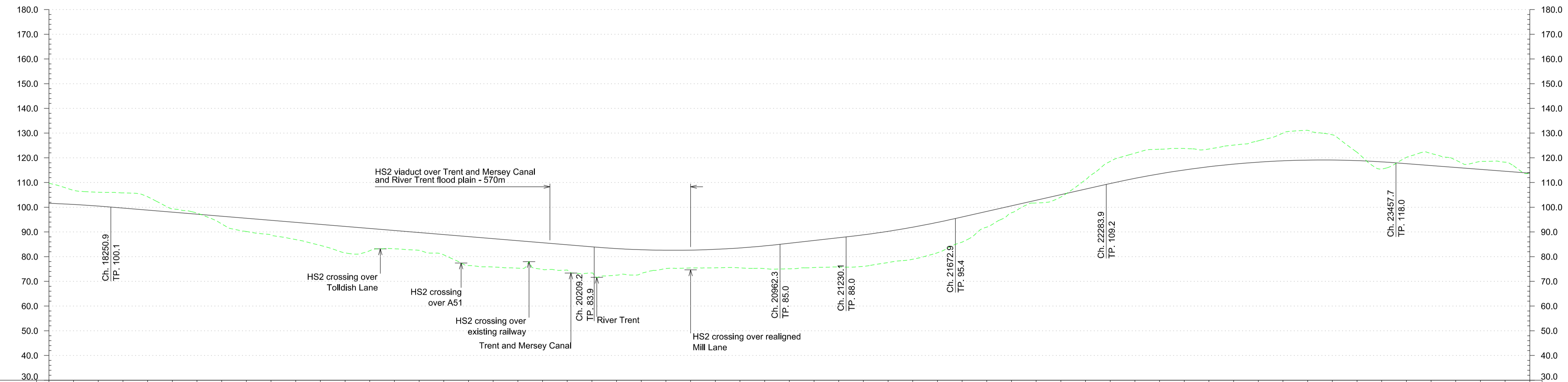


Plan
Scale 1:10,000 @ A1



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	21+100	21+200	21+300	21+400	21+500	21+600	21+700	21+800	21+900	22+000	22+100	22+200	22+300	22+400	22+500	22+600	22+700	22+800	22+900	23+000	23+100	23+200	23+300	23+400	23+500	23+600	23+700	23+800	23+900	24+000																			
Horizontal Alignment	R=16000.0m L=9088.4m										TL=200.0m L=2281.5m										TL=260.0m R=12000.0m L=6652.4m																																																											
Vertical Alignment	L=1254.0m R=56000m										L=1958.3m G=-0.83%										L=753.1m R=38800m										L=267.8m G=1.12%										L=442.8m R=38800m										L=611.0m G=2.26%										L=1173.8m R=38800m										L=3157.0m G=-0.77%									
Existing Level	109.7	106.8	106.1	105.8	104.2	99.3	97.6	93.3	90.2	88.8	86.9	84.5	81.5	82.4	83.2	82.6	80.7	76.4	75.8	75.3	74.8	74.6	73.4	72.5	73.2	75.2	75.4	75.5	75.5	75.2	75.1	75.6	75.8	76.1	77.6	78.9	81.6	85.9	91.9	97.8	101.7	104.1	111.1	118.5	121.9	123.5	123.8	123.6	125.1	126.9	130.0	131.1	129.3	122.2	115.5	120.2	121.8	119.1	119.1	118.5	118.2	113.8																		
Proposed Track Level	101.6	101.1	100.5	99.7	98.8	96.0	97.2	96.4	95.5	94.7	93.9	93.1	92.2	91.4	90.6	89.8	88.9	88.1	85.1	87.3	86.5	85.6	84.8	84.0	83.3	82.8	82.6	82.6	83.0	83.3	84.4	85.4	86.5	87.6	88.8	90.2	91.9	93.9	96.1	98.3	100.6	102.8	105.1	107.3	109.6	111.7	113.5	115.1	116.4	117.4	118.2	118.8	119.1	119.3	118.9	118.4	117.6	116.9	116.1	115.3	114.6	113.8																		
Cut and Fill	-8.1	-5.7	-5.6	-6.1	-5.4	-1.3	-0.4	+3.1	+5.3	+5.9	+7.0	+8.6	+10.7	+9.0	+7.4	+7.2	+8.2	+11.7	+11.5	+11.2	+10.8	+10.2	+10.6	+10.8	+9.6	+7.4	+7.2	+7.5	+8.0	+9.2	+10.3	+10.9	+11.8	+12.7	+12.6	+13.0	+12.3	+10.2	+6.4	+2.8	+1.1	+1.0	-3.8	-8.9	-10.2	-10.0	-8.7	-7.2	-7.7	-8.7	-11.2	-12.0	-10.2	-3.3	+2.9	-2.6	-4.9	-3.0	-3.2	-3.6	0.0																			
Maximum Speed	400 km/h																																																																															

Profile
Scale H:1:10,000 V:1:1000 @ 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

Legend

- Alignment Centreline
- Viaduct / Tunnel / Fully Retained Cutting
- Major Contour
- Minor Contour
- Node
- Retained structures will be used at depths of 15m or greater
- Railway Cutting
- Railway Embankment
- Highway Cutting
- Highway Embankment

Issue	Date	By	Chkd	Appd
P4	23.11.12	JA	RC	TW
P3	16.11.12	VS	RC	TW
P2	30.10.12	AS	RC	TW
P1	18.10.12	AS	RC	TW

Client: **hs2**

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

Scale at A1: **1:10000**

Discipline: **Rail**

MSG
MOTT MACDONALD SCOTT WILSON GRIMSHAW

Drawing Title: **Route HSM03 Plan and Profile Sheet 4 of 7**

Drawing Status: **-**

Drawing No: **HS2-MSG-MR0-ZZ-DR-RT-60304**

Job No: **277592**

Issue: **P4**