

**Rebuttal Proof of Evidence of Terry Seymour
(Drainage and Flood Risk)**

for the Residential Development at

Land North of Reading Road,

Arborfield

Prepared for Dandara Southern Limited and Elstree Land

LPA Reference: 243099

PINS Reference: APP/X0360/W/25/3371069

Prepared by
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I.0 Introduction

- I.1. This Rebuttal Proof of Evidence (Rebuttal) has been prepared in response to drainage and flood risk matters raised in the Proof of Evidence produced by Ms. Joanna Carter (CD14.01) and Mr. Chris Hannington (CD14.04). I have set out my experience, qualification and declaration in my main Proof.
- I.2. This is a rebuttal to address points made in the LPA's evidence. I have not set out every point I disagree with and therefore where I do not refer to parts of the LPA's evidence in this rebuttal this should not be taken to infer my agreement to their evidence.
- I.3. This Rebuttal provides the following sub-headings topics to assist the Inspector:
 - Planning - Drainage and Flood Risk Matters
 - Arboriculture and Landscape – Flood Risk and Drainage Matters

2.0 Planning - Drainage and Flood Risk Matters

- 2.1 The LPA through Ms Carters' Proof of Evidence (CD14.01) has made a number of points with respects to the drainage and flood risk which I do not agree with and/or can provide further responses to.
- 2.2 Paragraphs 4.11 to 4.16 appear seek to infer that the site is classified as being at a High Risk of Groundwater flooding, this being based on a recorded groundwater level at one of the groundwater monitoring points at being 0.01m below existing ground. I disagree that the site is classified as being at a high risk of groundwater flooding for the following reasons:
- 2.2.1 The LPA's own Strategic Flood Risk Assessment (SFRA) has identified this site as falling within an area of low risk of groundwater flooding from the EA's Areas Susceptible to Groundwater Flooding map as indicated in figure 11 within the 2026 FRA (CD17.06)
- 2.2.2 The SFRA also provides an extract from the JBA Groundwater Emergence Map indicated in figure 12 within the 2026 FRA (CD17.06) and indicates a localised area within the site (along the western main river) as having a risk of groundwater emergence between 0.025 to 0.5m below the surface. This would correlate with the highest recorded groundwater reading of 0.01m below the surface, at one of the eight groundwater monitoring wells across the site, this does not change the overall risk of groundwater flooding to the site which remains as low per the EA Groundwater Flood Risk Maps and the LPA's own SFRA.
- 2.2.3 Whilst groundwater is acknowledged as being shallow on this site, this is typical of sites underlain by London Clay bedrock formations.
- 2.2.4 Paragraph 2.4 of the Wokingham Borough Council Sequential and Exception Test (September 2024) notes: *"With regard to groundwater, sites with less than 10% of their area at a level of between 0 and 0.025m below ground or with less than 75% of their area at a level of between 0.025m and 0.5m below ground have been considered low risk"*. As indicated in Figure 12 within the 2026 FRA (CD17.06) the site has significantly less of its area at a level of between 0.025m and 0.5m below ground.
- 2.2.5 In general, the risk of groundwater flooding is a result of emergence of groundwater as the water table continues to rise and thus potentially flood homes and infrastructure. The testing to date on this site has indicated that the maximum winter groundwater monitoring level within the 2024/2025 period remains below the surface. As noted in the 2026 FRA (CD17.06) the residual risk of groundwater flooding can be mitigated through the design of the finished ground levels on the masterplan.

