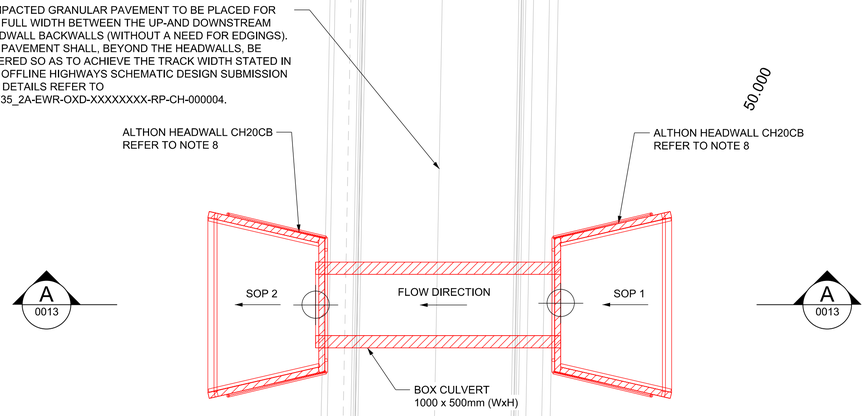
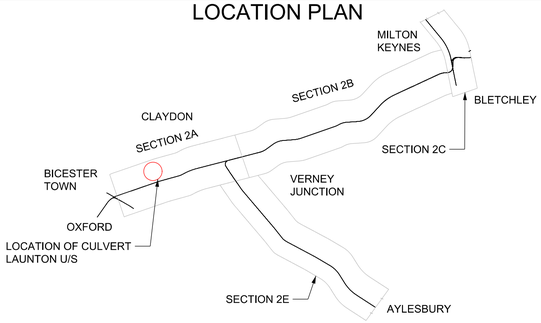
Revision & Version B01.02

Drawing Number 133735_2A-EWR-OXD-XX-DR-DC-000013



PLAN
SCALE : 1:50

LOCATION PLAN



SCALE : 1:250000

KEY

50.000	CHAINAGE (m)	SOP	SETTING OUT POINT
	PERMANENT LAND BOUNDARY		HAZARD TRIANGLE
	PROPOSED HEADWALL	HWL	HEADWATER LEVEL
	PROPOSED CULVERT	TWL	TAILWATER LEVEL
	EXISTING GROUND		
	GRANULAR BED AND SIDEFILL		
	PROPOSED RIVER REALIGNMENT DRAINAGE		

NOTES:

1. DO NOT SCALE FROM THIS DRAWING.

2. ALL LEVELS ARE IN mAOD. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS SHOWN OTHERWISE.

3. ALL CULVERTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE SPECIFICATION (REF: 133735-RW-EWR-XX-XX-SP-DC-000001).

4. ALL COORDINATES ARE BASED ON "EWR2 SNAKE GRID".

5. FOR HAZARDS REFER TO HAZARD LOG ASSESSMENT (REF:133735-EWR-LOG-SSD-000004).

6. BURIED SERVICES DATA IS PROVIDED FOR INFORMATION ONLY AND IS BASED UPON AVAILABLE RECORDS WHICH MAY BE INCOMPLETE. FOR BURIED SERVICES RECORDS REFER TO DOCUMENT (REF:133735_RW-EWR-EWL-XXXXXXXX-M2-U-010001). THE DELIVERY TEAM MUST NOT RELY ON THE ACCURACY OF THIS INFORMATION AND SHALL IDENTIFY THE LINE, LEVEL AND TYPE OF ALL SERVICES AND UNDERTAKE AN APPROPRIATELY DETAILED RISK ASSESSMENT BEFORE UNDERTAKING ANY WORKS THAT MAY CAUSE DAMAGE TO PROPERTY OR RISK TO HEALTH AND SAFETY.

7. POST MOUNTED CULVERT IDENTIFICATION PLATES TO BE INSTALLED AT THE FRONT FACE OF EACH HEADWALL. FOR INSTALLATION INSTRUCTIONS REFER TO ANCILLARY CIVILS SUBMISSION.

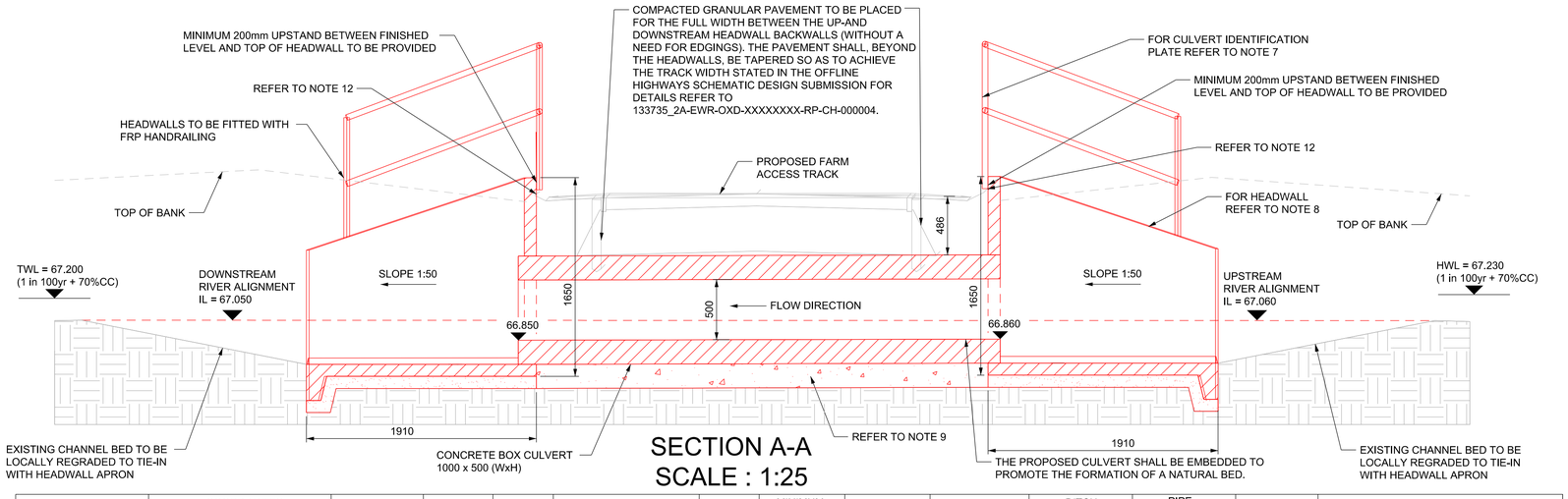
8. HEADWALLS ARE TO BE ALTHON CH20CB WITH 1:3 WINGWALL SLOPE AND 1650 BACKWALL HEIGHT OR SIMILAR NETWORK RAIL APPROVED PRODUCT. HEADWALL TO BE BEDDED ON MINIMUM 150mm DR-W MASS CONCRETE IN ACCORDANCE WITH THE EWR CONCRETE SPECIFICATION 133735_RW-EWR-XX-XX-SP-Z-000001 WITH A NOMINAL 1:50 FALL ACROSS THE APRON. FOR DETAILS REFER TO HEADWALL STANDARD DETAIL DRAWING (REF: 133735-RW-EWR-XX-XX-DR-DC-050022).

