

A417 Missing Link

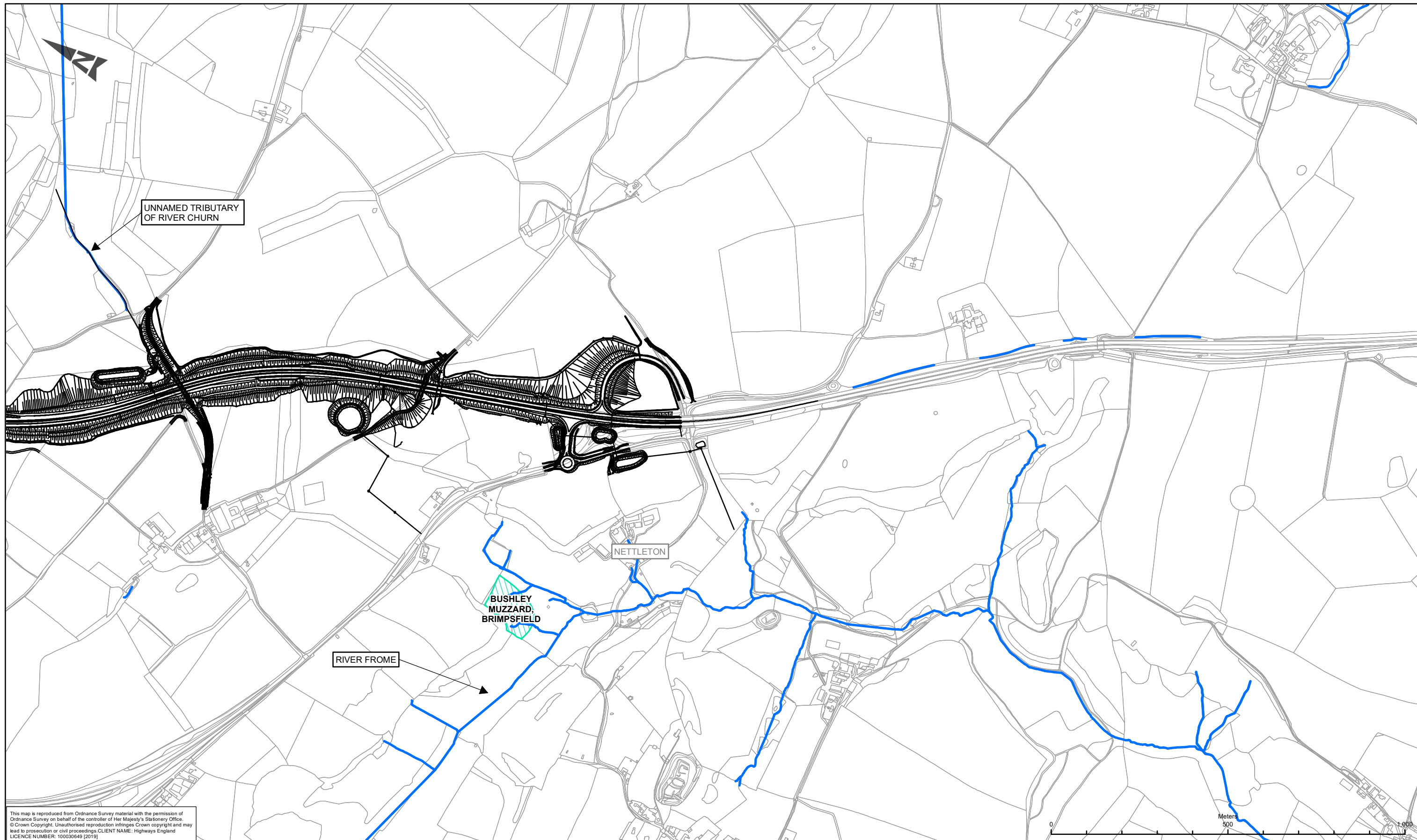
Preliminary Environmental Information Report

Chapter 13 Road Drainage and the Water Environment
- Figures

28 September 2020

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- LEGEND**
- WATER NETWORK
 - ▨ SITES OF SPECIAL SCIENTIFIC INTEREST (SSSI)

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 SIGNIFICANT RESIDUAL RISKS (REFERENCE SHALL ALSO BE MADE IN THE DESIGN HAZARD LOG)

CONSTRUCTION	NONE
MAINTENANCE / CLEANING	NONE
USE	NONE
DECOMMISSIONING / DEMOLITION	NONE

Rev.	Date	Description	By	Chk'd	App'd	Auth'd
P10	21/09/20	CLIENT COMMENTS ADDRESSED	EB	TS	JP	SW

Suitability S4 Drawing Status SUITABLE FOR STAGE APPROVAL

ARUP



Project Title A417 MISSING LINK

Drawing Title FIGURE 13.1 SURFACE WATER FEATURES SHEET 2 OF 2

Scale 1:10,000	By EB	Checked TS	Approved JP	Authorised SW
Original Size A3	Date 21/09/20	Date 21/09/20	Date 21/09/20	Date 21/09/20
Drawing Number HE551505 - X_XX_XXXX_X	HE PIN	Originator -DR	Volume - LE	Revision P10
Location	Type	Role	Number	



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LEGEND

FLOOD ZONE 3

FLOOD ZONE 2

NO DATA SHOWN AS NO FLOODING IN THE VICINITY OF THE SCHEME ON SHEET 1 OF 2

EXISTING FLOOD ZONES SHOWN IN SHEET 2 OF 2

SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION

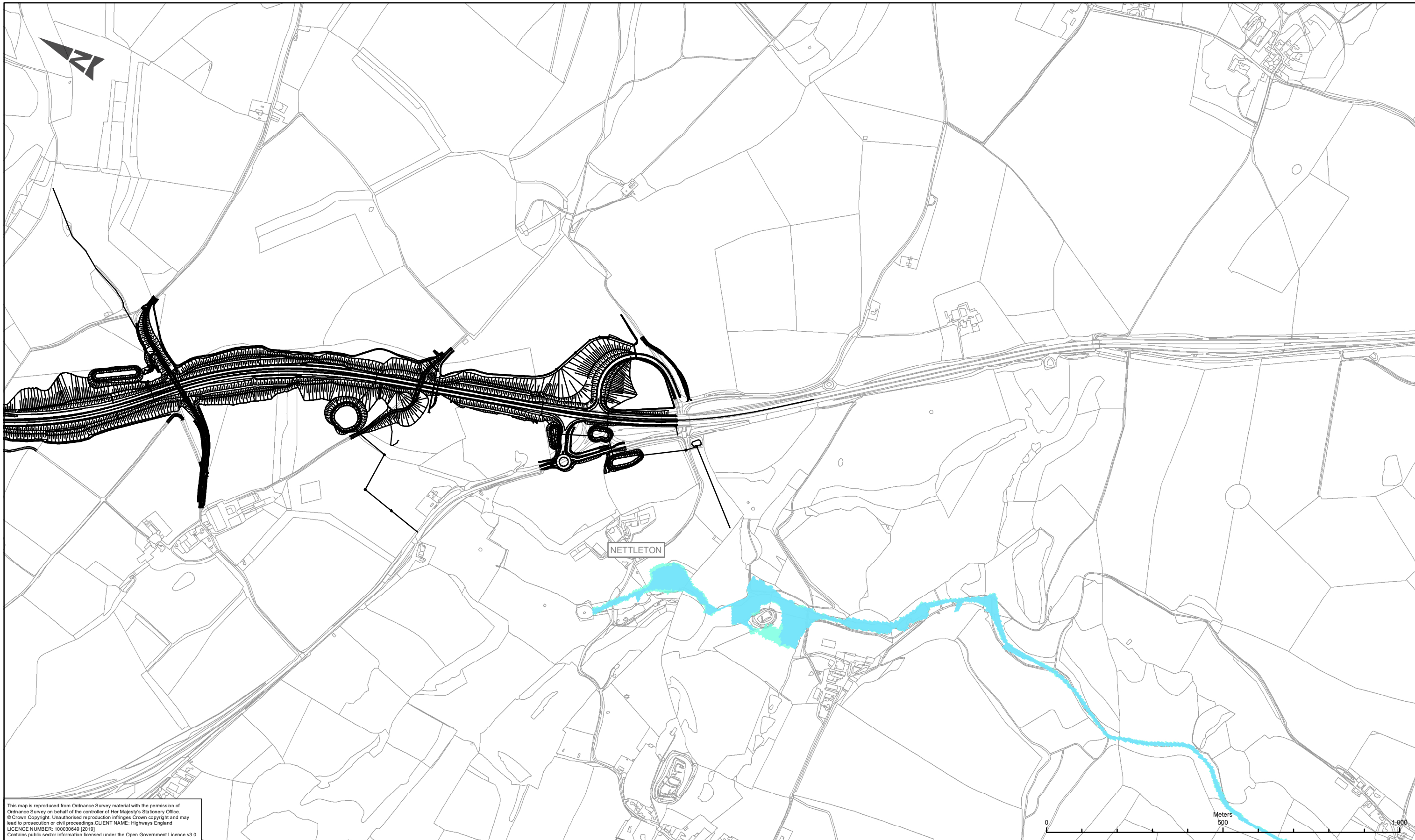
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CONSTRUCTION							
NONE							
MAINTENANCE / CLEANING							
NONE							
USE							
NONE							
DECOMMISSIONING / DEMOLITION							
NONE							

Rev.	Date	Description	By	Chk'd	App'd	Auth'd

Suitability	Drawing Status
S4	SUITABLE FOR STAGE APPROVAL
ARUP	

Project Title						A417 MISSING LINK					
Drawing Title						FIGURE 13.2 EXISTING FLOOD RISK SHEET 1 OF 2					
Scale	By	Checked	Approved	Authorised		Original Size	Date	Date	Date	Date	
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		HE551505 -	ARP	EWE							
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LEGEND

- FLOOD ZONE 3
- FLOOD ZONE 2

SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION

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CONSTRUCTION	NONE
MAINTENANCE / CLEANING	NONE
USE	NONE
DECOMMISSIONING / DEMOLITION	NONE

Rev.	Date	Description	By	Chk'd	App'd	Auth'd
P10	21/09/20	CLIENT COMMENTS ADDRESSED	EB	TS	JP	SW

Suitability: S4 Drawing Status: SUITABLE FOR STAGE APPROVAL

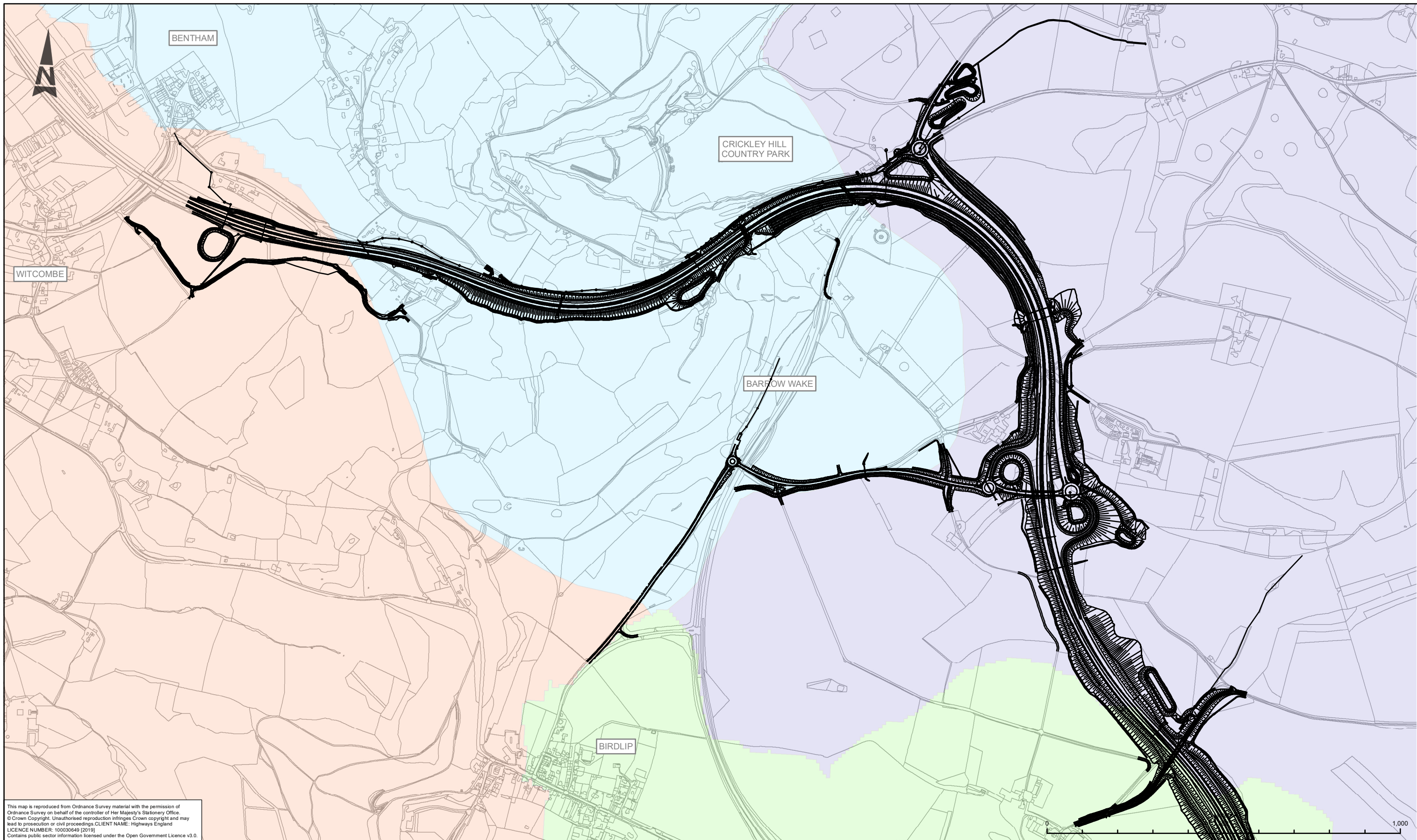
ARUP



Project Title: A417 MISSING LINK

Drawing Title: FIGURE 13.2 EXISTING FLOOD RISK SHEET 2 OF 2

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Location:	Type: -DR	Role: LE	Number: 000004	



