KEY:

EXISTING DRAINAGE

CONTINUOUS ASSETS

- CF — EXISTING COMBINED CARRIER FILTER PIPE
- CDR — EXISTING CARRIER DRAIN
- CKD — EXISTING COMBINED KERB DRAINAGE
- SWC — EXISTING SURFACE WATER CHANNEL
- FD — EXISTING FILTER DRAIN
- DIT — EXISTING DITCH
- SD — EXISTING SLOT DRAIN
- PD — EXISTING PIPE DITCH
- EXISTING DRAINAGE PIPE REMEDIATION
- EA DETAILED (PRIMARY, SECONDARY & TERTIARY RIVERS)
- PONDS, LAKES, RESERVOIRS
- EXISTING CULVERT

PROPOSED DRAINAGE

CONTINUOUS ASSETS

- ORDER LIMITS
- HIGHWAY BOUNDARY
- OUTLET PIPE
- FIN — FIN DRAIN
- BDU — BRIDGE DECK UNIT
- CDR — CARRIER DRAIN
- FD — FILTER DRAIN
- COMBINED KERB DRAINAGE AND FIN DRAIN
- SLOT DRAIN AND FIN DRAIN
- SWC — SURFACE WATER CHANNEL AND FIN DRAIN
- PD — PIPED DITCH
- DIT — ATTENUATION DITCH (USING EXISTING DITCH)
- LDC — LINEAR DRAINAGE CHANNEL AND FIN DRAIN
- CF — PROPOSED COMBINED CARRIER FILTER PIPE

POINT ASSETS

- MAJOR OUTFALL (EXISTING)
- EXISTING GULLY INLET
- EXISTING POLLUTION CONTROL DEVICE
- EXISTING CHAMBER
- SURFACE WATER CHANNEL WEIR OUTLET
- PIPE OUTLET HEADWALL
- SCD — EA SPILLAGE CONTAINMENT DEVICE
- PROPOSED GULLY INLET
- PROPOSED CHAMBER

CATCHMENT PRIORITIES

- FLOW DIRECTION
- DITCH FLOW DIRECTION
- HP — HIGH POINT MARKER
- LP — LOW POINT MARKER
- O1A ◄► O1B — CATCHMENT MARKER INDICATING EXTENT OF DRAINAGE NETWORK
- EXISTING OUTFALL O5B — EXISTING OUTFALL REFERENCE (MAJOR OUTFALL)
- O6B — HYDRAULIC CONSTRAINT, USED TO DEFINE BASELINE FLOW FOR DESIGN PURPOSES

NOTES

GENERAL

1. ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE.
2. ALL LEVELS ARE IN METRES ABOVE ORDNANCE DATUM (mAOD).
3. SOME DITCHES ARE SHOWN CLOSE TO THE DCO. WHERE THE HIGHWAY BOUNDARY EXTENDS BEYOND THE DCO BOUNDARY, THIS IS SHOWN IN THE DRAWINGS.
4. WHEN ACCURATE TOPOGRAPHICAL SURVEY INFORMATION IS NOT AVAILABLE TO CONFIRM THE DITCH ALIGNMENT, THE DITCH POSITION SHOWN IN THE ORDNANCE SURVEY (OS) MAPPING HAS BEEN USED.
5. THESE DRAWINGS INDICATE WHERE DITCHES ARE PROPOSED TO BE USED FOR FLOW CONTROL AND ATTENUATION. WHERE DITCHES CANNOT BE USED FOR ATTENUATION, THE PROPOSED DRAINAGE WILL CONSIST OF ATTENUATION BY OVERSIZED PIPES OR CHAMBERS IN THE VERGES.
6. EXTENT OF PIPED DITCHES MAY BE SUBJECT TO CHANGE TO SUIT GROUND CONDITIONS ON SITE.
7. IF EXISTING DRAINAGE PROPOSED TO BE RE-USED IS FOUND TO BE UNSUITABLE IN TERMS OF CONDITION, SIZE AND POSITION, THEN IT WILL BE REPLACED WITH NEW DRAINAGE.
8. OUTLETS FROM ROAD EDGE DRAINAGE AND CHAMBERS MAY BE SUBJECT TO CHANGE TO SUIT SITE CONDITIONS.
9. EXISTING DRAINAGE AT JUNCTIONS NOT REQUIRING CHANGES AS PART OF THE WORKS IS NOT ALL SHOWN FOR CLARITY.

SUMMARY OF OUTFALLS

JUNCTION 11

Outfall Reference	Carriageway	Chainage (m)	Marker Post (km)
Link 1 (J12 to J11)			
O8A	Westbound	56701	67.6
O8B	Eastbound	56529	67.5
O8C	Westbound	56559	67.5
O8D	Westbound	56550	67.5
O8E	Eastbound	56517	67.5
O9A	Eastbound	56732	67.5
O10A	Westbound	56346	67.3
O11A	Eastbound	55680	66.6
O11B	Westbound	55433	66.4
O11C	Eastbound	55416	66.4
O11D	Westbound	55430	66.4
O11E	Central Reserve	55425	66.4
O11F	Westbound	55184	66.1
O11G	Central Reserve	55182	66.1
O11H	Eastbound	55181	66.1
O11I	Reference not used		
O11J	Eastbound	55182	66.1
O11K	Eastbound	54900	65.9