- 2.3 I disagree with then statements made in paragraph 4.13 and 4.14 that the revisions to the attenuation basins would require substantial changes to the indicative layout. The current drainage strategy as presented in the 2026 FRA (CD17.06) has been designed to be clear of the extents of Flood Zone 2 and 3, including any earthworks associated with the construction of these basins. Furthermore, siting these basins within an area of shallow groundwater does not have an adverse impact on the construction of the attenuation basins nor impact to the residual risk of groundwater flooding. This typical to many developments in the south of England where shallow groundwater is present over London Clay. To demonstrate this, I have produced several cross-sections of the drainage strategy which shows the extent of the embankment in relation to the Flood Zone 2 and 3 as well a typical construction detail using an impermeable basin liner, which is typical of attenuation basin construction to ensure groundwater does not enter the surface water drainage system. These are presented in **Appendix A** of my Rebuttal. These sections provide further evidence alongside the drainage strategy provided in the 2026 FRA (CD17.06) that a surface water drainage strategy has been designed to accommodate the quantum of the outline masterplan.
- 2.4 Paragraph 7.107 (CD14.01) references the 2026 FRA (CD17.06) and notes that the 2026 FRA confirms that “*detailed hydraulic modelling will be required to support a Flood Permit Application*”. Following the discovery of the existing culvert at the proposed access and as discussed in my Evidence (CD13.10.01) the proposed access will make use of the existing culvert to cross the “Main River” and as such the existing flows through this existing culvert remain unchanged. As a result, no detailed hydraulic modelling will be required to support the Flood Permit Application.
- 2.5 Paragraph 7.109 refers to the “*Appellant confirmed that a clear span bridge was now being proposed...*” This needs to be clarified in the context that this was being considered by the Appellant, at the time, alongside ongoing investigations and surveys and was not a commitment to providing a clear span bridge as a singular option. Since it has been determined that there is an existing culvert which the proposed access will cross then no clear span bridge is proposed.
- 2.6 Paragraph 7.112 refers to Paragraph 067 of the PPG : “*Proposals to introduce new culverting or to build on top of existing culverting are likely to have adverse impacts on flood risk, ecology, human health and safety and amenity whilst increasing maintenance costs and hindering future options to restore the watercourse. Such proposals are likely to run contrary to natural flood management objectives and the objectives of River Basin Management Plans.*” I would like to clarify that the proposed access will be constructed over the existing culvert per the section detail provided in Appendix D of my Evidence (CD13.10.01) . As the existing culvert is being used there is no change to the flows through this culvert and thus no adverse impacts to flood risk. Furthermore, whilst the PPG refers to the potential for increasing maintenance costs and hindering future options to the watercourse, this needs to be viewed in the context that the proposals includes for constructing a new vehicle access over this existing culvert and not a new building or similar

structure. As such in my view this would promote ease of access for future maintenance of this existing culvert and there is also a potential that the development proposals during the Reserved Matters stage could seek to open up the existing culvert at the existing vehicle access further west of the new access point. I would also like to point out there already appears to be a precedence set along Reading Road with vehicle access crossing this culvert (Main River) to the existing properties east of the new access as well as the construction of the existing bus stop and bus shelter by the Local Authority which appears directly over this culvert (Main River).

- 2.7 The structural integrity of the existing culvert can be preserved through the implementation of various options of protection details which are widely recognised and used within the highways, drainage and utilities industry. Such options could include but not limited to the use of a concrete protective cover slab at the base of the new access road construction. This cover slab would be set at a nominal level above the existing culvert and would ensure that proposed future vehicular loading is distributed evenly and spread out to minimise the imposed load on the existing culvert.
- 2.8 As the proposed access will cross the Main River at the existing culvert and no new culvert or new bridge is proposed I therefore disagree with paragraph 7.116 in Ms Carter's Evidence (CD14.01) as the 2026 FRA (CD17.06) and my Evidence (CD13.10.01) provides clear information that the proposal will not increase the flood risk and they do comply with CS Policy CPI, MDD LP Policy CC09 and ABNP Policy AD4.

