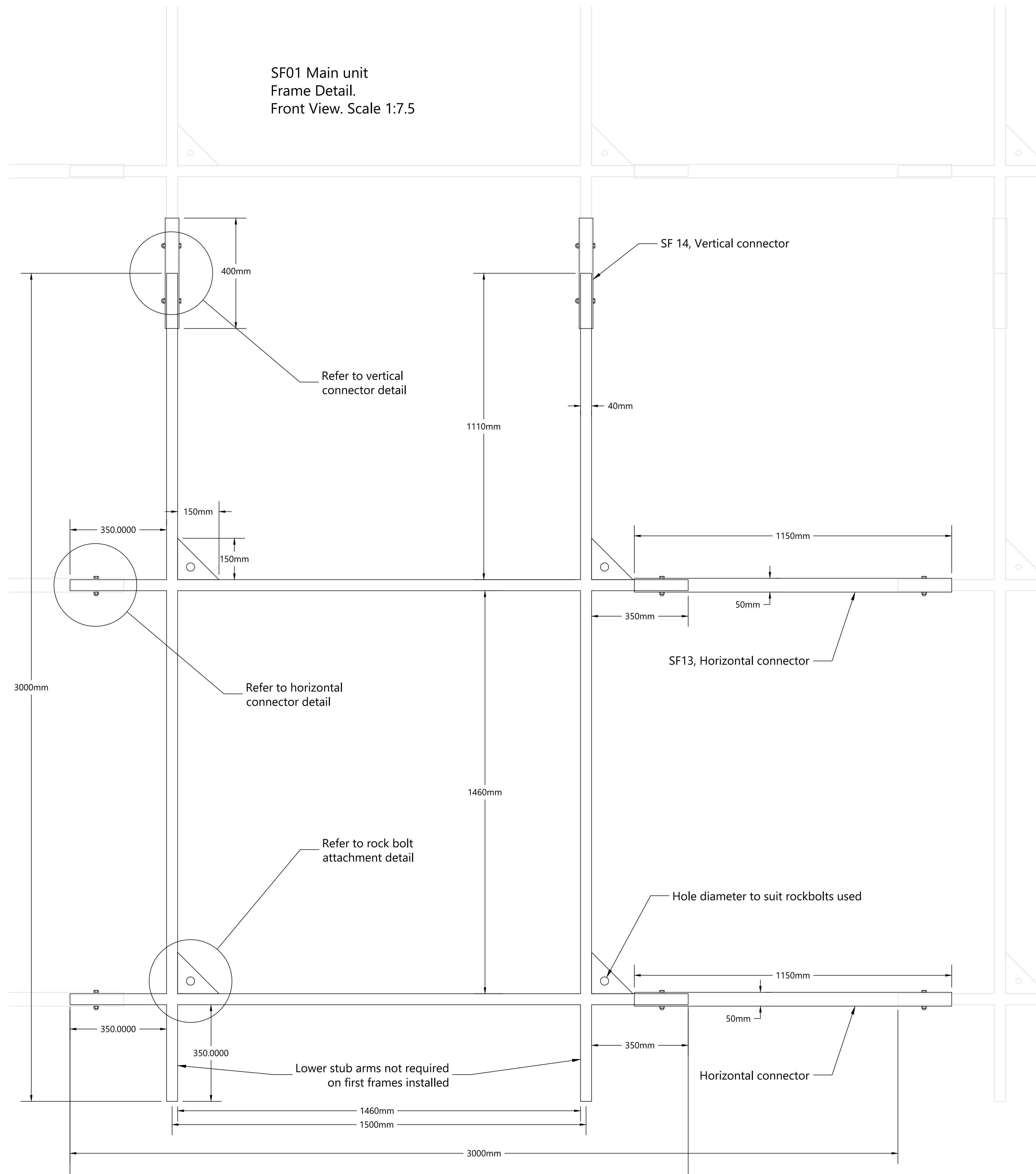
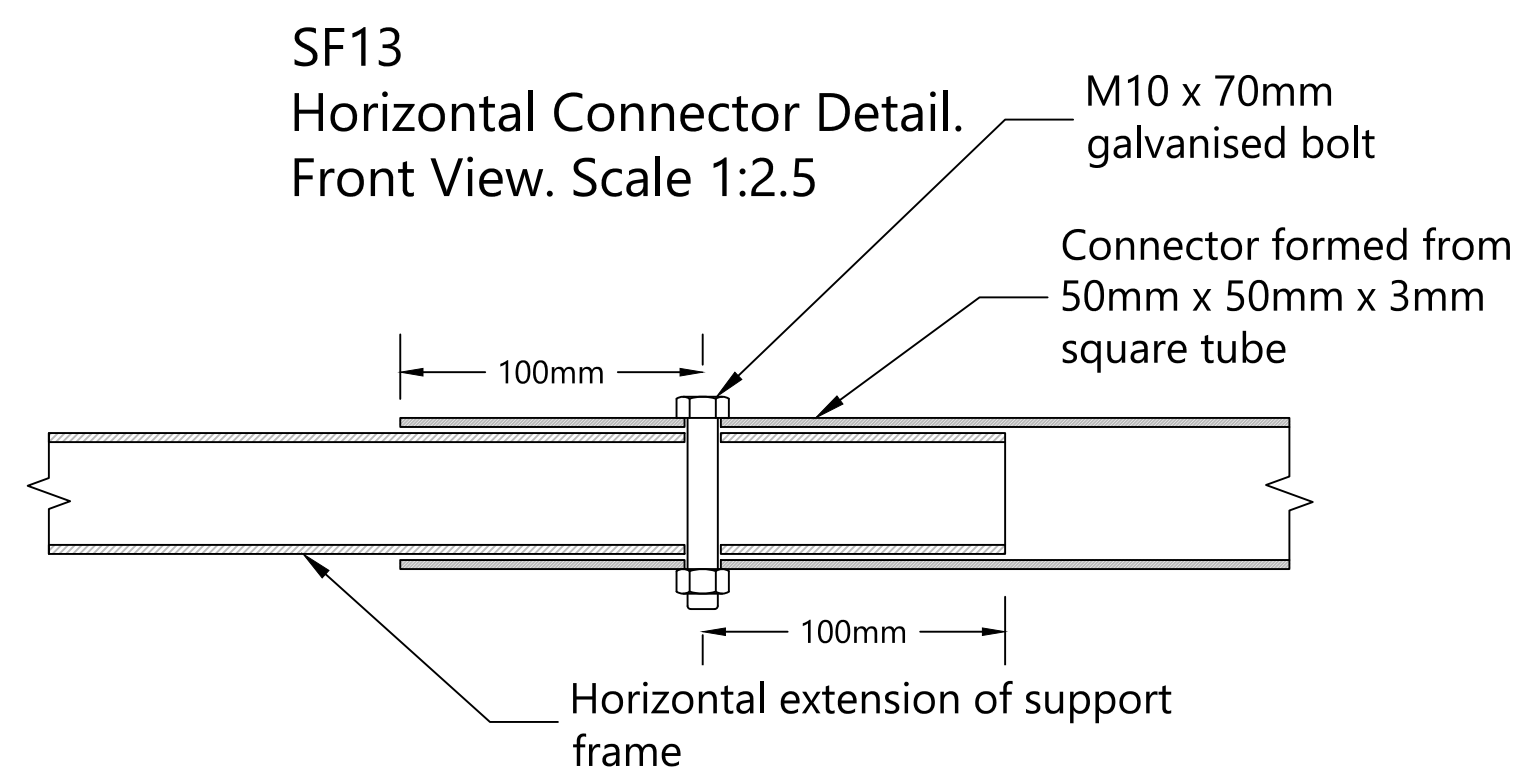
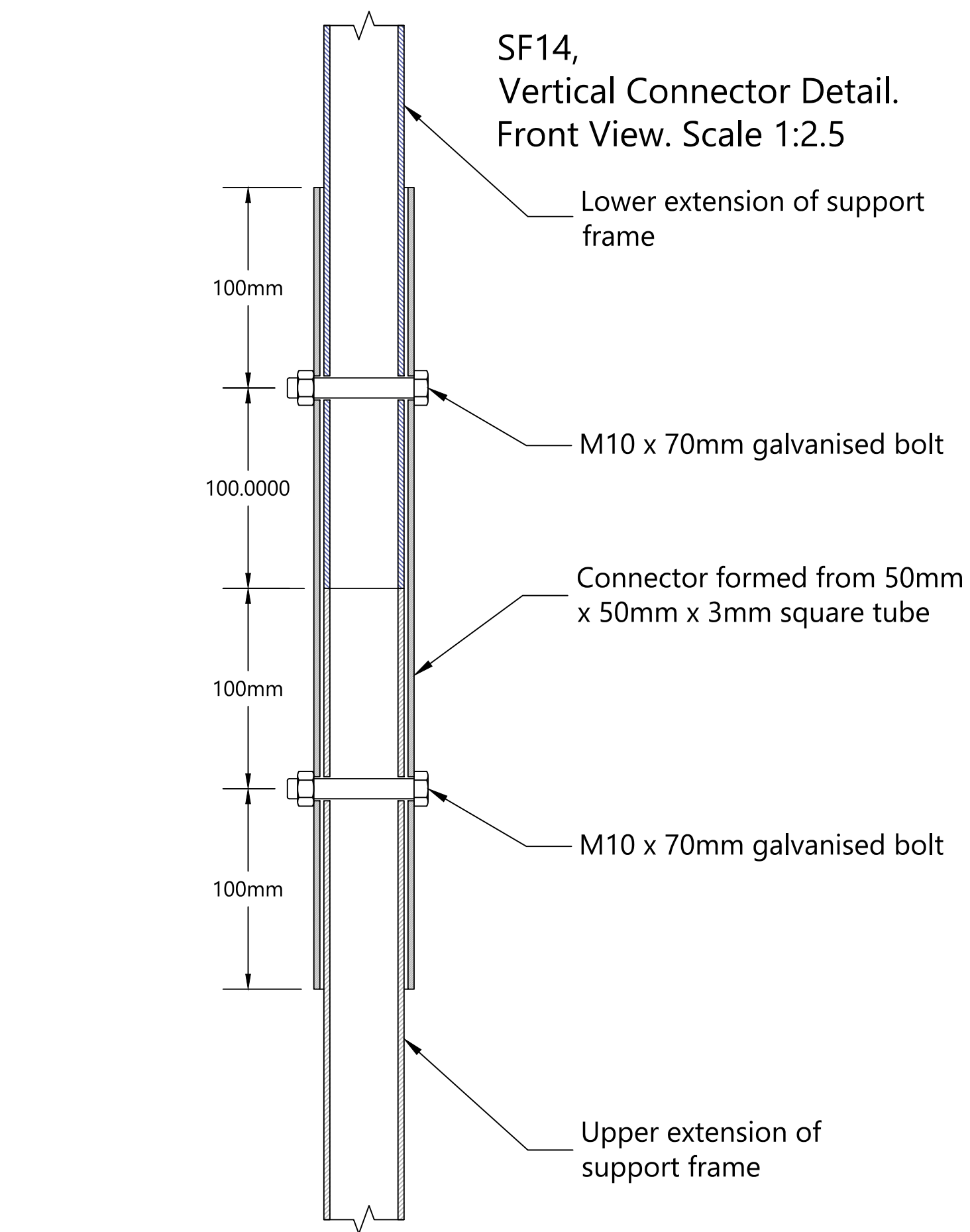
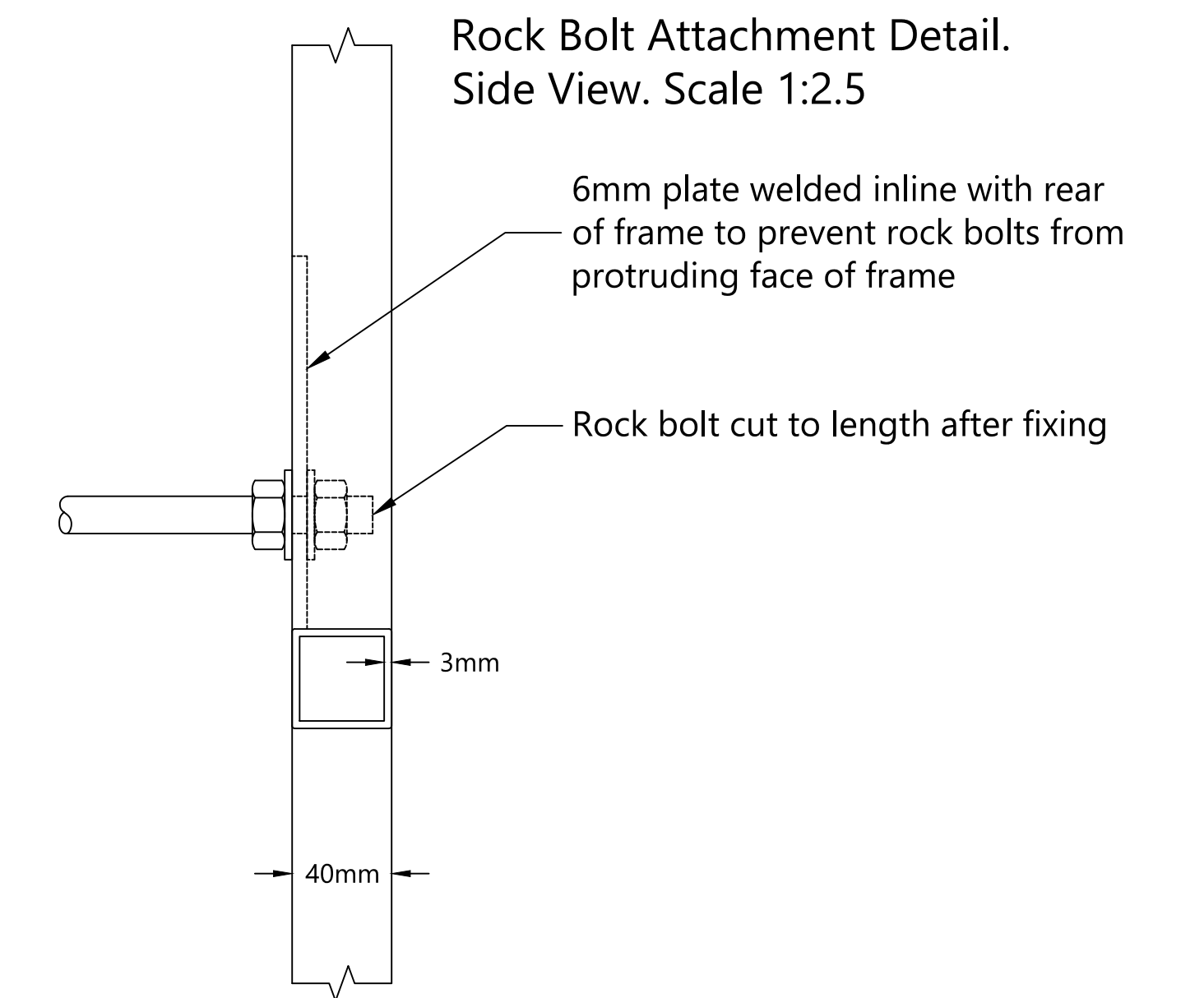


DRAWING NUMBER	REV
30499/WSM/SW/15	00









## NOTES

This design is subject to final approval.

The support frame sections are prefabricated from 40mm x 40mm x 3mm thick mild steel box section and of welded construction.

The connectors are formed from 50mm x 50mm x 3mm thick mild steel box section.

All connection holes to be drilled prior to galvanizing.

This drawing should be used for fabrication details for all support frame units

Drawings should be read in conjunction with the conceptual design statement report which presents full and detailed specifications.



PROJECT TITLE

Construction of a Steep Wall  
Non-Hazardous Waste Cell

PROJECT NUMBER

30499

CLIENT

Wasteserv Malta Ltd.

LOCATION

Maghtab Environmental Complex

DRAWING TITLE

Support Frame Construction Details

REVISIONS

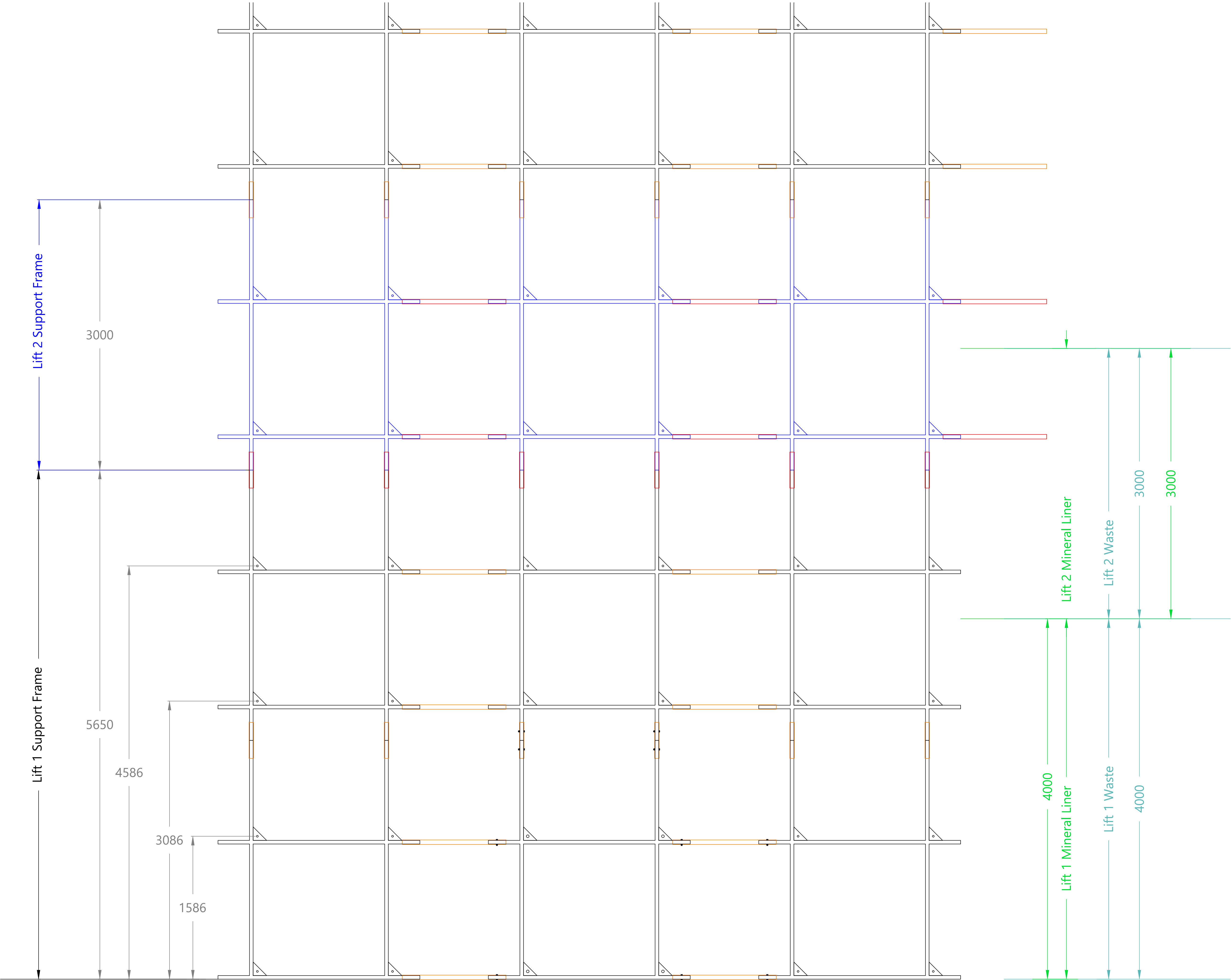
Rev	Date	Chkd	Description
0	16/08/2021	DB	First Issue

DESIGNED	RWS	DRAWN	RWS
SCALES @ A1	As Shown	DATE	16/08/2021



DRAWING NUMBER	REV
30374/WSM/SW/17	00





NOTES

This design is subject to final approval.

Drawings should be read in conjunction with the conceptual design statement report which presents full and detailed specifications.



PROJECT TITLE

Construction of a Steep Wall  
Non-Hazardous Waste Cell

PROJECT NUMBER

30499

CLIENT

Wasteserv Malta Ltd.

