Approved Scheme

- 1 At the planning application stage, the ESCC Senior Rights of Way Officer and the Ramblers Association were consulted over the means of the reinstated railway crossing footpath S&R 31.
- 2 Following consultation, RVR proposed that the footpath would be diverted using a new bridge No 12 to be built over the Mill Stream and under the railway. See email chain attached to this note at Appendix A. It is notable that, in his email of 24 January 2017, the ESCC Senior Rights of Way Officer gave his opinion that the minor change proposed to the line of the footpath where it would cross the railway would not, in his view, warrant a diversion order. This line remains unchanged; however, the powers conferred by article 11 (Stopping up of street) of the draft Order will provide certainty on this point and obviate the need for any footpath diversion order under the Town and Country Planning Act. The drawing appended to that email shows the diversion by means of an underbridge (see drawing attached to Annex A.)
- In its grant of planning permission Rother DC included in Condition 2 a list of approved drawings which. included "Drawing no. Plan B 2 dated October 2016" (Decision Notice page 1). This plan shows the footpath being diverted under Bridge No 12 (attached at Appendix 1). The plan is approved for the purpose of the principle of the restoration of the railway line and bridge in this location and is subject to approval of detailed design. This will involve ESCC in respect of the highway and the Environment Agency in respect of the watercourse as well as the local planning authority.
- 4 It is also worth noting that article 9 (power to alter layout etc. of streets) of the draft Order provides general powers to alter the level or increase the width of any footpath within the Order limits with the consent of ESCC.
- The list of approved drawings also includes "Application for Planning Permission Vol II: ref Engineering/GSC/618 Vol II" (Decision Notice page 2). Volume II was submitted to the Rother Planning Officer electronically on 30 June 2014 with two hard copies delivered on 3 July 2014.
- The set of drawing in Volume II as delivered includes Drawing No RVR UB12 001. (Bridge 12) Titled "MILL STREAM BRIDGE SITE PLAN" and dated 10 October 2013 (attached at Appendix 2). The drawing is annotated with a footpath drawn under the bridge and a comment "FP S&R 31 2.3m x 2.3m per DMRB Vol 6 Sec 3 Pt 1 TD 36/93" on the Elevation.
- 7 The approved profile drawing no. RVR-G-001 Rev C dated 13 June 2016 (attached at Appendix 3), shows the rail level on the east side of A21 (Ch. 1130) as 11.375 and the level at the centre of bridge 12 (Ch. 1205) as 11.230.

Changes to meet concerns over footpath under Bridge 12

The detail of the footpath under the bridge was refined and re-submitted to Rother DC on 30 January 2017. Drawing RVR – UB12 – 001 rev 2 (attached at Appendix 4) shows the footpath diversion route with a note: "FP S&R 31 Proposed diversion 2m wide with

max 8% gradient". It also shows the footpath under the bridge with a note: "FP S&R 31 1.5m wide x 2.1m high per www.fieldfare.org.uk" The rail level at the centre of the bridge is 11.230m AOD. No comment was received from Rother DC and the details remain to be resolved when the bridge detail drawings are submitted to Rother DC for approval following review by EA.

Changes to meet Condition 20 Highway England Departures from Standard

- 9 Following agreement with Highways England on the re-profiling of the A21 for the Level Crossing, the rail level on the east side of the A21 was aligned with the east carriageway level. Thus, the profile of the rail across the A21 was changed from "level" to 1:150 up. The west side of the carriageway is to be raised to meet the revised rail level.
- 10 As per Departure Drawing 239025-ARP-XX-XX-DR-CH-0010_Long_Sec. (attached at Appendix 5), the track crosses at A21 Ch. 56.0 and the A21 centreline level is 11.475m AOD.
- 11 As per Departure Drawing 239025-ARP-XX-XX-DR-CH-0022 (attached at Appendix 6) section at chainage = 55.000 shows west channel 11.444m AOD and east channel 11.507m AOD (gradient 1:150).
- 12 The design worked up with Highways England means that the railway now crosses the road at a 1:150 gradient rising eastwards to meet the East channel level as shown on drawing RVR-S-001b 2021-07-10 (attached at Appendix 7) at 11.507m AOD.
- 13 From the A21 east channel, the rail level continues to rise as it passes through a vertical crest curve of length 10m (shown as a "\" mark above the track) on drawing RVR-S-001b 2021-07-10 (attached at Appendix 7), attaining a level of 11.559m AOD. This is 0.189m higher than the profile level of 11.370m AOD at this point shown on the approved profile drawing at Appendix 3.

Changes to meet concerns over flooding of Footpath 31 under Bridge 12

14 An option to reduce frequency of flooding, should ESCC consider this an issue at detailed design, would be to provide a dual level path. If the rail level at Bridge 12 were to be retained at 11.230m AOD, the proposed lower footpath would need to be at 8.489m AOD to attain a "Fieldfare" compliant headroom of 2.1m. Capita advises that the frequency of flooding to the path at this level would be 3 to 4 times a year on average rather than the existing frequency of 1 to 2 times a year. However, by maintaining the rail level east of the A21 at a constant 11.559m AOD until the track crosses Bridge 12, rather than descending at 1:500, the additional 0.329m gained at Bridge 12 makes it possible to provide additional headroom over the footpath. With the footpath level at 8.62m AOD (2.3 m headroom), the lower footpath would flood 2 to 3 times a year on average but an upper ledge path (at 9.12m AOD) with headroom of 1.8 m, would flood on average 1 to 2 times year, which is the same as the frequency of flooding to the existing footpath.

