

Camp Field (land to the west of Havant Crematorium)
Bartons Road
Havant

Ref: CP/23/0122/6383

8th March 2023

Watercourse Condition Assessment

Scope

- 1.0 The purpose of this report is to establish the current condition of the existing watercourse that borders the western boundary of the site to confirm that it is suitable to receive the surface water flows from the proposed development and detail any remediation or clearance works required to return it to its original capacity.

Background

- 1.1 Redrow Homes has obtained planning permission (APP/19/00007) for the construction of 70No. dwellings and associated works at a 3ha parcel of land north of Bartons Road in Havant.
- 1.2 The proposed surface water drainage strategy for the site is to attenuate runoff from all new impermeable areas within onsite SuDS with a restricted discharge (equivalent to greenfield runoff rate Q_{bar} 12.5l/s) into the existing watercourse that borders the western boundary of the site.
Land drainage consent for this new headwall connection has been given by HCC under ref:OWC/2021/0573
- 1.3 The on-site SuDS provide a robust treatment train to remove sediment and pollutants from the runoff prior to discharge into the watercourse.
This watercourse currently receives greenfield runoff (overland and sub-surface flows) from the existing undeveloped site.

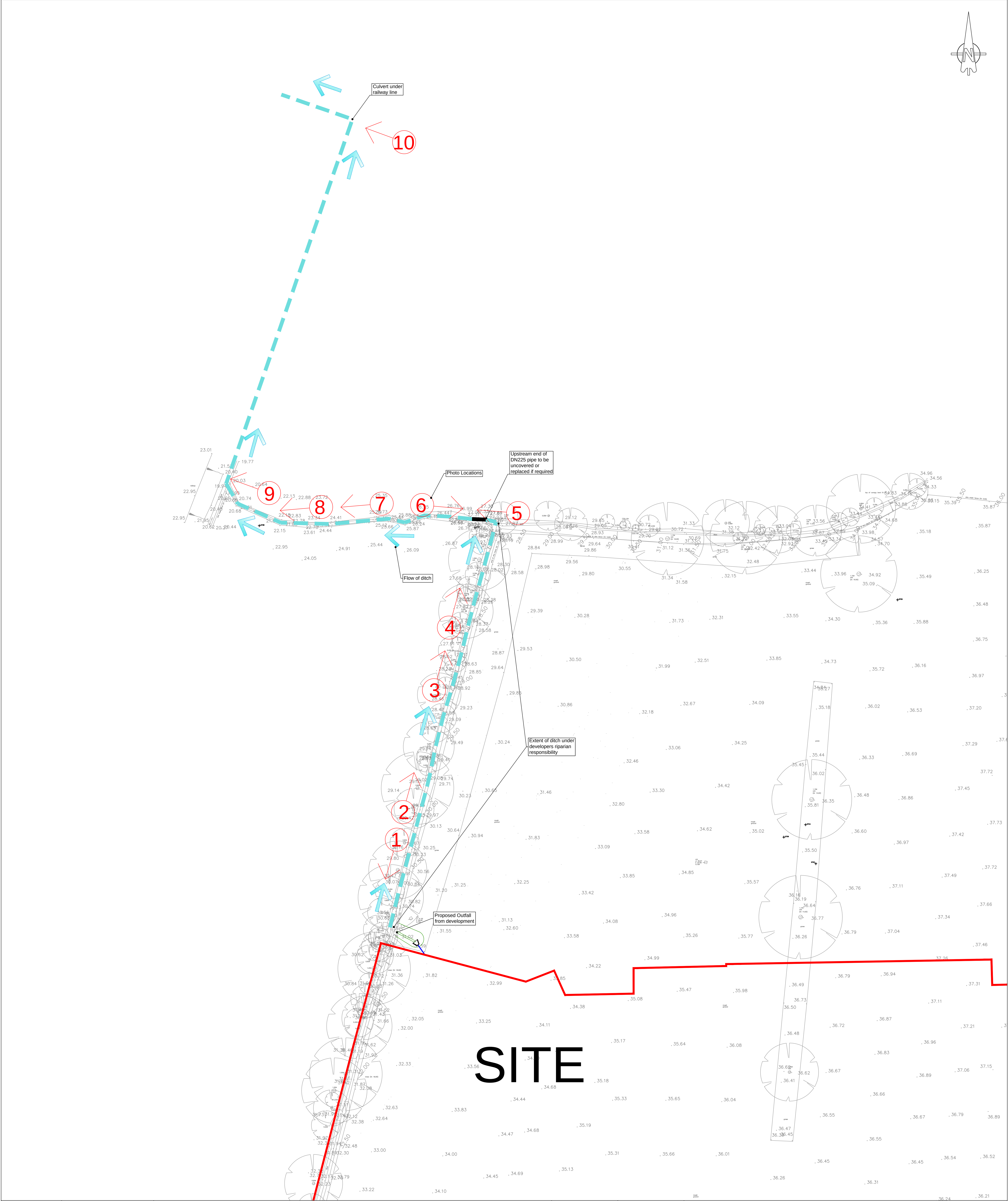
Route of watercourse

- 1.4 From the proposed point of the outfall, the watercourse flows in a northerly direction along the western site boundary for 120m before turning westwards.
This section of the ditch will be the joint riparian responsibility of Redrow Homes as the adjoining landowner as set out in law in the Public Health Act 1936, the Land Drainage Acts of 1991 & 1994, the Water Resources Act 1991.
- 1.5 A short 3m section of DN255 pipe culverts the ditch beneath the woodland track where the open ditch continues in a westerly direction following the topography towards the railway embankment.
At this point, this ditch joins a secondary drainage ditch that runs in a northerly direction parallel with the foot of the railway embankment. This ditch continues for 50m where it becomes culverted beneath the railway line where it joins the main river that flows to the west of the railway line.
This main river flows in a south westerly direction to its confluence with Bridge Lake near Langstone.

