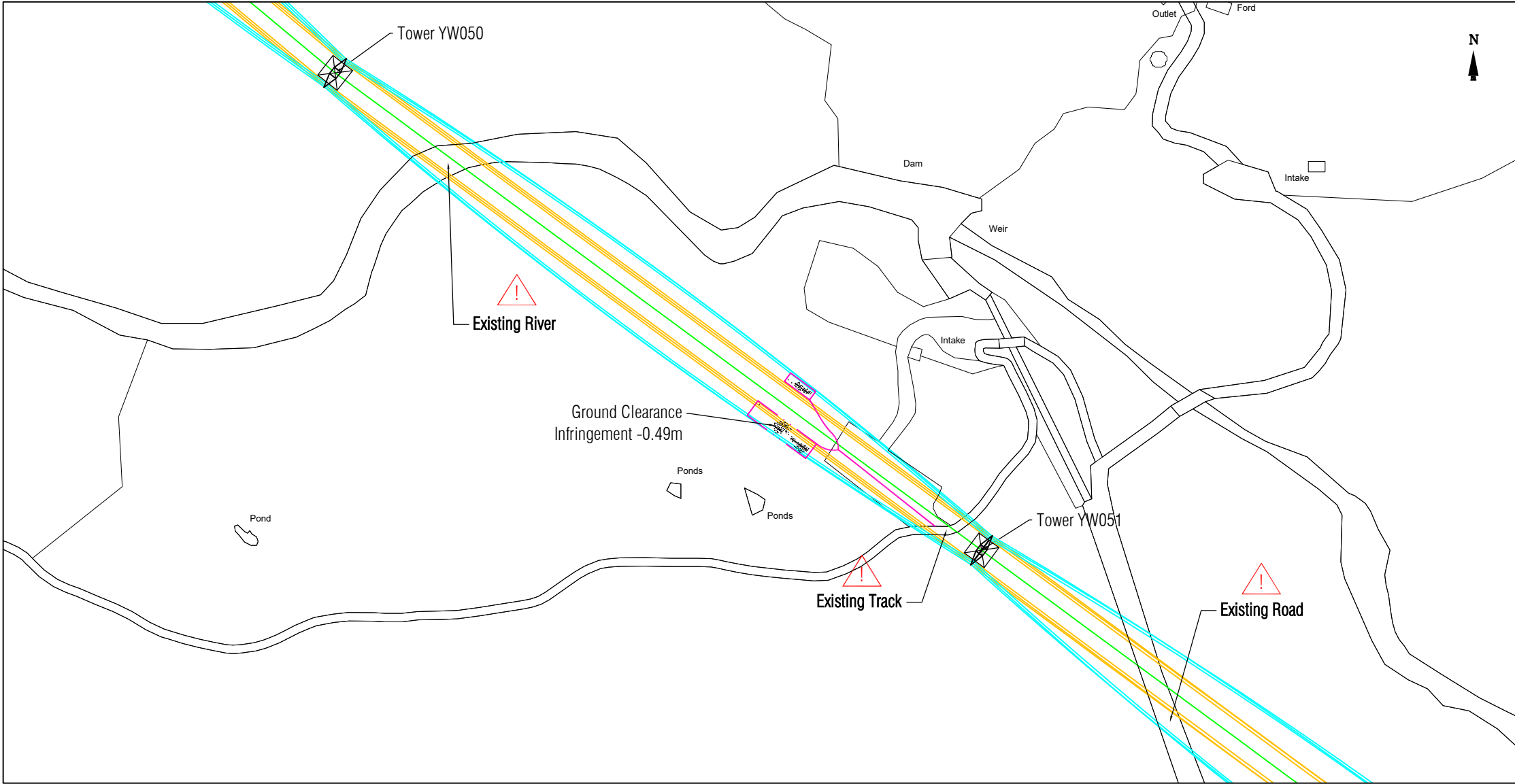
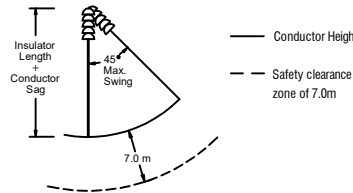




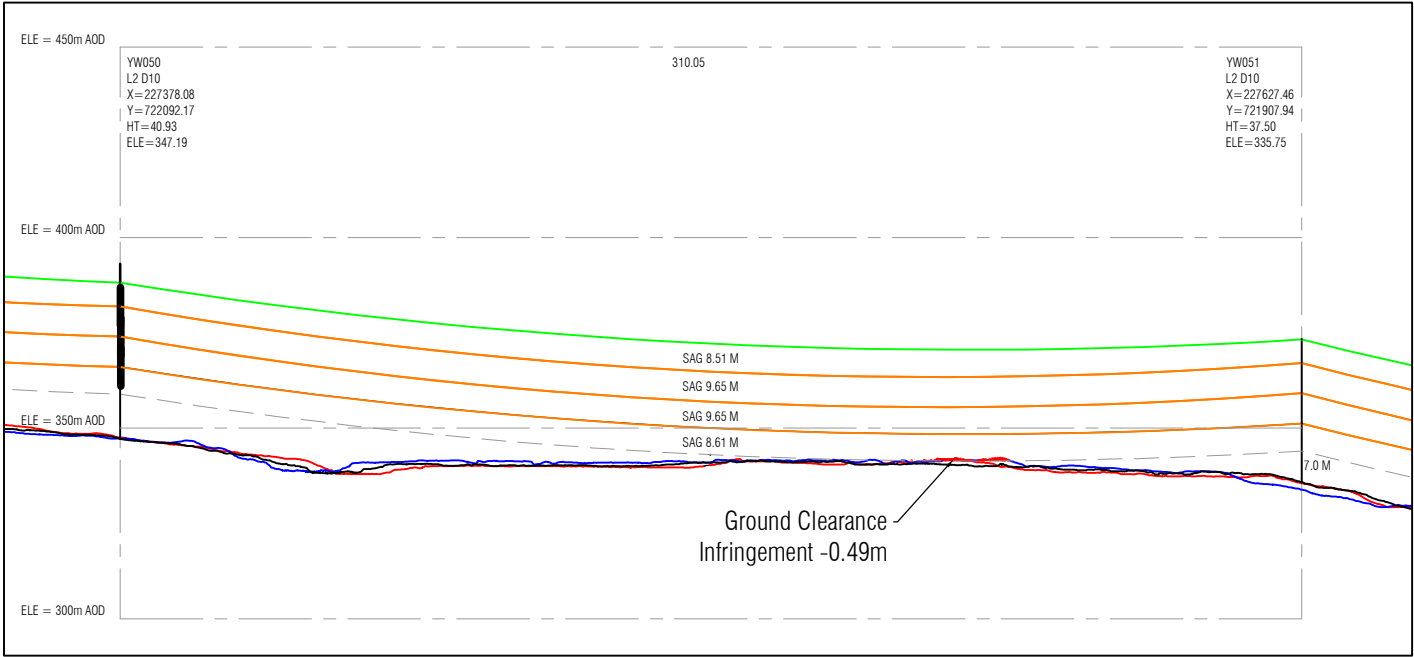
PLAN ON SPAN YW050 to YW051
(Scale 1:1000)

NOTES:

1. DO NOT SCALE DRAWINGS.
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3. ALL INFORMATION GENERATED FROM BBUS PLS-CAD MODEL DATED 14/08/2018 USING PLS-CADD SOFTWARE.
4. OVERHEAD LINE LIDAR SURVEY DATA PROVIDED BY FUGRO DATED 16th OF DECEMBER 2013.
5. CLEARANCE IS BASED UPON CONDUCTOR IN STILL AIR AT A TEMPERATURE OF 90°C AND AT A SWING OF 45°.
6. THIS DRAWING HAS BEEN PRODUCED TO SHOW THE RELATIONSHIP BETWEEN THE "YW" OHL AND HILLSIDE BETWEEN SPANS YW050 AND YW051. IT SHOULD NOT BE USED FOR ANY OTHER PURPOSE.
7. PARTICULAR ATTENTION SHOULD BE TAKEN TO SECTION 6.1 TABLE 1 OF ENATS 43-8. THIS REFERS TO THE REQUIRED GROUND CLEARANCE FOR 275kV CONDUCTORS. ATTENTION SHOULD ALSO BE TAKEN TO SECTION 11 OF ENATS 43-8 WHICH REFERS TO H.S.E GUIDANCE (GS6)
8. PARTICULAR ATTENTION SHOULD BE TAKEN TO BBUS PROFILE DRAWING A0/PTD/6527/075 & CLEARANCE REPORT BK-PTD-6527-3048 FOR CLEARANCE INFRINGEMENT LOCATIONS
9. SWING CLEARANCES:
THE CONDUCTORS MAY SWING (BLOW-OUT) TO A MAXIMUM OF 45 deg C DURING VERY STRONG WINDS, CLEARANCES NEED TO BE MAINTAINED FOR THIS SITUATION.



Back Structure No.	Ahead Structure No.	Weather Case	Controlling Feature code	Clearance Margin (m)	Proposed Solutions
YW050	YW051	90°C Blowout	Ground	-0.49	Remove infringement as part planning permission for EP2 (approx. 244m² - ground re-profiling volume is approx.120m³.)



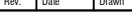
PROFILE SPAN YW050 to YW051
(Scale 1:1000)