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LEGEND

RIVER CATCHMENT

CHURN
FROME
HORSEBERE BK
NORMAN'S BK

SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION

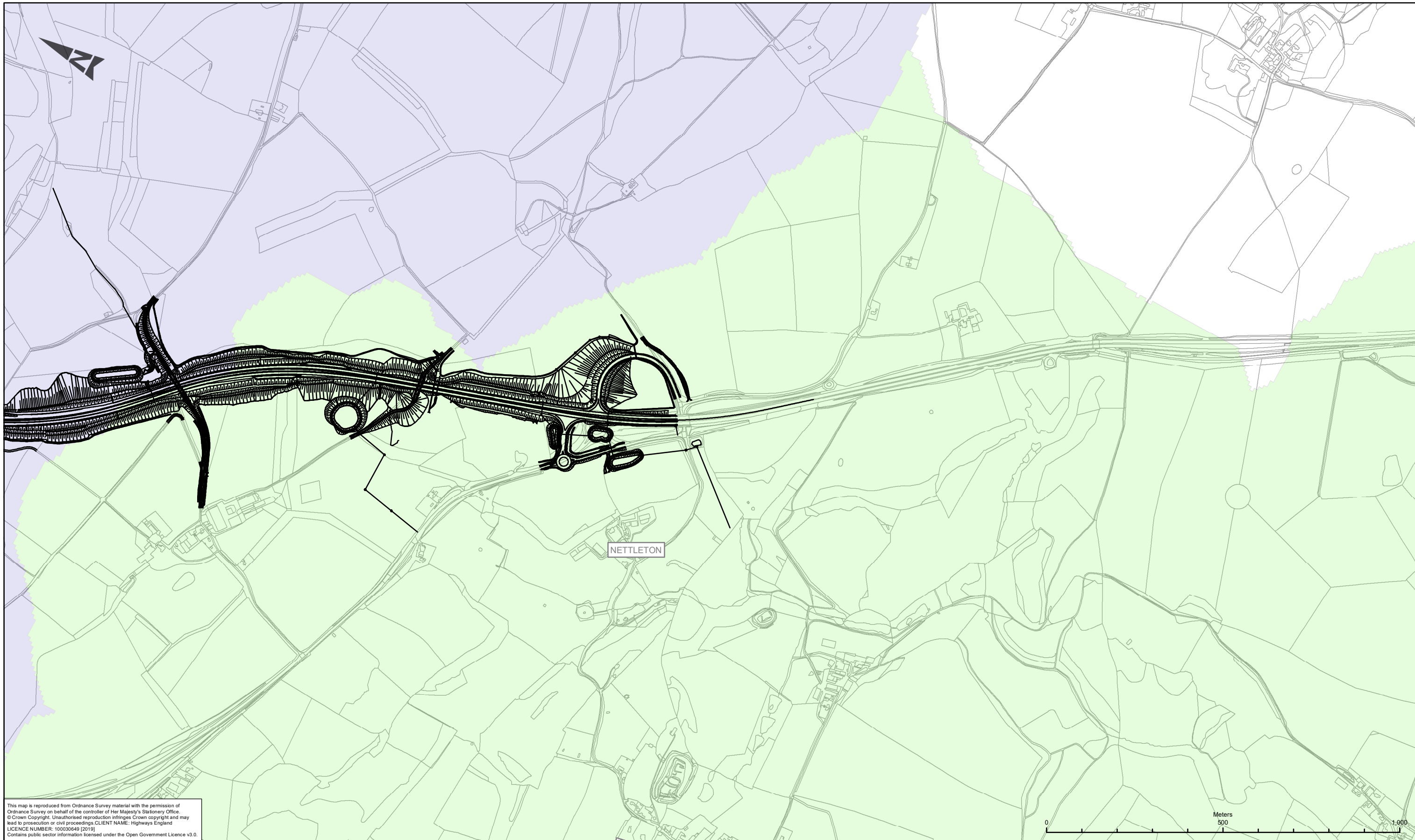
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CONSTRUCTION	NONE
MAINTENANCE / CLEANING	NONE
USE	NONE
DECOMMISSIONING / DEMOLITION	NONE

P10	21/09/20	CLIENT COMMENTS ADDRESSED	EB	TS	JP	SW
Rev.	Date	Description	By	Chk'd	App'd	Auth'd

S4	SUITABLE FOR STAGE APPROVAL
ARUP	

Project Title						A417 MISSING LINK					
Drawing Title						FIGURE 13.3 WFD SURFACE WATERBODIES SHEET 1 OF 2					
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Original Size	Date	Date	Date	Date		Original Size	Date	Date	Date	Date	
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HE551505 - ARP - EWE						HE551505 - ARP - EWE					
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Location						Location					
Type						Type					
Role						Role					
Number						Number					
P10						P10					



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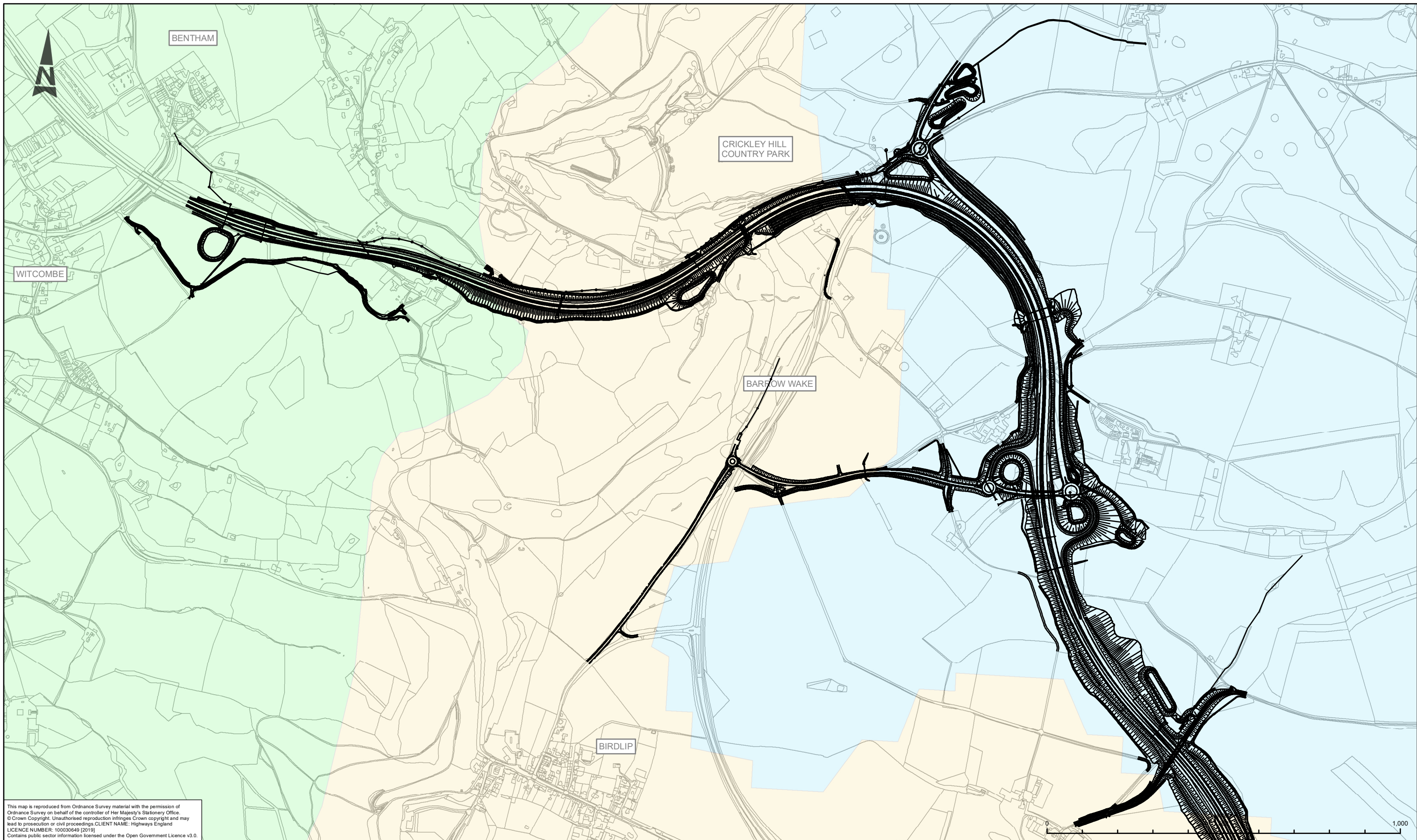
LEGEND	
RIVER CATCHMENT	
	CHURN
	FROME
	HORSEBERE BK
	NORMAN'S BK

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 SIGNIFICANT RESIDUAL RISKS (REFERENCE SHALL ALSO BE MADE IN THE DESIGN HAZARD LOG)	
CONSTRUCTION	
NONE	
MAINTENANCE / CLEANING	
NONE	
USE	
NONE	
DECOMMISSIONING / DEMOLITION	
NONE	

Rev.	Date	Description	By	Chk'd	App'd	Auth'd
P10	21/09/20	CLIENT COMMENTS ADDRESSED	EB	TS	JP	SW

Suitability	Drawing Status
S4	SUITABLE FOR STAGE APPROVAL

Project Title						A417 MISSING LINK					
Drawing Title						FIGURE 13.3 WFD SURFACE WATERBODIES SHEET 2 OF 2					
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Drawing Number						HE551505 - ARP - EWE					
HE PIN						X_XX_XXXX_X -DR- LE - 000006					
Location						Type Role Number					
						P10					



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LEGEND

WATER BODY NAME

	BURFORD JURASSIC
	SEVERN VALE - JURASSIC LIMESTONE COTSWOLD EDGE SOUTH
	SEVERN VALE - SECONDARY COMBINED

SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION

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MAINTENANCE / CLEANING							
NONE							
USE							
NONE							
DECOMMISSIONING / DEMOLITION							
NONE							
P12	21/09/20	CLIENT COMMENTS ADDRESSED		EB	TS	JP	SW
Rev.	Date	Description		By	Chk'd	App'd	Auth'd

