

NATIONAL GRID
(NORWICH TO TILBURY)
S.42 CONSULTATION TYPICAL ACCESS BELLMOUTH AND VISIBILITY SPLAY
SHEET 1 OF 1

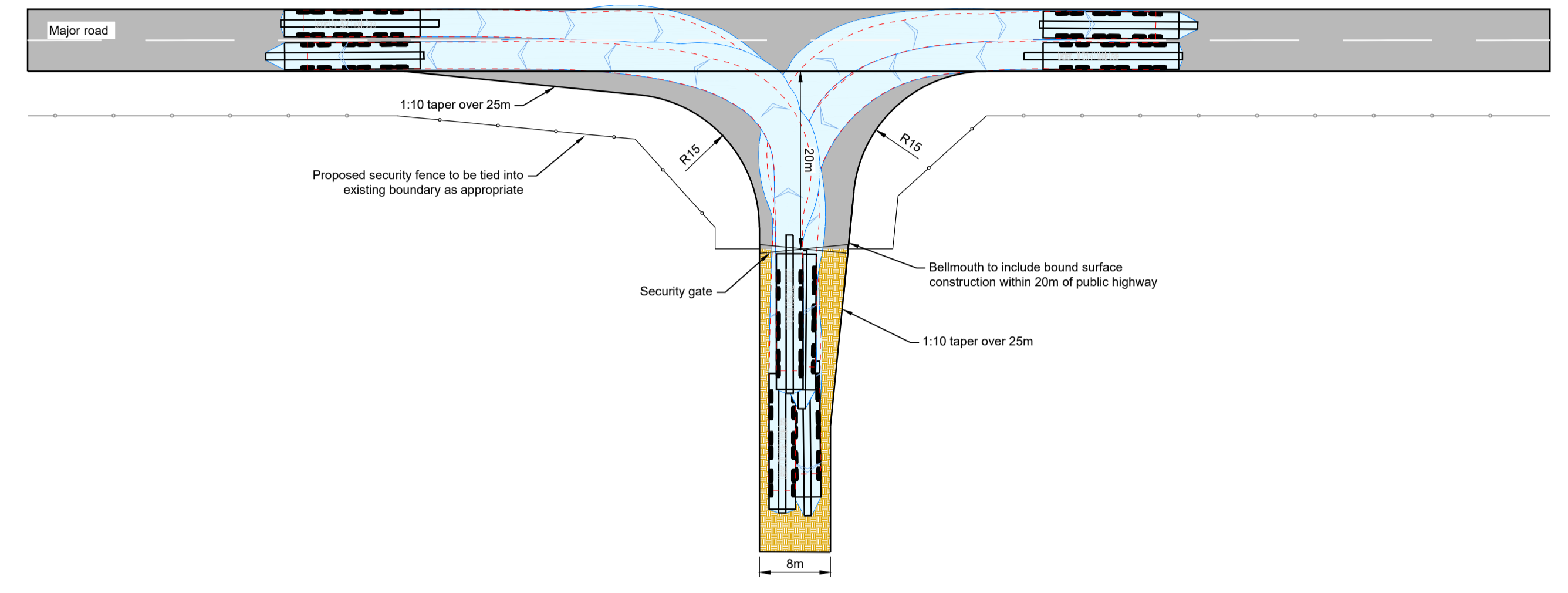
Legend	
	Visibility splay
	Existing boundary
	Proposed security fence
	Security gate
	Typical draft order limit extents