LOCATION

Maghtab Environmental Complex

DRAWING TITLE

Support Frame Construction

REVISIONS

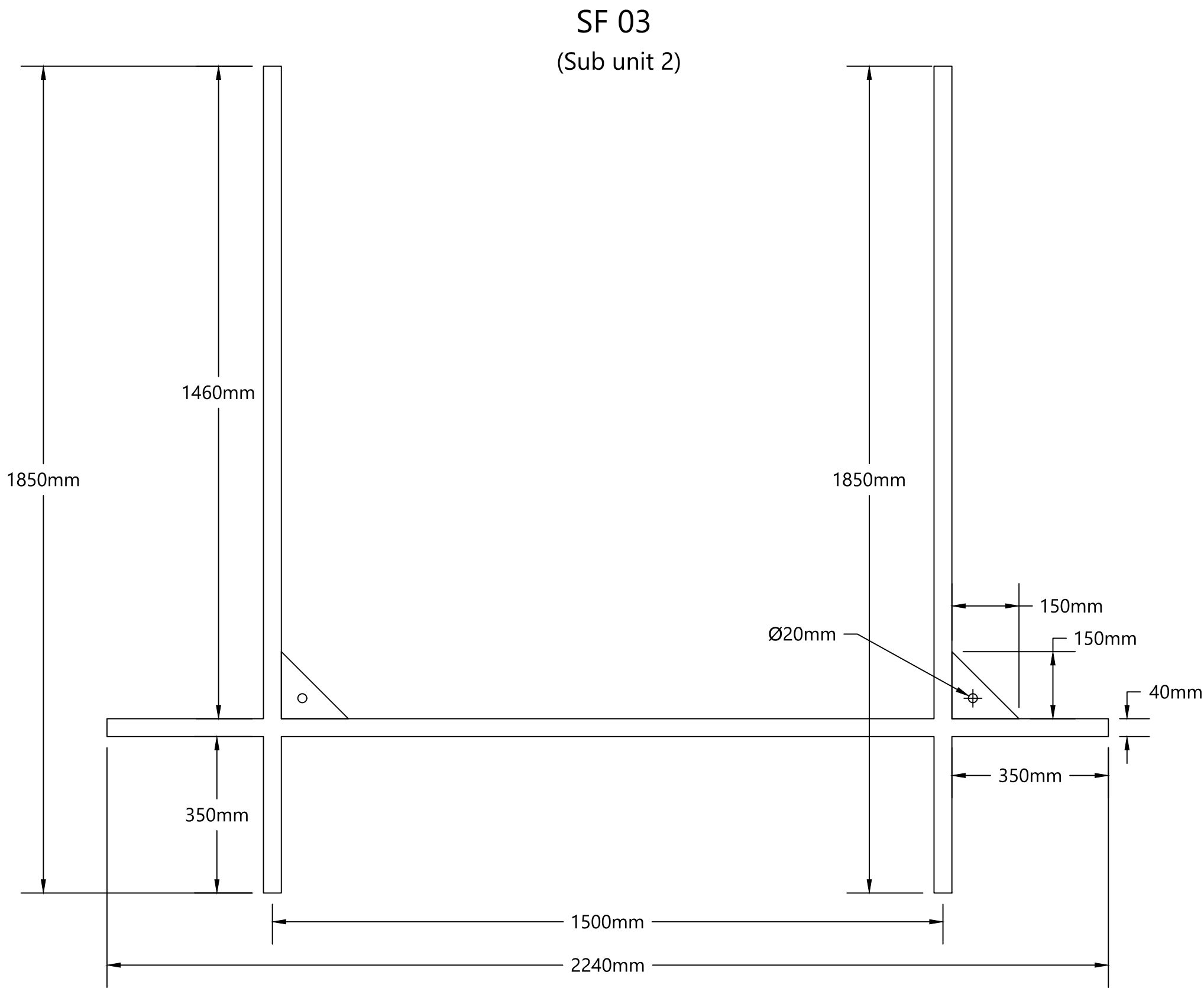
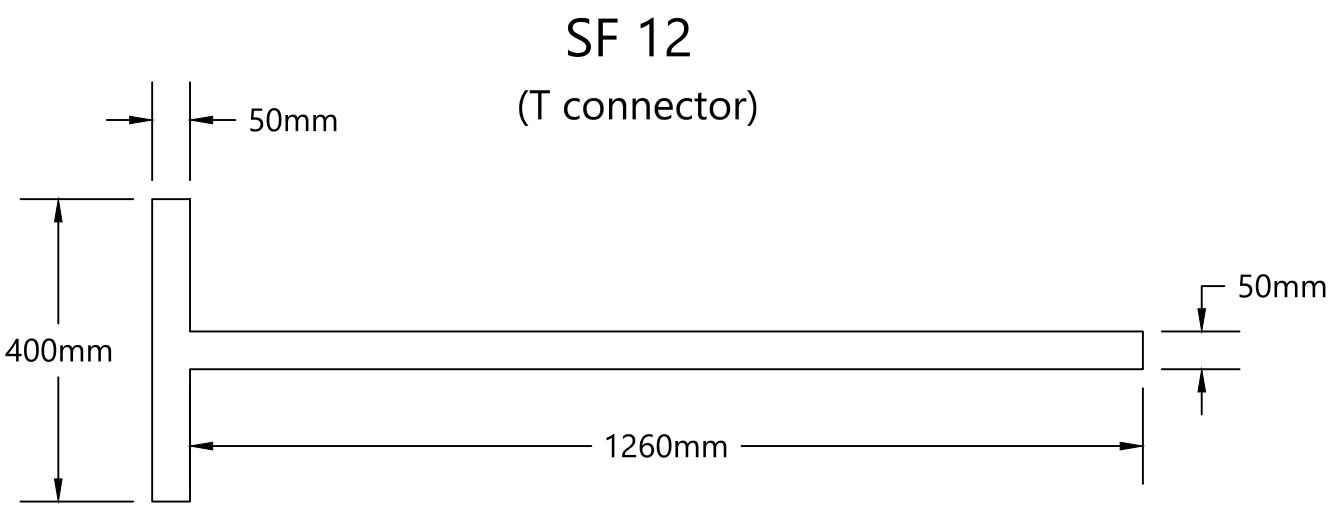
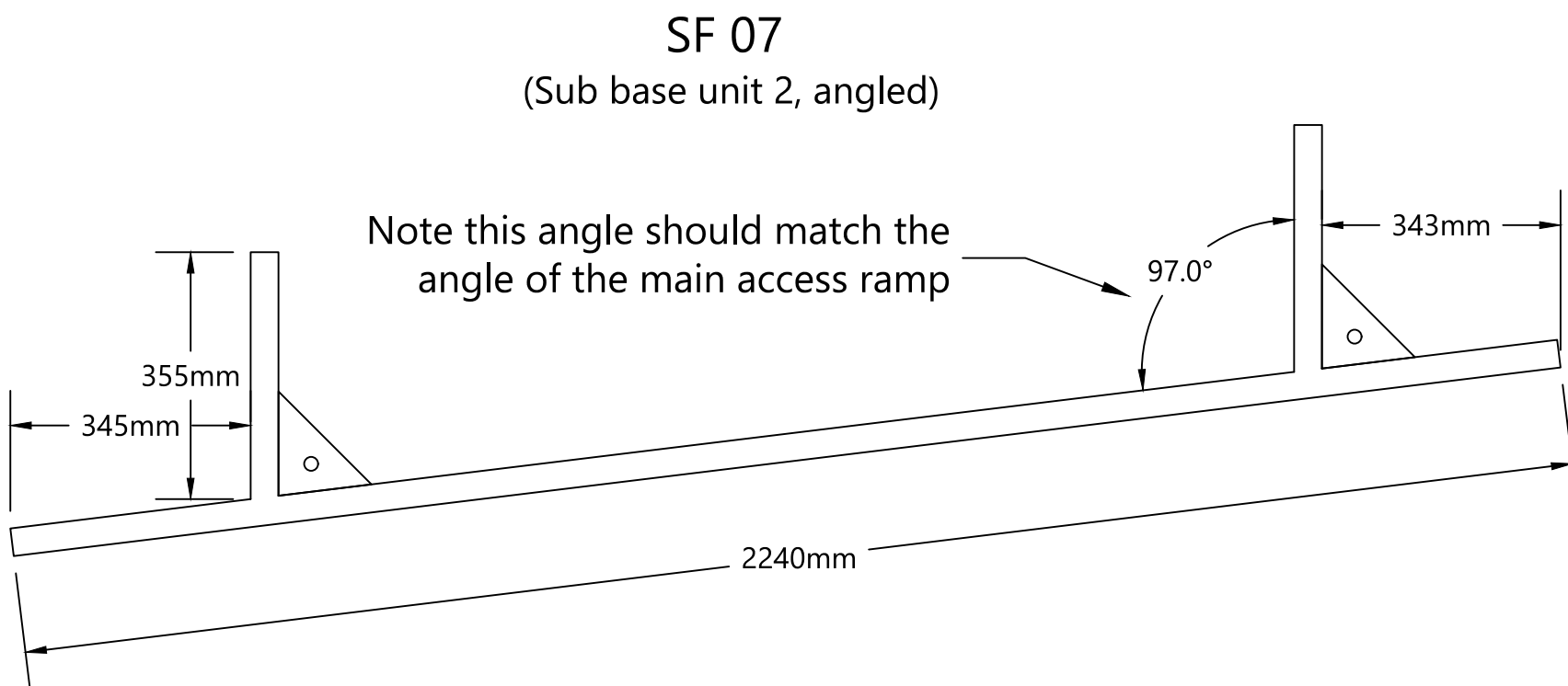
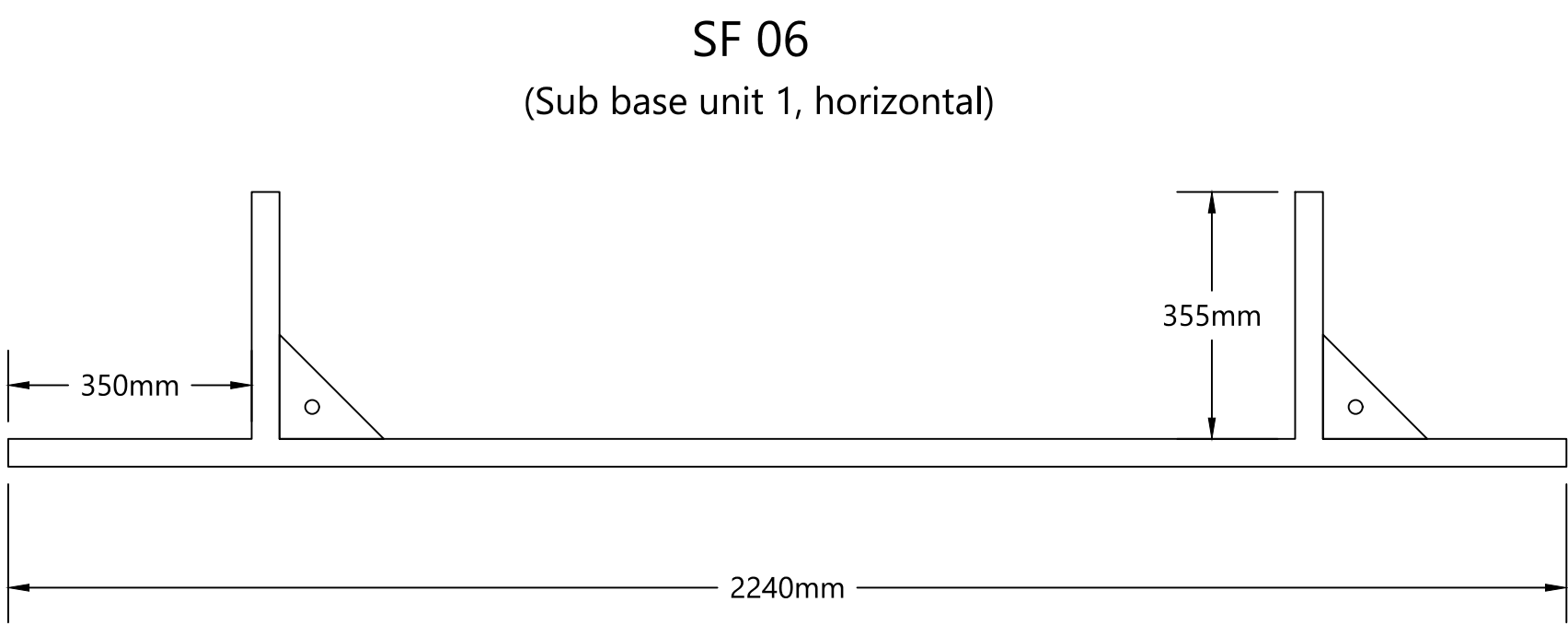
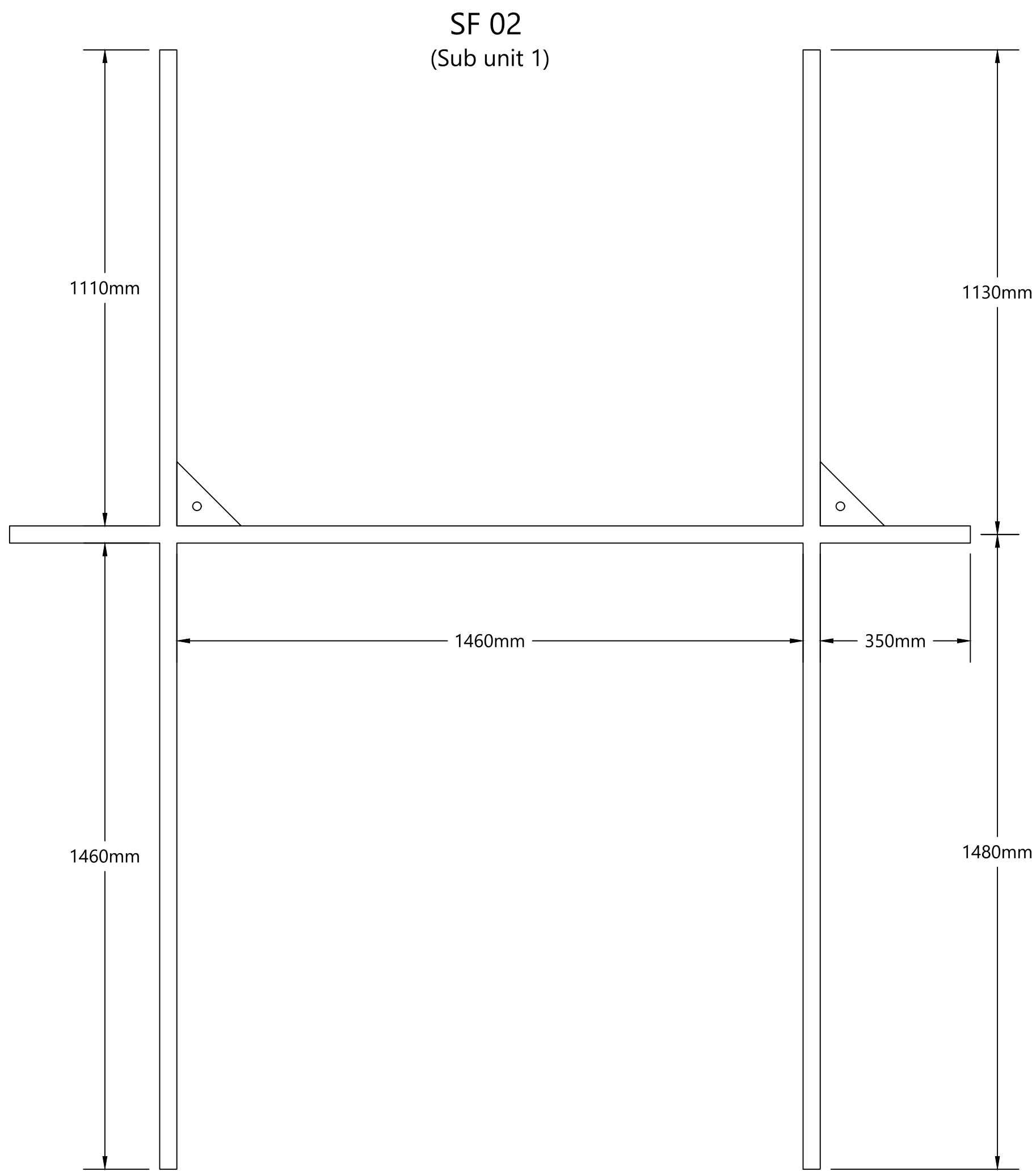
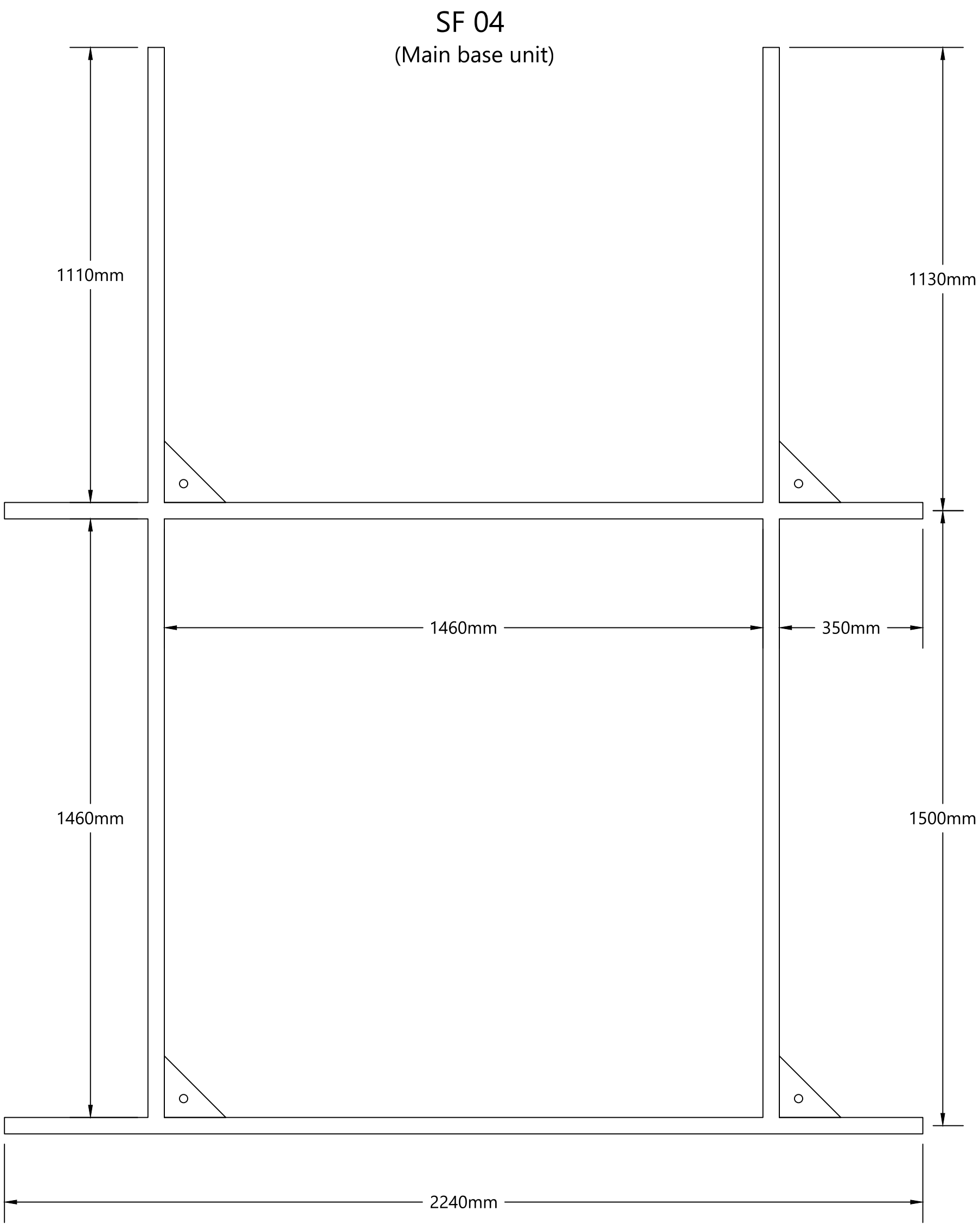
0	16/08/2021	DB	First Issue	
Rev	Date	Chkd	Description	

DESIGNED	RWS	DRAWN	RWS
SCALES @ A1	As Shown	DATE	16/08/2021



DRAWING NUMBER	REV
30374/WSM/SW/18	00





NOTES

This design is subject to final approval.

Drawings should be read in conjunction with the conceptual design statement report which presents full and detailed specifications.

The support frame sections are prefabricated from 40mm x 40mm x 3mm thick mild steel box section and of welded construction. The connectors are formed from 50mm x 50mm x 3mm thick mild steel box section. All units and connectors to be galvanised after fabrication. All cuts and hole made on site to be treated against corrosion.

Support frame base and sub units are based on the standard support frame unit, see drawing 30499/WSM/SW/17



PROJECT TITLE

Construction of a Steep Wall  
Non-Hazardous Waste Cell

PROJECT NUMBER

30499

CLIENT

Wasteserv Malta Ltd.

LOCATION

Maghtab Environmental Complex

DRAWING TITLE

Support Frame Base & Sub Units

REVISIONS

Rev	Date	Chkd	Description
0	17/08/2021	DB	First issue

DESIGNED RWS DRAWN RWS

SCALES @ A1 1:10 DATE 17/08/2021

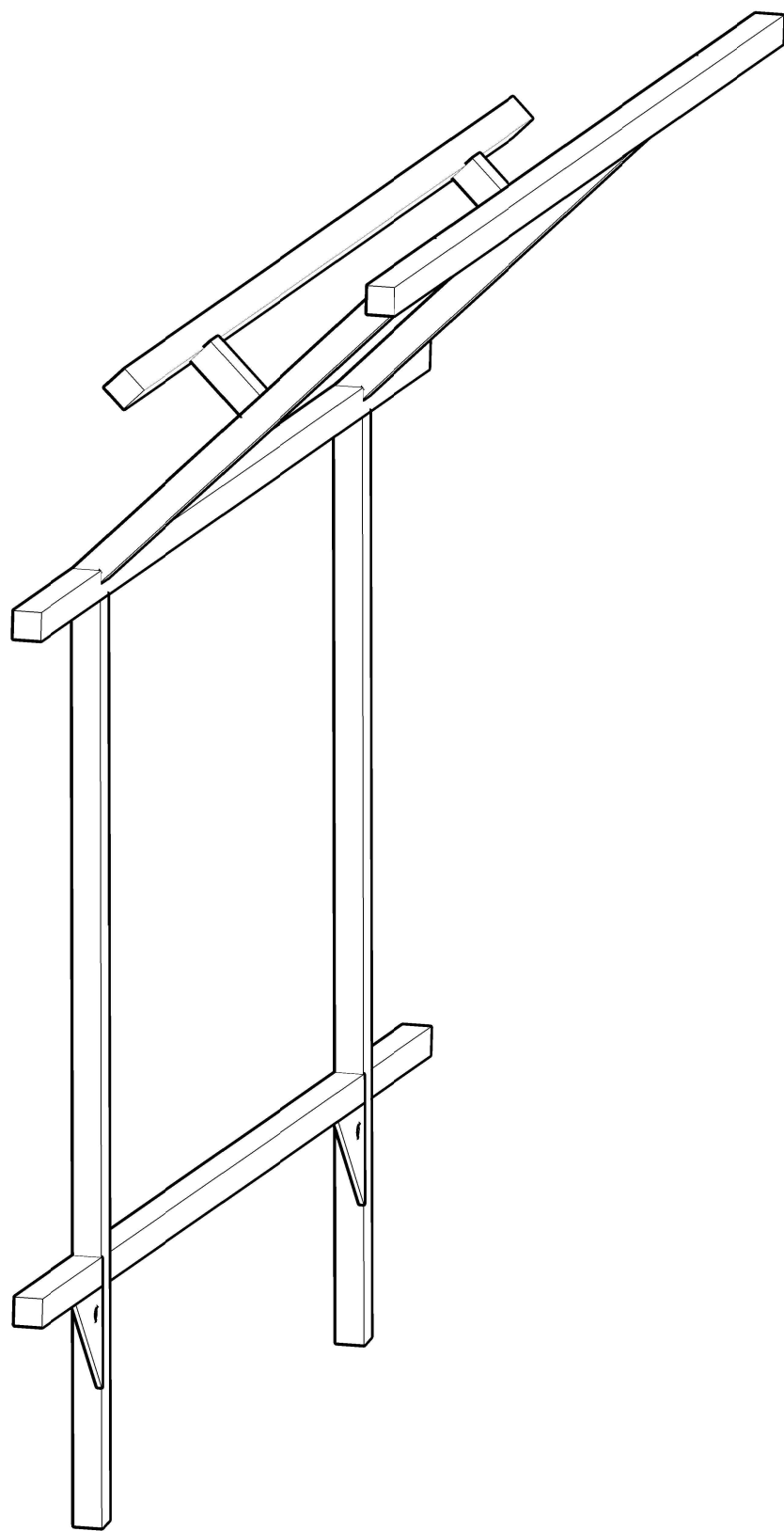
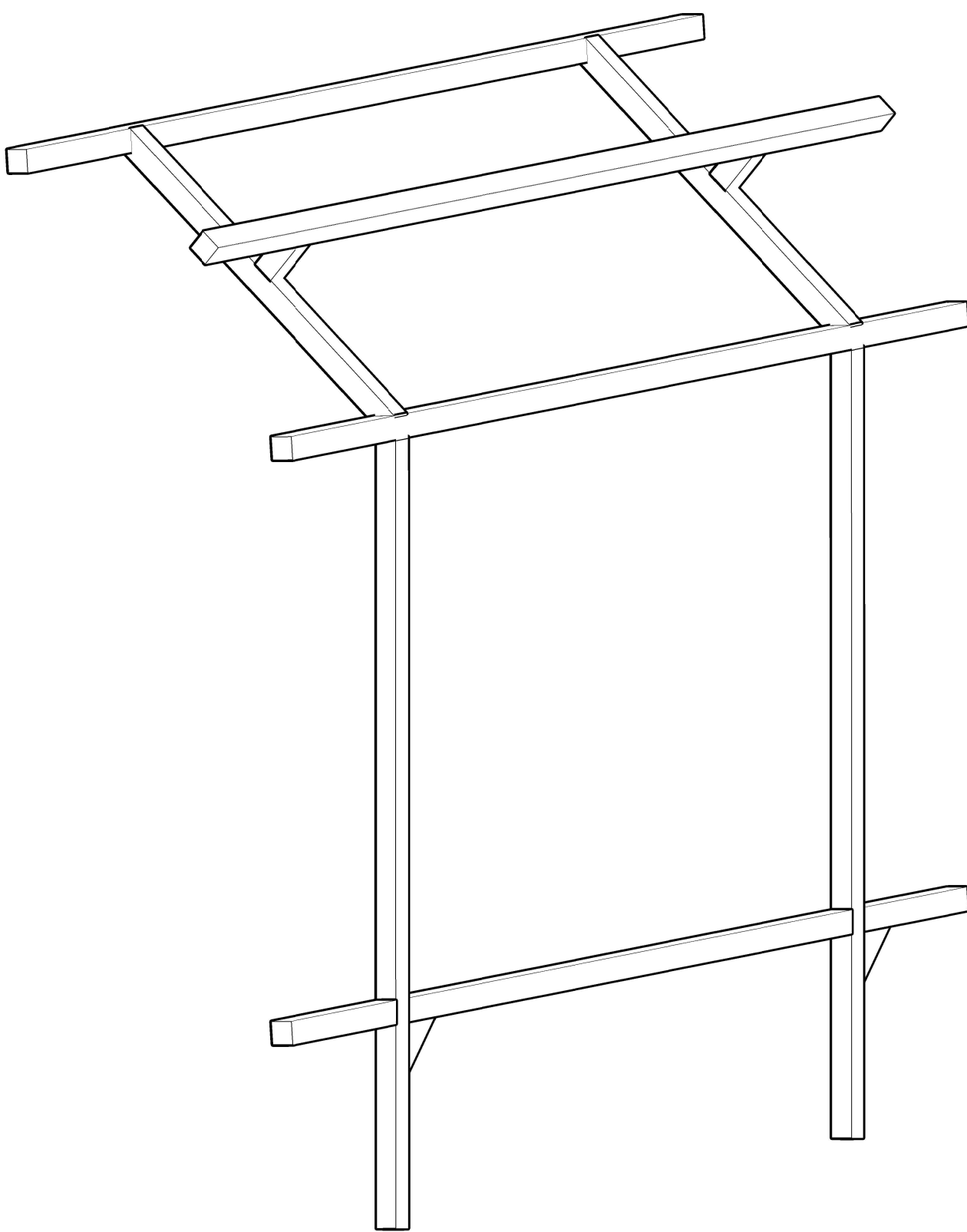
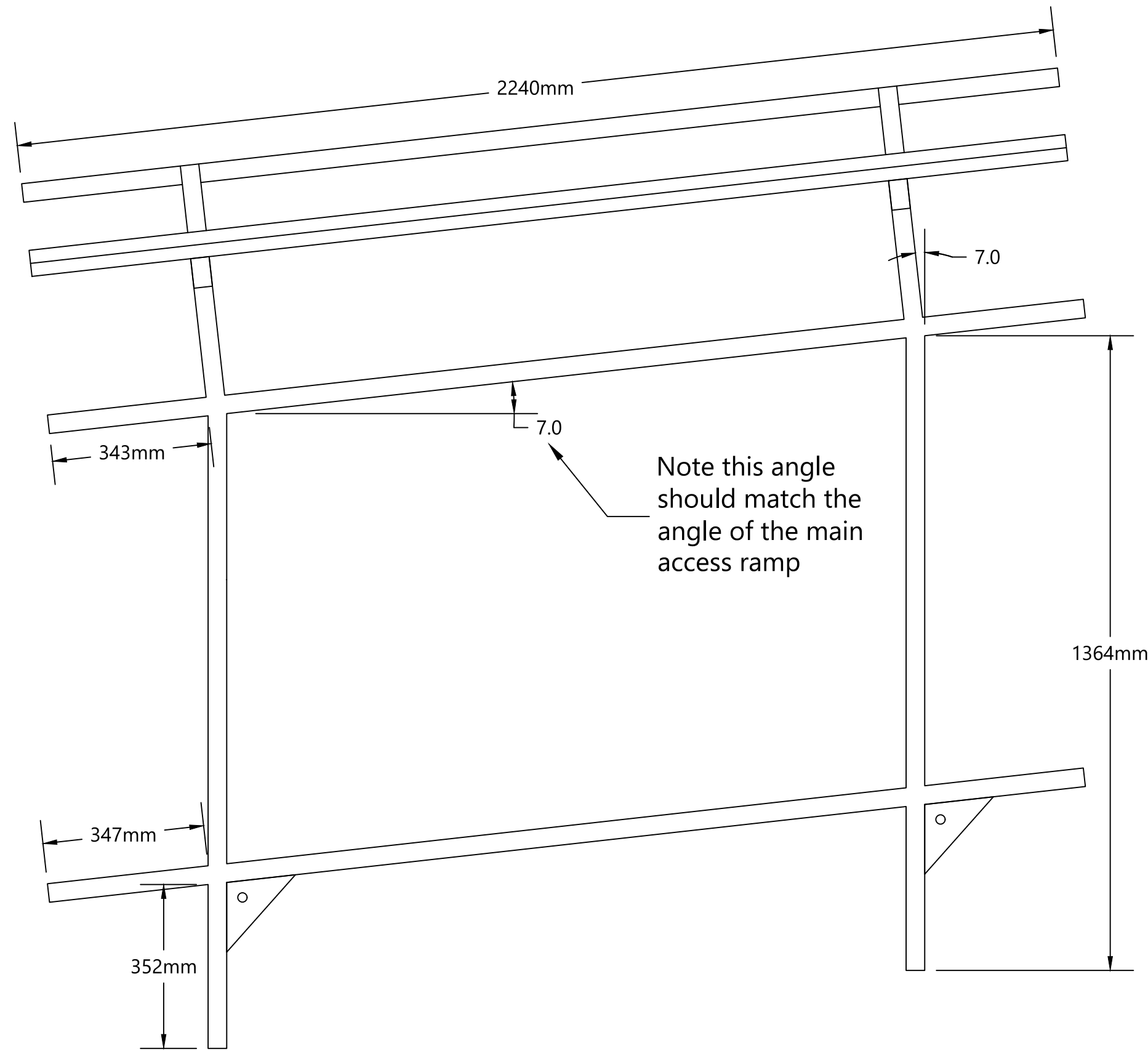
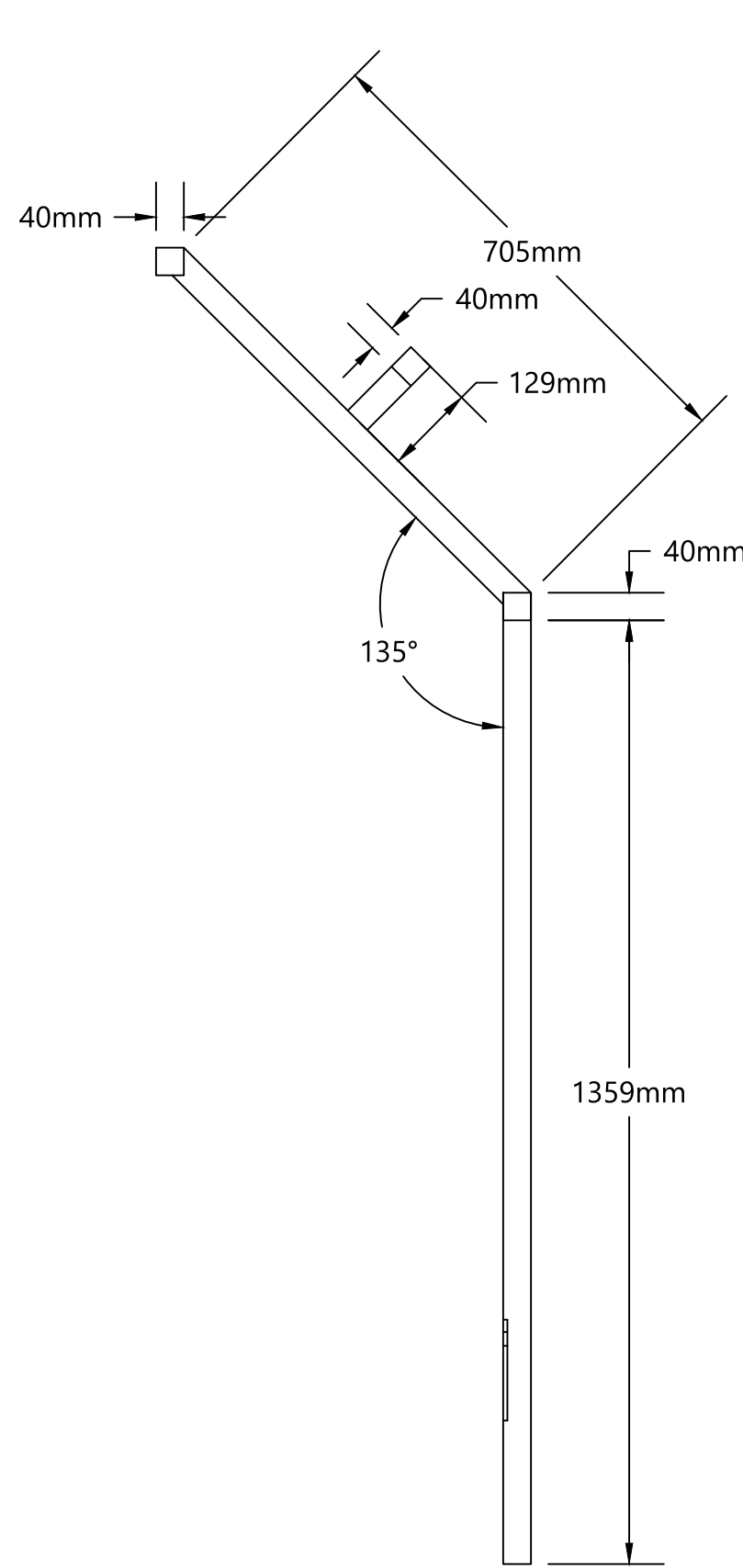


DRAWING NUMBER  
30499/WSM/SW/19

REV  
00



SF 09  
(Top unit 1 for access ramp)



NOTES

This design is subject to final approval.

Drawings should be read in conjunction with the conceptual design statement report which presents full and detailed specifications.

The support frame sections are prefabricated from 40mm x 40mm x 3mm thick mild steel box section and of welded construction. The connectors are formed from 50mm x 50mm x 3mm thick mild steel box section. All units and connectors to be galvanised after fabrication. All cuts and hole made on site to be treated against corrosion.

