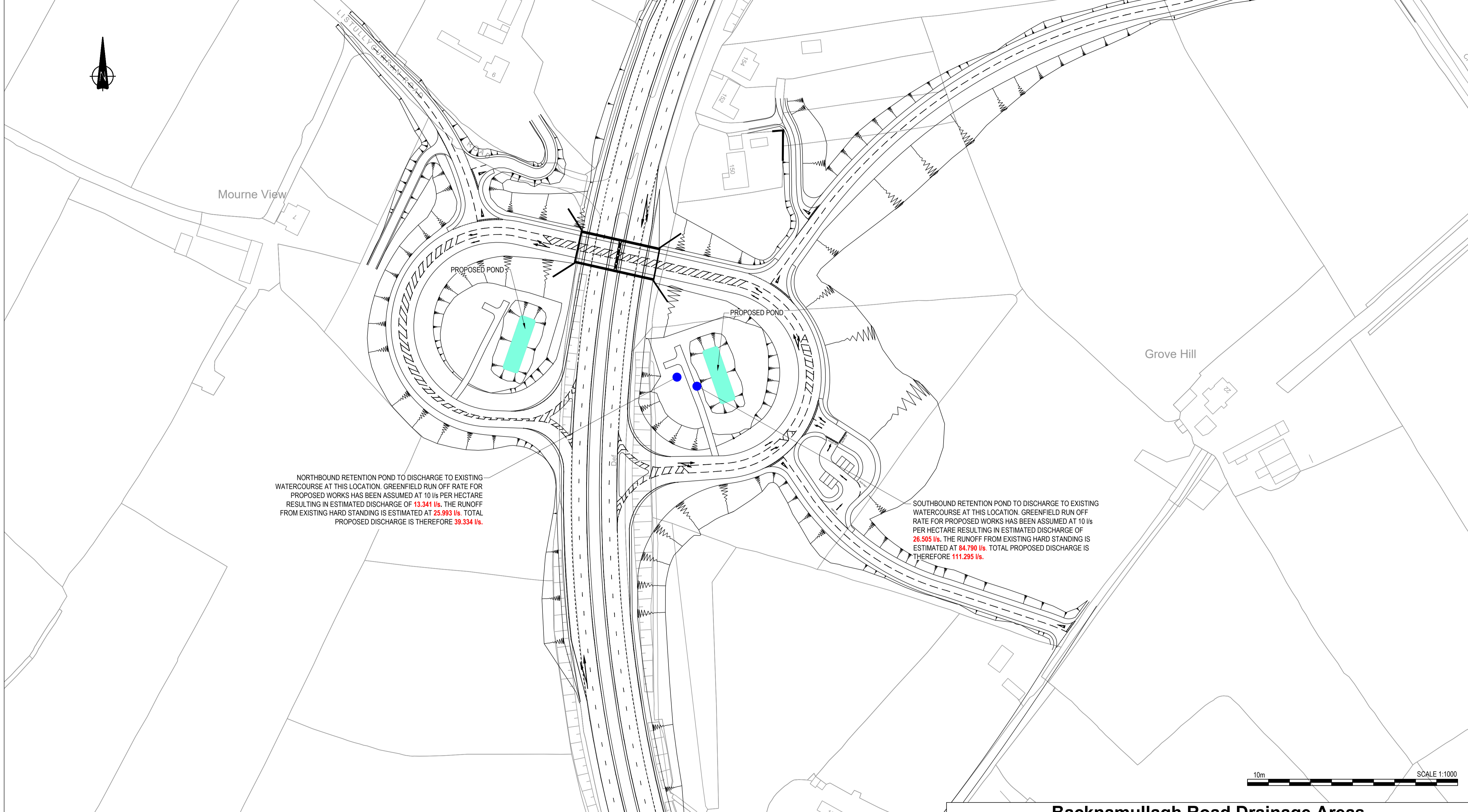


APPENDIX G

Drainage Outfalls

Northbound drainage areas		
	Area = m ²	Area = hectares
Northbound side - Proposed hard standing area (Roads and footways)	4682m ²	0.4682
Northbound side - Proposed soft standing area (Grassed verge and embankments)	8659m ²	0.8659
Total	13341m ²	1.3341
Northbound side - Existing mainline hard standing area (Carriageway and hard shoulder)	1870m ²	0.187
Northbound side - Existing and proposed mainline soft standing area (Verge and central reserve)	2641m ²	0.2641
Total	4511m ²	0.4511



NORTHBOUND RETENTION POND TO DISCHARGE TO EXISTING WATERCOURSE AT THIS LOCATION. GREENFIELD RUN OFF RATE FOR PROPOSED WORKS HAS BEEN ASSUMED AT 10 l/s PER HECTARE RESULTING IN ESTIMATED DISCHARGE OF 13.341 l/s. THE RUNOFF FROM EXISTING HARD STANDING IS ESTIMATED AT 25.993 l/s. TOTAL PROPOSED DISCHARGE IS THEREFORE 39.334 l/s.