Design Specifications of Indicative Construction Vehicles

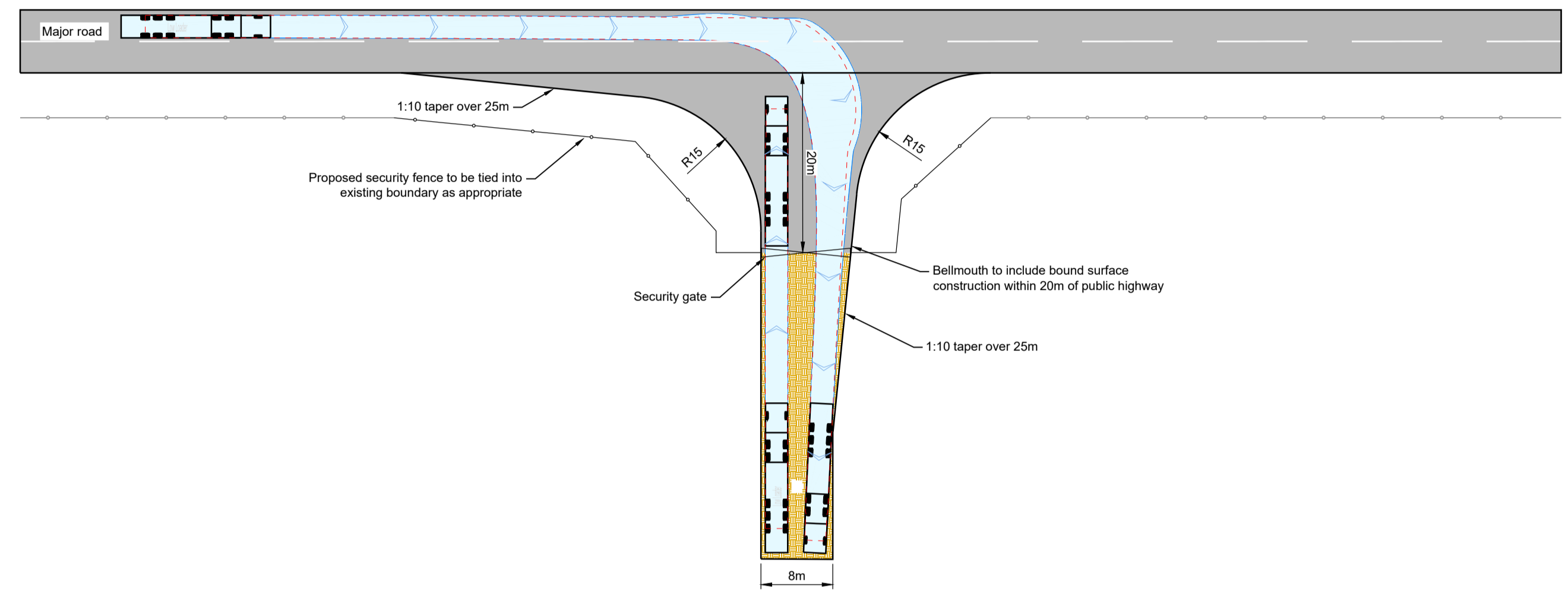
Mobile Crane Liebherr LTM 1250-6.1	Low Loader HGV
Overall Length 17.835m	Overall Length 16.633m
Overall Width 3.000m	Overall Width 2.500m
Overall Body Height 4.000m	Overall Body Height 3.396m
Track Width 3.000m	Max Track Width 2.500m
Kerb to Kerb Radius 11.624m	Kerb to Kerb Radius 6.790m