Support frame base and sub units are based on the standard support frame unit, see drawing 30499/WSM/SW/17

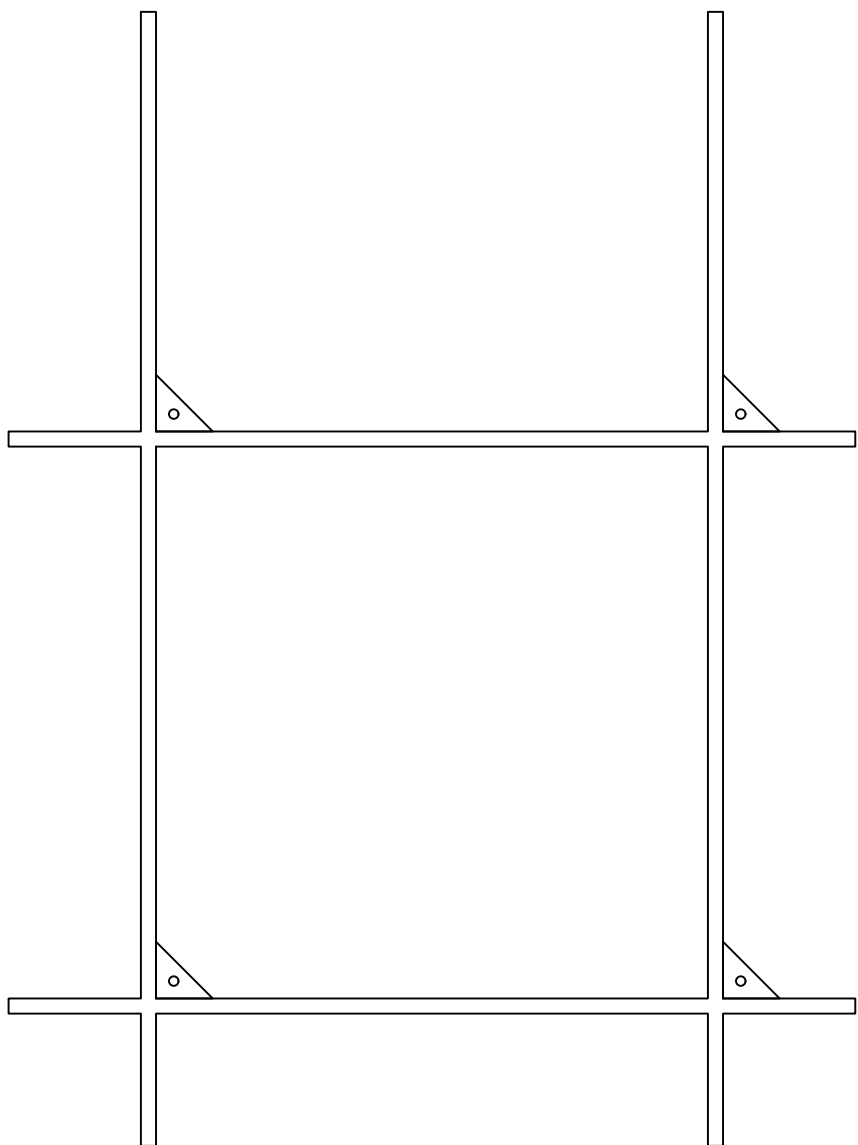


PROJECT TITLE			
Construction of a Steep Wall Non-Hazardous Waste Cell			
PROJECT NUMBER			
30499			
CLIENT			
Wasteserv Malta Ltd.			
LOCATION			
Maghtab Environmental Complex			
DRAWING TITLE			
Support Frame Top Unit 1 For Access Ramp To Landfill			
REVISIONS			
0	17/08/2021	DB	First issue
Rev	Date	Chkd	Description
DESIGNED		DRAWN	
RWS		RWS	
SCALES @ A1		DATE	
1:10		17/08/2021	
<div>CQA</div> <div>CQA INTERNATIONAL LTD</div>			
DRAWING NUMBER			REV
30499/WSM/SW/20			00



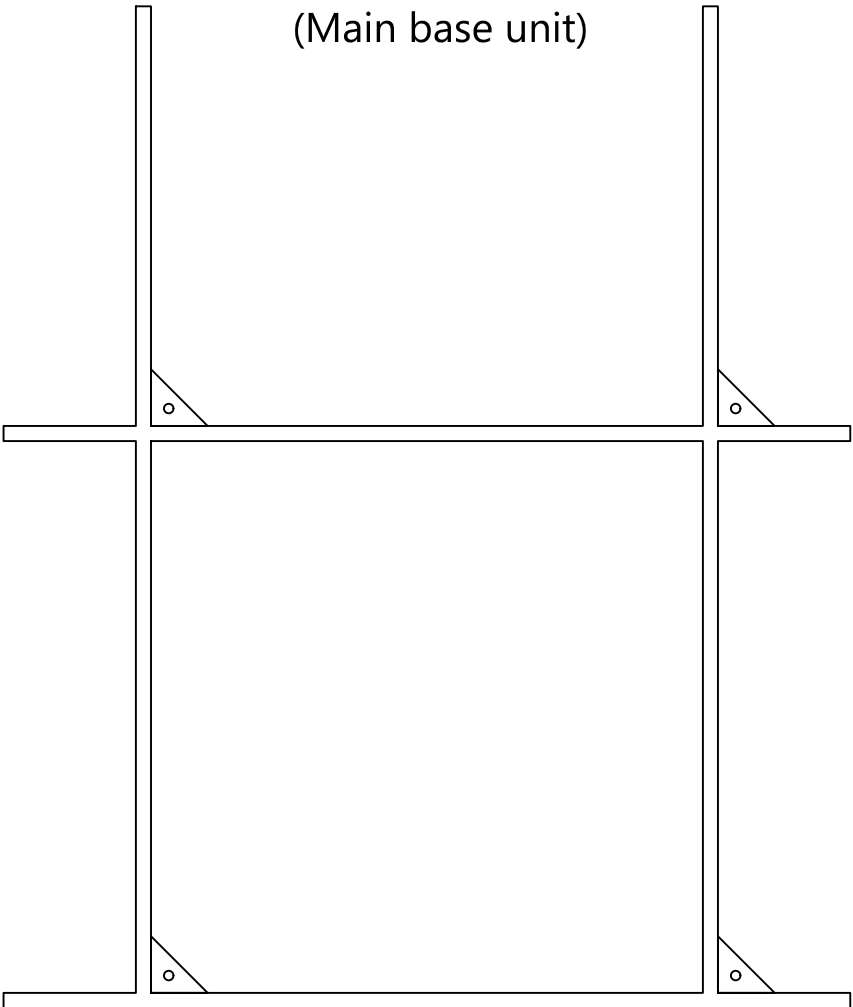
SF 01

(Main unit)



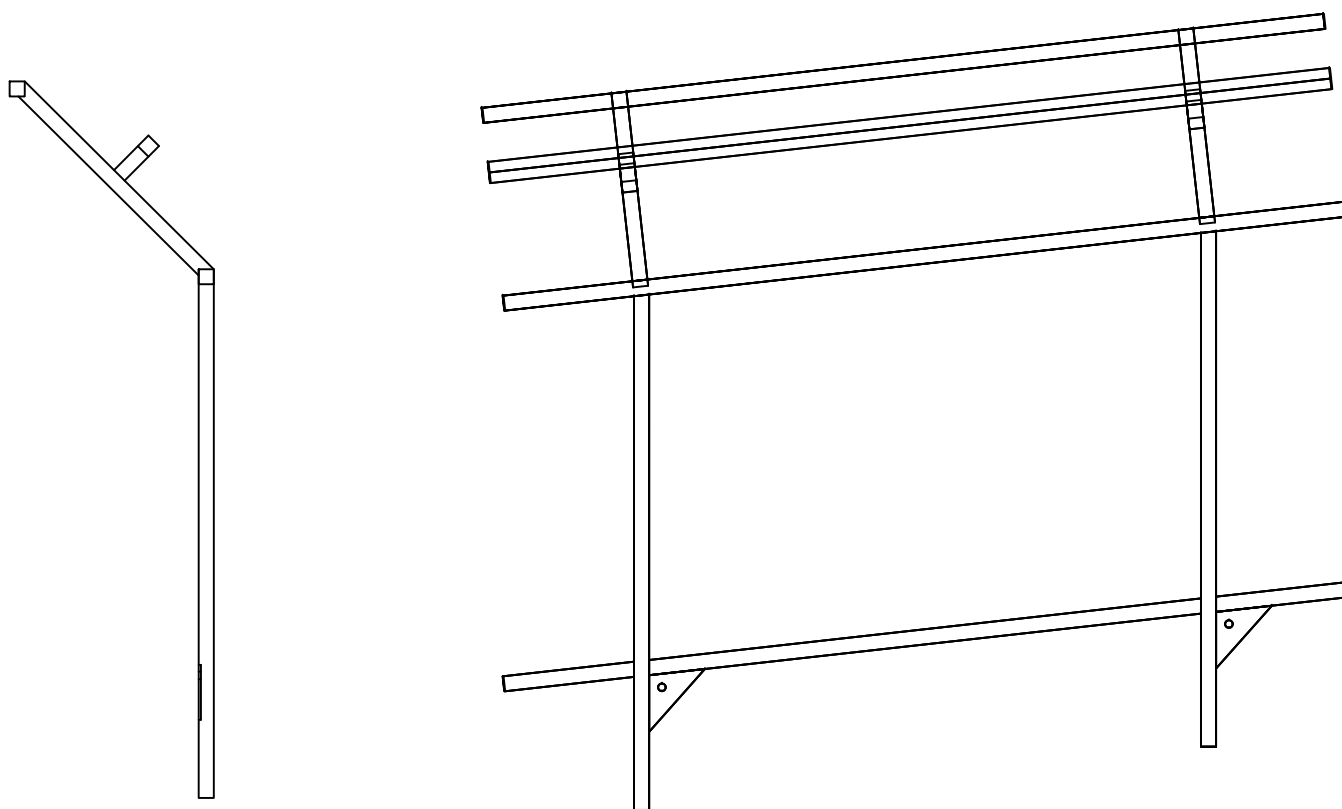
SF 04

(Main base unit)



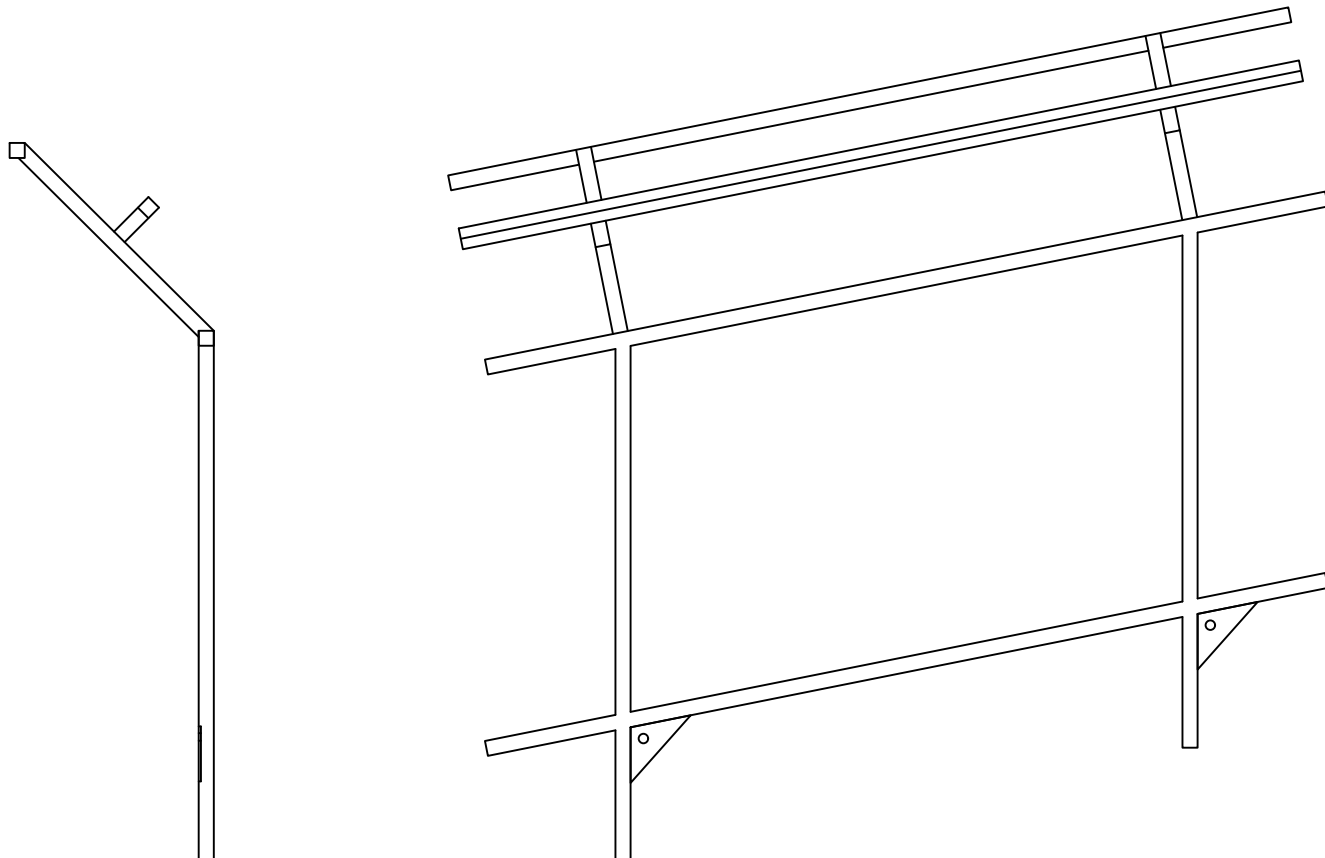
SF 09

(Top unit 1 for access ramp)



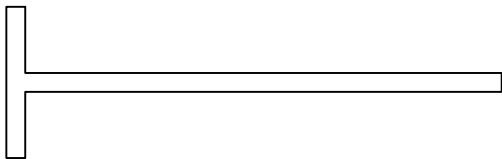
SF 10

(Top unit 2 for access ramp to southern bench)



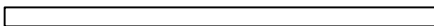
SF 12

(T connector)



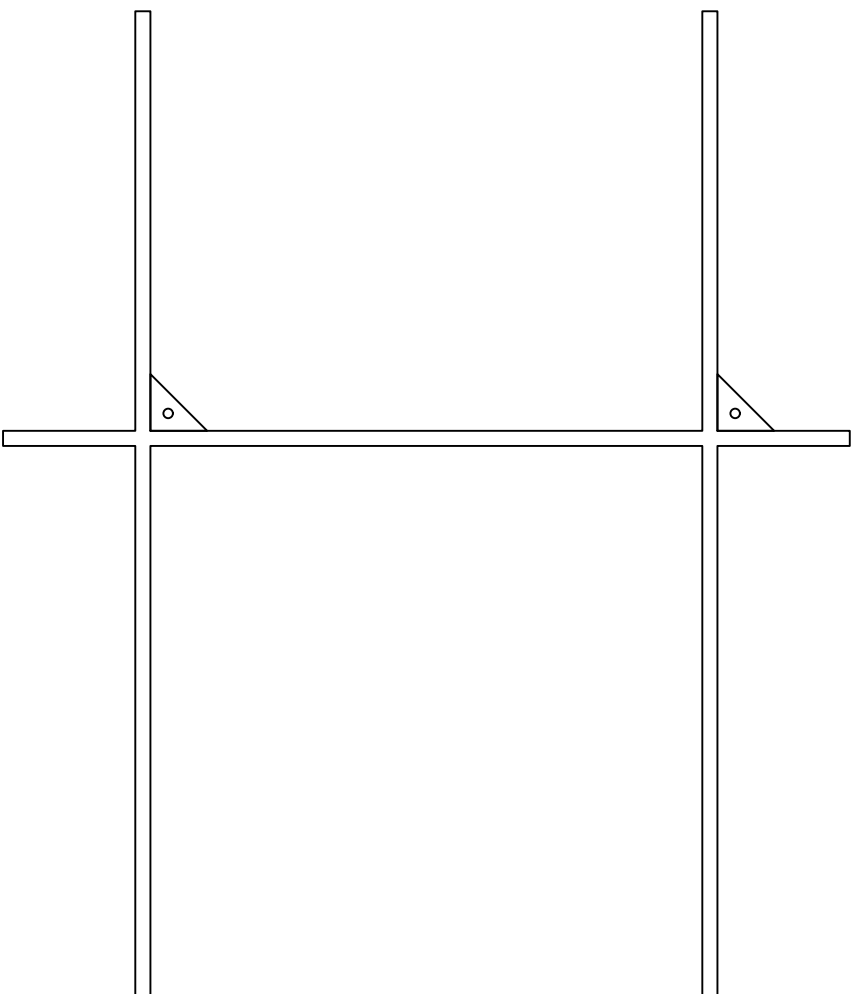
SF 13

(Horizontal connector)



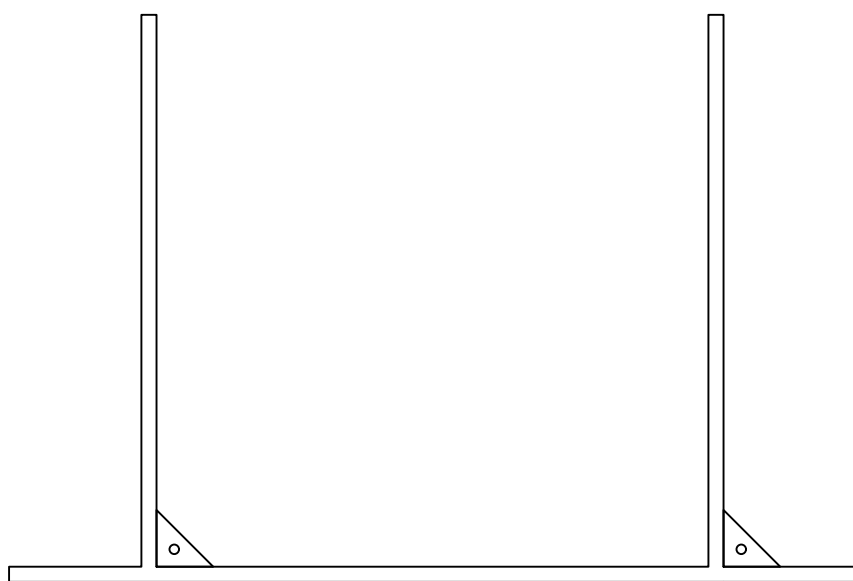
SF 02

(Sub unit 1)



SF 05

(Sub base unit 4)



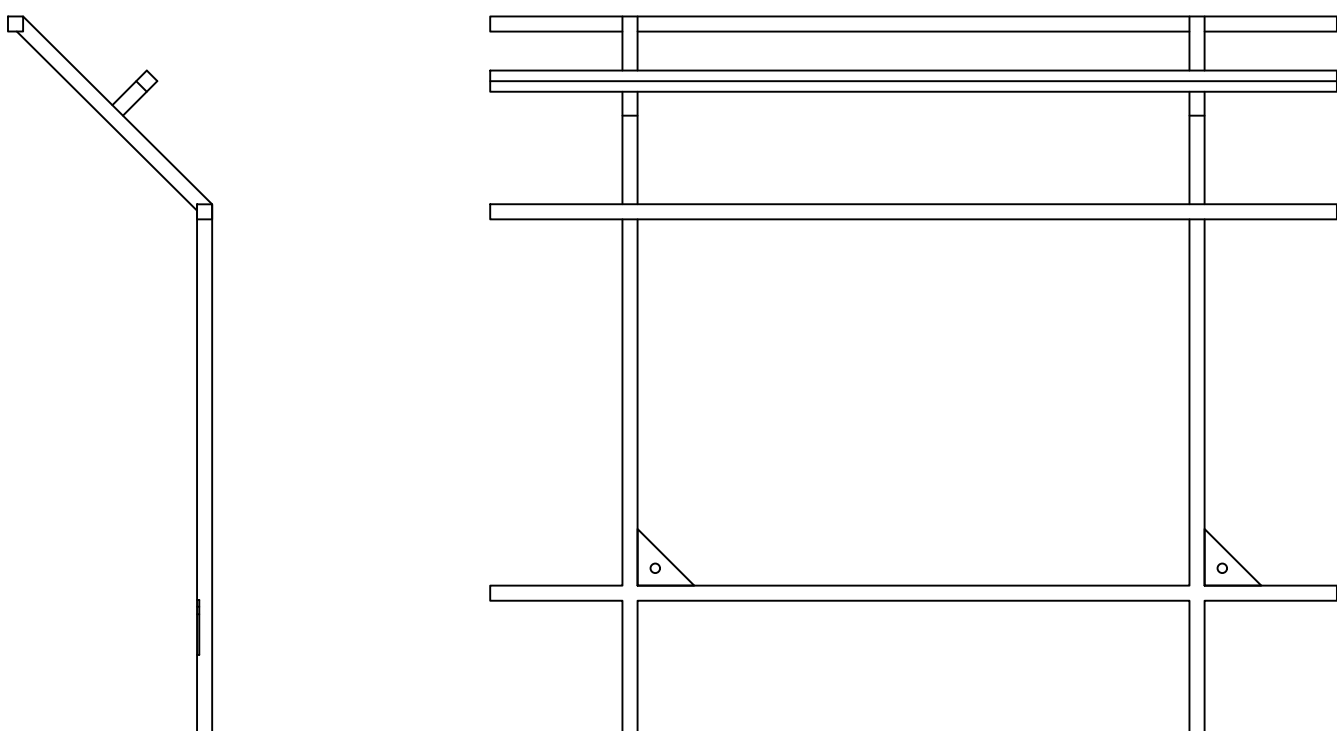
SF 06

(Sub base unit 1, horizontal)



SF 11

(Top unit 3 for southern bench)



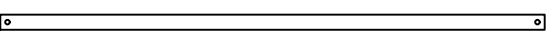
SF 14

(Vertical connector)



SF 15

(Horizontal bar, sloping units)



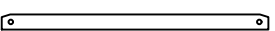
SF 16

(Horizontal bar, sloping units)



SF 17

(Vertical bar, sloping units)



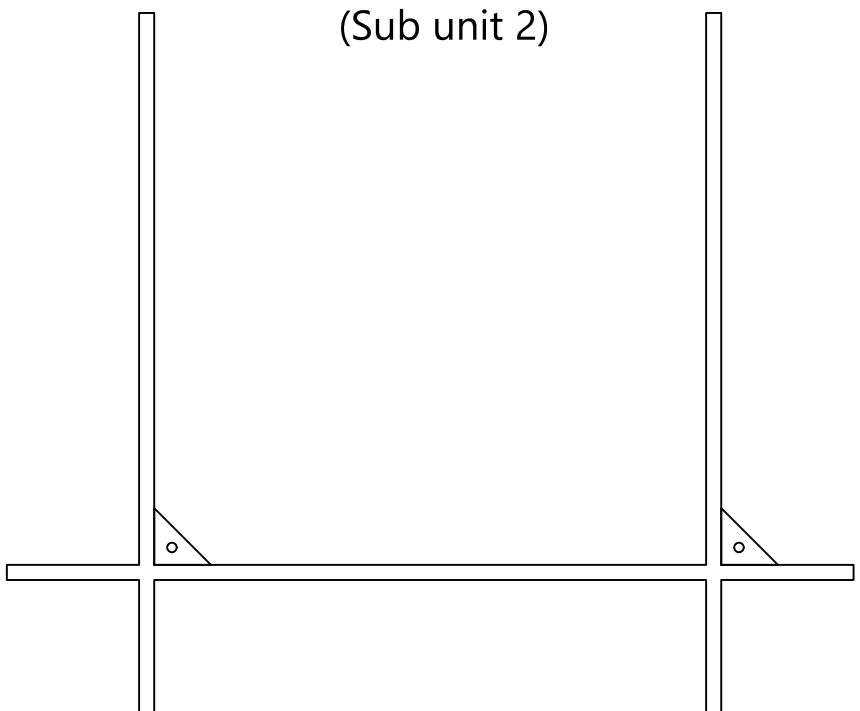
SF 18

(Connecting bracket, sloping units)



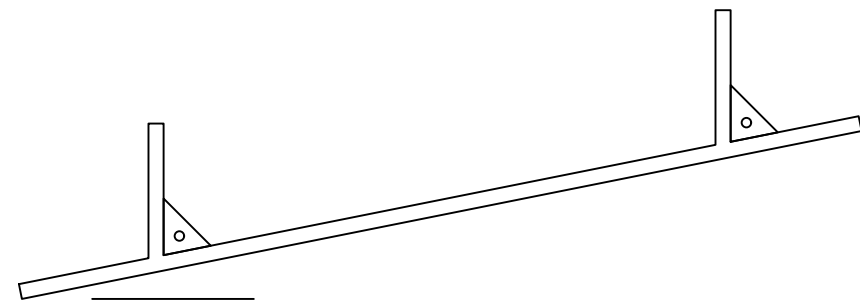
SF 03

(Sub unit 2)



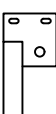
SF 08

(Sub base unit 3 angled for access ramp to southern bench)



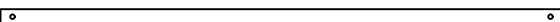
SF 19

(Connecting bracket, support frame top)



SF 20

(Top rail, support frame top)



This design is subject to final approval.

Drawings should be read in conjunction with the conceptual design statement report which presents full and detailed specifications.

See drawing 30499/WSM/SW/17 for construction detail of SF 01, 13 & 14

See drawing 30499/WSM/SW/19 for construction detail of SF 02, 03, 04, 06, 07 & 12

See drawing 30499/WSM/SW/20 for construction detail of SF 09

See drawing 30499/WSM/SW/22 for construction detail of SF 05, 08, 10 & 11

See drawing 30499/WSM/SW/24 for construction detail of SF 15, 16, 17 & 18

See drawing 30499/WSM/SW/25 for construction detail of SF 19 & 20

Some units will need to adapted for site conditions



PROJECT TITLE

Construction of a Steep Wall  
Non-Hazardous Waste Cell

PROJECT NUMBER

30499

CLIENT

Wasteserv Malta Ltd.