SOUTHBOUND RETENTION POND TO DISCHARGE TO EXISTING WATERCOURSE AT THIS LOCATION. GREENFIELD RUN OFF RATE FOR PROPOSED WORKS HAS BEEN ASSUMED AT 10 l/s PER HECTARE RESULTING IN ESTIMATED DISCHARGE OF 26.505 l/s. THE RUNOFF FROM EXISTING HARD STANDING IS ESTIMATED AT 84.790 l/s. TOTAL PROPOSED DISCHARGE IS THEREFORE 111.295 l/s.

Southbound drainage areas		
	Area = m ²	Area = hectares
Southbound side - Proposed hard standing area (Roads and footways)	7120m ²	0.712
Southbound side - Proposed soft standing area (Grassed verge and embankments)	19385m ²	1.9385
Total	26505m ²	2.6505
Southbound side - Existing mainline hard standing area (Carriageway and hard shoulder)	6100m ²	0.6100
Southbound side - Existing and proposed mainline soft standing area (Verge and central reserve)	4795m ²	0.4795
Total	10895m ²	1.0895

Backnamullagh Road Drainage Areas		
	Area = m ²	Area = hectares
Northbound side - Proposed hard standing area (Roads and footways)	1390m ²	0.139
Northbound side - Proposed soft standing area (Grassed verge and embankments)	3425m ²	0.3425
Total	4815m ²	0.4815
Northbound side - Existing mainline hard standing area (Carriageway and hard shoulder)	0m ²	0
Northbound side - Existing and proposed mainline soft standing area (Verge and central reserve)	0m ²	0
Total	0m ²	0

- NOTES**
- Verifying Dimensions. The contractor shall verify dimensions against such other drawings or site conditions as pertain to this part of the work.
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 - DATUM: Irish Grid
 - Key:
 - Existing Survey / OS Mapping
 - Proposed Layout
 - Top of slope
 - Earthworks
 - Bottom of slope
 - Drainage Outfall
 - Proposed Pond

