AENC-MMAC-ENG-DWG-0086 Norwich to Tilbury **Volume 2: Plans, Drawings and Sections Document: 2.6.3 Design and Layout Plans - Traffic & Transport** Final Issue A Planning Inspectorate Reference: EN020027 Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 Regulation 5(2)(o)

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SHEET 1 OF 1 A

SHEET 1 OF 1

Overall Length
Overall Width
Overall Body Height
Track Width
Kerb to Kerb Turning Radius

Fire Tender (Multistar)

Overall Body Height

Overall Width

Track Width

Overall Chassis Length

Kerb to Kerb Turning Radius

Overall Length (Including Basket) 11.400m

Note: This vehicle profile was produced using

manufacturer's specifications and is not from Autodesk's Vehicle Tracking library.

2.900m

3.603m

2.900m

8.565m

Ambulance access

Fire tender access





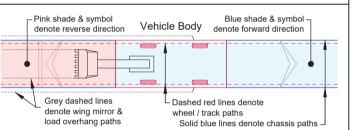


- These plans are illustrative and will sit within the Order Limits. Due to the need for future flexibility, National Grid will be applying for Order Limits and Limits of Deviation within its DCO, within which any final alignment would lie.
- For additional detail on the plan suites, please refer to the Guide to Plans (document reference 2.0), located in the Volume 2 of the DCO application.
- All dimensions are approximate and indicated in metres (m) unless noted otherwise.
- This drawing is scaled at paper size A1, therefore any prints taken at
- smaller sizes will affect accuracy of the measurement units and should not be scaled against. These Application Documents 2.6.3 have been produced in
- accordance with Regulation 5 of The Infrastructure Planning
- (Applications: Prescribed Forms and Procedure) Regulations 2009.
- Illustrative details for widening are temporary construction, and are to
- be removed and reinstated to an agreed condition on completion. Dimensions and design may vary depending upon site conditions and
- access requirements. The design is based on the posted speed limit and the requirements of the Design Manual for Roads and Bridges (DMRB). Where appropriate, design speed reductions have been proposed based on engineering judgement and information has been provided for the
- basis on which the design speed has been reduced. 85th percentile speed information is not available for all of the proposed haul road crossing points, and therefore any proposed reductions to the design speed will need to be verified via 85th percentile speed surveys to be undertaken. The construction and tie-in of temporary widenings, passing places or
- bellmouths are to be constructed in accordance with Local Highway Authority standard details or specifications. 10. The drawing does not include any information on highway drainage,
- utilities, or other assets which may need to be removed, protected or diverted as part of the works. Existing roadside ditches may require provision of a piped culvert or similar solution to retain the flow of water where new bellmouths are to be constructed over ditches. This will require further assessment during further stages of design. Vegetation clearance and/or groundworks may be required to
- maximise available visibility at the proposed access location. 2. Bellmouths shall be sited such that the gradient on the haul road
- approach to the existing carriageway shall not exceed 4% and where reasonably achievable should not exceed 2% over a distance of at least 15m, measured from the edge of the major road carriageway. 3. The minimum approach angle of the haul road to the existing carriageway, measured over 15 metres from the edge of the existing
- carriageway, shall be no less than 70 degrees and should be 90 degrees where reasonably achievable. 14. The swept path analysis shown has been carried out for the most onerous vehicle anticipated to be required to use the proposed

bellmouth, and a typical construction movement of two-way HGVs

- passing at the junction. 15. Crossover bellmouth anticipated construction traffic movements directly through the bellmouths with no access to or from the public
- 16. Drawing must be read in colour.

Vehicle Tracking - Key to Symbols

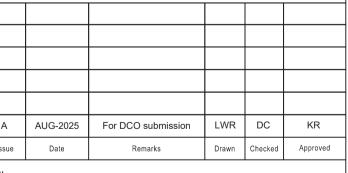


Vehicle Tracking - Notes

A. The swept path analyses shown on this drawing indicate theoretical / idealised paths that the specified vehicles can take, as derived using Autodesk's Vehicle Tracking software. The paths assume that the vehicle's driver will make a turn from a specific point / initial alignment, in the most effective manner. The Client / Architect should note that achievement of the idealised paths is subject to driver's anticipation of turning points, driving ability, and due care. It is therefore recommended that the area is set out and driven in real life. prior to acceptance for construction, particularly if there is any concern that the idealised track may not be readily achieved.