LOCATION

Maghtab Environmental Complex

DRAWING TITLE

Support Frame Units and Connectors

REVISIONS

Rev	Date	Chkd	Description
0	16/08/2021	DR	First Issue

DESIGNED RWS

SCALE S @ A1 1:20

DRAWN RWS

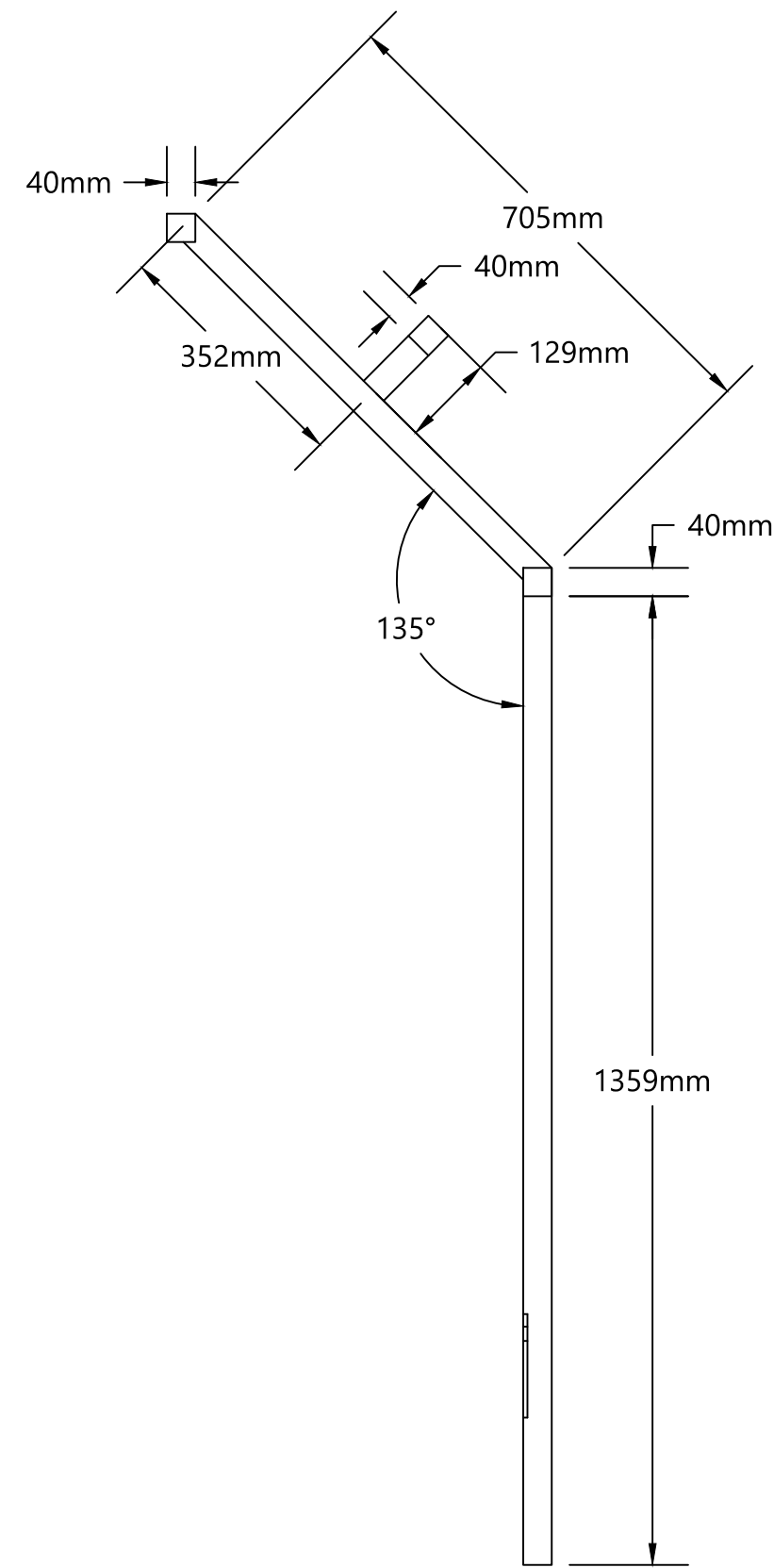
DATE 16/08/2021



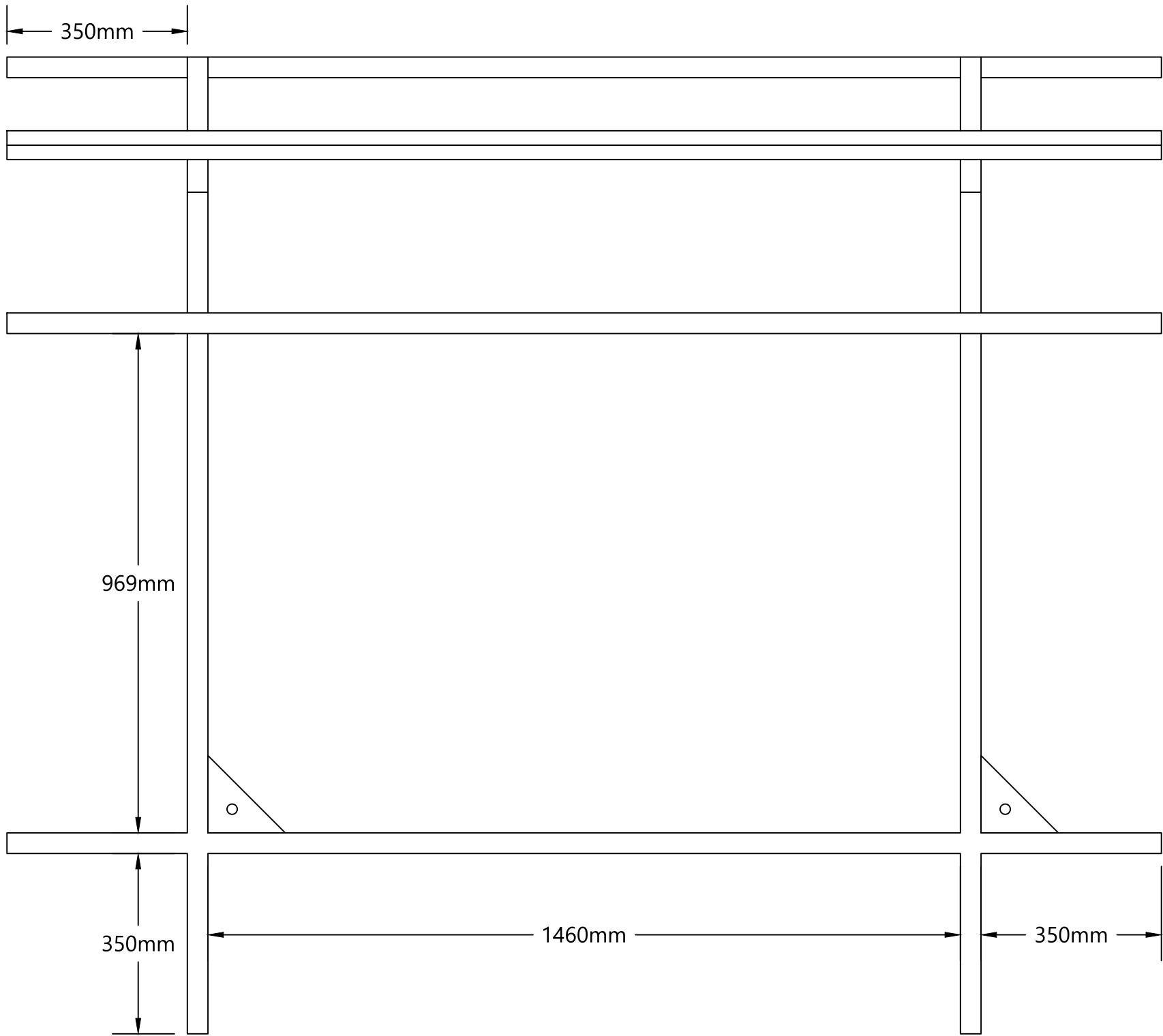
DRAWING NUMBER  
30499/WSM/SW/21

REV  
00

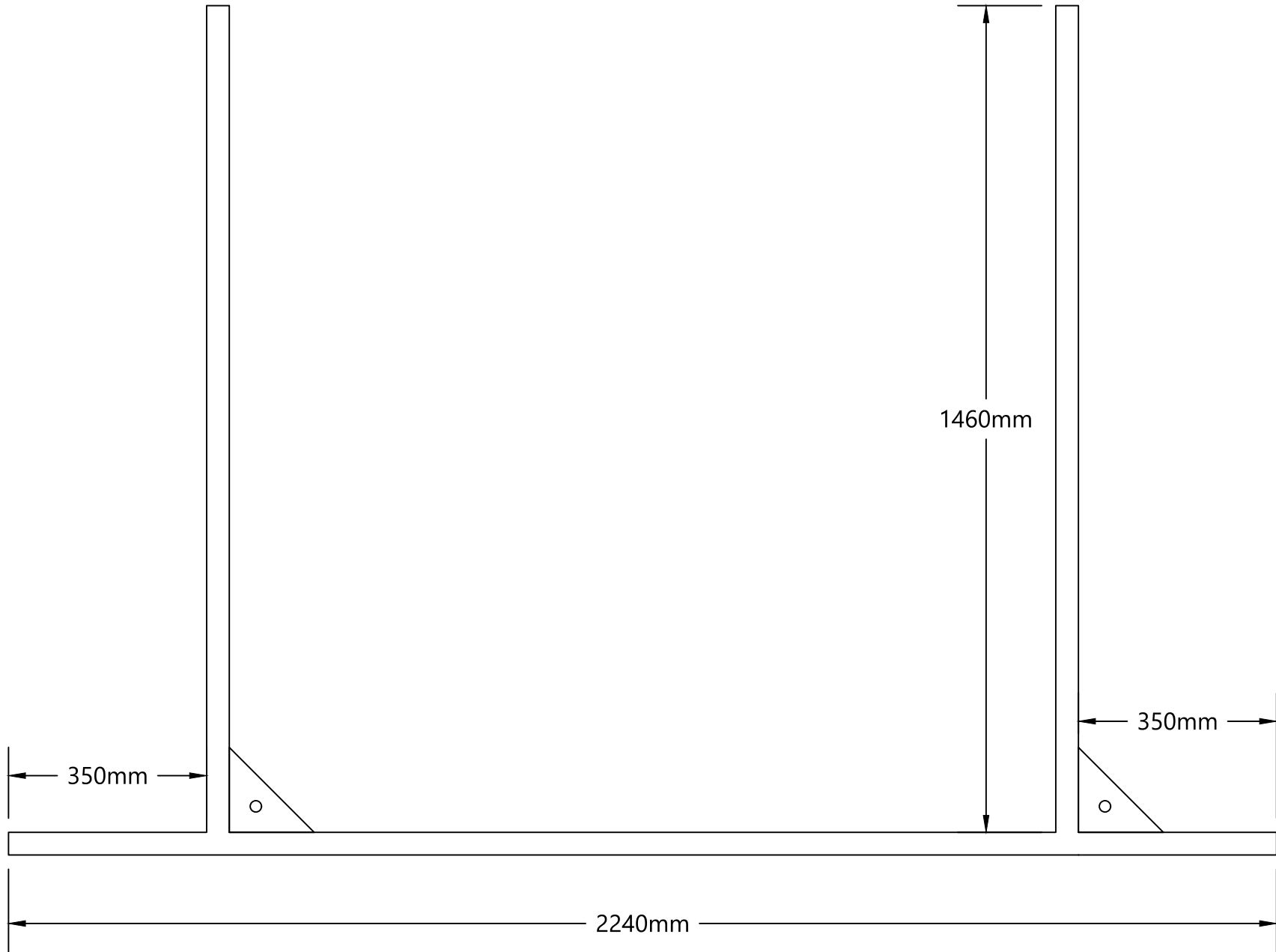




SF 11  
(Top unit 3 for southern bench)

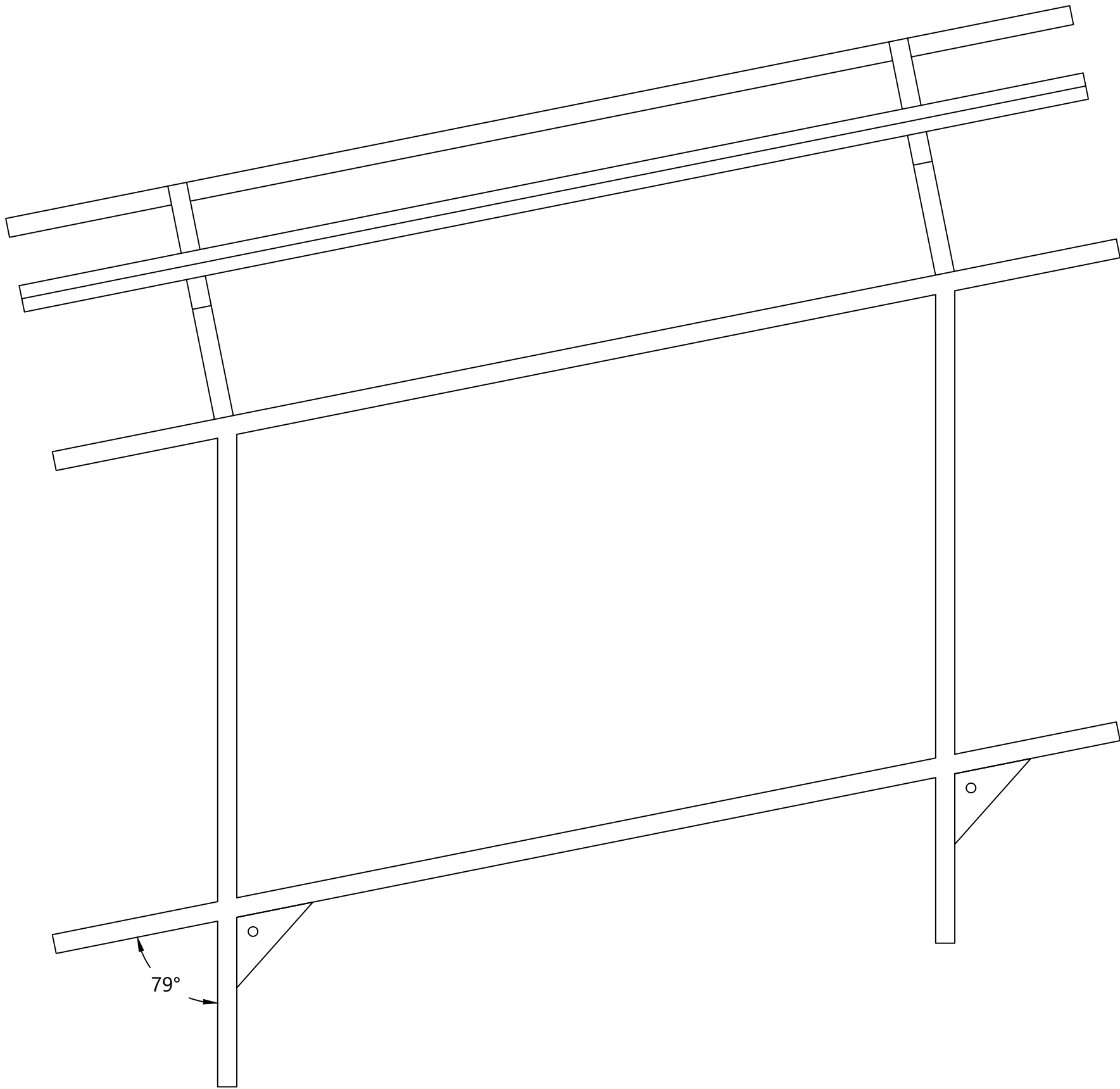
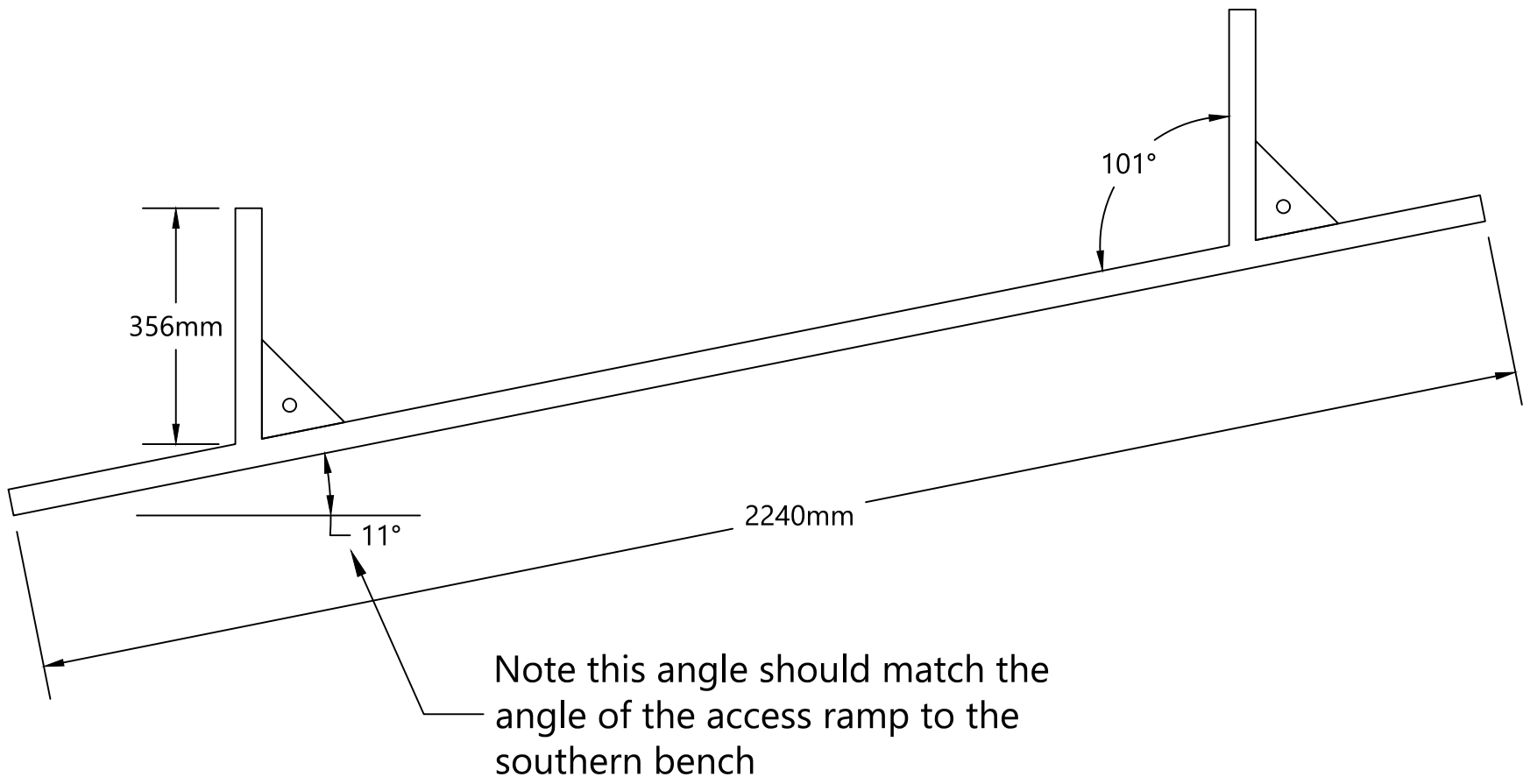


SF 05  
(Sub base unit 4 for southern bench)



SF 10  
(Top unit 2 for access ramp to southern bench)

SF 08  
(Sub base unit 3 angled for access ramp to southern bench)



NOTES

This design is subject to final approval.

Drawings should be read in conjunction with the conceptual design statement report which presents full and detailed specifications.

The support frame sections are prefabricated from 40mm x 40mm x 3mm thick mild steel box section and of welded construction. The connectors are formed from 50mm x 50mm x 3mm thick mild steel box section. All connection holes to drilled prior to galvanizing.

Support frame base and sub units are based on the standard support frame unit, see drawing 30499/WSM/SW/17



PROJECT TITLE

Construction of a Steep Wall  
Non-Hazardous Waste Cell

PROJECT NUMBER

30499

CLIENT

Wasteserv Malta Ltd.

LOCATION

Maghtab Environmental Complex

DRAWING TITLE

Support Frame Units Specific to  
Southern Bench

REVISIONS

Rev	Date	Chkd	Description
0	17/08/2021	DB	First Issue

DESIGNED

RWS

DRAWN

RWS

SCALES @ A1

1:10

DATE

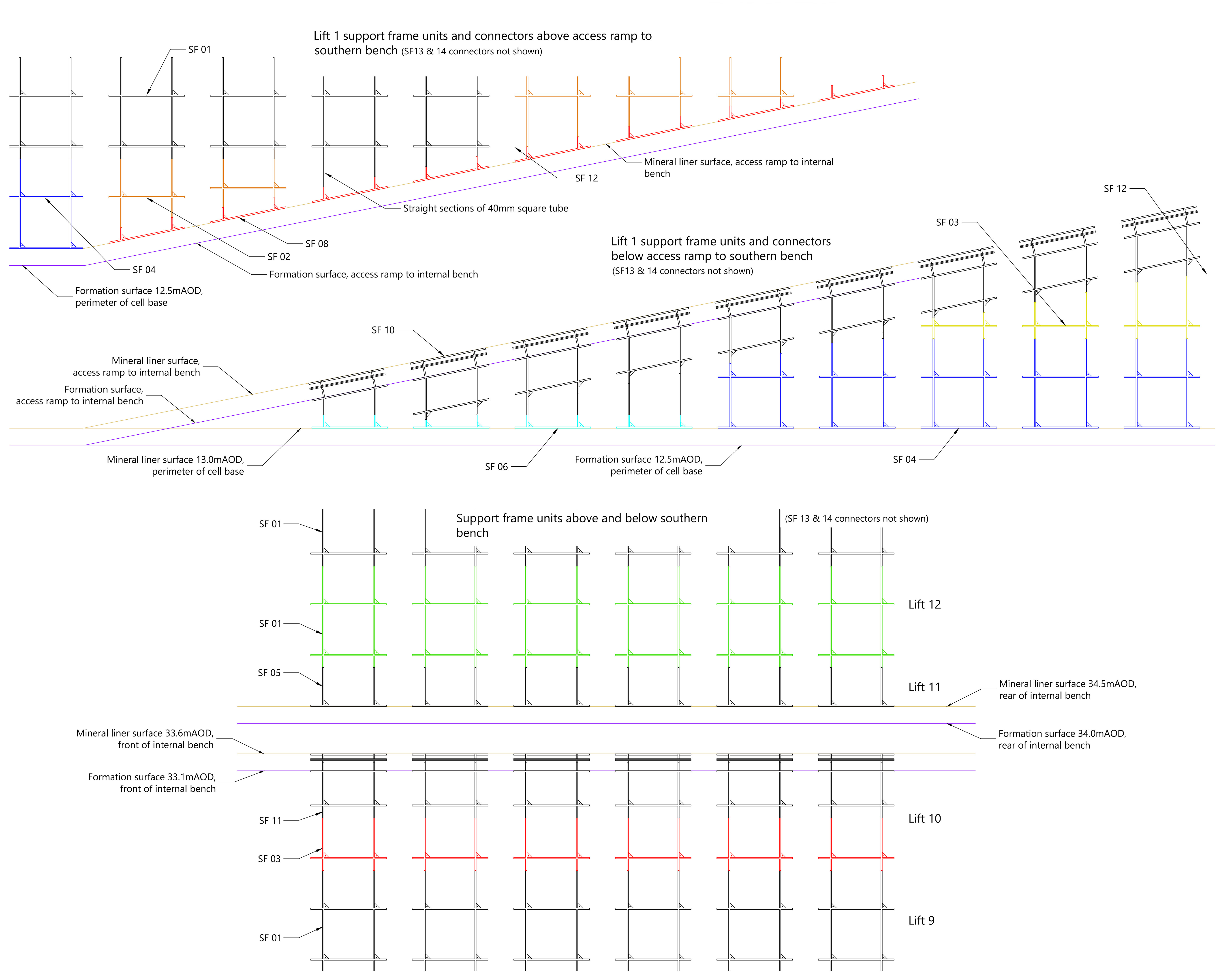
17/08/2021



DRAWING NUMBER  
30499/WSM/SW/22

REV  
00






**NOTES**


This design is subject to final approval.

Drawings should be read in conjunction with the conceptual design statement report which presents full and detailed specifications.



**WASTESERV**  
CREATING RESOURCES FROM WASTE

PROJECT TITLE									
Construction of a Steep Wall Non-Hazardous Waste Cell									
PROJECT NUMBER									
30499									
CLIENT									
Wasteserv Malta Ltd.									
LOCATION									
Maghtab Environmental Complex									
DRAWING TITLE									
Southern Bench Frame Units Type & Locations									
REVISIONS									
<table><tr><td>0</td><td>17/08/2021</td><td>DB</td><td>First Issue</td></tr><tr><td>Rev</td><td>Date</td><td>Chkd</td><td>Description</td></tr></table>		0	17/08/2021	DB	First Issue	Rev	Date	Chkd	Description
0	17/08/2021	DB	First Issue						
Rev	Date	Chkd	Description						
DESIGNED	RWS	DRAWN	RWS						
SCALES @ A1	1:50	DATE	17/08/2021						

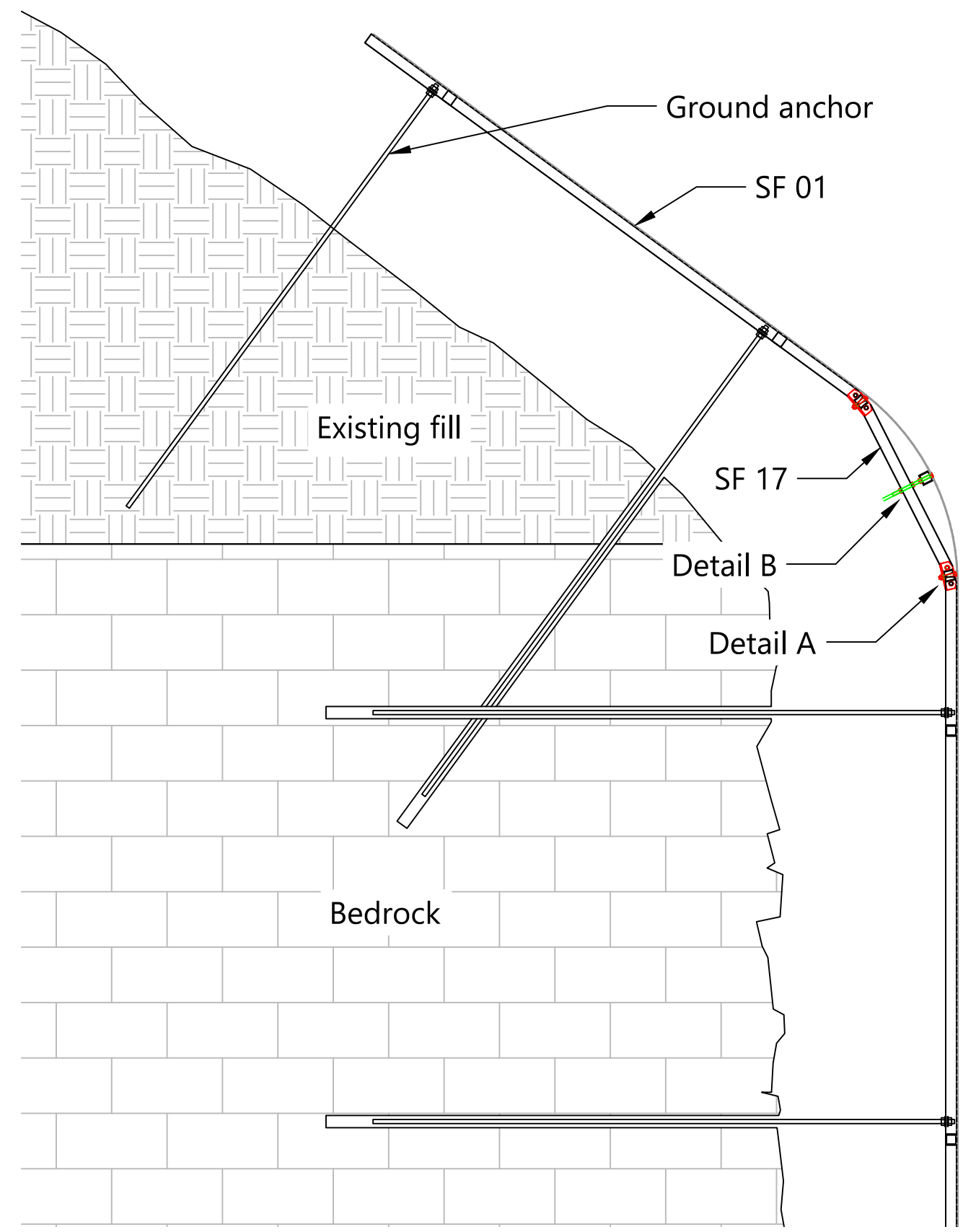


**CQA**  
CQA INTERNATIONAL LTD

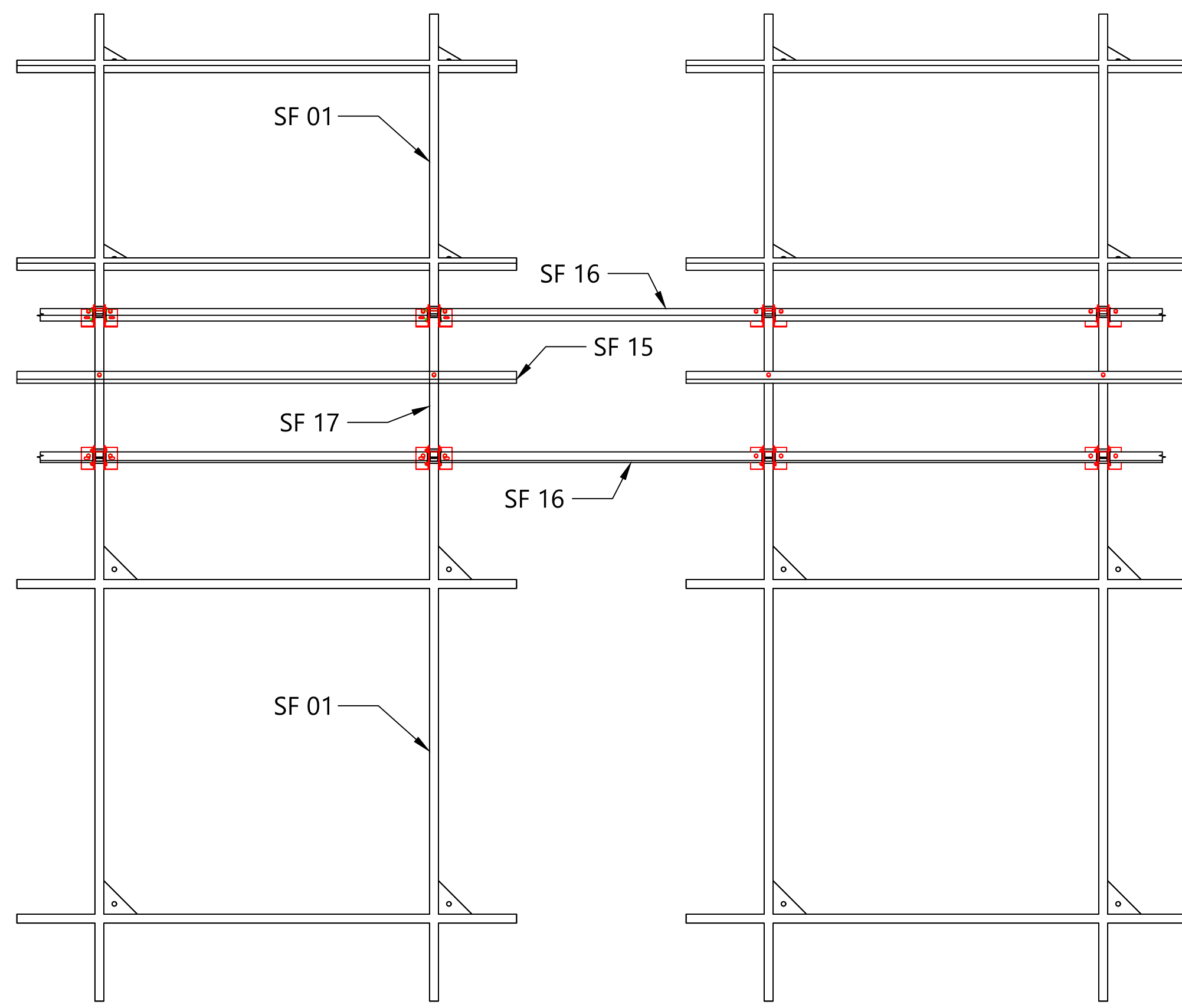
DRAWING NUMBER	REV
30499/WSM/SW/23	00



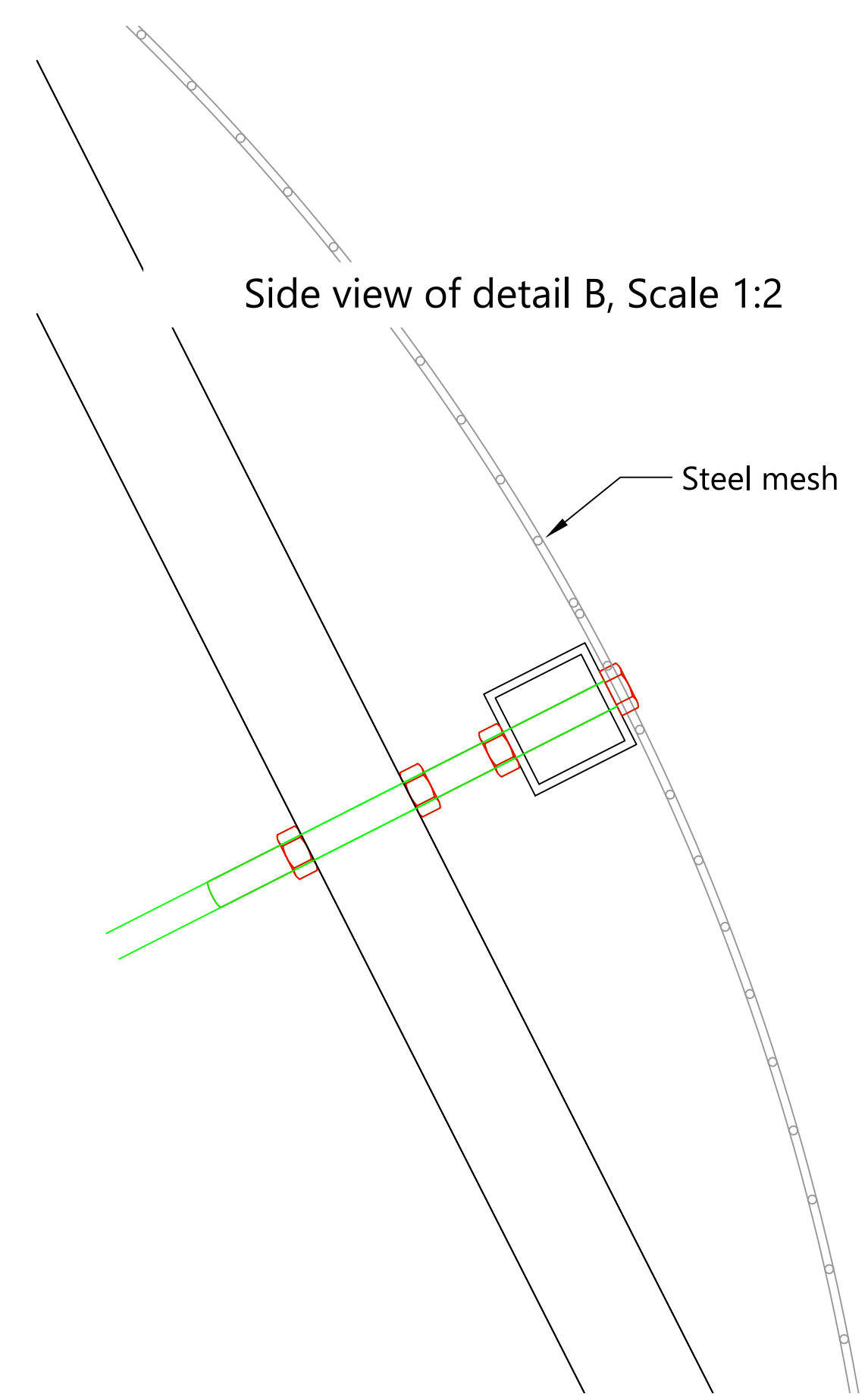
Sloping support frame detail,  
Scale 1:20