P2.0 Updated for inclusion in Stage 3 Scheme Assessment Report PN JB CD 18/02/19

REV	COMMENT	DRAWN	CH	AP	DATE

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Project

A1 Junctions Phase 2

Title

J1 Listullycurran - Proposed Drainage Outfalls

Drawing Status	Suitability	Project Ref No.
S2	For Information	IBH0488

Scale	Designed	Drawn By	Checked	Authorised
1:1000	PN	PN	JB	CD

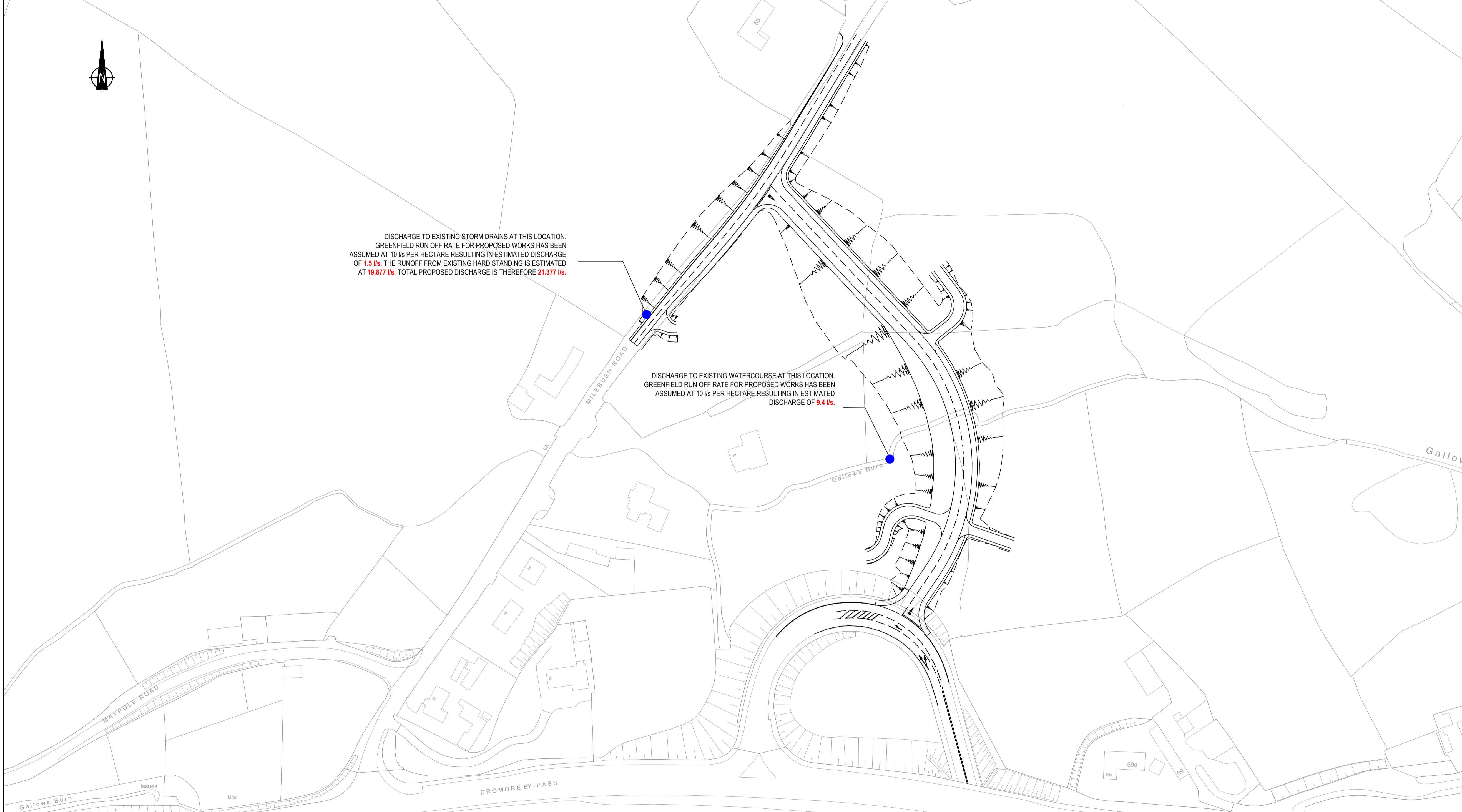
Original Size	Date	Date	Date	Date
A1	09/02/18	09/02/18	15/01/19	15/02/19

Drawing Number Rev P2.0

TNI Ref Originator Volume Location Type Discipline Classification Number
168014-RPSB-HDG-J1-DR-D-500-00003



Milebush Road Drainage Areas		
	Area = m ²	Area = hectares
Proposed hard standing area (Roads and footways)	160m ²	0.016
Proposed soft standing area (Grassed verge and embankments)	1340m ²	0.134
Total	1500m ²	0.15
Existing hard standing area (Carriageway)	1430m ²	0.143
Existing and proposed mainline soft standing area (Verge)	0m ²	0
Total	1430m ²	0.143



Milebush Link Road Drainage Areas		
	Area = m ²	Area = hectares
Proposed hard standing area (Roads and footways)	2723m ²	0.272
Proposed soft standing area (Grassed verge and embankments)	6705m ²	0.671
Total	9428m ²	0.943
Existing hard standing area (Carriageway)	0m ²	0
Existing and proposed mainline soft standing area (Verge)	0m ²	0
Total	0m ²	0

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- DATUM: Irish Grid
- KEY
 - Existing Survey / OS Mapping
 - Proposed Layout
 - Top of slope
 - Earthworks
 - Bottom of slope
 - Drainage Outfall

P1.0	UPDATED FOR INCLUSION IN STAGE 3 SCHEME ASSESSMENT REPORT	GMCO	JB	CD	15/02/2019
REV	COMMENT	DRAWN	CH	AP	DATE

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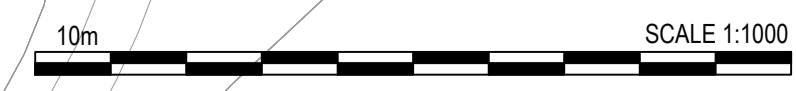
Department for Infrastructure
An Roinn Bonneagair
www.infrastructure.ni.gov.uk

