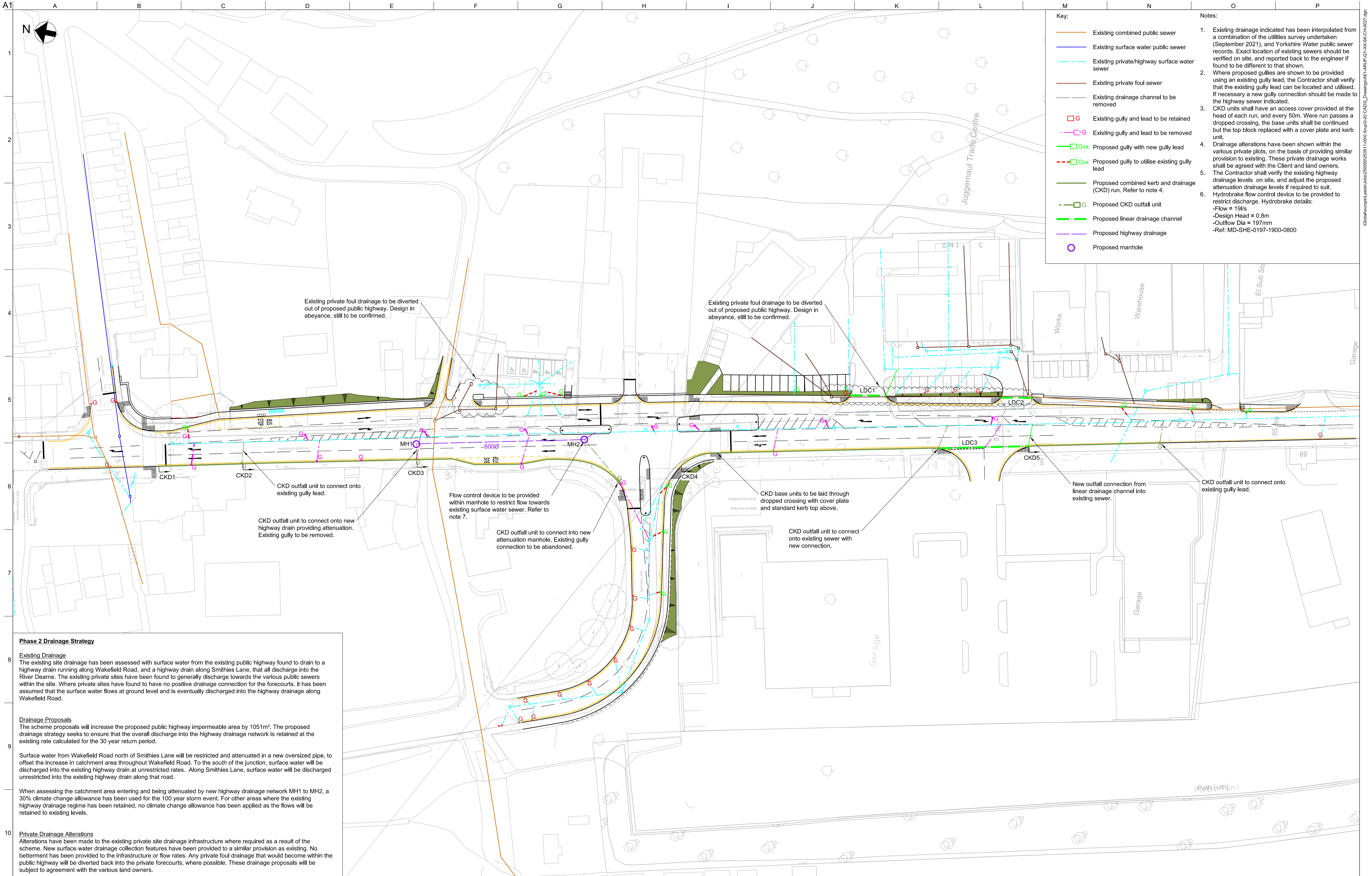




Phase 2 Drainage Strategy

Existing Drainage
The existing site drainage has been assessed with surface water from the existing public highway found to drain to a highway drain running along Wakefield Road, and a highway drain along Smithies Lane, that all discharge into the River Deame. The existing private sites have been found to generally discharge towards the various public sewers within the site. Where private sites have found to have no positive drainage connection for the forecourts, it has been assumed that the surface water flows at ground level and is eventually discharged into the highway drainage along Wakefield Road.

Drainage Proposals
The scheme proposals will increase the proposed public highway impermeable area by 1051m². The proposed drainage strategy seeks to ensure that the overall discharge into the highway drainage network is retained at the existing rate calculated for the 30 year return period.

Surface water from Wakefield Road north of Smithies Lane will be restricted and attenuated in a new oversized pipe, to offset the increase in catchment area throughout Wakefield Road. To the south of the junction, surface water will be discharged into the existing highway drain at unrestricted rates. Along Smithies Lane, surface water will be discharged unrestricted into the existing highway drain along that road.

When assessing the catchment area entering and being attenuated by new highway drainage network MH1 to MH2, a 30% climate change allowance has been used for the 100 year storm event. For other areas where the existing highway drainage regime has been retained, no climate change allowance has been applied as the flows will be retained to existing levels.

Private Drainage Alterations
Alterations have been made to the existing private site drainage infrastructure where required as a result of the scheme. New surface water drainage collection features have been provided to a similar provision as existing. No betterment has been provided to the infrastructure or flow rates. Any private foul drainage that would become within the public highway will be diverted back into the private forecourts, where possible. These drainage proposals will be subject to agreement with the various land owners.

P01	29/11/21	SM	HJ	CW
Issued for Planning				
Issue	Date	By	Chkd	Appd

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Client
South Yorkshire Passenger
Transport Executive

Project Title
A61 Corridor

Drawing Title
Phase 2
Proposed Drainage

Scale at A1	1:500
Role	Highways
Suitability	- S2 - Fit for information
Arup Job No	Rev
253511-00	P01
Name	
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