S4 Drawing Status
SUITABLE FOR STAGE APPROVAL

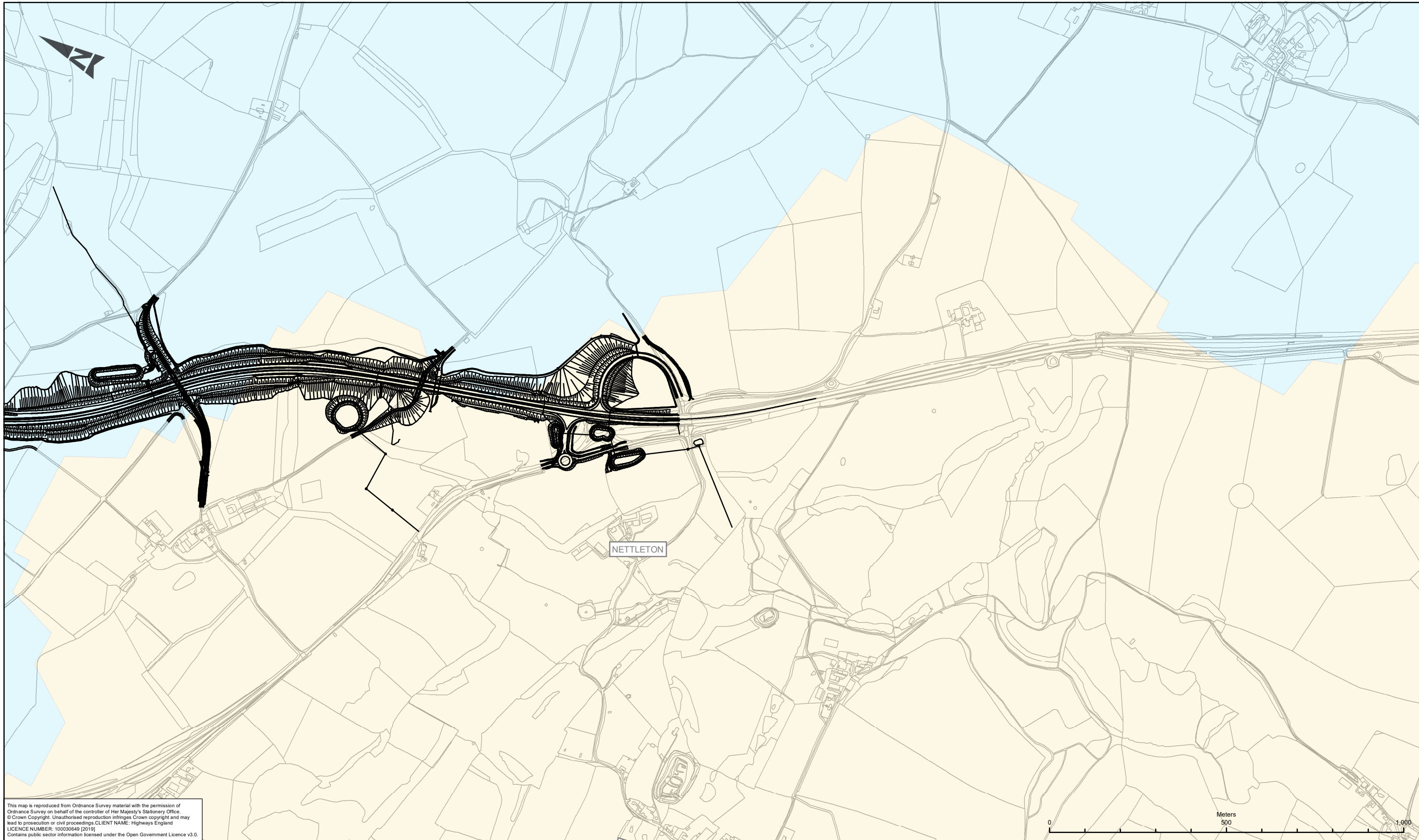
Project Title
A417 MISSING LINK

ARUP

Drawing Title
FIGURE 13.4
WFD GROUNDWATER BODIES
SHEET 1 OF 2

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Original Size	A3	Date	21/09/20	Date	21/09/20	Date	21/09/20	Date	21/09/20
Drawing Number	HE PIN	Originator	ARP	Volume	EWE				
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	Location	Type	Role	Number					





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LEGEND	
WATER BODY NAME	
	BURFORD JURASSIC
	SEVERN VALE - JURASSIC LIMESTONE COTSWOLD EDGE SOUTH
	SEVERN VALE - SECONDARY COMBINED

SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION

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MAINTENANCE / CLEANING	NONE
USE	NONE
DECOMMISSIONING / DEMOLITION	NONE

Rev.	Date	Description	By	Chk'd	App'd	Auth'd
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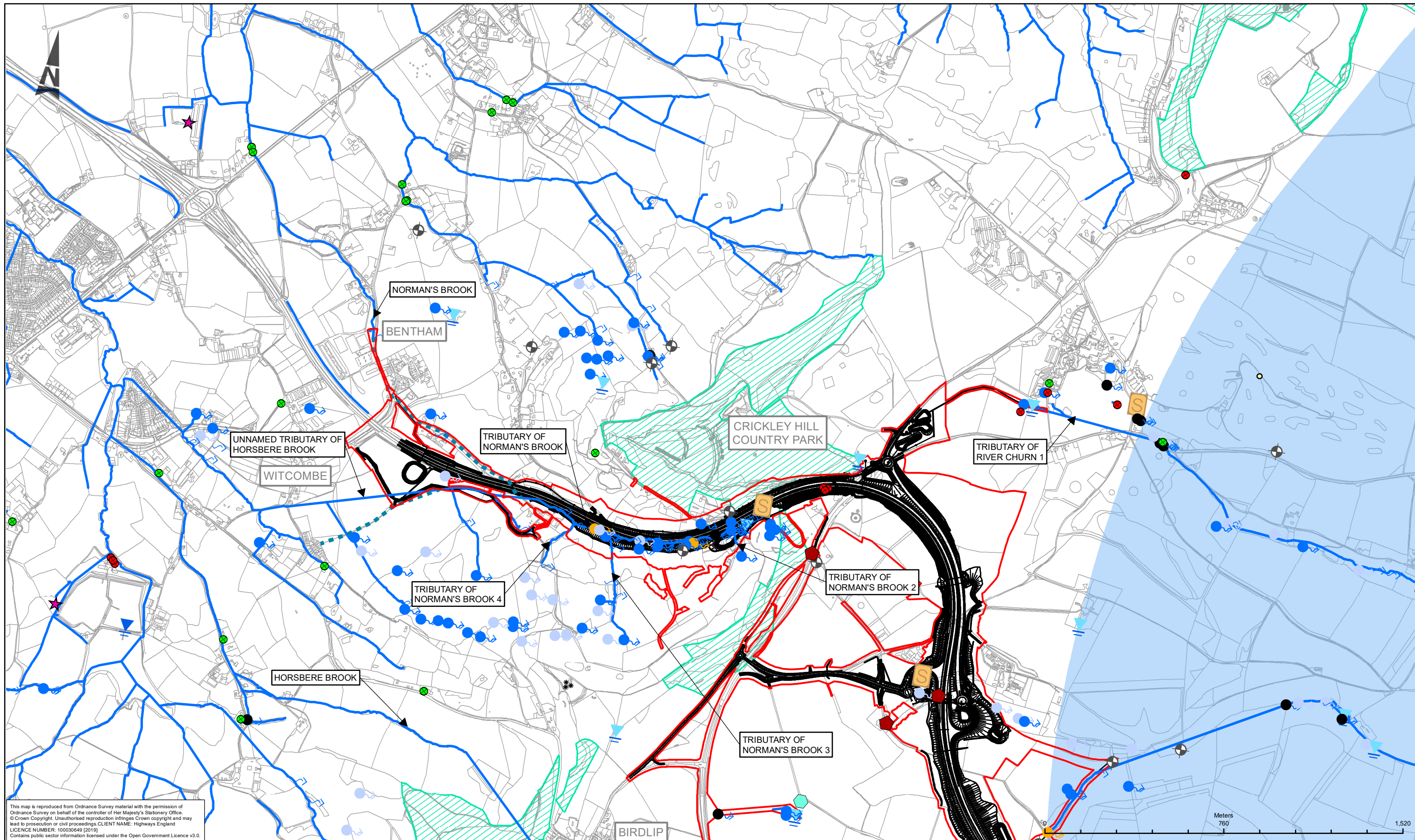
S4 Drawing Status SUITABLE FOR STAGE APPROVAL

ARUP

highways
england

Project Title A417 MISSING LINK

Drawing Title FIGURE 13.4 WFD GROUNDWATER BODIES SHEET 2 OF 2					
Scale 1:10,000	By EB	Checked TS	Approved JP	Authored SW	
Original Size A3	Date 21/09/20	Date 21/09/20	Date 21/09/20	Date 21/09/20	Date 21/09/20
Drawing Number HE PIN	Originator ARP	Volume EWE	Revision P12		
X_XX_XXXX_X	-DR-LE-000008				
Location	Type	Role	Number		



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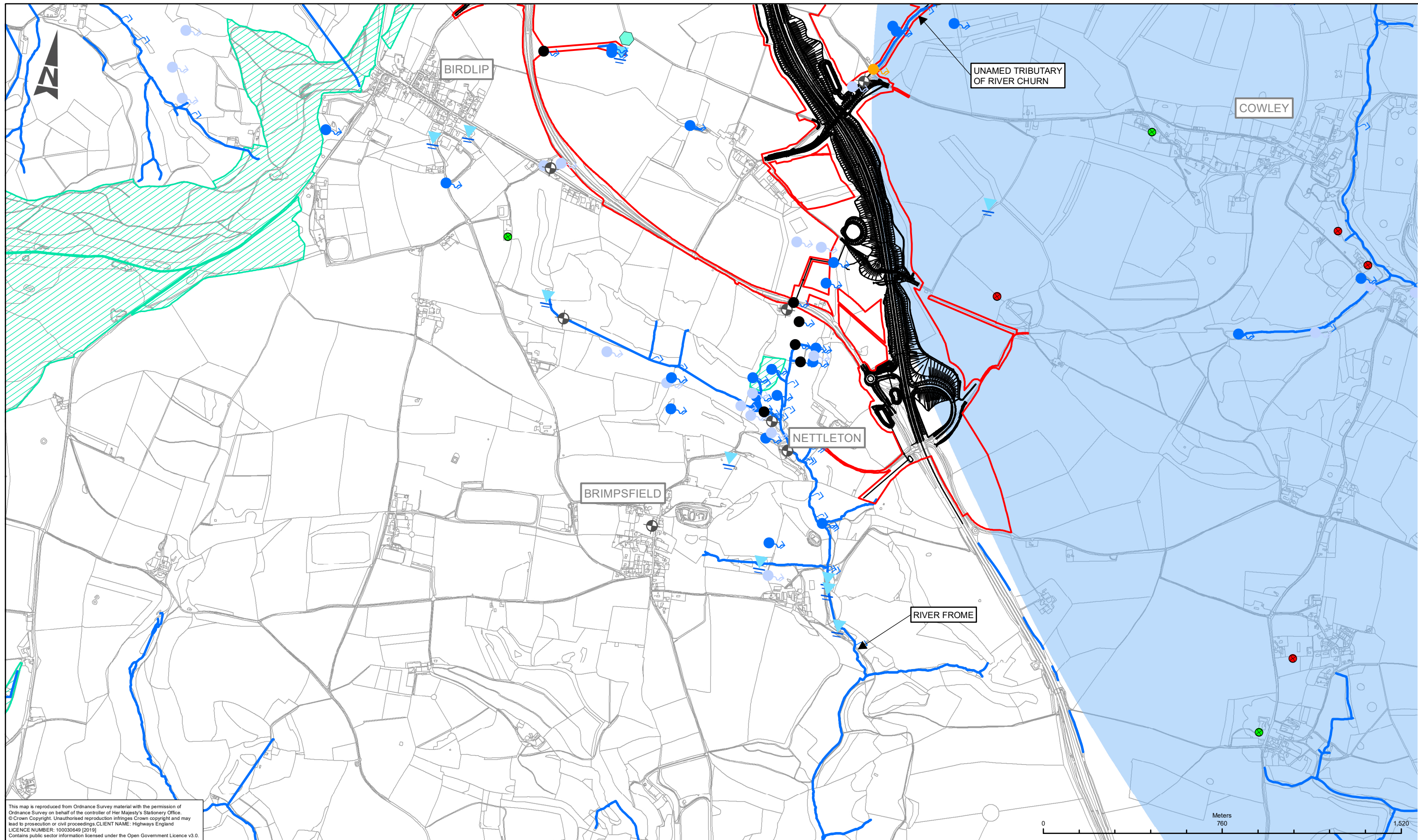
LEGEND	
	DCO BOUNDARY
	DCO BOUNDARY - 1KM BUFFER
	SITES OF SPECIAL SCIENTIFIC INTEREST (SSSI)
	WATER NETWORK AS PRESENTED BY THE EA SUPERCEDED BY TRACER TESTING
	APPROXIMATE DIRECTION OF WATERCOURSE FOLLOWING TRACER TESTING
	SOURCE PROTECTION ZONE
	ZONE III - TOTAL CATCHMENT
	ACTIVE SURFACE WATER ABSTRACTION POINTS
	SEEPAGE
	SPRING
	POTENTIAL TUFA FORMATION
	BOREHOLE
	DRAINAGE
	DRY VALLEY
	FLOODED GROUND
	LAKE
	LAKE (PROPOSED)
	OUTCROP
	RESERVOIR
	WASTE TREATMENT
	WATERCOURSE
	WEIR
	CONSented DISCHARGES
	ACTIVE
	REVOKED

SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION	
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CONSTRUCTION	NONE
MAINTENANCE / CLEANING	NONE
USE	NONE
DECOMMISSIONING / DEMOLITION	NONE

Rev.	Date	Description	By	Chk'd	App'd	Auth'd
P06	21/09/20	CLIENT COMMENTS ADDRESSED	EB	AL-P	JP	SW

Subsidiarity	S4	Drawing Status	SUITABLE FOR STAGE APPROVAL

Project Title		A417 MISSING LINK			
Drawing Title		FIGURE 13.5 HYDROGEOLOGICAL STUDY AREA AND FEATURES SHEET 1 OF 2			
Scale	1:15,000	By	EB	Checked	AL-P
Original Size	A3	Date	21/09/20	Date	21/09/20
Approved	JP	Date	21/09/20	Authorised	SW
Drawing Number	HE PIN	Originator	ARP	Volume	EWE
HE551505 -		-DR -	LE -	000030	
Location	Type	Role	Number	P06	



