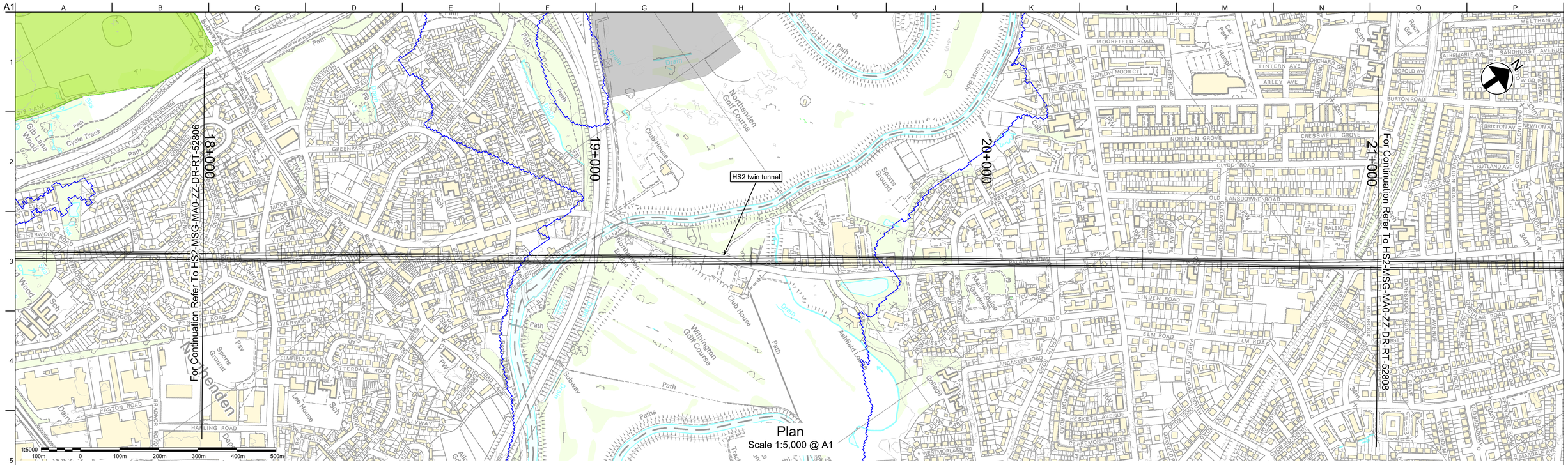
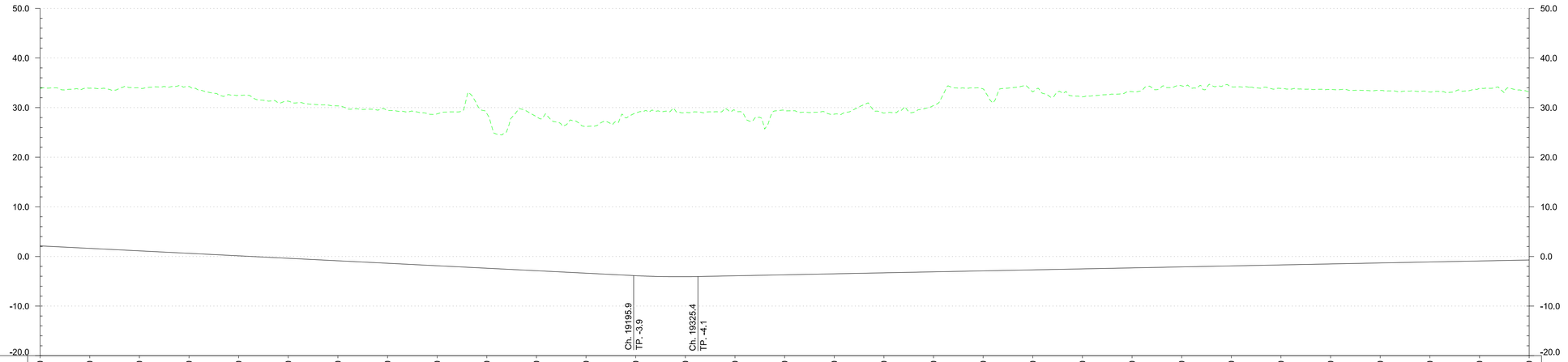
A1



Plan
Scale 1:5,000 @ A1



Chainage	18+000	18+100	18+200	18+300	18+400	18+500	18+600	18+700	18+800	18+900	19+000	19+100	19+200	19+300	19+400	19+500	19+600	19+700	19+800	19+900	20+000	20+100	20+200	20+300	20+400	20+500	20+600	20+700	20+800	20+900	21+000
Horizontal Alignment	L=7690.6m																														
Vertical Alignment	L=3502.2m G=-0.50%													L=129.5m R=18498m									L=6048.4m G=0.20%								
Existing Level	33.9	33.9	33.9	34.3	32.5	31.3	30.3	29.5	28.7	28.8	28.2	26.2	28.9	29.0	29.4	29.4	28.7	28.9	30.4	33.7	33.2	32.2	33.2	34.4	34.2	33.9	33.7	33.4	33.1	33.9	33.2
Proposed Track Level	2.1	1.6	1.1	0.6	0.1	-0.4	-0.9	-1.4	-1.9	-2.4	-2.9	-3.4	-3.9	-4.1	-3.9	-3.7	-3.5	-3.3	-3.1	-2.9	-2.7	-2.5	-2.3	-2.1	-1.9	-1.7	-1.5	-1.3	-1.1	-0.9	-0.7
Cut and Fill	-31.8	-32.3	-32.8	-33.7	-32.4	-31.6	-31.1	-30.8	-30.5	-31.1	-31.0	-29.5	-32.7	-33.0	-33.3	-33.1	-32.2	-32.2	-33.5	-36.6	-35.9	-34.7	-35.5	-36.5	-36.1	-35.6	-35.2	-34.7	-34.2	-34.8	-33.9
Maximum Speed	230 km/h																														

Profile
Scale H:1:5,000 V:1:500 @ A1

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Key Environmental Features Legend
- World Heritage Site
- Ramsar
- Special Areas of Conservation
- Special Protection Areas
- SSSI
- National Nature Reserves
- Area of Outstanding Natural Beauty
- National Park
- Scheduled Monuments
- Registered Parks and Gardens
- Historical Battlefields
- Active and/or Authorised Landfill
- Historical Landfill
- Flood Zone 3

1:5000 100m 0 100m 200m 300m 400m 500m

Legend
- Alignment Centreline
- Viaduct / Tunnel / Fully Retained Cutting
- 10 Major Contour
- Minor Contour
- Node
- Railway Cutting
- Railway Embankment
- Highway Cutting
- Highway Embankment

Retained structures will be used at depths of 15m or greater

1:500 10m 0 10m 20m 30m 40m 50m

Do not scale

Issue	Date	By	Chkd	Appd
P6	23.11.12	JFF	RC	TW
P5	16.11.12	JA	RC	TW
P4	30.10.12	JFF	RC	TW
P3	19.10.12	JA	RC	TW
P2	31.08.12	MM	RC	TW
P1	20.03.12	MM	RC	TW

Client: hs2

Job Title: HS2 West Midlands to Manchester
Initial Preferred Route
December 2012

Scale at A1: 1:5000

Discipline: Rail

MSG MOTT MACDONALD SCOTT WILSON GRIMSHAW

Drawing Title: Route HSM28
Plan and Profile
Sheet 7 of 9

Drawing Status: -

Job No: 277592

Drawing No: HS2-MSG-MA0-ZZ-DR-RT-52807

Issue: P6