Project

A1 Junctions Phase 2

Title
Junction 2 Milebush - Proposed Drainage Outfalls

Drawing Status	Suitability	Project Ref No.		
S2	FOR INFORMATION	IBH0488		
Scale	Designed	Drawn By	Checked	Authorised
1:1000	PA	PA	JB	CD
Original Size	Date	Date	Date	Date
A1	14/02/18	14/02/18	14/02/18	14/02/18
Drawing Number	Rev P1.0			
TNI Ref Originator Volume Location Type Discipline Classification Number				
168014-RPSB-HDG-J2-DR-D-500-00003				



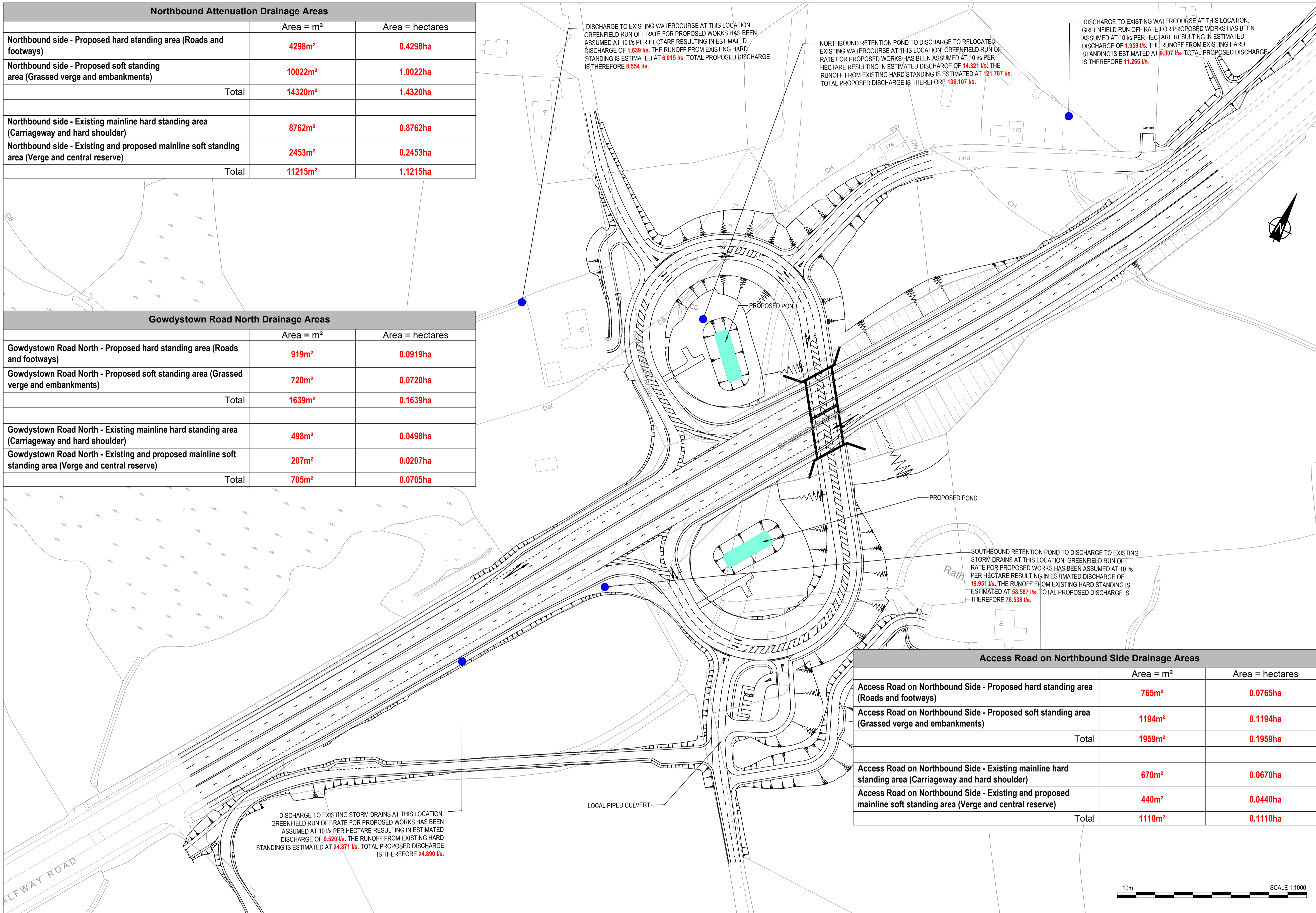
Northbound Attenuation Drainage Areas		
	Area = m ²	Area = hectares
Northbound side - Proposed hard standing area (Roads and footways)	4298m ²	0.4298ha
Northbound side - Proposed soft standing area (Grassed verge and embankments)	10022m ²	1.0022ha
Total	14320m ²	1.4320ha
Northbound side - Existing mainline hard standing area (Carriageway and hard shoulder)	8762m ²	0.8762ha
Northbound side - Existing and proposed mainline soft standing area (Verge and central reserve)	2453m ²	0.2453ha
Total	11215m ²	1.1215ha