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LEGEND		SOURCE PROTECTION ZONE		POTENTIAL Tufa FORMATION	
	DCO BOUNDARY		ZONE III - TOTAL CATCHMENT		
	DCO BOUNDARY - 1KM BUFFER		WATER FEATURE SURVEY		WATERCOURSE
	SITES OF SPECIAL SCIENTIFIC INTEREST (SSSI)		BOREHOLE		CONSSENTED DISCHARGES
	WATER NETWORK AS PRESENTED BY THE EA SUPERCEDED BY TRACER TESTING		DRAINAGE		ACTIVE
	APPROXIMATE DIRECTION OF WATERCOURSE FOLLOWING TRACER TESTING		FLOODED GROUND		REVOKED
	ACTIVE SURFACE WATER ABSTRACTION POINTS		LAKE		
			SEEPAGE		
			SPRING		

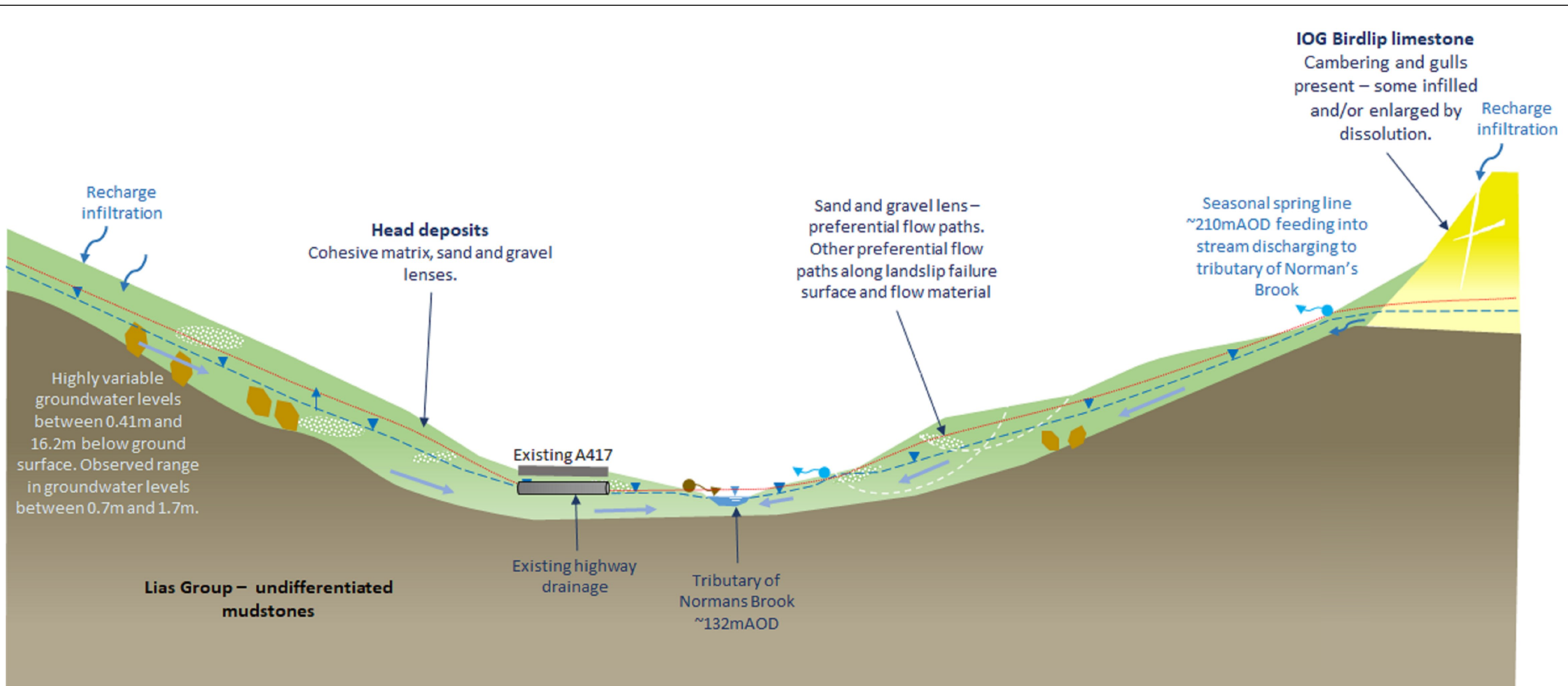
SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION

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MAINTENANCE / CLEANING					
NONE					
USE					
NONE					
DECOMMISSIONING / DEMOLITION					
NONE					
Rev.	Date	Description	By	Chk'd	App'd
P06	21/09/20	CLIENT COMMENTS ADDRESSED	EB	AL-P	JP

Suitability	Drawing Status	Project Title
S4	SUITABLE FOR STAGE APPROVAL	A417 MISSING LINK
ARUP		
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	Date	By
	21/09/20	EB
	Date	Checked
	21/09/20	AL-P
	Date	Approved
	21/09/20	JP
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	21/09/20	SW
Drawing Number	HE PIN	Originator
HE551505 - ARP		- EWE
X_XX_XXXX_X	-DR	-LE - 000031
Location	Type	Role
		Number
		P06

DO NOT SCALE

Millimetres
0 10 100



SECTION A - A'
CH. 0+900 CRICKLEY HILL

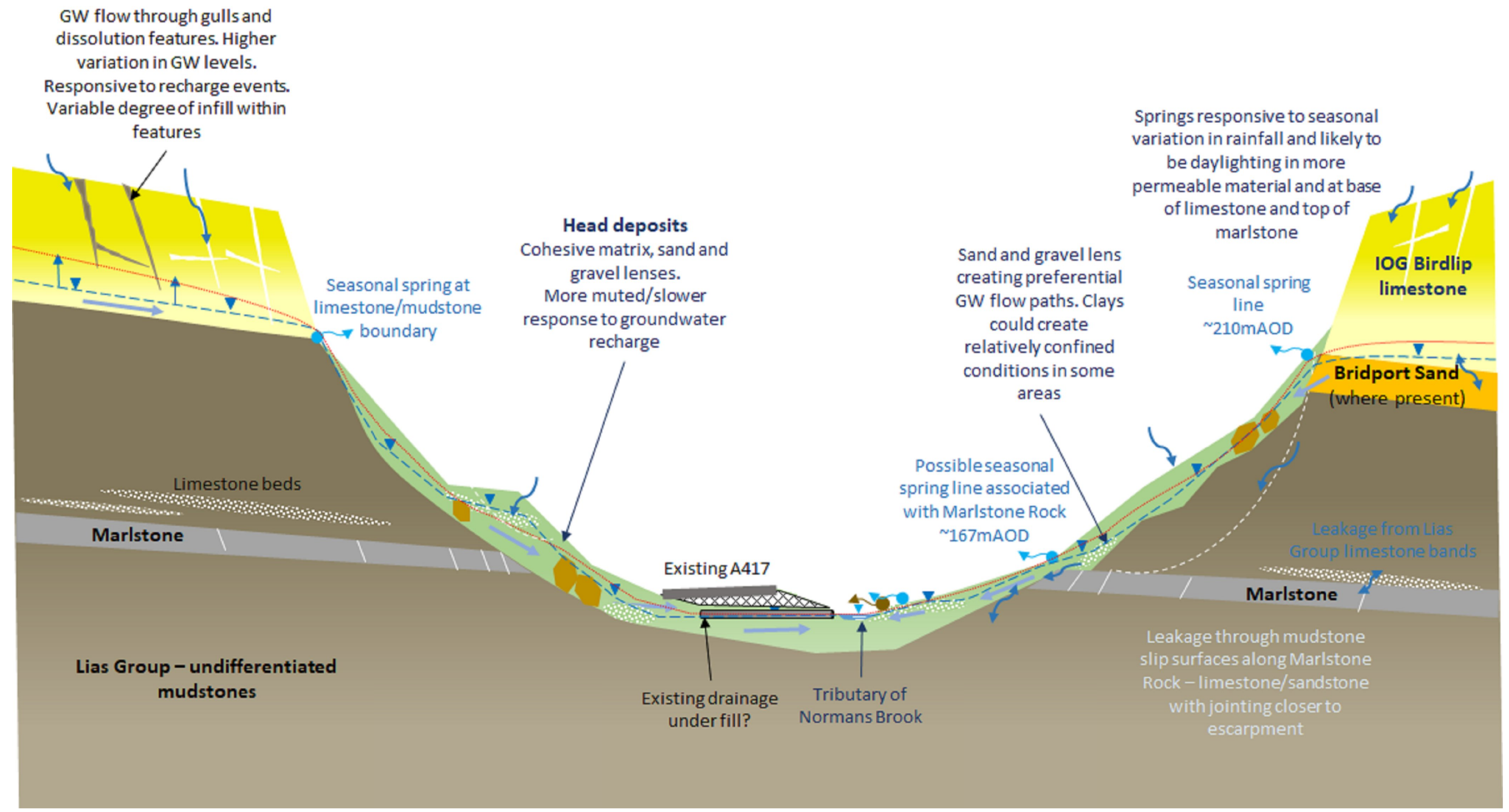
NOTES
1. THIS SKETCH IS FOR ILLUSTRATIVE PURPOSES ONLY.
2. ONLY WRITTEN DIMENSIONS SHALL BE USED, DO NOT SCALE.

LEGEND	
	HIGH GROUNDWATER LEVEL
	AVERAGE GROUNDWATER LEVEL
	GENERAL GROUNDWATER FLOW DIRECTION
	LOCAL WATER FLOW DIRECTION
	SURFACE WATER BODY
	GROUNDWATER SPRING
	POTENTIAL TUFA FORMATION
	GROUNDWATER SEEPAGE
	BOULDER
	SAND AND/OR GRAVEL LENS
	LIMESTONE BED
	SITE OF SPECIAL SCIENTIFIC INTEREST

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 SIGNIFICANT RESIDUAL RISKS (REFERENCE SHALL ALSO BE MADE TO THE DESIGN HAZARD LOG).					
CONSTRUCTION (ENTER 'NONE' IF APPLICABLE)					
P01	10/02/20	FIRST ISSUE	JA	AL	JP
P02	10/02/20	FIRST ISSUE	JA	AL	JP
P03	09/09/20	INTERNAL REVIEW	AJ	AL	JP
MAINTENANCE / CLEANING (ENTER 'NONE' IF APPLICABLE)					
P04	15/09/20	P04	AJ	AL	JP
P05	24/09/20	CLIENT COMMENTS ADDRESSED	AJ	AL	JP
USE (ENTER 'NONE' IF APPLICABLE)					
P06	24/09/20	ISSUE FOR CLIENT SIGN OFF	AJ	AL	JP
P07	24/09/20	CLIENT COMMENTS ADDRESSED	AJ	AL	JP
DECOMMISSIONING / DEMOLITION (ENTER 'NONE' IF APPLICABLE)					
P08	25/09/20	ISSUE FOR CLIENT SIGN OFF	AJ	AL	JP
Rev.	Date	Description	By	Chk'd	App'd

S4	SUITABLE FOR STAGE APPROVAL	Project Title A417 MISSING LINK			
		Drawing Title FIGURE 13.8 HYDROGEOLOGY CROSS SECTIONS SECTION A - A' SHEET 1 OF 9			
		Scale NTS	By AJ	Checked AL	Approved JP
Client 		Original Size A3	Date 24/09/20	Date 24/09/20	Date 24/09/20
Drawing Number HE PIN Originator Volume HE551505 - ARP - EGT X_XX_XXXX_X -SK - LE - 000101		Revision P08		Date 25/09/20	