15 Starting the gradient of 1:100 at Ch. 1220, rather than Ch.1280, means that the approved levels are reached to the west of Bridge (culvert)14 and, by Bridge 14, the level is 10.959 m AOD (i.e. lower than shown on the profile). This reduces the height of the accommodation level crossing and its approach ramps in the fields either side. The profile then remains unchanged through Moat Farm to Junction Road.

Blockage

- 16 Concern has been raised by Mr Patmore that handrails within Bridge 12 could collect debris and block the free passage of flood water. Bridge 12 is located on the Mill Stream approximately 90m downstream of the A21. The proposed Mill Stream bridge is much larger than the A21 Mill Stream culvert. Upstream of the A21 there is a further culvert and pumping station. Capita has concluded that it is unlikely any significant debris will reach the Mill Stream bridge from upstream of the A21. The 90m between the A21 and the Mill Stream bridge includes some trees.
- 17 There is a possibility that debris from these could enter the watercourse. However, Bridge 12 has a large span and blockage from large pieces of debris is unlikely. Smaller debris may be caught up on the handrails. As the handrails are broadly parallel to the river rather than across it, (as they would be for a footbridge over a watercourse) the impact of any material caught on the handrails is less likely to seriously impede flows. Based on a preliminary assessment, risk of blockage is considered low. This was discussed and agreed between Mrs Callaway of Capita and Mr Patmore of WSP today, 27 July 2021.

Flood Modelling

- 18 The flood modelling has used the top of rail level, as shown on the 2016 gradient profile drawing (RVR G 001 C), to set the top elevation of the embankment in the model.
- 19 At the Mill Stream crossing the flood level predicted by the model is 10.1m AOD in the 1% AEP with 105% allowance for climate change design flood event. In the gradient profile drawing (RVR G 001 C), the proposed Mill Stream bridge soffit is shown as 10.563m AOD and the rail level is set at 11.23m AOD. These are both above the maximum predicted flood level in the 1% AEP with 105% allowance for climate change design flood event.
- 20 As no flood water is predicted to overtop the embankment at this location, if the rail level and embankment are raised to 11.559m AOD as shown in drawing RVR-S-001b 2021-07-10 the revised section, see paragraph 13 above (attached at Appendix 7), the additional height will not be obstructing any flow over the railway. There may be a small increase in the volume of material added to the floodplain below the 1% AEP climate change flood level due to the potential adjustments required to the embankment slope to accommodate the higher rail level. This would be mitigated through floodplain storage compensation or adjustments within the detailed design of the embankment.
- 21 The revised rail level would be 11.559m AOD at the Mill Stream. Drawing RVR-S-001b 2021-07-10 shows how the proposed rail level would return to the previously proposed

level (approx. 11.1m AOD) to the west of bridge 14. At this location the predicted flood level of 9.98m AOD (1% AEP with 105% allowance for climate change design flood event) is also below the top of the embankment, so for the short section where the proposed rail levels would be adjusted the additional height will not be obstructing any flow over the railway. As such there would be no significant impact on predicted flood levels and the conclusions of the 2021 Flood Risk Assessment would not change.

Implications

- 22 In order to comply with the designs worked up with Highways England it will be necessary to vary the approved planning drawings which is both contemplated by, and would be an output of, compliance with planning condition 20 (level crossing design and departures from standard).
- 23 Although we have been concerned with Bridge No. 12, it is worth explaining that the designs also require the embankment to the west of A21 to be raised slightly from 11.383m AOD to 11.444m AOD by 0.061m (an average of 0.030m between NBS and A21) with a potential increase in embankment volume. This is counterbalanced by the removal of the signal cabin and the use of reinforced earth (vertical sides) in the embankment adjacent to A21. Having consulted with Capita, it is not anticipated that the slight increase in the height of the embankment would have an impact on the conclusions of the FRA or flood compensation volumes as any potential increase in volume would be straightforward to design out at the detailed design stage.
- 24 The embankment to the east of A21 is raised by 0.130m from 11.375m AOD to 11.507m AOD. The small potential increase in embankment volume between A21 and Bridge 12 is counterbalanced in part by the use of reinforced earth (vertical sides) in the embankment adjacent to A21 and, any increase in embankment volume would be designed out.
- 25 Raising the rail level at Bridge 12 from 11.230m AOD to 11.559m AOD by 0.329m will increase the volume of the embankment from A21 to a point to east of Bridge 12. This can be counterbalanced by more extensive use of a reinforced earth embankment. To the east of Bridge 12, the 1 in 100 descending gradient begins sooner, at Ch. 1232 rather than Ch. 1280, thereby marginally reducing the height of embankment and volume of fill material over that length. By these means, the marginal increase in the height of the embankment at this location will not impact on flood risk or flood compensation.

Gardner Crawley 27 July 2021

From: Mark Cathcart [mailto: Sent: 27 January 2017 14:33

To: David Gillett (

Subject: FW: Rother planning: RR/2014/1608/P Rother Valley Railway.

Dear David,

Comments from ESCC Rights of Way as discussed. Any update you can provide would be appreciated

Regards, Mark

Mark Cathcart BSc MA MRTPI

Planning Officer Rother District Council Bexhill on Sea

East Sussex

From: Matthew Harper [

Sent: 24 January 2017 13:47

To: Mark Cathcart

Subject: FW: Rother planning: RR/2014/1608/P Rother Valley Railway.

Hello Mark,

I have had to revive my thoughts on this, not having had anything since 2014.

Please see my comments below in respect to the three affected paths:

Bridleway 36b

Following my correspondence to you in August 2014 I met with David Gillett at our offices. David then met with Tamara Strapp, a local riding representative (and I believe at that time also a Parish Council representative). The correspondence attached followed that meeting and is the last I have on this issue.