Reference Drawings

- . AENC-MMAC-ENG-DWG-0086-1 Illustrative haul road cross section 2. AENC-MMAC-ENG-DWG-0086-2 Illustrative access bellmouth and visibility splay 3. AENC-MMAC-ENG-DWG-0086-3 Illustrative crossover bellmouth and
- visibility splay 4. AENC-MMAC-ENG-DWG-0086-4 Illustrative passing place
- . AENC-MMAC-ENG-DWG-0086-5 Illustrative detail bend widening
- 6. AENC-MMAC-ENG-DWG-0086-6 Illustrative bellmouth culvert



50m

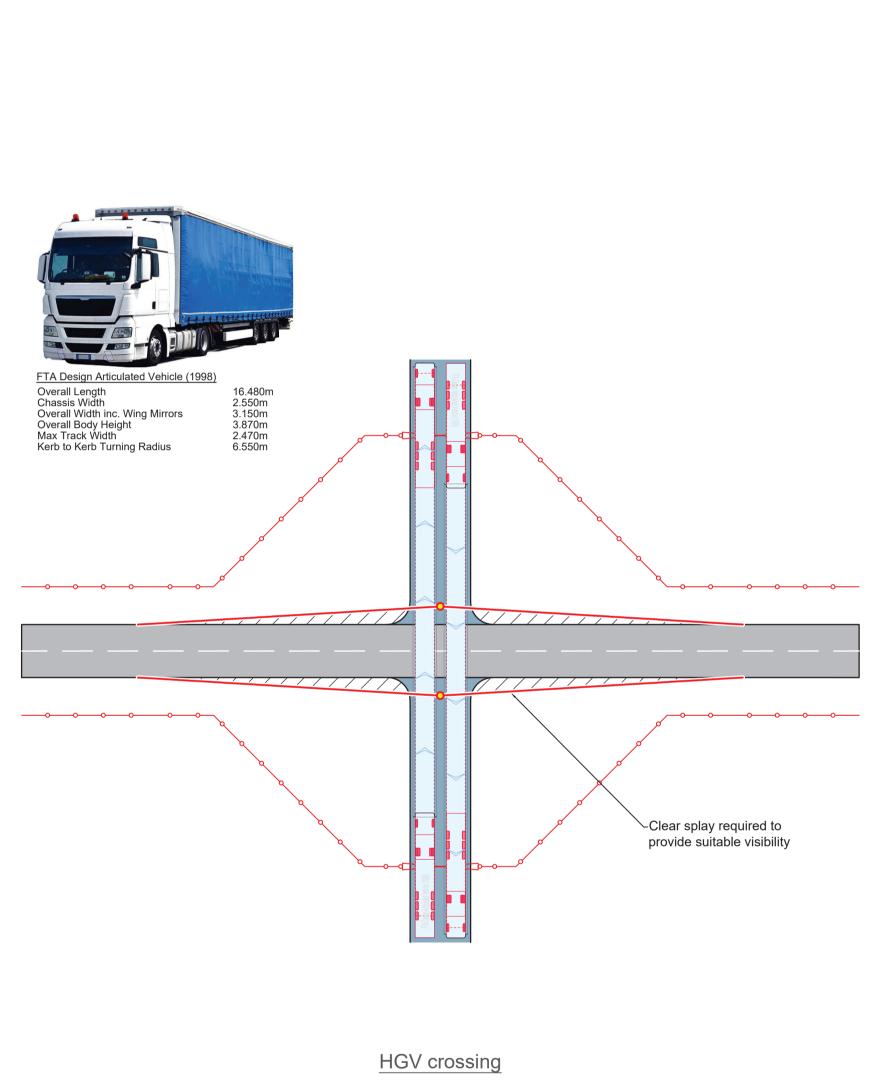
THE NATIONAL GRID (NORWICH TO TILBURY) ORDER ILLUSTRATIVE CROSSOVER BELLMOUTH AND VISIBILITY SPLAY REGULATION 5(2)(O) SHEET 1 OF 1