DRAWING PRODUCED FOR
DISCUSSION PURPOSES

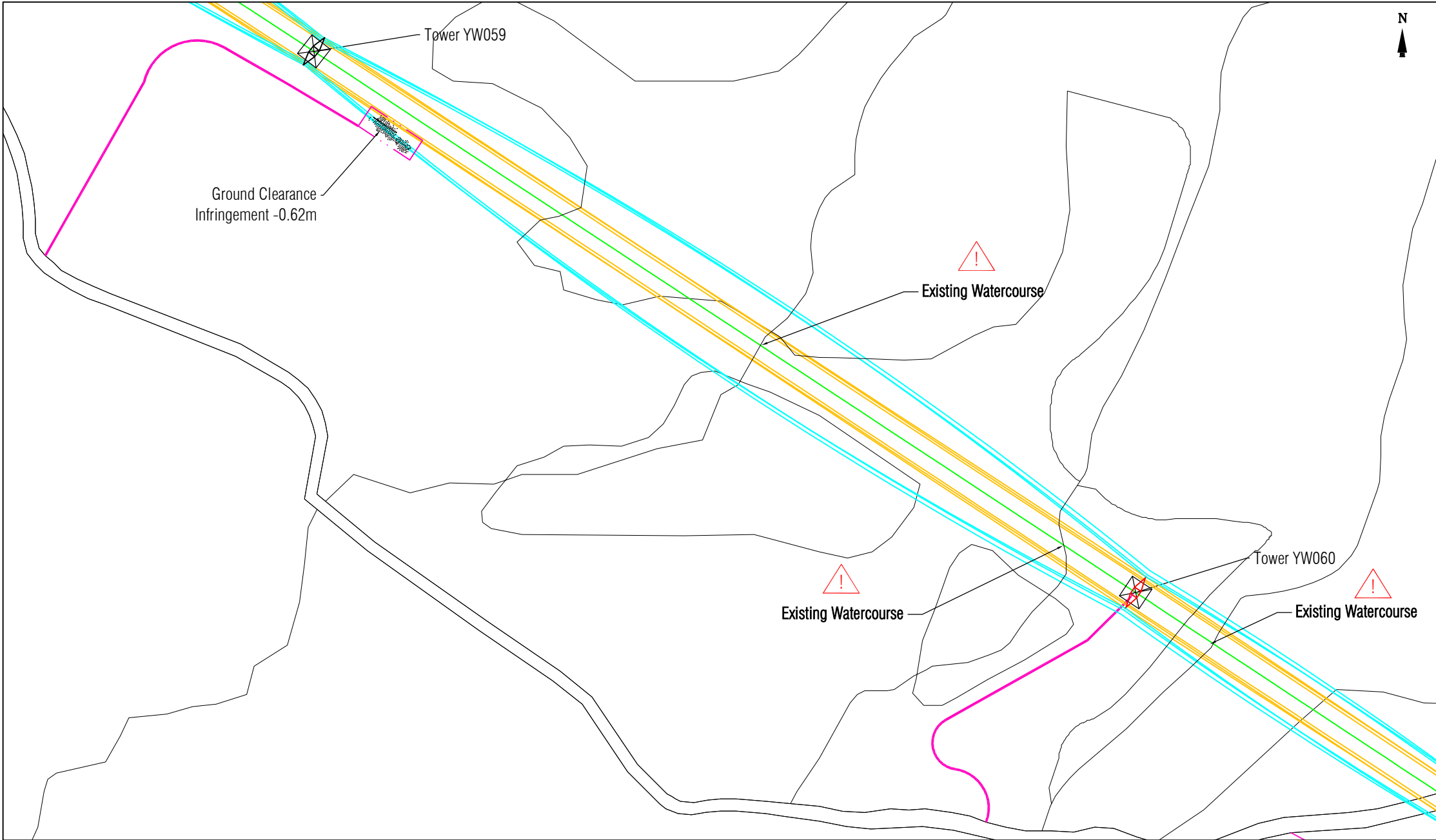
KEY:

- PHASEWIRE STILL AIR @ 90°
- PHASEWIRE - 45° BLOWOUT @ 90°
- EARTHWIRE
- 7M CLEARANCE LINE
- CLEARANCE INFRINGEMENT
- LEFT PROFILE = 7.5M
- RIGHT PROFILE = 7.5M
- PROPOSED ACCESS ROUTE
- PROPOSED WORKING AREA

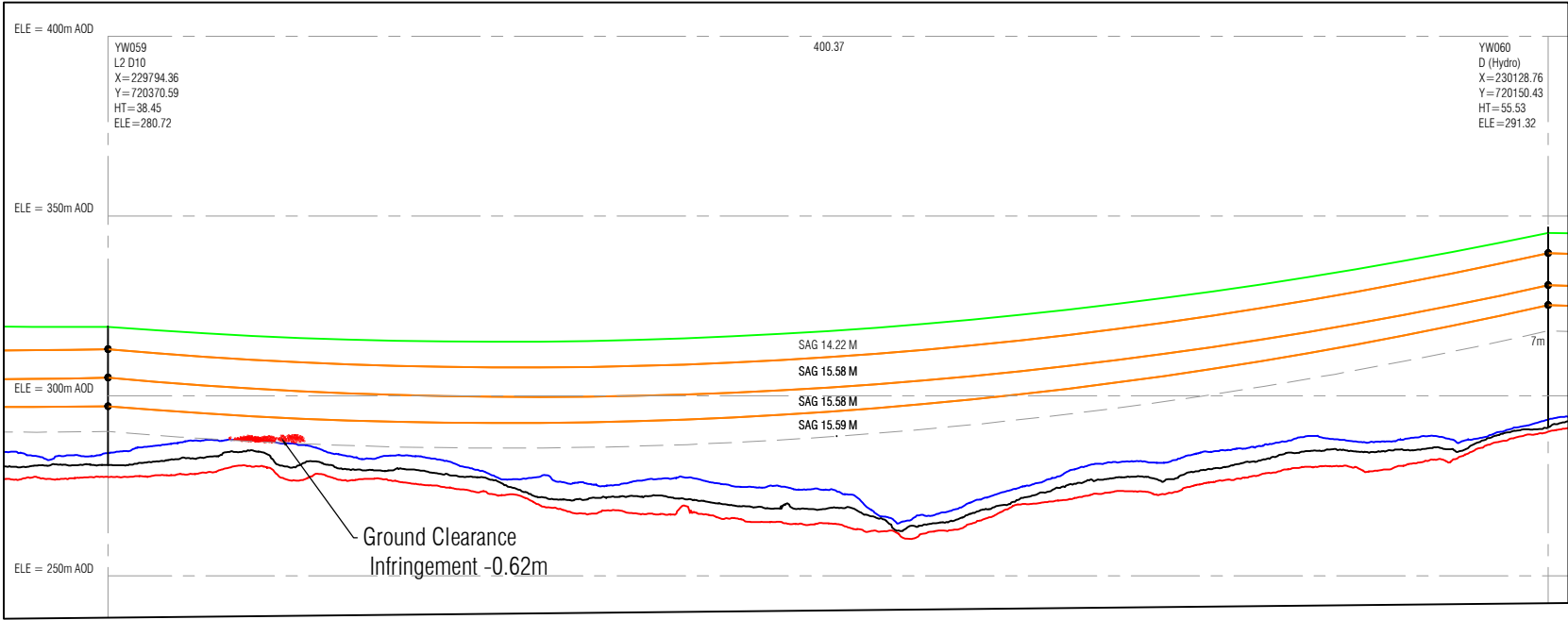
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0.C	09/09/2024	CW				Solution update to align with final SCA / Estimated soil volume added
0.B	06/09/2023	CW				Estimated Area for proposed reprofiling Added
0.A	25/05/2023	JV				FOR COMMENT AND REVIEW
00	09/05/2023	JN	CW	SB		First Issue
Rev.	Date	Drawn	Reviewed	Approved	Reason / Description of changes.	
			Station Stamp:		Project:	
					YW/ YX Route Thermal Upgrading	
			Station Stamp:		Location:	
					Dalmally / Inveraman / Windyhill	
					Drg. Title:	
					Clearance Drawing Between Tower YW050 to YW051	
			Drawn	Rev'd	App'd	Drg. No.:
						T4155-1-8700-DO-SPENEL-0310
						SPEN Ref. No. #####
						Sheet: 1
						Next: 2
						Rev: 0.C
						Scale: AS SHOWN
						Size: A

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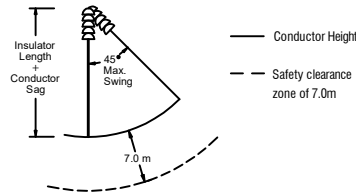
PLAN ON SPAN YW059 to YW060
(Scale 1:1000)



PROFILE SPAN YW059 to YW060
(Scale 1:1000)

NOTES:

1. DO NOT SCALE DRAWINGS.
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3. ALL INFORMATION GENERATED FROM BBUS PLS-CAD MODEL DATED 14/08/2018 USING PLS-CADD SOFTWARE.
4. OVERHEAD LINE LIDAR SURVEY DATA PROVIDED BY FUGRO DATED 16th OF DECEMBER 2013.
5. CLEARANCE IS BASED UPON CONDUCTOR IN STILL AIR AT A TEMPERATURE OF 90°C AND AT A SWING OF 45°.
6. THIS DRAWING HAS BEEN PRODUCED TO SHOW THE RELATIONSHIP BETWEEN THE "YW" OHL AND HILLSIDE BETWEEN SPANS YW059 AND YW060. IT SHOULD NOT BE USED FOR ANY OTHER PURPOSE.
7. PARTICULAR ATTENTION SHOULD BE TAKEN TO SECTION 6.1 TABLE 1 OF ENATS 43-8. THIS REFERS TO THE REQUIRED GROUND CLEARANCE FOR 275kV CONDUCTORS. ATTENTION SHOULD ALSO BE TAKEN TO SECTION 11 OF ENATS 43-8 WHICH REFERS TO H.S.E GUIDANCE (GS6)
8. PARTICULAR ATTENTION SHOULD BE TAKEN TO BBUS PROFILE DRAWING A0/PTD/6527/077 & CLEARANCE REPORT BK-PTD-6527-3048 FOR CLEARANCE INFRINGEMENT LOCATIONS
9. SWING CLEARANCES:
THE CONDUCTORS MAY SWING (BLOW-OUT) TO A MAXIMUM OF 45 deg C DURING VERY STRONG WINDS, CLEARANCES NEED TO BE MAINTAINED FOR THIS SITUATION.



Back Structure No.	Ahead Structure No.	Weather Case	Controlling Feature code	Clearance Margin (m)	Proposed Solutions
YW059	YW060	90°C Blowout	Ground	-0.82	Remove infringement as part planning permission for EP2 (approx. 238m² - ground re-profiling volume is approx.148m³.)