As you can see David confirmed various amendments to the design for the bridleway crossing and suggested that a revised drawing would be forwarded. I can't recall or find any record of having received the revised drawing.

As you can see was additionally requested that the gates at the crossing to be two way opening. There was also a suggestion as I recall of agreement to the crossing gates being maintained open outside of the line operating times, to limit the inconvenience to bridleway users. If these proposals were adopted ESCC would be likely to accept the crossing design.

Footpath 31

We will need more information on the affect on this path too. I don't think we have been provided with any detailed drawings to show the proposed height of the bridge relative to the path as yet.

It had been assumed that a diversion would be needed, but that may not be necessary. There is a variance between the walked and recorded line of the path. The plan attached ('Footpath 31 (bridge 12)') shows the recorded line overlaid on the application drawing 'B - 2 Rev B Title Plans 3'. The change to the recorded line of the path would effectively be confined to the path being re-angled very slightly where it runs beneath the bridge. This would really not warrant a diversion order in my view.

I am happy of course to discuss the path issues further with representatives of the Railway, to bring things up to date and clarifying our position.

Regards

Matthew

Matthew Harper Senior Rights of Way Officer East Sussex County Council

From: Mark Cathcart [

Sent: 23 January 2017 14:40

To: Matthew Harper

Subject: Rother planning: RR/2014/1608/P Rother Valley Railway.

Good afternoon Matthew,

ESCC Rights of Way Team were consulted some time ago on the above mentioned planning application which is still outstanding. I think that the last email I received from you was dated the 15 August 2014, in which you raised a few footpath related concerns. We are now ready to move the application towards a decision and I would be grateful if you could possible let me know whether you have had further contact with representatives of the Rother Valley Railway with a view towards addressing any of the issues.

Regards, Mark

Mark Cathcart BSc MA MRTPI

Planning Officer Rother District Council Bexhill on Sea East Sussex



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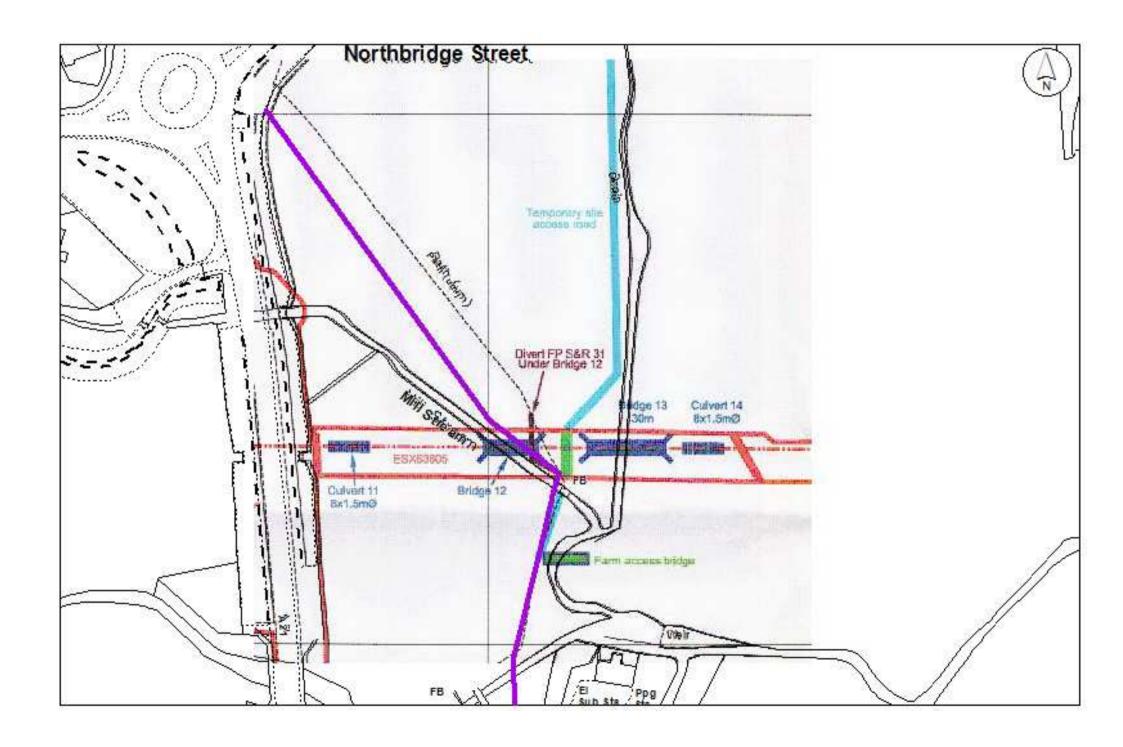
Although East Sussex County Council has taken steps to ensure that this e-mail and any attachments are virus free, we can take no responsibility