JUNCTION 8/9

Outfall Reference	Carriageway	Chainage (m)	Marker Post (km)
Link 3 (J10 TO J8/9)			
O32A	Westbound	37091	48.0
O33A	Eastbound	35548	46.5
O33B	Westbound	35583	46.5
O33C	Eastbound	35543	46.5
O33D	Westbound	35578	46.5
O34A	Westbound	36110	47.1
O34B	Eastbound	36151	47.1
O35A	Westbound	34762	45.7
O35B	Eastbound	34671	45.6
O35C	Central Reserve	34765	45.7
O35D	Westbound	34765	45.7
O36A	Eastbound	33824	44.8
O36B	Westbound	33791	44.7

Outfall Reference	Carriageway	Chainage (m)	Marker Post (km)
Link 4 (J8/9 to J7)			
O36C	Eastbound	33820	44.7
O36D	Westbound	33789	44.7
O36E	Eastbound	33570	44.5
O37A	Eastbound	33294	44.2
O38A	Reference not used		
O38B	Reference not used		
O39A	Eastbound	32928	43.9
O39B	Eastbound	32841	43.7
O40A	Eastbound	32083	43.0
O40B	Eastbound	32064	43.0
O40C	Westbound	32048	43.0
O42A	Westbound	31279	42.2
O42B	Westbound	31194	42.1
O42C	Eastbound	31195	42.1
O42D	Eastbound	31282	42.2

JUNCTION 6

Outfall Reference	Carriageway	Chainage (m)	Marker Post (km)
Link 5 (J7 TO J6)			
O47A	Westbound	27341	38.3
O47B	Eastbound	27626	38.6
O47C	Westbound	27108	38.0
O47D	Westbound	27104	38.0
O48A	Westbound	26848	37.8
O48B	Eastbound	26850	37.8
O48C	Eastbound	26842	37.8
O48D	Westbound	26843	37.8
O50A	Westbound	26269	37.2
O50B	Eastbound	26238	37.2
O51A	Westbound	26150	37.1
O51B	Westbound	26103	37.1
O51C	Reference not used		
O51D	Eastbound	26065	37.0

Outfall Reference	Carriageway	Chainage (m)	Marker Post (km)
Link 6 (J6 TO J5)			
O52A	Eastbound	25707	36.7
O52B	Eastbound	25700	36.7
O53A	Westbound	25052	36.0
O53B	Eastbound	25021	36.0
O54A	Westbound	24751	35.7
O54B	Eastbound	24736	35.7
O54C	Westbound	24923	35.9
O55A	Eastbound	24607	35.6
O55B	central reserve	24608	35.6
O55C	Westbound	24323	35.3
O55D	central reserve	24527	35.5
O55E	central reserve	24423	35.4
O55F	central reserve	24329	35.3
O56A	Eastbound	24197	35.1
O57A	Westbound	24174	35.1
O58A	Eastbound	23885	34.8
O58D	Eastbound	23166	34.1

JUNCTION 5

Outfall Reference	Carriageway	Chainage (m)	Marker Post (km)
Link 6 (J6 TO J5)			
O59B	Eastbound	22113	33.1
O59C	Eastbound	21777	32.7
O59D	central reserve	21583	32.5
O59M	Eastbound	22072	33.0
O59F	Eastbound	21534	32.5
O59G	Eastbound	21181	32.1
O59H	Westbound	21183	32.1
O59I	Eastbound	20978	31.9
O59J	Westbound	20987	31.9
O59K	Eastbound	20573	31.5
O59L	Westbound	20510	31.5

Outfall Reference	Carriageway	Chainage (m)	Marker Post (km)
Link 7 (J5 TO J4B)			
O60A	Westbound	20213	31.2
O60B	Westbound	20040	31.0
O60C	Eastbound	20600	31.6
O61A	Westbound	19680	30.6
O61B	Central Reserve	19055	30.0
O61C	Westbound	19020	30.0
O61D	Westbound	18700	29.7
O61E	Eastbound	18700	29.7
O62A	Eastbound	18413	29.4
O62B	Westbound	18412	29.4
O62C	Central Reserve	18411	29.4
O63A	Eastbound	18116	29.1
O63B	Central Reserve	18120	29.1
O63C	Eastbound	18100	29.1
O63D	Eastbound	17910	28.9
O64A	Westbound	17595	28.5
O64B	Eastbound	17519	28.5
O64C	Westbound	17519	28.5

Rev	Status	Rev. Date	Purpose of revision	Drawn	Chck'd	Apprv'd
P01	S2	18/02/2022	Non-Material Change	WE	RA	DP

Client: highways england

DELIVERING THROUGH ARCADIS JACOBS

Project: SMART MOTORWAYS PROGRAMME M4 JUNCTIONS 3-12

Drawing title: PROPOSED DRAINAGE LEGEND & NOTES

Status: S2		Revision: P01
Scale: NTS		Date - 18/02/2022
Drawn By: William Emery		
Checked By: Rohit Asthana		
Approved By: David Pilsworth		
Project No. HA PIN: HA514451 / Originator: CHHJ	Original Size: A1	
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