DRAWING PRODUCED FOR
DISCUSSION PURPOSES

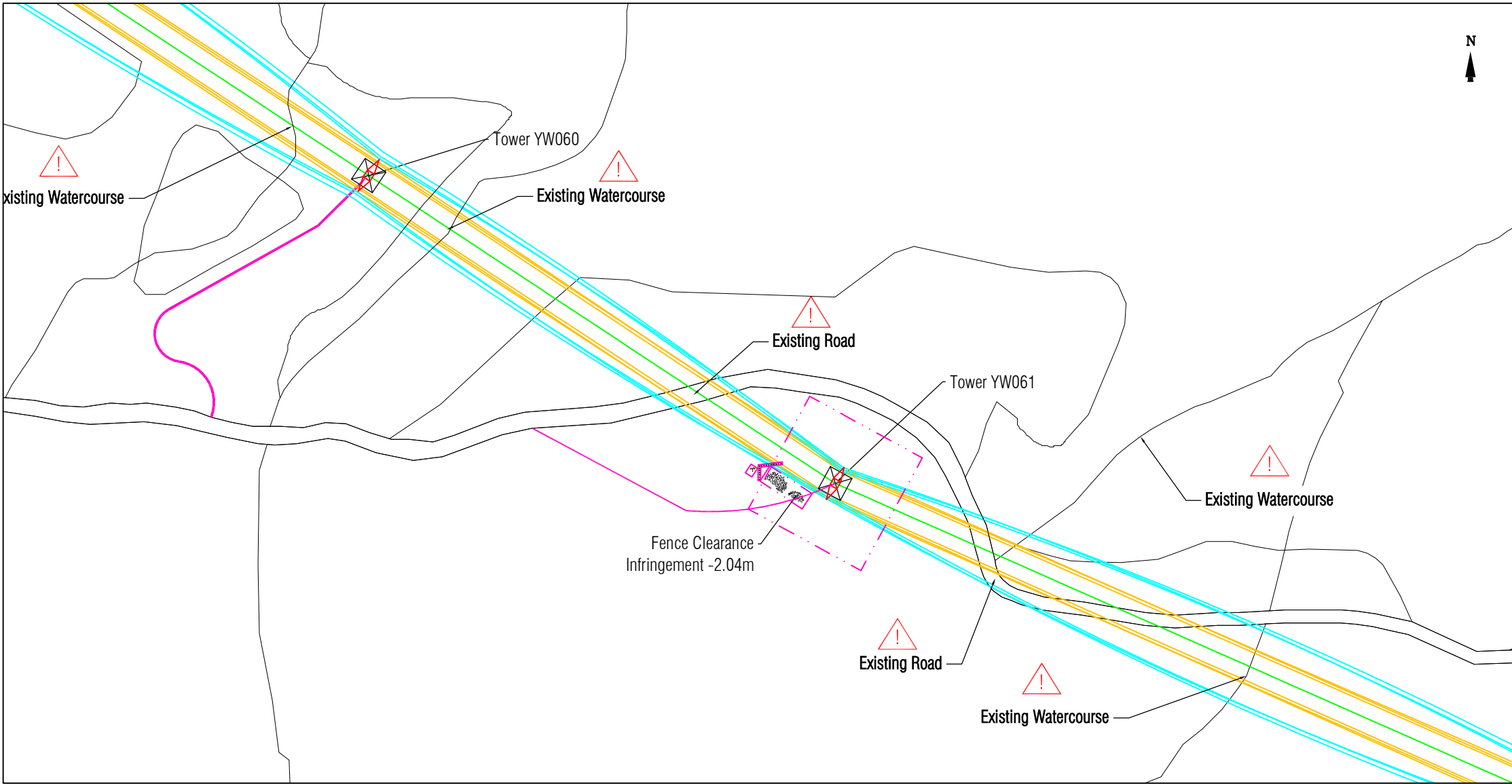
KEY:

- PHASEWIRE STILL AIR @ 90°
- PHASEWIRE - 45° BLOWOUT @ 90°
- EARTHWIRE
- 7M CLEARANCE LINE
- CLEARANCE INFRINGEMENT
- LEFT PROFILE = 7.5M
- RIGHT PROFILE = 7.5M
- PROPOSED ACCESS ROUTE
- PROPOSED WORKING AREA

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0.C	09/09/2024	CW				Solution update to align with final SCA / Estimated soil volume added
0.B	06/09/2023	CW				Estimated Area for proposed reprofiling Added
0.A	25/05/2023	JV				FOR COMMENT AND REVIEW
00	09/05/2023	JN	CW	SB		First Issue
Rev.	Date	Drawn	Reviewed	Approved	Reason / Description of changes.	
Station Name:			Project:			YW/ YX Route Thermal Upgrading
Station Name:			Location:			Dalmally / Inveraman / Windyhill
Station Name:			Drg. Title:			Clearance Drawing Between Tower YW059 to YW060
Drawn			Rev'd	App'd	Drg. No.:	Sheet: 2
					T4155-1-8700-DO-SPENEL-0311	Rev: 3
SPEN Ref. No.:			Scale:			Size: A1
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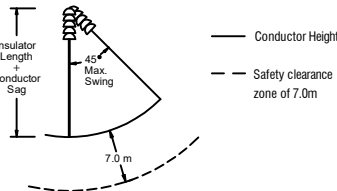
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PLAN ON SPAN YW060 to YW061
(Scale 1:1000)

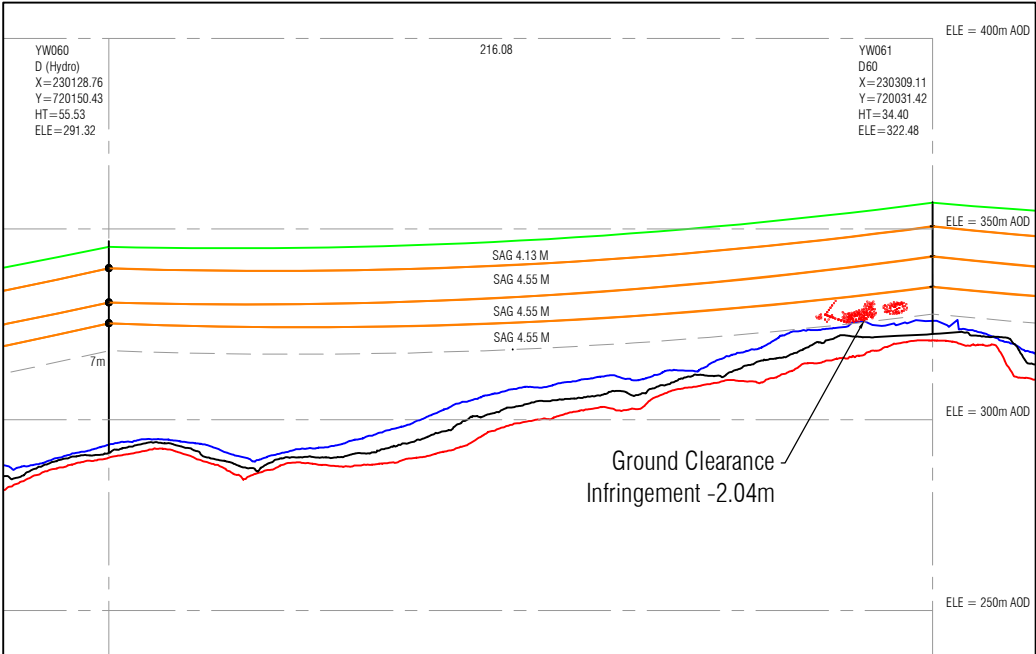
NOTES:

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- ALL INFORMATION GENERATED FROM BBUS PLS-CAD MODEL DATED 14/08/2018 USING PLS-CADD SOFTWARE.
- OVERHEAD LINE LIDAR SURVEY DATA PROVIDED BY FUGRO DATED 16th OF DECEMBER 2013.
- CLEARANCE IS BASED UPON CONDUCTOR IN STILL AIR AT A TEMPERATURE OF 90°C AND AT A SWING OF 45°.
- THIS DRAWING HAS BEEN PRODUCED TO SHOW THE RELATIONSHIP BETWEEN THE "YW" OHL AND HILLSIDE BETWEEN SPANS YW060 AND YW061. IT SHOULD NOT BE USED FOR ANY OTHER PURPOSE.
- PARTICULAR ATTENTION SHOULD BE TAKEN TO SECTION 6.1 TABLE 1 OF ENATS 43-8. THIS REFERS TO THE REQUIRED GROUND CLEARANCE FOR 275kV CONDUCTORS. ATTENTION SHOULD ALSO BE TAKEN TO SECTION 11 OF ENATS 43-8 WHICH REFERS TO H.S.E GUIDANCE (GS6)
- PARTICULAR ATTENTION SHOULD BE TAKEN TO BBUS PROFILE DRAWING A0/PTD/6527/077 & CLEARANCE REPORT BK-PTD-6527-3048 FOR CLEARANCE INFRINGEMENT LOCATIONS
- SWING CLEARANCES:
THE CONDUCTORS MAY SWING (BLOW-OUT) TO A MAXIMUM OF 45 deg C DURING VERY STRONG WINDS, CLEARANCES NEED TO BE MAINTAINED FOR THIS SITUATION.



Back Structure No.	Ahead Structure No.	Weather Case	Controlling Feature code	Clearance Margin (m)	Proposed Solutions
YW060	YW061	90°C Blowout	Ground	-2.04	Option 1 - Ampjack 3.2m Extension to tower YW061

Note: an option for ground reprofiling was considered but discounted due to the large volume of soil that would need to be removed. For span YW060 - YW061 the approx. ground re-profiling volume is 280m³.



PROFILE SPAN YW060 to YW061
(Scale 1:1000)

DRAWING PRODUCED FOR
DISCUSSION PURPOSES

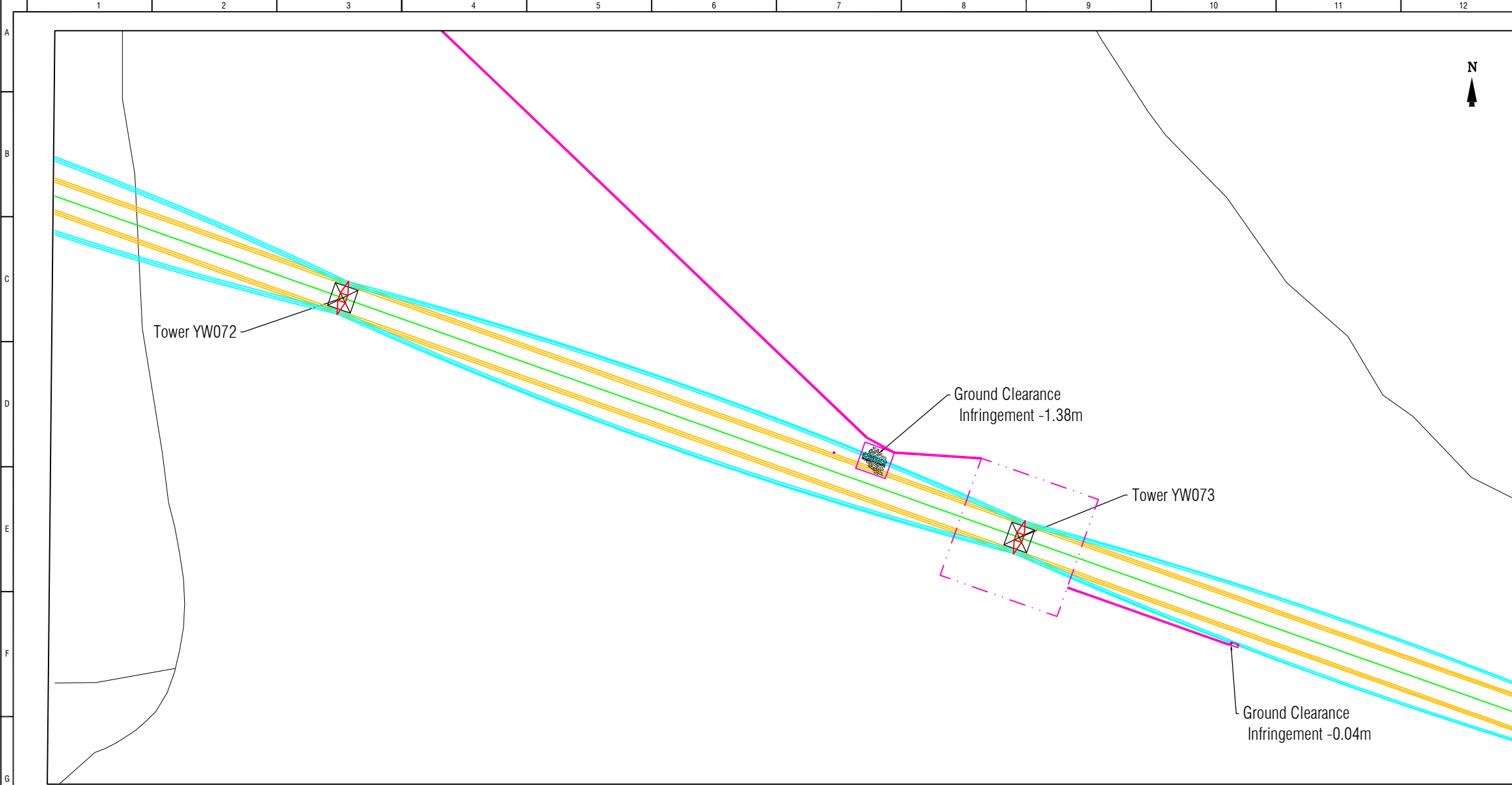
KEY:

- PHASEWIRE STILL AIR @ 90°
- PHASEWIRE - 45° BLOWOUT @ 90°
- EARTHWIRE
- 7M CLEARANCE LINE
- CLEARANCE INFRINGEMENT
- LEFT PROFILE = 7.5M
- RIGHT PROFILE = 7.5M
- PROPOSED ACCESS ROUTE
- PROPOSED WORKING AREA

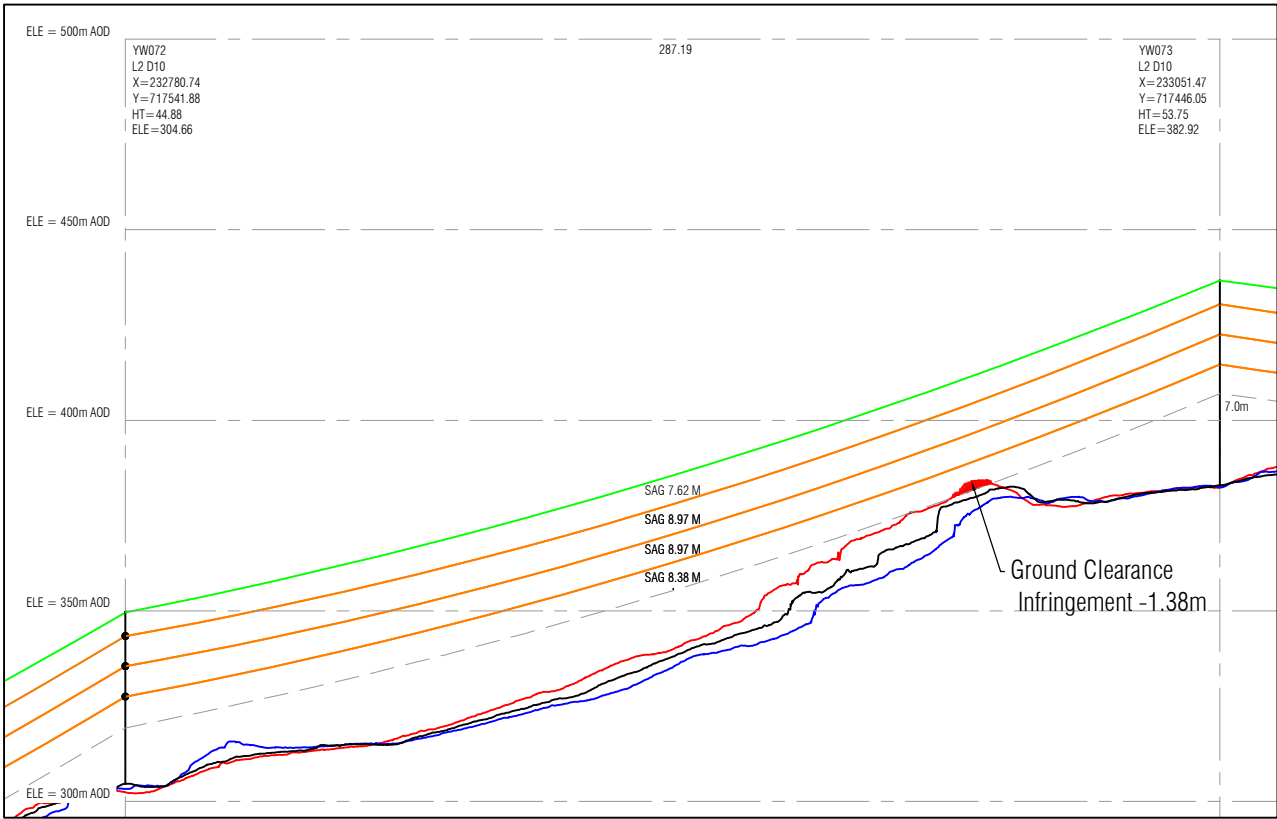
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0.C	09/09/2024	CW				Solution update to align with final SCA / Estimated soil volume added
0.B	06/09/2023	CW				Estimated Area for proposed reprofiling Added
0.A	25/05/2023	JV				FOR COMMENT AND REVIEW
00	09/05/2023	JN	CW	SB		First Issue
Rev.	Date	Drawn	Reviewed	Approved	Reason / Description of changes.	
Station Stamp:			Project:		YW/ YX Route Thermal Upgrading	
Station Stamp:			Location:		Dalmally / Inveraman / Windyhill	
Station Stamp:			Drg. Title:		Clearance Drawing Between Tower YW060 to YW061	
Drawn			Rev'd	App'd	Drg. No.:	Sheet: 3
					T4155-1-8700-DO-SPENEL-0312	Rev: 4
					SPEN Ref. No.:	Scale: AS SHOWN
						Size: A1

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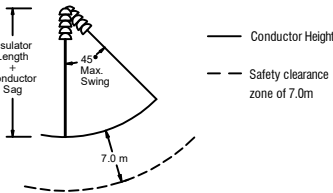
PLAN ON SPAN YW072 to YW073
(Scale 1:1000)



PROFILE SPAN YW072 to YW073
(Scale 1:1000)

NOTES:

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4. OVERHEAD LINE LIDAR SURVEY DATA PROVIDED BY FUGRO DATED 16th OF DECEMBER 2013.
5. CLEARANCE IS BASED UPON CONDUCTOR IN STILL AIR AT A TEMPERATURE OF 90°C AND AT A SWING OF 45°.
6. THIS DRAWING HAS BEEN PRODUCED TO SHOW THE RELATIONSHIP BETWEEN THE "YW" OHL AND HILLSIDE BETWEEN SPANS YW072 AND YW073. IT SHOULD NOT BE USED FOR ANY OTHER PURPOSE.
7. PARTICULAR ATTENTION SHOULD BE TAKEN TO SECTION 6.1 TABLE 1 OF ENATS 43-8. THIS REFERS TO THE REQUIRED GROUND CLEARANCE FOR 275kV CONDUCTORS. ATTENTION SHOULD ALSO BE TAKEN TO SECTION 11 OF ENATS 43-8 WHICH REFERS TO H.S.E GUIDANCE (GS6)
8. PARTICULAR ATTENTION SHOULD BE TAKEN TO BBUS PROFILE DRAWING A0/PTD/6527/080 & CLEARANCE REPORT BK-PTD-6527-3048 FOR CLEARANCE INFRINGEMENT LOCATIONS
9. SWING CLEARANCES:
THE CONDUCTORS MAY SWING (BLOW-OUT) TO A MAXIMUM OF 45 deg C DURING VERY STRONG WINDS. CLEARANCES NEED TO BE MAINTAINED FOR THIS SITUATION.



Back Structure No.	Ahead Structure No.	Weather Case	Controlling Feature code	Clearance Margin (m)	Proposed Solutions
YW072	YW073	90°C Blowout	Ground	-1.38	Option 1 - Ampjack 3.2m Extension to tower YW073

Note: an option for ground reprofiling was considered but discounted due to the large volume of soil that would need to be removed. For span YW072 - YW073 the approx. ground re-profiling volume is 190m³.

DRAWING PRODUCED FOR
DISCUSSION PURPOSES

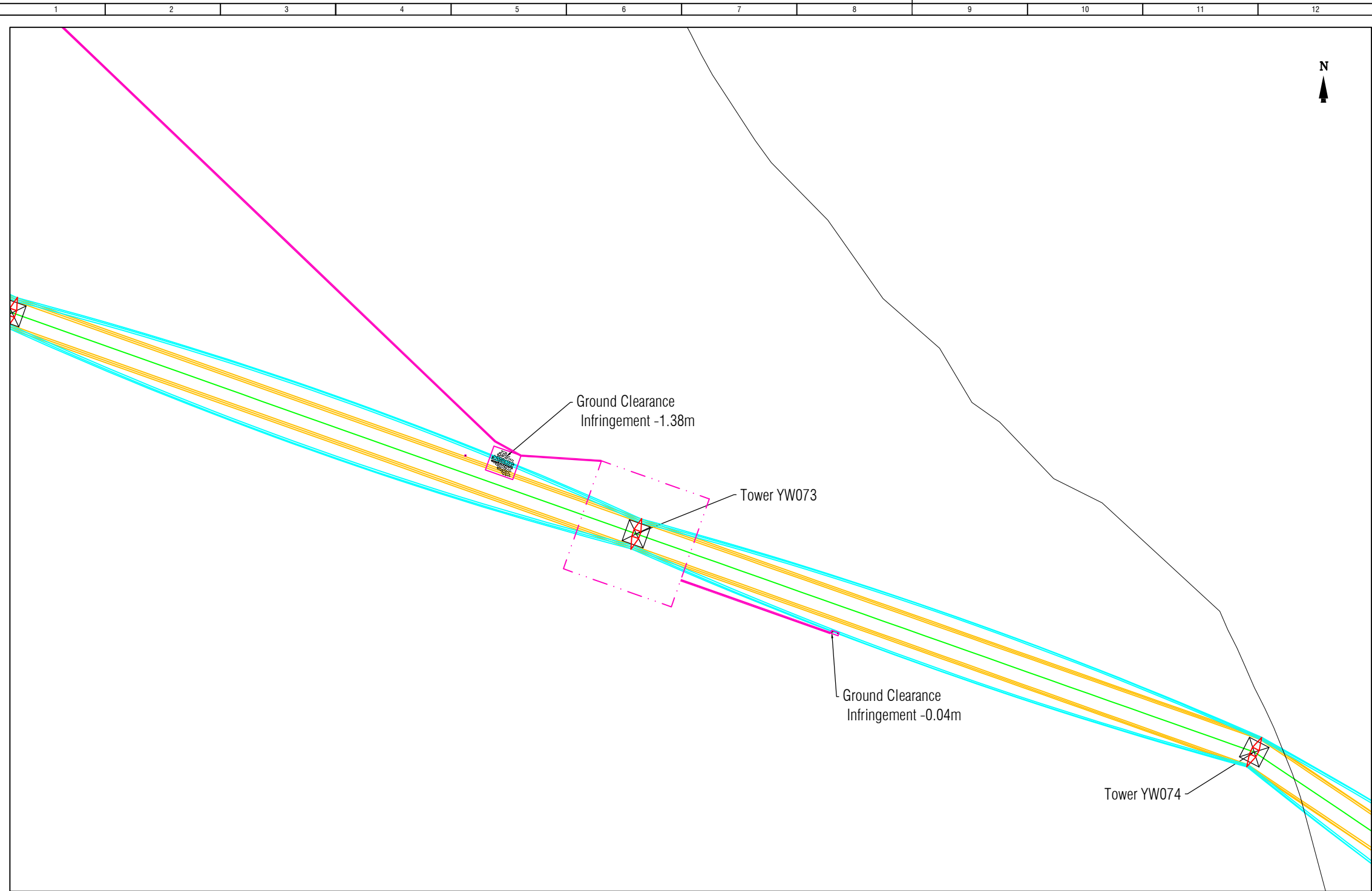
KEY:

- PHASEWIRE STILL AIR @ 90°
- PHASEWIRE - 45° BLOWOUT @ 90°
- EARTHWIRE
- 7M CLEARANCE LINE
- CLEARANCE INFRINGEMENT
- LEFT PROFILE = 7.5M
- RIGHT PROFILE = 7.5M
- PROPOSED ACCESS ROUTE
- PROPOSED WORKING AREA

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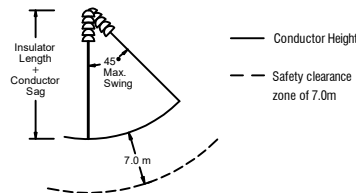
0.C	09/09/2024	CW				Solution update to align with final SCA / Estimated soil volume added
0.B	06/09/2023	CW				Estimated Area for proposed reprofiling Added
0.A	25/05/2023	JV				FOR COMMENT AND REVIEW
00	09/05/2023	JN	CW	SB		First Issue
Rev.	Date	Drawn	Reviewed	Approved	Reason / Description of changes.	
Station Stamp:			Project:		YW/ YX Route Thermal Upgrading	
Station Stamp:			Location:		Dalmally / Inveraman / Windyhill	
Station Stamp:			Drg. Title:		Clearance Drawing Between Tower YW072 to YW073	
Drawn			Rev'd	App'd	Drg. No.:	Sheet: 4
					T4155-1-8700-DO-SPENEL-0313	Rev: 5
SPEN Ref. No.:			Scale:		AS SHOWN	
			Size:		A1	

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3. ALL INFORMATION GENERATED FROM BBUS PLS-CAD MODEL DATED 14/08/2018 USING PLS-CADD SOFTWARE.
4. OVERHEAD LINE LIDAR SURVEY DATA PROVIDED BY FUGRO DATED 16th OF DECEMBER 2013.
5. CLEARANCE IS BASED UPON CONDUCTOR IN STILL AIR AT A TEMPERATURE OF 90°C AND AT A SWING OF 45°.
6. THIS DRAWING HAS BEEN PRODUCED TO SHOW THE RELATIONSHIP BETWEEN THE "YW" OHL AND HILLSIDE BETWEEN SPANS YW073 AND YW074. IT SHOULD NOT BE USED FOR ANY OTHER PURPOSE.
7. PARTICULAR ATTENTION SHOULD BE TAKEN TO SECTION 6.1 TABLE 1 OF ENATS 43-8. THIS REFERS TO THE REQUIRED GROUND CLEARANCE FOR 275kV CONDUCTORS. ATTENTION SHOULD ALSO BE TAKEN TO SECTION 11 OF ENATS 43-8 WHICH REFERS TO H.S.E GUIDANCE (G59)
8. PARTICULAR ATTENTION SHOULD BE TAKEN TO BBUS PROFILE DRAWING AD/PT/6527/081 & CLEARANCE REPORT BK-PT-6527-304B FOR CLEARANCE INFRINGEMENT LOCATIONS
9. SWING CLEARANCES:
THE CONDUCTORS MAY SWING (BLOW-OUT) TO A MAXIMUM OF 45 DEG C DURING VERY STRONG WINDS. CLEARANCES NEED TO BE MAINTAINED FOR THIS SITUATION.

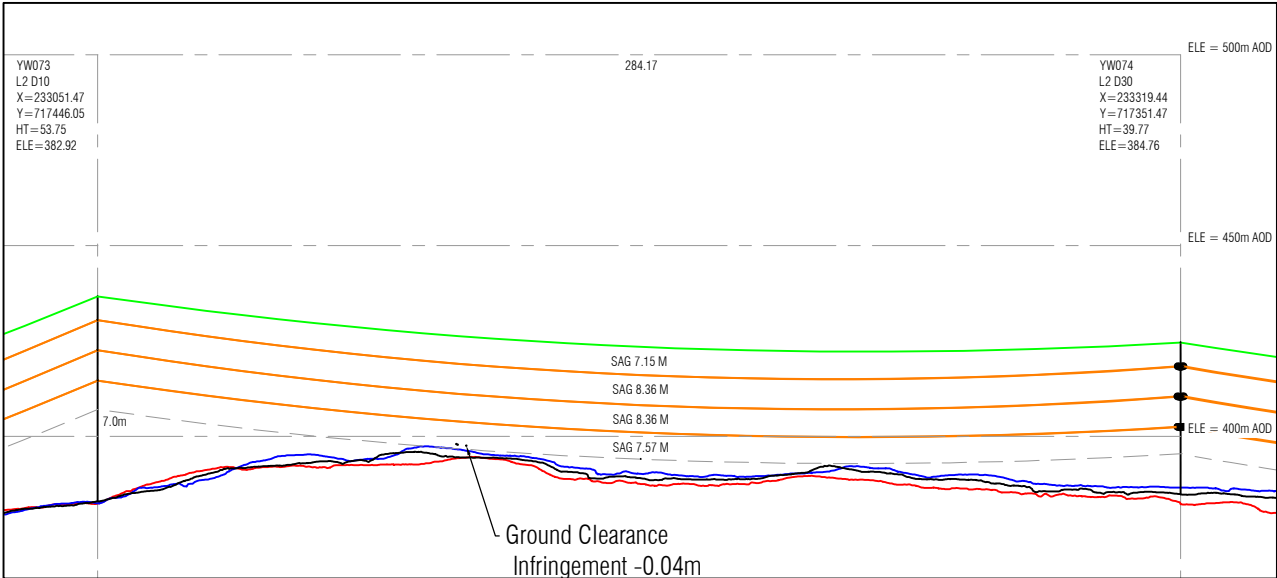


Back Structure No.	Ahead Structure No.	Weather Case	Controlling Feature code	Clearance Margin (m)	Proposed Solutions
YW073	YW074	90°C Blowout	Ground	-0.04	Option 1 - Ampjack 3.2m Extension to tower YW073

Note: an option for ground reprofiling was considered but discounted due to the large volume soil that would need to be removed in the back span YW072 – YW073. An ampjack extension at YW073 alleviated the clearance infringements in both spans YW072 – YW073 & YW073 – YW074. For span YW073 – YW074 the approx. ground re-profiling volume is 0.2m³.

Note: an option for ground reprofiling was considered but discounted due to the large volume soil that would need to be removed in the back span YW072 - YW073. An ampjack extension at YW073 alleviated the clearance infringements in both spans YW072 - YW073 & YW073 - YW074. For span YW073 - YW074 the approx. ground re-profiling volume is 0.2m³.

PLAN ON SPAN YW073 to YW074
(Scale 1:1000)



PROFILE SPAN YW073 to YW074
(Scale 1:1000)

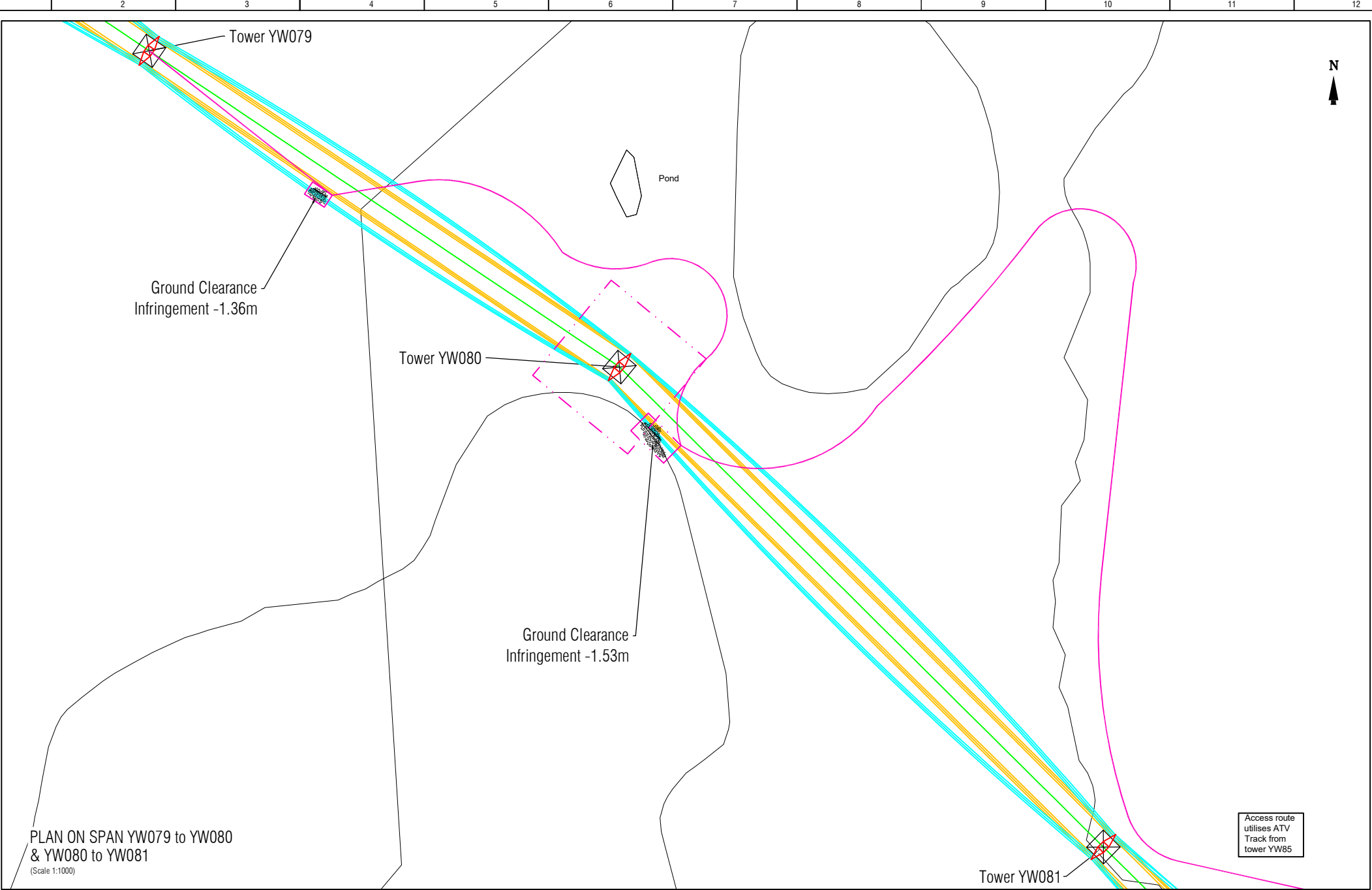
DRAWING PRODUCED FOR
DISCUSSION PURPOSES