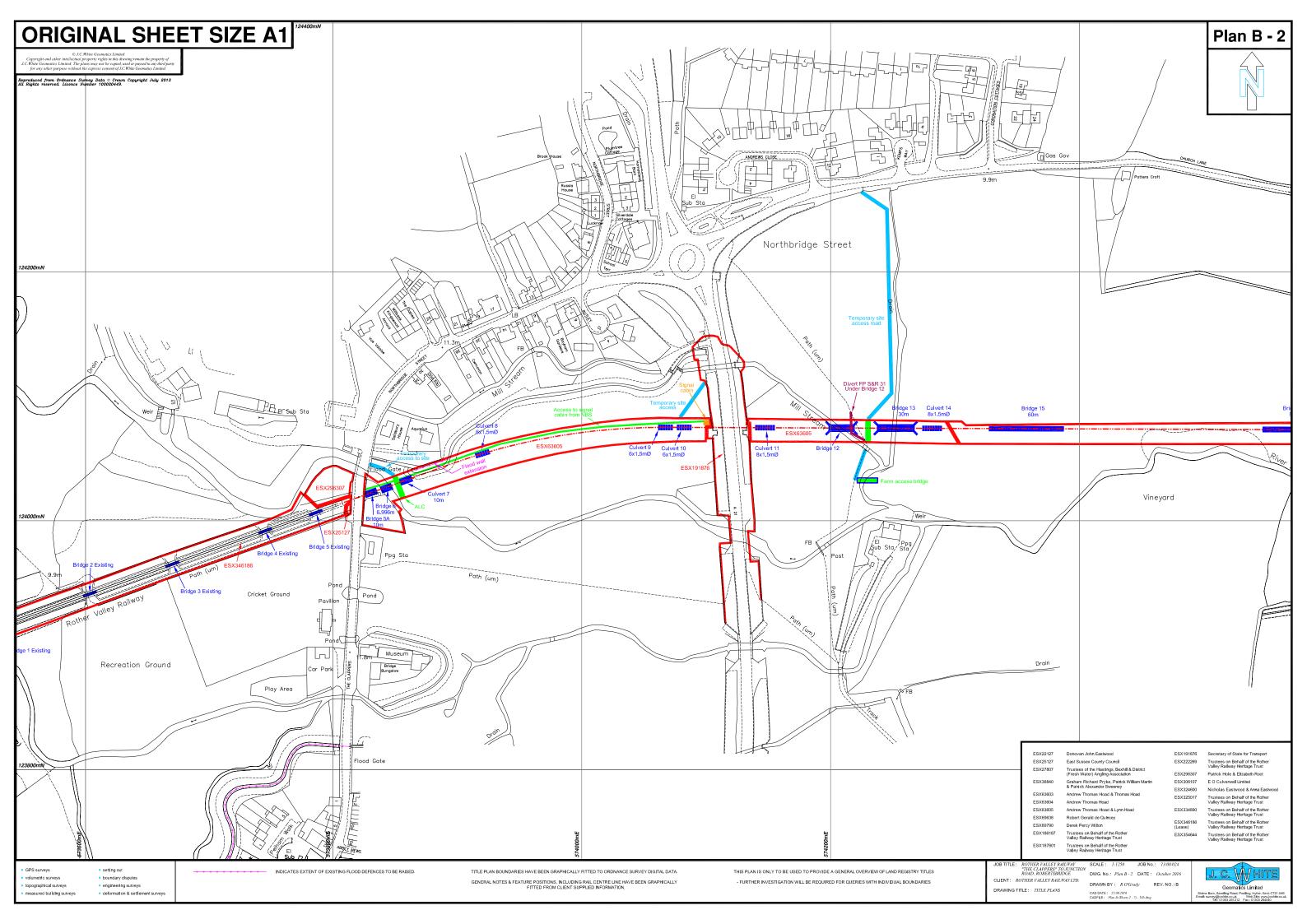
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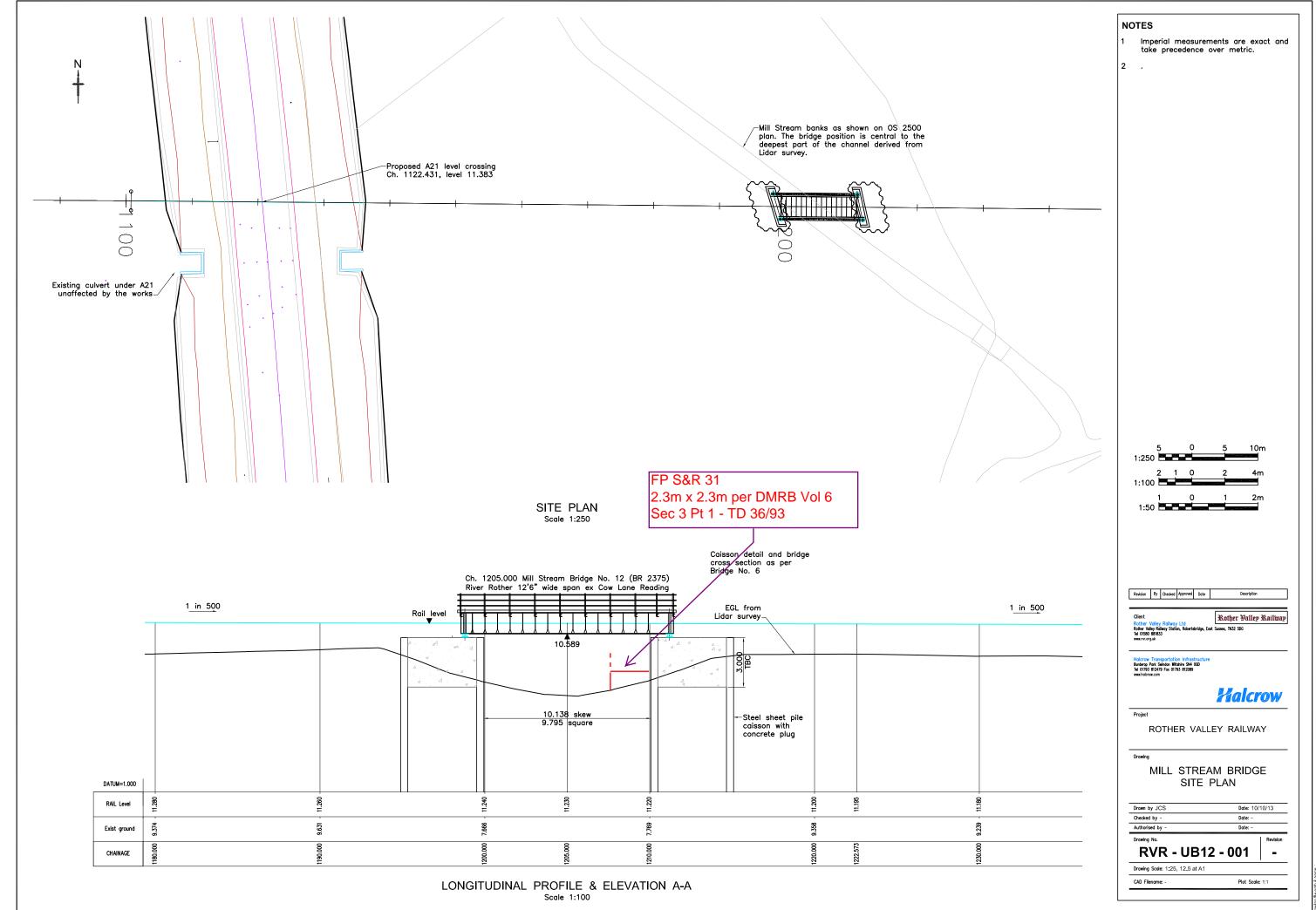
You can visit our website at http://www.eastsussex.gov.uk