Notes

- 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.
- All dimensions are in metres unless otherwise shown. All levels are in metres Above Ordnance Datum (AOD). All dimensions & levels should be checked on site.
- Any drawing errors or discrepancies should be brought to the attention of Mott MacDonald.
- The proposed arrangement is shown for indicative purposes only. Dimensions and design may vary according to site conditions and construction access requirements.
- The design has not been submitted to the Highway Authority or National Highways for their technical review.
- Details of any signage, lining, surfacing or other highways infrastructure associated with bellmouth construction subject to agreement with the relevant Local Highway Authority.
- Vegetation clearance and/or groundworks may be required to facilitate minimum sight distances.
- The drawing does not include any information on highway drainage, utilities, or other assets which may need to be protected or diverted as part of works. These will require assessment during further stages of design.
- The design is based on the requirements of the Design Manual for Roads and Bridges.
- Visibility splay x-distance taken as 2.4m, as set out for a simple priority junction in Design Manual for Roads and Bridges document CD 123 paragraph 3.8(2b).
- Typically, 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 15 metres, measured from the edge of the major road carriageway.
- The minimum approach angle of the haul road to the existing carriageway, measured over 15 metres from the edge of the existing carriageway, shall typically be no less than 70 degrees and should be 90 degrees where reasonably achievable.
- Swept path analysis has been carried out for the most onerous vehicles anticipated to be required to use the proposed bellmouth, and a typical construction movement of 2no. HGVs passing at the junction.
- The typical draft Order Limit extents shown include for an assumed allowance based on the anticipated spatial requirements to facilitate the clearance, earthworks, drainage, construction and maintenance of the proposed access bellmouths.
- An offset of 1m has been taken for the draft Order Limits beyond the visibility splays to account for clearance and signage.
- The design is based on a typical bellmouth arrangement. The draft order limit may need to be considered further on a case by case basis to respond to site specific requirements / constraints.
- Drawing must be read in colour.



Typical bellmouth - Mobile crane swept path



Typical bellmouth - Mobile crane swept path

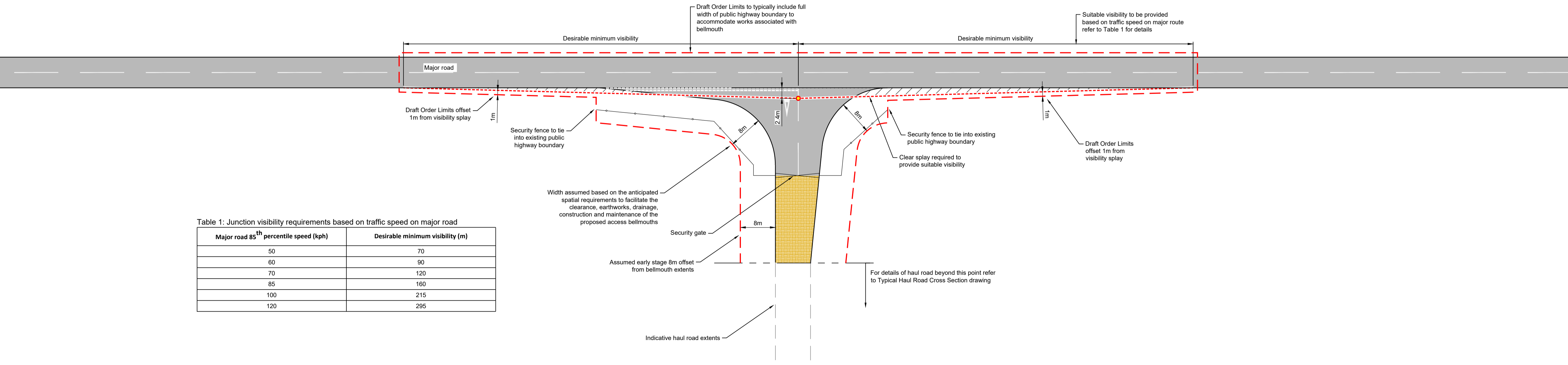
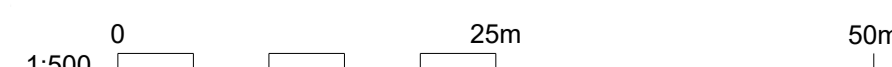


Table 1: Junction visibility requirements based on traffic speed on major road

Major road 85 th percentile speed (kph)	Desirable minimum visibility (m)
50	70
60	90
70	120
85	160
100	215
120	295

Typical bellmouth visibility splay



A	April 2024	FOR STATUTORY CONSULTATION	AB	RM	LK
Issue	Date	Remarks	Drawn	Checked	Approved

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nationalgrid			
Application Number			
National Grid Drawing Reference			
AENC-NG-ENG-DWG-0002			
Scale	Sheet Size	Sheet	Issue
1:500	A1	SHEET 1 OF 1	A