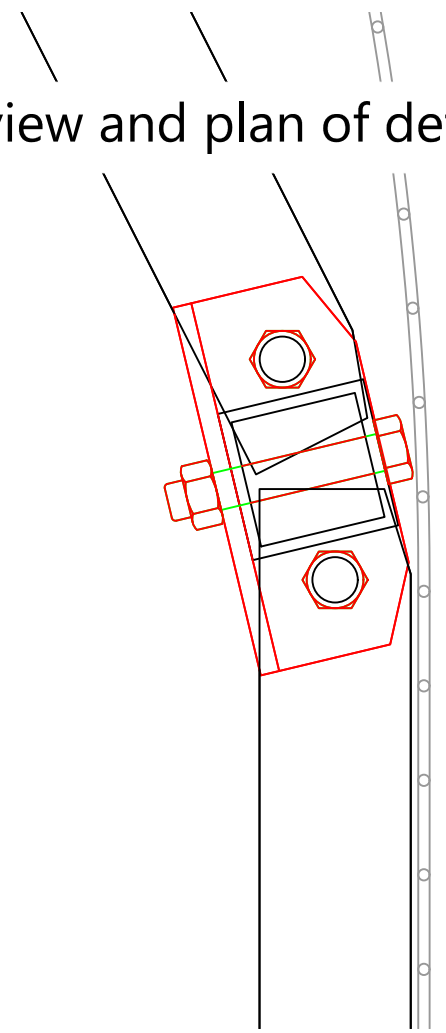
Sloping support frame detail,  
Scale 1:20



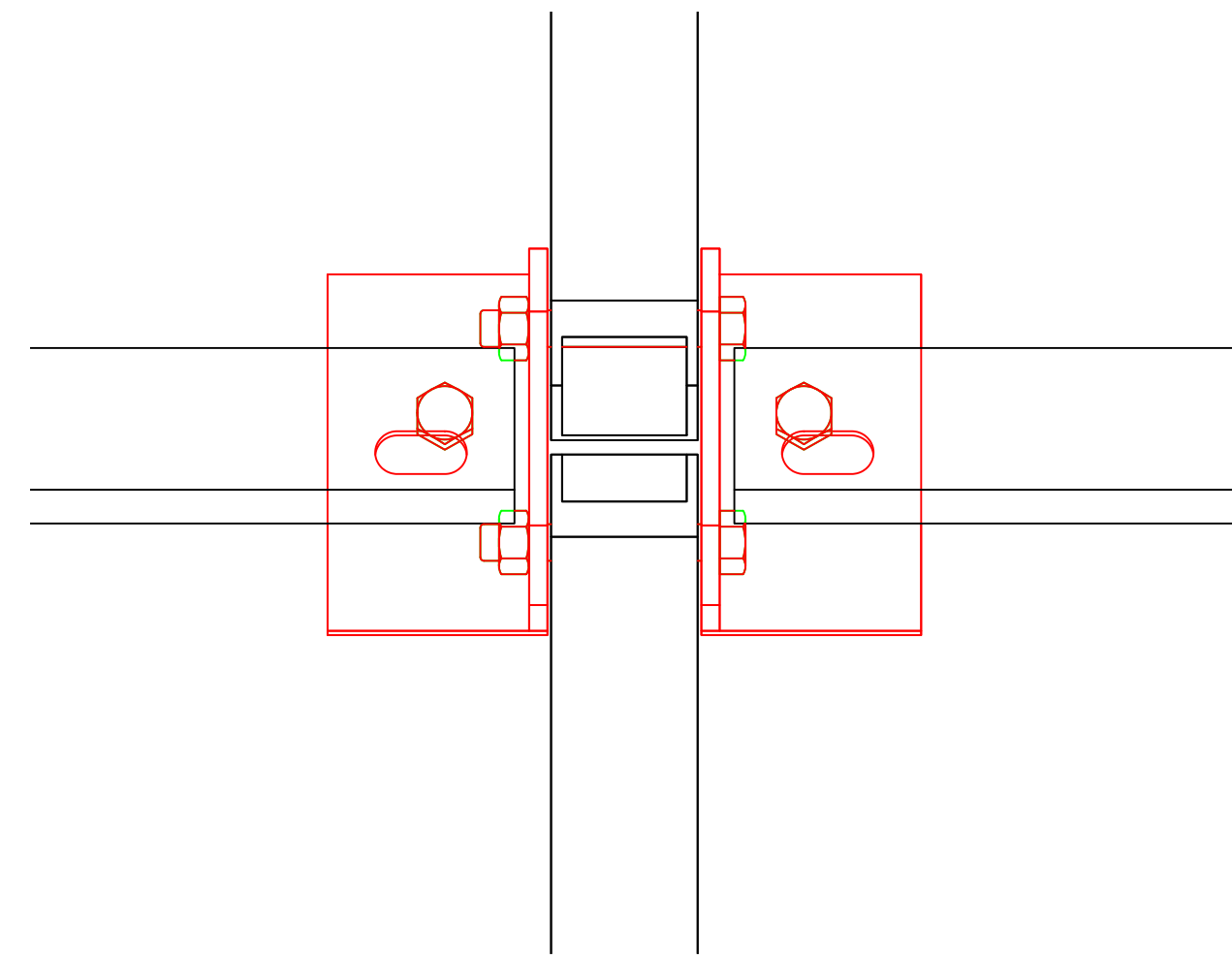
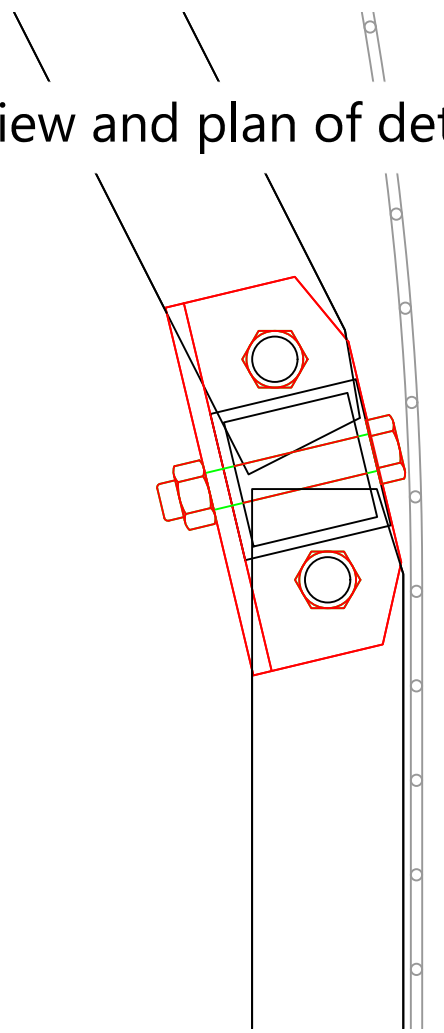
Side view of detail B, Scale 1:2



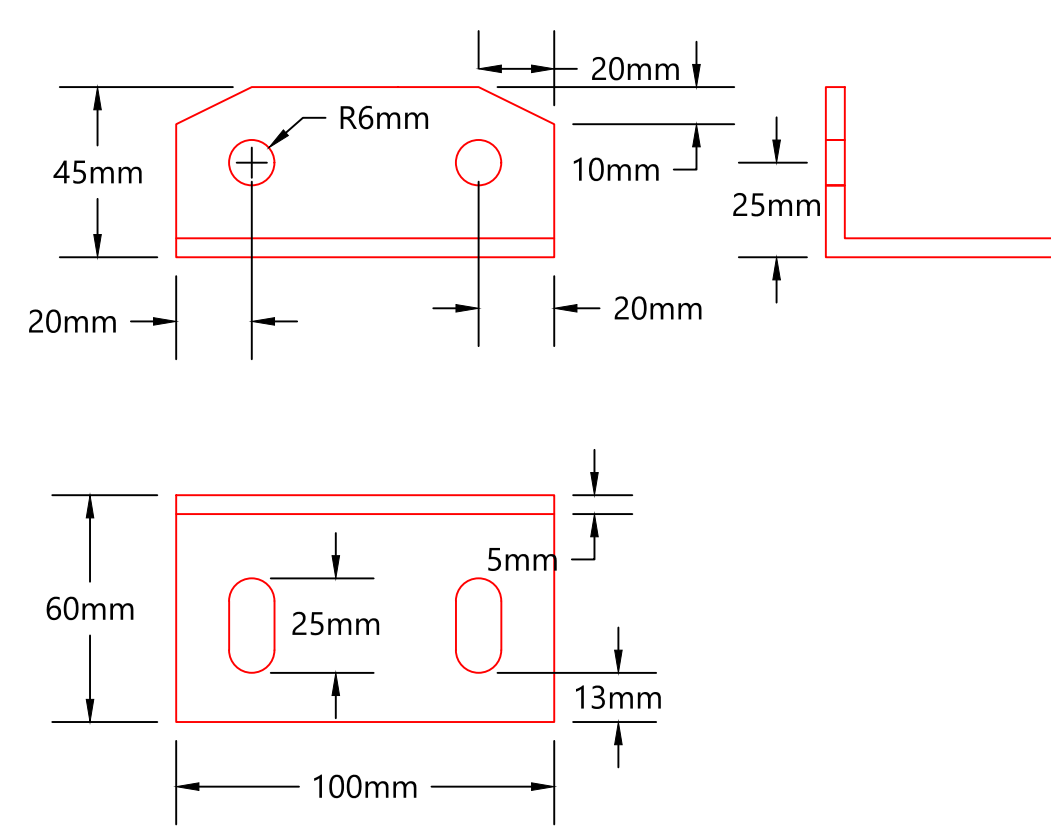
Side view and plan of detail A, Scale 1:2



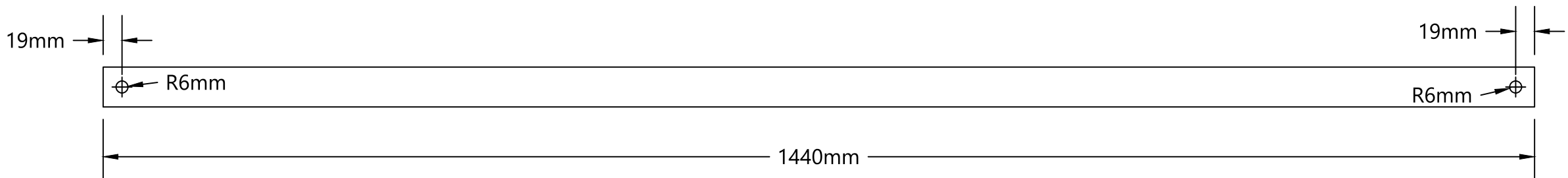
Side view and plan of detail A, Scale 1:2



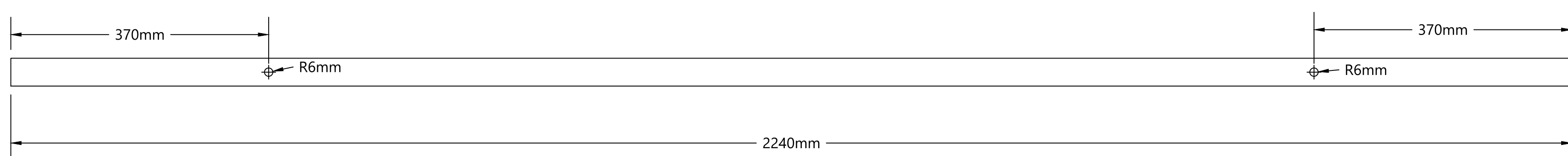
SF 18 Connecting bracket, Scale 1:2



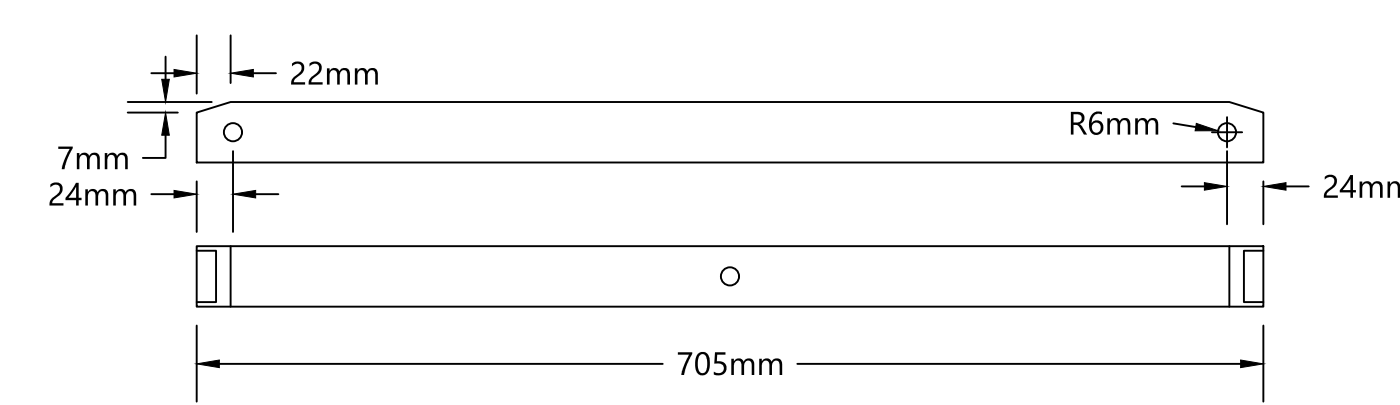
SF15 Horizontal bar, Scale 1:5



SF16 Horizontal bar, Scale 1:5



SF 17 Vertical bar, Scale 1:5




This design is subject to final approval.

Drawings should be read in conjunction with the conceptual design statement report which presents full and detailed specifications.


The support frame sections are prefabricated from 40mm x 40mm x 3mm thick mild steel box section and of welded construction. The connectors are formed from 50mm x 50mm x 3mm thick mild steel box section. All connection holes to drilled prior to galvanizing.

Support frame base and sub units are based on the standard support frame unit, see drawing 30499/WSM/SW/17



CREATING RESOURCES FROM WASTE

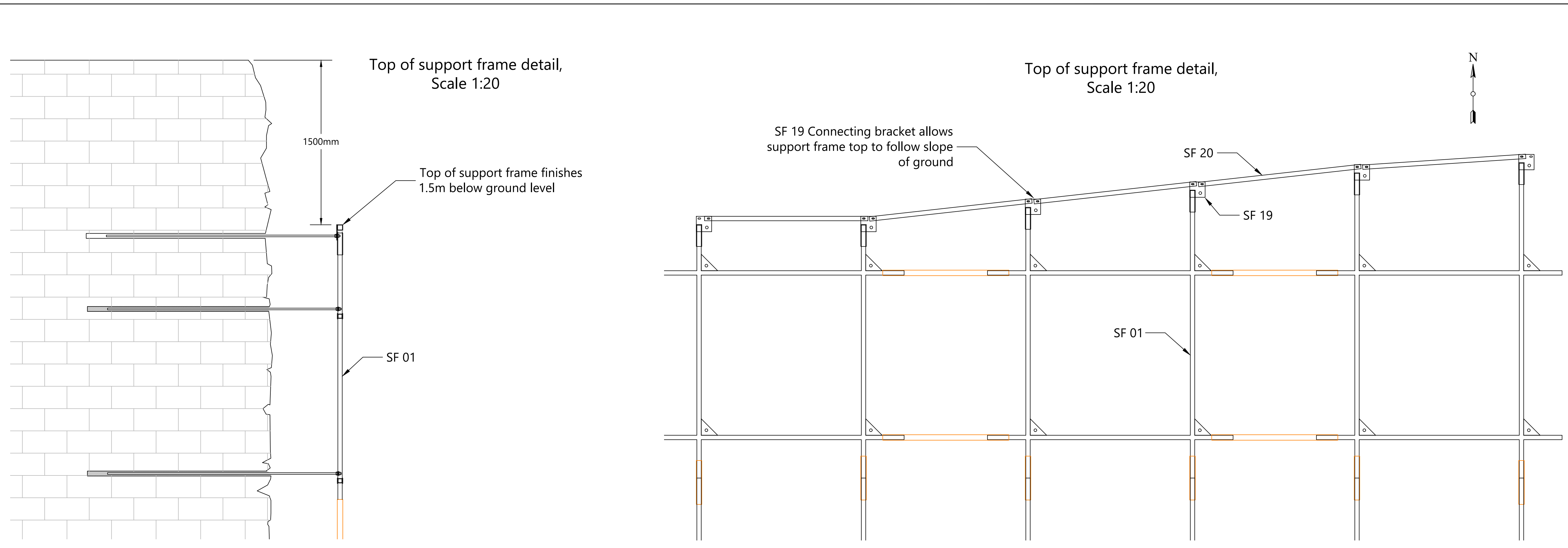
PROJECT TITLE									
Construction of a Steep Wall Non-Hazardous Waste Cell									
PROJECT NUMBER									
30499									
CLIENT									
Wasteserv Malta Ltd.									
LOCATION									
Maghtab Environmental Complex									
DRAWING TITLE									
Sloping Support Frame Units And Connectors									
REVISIONS									
<table><tr><td>0</td><td>16/08/2021</td><td>DB</td><td>First Issue</td></tr><tr><td>Rev</td><td>Date</td><td>Chkd</td><td>Description</td></tr></table>		0	16/08/2021	DB	First Issue	Rev	Date	Chkd	Description
0	16/08/2021	DB	First Issue						
Rev	Date	Chkd	Description						
DESIGNED	RWS	DRAWN	RWS						
SCALES @ A1	As Shown	DATE	16/08/2021						



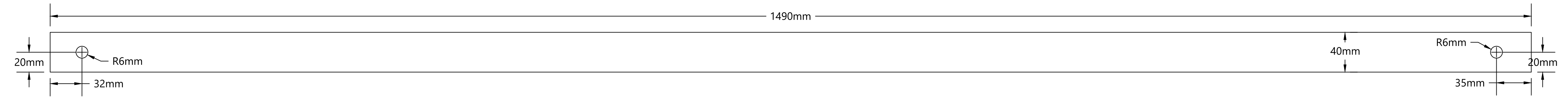
CQA INTERNATIONAL LTD

DRAWING NUMBER	REV
30499/WSM/SW/24	00

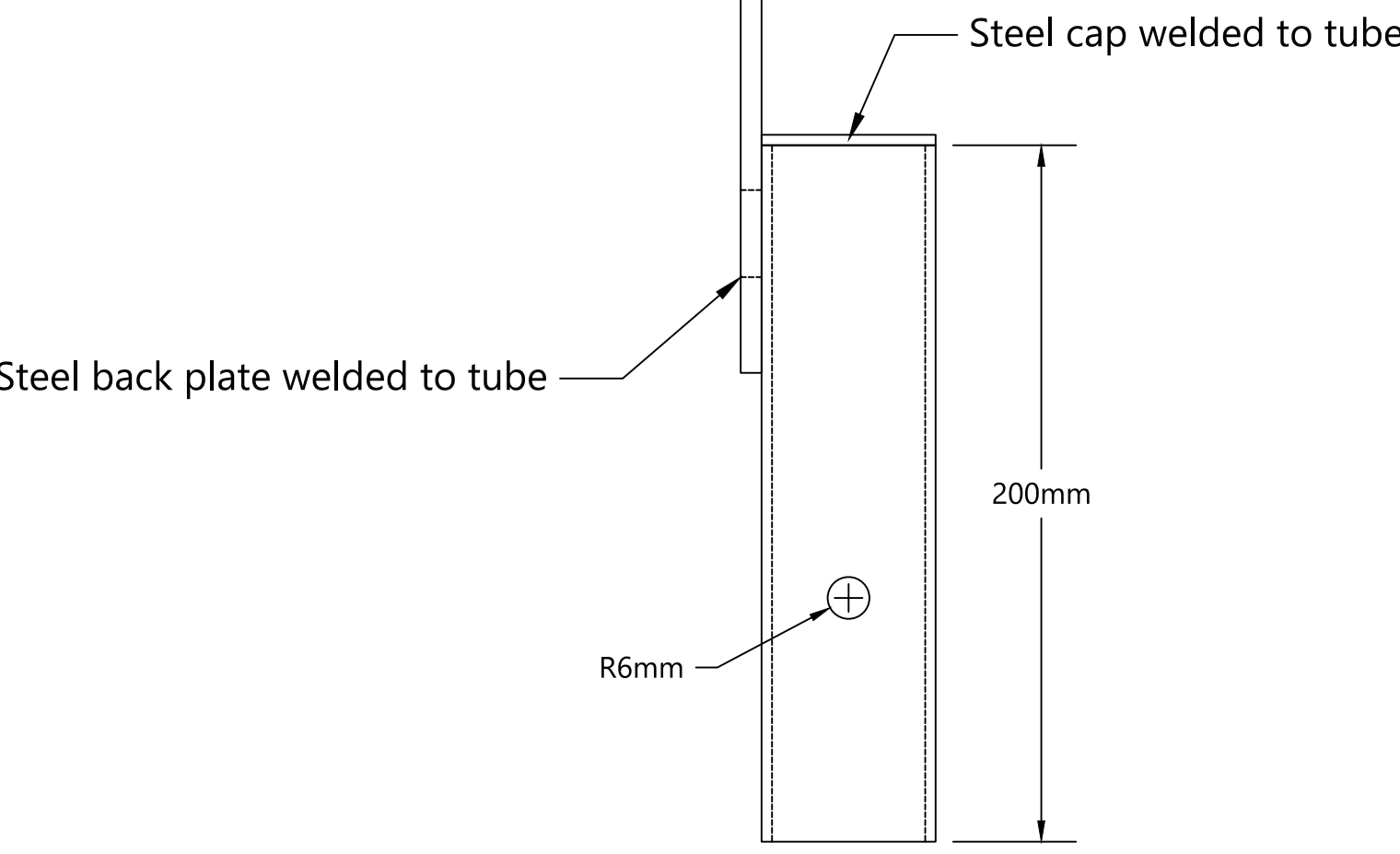
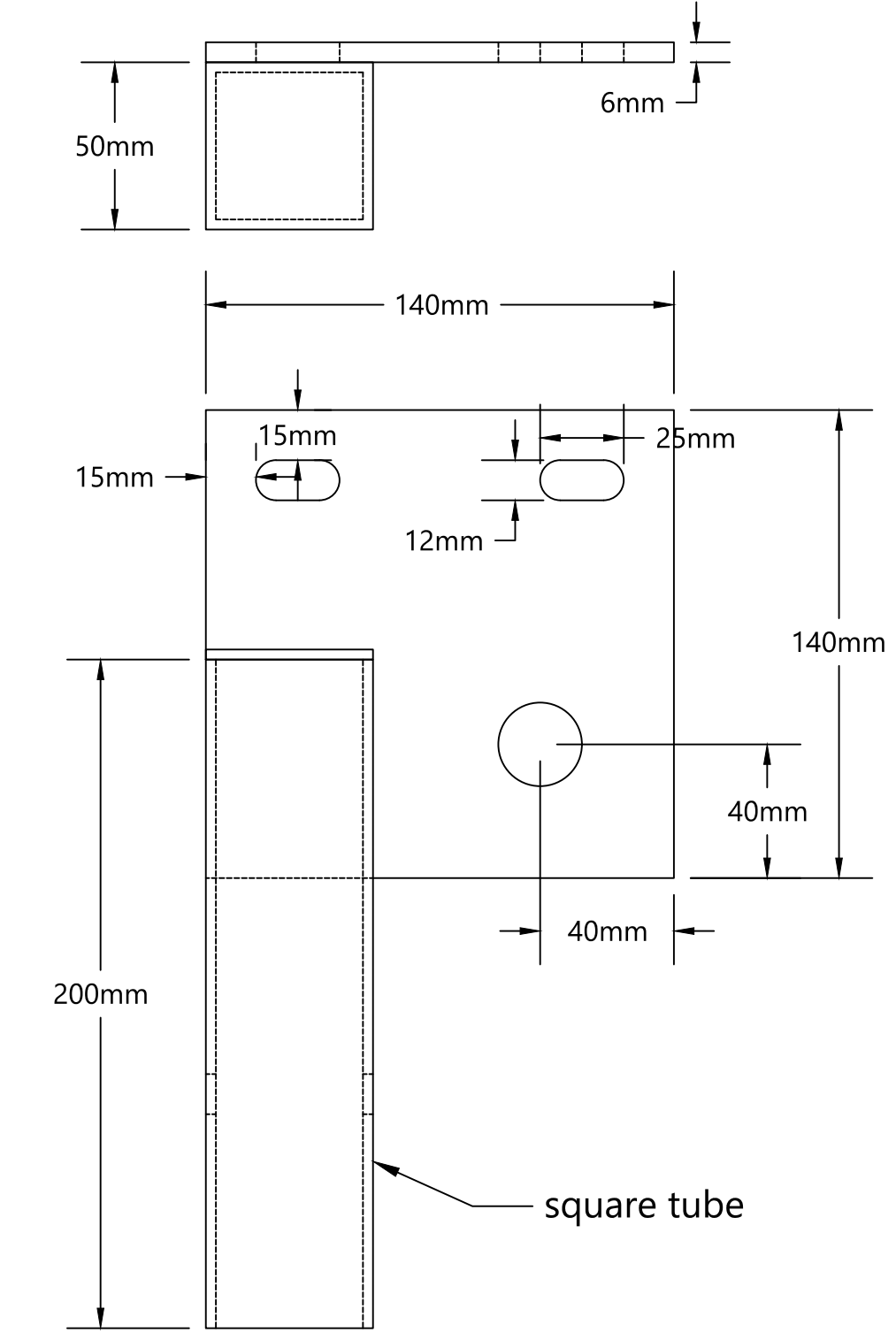




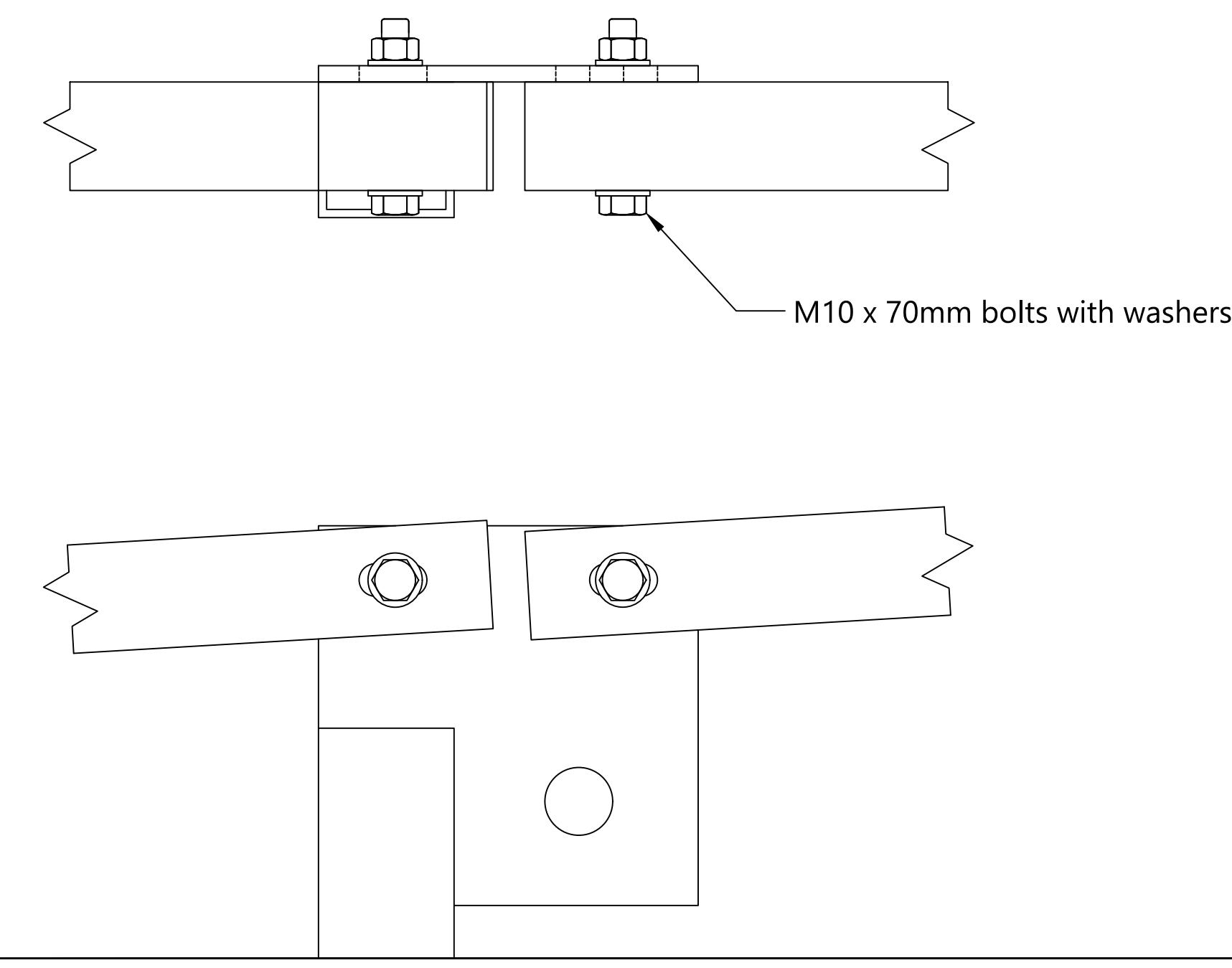
Support frame top connecting bar, SF 20  
Scale 1:2.5



Connecting bracket, support frame top SF 19  
Scale 1:2



Plan and front view of connection  
Scale 1:2



**NOTES**

This design is subject to final approval.