DO NOT SCALE



SECTION B - B'
Ch. 1+200 CRICKLEY HILL

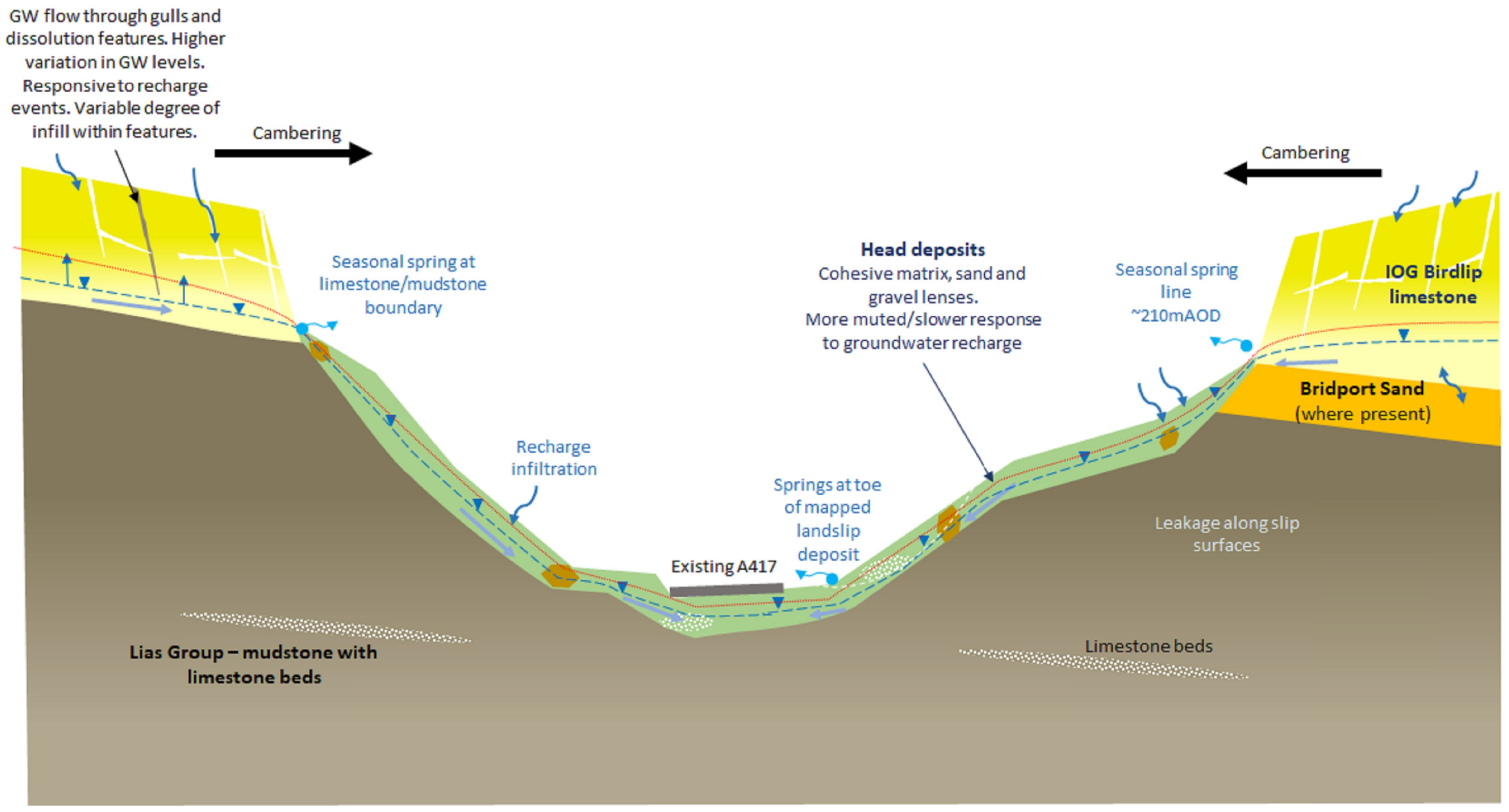
NOTES
1. THIS SKETCH IS FOR ILLUSTRATIVE PURPOSES ONLY.
2. ONLY WRITTEN DIMENSIONS SHALL BE USED, DO NOT SCALE.

LEGEND	
	HIGH GROUNDWATER LEVEL
	AVERAGE GROUNDWATER LEVEL
	GENERAL GROUNDWATER FLOW DIRECTION
	LOCAL WATER FLOW DIRECTION
	SURFACE WATER BODY
	GROUNDWATER SPRING
	POTENTIAL TUF A FORMATION
	GROUNDWATER SEEPAGE
	BOULDER
	SAND AND/OR GRAVEL LENS
	LIMESTONE BED
	SITE OF SPECIAL SCIENTIFIC INTEREST

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 SIGNIFICANT RESIDUAL RISKS (REFERENCE SHALL ALSO BE MADE TO THE DESIGN HAZARD LOG).					
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P05	24/09/20	CLIENT COMMENTS ADDRESSED	AJ	AL	JP
USE (ENTER 'NONE' IF APPLICABLE)					
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P07	24/09/20	CLIENT COMMENTS ADDRESSED	AJ	AL	JP
DECOMMISSIONING / DEMOLITION (ENTER 'NONE' IF APPLICABLE)					
P08	25/09/20	ISSUE FOR CLIENT SIGN OFF	AJ	AL	JP
Rev.	Date	Description	By	Chk'd	App'd

S4	SUITABLE FOR STAGE APPROVAL	Project Title A417 MISSING LINK			
		Drawing Title FIGURE 13.8 HYDROGEOLOGY CROSS SECTIONS SECTION B - B' SHEET 2 OF 9			
		Scale NTS	By AJ	Checked AL	Approved JP
Client 		Original Size A3	Date 24/09/20	Date 24/09/20	Date 24/09/20
Drawing Number HE PIN HE551505 - ARP		Originator - SK - LE -000102	Volume - EGT	Revision P08	

DO NOT SCALE



SECTION C - C'
Ch. 1+600 CRICKLEY HILL

NOTES
1. THIS SKETCH IS FOR ILLUSTRATIVE PURPOSES ONLY.
2. ONLY WRITTEN DIMENSIONS SHALL BE USED, DO NOT SCALE.

LEGEND	
	HIGH GROUNDWATER LEVEL
	AVERAGE GROUNDWATER LEVEL
	GENERAL GROUNDWATER FLOW DIRECTION
	LOCAL WATER FLOW DIRECTION
	SURFACE WATER BODY
	GROUNDWATER SPRING
	POTENTIAL TUFA FORMATION
	GROUNDWATER SEEPAGE
	BOULDER
	SAND AND/OR GRAVEL LENS
	LIMESTONE BED
	SITE OF SPECIAL SCIENTIFIC INTEREST

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 SIGNIFICANT RESIDUAL RISKS (REFERENCE SHALL ALSO BE MADE TO THE DESIGN HAZARD LOG).					
CONSTRUCTION (ENTER 'NONE' IF APPLICABLE)					
P01	10/02/20			JA	AL JP --
P02	10/02/20			JA	AL JP SW
P03	09/09/20	INTERNAL REVIEW		AJ	AL JP --
MAINTENANCE / CLEANING (ENTER 'NONE' IF APPLICABLE)					
P04	15/09/20	P04		AJ	AL JP AL
P05	24/09/20	CLIENT COMMENTS ADDRESSED		AJ	AL JP --
USE (ENTER 'NONE' IF APPLICABLE)					
P06	24/09/20	ISSUE FOR CLIENT SIGN OFF		AJ	AL JP JP
P07	24/09/20	CLIENT COMMENTS ADDRESSED		AJ	AL JP --
DECOMMISSIONING / DEMOLITION (ENTER 'NONE' IF APPLICABLE)					
P08	25/09/20	ISSUE FOR CLIENT SIGN OFF		AJ	AL JP AL
Rev.	Date	Description	By	Chk'd	App'd Auth'd

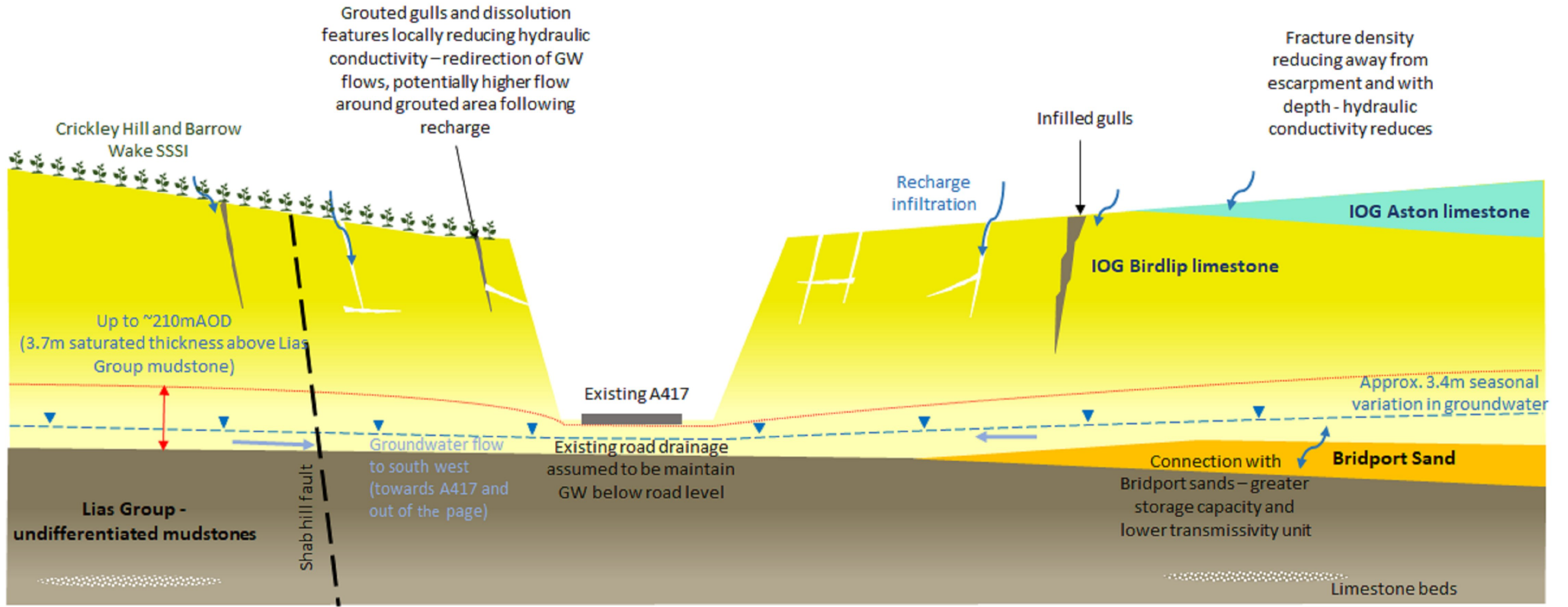
Suitability: S4
Drawing Status: SUITABLE FOR STAGE APPROVAL

ARUP

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Project Title: A417 MISSING LINK					
Drawing Title: FIGURE 13.8 HYDROGEOLOGY CROSS SECTIONS SECTION C - C' SHEET 3 OF 9					
Scale: NTS	By: AJ	Checked: AL	Approved: JP	Authorised: AL	
Original Size: A3	Date: 24/09/20	Date: 24/09/20	Date: 24/09/20	Date: 25/09/20	
Drawing Number: HE551505 - ARP	Originator: ARUP	Volume: EGT	Revision: P08		
X_XX_XXXX_X	-SK - LE -000103		Type	Role	Number

DO NOT SCALE



SECTION D - D'
CH. 1+850 AIR BALLOON CUT

NOTES
1. THIS SKETCH IS FOR ILLUSTRATIVE PURPOSES ONLY.
2. ONLY WRITTEN DIMENSIONS SHALL BE USED, DO NOT SCALE.

LEGEND	
	HIGH GROUNDWATER LEVEL
	AVERAGE GROUNDWATER LEVEL
	GENERAL GROUNDWATER FLOW DIRECTION
	LOCAL WATER FLOW DIRECTION
	SURFACE WATER BODY
	GROUNDWATER SPRING
	POTENTIAL TUF A FORMATION
	GROUNDWATER SEEPAGE
	BOULDER
	SAND AND/OR GRAVEL LENS
	LIMESTONE BED
	SITE OF SPECIAL SCIENTIFIC INTEREST

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 SIGNIFICANT RESIDUAL RISKS (REFERENCE SHALL ALSO BE MADE TO THE DESIGN HAZARD LOG).			
CONSTRUCTION (ENTER 'NONE' IF APPLICABLE)			
MAINTENANCE / CLEANING (ENTER 'NONE' IF APPLICABLE)			
USE (ENTER 'NONE' IF APPLICABLE)			
DECOMMISSIONING / DEMOLITION (ENTER 'NONE' IF APPLICABLE)			
Rev.	Date	Description	

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P01	10/02/20	---	JA	AL	JP	---	---	---	---
P02	10/02/20	---	JA	AL	JP	SW	---	---	---
P03	09/09/20	INTERNAL REVIEW	AJ	AL	JP	---	---	---	---
P04	15/09/20	P04	AJ	AL	JP	AL	---	---	---
P05	24/09/20	CLIENT COMMENTS ADDRESSED	AJ	AL	JP	---	---	---	---
P06	24/09/20	ISSUE FOR CLIENT SIGN OFF	AJ	AL	JP	---	---	---	---
P07	24/09/20	CLIENT COMMENTS ADDRESSED	AJ	AL	JP	---	---	---	---
P08	25/09/20	ISSUE FOR CLIENT SIGN OFF	AJ	AL	JP	AL	---	---	---
Rev.	Date	Description	By	Chk'd	App'd	Auth'd			