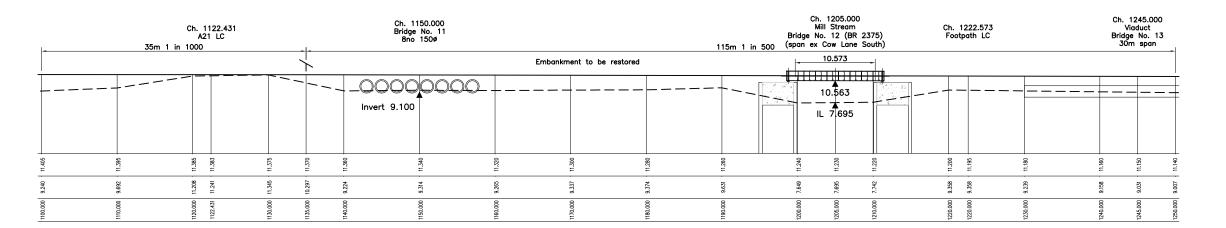
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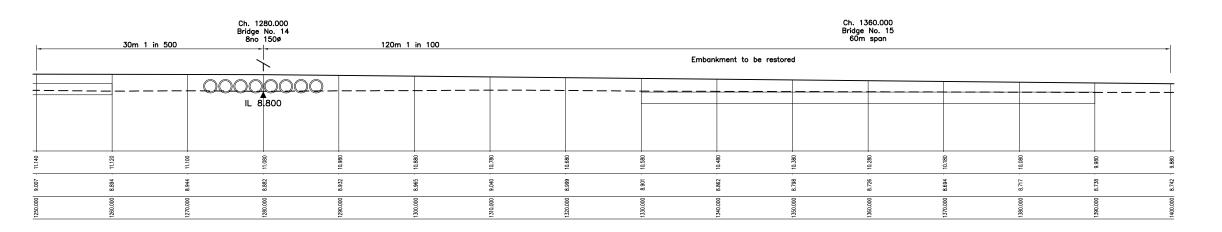






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9.727	9.657	9.639		9.596	9.482	9.449	9.398	9.372	9.359	9.292	9.310	9.277	9.298	9.256	9.262	9.288	9.240
950.000	960.000	970.000	975.000	980.000	990.000	000:000	010.000	020.000	030.000	040.000	050.000	000:000	070.000	080.000	085.000	000.000	100.000





NOTES

- The existing ground level is derived by interpolation from a Lidar survey with spot heights at 2.0m intervals.
- Ditch levels, where not identified by Lidar, are to be confirmed on site.
- 3 Pipe culverts are shown as a minimum 750mm internal diameter to enable personnel access for maintenance. Rail level is a minimum 1.0m above the crown of the pipe.
- 4 Embankment side slopes are shown as 1 in 3, commencing ?m below rail level.

С	JCS	-	-	13.06.16	Revised after flood modelling
В	JCS	-	-	10.03.14	Revised after flood risk assessment
A	JCS	-	-	03.06.13	Cow Lane Bridge elevation revised
Revision	Ву	Checked	Approved	Date	Description

Rother Valley Railway

Rother Valley Railway Ltd
Rother Valley Railway Station, Robertsbridge, East Sussex, TN32 5DG
Tel 01580 881833
*****REALTHOUGH.**

Halcrow Transportation Infrastructu Burderop Park Swindon Wiltshire SN4 000 Tel 01793 812479 Fax 01793 812089 www.holcrow.com

Halcrow

Project

ROTHER VALLEY RAILWAY

Drawing

GRADIENT PROFILE CH 800-1400

Drawing No.	Revision
Authorised by -	Date: -
Checked by -	Date: -
Drawn by JCS	Date: 13/06/16

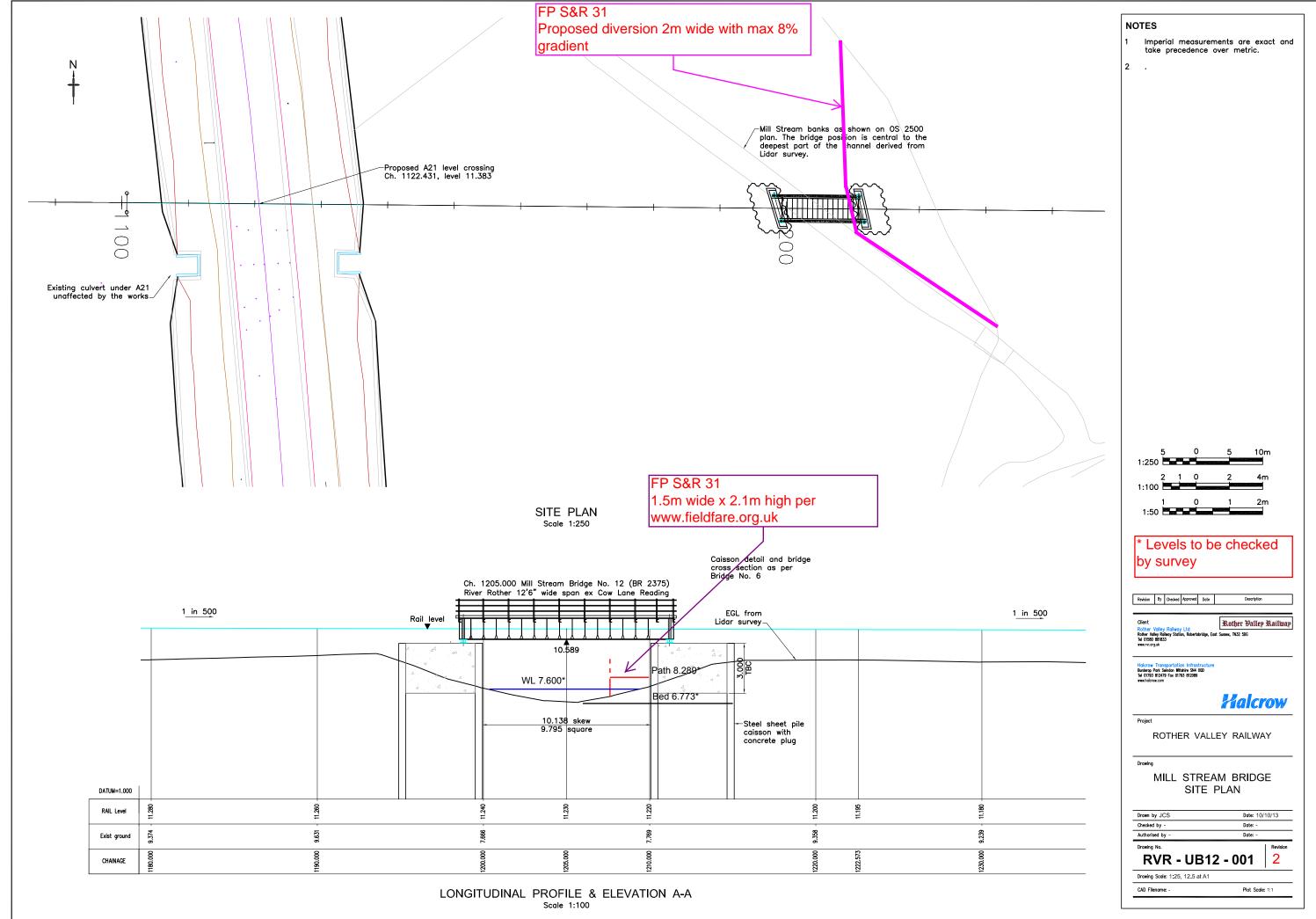
RVR - G - 001

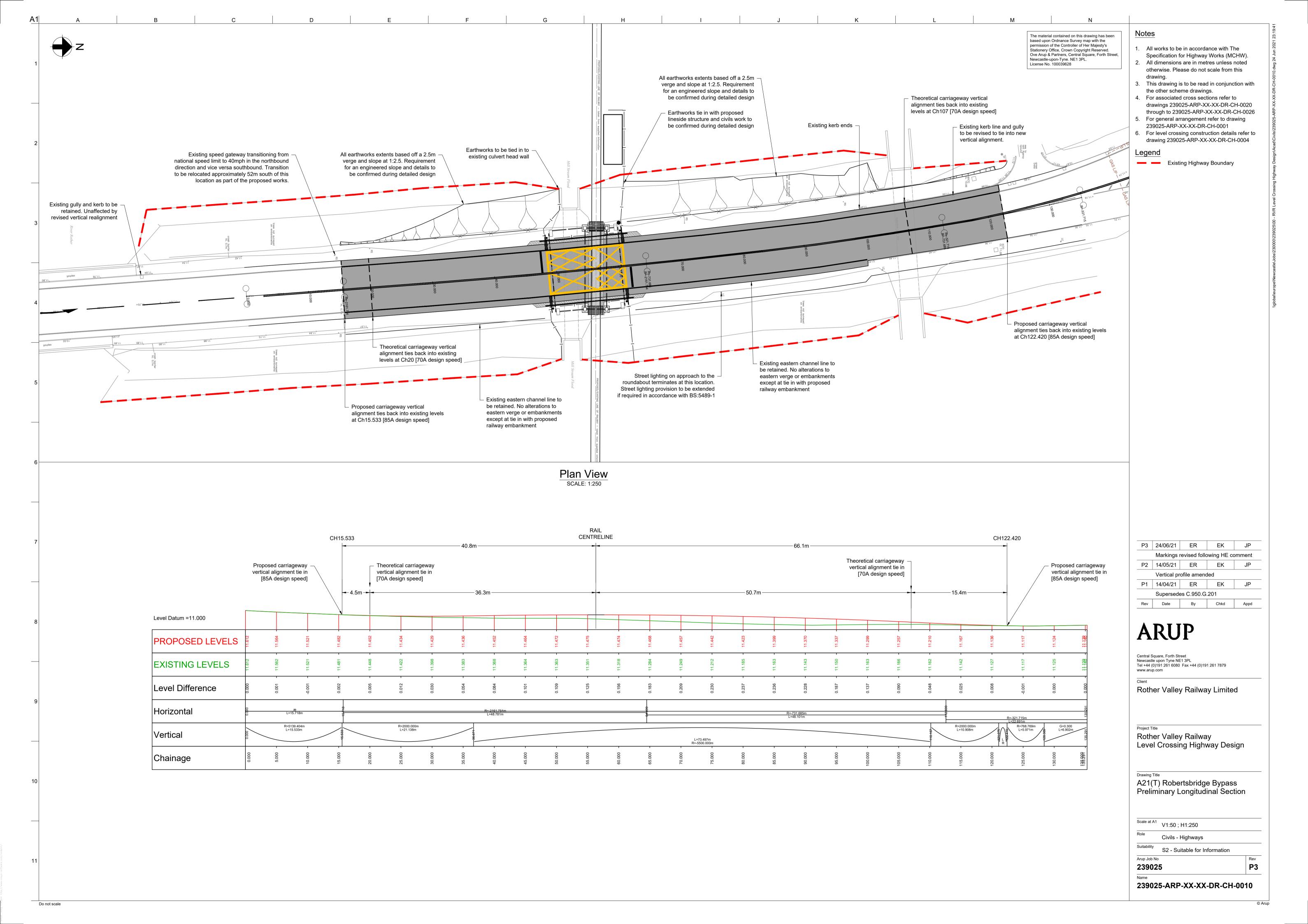
owing Scale: 1:250 at A1

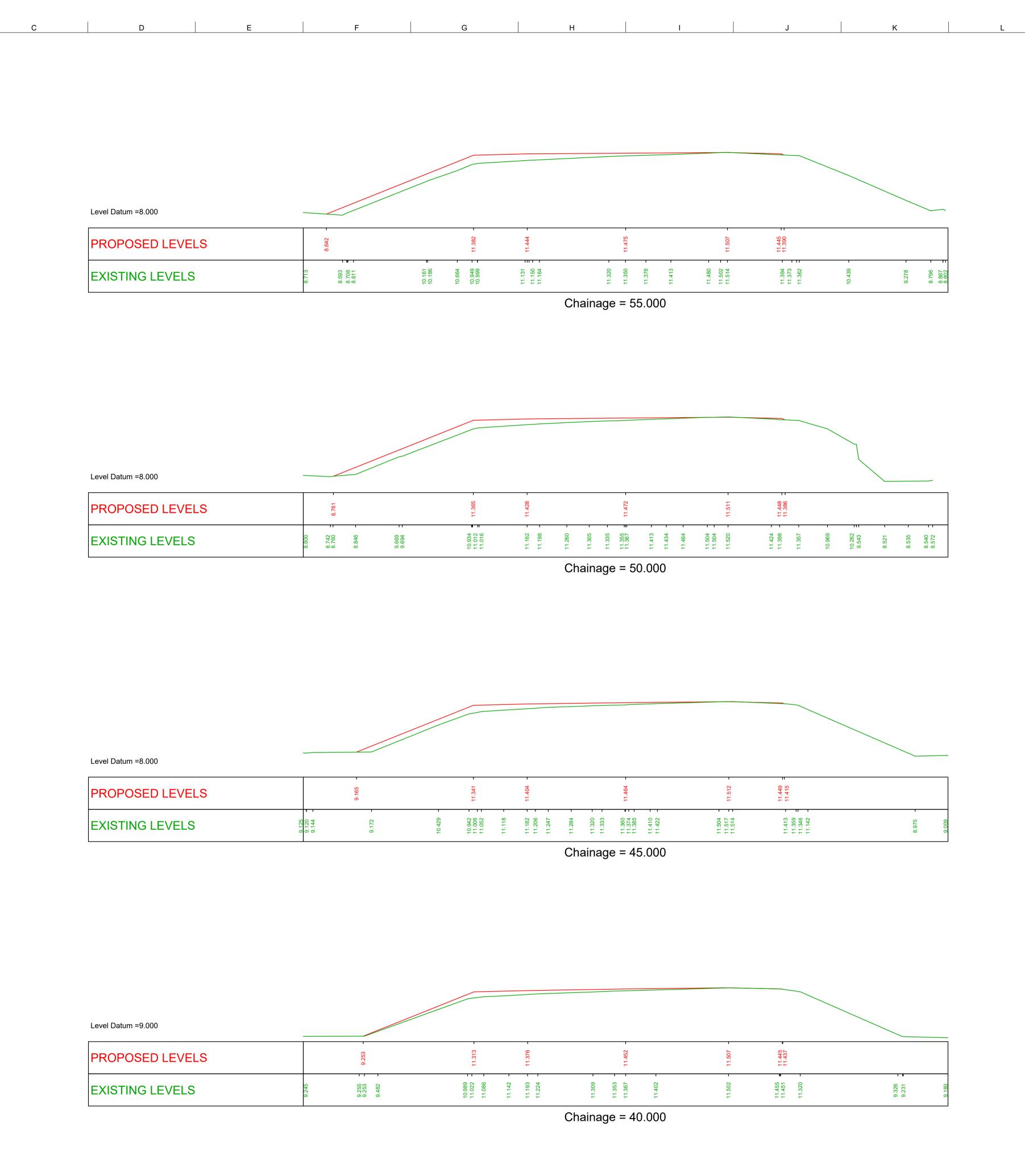
ne: - Plot Scale: 1:1

FILE STORAGE PATH = ORIGINATING DEI
REE STORAGE PATH = PLOT DA

C







Notes

- 1. All works to be in accordance with The
- Specification for Highway Works (MCHW).