Drawings should be read in conjunction with the conceptual design statement report which presents full and detailed specifications.

The support frame sections are prefabricated from 40mm x 40mm x 3mm thick mild steel box section and of welded construction. The connectors are formed from 50mm x 50mm x 3mm thick mild steel box section. All units and connectors to be galvanised after fabrication. All cuts and hole made on site to be treated against corrosion.

Support frame base and sub units are based on the standard support frame unit, see drawing 30499/WSM/SW/17

**WASTESERV**  
CREATING RESOURCES FROM WASTE

PROJECT TITLE  
Construction of a Steep Wall  
Non-Hazardous Waste Cell

PROJECT NUMBER  
30499

CLIENT  
Wasteserv Malta Ltd.

LOCATION  
Magtab Environmental Complex

DRAWING TITLE  
Support Frame Top Detail

REVISIONS

Rev	Date	Chkd	Description
0	17/08/2021	DB	First issue

DESIGNED	RWS	DRAWN	RWS
SCALES @ A1	As Shown	DATE	17/08/2021

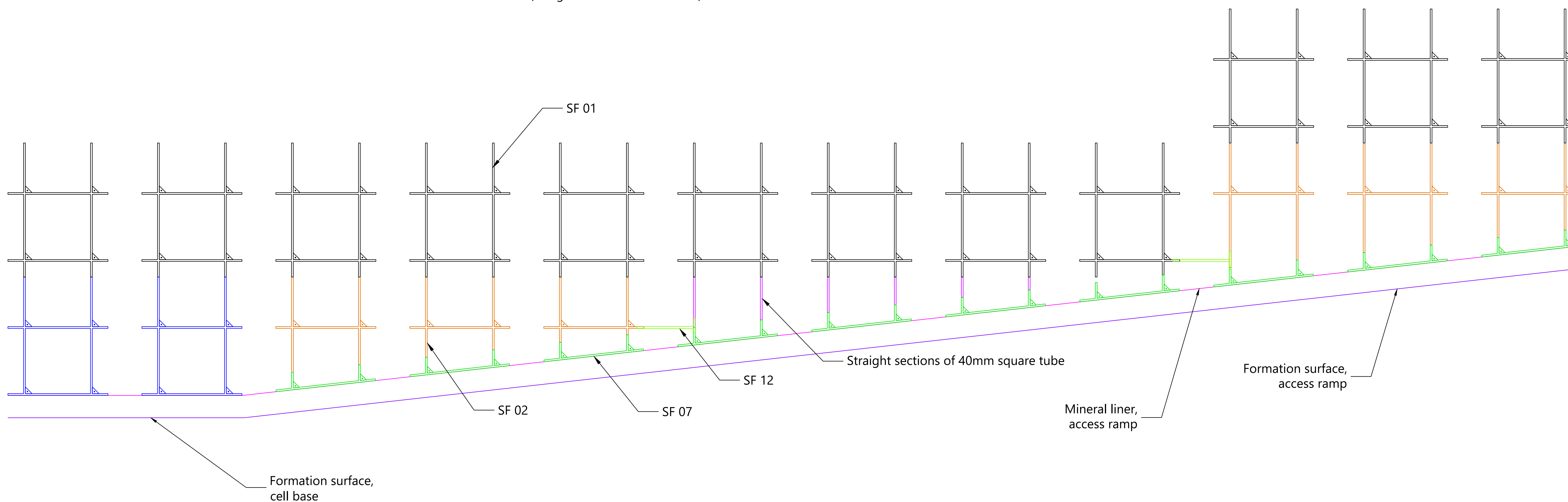
**CQA**  
CQA INTERNATIONAL LTD

DRAWING NUMBER  
30499/WSM/SW/25

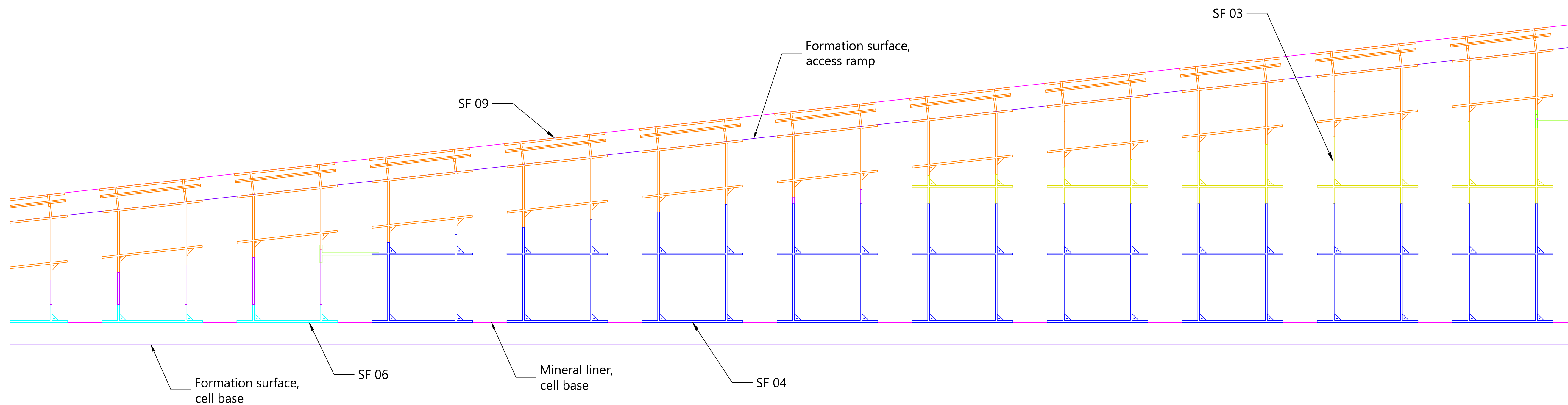
REV  
00



Lift 1 support frame units above access ramp  
(straight connectors not shown)



Lift 1 support frame units below access ramp  
(straight connectors not shown)



NOTES
-------

This design is subject to final approval.

Drawings should be read in conjunction with the conceptual design statement report which presents full and detailed specifications.



PROJECT TITLE

Construction of a Steep Wall  
Non-Hazardous Waste Cell

PROJECT NUMBER
----------------

30499

	CLIENT
--	--------

Wasteserv Malta Ltd.

LOCATION

Maghtab Environmental Complex

	DRAWING TITLE
--	---------------

### Access Ramp Frame Units Types & Locations

REVISIONS

[illegible]

DESIGNED

RWS

SCALES @ A1

1:50

	DRAW
--	------

RWS


---

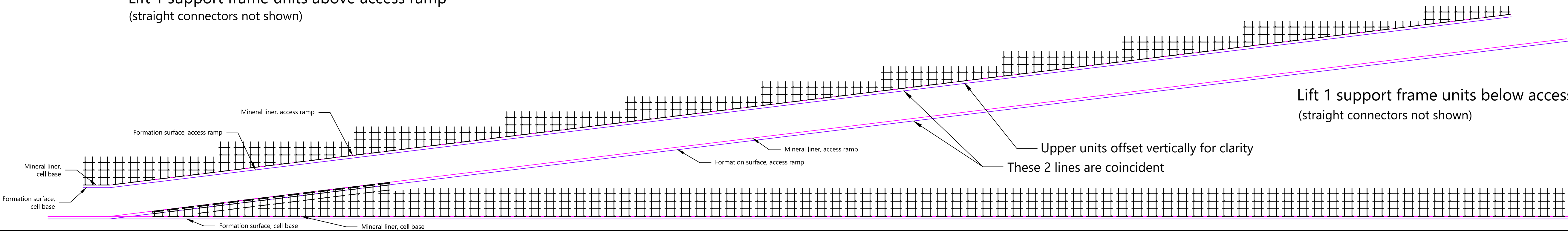


DRAWING NUMBER  
30499/WSM/SW/26

REV	00
-----	----



Lift 1 support frame units above access ramp  
(straight connectors not shown)



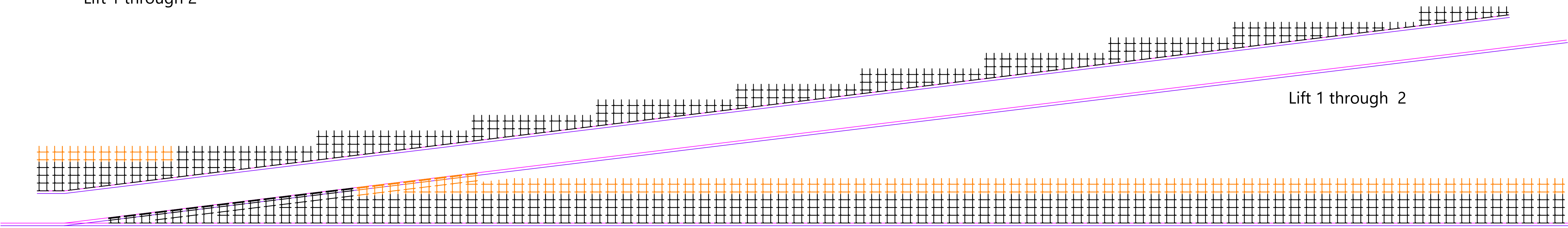
Lift 1 support frame units below access ramp  
(straight connectors not shown)

This design is subject to final approval.

Drawings should be read in conjunction with the conceptual design statement report which presents full and detailed specifications.

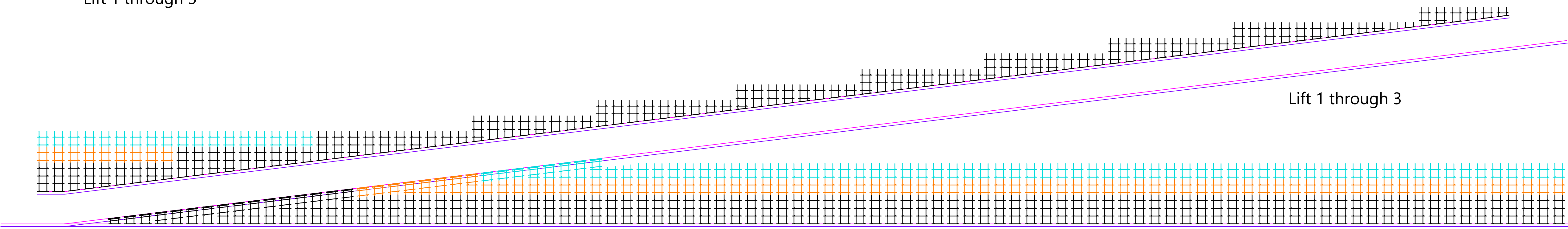
The upper support frame units are shown offset vertically for clarity.

Lift 1 through 2



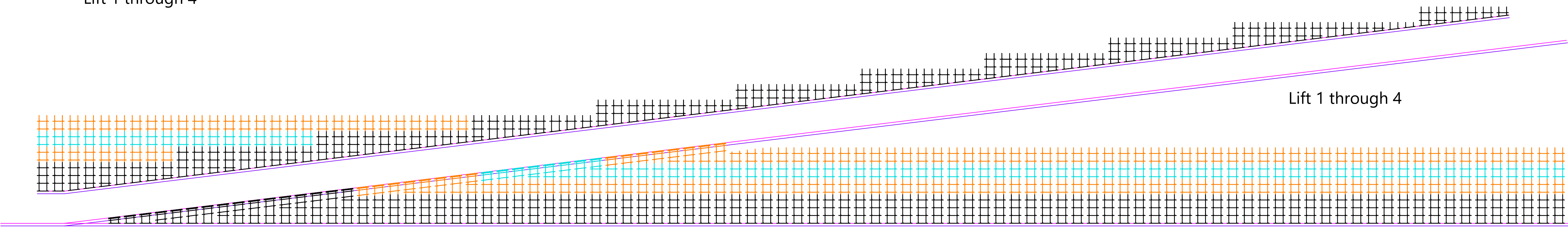
Lift 1 through 2

Lift 1 through 3



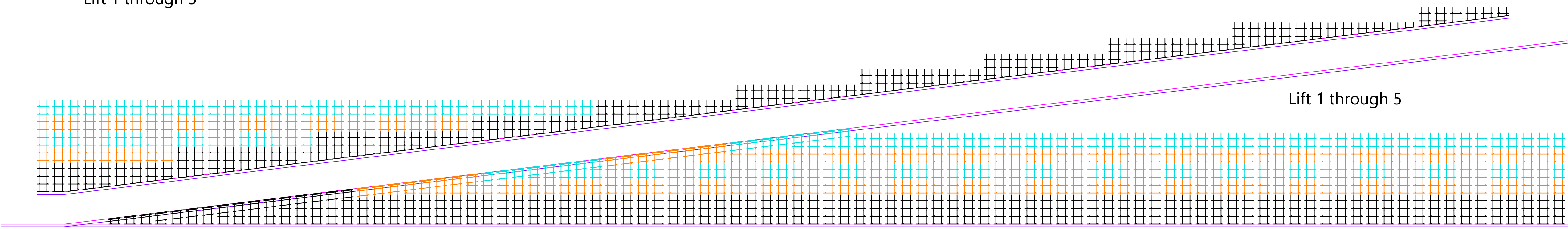
Lift 1 through 3

Lift 1 through 4



Lift 1 through 4

Lift 1 through 5

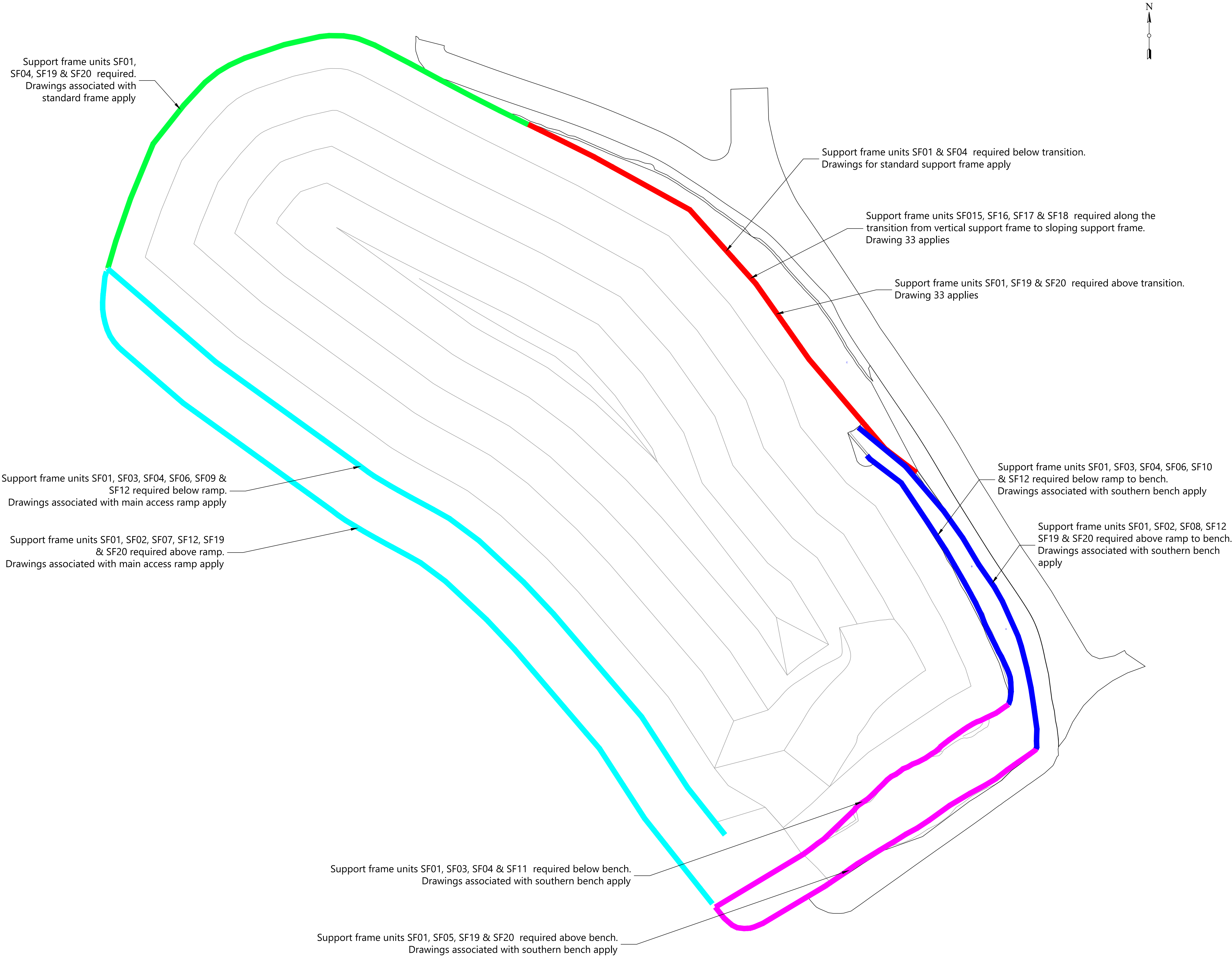


Lift 1 through 5



PROJECT TITLE			
Construction of a Steep Wall Non-Hazardous Waste Cell			
PROJECT NUMBER			
30499			
CLIENT			
Wasteserv Malta Ltd.			
LOCATION			
Maghtab Environmental Complex			
DRAWING TITLE			
Access ramp support frame first 5 lifts			
REVISIONS			
0	17/08/2021	DB	First issue
Rev	Date	Chkd	Description
DESIGNED		RWS	DRAWN
SCALES @ A1		1:450	DATE
			17/08/2021
<div>CQA</div> <div>CQA INTERNATIONAL LTD</div>			
DRAWING NUMBER			REV
30499/WSM/SW/27			00





**NOTES**

This design is subject to final approval.

Drawings should be read in conjunction with the conceptual design statement report which presents full and detailed specifications.

This drawing should be used as a guide to locate support frame units and connectors used in the steepwall lining system construction.

Support frame units SF13 & SF14 are not referenced as they are common to all parts of the support frame.



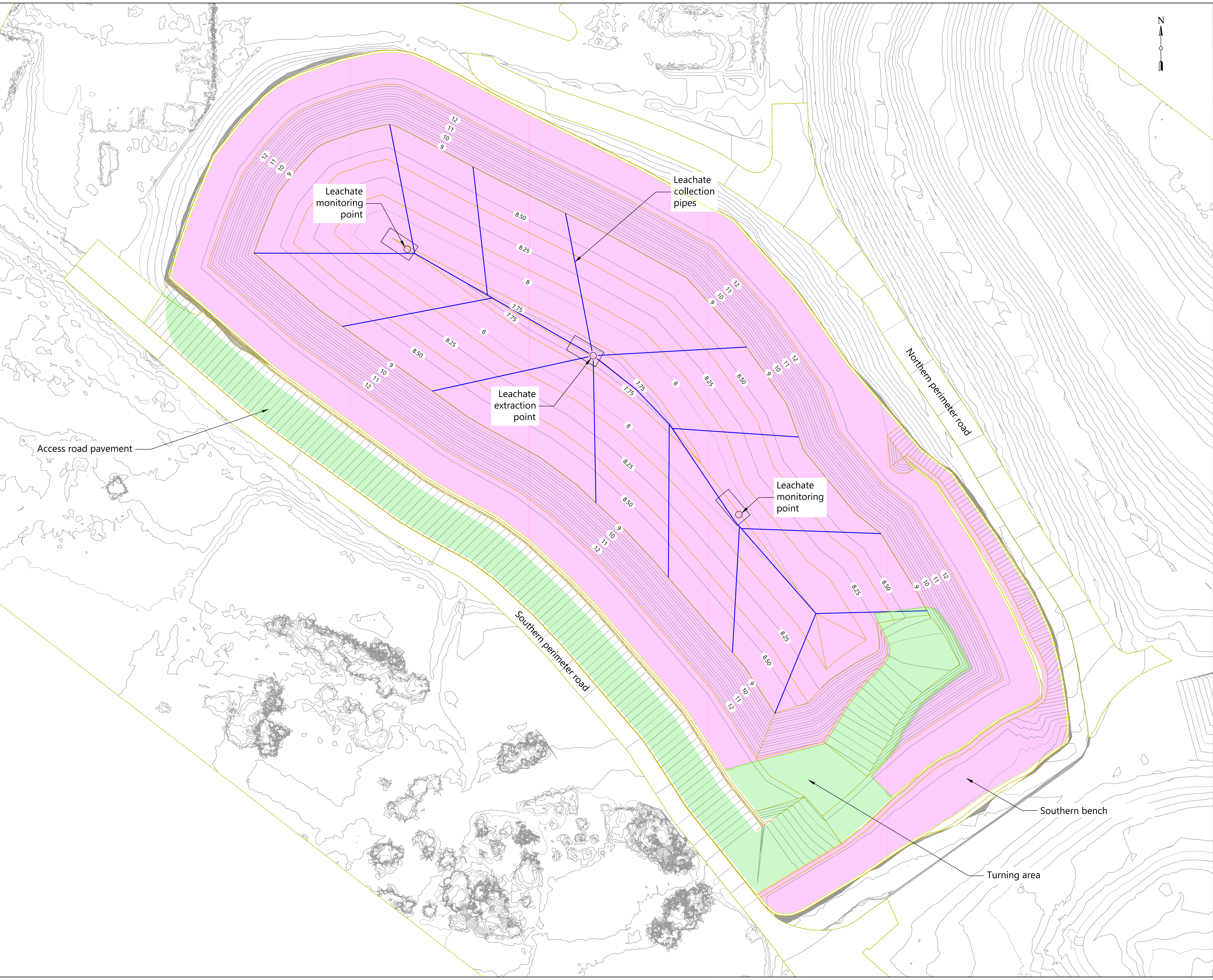
PROJECT TITLE			
Construction of a Steep Wall Non-Hazardous Waste Cell			
PROJECT NUMBER			
30499			
CLIENT			
Wasteserv Malta Ltd.			
LOCATION			
Maghtab Environmental Complex			
DRAWING TITLE			
Guide to Locations of Specific Support Frame Units			

REVISIONS			
0	26/08/2021	DB	First Issue
Rev	Date	Chkd	Description

DESIGNED	RWS	DRAWN	RWS
SCALES @ A1	1:500	DATE	26/08/2021

 CQA INTERNATIONAL LTD	
DRAWING NUMBER 30499/WSM/SW/28	REV 00





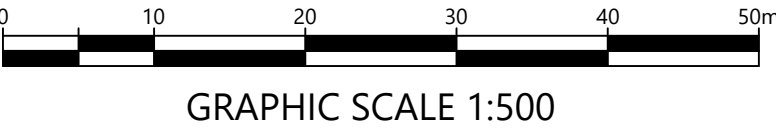
NOTES

This design is subject to final approval.

Drawings should be read in conjunction with the conceptual design statement report which presents full and detailed specifications.

LEGEND

- Extent of drainage gravel
- Extent of access road pavement



PROJECT TITLE

Construction of a Steep Wall  
Non-Hazardous Waste Cell

PROJECT NUMBER

30499

CLIENT

Wasteserv Malta Ltd.