3 Arboriculture and Landscape – Flood Risk and Drainage Matters

- 3.1 The LPA through Mr Hannington's Proof of Evidence (CD14.04) has made a number of points with respects to the drainage and flood risk which I do not agree with and/or can provide further response.
- 3.2 I disagree with paragraph 7.43, this statement is unsubstantiated. I have previously provided the Council's Drainage Officer with the results of the surface water drainage modelling both within the 2026 FRA (CD17.06) as well as through a separate request for the modelling files. The results provided in the drainage simulation results in Appendix E of the 2026 FRA (CD17.06) clearly confirm the input rainfall parameters of FEH2022 rainfall data being used, in addition the onsite attenuation storage within the main attenuation basin is noted as a maximum required volume of 1,718.908m³ for the peak design storm event as apparent on page 3 of these calculations. The fact that the drainage drawing in Appendix D notes a requirement for "*circa 2,200 cubic meters*" is to ensure that sufficient area within the masterplan is preserved within the site layout for when it is developed to a detailed layout as Reserved Matters Stage. The current drainage calculations demonstrate that the area and volume provided within the outline site masterplan exceeds that which is required to cater for the peak design storm.
- 3.3 In paragraphs 7.44 and 7.45 Mr Hannington infers that the construction of the attenuation basin and associated bund would comprise of a clay core with limited opportunity for planting. I disagree with this, whilst it is a matter of detailed design, the basin would be expected to be designed following common good design and construction practice for SuDS attenuation basins. An impermeable liner, comprising either HDPE geomembrane or a confined clay bentonite liner would be used along the inside base and sides of the basin. The liner would be set at a nominal depth to ensure sufficient cover of soil over the top to promote planting. Trees can be planted on the top and the outside face of the bund if so desired. This is all achievable through detailed design. I would also point out that the attenuation basin does not provide storage for a permanent body of water, this is not a reservoir but rather a basin which provides temporary storage of water during peak rainfall events, which following end of a rainfall event the water levels within the basin drop and the basin returns to empty.
- 3.4 Paragraphs 7.49 to 7.55 of Mr Hannington's Evidence appears to estimate the potential earthworks and vehicular movements to and from the site. At this stage I cannot comment fully on the overall earthworks associated with the construction, but I can comment on the basis that earthworks including excavations, filling and compaction of soil is typical of any development works, whether residential or not. Furthermore, elements relating to overall vehicle movements to and from the site would be addressed through good construction practice and included in the Construction Environment Management Plan (CEMP). I would also disagree that the need to construct landscape bunds associated with the attenuation basins are a negative impact to sustainability in terms of earthwork movements. Mr Hannington's earthworks calculations do not consider the volumes of arisings from the construction of new plot foundations, roads and other supporting