Gowdstown Road North Drainage Areas		
	Area = m ²	Area = hectares
Gowdstown Road North - Proposed hard standing area (Roads and footways)	919m ²	0.0919ha
Gowdstown Road North - Proposed soft standing area (Grassed verge and embankments)	720m ²	0.0720ha
Total	1639m ²	0.1639ha
Gowdstown Road North - Existing mainline hard standing area (Carriageway and hard shoulder)	498m ²	0.0498ha
Gowdstown Road North - Existing and proposed mainline soft standing area (Verge and central reserve)	207m ²	0.0207ha
Total	705m ²	0.0705ha

Southbound Merge Drainage Areas		
	Area = m ²	Area = hectares
Southbound Merge - Proposed hard standing area (Roads and footways)	295m ²	0.0295ha
Southbound Merge - Proposed soft standing area (Grassed verge and embankments)	225m ²	0.0225ha
Total	520m ²	0.0520ha
Southbound Merge - Existing mainline hard standing area (Carriageway and hard shoulder)	1753m ²	0.1753ha
Southbound Merge - Existing and proposed mainline soft standing area (Verge and central reserve)	1157m ²	0.1157ha
Total	2910m ²	0.2910ha

Access Road on Northbound Side Drainage Areas		
	Area = m ²	Area = hectares
Access Road on Northbound Side - Proposed hard standing area (Roads and footways)	765m ²	0.0765ha
Access Road on Northbound Side - Proposed soft standing area (Grassed verge and embankments)	1194m ²	0.1194ha
Total	1959m ²	0.1959ha
Access Road on Northbound Side - Existing mainline hard standing area (Carriageway and hard shoulder)	670m ²	0.0670ha
Access Road on Northbound Side - Existing and proposed mainline soft standing area (Verge and central reserve)	440m ²	0.0440ha
Total	1110m ²	0.1110ha

Southbound Attenuation Drainage Areas		
	Area = m ²	Area = hectares
Southbound side - Proposed hard standing area (Roads and footways)	7529m ²	0.7529ha
Southbound side - Proposed soft standing area (Grassed verge and embankments)	12422m ²	1.2422ha
Total	19951m ²	1.9951ha
Southbound side - Existing mainline hard standing area (Carriageway and hard shoulder)	4215m ²	0.4215ha
Southbound side - Existing and proposed mainline soft standing area (Verge and central reserve)	2803m ²	0.2803ha
Total	7018m ²	0.7018ha



- NOTES**
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 - DATUM: Irish Grid

KEY

	Existing Survey / OS Mapping
	Proposed Layout
	Top of slope
	Earthworks
	Bottom of slope
	Drainage Outfall
	Proposed Pond

P1.0	UPDATED FOR INCLUSION IN STAGE 3 SCHEME ASSESSMENT REPORT	GMCQ	JB	CD	15/02/2019
P0.2	DISCHARGE NOTE AMENDED	GMCQ	JB	CD	31/01/2019
REV	COMMENT	DRAWN	CH	AP	DATE

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Project

A1 Junctions Phase 2

Title: J3 Gowdstown - Proposed Drainage Outfalls

Drawing Status	Suitability	Project Ref No.		
S2	FOR INFORMATION	IBH0488		
Scale	Designed	Drawn By	Checked	Authorised
1:1000	GMCQ	GMCQ	JB	CD
Original Size	Date	Date	Date	Date
A1	09/02/2018	09/02/2018	15/02/2019	15/02/2019
Drawing Number	Rev P1.0			
TNI Ref	Originator	Volume	Location	Type Discipline Classification Number
168014-RPSB-HDG-J3-DR-D-500-00003				