LOCATION

Maghtab Environmental Complex

DRAWING TITLE

Leachate Collection System Plan

REVISIONS

0	26/08/2021	DB	First Issue
Rev	Date	Chkd	Description

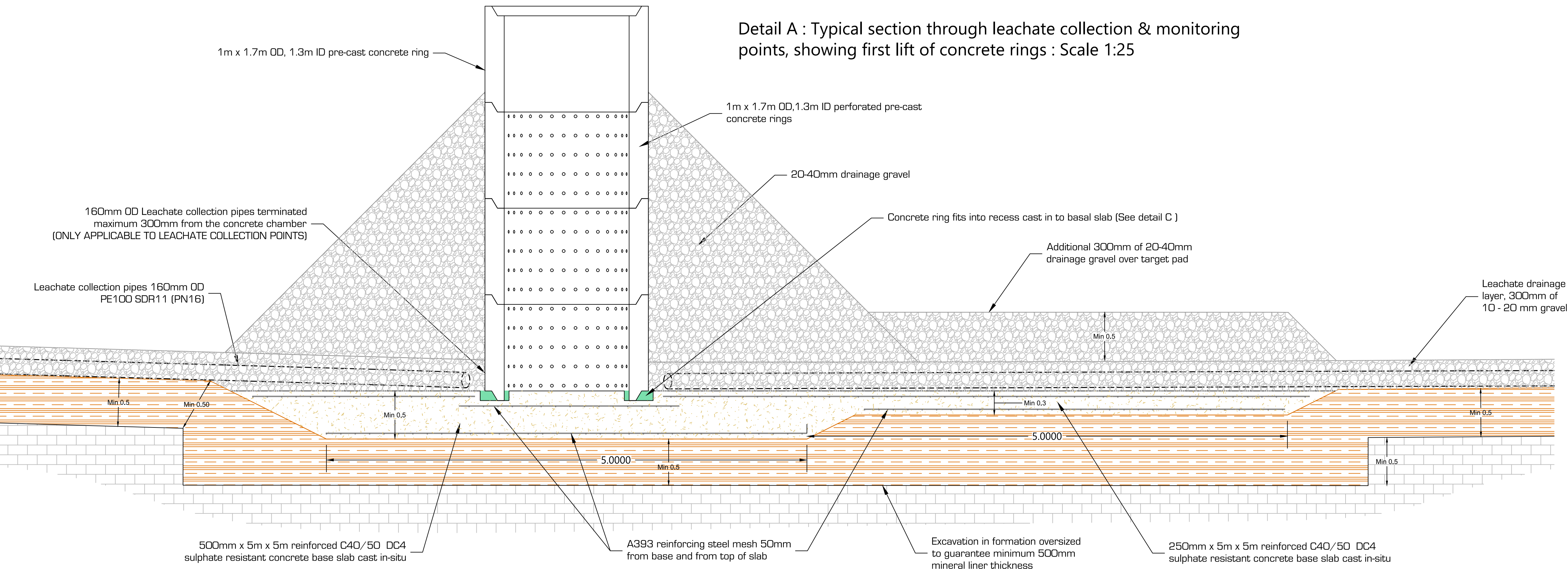
DESIGNED	RWS	DRAWN	RWS
SCALES @ A1	1:500	DATE	26/08/2021



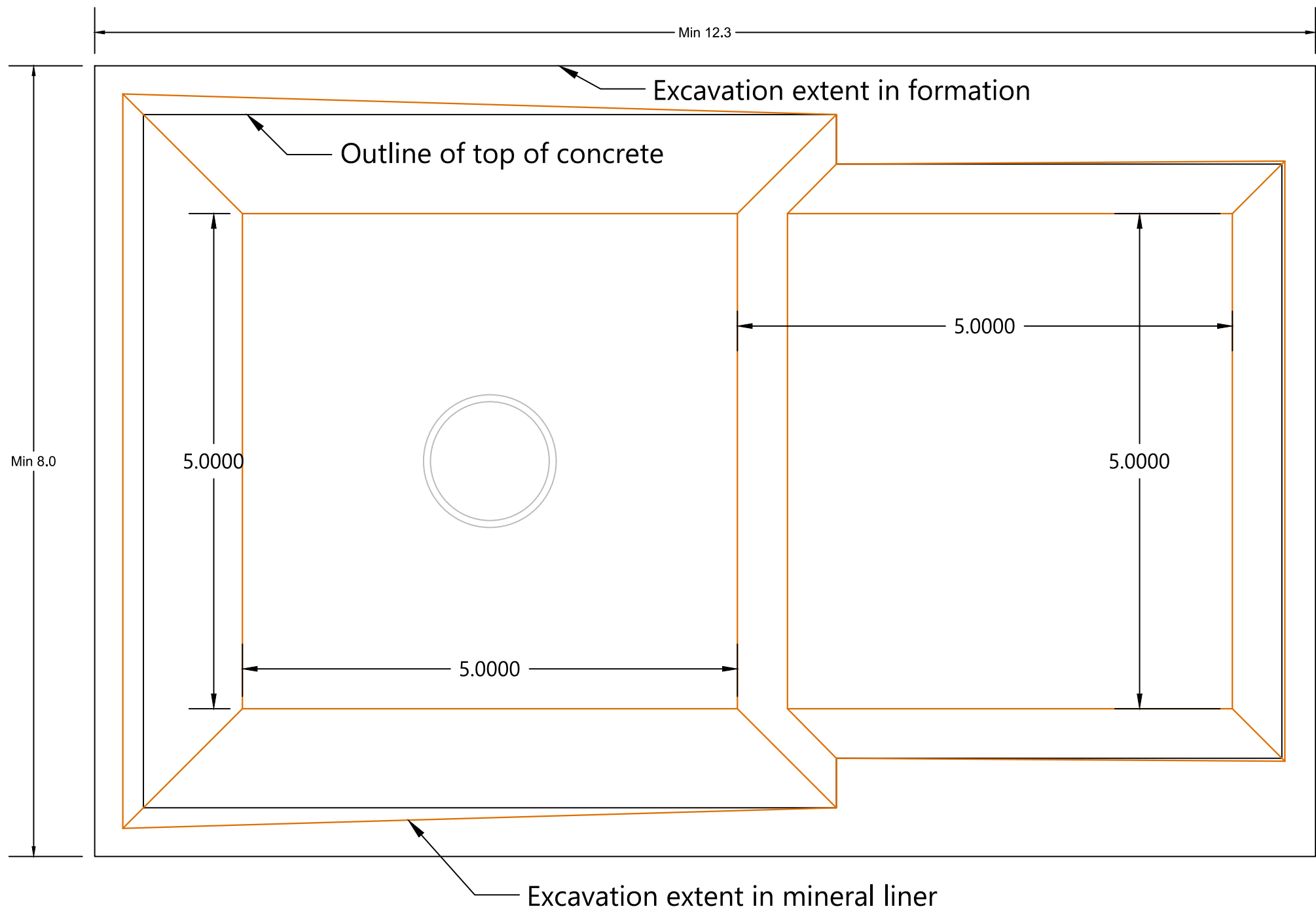
DRAWING NUMBER  
30499/WSM/SW/29

REV  
00

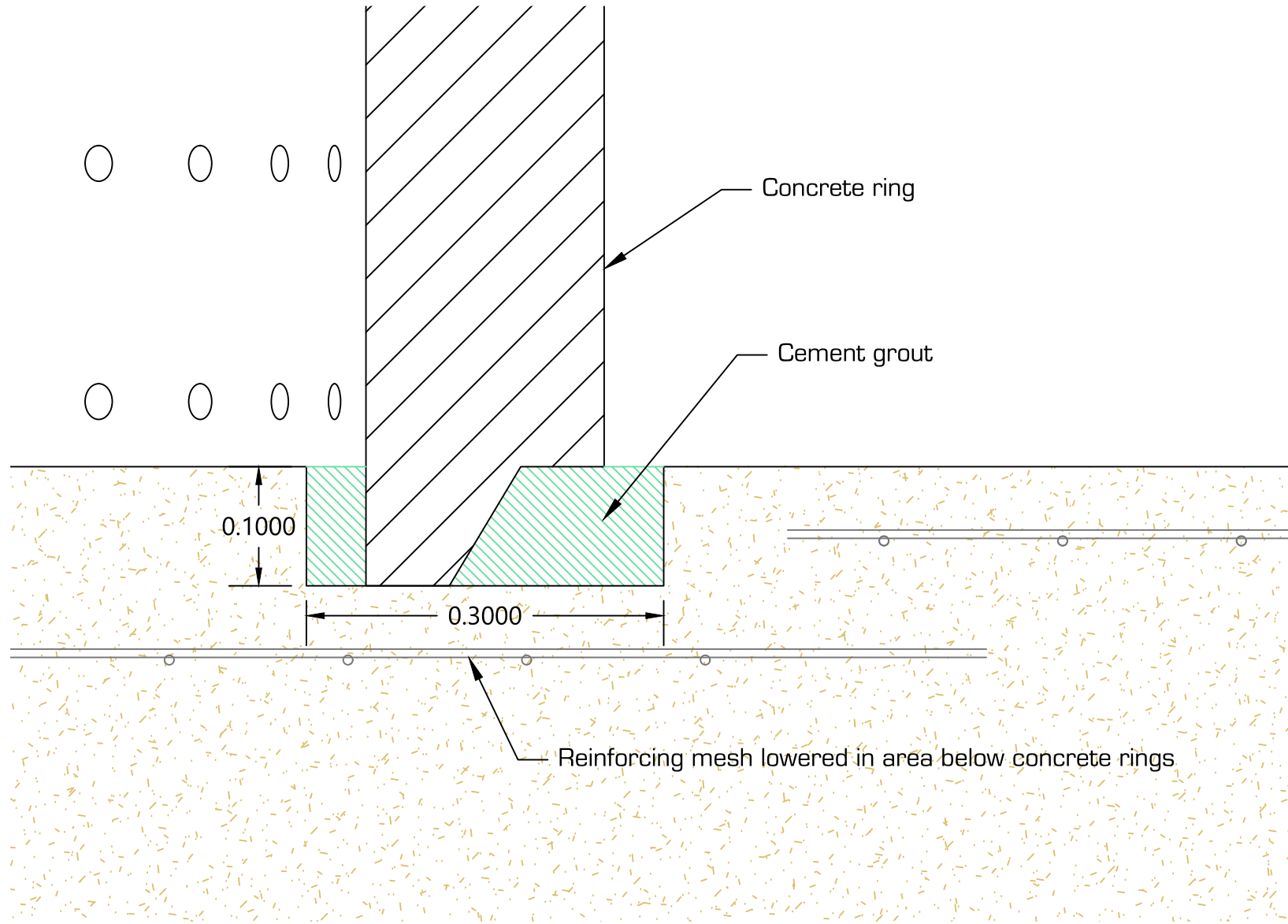




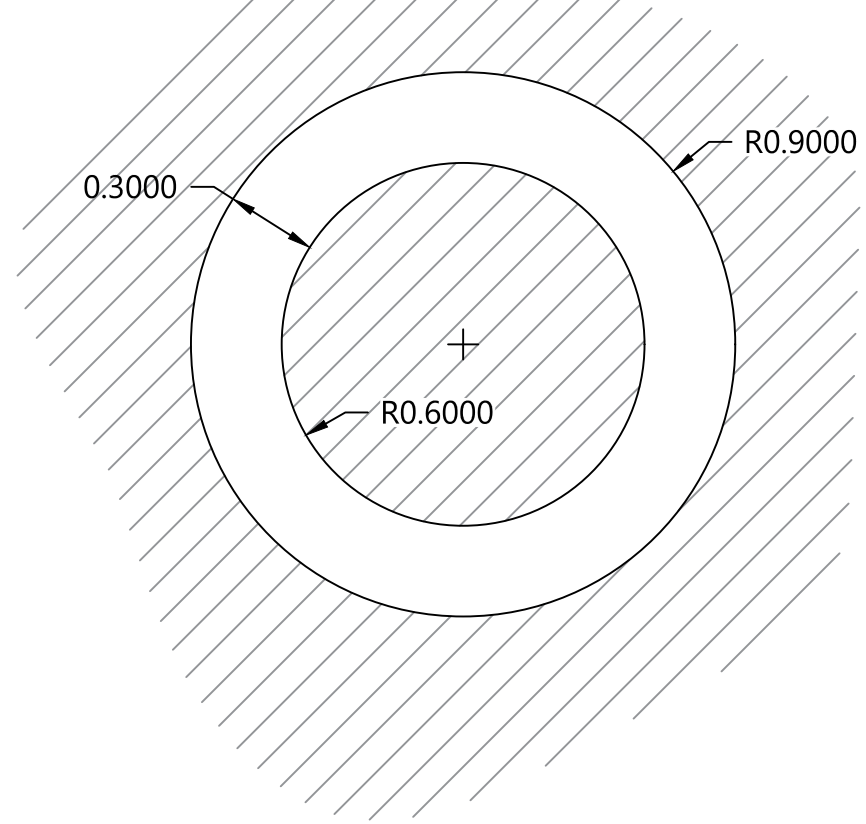
Detail B : Example plan showing excavation outlines for formation and mineral liner: Scale 1:50



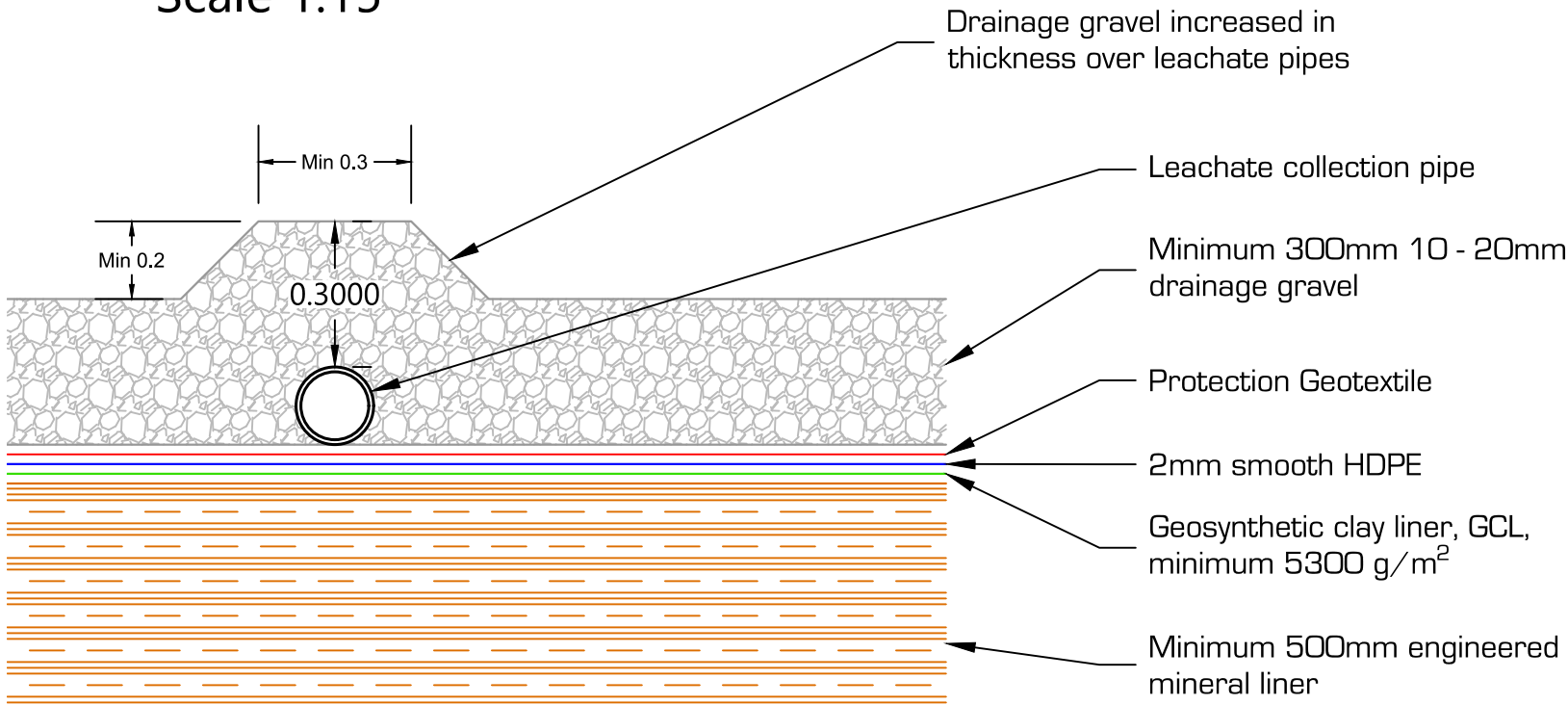
Detail C : Recess cast into concrete slab to accept concrete rings Scale 1:5



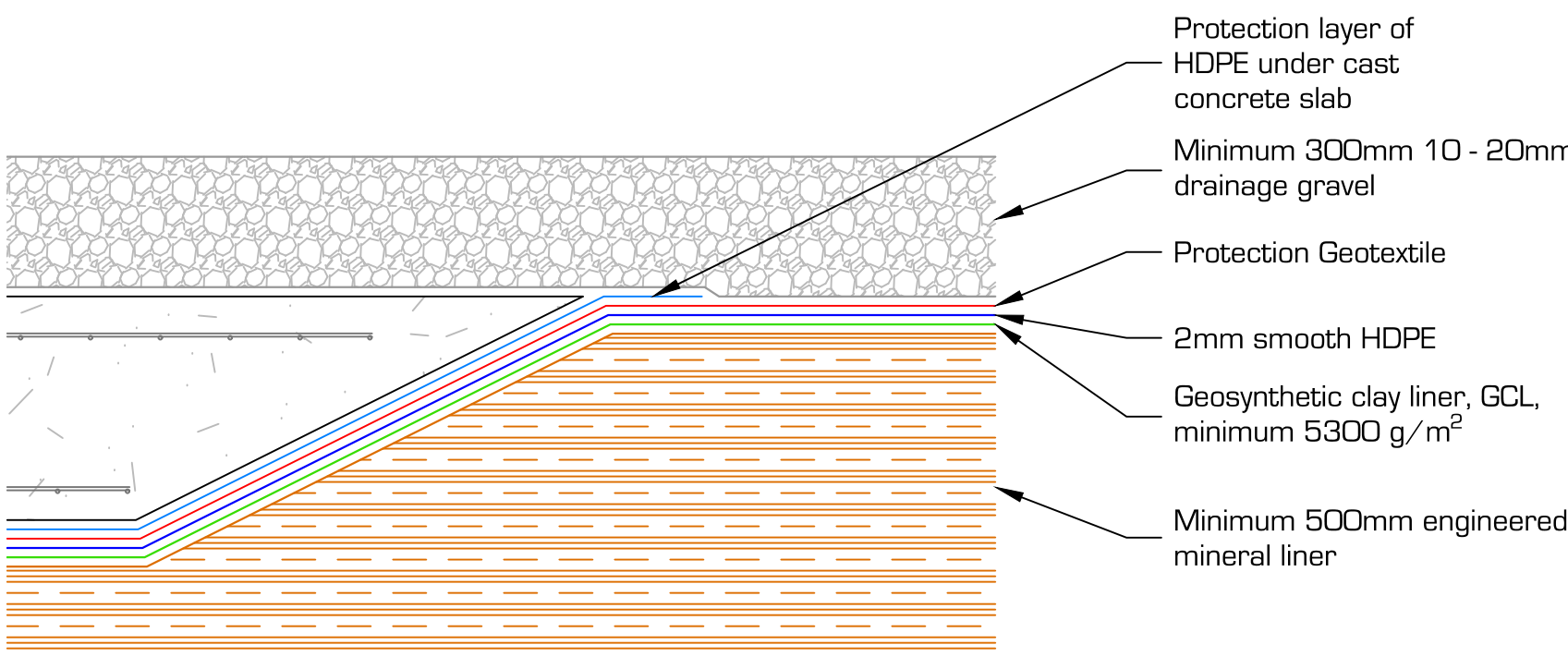
Detail G : Plan of recess cast into base slab: Scale 1:25



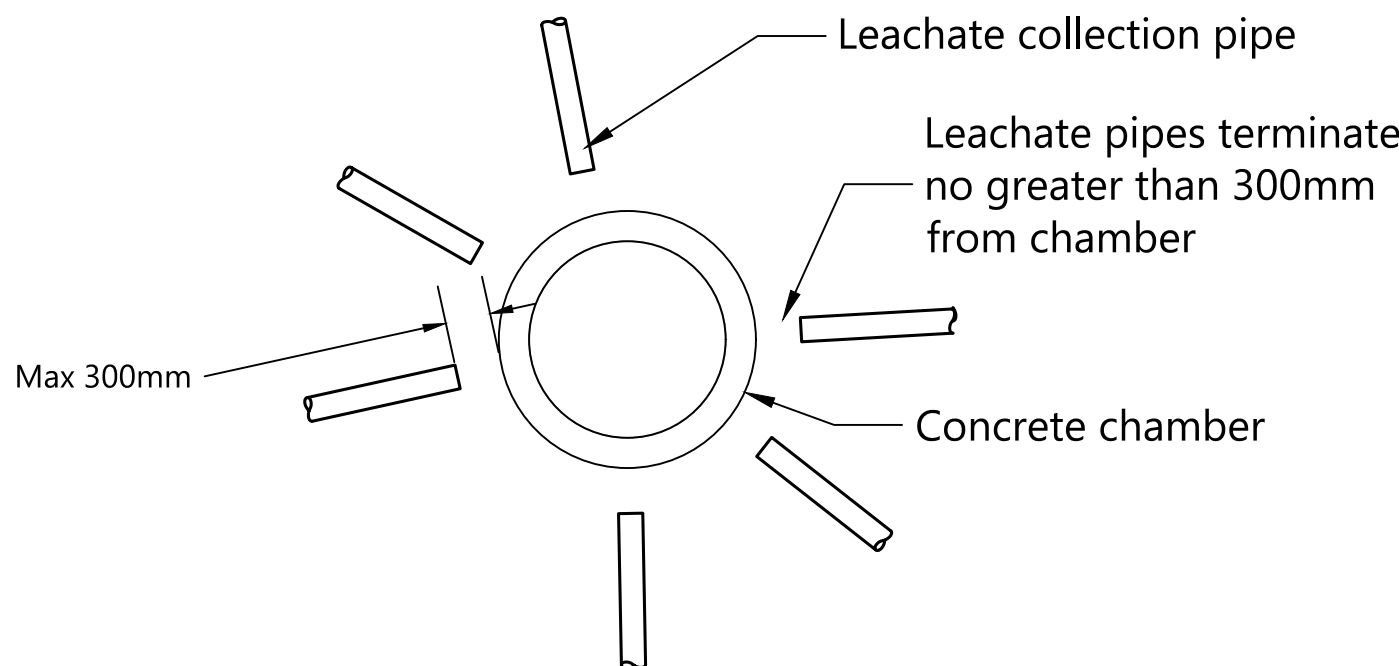
Detail D : Leachate drainage layer detail over leachate pipes: Scale 1:15



Detail E : Geosynthetic details under concrete slab: Scale 1:15



Detail F : Leachate pipe arrangement around collection chamber: Scale 1:50



This design is subject to final approval.

Drawings should be read in conjunction with the conceptual design statement report which presents full and detailed specifications.

**WASTESERV**  
CREATING RESOURCES FROM WASTE

PROJECT TITLE

Construction of a Steep Wall  
Non-Hazardous Waste Cell

PROJECT NUMBER

30499

CLIENT

Wasteserv Malta Ltd.

LOCATION

Maghtab Environmental Complex

DRAWING TITLE

Leachate Collection & Monitoring  
Points, Construction Details 1

REVISIONS

0	17/08/2021	DB	First Issue
Rev	Date	Chkd	Description

DESIGNED	RWS	DRAWN	RWS
SCALES @ A1	As Shown	DATE	17/08/2021

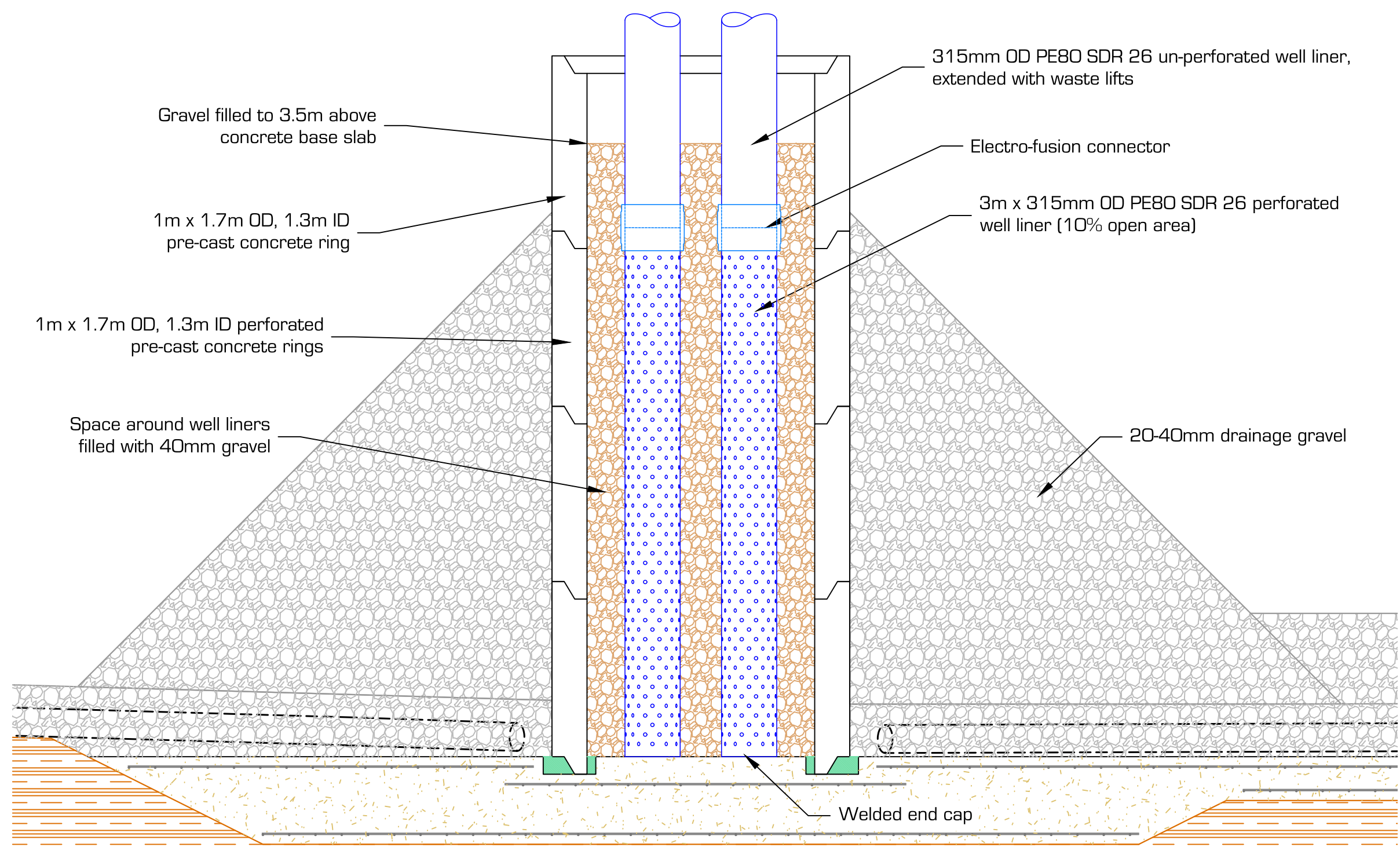
**CQA**  
CQA INTERNATIONAL LTD

DRAWING NUMBER  
30499/WSM/SW/30

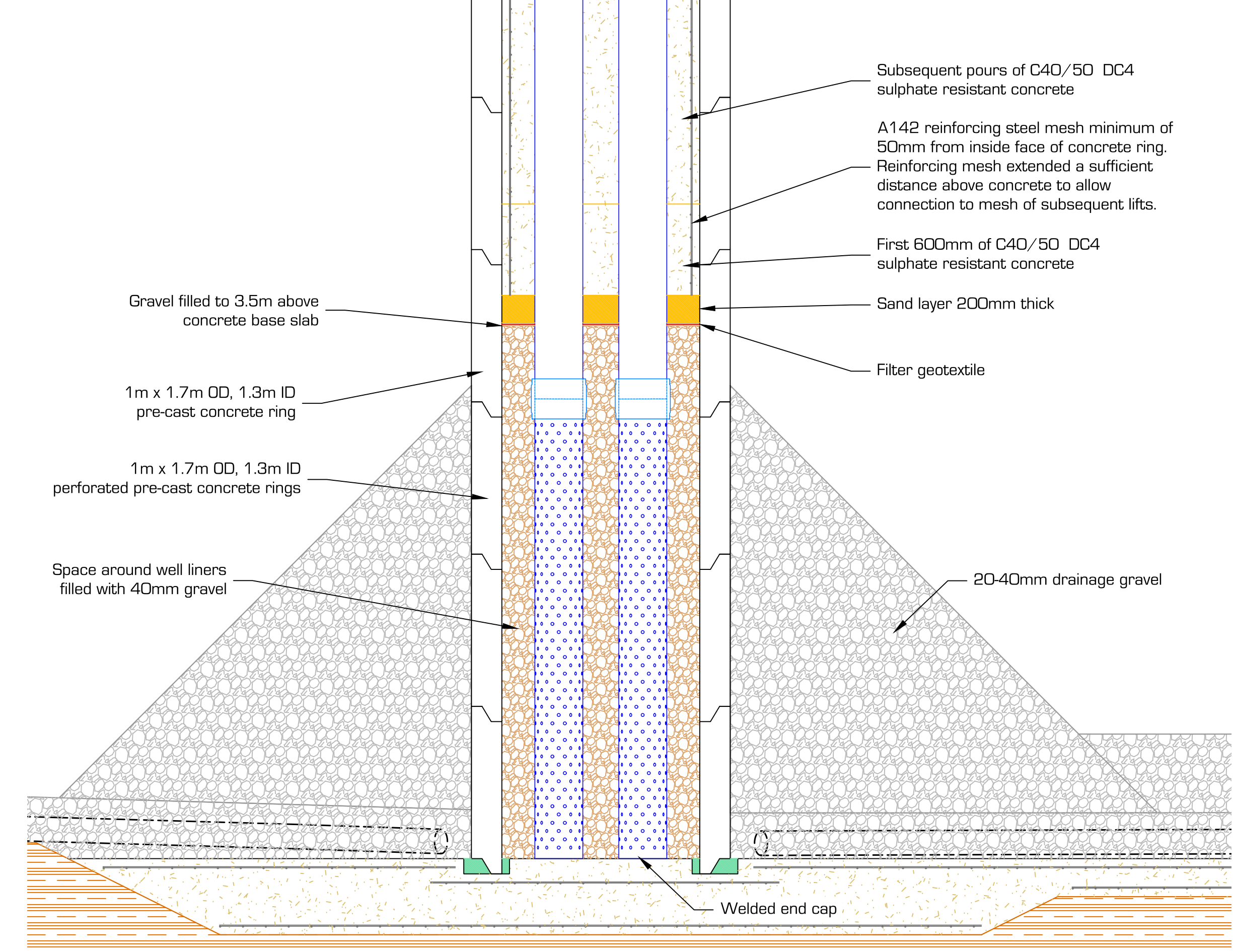
REV  
00



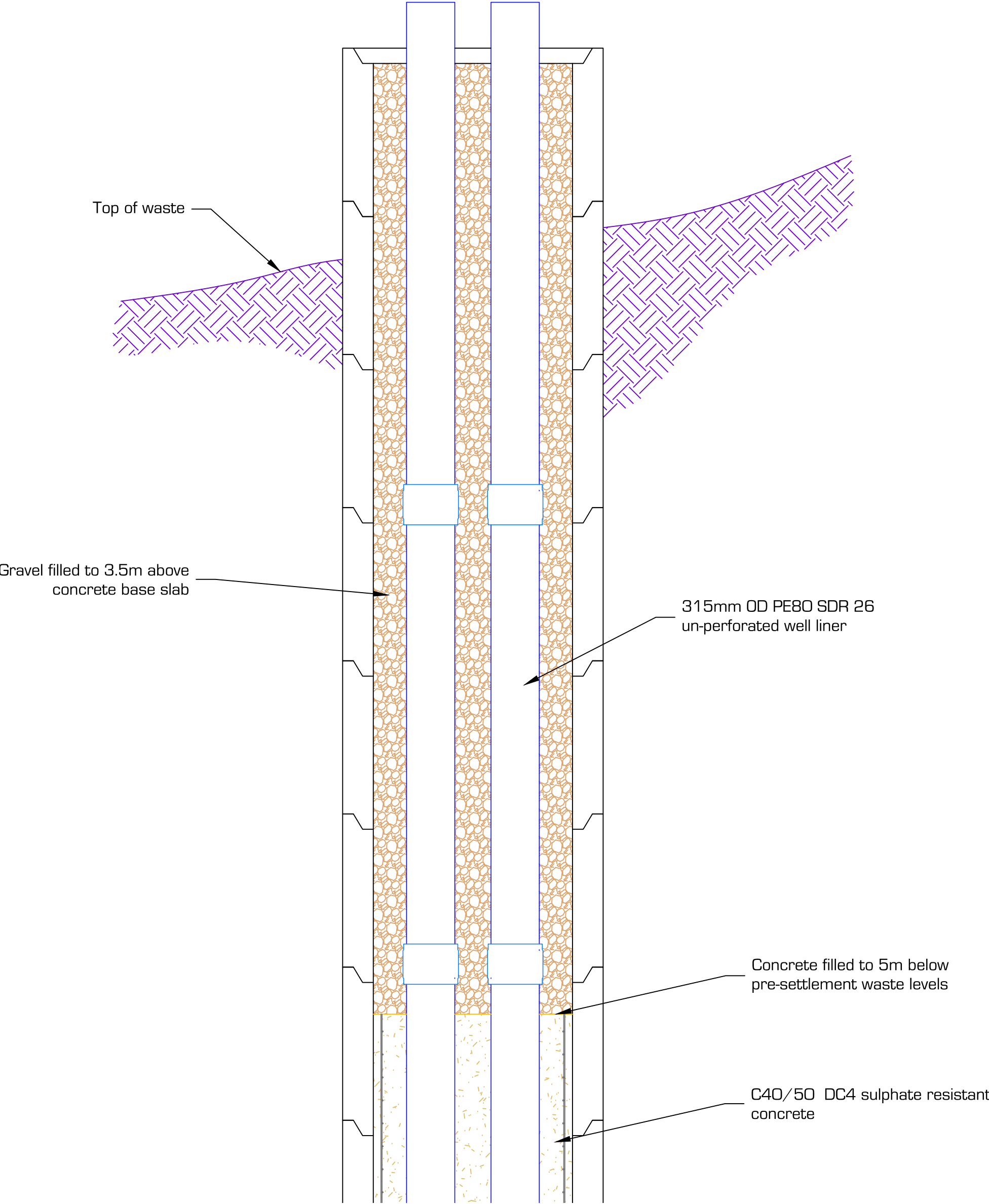
Typical section through leachate collection & monitoring points showing gravel fill & well liner detail for first lift: Scale 1:25