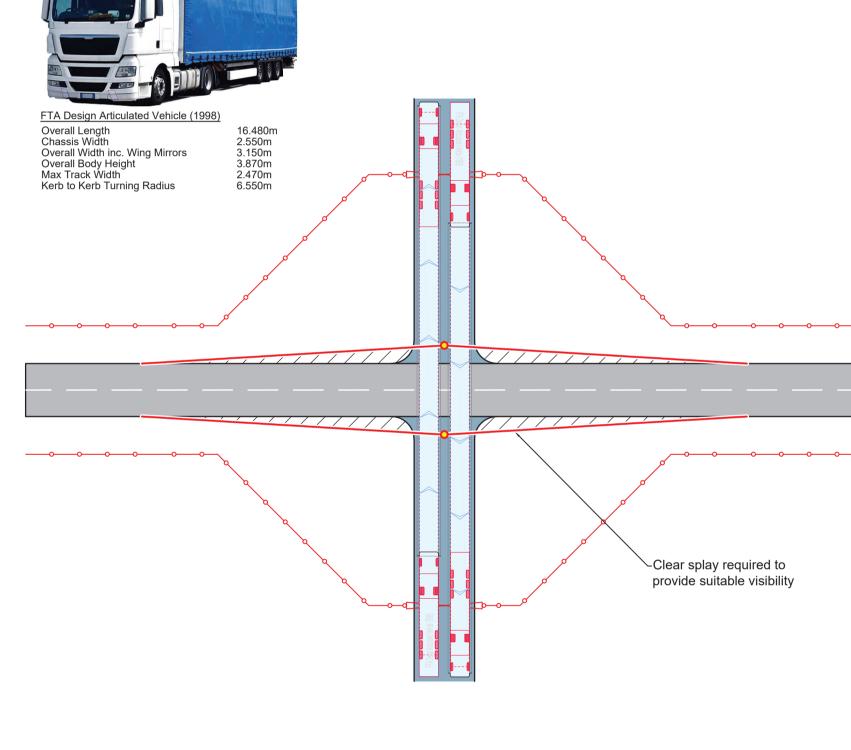
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Application Number

EN020027 National Grid Drawing Reference

AENC-MMAC-ENG-DWG-0086-3 1:500 SHEET 1 OF 1





Major road 85th percentile speed (kph) Desirable minimum visibility each way (m) 50 60 90 70 120 85 100 215

Table 1: Junction visibility requirements based on traffic speed on major road

120

Vehicle crossover

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illustrative

295

- utilities, or other assets which may need to be protected or diverted as

Plan view

Existing highway

Illustrative bellmouth

Bellmouth extents Existing highway

Swale / drainage feature Bellmouth access road

Separation membrane



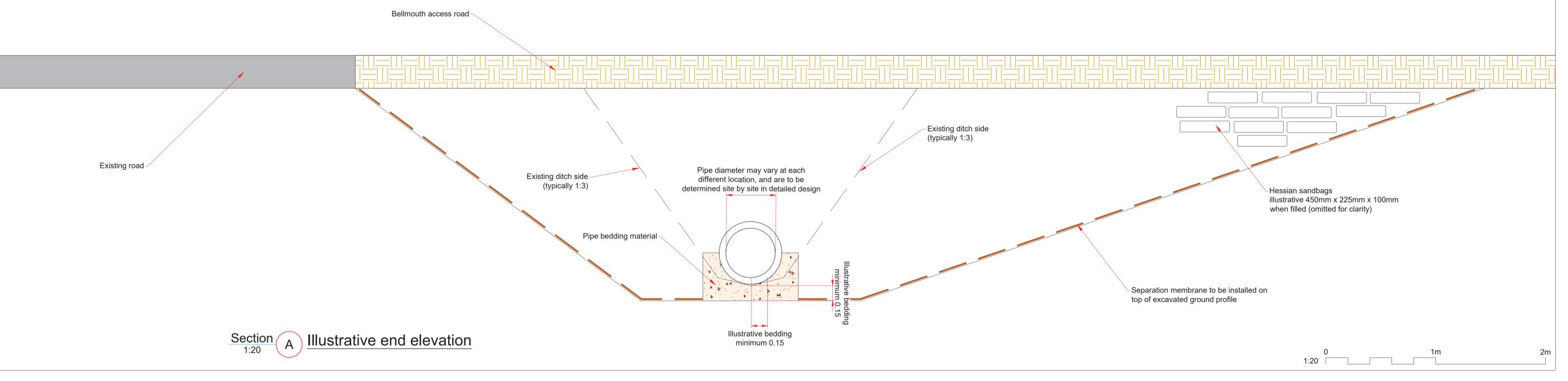
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- This drawing is scaled at paper size A1, therefore any prints taken at smaller sizes will affect accuracy of the measurement units and should
- not be scaled against. 5. These Application Documents 2.6.3 have been produced in
- accordance with Regulation 5 of The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009.
- 6. Illustrative drawings apply to both temporary and permanent culvert arrangements. Temporary culvert arrangement, as shown are to be formed from hessian sandbags, and will be removed and reinstated before end of construction. Permanent culvert arrangement will be formed from concrete headwalls, and their final detailed design and materials specifications will be subject to approval from the Local Highway Authority's Lead Local Flood Authority at detailed design
- drainage, utilities, or other assets which may need to be protected or diverted as part of works. 8. Typical drainage swales shown indicatively to illustrate potential