KEY:

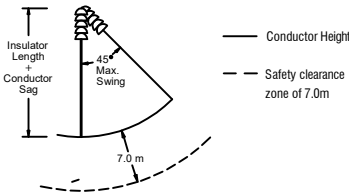
-  PHASEWIRE STILL AIR @ 90°
 PHASEWIRE - 45° BLOWOUT @ 90°
 EARTHWIRE
 7M CLEARANCE LINE
 CLEARANCE INFRINGEMENT
 LEFT PROFILE = 7.5M
 RIGHT PROFILE = 7.5M
 PROPOSED ACCESS ROUTE
 PROPOSED WORKING AREA

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C	09/09/2024	CW				Solution update to align with final SCA / Estimated soil volume added
B	06/09/2023	CW				Estimated Area for proposed reprofiling Added
A	25/05/2023	JV				FOR COMMENT AND REVIEW
00	09/05/2023	JN	CW		SB	First Issue
Rev.	Date	Drawn	Reviewed	Approved	Reason / Description of changes.	
					Project:	
					YW/ YX Route Thermal Uprating	
					Location:	
					Daimally / Inverarnan / Windyhill	
					Drg. Title:	
					Clearance Drawing Between Tower YW073 to YW074	
Drawn Rev'd Appt			Drg. No.: T4155-1-8700-DO-SPENEL-0314			Sheet: 5 Next: 6
			SPEN Ref. No.: ###			Scale: AS SHOWN Size:
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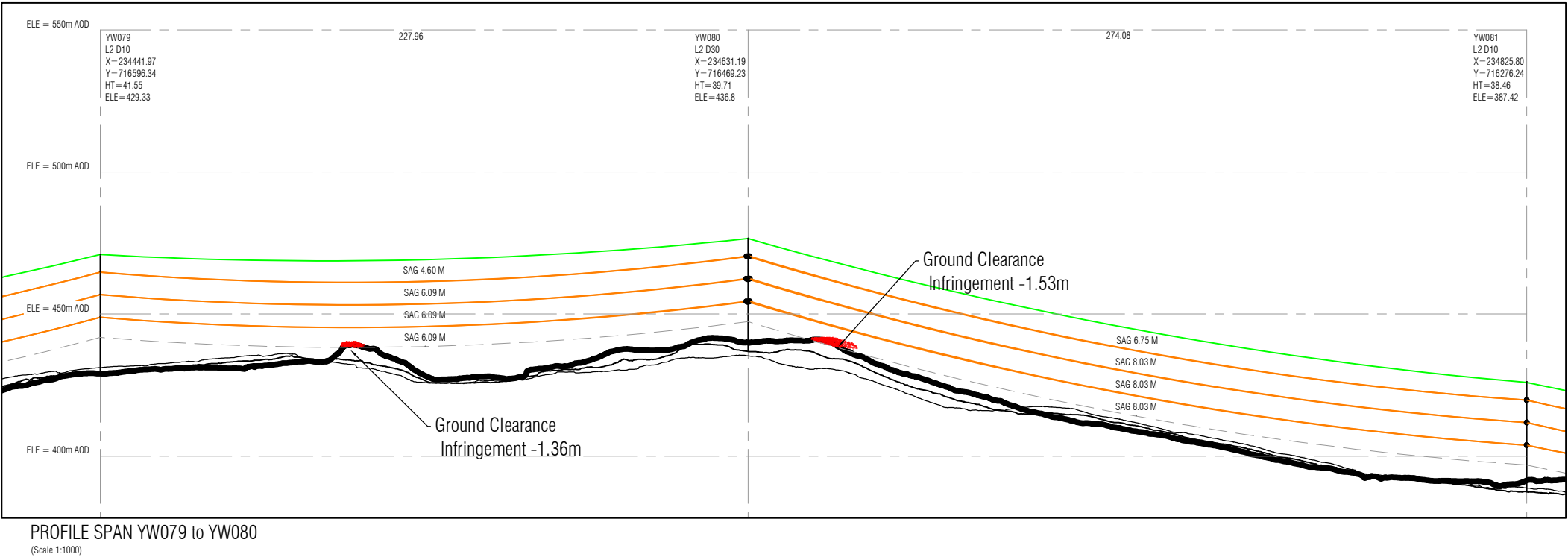


- NOTES:
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 - THIS DRAWING HAS BEEN PRODUCED TO SHOW THE RELATIONSHIP BETWEEN THE "Y" OHL AND HILLSIDE BETWEEN SPANS YW079 AND YW080 / YW080 AND YW081. IT SHOULD NOT BE USED FOR ANY OTHER PURPOSE.
 - PARTICULAR ATTENTION SHOULD BE TAKEN TO SECTION 6.1 TABLE 1 OF ENATS 43-8. THIS REFERS TO THE REQUIRED GROUND CLEARANCE FOR 275KV CONDUCTORS. ATTENTION SHOULD ALSO BE TAKEN TO SECTION 11 OF ENATS 43-8 WHICH REFERS TO H.S.E GUIDANCE (GS6)
 - PARTICULAR ATTENTION SHOULD BE TAKEN TO BBUS PROFILE DRAWING A0/PTD/6527/082 & CLEARANCE REPORT BK-PTD-6527-3048 FOR CLEARANCE INFRINGEMENT LOCATIONS
 - SWING CLEARANCES:
THE CONDUCTORS MAY SWING (BLOW-OUT) TO A MAXIMUM OF 45 deg C DURING VERY STRONG WINDS, CLEARANCES NEED TO BE MAINTAINED FOR THIS SITUATION.



Back Structure No.	Ahead Structure No.	Weather Case	Controlling Feature code	Clearance Margin (m)	Proposed Solutions
YW079	YW080	90°C Blowout	Ground	-1.36	Option 1 - Ampjack 3.2m Extension to tower YW080.
YW080	YW081	90°C Blowout	Ground	-1.53	Option 1 - Ampjack 3.2m Extension to tower YW080.

Note: an option for ground re-profiling was considered but discounted due to the large volume soil that would need to be removed. For span YW079 - YW080 the approx. ground re-profiling volume is 76m³ and span YW080 - YW081 the approx. ground re-profiling volume is 283m³ .