Suitability: S4
Drawing Status: SUITABLE FOR STAGE APPROVAL

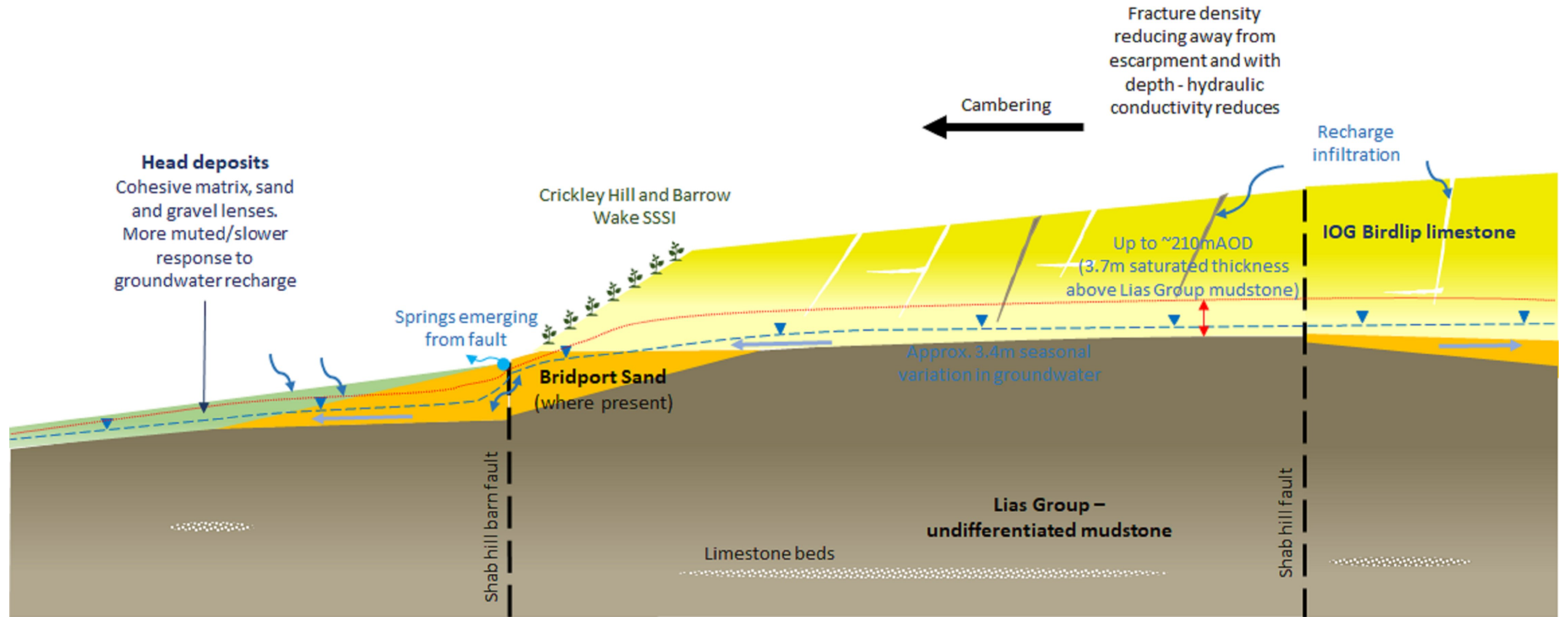
ARUP

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Project Title: A417 MISSING LINK					
Drawing Title: FIGURE 13.8 HYDROGEOLOGY CROSS SECTIONS SECTION D - D' SHEET 4 OF 9					
Scale: NTS	By: AJ	Checked: AL	Approved: JP	Authorised: AL	
Original Size: A3	Date: 24/09/20	Date: 24/09/20	Date: 24/09/20	Date: 25/09/20	
Drawing Number: HE PIN	Originator: ARP	Volume: EGT	Revision: P08		
X_XX_XXXX_X	-SK - LE -000104				

DO NOT SCALE

Millimetres
0 10 100



SECTION E - E'
CRICKLEY HILL AND AIR BALLOON CUT

NOTES
1. THIS SKETCH IS FOR ILLUSTRATIVE PURPOSES ONLY.
2. ONLY WRITTEN DIMENSIONS SHALL BE USED, DO NOT SCALE.

LEGEND	
	HIGH GROUNDWATER LEVEL
	AVERAGE GROUNDWATER LEVEL
	GENERAL GROUNDWATER FLOW DIRECTION
	LOCAL WATER FLOW DIRECTION
	SURFACE WATER BODY
	GROUNDWATER SPRING
	POTENTIAL TUF A FORMATION
	GROUNDWATER SEEPAGE
	BOULDER
	SAND AND/OR GRAVEL LENS
	LIMESTONE BED
	SITE OF SPECIAL SCIENTIFIC INTEREST

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 SIGNIFICANT RESIDUAL RISKS (REFERENCE SHALL ALSO BE MADE TO THE DESIGN HAZARD LOG).						
CONSTRUCTION (ENTER 'NONE' IF APPLICABLE)						
P01	10/02/20			JA	AL	JP
P02	10/02/20			JA	AL	JP
P03	09/09/20	INTERNAL REVIEW		AJ	AL	JP
MAINTENANCE / CLEANING (ENTER 'NONE' IF APPLICABLE)						
P04	15/09/20	P04		AJ	AL	JP
P05	24/09/20	CLIENT COMMENTS ADDRESSED		AJ	AL	JP
USE (ENTER 'NONE' IF APPLICABLE)						
P06	24/09/20	ISSUE FOR CLIENT SIGN OFF		AJ	AL	JP
P07	24/09/20	CLIENT COMMENTS ADDRESSED		AJ	AL	JP
DECOMMISSIONING / DEMOLITION (ENTER 'NONE' IF APPLICABLE)						
P08	25/09/20	ISSUE FOR CLIENT SIGN OFF		AJ	AL	JP
Rev.	Date	Description	By	Chk'd	App'd	Auth'd

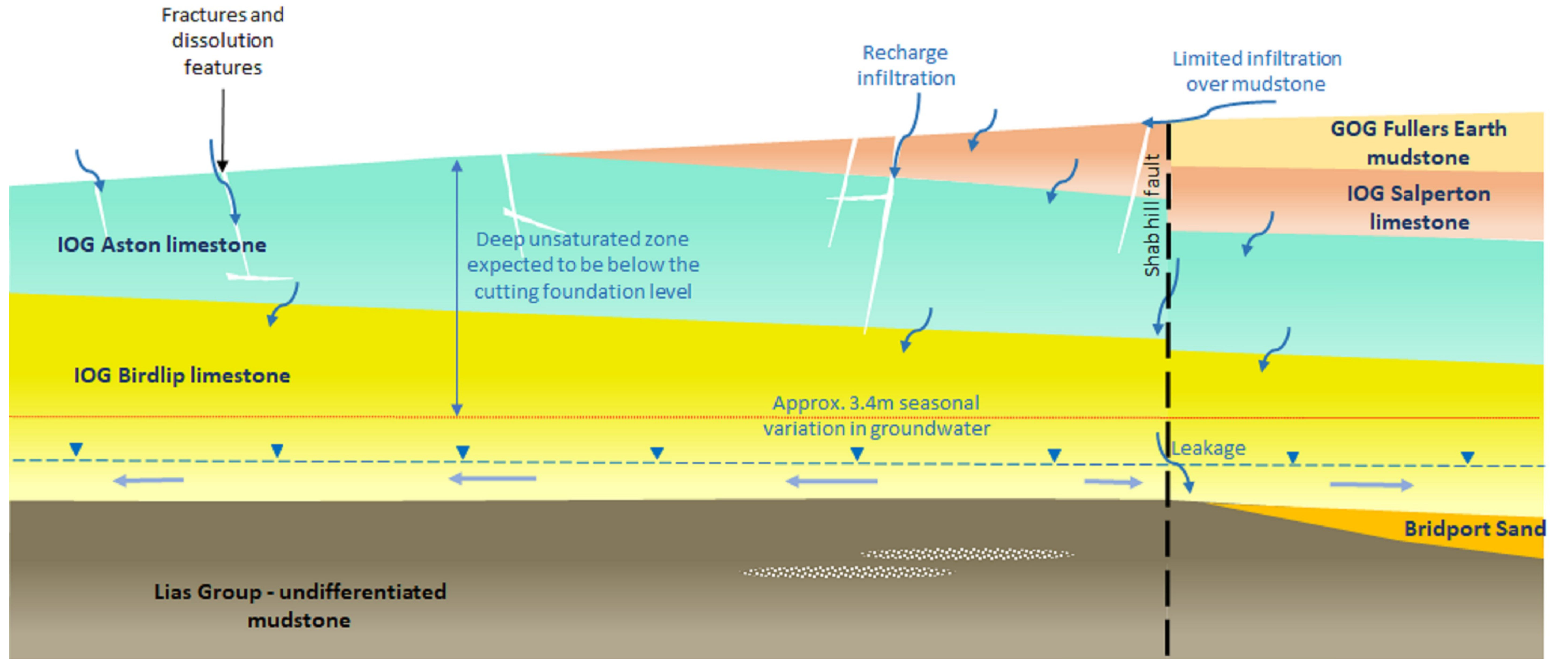
Suitability: S4
Drawing Status: SUITABLE FOR STAGE APPROVAL

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Project Title: A417 MISSING LINK					
Drawing Title: FIGURE 13.8 HYDROGEOLOGY CROSS SECTIONS SECTION E - E' SHEET 5 OF 9					
Scale: NTS	By: AJ	Checked: AL	Approved: JP	Authorised: AL	
Original Size: A3	Date: 24/09/20	Date: 24/09/20	Date: 24/09/20	Date: 25/09/20	
Drawing Number: HE PIN	Originator: ARP	Volume: EGT	Revision: P08		
X_XX_XXXX_X	-SK - LE -000105				

100
Millimetres
0 10
DO NOT SCALE



SECTION F - F'
CH. 2+750 AIR BALOON CUT

NOTES
1. THIS SKETCH IS FOR ILLUSTRATIVE PURPOSES ONLY.
2. ONLY WRITTEN DIMENSIONS SHALL BE USED, DO NOT SCALE.

LEGEND	
	HIGH GROUNDWATER LEVEL
	AVERAGE GROUNDWATER LEVEL
	GENERAL GROUNDWATER FLOW DIRECTION
	LOCAL WATER FLOW DIRECTION
	SURFACE WATER BODY
	GROUNDWATER SPRING
	POTENTIAL TUFA FORMATION
	GROUNDWATER SEEPAGE
	BOULDER
	SAND AND/OR GRAVEL LENS
	LIMESTONE BED
	SITE OF SPECIAL SCIENTIFIC INTEREST

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 SIGNIFICANT RESIDUAL RISKS (REFERENCE SHALL ALSO BE MADE TO THE DESIGN HAZARD LOG).

CONSTRUCTION	(ENTER 'NONE' IF APPLICABLE)
MAINTENANCE / CLEANING	(ENTER 'NONE' IF APPLICABLE)
USE	(ENTER 'NONE' IF APPLICABLE)
DECOMMISSIONING / DEMOLITION	(ENTER 'NONE' IF APPLICABLE)

Rev.	Date	Description	By	Chk'd	App'd	Auth'd
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P02	10/02/20	—	JA	AL	JP	SW
P03	11/02/20	FIRST ISSUE	JA	AL	JP	—
P04	11/02/20	FIRST ISSUE	JA	AL	JP	YB
P05	09/09/20	INTERNAL REVIEW	AJ	AL	JP	—
P06	15/09/20	P06	AJ	AL	JP	AL
P07	24/09/20	CLIENT COMMENTS ADDRESSED	AJ	AL	JP	—
P08	24/09/20	ISSUE FOR CLIENT SIGN OFF	AJ	AL	JP	JP
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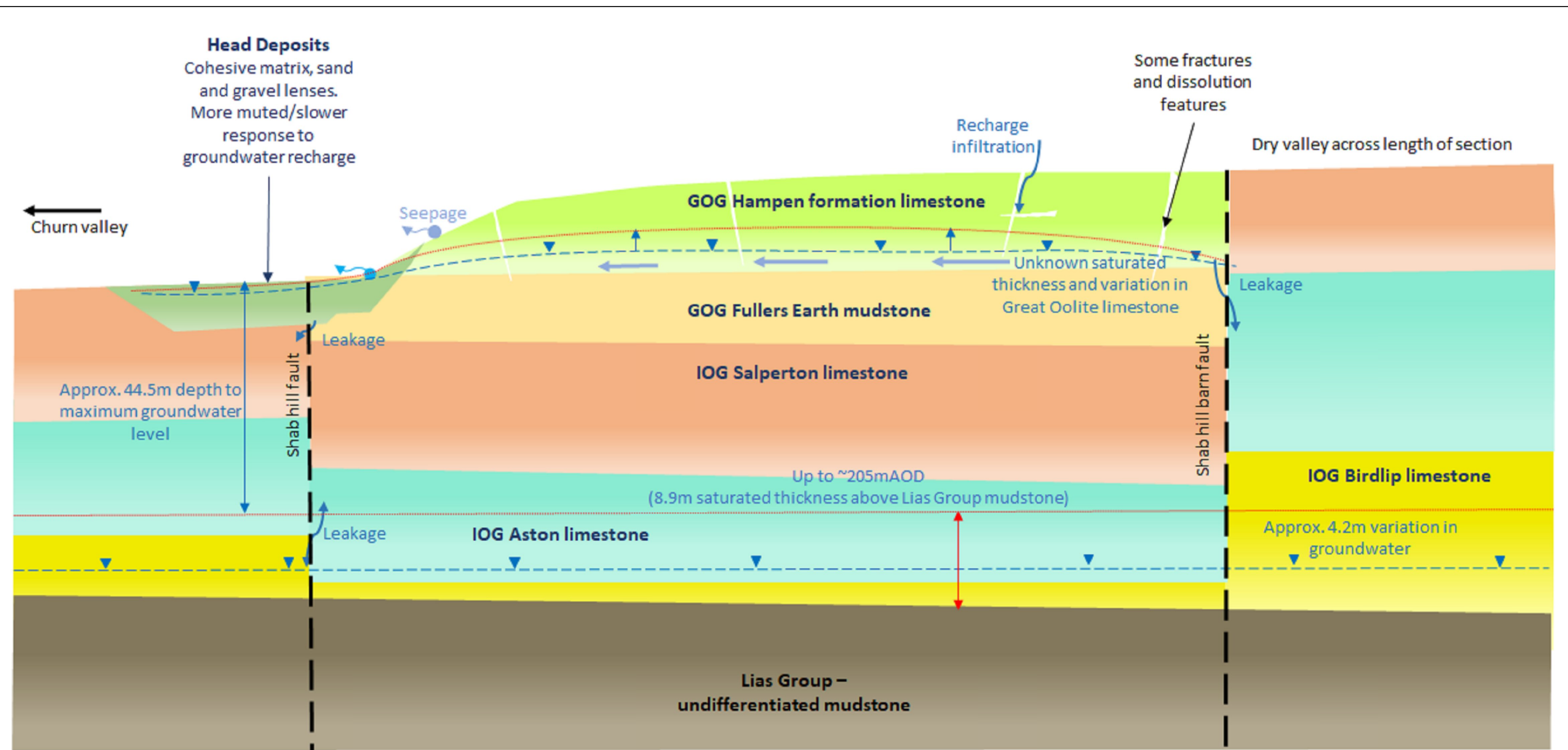
S4 SUITABLE FOR STAGE APPROVAL

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Project Title A417 MISSING LINK					
Drawing Title FIGURE 13.8 HYDROGEOLOGY CROSS SECTIONS SECTION F - F' SHEET 6 OF 9					
Scale NTS	By AJ	Checked AL	Approved JP	Authorised AL	
Original Size A3	Date 24/09/20	Date 24/09/20	Date 24/09/20	Date 25/09/20	Date 25/09/20
Drawing Number HE PIN HE551505	Originator ARP	Volume - SK - LE - 000106	Revision P10		

DO NOT SCALE



SECTION G - G'
CH. 3+100 SHAB HILL JUNCTION

NOTES
1. THIS SKETCH IS FOR ILLUSTRATIVE PURPOSES ONLY.
2. ONLY WRITTEN DIMENSIONS SHALL BE USED, DO NOT SCALE.