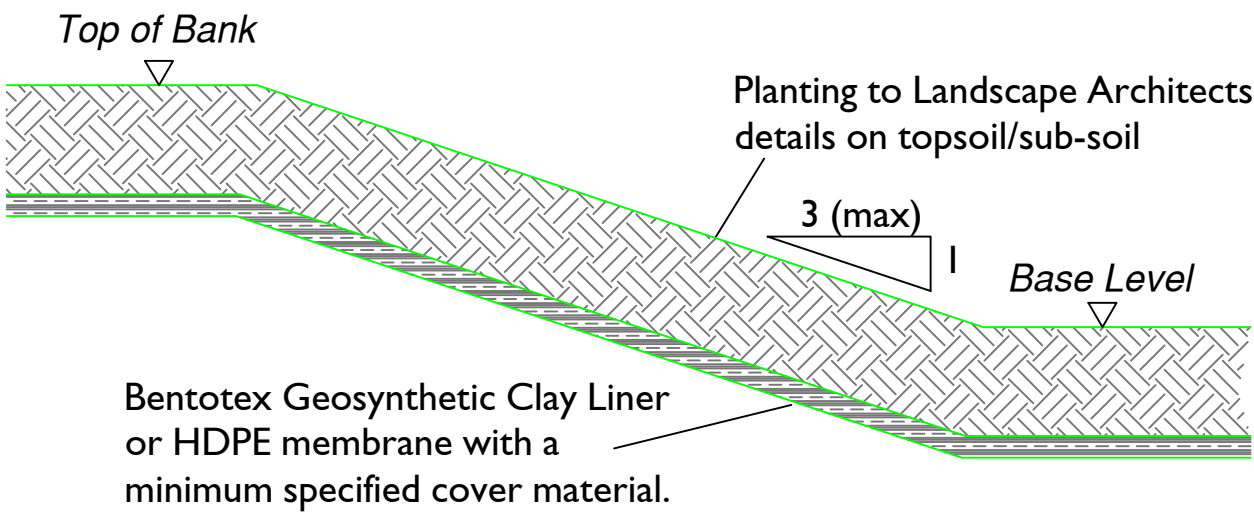
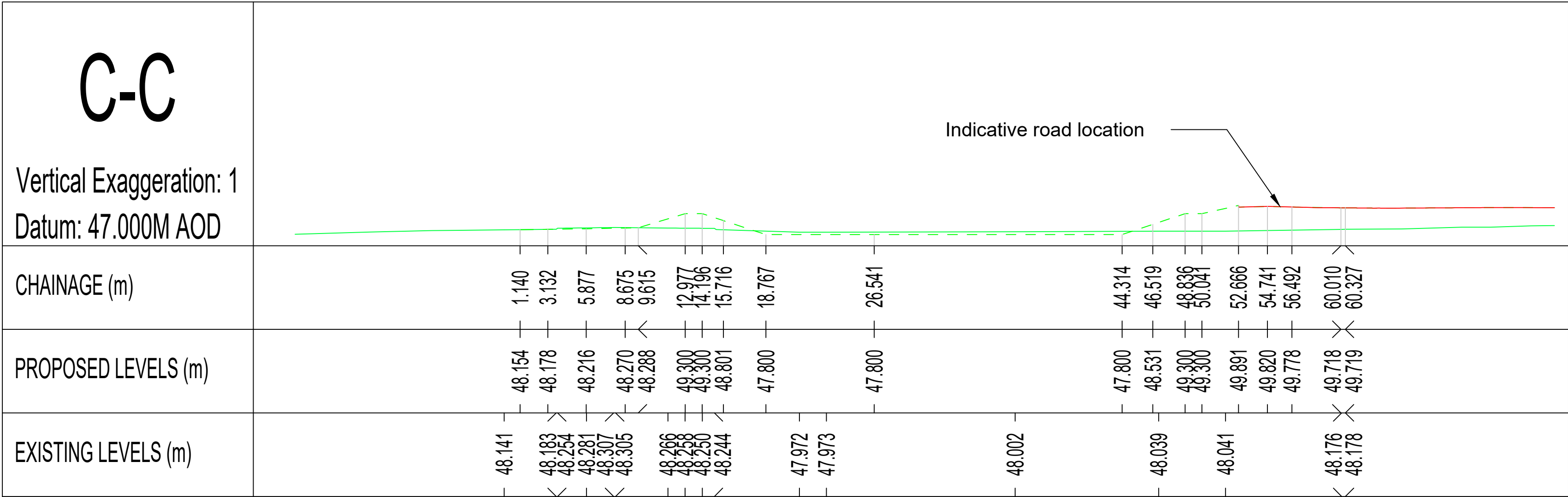
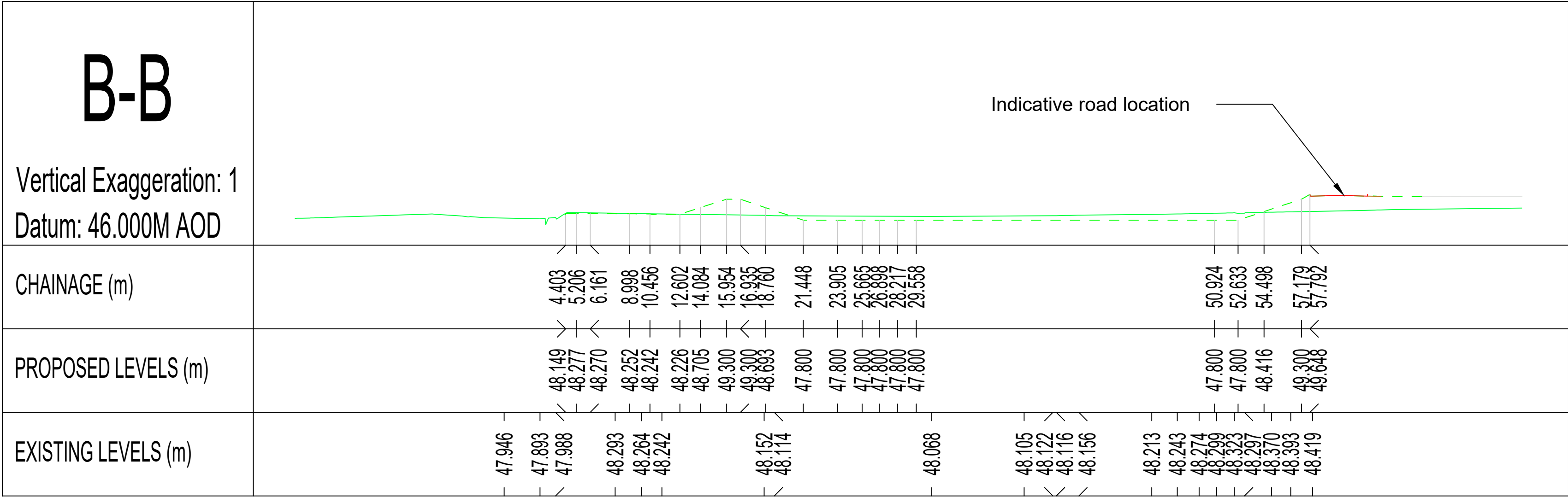
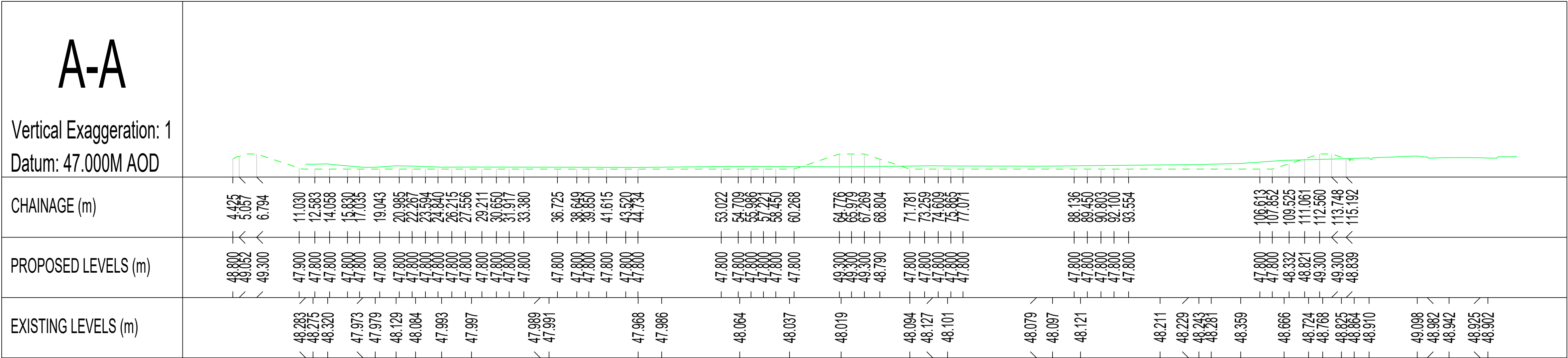
infrastructure. Generally, such arisings would need to be exported from the site and being taken to specialist landfill sites. In this case, as there is a need to retain the excavated arisings from the site I believe this provides a more sustainable approach to an earthworks solution within the site.