7. The drawing does not include any information on underground

drainage arrangement. Drainage specification and dimensions subject to change, and may vary depending on local ground conditions.

Reference Drawings

- 1. AENC-MMAC-ENG-DWG-0086-1 Illustrative Haul road cross section 2. AENC-MMAC-ENG-DWG-0086-2 Illustrative access bellmouth and visibility splay
- 3. AENC-MMAC-ENG-DWG-0086-3 Illustrative crossover bellmouth and visibility splay
- 4. AENC-MMAC-ENG-DWG-0086-4 Illustrative passing place
- 5. AENC-MMAC-ENG-DWG-0086-5 Illustrative detail bend widening
- 6. AENC-MMAC-ENG-DWG-0086-6 Illustrative bellmouth culvert



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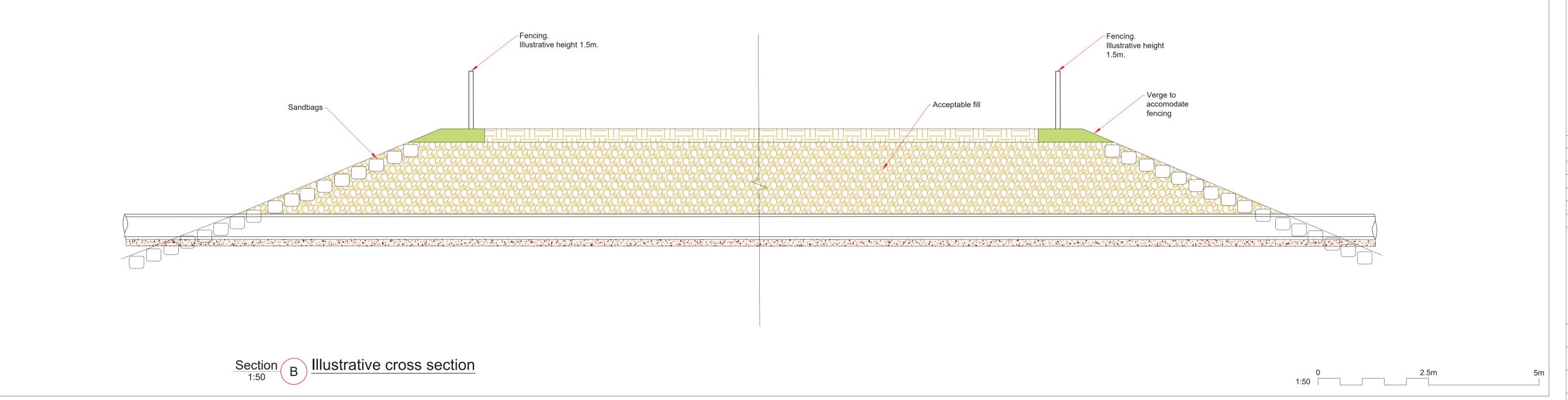
THE NATIONAL GRID (NORWICH TO TILBURY) ORDER ILLUSTRATIVE BELLMOUTH CULVERT REGULATION 5(2)(O) SHEET 1 OF 1

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National Grid Drawing Reference AENC-MMAC-ENG-DWG-0086-6 SHEET 1 OF 1 A



Culvert to be constructed beneath constructed site access

Existing ditch-