Northbound drainage areas		
	Area = m ²	Area = hectares
Northbound side - Proposed hard standing area (Roads and footways)	10634m ²	1.0634
Northbound side - Proposed soft standing area (Grassed verge and embankments)	11570m ²	1.157
Total	22204m ²	2.2204
Northbound side - Existing mainline hard standing area (Carriageway and hard shoulder)	5046m ²	0.5046
Northbound side - Existing and proposed mainline soft standing area (Verge and central reserve)	1671.9m ²	0.16719
Total	6717.9m ²	0.67179

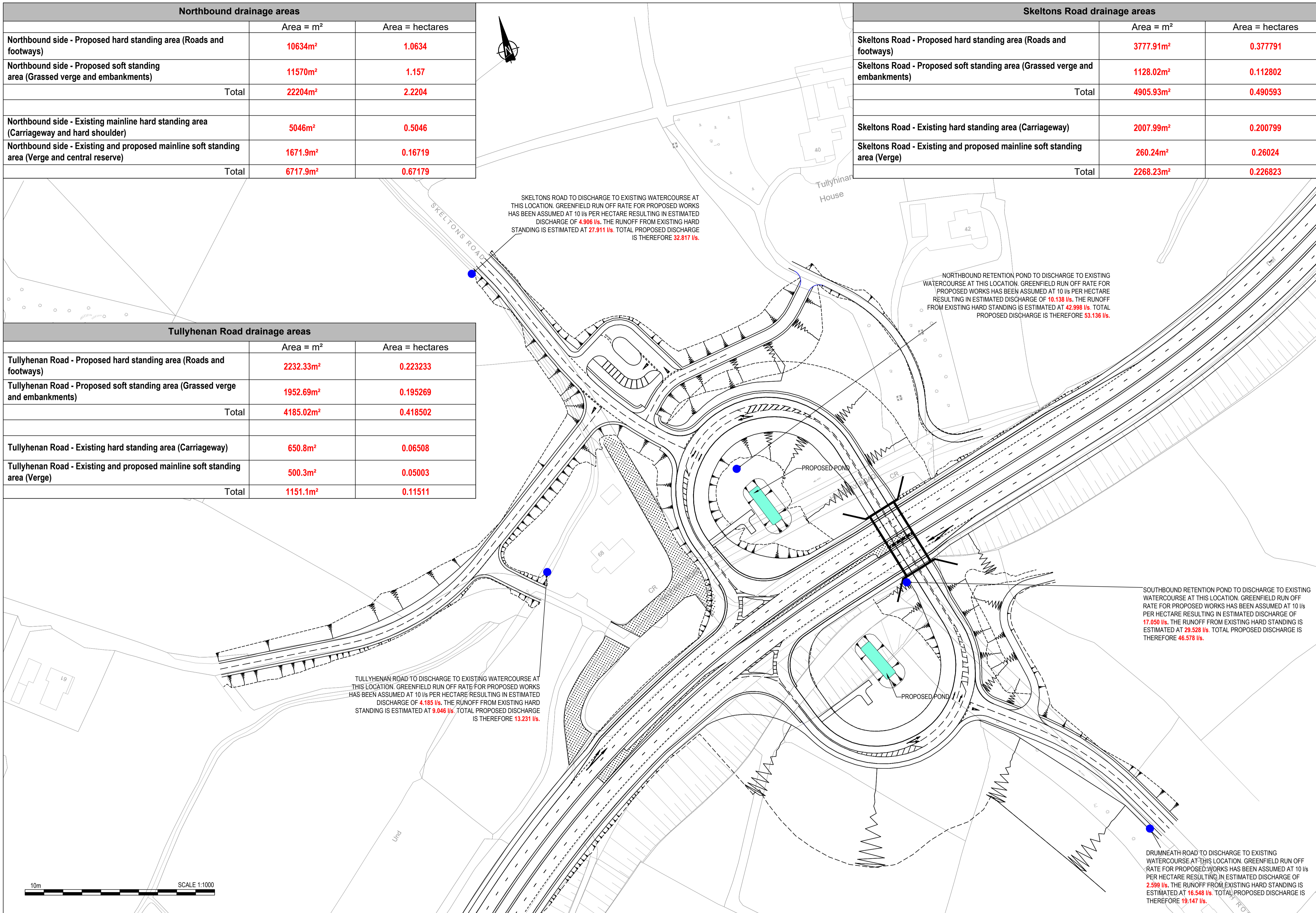
Skeltons Road drainage areas		
	Area = m ²	Area = hectares
Skeltons Road - Proposed hard standing area (Roads and footways)	3777.91m ²	0.377791
Skeltons Road - Proposed soft standing area (Grassed verge and embankments)	1128.02m ²	0.112802
Total	4905.93m ²	0.490593
Skeltons Road - Existing hard standing area (Carriageway)	2007.99m ²	0.200799
Skeltons Road - Existing and proposed mainline soft standing area (Verge)	260.24m ²	0.26024
Total	2268.23m ²	0.226823