 2. All dimensions are in metres unless noted otherwise. Please do not scale from this
- This drawing is to be read in conjunction with the other scheme drawings.
- For associated longitudinal sections refer to drawings 239025-ARP-XX-XX-DR-CH-0010
 For level crossing construction details refer to drawing 239025-ARP-XX-XX-DR-CH-0004

 P2
 14/05/21
 ER
 EK
 JP

 Vertical profile amended

 P1
 14/04/21
 ER
 EK
 JP

 Supersedes C.950.G.212

 Rev
 Date
 By
 Chkd
 Appd

ARUP

Central Square, Forth Street Newcastle upon Tyne NE1 3PL Tel +44 (0)191 261 6080 Fax +44 (0)191 261 7879 www.arup.com

ent

Rother Valley Railway Limited

Project Title

Rother Valley Railway Level Crossing Highway Design

Drawing Title

Scale at A1 1:100

A21(T) Robertsbridge Bypass Preliminary Cross Sections Sheet 3 of 7

Civils - Highways

Suitability
S2 - Suitable for Information

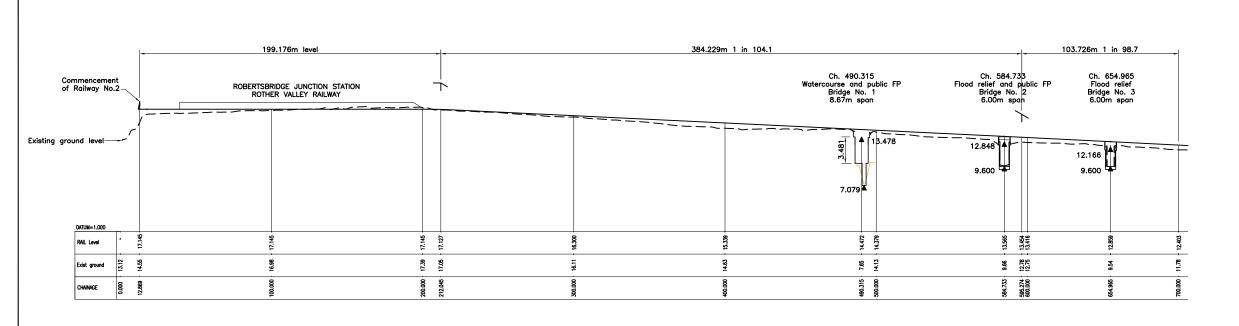
Arup Job No

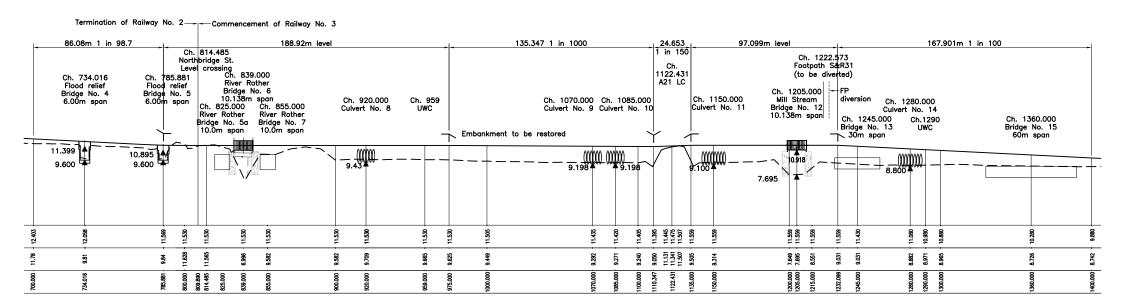
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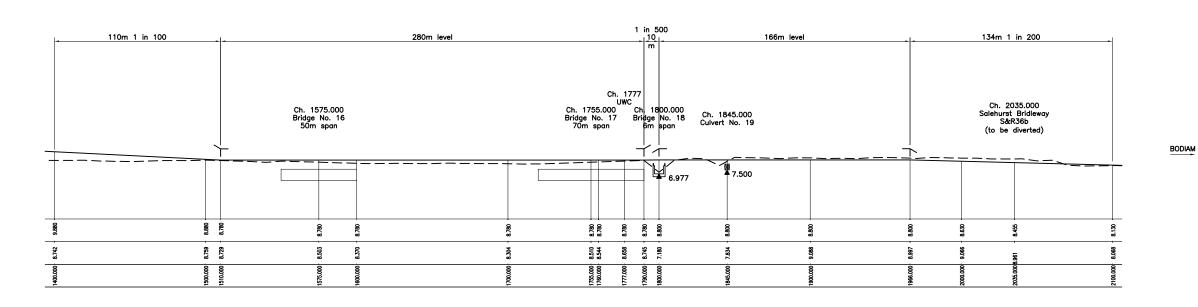
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P2







SECTION RAILWAY NO. 2 SECTION RAILWAY No. 3 0 250 250 500 1:1250 0 5 10m 1:250

SHEET 9

A	JCS	-	-	27.08.20	A21 LC gradient amended, UWCs added
Revision	Ву	Checked	Approved	Date	Description

Client	Rother Valley Railway
Rother Valley Railway Ltd Rother Valley Railway Station, Robertsbridge, East Tel 01580 881833 www.rx.org.uk	, ,

ROTHER VALLEY RAILWAY

SECTIONS CH 0-2100 RAILWAY No. 2 (PART) RAILWAY No. 3 (PART)

Drawing No.	Revision
Authorised by -	Date: -
Checked by -	Date: -
Drawn by JCS	Date: 10/07/2021

RVR - S - 001 В

Drawing Scale: 1:250 V, 1 : 1250 H

Plot Scale: 1:1