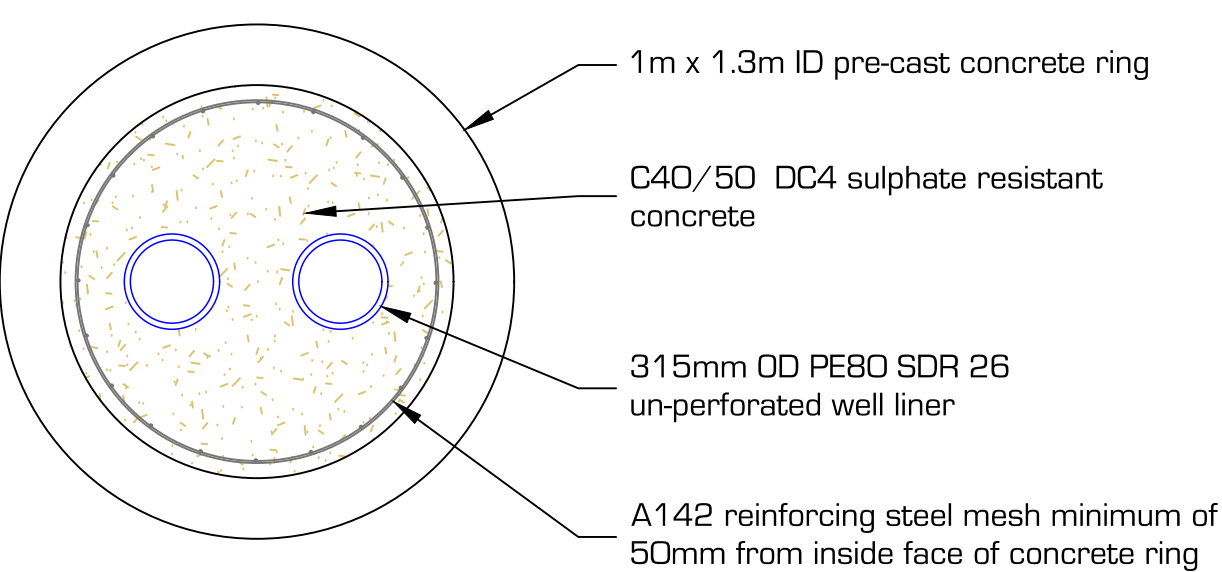
Typical section through leachate collection & monitoring points showing gravel fill, well liner & concrete bulk fill detail: Scale 1:25



Typical upper section of leachate collection & monitoring shafts showing concrete bulk fill and gravel fill detail: Scale 1:25



Plan view of leachate collection & monitoring points concrete bulk fill detail: Scale 1:25



This design is subject to final approval.

Drawings should be read in conjunction with the conceptual design statement report which presents full and detailed specifications.



PROJECT TITLE  
Construction of a Steep Wall  
Non-Hazardous Waste Cell

PROJECT NUMBER  
30499

CLIENT  
Wasteserv Malta Ltd.

LOCATION  
Maghtab Environmental Complex

DRAWING TITLE  
Leachate Collection & Monitoring  
Points, Construction Details 2

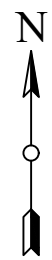
REVISIONS			
0	17/08/2021	DB	First Issue
Rev	Date	Chkd	Description

DESIGNED	RWS	DRAWN	RWS
SCALES @ A1	As Shown	DATE	17/08/2021



DRAWING NUMBER 30499/WSM/SW/31	REV 00
-----------------------------------	-----------





NOTES

This design is subject to final approval.

Drawings should be read in conjunction with the conceptual design statement report which presents full and detailed specifications.

The waste surface includes the 300mm regulation soil layer

The access roads shown are 4m wide



PROJECT TITLE

Construction of a Steep Wall  
Non-Hazardous Waste Cell

PROJECT NUMBER

30499

CLIENT

Wasteserv Malta Ltd.

LOCATION

Maghtab Environmental Complex

DRAWING TITLE

Waste Surface Pre - Settlement Plan

REVISIONS

0	26/08/2021	DB	First Issue
Rev	Date	Chkd	Description

DESIGNED	RWS	DRAWN	RWS
SCALES @ A1	1:500	DATE	26/08/2021



DRAWING NUMBER  
30499/WSM/SW/32

REV  
00



NOTES

This design is subject to final approval.

Drawings should be read in conjunction with the conceptual design statement report which presents full and detailed specifications.

The access roads shown are 4m wide



PROJECT TITLE

Construction of a Steep Wall  
Non-Hazardous Waste Cell

PROJECT NUMBER

30499

CLIENT

Wasteserv Malta Ltd.

LOCATION

Maghtab Environmental Complex

DRAWING TITLE

Landfill Post - Settlement Restoration  
Surface Plan

REVISIONS			
0	26/08/2021	DB	First Issue
Rev	Date	Chkd	Description

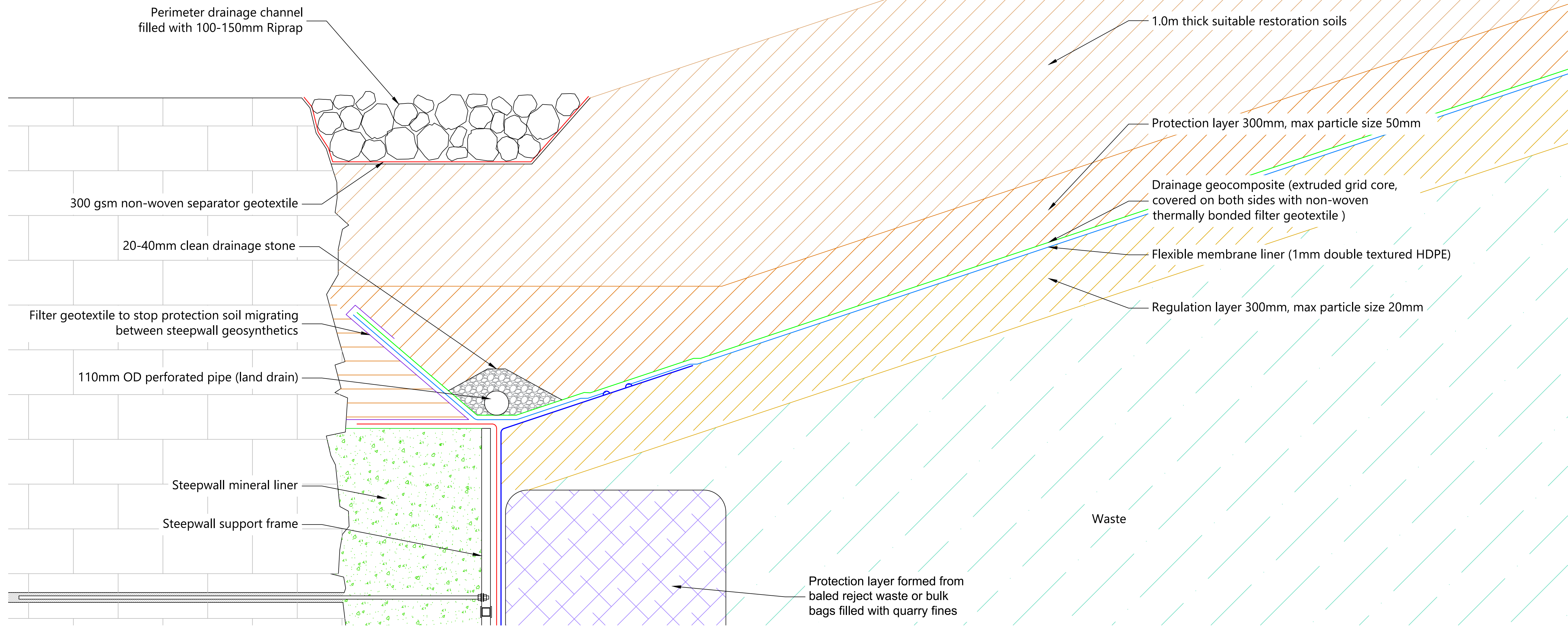
DESIGNED	RWS	DRAWN	RWS
SCALES @ A1	1:500	DATE	26/08/2021



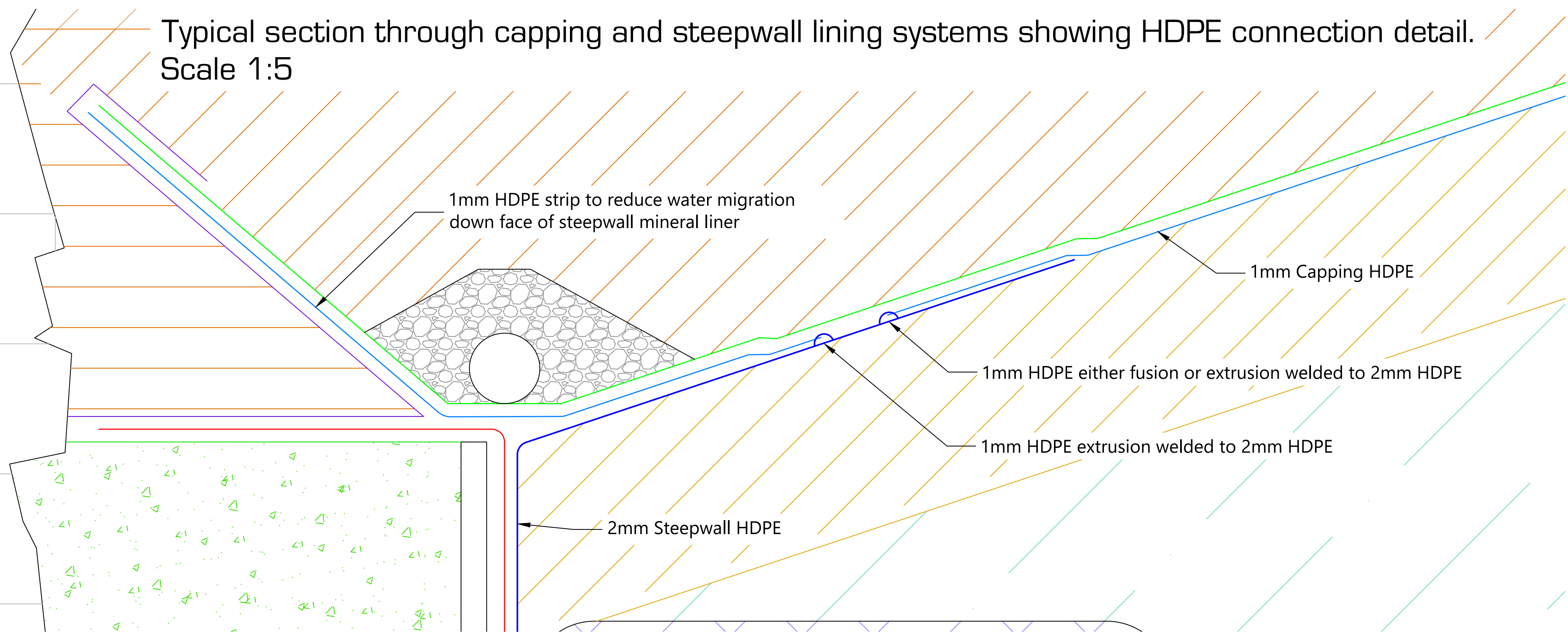
DRAWING NUMBER	REV
30499/WSM/SW/33	00



Typical section through capping and steepwall lining systems showing connection detail.  
Scale 1:10



Typical section through capping and steepwall lining systems showing HDPE connection detail.  
Scale 1:5



NOTES

This design is subject to final approval.

Drawings should be read in conjunction with the conceptual design statement report which presents full and detailed specifications.



PROJECT TITLE

Construction of a Steep Wall  
Non-Hazardous Waste Cell

PROJECT NUMBER

30499

CLIENT

Wasteserv Malta Ltd.

LOCATION

Maghtab Environmental Complex

DRAWING TITLE

Landfill Capping System Details

REVISIONS

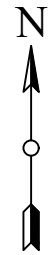
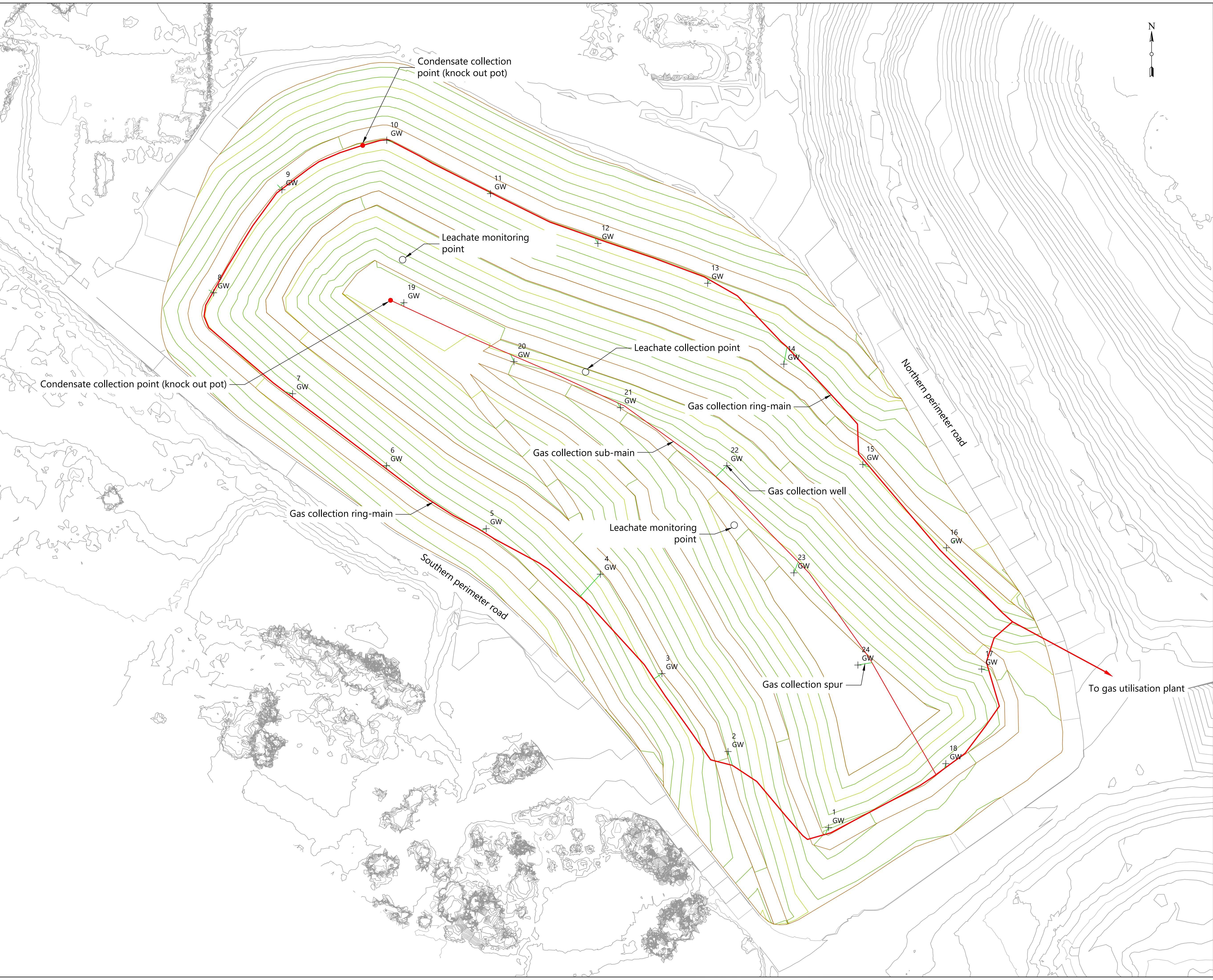
Rev	Date	Chkd	Description
0	17/08/2021	DB	First Issue

DESIGNED	RWS	DRAWN	RWS
SCALES @ A1	As Shown	DATE	17/08/2021



DRAWING NUMBER	REV
30499/WSM/SW/34	00





NOTES

This design is subject to final approval.

Drawings should be read in conjunction with the conceptual design statement report which presents full and detailed specifications.

Green contours show post-settlement restoration surface



PROJECT TITLE			
Construction of a Steep Wall Non-Hazardous Waste Cell			
PROJECT NUMBER			
30499			
CLIENT			
Wasteserv Malta Ltd.			
LOCATION			
Maghtab Environmental Complex			
DRAWING TITLE			
Landfill Gas Collection System Plan			
REVISIONS			
0	27/08/2021	DB	First issue
Rev	Date	Chkd	Description
DESIGNED		DRAWN	
RWS		RWS	
SCALES @ A1		DATE	
1:500		27/08/2021	
<div>CQA</div> <div>CQA INTERNATIONAL LTD</div>			
DRAWING NUMBER			REV
30499/WSM/SW/35			00



Temporary top cap (prior to permanent head works installation)

160mm - 225mm OD Plain Pipe. PE80 SDR11 HDPE, manufactured to DIN 8074 and DIN 8075 specifications

Existing ground surface

Restoration soil

Protection soil above cap

Capping geosynthetics

Regulation soil below cap

Fully hydrated bentonite slurry

Waste

Dry bentonite powder or bentonite pellets

Well annulus backfilled with 20mm to 40mm clean gravel

160mm - 225mm OD perforated pipe forming the response zone. Perforations to be a minimum of 8% of the surface area. PE80 SDR11 HDPE, manufactured to DIN 8074 and DIN 8075 specifications

Min 1.00m

Min 1.00m

Min 0.30m

Min 0.30m

Min 0.25m

Min 0.50m

Varies with well depth

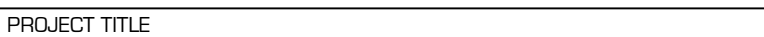
Welded end cap

3m offset from top of basal liner system

Diagram illustrating the components of a gas well system:

- Gas sampling valve
- Gas pressure monitoring valve
- Gas flow control valve
- Gas pressure monitoring valve
- Removable cap for dipping
- Stub flange
- E/F reducing 'Tee'
- Flex seal
- Flexible pipe connecting to gas collection pipework, with enough slack to accommodate waste settlement
- 160mm - 225mm gas well
- Existing ground surface
- Restoration soil

This design is subject to final approval.



30499

CLIENT

Wasteserv Malta Ltd.

LOCATION  
Maghtab Environmental Complex

DRAWING TITLE

Landfill Gas Well Construction Detail

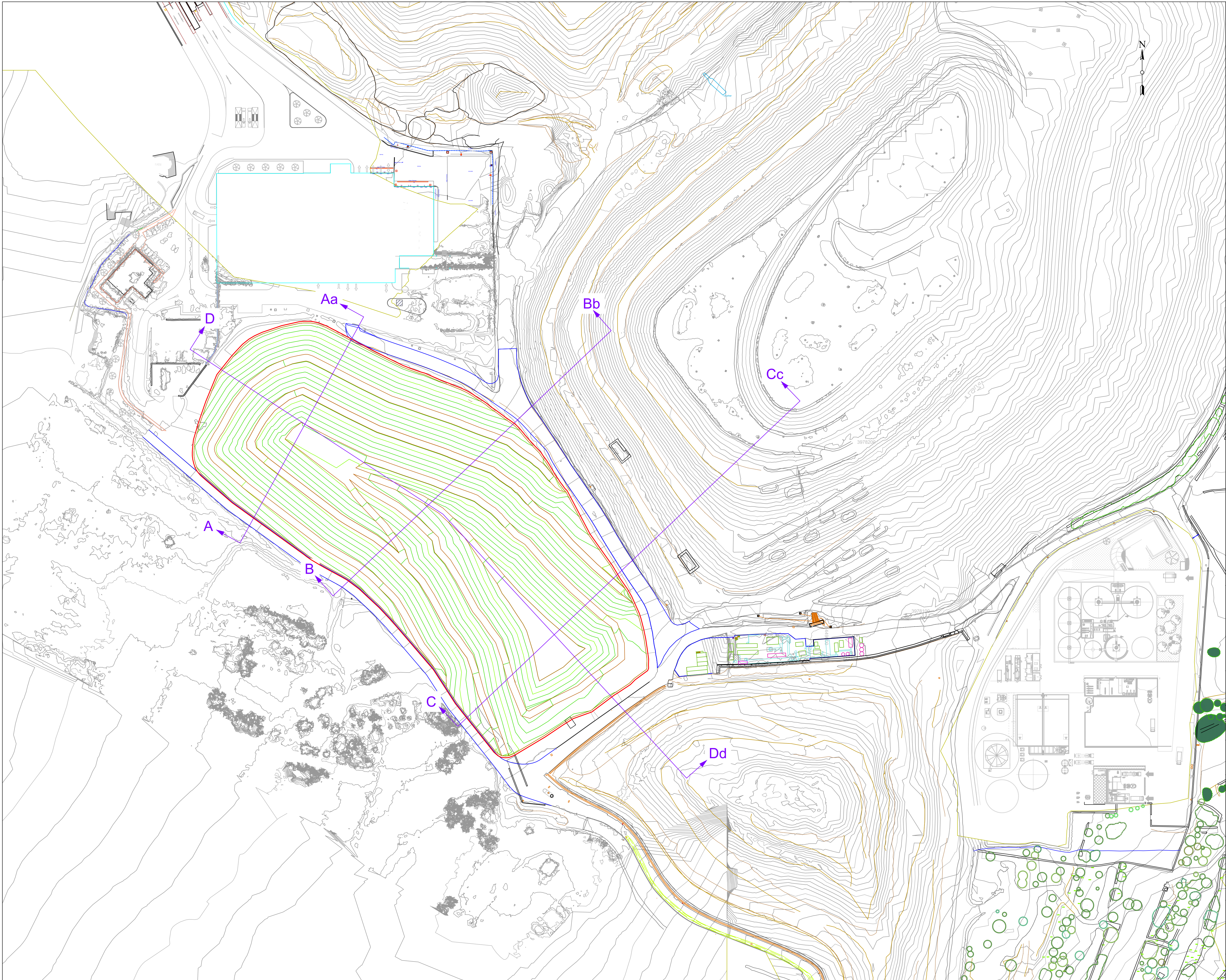
Rev	Date	Chkd	Description
0	27/08/2021	00	First issue

DESIGNED	RWS	DRAWN	RWS
SCALES @ A1	1:500	DATE	27/08/2021

**CQA**  
CQA International limited

DRAWING NUMBER	REV
30499/WSM/SW/36	00





**NOTES**

This design is subject to final approval.

Topographic survey data  
November 2018 to 2021

**LEGEND**

- New landfill boundary
- New landfill perimeter roads
- Location for section, see drawing 30499/WSM/SW/38



**PROJECT TITLE**  
Construction of a Steep Wall Non-Hazardous Waste Landfill

**PROJECT NUMBER**  
30499

**CLIENT**  
Wasteserv Malta Ltd.

**LOCATION**  
Magtab Environmental Complex

**DRAWING TITLE**  
Post - Restoration Surface Section Location Plan

**REVISIONS**

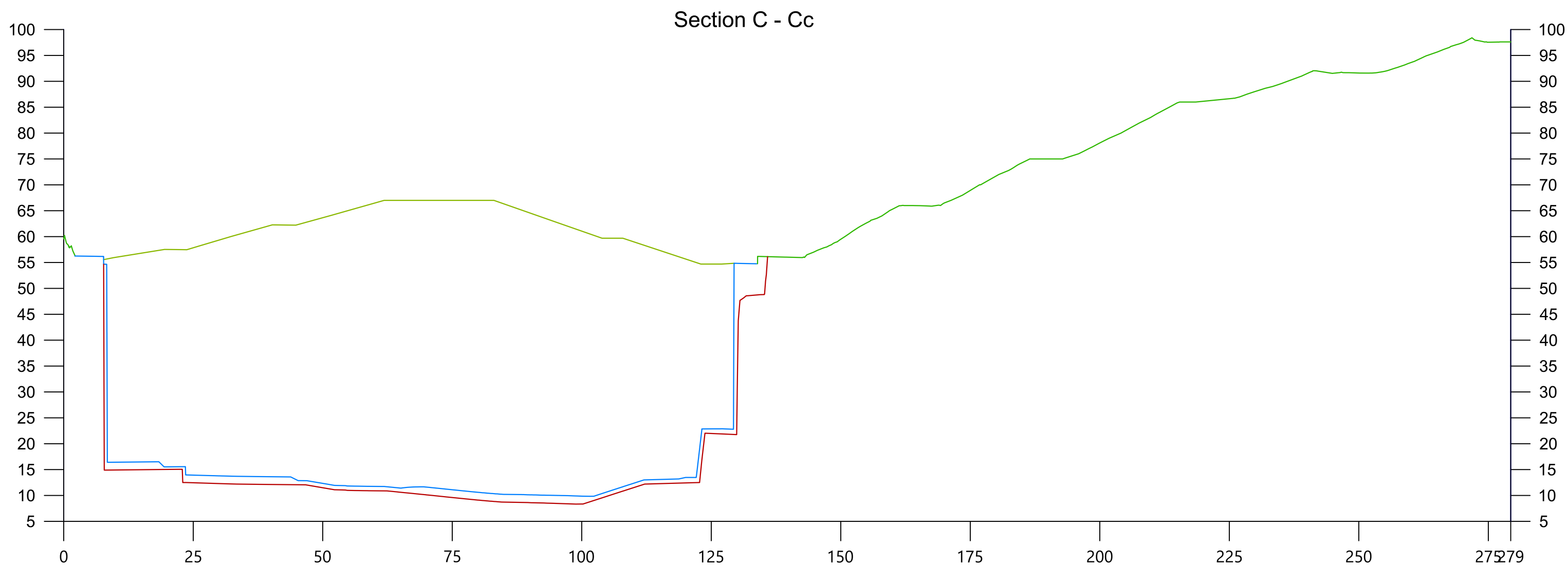
Rev	Date	Chkd	Description
0	31/08/2021	DB	First issue

DESIGNED	RWS	DRAWN	RWS
SCALES @ A1	1:1000	DATE	31/08/2021

**CQA**  
CQA International limited

DRAWING NUMBER	REV
30499/WSM/SW/37	0





This design is subject to final approval.

Topographic survey data  
November 2018 to 2021

### LEGEND

—— Landfill formation surface

—— Landfill lining system

Post - settlement  
restoration surface

—— Surrounding ground



PROJECT TITLE

## Construction of a Steep Wall Non-Hazardous Waste Landfill

PROJECT NUMBER

30499

CLIENT

Wasteserv Malta Ltd.

LOCATION

## Maghtab Environmental Complex

DRAWING TITLE

# Restoration Surface & Existing Ground Sections

## REVISIONS

O	31/08/2021	D8	First issue
Rev	Date	Cikid	Description

DESIGNED

RWS

SCALES @ A1 1:

DATE 31/08/2021

CQA

CQA International limited

DRAWING NUMBER  
30499/WSM/SW/38

RE

0