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 - DATUM: Irish Grid
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Tullyhenan Road drainage areas		
	Area = m ²	Area = hectares
Tullyhenan Road - Proposed hard standing area (Roads and footways)	2232.33m ²	0.223233
Tullyhenan Road - Proposed soft standing area (Grassed verge and embankments)	1952.69m ²	0.195269
Total	4185.02m ²	0.418502
Tullyhenan Road - Existing hard standing area (Carriageway)	650.8m ²	0.06508
Tullyhenan Road - Existing and proposed mainline soft standing area (Verge)	500.3m ²	0.05003
Total	1151.1m ²	0.11511

Drumneath Road drainage areas		
	Area = m ²	Area = hectares
Drumneath Road - Proposed hard standing area (Roads and footways)	1382.92m ²	0.138292
Drumneath Road - Proposed soft standing area (Grassed verge and embankments)	1216.541m ²	0.1216541
Total	2599.461m ²	0.2599461
Drumneath Road - Existing hard standing area (Carriageway)	1190.49m ²	0.119049
Drumneath Road - Existing and proposed mainline soft standing area (Verge)	221.02m ²	0.022102
Total	1411.51m ²	0.141151

Southbound drainage areas		
	Area = m ²	Area = hectares
Southbound side - Proposed hard standing area (Roads and footways)	5987.2m ²	0.59872
Southbound side - Proposed soft standing area (Grassed verge and embankments)	17069.7m ²	1.70697
Total	23056.9m ²	2.30569
Southbound side - Existing mainline hard standing area (Carriageway and hard shoulder)	3699.5m ²	0.36995
Southbound side - Existing and proposed mainline soft standing area (Verge and central reserve)	1636.3m ²	0.16363
Total	5335.8m ²	0.53358