9. BOX CULVERT BEDDING TO BE PROVIDED IN ACCORDANCE WITH SECTION V OF STANDARD DETAIL DRAWING (REF: 13375_RW-EWR-XX-XX-DR-DC-050023). MINIMUM TRENCH WIDTH OF 2.3m TO BE PROVIDED.

10.TO INFORM TEMPORARY REQUIREMENTS INCOMING FLOWS FOR THE 1 IN 2 YEAR AND 1 IN 100 YEAR DESIGN STORM EVENTS ARE 80 l/s AND 83 l/s RESPECTIVELY

11. BOX CULVERT SHALL BE DESIGNED TO WITHSTAND FIELD LOADING IN ACCORDANCE WITH DESIGN MANUAL FOR ROADS AND BRIDGES CD 533 AND BS 9295:2010.

12. EARTHWORKS SHALL BE LOCALLY REGRADED ON SITE AT THE HEADWALL INTERFACE.



SECTION A-A
SCALE : 1:25

CULVERT REFERENCE:	COORDINATES: # UPSTREAM SOP 1	COORDINATES: # DOWNSTREAM SOP 2	CULVERT TYPE / MATERIAL:	BOX INTERNAL HEIGHT (mm):	BOX INTERNAL WIDTH (mm):	WALL THICKNESS (mm):	LENGTH (m):	MINIMUM DEPTH OF COVER BELOW ROAD (m):	GRADIENT OF CULVERT (1 in X):	HEADWALL TYPE:	DITCH INVERT LEVEL (mAOD): U/S	DITCH INVERT LEVEL (mAOD): D/S	PIPE INVERT LEVEL (mAOD): U/S	PIPE INVERT LEVEL (mAOD): D/S	DEPTH OF EMBEDMENT (mm):	DETAILS OF SCOUR PROTECTION:
EWR STATION ROAD LAUNTON U/S	X: 178864.987 Y: 142380.388 Z: 66.860	X: 178863.431 Y: 142376.704 Z: 66.850	PRECAST CONCRETE BOX CULVERT	500	1000	200 (THICKNESS AND REINFORCEMENT DETAIL TO BE CONFIRMED BY THE MANUFACTURER)	4	0.486	400	ALTHON CH20CB WINGWALL SLOPE 1:3	67.060	67.050	66.860	66.850	200	SCOUR PROTECTION NOT REQUIRED

TABLE 1 : SUMMARY OF THE CULVERT DETAILS

Safety, Health and Environmental Information

The works are to be undertaken by a competent contractor, and therefore only exceptional risks relating to the works associated with this drawing are identified below. For further details and proposed safety measures refer "EWR Phase 2 Hazard Log Working Copy" eB doc. Ref: 133735-EWR-LOG-SSD-000004.

ID	Hazard description
-	-

⚠ INDICATES PROJECT RISKS (EWR2-DRIS- .....)
⚠ INDICATES H&S RISKS (EWR2-HAZ- .....)

0 0.5 1.0 1.5 2.0 2.5m
SCALE 1:25

0 1 2 3 4 5m
SCALE 1:50

Rev	Date	Description of Revisions	Dsnd	Chkd	Appr
B01	24/09/20	Shared for coordination	M.S.	M.S.	A.R.

Status: SHARED - for IDC Review
Suitability: S3

EWR Alliance
Connecting People

Project
East West Rail
(Western Section)
Phase 2

Drawing Title
Civil Engineering Culvert Design
Section 2A2 Culvert -
EWR Station Road Launton U/S
Long Section & General Arrangement

Designed	Mohd Shahid	Signed	M. Shahid	Date	16/09/20
Drawn	Muthusamy M Kannan	Signed	M. M. Kannan	Date	24/06/20
Checked	Mark Stevens	Signed	M. Stevens	Date	17/09/20
Approved	Adrian Rose	Signed	A. Rose	Date	24/09/20

Scale(s): AS SHOWN
ELR - Project Chainage (Miles Yards): OXD - N/A @ 17m 0156y
Design Package Risk Classification: Normal
Sheet: 1 of 1
Alternative Reference:
Revision: B01
Drawing Number: 133735_2A-EWR-OXD-XX-DR-DC-000013

Sheet Size A1 594 x 841