Condition of watercourse

- 1.6 The section of the ditch from the proposed point of the outfall to the point where it becomes culverted beneath the woodland track (section within the developer's riparian responsibility) is in an overall good condition and the capacity of this watercourse will adequately convey greenfield runoff and the proposed 12.5 l/s within the main ditch channel.
- 1.7 There are several locations along this ditch where excess dense leaf litter/ vegetation and fallen branches from the surrounding woodland trees have accumulated within the ditch channel, which will partially restrict flows.
It is recommended that this excess organic matter should be cleared to the original channel profile.
- 1.8 It should be noted that established vegetation within and on the banks of the ditch should be kept to prevent erosion and remain beneficial for wildlife.
Due to the location and scale of this ditch, clearance works should be undertaken by hand using manual tools such as rakes, hoes, shovels, buckets and wheelbarrows. The organic waste shall be left a safe distance from the bank for a few days to allow any organisms to move back into the watercourse, after which the waste should be appropriately removed an adequate distance from the ditch site so it does not end up back into the watercourse.
- 1.9 During the clearance process, ensure that any disturbed debris does not end up flowing downstream and causing problems for other landowners.
Ideally, the majority of clearance works should be undertaken after the vegetation has begun to die back in late September/October. At this time of year, there is also less likely to be wildlife nesting or breeding in or near the ditch.
- 1.10 Several waste materials/debris/litter was also noted within the ditch.
This nonorganic waste should be completely removed off-site and disposed of in an appropriate manner.
No invasive species (vegetation or animal) were observed during the walkover.
- 1.11 It should be noted that the remedial maintenance measures listed above should be incorporated into the development long-term management and maintenance plan to ensure regular inspection and maintenance is carried out on this stretch of the watercourse within the developer's riparian responsibility.
- 1.12 Where the ditch becomes culverted beneath the woodland track the upstream end of the DN225 pipe has become buried beneath sediments and vegetation/leaf litter.
Currently, flows will back up within this area of the ditch before spilling over the woodland track or slowly infiltrating into the ground and through the pipe.
- 1.13 It is suggested that this section of the ditch is cleared out and the end of the DN225 pipe uncovered to assess the condition of the pipe and restore the positive connection.
If required, this pipe may need to be replaced if collapsed or if any internal blockage cannot be removed.
- 1.14 Downstream of the culvert the open ditch is of a suitable woodland nature and does not require any maintenance.
The culvert that conveys flows underneath the railway line is clear and in a suitable condition.

Appendix A - Watercourse Route and Photo Locations Plan 6383-911



REV. No.	DATE	DESCRIPTION	DRAWN	CHECKED		
Client			MJA CONSULTING CIVIL & STRUCTURAL ENGINEERS Ipsum Court, 24 The Quadrant, Abingdon Science Park, Abingdon Oxon, OX14 3YS Tel: 01235 555173 Email: mail@mjaconsulting.co.uk			
Project Bartons Road Havant						
Title Wartercourse Route and Photo Locations			Scale: 1:1000 @A3		Status: FOR INFORMATION	
			Drawn: CP	Project Engineer WSR	MJA Project No: 6383	Date: **/**/2020
			Drawing Number: 6383-911		Rev: -	

Appendix B - Photos

Photo 1



Photo 2



Photo 3



Photo 4



Photo 5



Photo 6



Photo 7



Photo 8



Photo 9



Photo 10



Appendix C - Storm Outfall Location 6383-004

KEY:

Proposed Adoptable Sewers:

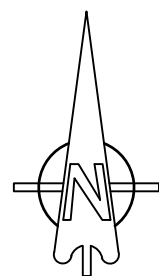
Foul sewer



Storm sewer



Highway Gully



Proposed outfall ditch

SDS LTD Aqua-Swirl
Vortex Separator
Type - AS-4

Flow Control Chamber.
Discharge restricted
to 12.5 l/sec for all
storm events.

Attenuation Tank
470m² x 0.75m deep SDS
Cellular Geolight Tank.

Attenuation Basin

Connection to existing foul
water manhole. Manhole
condition to be renewed.

FW1101
CL 31.230
IL 29.580

IL 30.065

HW3
CL -
IL 30.500

SW24
CL 32.410
IL 30.575

SW23
CL 32.020
IL 30.600
FLOW CTRL
12.5 l/sec

TANK TOP: 31.450
TANK BASE: 30.650

SW21
CL 32.855
IL 31.372

FW15
CL 32.961
IL 30.920

SW22
CL 32.990
IL 30.872
IL 30.647

C1	10.01.22	First Issue.	RJC		AMc	
REV. No.	DATE	DESCRIPTION	DRAWN		CHECKED	
Client			 MJA CONSULTING CIVIL & STRUCTURAL ENGINEERS Ipsum Court, 24 The Quadrant, Abingdon Science Park, Abingdon Oxon, OX14 3YS <i>Tel:</i> 01235 555173 <i>Email:</i> mail@mjaconsulting.co.uk 			
Project			Bartons Road, Havant			
Title			Scale: 1:250 @ A3			
Foul and Storm Outfall Locations			Status: CONSTRUCTION			
			Drawn: RJC	Project Engineer: AMc	MJA Project No: 6383	Date: 01/2022
			Drawing Number: 6383-MJA-SW-XX-DR-C-004			Rev: C1