LEGEND	
	HIGH GROUNDWATER LEVEL
	AVERAGE GROUNDWATER LEVEL
	GENERAL GROUNDWATER FLOW DIRECTION
	LOCAL WATER FLOW DIRECTION
	SURFACE WATER BODY
	GROUNDWATER SPRING
	POTENTIAL TUF A FORMATION
	GROUNDWATER SEEPAGE
	BOULDER
	SAND AND/OR GRAVEL LENS
	LIMESTONE BED
	SITE OF SPECIAL SCIENTIFIC INTEREST

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 SIGNIFICANT RESIDUAL RISKS (REFERENCE SHALL ALSO BE MADE TO THE DESIGN HAZARD LOG).	
CONSTRUCTION (ENTER 'NONE' IF APPLICABLE)	
MAINTENANCE / CLEANING (ENTER 'NONE' IF APPLICABLE)	
USE (ENTER 'NONE' IF APPLICABLE)	
DECOMMISSIONING / DEMOLITION (ENTER 'NONE' IF APPLICABLE)	

Rev.	Date	Description	By	Chk'd	App'd	Auth'd
P01	10/02/20	—	AL	AL	JP	—
P02	10/02/20	—	JA	AL	JP	SW
P03	11/02/20	FIRST ISSUE	JA	AL	JP	—
P04	11/02/20	FIRST ISSUE	JA	AL	JP	YB
P05	09/09/20	INTERNAL REVIEW	AJ	AL	JP	—
P06	15/09/20	P06	AJ	AL	JP	AL
P07	24/09/20	CLIENT COMMENTS ADDRESSED	AJ	AL	JP	—
P08	24/09/20	ISSUE FOR CLIENT SIGN OFF	AJ	AL	JP	—
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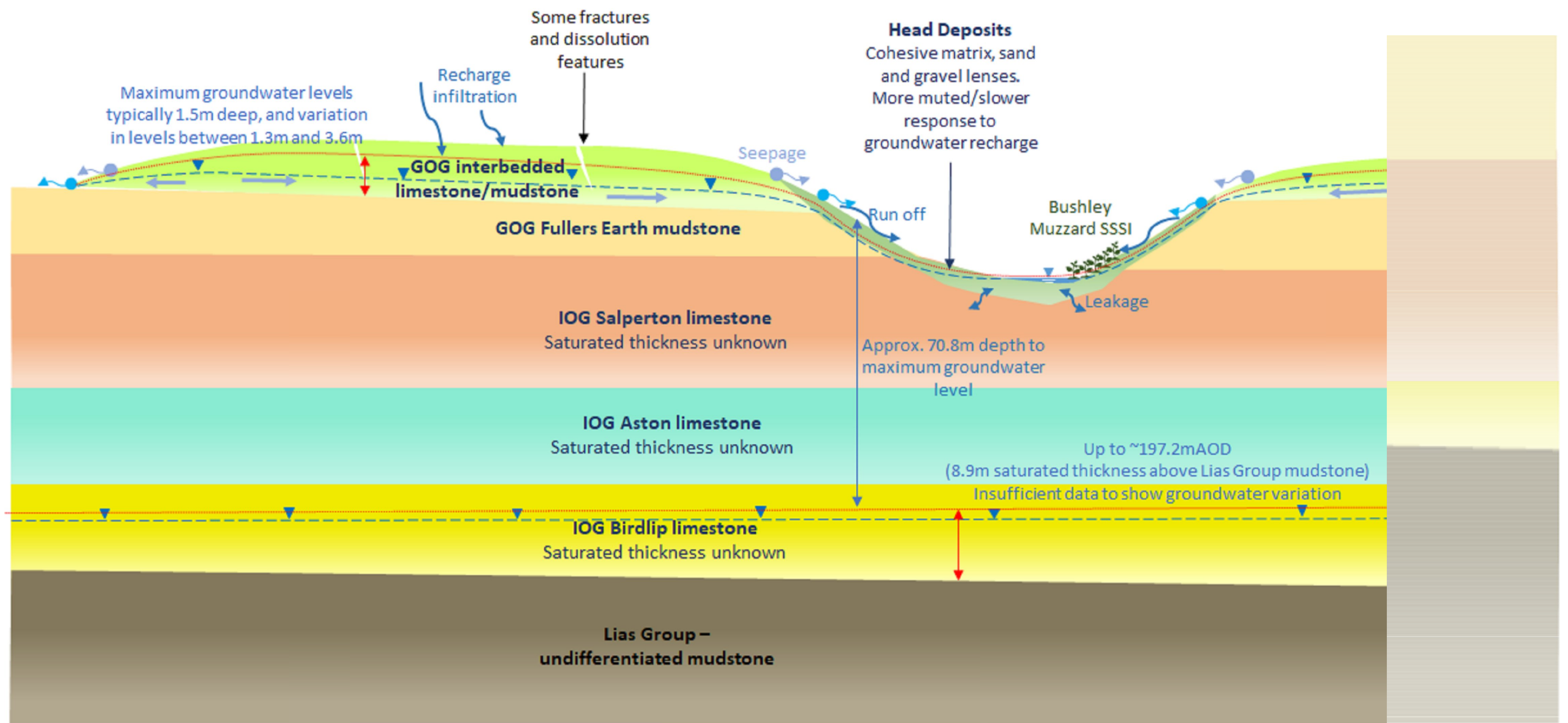
S4 SUITABLE FOR STAGE APPROVAL

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Project Title A417 MISSING LINK					
Drawing Title FIGURE 13.8 HYDROGEOLOGY CROSS SECTIONS SECTION G - G' SHEET 7 OF 9					
Scale NTS	By AJ	Checked AL	Approved JP	Authorised AL	
Original Size A3	Date 24/09/20	Date 24/09/20	Date 24/09/20	Date 25/09/20	
Drawing Number HE PIN HE551505	Originator ARP	Volume -SK-LE-000107	Revision P10		

100
10
0
DO NOT SCALE



SECTION H - H'
BUSHLEY MUZZARD SSSI

NOTES
1. THIS SKETCH IS FOR ILLUSTRATIVE PURPOSES ONLY.
2. ONLY WRITTEN DIMENSIONS SHALL BE USED, DO NOT SCALE.

LEGEND	
	HIGH GROUNDWATER LEVEL
	AVERAGE GROUNDWATER LEVEL
	GENERAL GROUNDWATER FLOW DIRECTION
	LOCAL WATER FLOW DIRECTION
	SURFACE WATER BODY
	GROUNDWATER SPRING
	POTENTIAL TUF A FORMATION
	GROUNDWATER SEEPAGE
	BOULDER
	SAND AND/OR GRAVEL LENS
	LIMESTONE BED
	SITE OF SPECIAL SCIENTIFIC INTEREST

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 SIGNIFICANT RESIDUAL RISKS (REFERENCE SHALL ALSO BE MADE TO THE DESIGN HAZARD LOG).					
CONSTRUCTION					
(ENTER 'NONE' IF APPLICABLE)					
P01	10/02/20		JA	AL	JP
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P03	09/09/20	INTERNAL REVIEW	AJ	AL	JP
P04	15/09/20	P04	AJ	AL	JP
P05	24/09/20	CLIENT COMMENTS ADDRESSED	AJ	AL	JP
P06	24/09/20	ISSUE FOR CLIENT SIGN OFF	AJ	AL	JP
P07	24/09/20	CLIENT COMMENTS ADDRESSED	AJ	AL	JP
P08	25/09/20	ISSUE FOR CLIENT SIGN OFF	AJ	AL	JP
Rev.	Date	Description	By	Chk'd	App'd

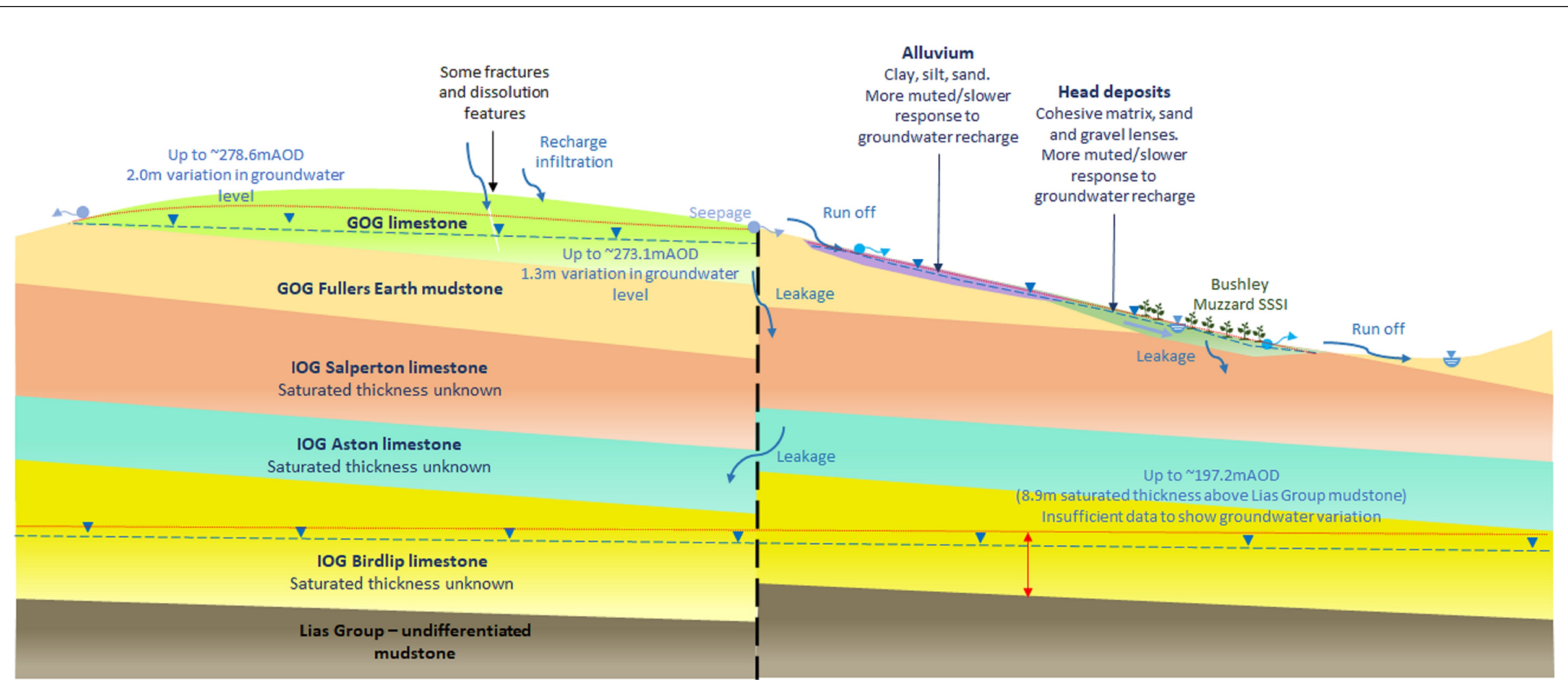
S4 SUITABLE FOR STAGE APPROVAL

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Project Title A417 MISSING LINK					
Drawing Title FIGURE 13.8 HYDROGEOLOGY CROSS SECTIONS SECTION H - H' SHEET 8 OF 9					
Scale	By	Checked	Approved	Authorised	
NTS	AJ	AL	JP	AL	
Original Size	Date	Date	Date	Date	Date
A3	24/09/20	24/09/20	24/09/20	25/09/20	
Drawing Number	HE PIN	Originator	Volume	Revision	
HE551505 -	ARP	-	EGT	P08	
X_XX_XXXX_X	-SK	-LE	-000108		
Location	Type	Role	Number		