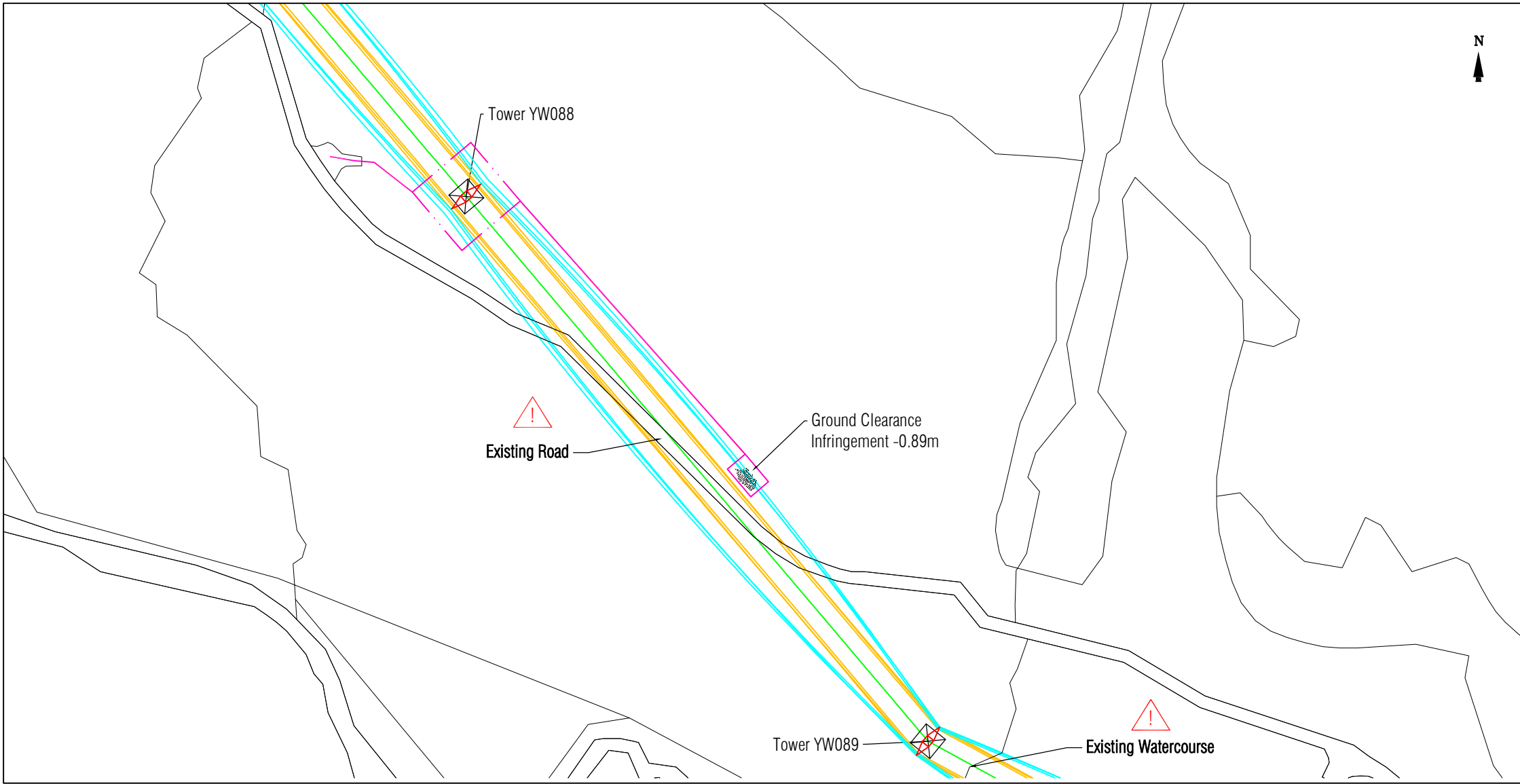


DRAWING PRODUCED FOR DISCUSSION PURPOSES

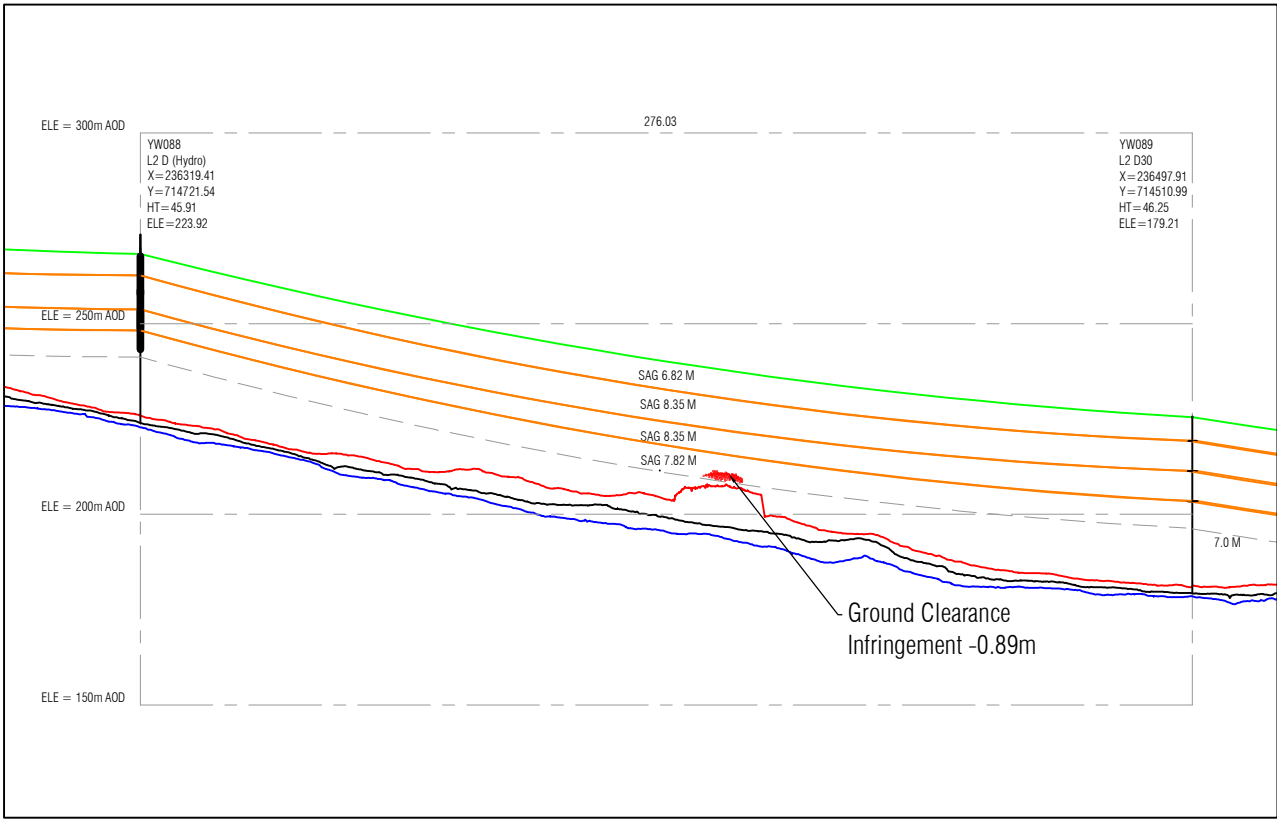
- KEY:
- PHASEWIRE STILL AIR @ 90°
 - PHASEWIRE - 45° BLOWOUT @ 90°
 - EARTHWIRE
 - 7M CLEARANCE LINE
 - CLEARANCE INFRINGEMENT
 - LEFT PROFILE = 7.5M
 - RIGHT PROFILE = 7.5M
 - PROPOSED ACCESS ROUTE
 - PROPOSED WORKING AREA
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0.C	09/09/2024	CW			Solution update to align with final SCA / Estimated soil volume added
0.B	06/09/2023	CW			Estimated Area for proposed reprofiling Added
0.A	25/05/2023	JV			FOR COMMENT AND REVIEW
00	09/05/2023	JN	CW	SB	First Issue
Rev.	Date	Drawn	Reviewed	Approved	Reason / Description of changes.
Station Stamp:			Project: YW/ YX Route Thermal Upgrading		
Station Stamp:			Location: Dalmally / Inveraman / Windyhill		
Station Stamp:			Drg. Title: Clearance Drawing Between Tower YW079 to YW080 & YW080 to YW081		
Drawn			Rev'd	App'd	Drg. No.: T4155-1-8700-DO-SPENEL-0315
SPEN Ref. No.:			Sheet: 6 Rev: 0.C		
			Scale: AS SHOWN Size: A1		

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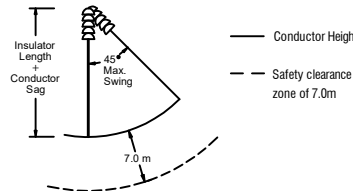
PLAN ON SPAN YW088 to YW089
(Scale 1:1000)



PROFILE SPAN YW088 to YW089
(Scale 1:1000)

NOTES:

- DO NOT SCALE DRAWINGS.
- ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED. (DIMENSIONS NOTED * APPROX. TAKEN FROM BBUS PLS-CAD MODEL)
- ALL INFORMATION GENERATED FROM BBUS PLS-CAD MODEL DATED 14/08/2018 USING PLS-CADD SOFTWARE.
- OVERHEAD LINE LIDAR SURVEY DATA PROVIDED BY FUGRO DATED 16th OF DECEMBER 2013.
- CLEARANCE IS BASED UPON CONDUCTOR IN STILL AIR AT A TEMPERATURE OF 90°C AND AT A SWING OF 45°.
- THIS DRAWING HAS BEEN PRODUCED TO SHOW THE RELATIONSHIP BETWEEN THE "YW" OHL AND HILLSIDE BETWEEN SPANS YW088 AND YW089. IT SHOULD NOT BE USED FOR ANY OTHER PURPOSE.
- PARTICULAR ATTENTION SHOULD BE TAKEN TO SECTION 6.1 TABLE 1 OF ENATS 43-8. THIS REFERS TO THE REQUIRED GROUND CLEARANCE FOR 275kV CONDUCTORS. ATTENTION SHOULD ALSO BE TAKEN TO SECTION 11 OF ENATS 43-8 WHICH REFERS TO H.S.E GUIDANCE (GS6)
- PARTICULAR ATTENTION SHOULD BE TAKEN TO BBUS PROFILE DRAWING A0/PTD/6527/083 & CLEARANCE REPORT BK-PTD-6527-3048 FOR CLEARANCE INFRINGEMENT LOCATIONS
- SWING CLEARANCES:
THE CONDUCTORS MAY SWING (BLOW-OUT) TO A MAXIMUM OF 45 deg C DURING VERY STRONG WINDS, CLEARANCES NEED TO BE MAINTAINED FOR THIS SITUATION.



Back Structure No.	Ahead Structure No.	Weather Case	Controlling Feature code	Clearance Margin (m)	Proposed Solutions
YW088	YW089	90°C Blowout	Ground	-0.89	Option 1 - Proposed site for insulated crossarm solution with a shift on attachment point and possible peak modification given tower existing YW88 already has STS.
Note: an option for ground reprofiling was considered but discounted due to the large volume soil that would need to be removed. For span YW088 - YW089 the approx. ground re-profiling volume is 112m³.					

DRAWING PRODUCED FOR
DISCUSSION PURPOSES

KEY:

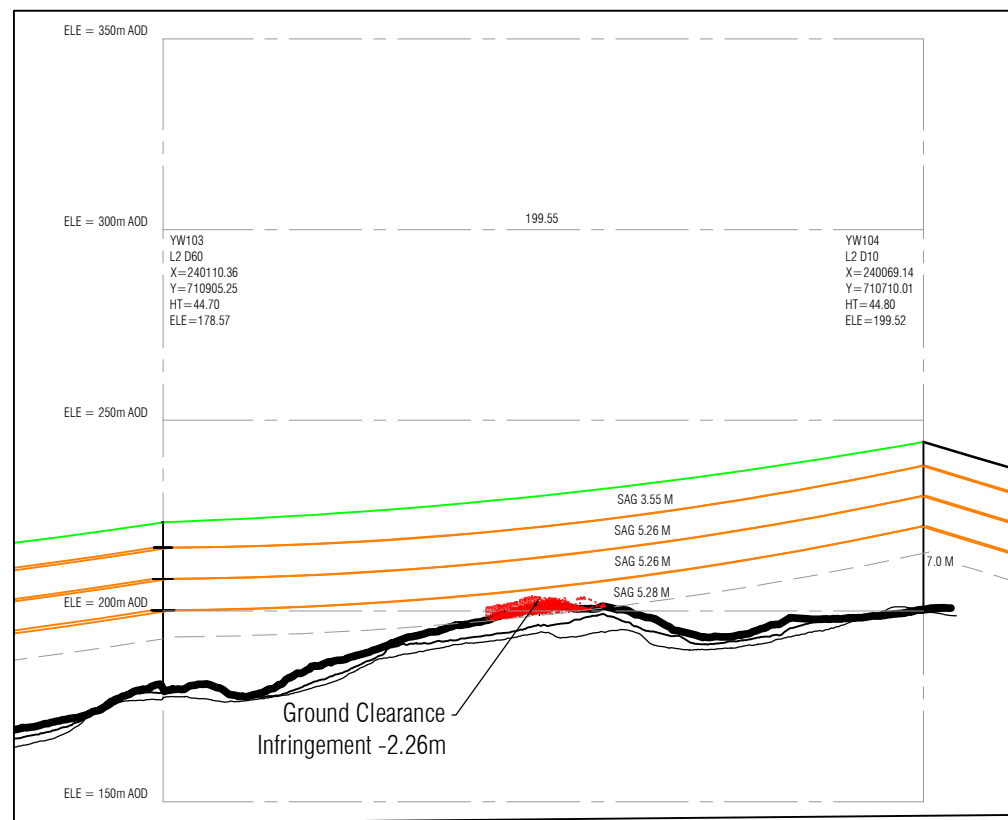
- PHASEWIRE STILL AIR @ 90°
- PHASEWIRE - 45° BLOWOUT @ 90°
- EARTHWIRE
- 7M CLEARANCE LINE
- CLEARANCE INFRINGEMENT
- LEFT PROFILE = 7.5M
- RIGHT PROFILE = 7.5M
- PROPOSED ACCESS ROUTE
- PROPOSED WORKING AREA

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0.C	09/09/2024	CW				Solution update to align with final SCA / Estimated soil volume added
0.B	06/09/2023	CW				Estimated Area for proposed reprofiling Added
0.A	25/05/2023	JV				FOR COMMENT AND REVIEW
00	09/05/2023	JN	CW	SB		First Issue
Rev.	Date	Drawn	Reviewed	Approved	Reason / Description of changes.	
Station Stamp:			Project:			YW/ YX Route Thermal Uprating
Station Stamp:			Location:			Dalmally / Inveraman / Windyhill
Station Stamp:			Drg. Title:			Clearance Drawing Between Tower YW088 to YW089
Drawn			Rev'd	App'd	Drg. No.:	Sheet: 7
SPEN Ref. No.:					T4155-1-8700-DO-SPENEL-0316	Rev: 8
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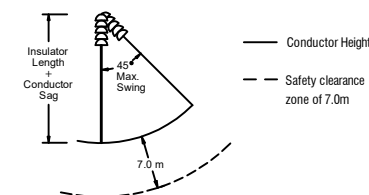
PLAN ON SPAN YW103 to YW104
(Scale 1:1000)