10m SCALE 1:1000

P1.0	UPDATED FOR INCLUSION IN STAGE 3 SCHEME ASSESSMENT REPORT	GMCO	JB	CD	15/02/2019
REV	COMMENT	DRAWN	CH	AP	DATE

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Project

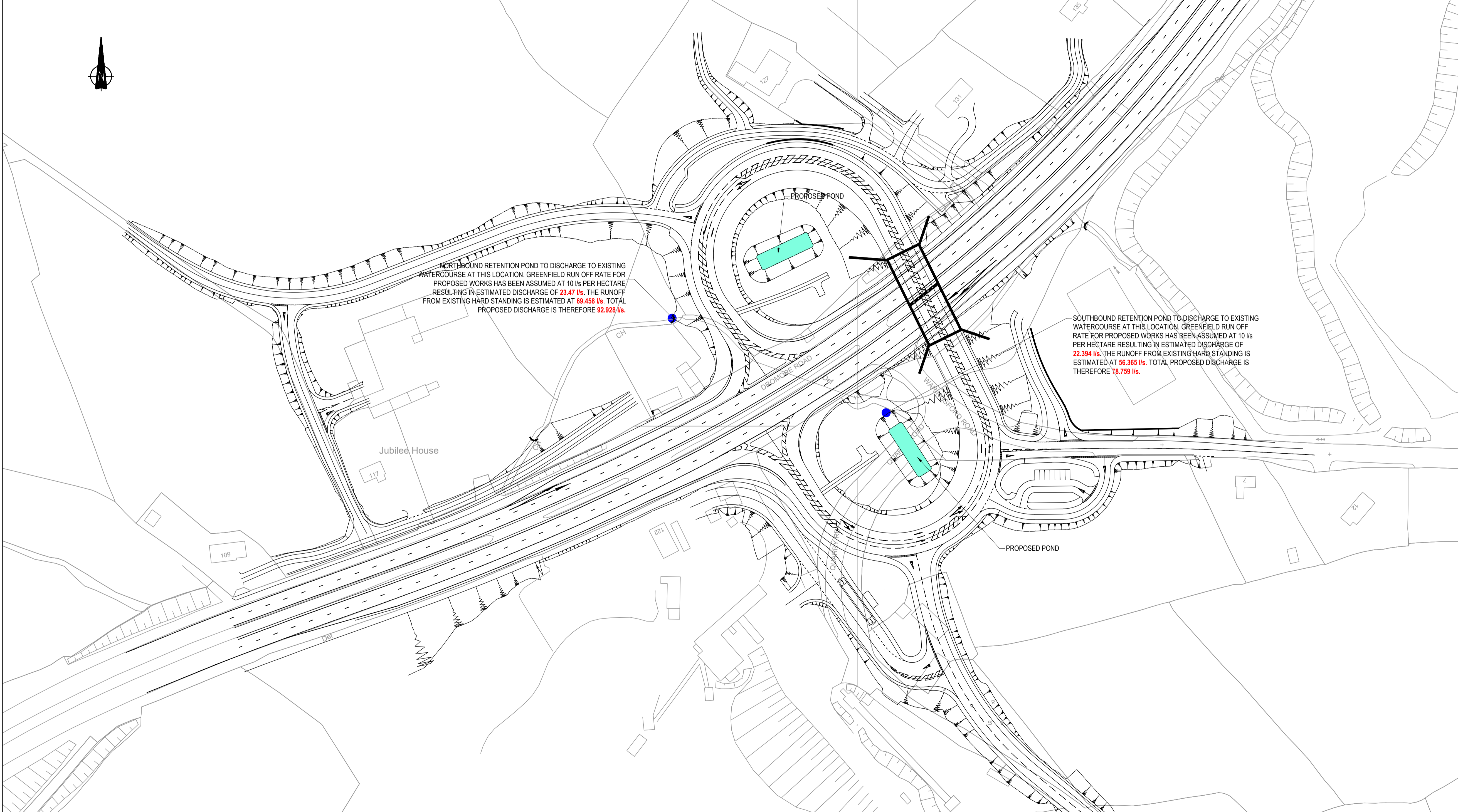
A1 Junctions Phase 2

Title

Junction 4 Skeltons/Drumneath - Proposed Drainage Outfalls

Drawing Status	Suitability	Project Ref No.		
S2	FOR INFORMATION	IBH0488		
Scale	Designed	Drawn By	Checked	Authorised
1:1000	PA	PA	JB	CD
Original Size	Date	Date	Date	Date
A1	15/02/18	15/02/18	15/02/18	15/02/18
Drawing Number	Rev P1.0			
TNI Ref	Originator	Volume	Location	Type Discipline Classification Number
168014-RPSB-HDG-J4-DR-D-500-00003				

Northbound drainage areas		
	Area = m ²	Area = hectares
Northbound side - Proposed hard standing area (Roads and footways)	8756m ²	0.8756
Northbound side - Proposed soft standing area (Grassed verge and embankments)	14714m ²	1.4714
Total	23470m ²	2.3470
Northbound side - Existing mainline hard standing area (Carriageway and hard shoulder)	4997m ²	0.4997
Northbound side - Existing and proposed mainline soft standing area (Verge and central reserve)	1336m ²	0.1336
Total	6333m ²	0.6333



Southbound drainage areas		
	Area = m ²	Area = hectares
Southbound side - Proposed hard standing area (Roads and footways)	10105m ²	1.0105
Southbound side - Proposed soft standing area (Grassed verge and embankments)	12289m ²	1.2289
Total	22394m ²	2.2394
Southbound side - Existing mainline hard standing area (Carriageway and hard shoulder)	4055m ²	0.4055
Southbound side - Existing and proposed mainline soft standing area (Verge and central reserve)	1254m ²	0.1254
Total	5309m ²	0.5309

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Legend:

- Existing Survey / OS Mapping
- Proposed Layout
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- Earthworks
- Bottom of slope
- Drainage Outfall
- Proposed Pond

REV	COMMENT	DRAWN	CH	AP	DATE

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Project

A1 Junctions Phase 2

Title

J5 Waringsford - Proposed Drainage Outfalls

Drawing Status	Suitability	Project Ref No.		
S2	For Information	IBH0488		
Scale	Designed	Drawn By	Checked	Authorised
1:1000	DMI	DMI	JB	CD
Original Size	Date	Date	Date	Date
A1	09/02/18	09/02/18	15/02/19	15/02/19
Drawing Number	Rev P1.0			
TNI Ref	Originator	Volume	Location	Type Discipline Classification Number
168014-RPSB-HDG-J5-DR-D-500-00003				