DO NOT SCALE



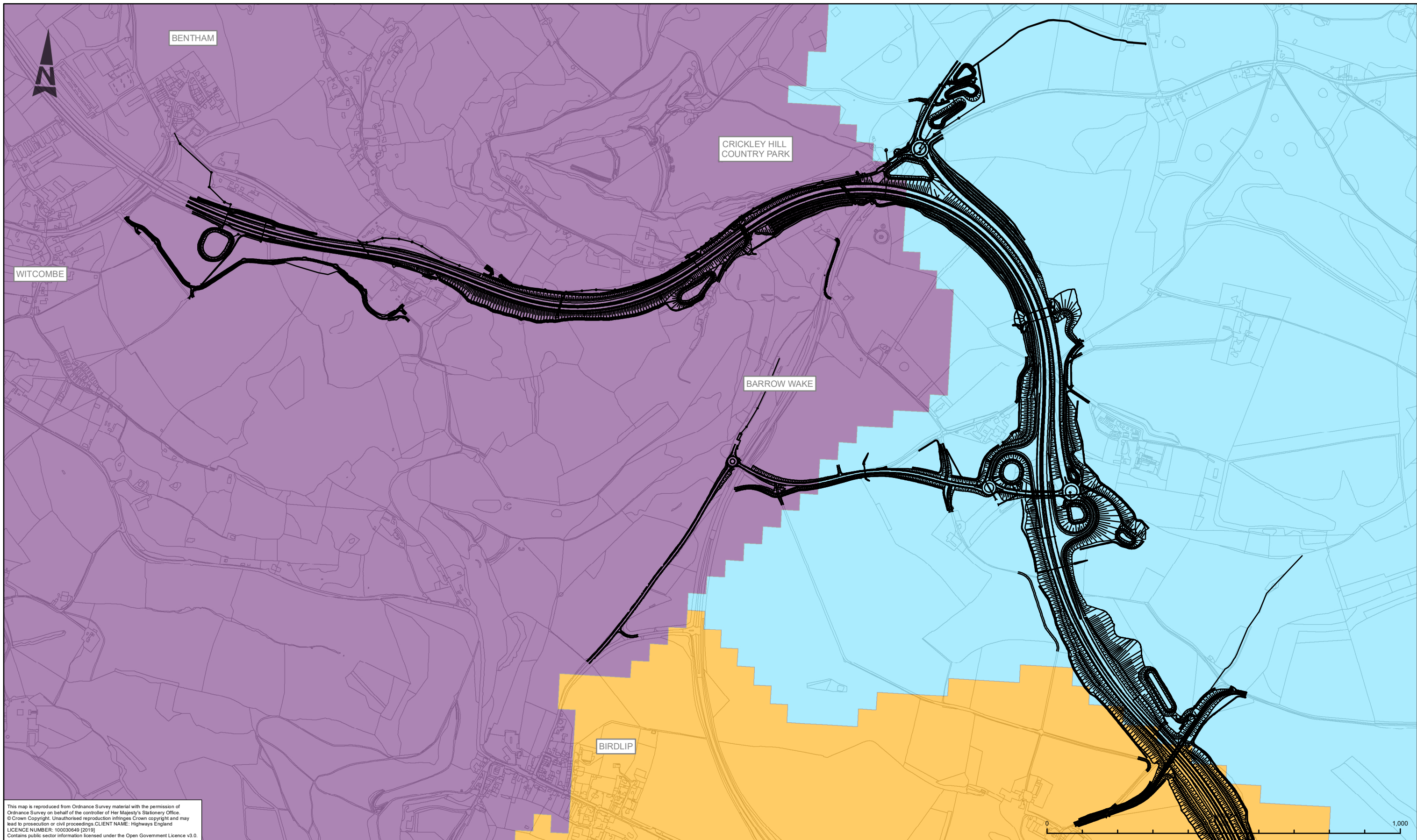
SECTION I - I'
CH. 5+100 BUSHLEY MUZZARD SSSI

NOTES
1. THIS SKETCH IS FOR ILLUSTRATIVE PURPOSES ONLY.
2. ONLY WRITTEN DIMENSIONS SHALL BE USED, DO NOT SCALE.

LEGEND	
	HIGH GROUNDWATER LEVEL
	AVERAGE GROUNDWATER LEVEL
	GENERAL GROUNDWATER FLOW DIRECTION
	LOCAL WATER FLOW DIRECTION
	SURFACE WATER BODY
	GROUNDWATER SPRING
	POTENTIAL TUF A FORMATION
	GROUNDWATER SEEPAGE
	BOULDER
	SAND AND/OR GRAVEL LENS
	LIMESTONE BED
	SITE OF SPECIAL SCIENTIFIC INTEREST

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 SIGNIFICANT RESIDUAL RISKS (REFERENCE SHALL ALSO BE MADE TO THE DESIGN HAZARD LOG).					
CONSTRUCTION (ENTER 'NONE' IF APPLICABLE)					
P01	10/02/20		JA	AL	JP
P02	10/02/20		JA	AL	JP
P03	09/09/20	INTERNAL REVIEW	AJ	AL	JP
MAINTENANCE / CLEANING (ENTER 'NONE' IF APPLICABLE)					
P04	15/09/20	P04	AJ	AL	JP
P05	24/09/20	CLIENT COMMENTS ADDRESSED	AJ	AL	JP
USE (ENTER 'NONE' IF APPLICABLE)					
P06	24/09/20	ISSUE FOR CLIENT SIGN OFF	AJ	AL	JP
P07	24/09/20	CLIENT COMMENTS ADDRESSED	AJ	AL	JP
DECOMMISSIONING / DEMOLITION (ENTER 'NONE' IF APPLICABLE)					
P08	25/09/20	ISSUE FOR CLIENT SIGN OFF	AJ	AL	JP
Rev.	Date	Description	By	Chk'd	App'd

S4	SUITABLE FOR STAGE APPROVAL	Project Title A417 MISSING LINK			
		Drawing Title FIGURE 13.8 HYDROGEOLOGY CROSS SECTIONS SECTION I - I' SHEET 9 OF 9			
		Scale NTS	By AJ	Checked AL	Approved JP
Original Size A3	Date 24/09/20	Date 24/09/20	Date 24/09/20	Date 25/09/20	
Drawing Number HE PIN Originator Volume HE551505 - ARP - EGT		Location Type Role Number X_XX_XXXX_X -SK - LE -000109		Revision P08	



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LEGEND

■	COTSWOLDS
■	SEVERN CORRIDOR
■	SEVERN VALE

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 SIGNIFICANT RESIDUAL RISKS (REFERENCE SHALL ALSO BE MADE IN THE DESIGN HAZARD LOG)

CONSTRUCTION	NONE
MAINTENANCE / CLEANING	NONE
USE	NONE
DECOMMISSIONING / DEMOLITION	NONE

Rev.	Date	Description	By	Chk'd	App'd	Auth'd
P06	21/09/20	CLIENT COMMENTS ADDRESSED	EB	AL-P	JP	SW

Suitability	Drawing Status
S4	SUITABLE FOR STAGE APPROVAL

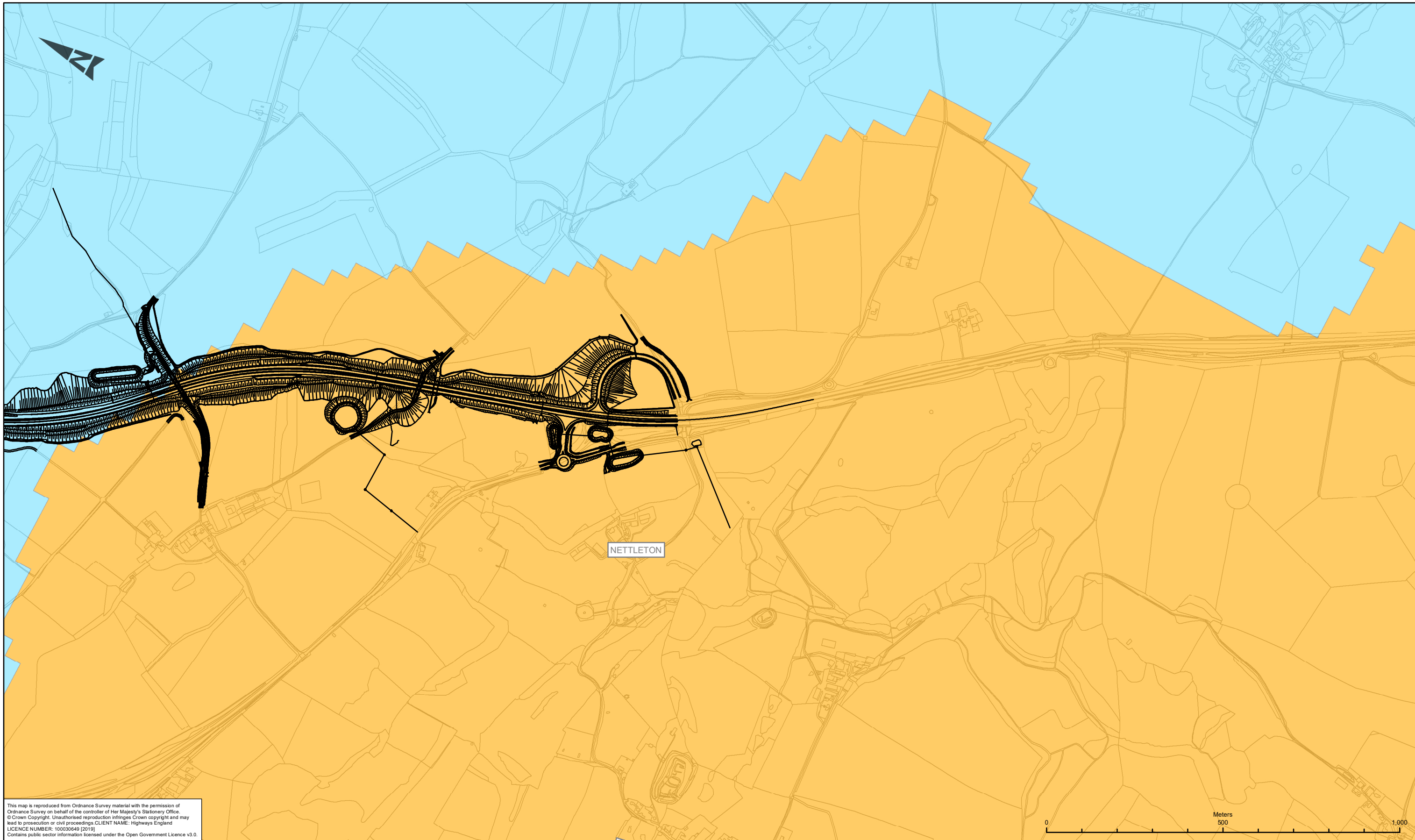
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

Project Title	A417 MISSING LINK
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Drawing Title	FIGURE 13.10 CATCHMENT ABSTRACTION MANAGEMENT STRATEGY AREAS SHEET 1 OF 2
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Scale	1:10,000	By	EB	Checked	AL-P	Approved	JP	Authorised	SW
Original Size	A3	Date	21/09/20	Date	21/09/20	Date	21/09/20	Date	21/09/20
Drawing Number	HE PIN	Originator	ARP	Volume	EWE	Revision			
	X_XX_XXXX_X		-DR-LE-000032						P06
	Location	Type	Role	Number					



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LEGEND	
	COTSWOLDS
	SEVERN VALE

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 SIGNIFICANT RESIDUAL RISKS (REFERENCE SHALL ALSO BE MADE IN THE DESIGN HAZARD LOG)	
CONSTRUCTION	NONE
MAINTENANCE / CLEANING	NONE
USE	NONE
DECOMMISSIONING / DEMOLITION	NONE

Rev.	Date	Description	By	Chk'd	App'd	Auth'd
P06	21/09/20	CLIENT COMMENTS ADDRESSED	EB	AL-P	JP	SW

Suitability: **S4** Drawing Status: **SUITABLE FOR STAGE APPROVAL**

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Project Title: A417 MISSING LINK					
Drawing Title: FIGURE 13.10 CATCHMENT ABSTRACTION MANAGEMENT STRATEGY AREAS SHEET 2 OF 2					
Scale: 1:10,000	By: EB	Checked: AL-P	Approved: JP	Authored: SW	
Original Size: A3	Date: 21/09/20	Date: 21/09/20	Date: 21/09/20	Date: 21/09/20	
Drawing Number: HE551505 - ARP - EWE	HE PIN: X_XX_XXXX_X	Originator: -DR-LE-000033	Volume: -	Revision: P06	
Location: X_XX_XXXX_X	Type: -DR-LE-000033	Role: -	Number: -		