PROFILE SPAN YW103 to YW104
(Scale 1:1000)

NOTES:

1. DO NOT SCALE DRAWINGS.
2. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED. (DIMENSIONS NOTED * APPROX. TAKEN FROM BBUS PLS-CAD MODEL)
3. ALL INFORMATION GENERATED FROM BBUS PLS-CAD MODEL DATED 14/08/2018 USING PLS-CAD SOFTWARE.
4. OVERHEAD LINE LIDAR SURVEY DATA PROVIDED BY FUGRO DATED 16th OF DECEMBER 2013.
5. CLEARANCE IS BASED UPON CONDUCTOR IN STILL AIR AT A TEMPERATURE OF 90°C AND AT A SWING OF 45°.
6. THIS DRAWING HAS BEEN PRODUCED TO SHOW THE RELATIONSHIP BETWEEN THE 'Y'W OHL AND HILL SIDE BETWEEN SPANS YW103 AND YW104. IT SHOULD NOT BE USED FOR ANY OTHER PURPOSE.
7. PARTICULAR ATTENTION SHOULD BE TAKEN TO SECTION 6.1 TABLE 1 OF ENATS 43-8. THIS REFERS TO THE REQUIRED GROUND CLEARANCE FOR 275KV CONDUCTORS. ATTENTION SHOULD ALSO BE TAKEN TO SECTION 11 OF ENATS 43-8 WHICH REFERS TO H.S.E GUIDANCE (G56)
8. PARTICULAR ATTENTION SHOULD BE TAKEN TO BBUS PROFILE DRAWING A0/PTD-6527/087 & CLEARANCE REPORT BK-PTD-6527-3048 FOR CLEARANCE INFRINGEMENT LOCATIONS
9. SWINGING CLEARANCES:
THE CONDUCTORS MAY SWING (BLOW-OUT) TO A MAXIMUM OF 45 deg C DURING VERY STRONG WINDS. CLEARANCES NEED TO BE MAINTAINED FOR THIS SITUATION.



Back Structure No.	Ahead Structure No.	Weather Case	Controlling Feature code	Clearance Margin (m)	Proposed Solutions
YW103	YW104	90°C Blowout	Ground	-2.26	Option 1 - Ampjack 3.2m Extension to tower YW103 & Ampjack 3.2m Extension to tower YW04.
Note: an option for ground reprofiling was considered but discounted due to the large volume soil that would need to be removed. For span YW103 - YW104 the approx. ground re-profiling volume is 1220m³.					

DRAWING PRODUCED FOR
DISCUSSION PURPOSES

KEY:

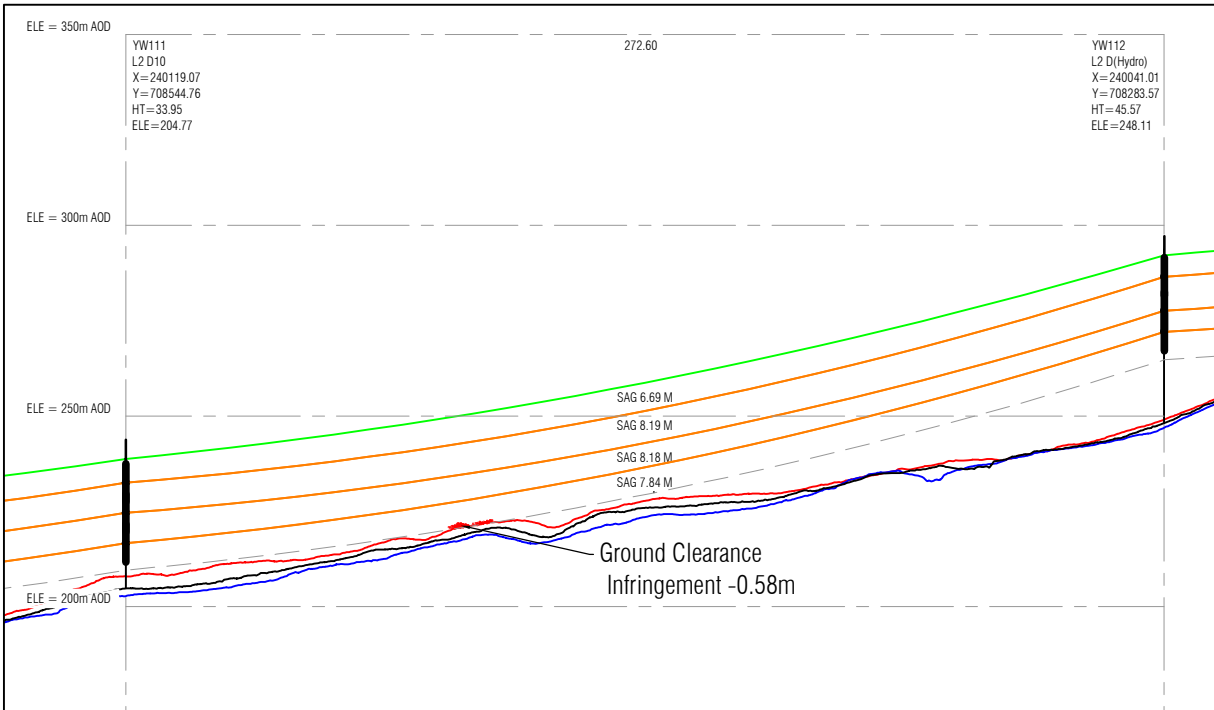
-  PHASEWIRE STILL AIR @ 90°
 PHASEWIRE - 45° BLOWOUT @ 90°
 EARTHWIRE
 7M CLEARANCE LINE
 CLEARANCE INFRINGEMENT
 LEFT PROFILE = 7.5M
 RIGHT PROFILE = 7.5M
 PROPOSED ACCESS ROUTE
 PROPOSED WORKING AREA

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O.C	09/09/2024	CW				Solution update to align with final SCA / Estimated soil volume added
O.B	06/09/2023	CW				Estimated Area for proposed reprofiling Added
O.A	25/05/2023	JV				FOR COMMENT AND REVIEW
00	09/05/2023	JN	CW	SB		First Issue
Rev.	Date	Drawn	Reviewed	Approved		Reason / Description of changes.
		Status Stamp: 			Project: YW/ YX Route Thermal Upgrading	
					Location: Dalmaally / Inverarnan / Windyhill	
		Status Stamp: 			Drg. Title: Clearance Drawing Between Tower YW103 to YW104	
	Drawn	Revid	Apprd		Drg. No. : T4155-1-8700-DO-SPENEL-0318	Sheet: 9 Next: 10 Scale: AS SHOWN
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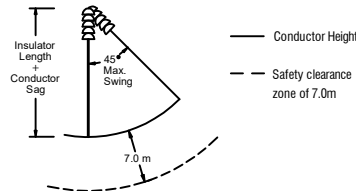
PLAN ON SPAN YW111 to YW112
(Scale 1:1000)



PROFILE SPAN YW111 to YW112
(Scale 1:1000)

NOTES:

- DO NOT SCALE DRAWINGS.
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- ALL INFORMATION GENERATED FROM BBUS PLS-CAD MODEL DATED 14/08/2018 USING PLS-CADD SOFTWARE.
- OVERHEAD LINE LIDAR SURVEY DATA PROVIDED BY FUGRO DATED 16th OF DECEMBER 2013.
- CLEARANCE IS BASED UPON CONDUCTOR IN STILL AIR AT A TEMPERATURE OF 90°C AND AT A SWING OF 45°.
- THIS DRAWING HAS BEEN PRODUCED TO SHOW THE RELATIONSHIP BETWEEN THE "YW" OHL AND HILLSIDE BETWEEN SPANS YW111 AND YW112. IT SHOULD NOT BE USED FOR ANY OTHER PURPOSE.
- PARTICULAR ATTENTION SHOULD BE TAKEN TO SECTION 6.1 TABLE 1 OF ENATS 43-8. THIS REFERS TO THE REQUIRED GROUND CLEARANCE FOR 275kV CONDUCTORS. ATTENTION SHOULD ALSO BE TAKEN TO SECTION 11 OF ENATS 43-8 WHICH REFERS TO H.S.E GUIDANCE (GS6)
- PARTICULAR ATTENTION SHOULD BE TAKEN TO BBUS PROFILE DRAWING A0/PTD/6527/090 & CLEARANCE REPORT BK-PTD-6527-3048 FOR CLEARANCE INFRINGEMENT LOCATIONS
- SWING CLEARANCES:
THE CONDUCTORS MAY SWING (BLOW-OUT) TO A MAXIMUM OF 45 deg C DURING VERY STRONG WINDS, CLEARANCES NEED TO BE MAINTAINED FOR THIS SITUATION.



Back Structure No.	Ahead Structure No.	Weather Case	Controlling Feature code	Clearance Margin (m)	Proposed Solutions
YW111	YW112	90°C Blowout	Ground	-0.58	Option 1 - Proposed site for insulated crossarm solution with a shift on attachment point and possible peak modification given tower existing YW112 already has STS..
Note: an option for ground reprofiling was considered but discounted due to the large volume soil that would need to be removed. For span YW111 - YW112 the approx. ground re-profiling volume is 89m³.					

DRAWING PRODUCED FOR
DISCUSSION PURPOSES

KEY:

- PHASEWIRE STILL AIR @ 90°
- PHASEWIRE - 45° BLOWOUT @ 90°
- EARTHWIRE
- 7M CLEARANCE LINE
- CLEARANCE INFRINGEMENT
- LEFT PROFILE = 7.5M
- RIGHT PROFILE = 7.5M
- PROPOSED ACCESS ROUTE
- PROPOSED WORKING AREA

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0.C	09/09/2024	CW				Solution update to align with final SCA / Estimated soil volume added
0.B	06/09/2023	CW				Estimated Area for proposed reprofiling Added
0.A	25/05/2023	JV				FOR COMMENT AND REVIEW
00	09/05/2023	JN	CW	SB		First Issue
Rev.	Date	Drawn	Reviewed	Approved	Reason / Description of changes.	
Station Stamp:			Project:		YW/ YX Route Thermal Uprating	
Station Stamp:			Location:		Dalmally / Inveraman / Windyhill	
Station Stamp:			Drg. Title:		Clearance Drawing Between Tower YW111 to YW112	
Drawn			Rev'd	App'd	Drg. No.:	Sheet: 10 Rev.
					T4155-1-8700-DO-SPENEL-0319	11 0.C
					SPEN Ref. No.:	Scale: AS SHOWN Size: A1

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