4 Additional Items

- 4.1 The FRA notes that the indicative location for the western pedestrian access onto Church Lane within Flood Zone 2 and 3. The location of this access is indicative only and can be placed further northwards along the western site boundary outside of Flood Zone 2 and 3. This is reflected on the updated outline site layout.

Appendix (A)

Indicative Basin Sections



Typical Attenuation Basin Bank & Base Lining Detail

Not to Scale

NOTES

- All dimensions are in metres unless stated otherwise.
- Do not scale from this drawing. Only written dimensions are to be used.
- Section locations shown on drawing IEP_001_022_005 - 'Outline Flood Zone Overlay'.
- The drainage design is based upon DAN-E0254-001 which was originally produced by RCP Consulting Engineers Ltd.
- ANY VARIANCE OR DISCREPANCY MUST BE REPORTED BACK TO INFRA ENGINEERING PRACTICE LTD.

KEY

- Indicative proposed levels
- Existing surveyed levels
- Indicative road

PRELIMINARY ISSUE

Scale @ A1:

Not to scale



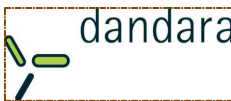
Project:

Land North of Reading Road
Arborfield

Title:

Indicative Basin Sections
and Construction Detail

Client:



Date: February 2026

Drawn by: SB

Checked by: TRS

Authorised by: TRS

Drg No: IEP_001_022_006

Rev:

