

Our Ref: J-11713-01-AW

30 August 2017

A & M Architectural Partnership LLP
40 Cambridge Road
Hastings
East Sussex
TN34 1DT

RE: Demolition of 6,111 square metres of redundant chalets and facilities buildings, use of land for the siting of 203 holiday caravans including 5 caravans for use as staff accommodation, refurbishment of retained single and two storey holiday chalets to form 87 units of holiday accommodation, retain managers bungalow, sales area for 5 caravans, refurbishment of remainder of central facilities building, CCTV cameras, provision of new pedestrian concourse with terraces, splash and dry play areas, multi-games court, adventure golf course and outdoor theatre and new landscaping. Retaining existing pitch and putt golf course to the east of the site.

Introduction

Away Resorts are proposing to develop Mill Rythe Holiday Park to partly demolish and convert the existing chalet accommodation into 203 holiday caravans, including 5 caravans for use as staff accommodation, refurbishment of single and two story holiday chalets to form 87 units of holiday accommodation, retain the managers bungalow, sales area for 5 caravans and refurbishment of the central facilities building. Planning permission has been granted under application reference number APP/16/01237.

As part of the approval a number of conditions were imposed upon the development. As such Nijhuis H2OK Ltd. Have been commissioned with a view to discharge Condition 14 of the aforementioned planning approval. The condition reads as follows:

14 *No development shall commence on site until details of a scheme for foul and surface water drainage has been submitted to and approved in writing by the Local Planning Authority. Such details should include provision for all surface water drainage from parking areas and areas of hardstanding. Where a SUDS scheme is to be implemented, the drainage details submitted to the Local Planning Authority should:*

i) Specify the responsibilities of each party for the implementation of the SUDS scheme

ii) Specify a timetable for implementation

iii) Provide a management and maintenance plan for the lifetime of the development. This should include the arrangements for adoption by any public

authority or statutory undertaker and any other arrangements to secure the operation of the scheme throughout its lifetime.

The development shall be carried out in accordance with the approved details before any part of the development is occupied and shall be retained thereafter.



Reason: To ensure adequate provision for drainage in accordance with the NPPF and in accordance with policy CS15 of the Havant Borough Local Plan (Core Strategy) 201

The objective of this letter is to present sufficient information to discharge planning condition 14 relating to the foul water drainage system proposed on site. The surface water drainage will be dealt with in a separate report for the site.

Existing Foul Drainage Arrangements

The existing foul drainage arrangements at Mill Rythe comprise a combination of gravity drains and a satellite pumping station leading to a terminal pumping station which discharges via a rising main to the public sewer off site.

An indicative layout showing the existing drainage arrangements can be seen in **Annex B**.

A copy of the sewer records is included within **Annex A** for information, these do not show all private sewerage networks. The site has indicated the connection point to the public sewer is at the park entrance road by Havent Road, the closest manhole to this location is number 4603 as shown on the sewage plans.

The satellite pumping station, labelled PS #2 on the associated drawings, consists of a wet well constructed from pre-cast concrete rings with approximate diameter 1.8m and 2.6m total depth from cover level. During the site visit a temporary pump was installed due to maintenance operations and it is planned to install two KSB Ama Porter 501 ND pumps to service the well with approximately a 50mm diameter rising main (60m length). This pumps flows to a manhole upstream of the terminal pump station where flows then gravitate thereafter. This pump station was in a serviceable condition with no obvious damage to the system or leaks within the vicinity.

The terminal pump station, labelled PS #1, is located adjacent to the main complex building. This comprises of a wet well constructed from pre-cast concrete rings with approximate diameter of 1.8m and total depth of 4m from cover level. Storage within the wet well is estimated at around 5m³. Pumps consist of a duty assist set up with two Grundfos SE1.80.80.40.4.51D units. These pump through a separate valve chamber and approximately 100mm diameter ductile iron rising main. This pump station was in a serviceable condition with no obvious damage to the system or leaks within the vicinity.

The on-site restaurant and kitchen have been fitted with a PPD underground Biomass Grease Trap (Model number NS20 UGB) within the last year to alleviate blocking issues within the gravity system.

Drainage Strategy

The existing network of gravity drainage infrastructure and pump stations will serve the chalets, launderette and complex building. The proposed development consisting of new static caravans will be drained via a traditional gravity sewerage system network comprising access / inspection chambers, gravity drains and sewers, and two new sewage pumping stations and pumping mains.

It is proposed the site will retain the indoor swimming pool which is currently served by a backwash filter system. The new pool complex and associated backwash filtration system should discharge to the public sewage system and comply with the utility providers requirements.

The proposed restaurant will be served by the existing grease trap system and therefore no modifications are proposed.

An indicative drainage arrangement is shown on the plan enclosed within **Annex B**.

As can be seen from the plan, the majority of new caravan units in the centre of the site will drain under gravity as per the existing arrangements. Two low lying areas to the east and the west will drain to new pumping stations. The eastern development consists of a population equivalent of 144 (totaling 72 units) and the western development consists of a population equivalent of 128 (64 units). These areas will require their own foul pumping stations which will incorporate 24 hour emergency storage and duty/standby submersible pumps. These pumping stations are labelled PS #5 (eastern) and PS #6 (western). PS #5 will incorporate emergency storage of 22.5m³ and convey flows using an 80mm rising main at a flow rate of 4 l/s. PS #6 will incorporate emergency storage of 20m³ and convey flow using an 80mm rising main at a flow rate of 4 l/s.

The terminal pumping station, labelled PS #1, is to be modified to accommodate additional 24 hour emergency storage consisting of an online storage tank system. This storage tank should be 91m³ in size to increase the total storage to 96m³ to accommodate 24 hours emergency storage from the site. Flows will be conveyed to the public sewerage system via the existing pumping main and pumps. This equipment may need to be upgraded depending on its capacity, although the theoretical increase in flows is minimal and therefore the existing system is likely to be sufficient. The addition of emergency storage provision will also provide a buffer during times of peak flow. The peak flow rate will be approximately 7 l/s calculated with a peaking factor of 6. Flows and loads calculations for the existing and proposed development are included in **Annex C** at the end of this report. The increase in flows resulting from the proposed development is approximately 8% and therefore should not have a large impact on the public sewerage system. With the installation of new modern caravan units and the refurbishment of the existing chalet units it is expected that water saving technologies will reduce this figure even further in reality. The impact of the flows and loads on the public sewerage system is to be agreed with the sewerage utility provider.

An indicative drawing showing the existing and proposed drainage arrangement is enclosed within **Annex B**.

Conclusions

The existing sewerage system at Mill Rythe Holiday Park is in a serviceable condition and will be retained for the majority of the proposed development which will retain a number of the chalets and the main complex building on site.

The proposed development of 203 new static caravans will be serviced by a combination of traditional gravity sewers and associated infrastructure along with two new pumping stations. Flows will be conveyed to the public sewer via the existing terminal pumping station and pumping main. Additional emergency storage is to be installed at this pumping station to allow for 24 hours emergency storage of flows.

The increase in total daily flows for the site as a result of the proposed development is minimal, calculated at 8% of the existing situation. The pumped flow rate to the public sewer may change and this is to be agreed with the sewerage utility provider. An increase in flow may require an upsizing of the pumping main



and a replacement of the existing pumps, although this is unlikely due to the small increase in flows and the addition of emergency storage provision providing a buffer during times of peak flow. This can be confirmed once further investigations have been undertaken to confirm the capacity of the existing pumps and rising main.

The drawings in **Annex B** show the layout of the existing drainage infrastructure and the proposed new installations.

We trust that the above provides sufficient information to enable the discharge of the foul aspects of planning condition 14.

Yours sincerely
For and on behalf of Nijhuis H₂OK Ltd

Andy Woolley
Intermediate Engineer

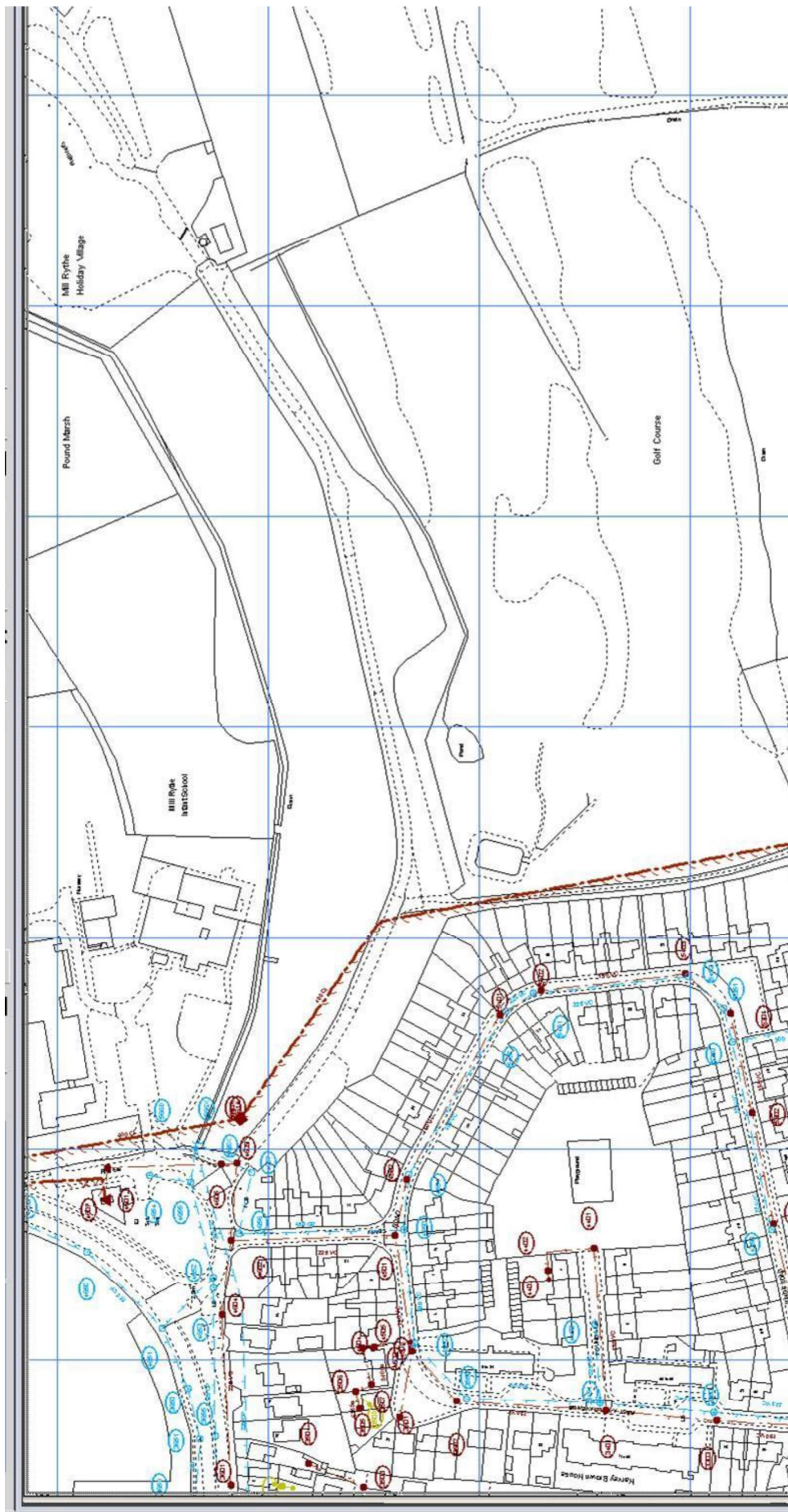
Enc. Annex A: Sewage Undertaker Asset Plans
 Annex B: Existing and Proposed Foul Drainage Arrangements
 Annex C: Flows and Loads Calculations

ANNEX A: SEWAGE UNDERTAKER ASSET PLANS



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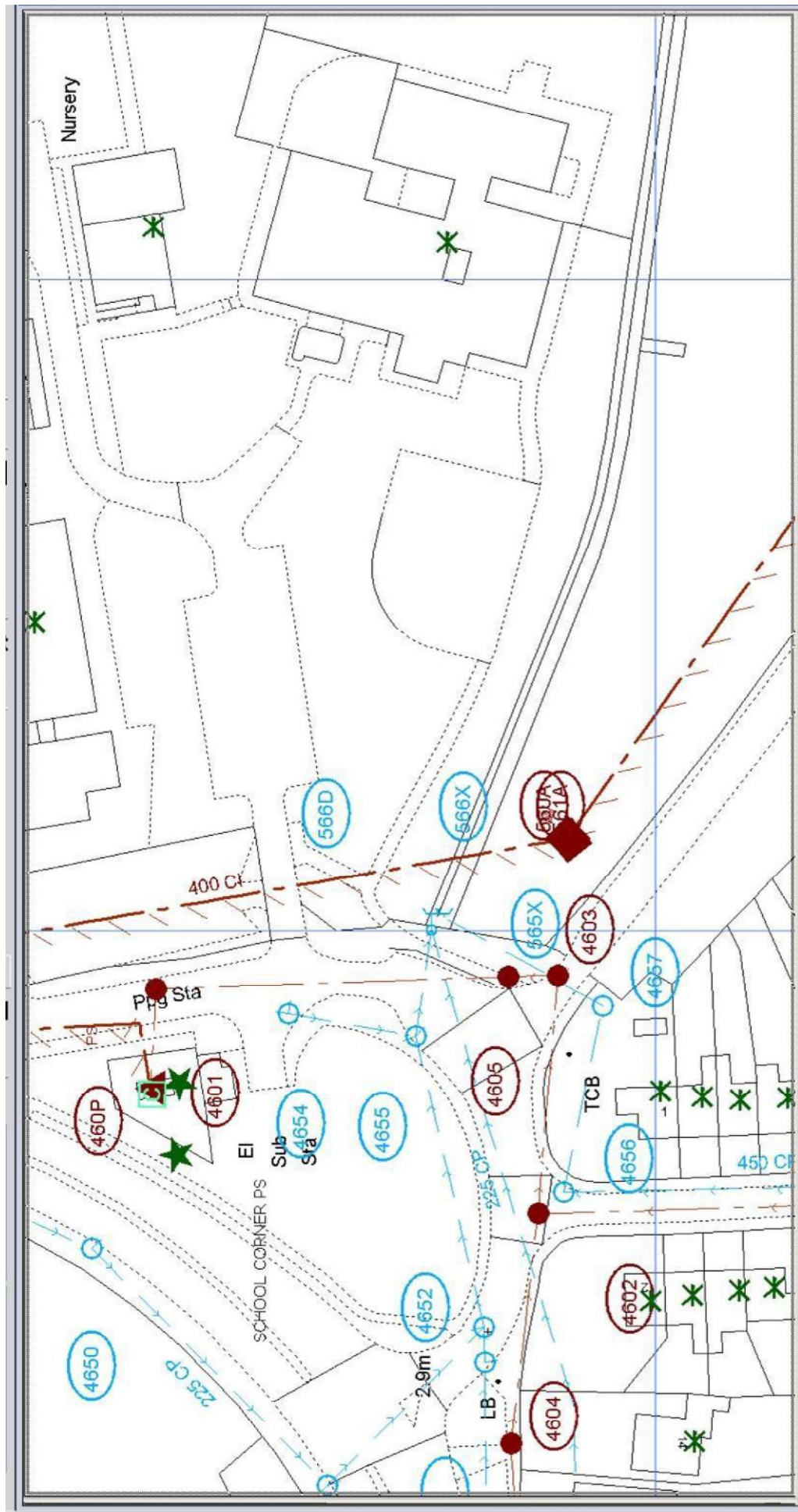
Nijhuis H2OK Ltd. | Nanjerrick Court - Allet - Truro - TR4 9DU - United Kingdom | T +44 (0)333 7000 007 | www.h2ok.co.uk | nh2ok@nijhuisindustries.com
Registered Office: Chy Nyverow - Newham Road - Truro - Cornwall - TR1 2DP | Registered in England No. 4785670





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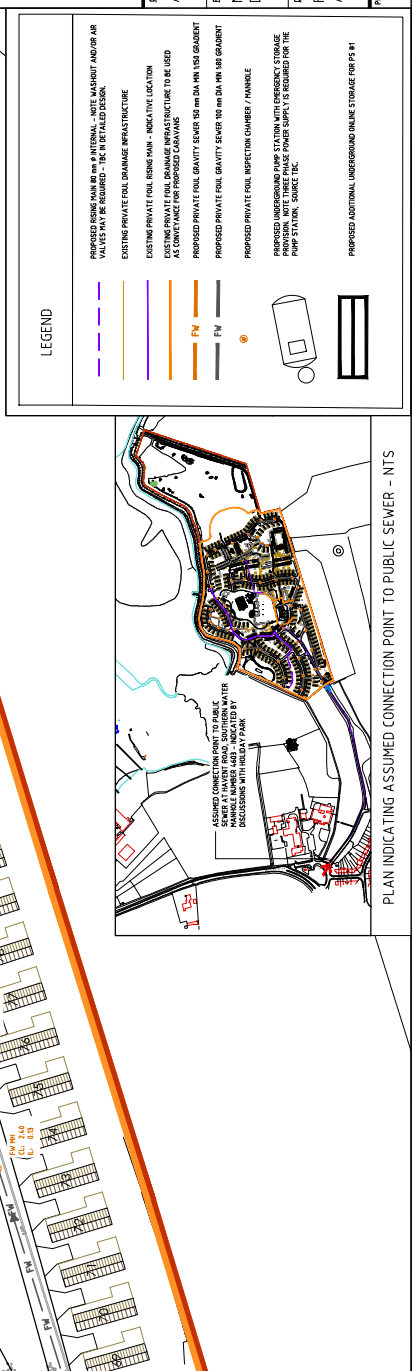
Nijhuis H2OK Ltd. | Nanjerrick Court - Allet - Truro - TR4 9DU - United Kingdom | T +44 (0)333 7000 007 | www.h2ok.co.uk | nh2ok@nijhuisindustries.com
Registered Office: Chy Nyverow - Newham Road - Truro - Cornwall - TR1 2DP | Registered in England No. 4785670



ANNEX B: EXISTING AND PROPOSED FOUL DRAINAGE ARRANGEMENTS

[illegible]

Sanitary Sewer Collection System Map showing building footprints, sewer lines, manholes, and a pump station. The map includes labels for manholes (e.g., MH 1, MH 2) and sewer lines (e.g., S-1, S-2) with associated elevations. A large blue arrow points towards the pump station area. The map is titled "PS #3 EXISTING PUMP STATION - NOT IN USE".



DESIGN RISK ASSESSMENT

A RISK ASSESSMENT RELATING TO POTENTIAL HAZARDS ASSOCIATED WITH THE CONSTRUCTION OF A PROJECT IS REQUIRED FOR ALL PROJECTS DISCUSSED IN THIS REPORT. THE RISK ASSESSMENT FOR EACH PROJECT WAS DISCUSSED IN THE PROJECT REPORT. THE RISK ASSESSMENT FOR THE HAWK HOOK LIFT WAS UNDERTAKEN BY HAWK HOOK LTD. IT HAS BEEN DETERMINED THAT THE RISK OF A PERSON BEING INJURED BY A HAWK HOOK LIFT HAS BEEN UNDERSTAND. RISKS SO IDENTIFIED HAVE BEEN ELIMINATED BY DESIGN WHEREVER PRACTICABLE. THE SITUATION WITH REGARD TO RESIDUAL RISKS IS AS FOLLOWS:

THE WORK IS OF LOW COMPLEXITY WITH LOW LEVEL OF RISK. IT IS CONSIDERED THAT THERE ARE NO SIGNIFICANT RESIDUAL RISKS THAT WOULD NOT BE READY FORSEEEABLE BY A COMPETENT CONTRACTOR, OBSERVING GOOD WORKING PRACTICES.

DESIGNER – MARCUS HOOK DRAWING REVISION – A

FOR INFORMATION	1.00000	4.1.1	1.00000
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PROJECT NO.	DATE	NAME OF PROJECT	NAME OF PROJECT MANAGER
			WILLIAM OTENG MENSAH

DRAWN DATE:-	AUGUST 2017
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FOR INFORMATION

1

nijhuis
INDUSTRIES
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- Waste to Value (AD/Biogas)
- Flood Risk Management/SUDS

Nijhuis H2OK Ltd. | nh2ok@nijhuisindustries.com | www.nijhuisindustries.com/consultancy
Head Office: +44 (0)333 7000 027

Centre
Aronmouth, Bristol BS11 9CE
United Kingdom

AWAY RESORTS

THE
MILL | BY THE PROPOSED HOLLAND V PARK

FOUL DRAINAGE GENERAL
 OCCURRENCE (4 OF 6)

PROJECT No.	DRAWING No.	REV.
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FLOW FROM THE PROPOSED DEVELOPMENT WILL BE CONVEYED TO THE EXISTING TERMINAL PUMPING STATION ON SITE. THEY WILL THEN BE PUMPED VIA THE EXISTING ARRANGEMENTS TO THE PUBLIC SEWER OFF SITE. THE CONNECTION POINT TO THE PUBLIC SEWER IS IN VICINITY OF THE HAVENT ROAD AREA AS INDICATED BY THE PARK. THE PUMP RATE IS AS PER THE EXISTING ARRANGEMENTS.

THE TERMINAL PUMPING STATION WILL BE UPGRADED WITH ADDITIONAL PRESURGENT STORAGE PROVIDED FOR THE NOTES AND DRAWINGS 201 AND 202 AND PROTECTED FLOODING FROM THE COASTING CANALS WILL BE MAINTAINED AS THE TERMINAL PUMPING STATION AND THE EXISTING INFRASTRUCTURE ON SITE WITHIN THE EXISTING 1/125TH FLOOD DRAINAGE STATION. THE PUMPS MAY REQUIRE MODIFICATION TO PROVIDE ADEQUATE CAPACITY.

THE COASTING CANALS ON SITE TO BE REMAINED AS THE EXISTING STORAGE INFRASTRUCTURE. A GRADE TRAIL WAS SET INSTALLED TO CONTROL GRADE AND TO ALLOW THE EXISTING CANALS TO BE MAINTAINED AS THE EXISTING STORAGE INFRASTRUCTURE. THE EXISTING CANALS ON SITE TO BE REMAINED AS THE EXISTING STORAGE INFRASTRUCTURE. THE EXISTING CANALS ON SITE TO BE REMAINED AS THE EXISTING STORAGE INFRASTRUCTURE.

THE PROPOSED NEW STORABLE CANAL ON SITE WILL BE SERVED BY A COMBINATION OF THE EXISTING STORAGE INFRASTRUCTURE, AND TWO EXISTING PUMP STATIONS, 194B AND 194C. THE PUMPING STATIONS WILL BE PROVIDED WITH 12 HOUR EMERGENCY STORAGE PROVIDED AND DISCHARGE TO THE EXISTING STORAGE INFRASTRUCTURE.

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THE FOUL DRAINAGE SYSTEM IS TO REMAIN PRIVATELY OWNED, OPERATED AND MAINTAINED BY THE SITE OWNER/OPERATOR.

PROPOSED RISING MAIN 30 mm Ø INTERNAL - NOTE WASHOUT AND/OR AIR VALVES MAY BE REQUIRED - TBC IN DETAILED DESIGN.

EXISTING PRIVATE FOUL DRAINAGE INFRASTRUCTURE

EXISTING PRIVATE FOUL RISING MAIN - INDICATIVE LOCATION

EXISTING PRIVATE FOUL DRAINAGE INFRASTRUCTURE TO BE USED AS CONVEYANCE FOR PROPOSED CARAVANS

PROPOSED PRIVATE FOUL GRAVITY SEWER 150 mm DIA MIN 155 GRADIENT

PROPOSED PRIVATE FOUL GRAVITY SEWER 100 mm DIA MIN 140 GRADIENT

PROPOSED PRIVATE FOUL INSPECTION CHAMBER 7 MANHOLE

PROPOSED PS (45) - TO HAVE STORAGE CAPACITY OF 22M³ TO ALLOW FOR 24 HOURS EMERGENCY STORAGE, AN UNDERGROUND TT (12x4m) PACKAGE PUMP STATION WITH 2250L STORAGE CAPACITY (2 pumps) WOULD MEET THE REQUIREMENT. DUTY STANDING PUMPS WITH 4L/S FLOW RATE AND 80mm RISING MAIN INTERNAL DIAMETER, STATIC HEAD OF APPROXIMATELY 3.5m, RISING MAIN LENGTH OF 250m MAY REQUIRE 34.5MW/HR AND 1.1LIVE RESERVATION ON LEVEL 5.

PROPOSED PRIVATE FOUL INSPECTION CHAMBER / MANHOLE

PROPOSED UNDERGROUND PUMP STATION WITH EMERGENCY STORAGE PROVISION. NOTE THREE PHASE POWER SUPPLY IS REQUIRED FOR THE PUMP STATION. SOURCE TBC.

PROPOSED ADDITIONAL UNDERGROUND ONLINE STORAGE FOR PPS #1.

DESIGNER - NICHOLS H20K
DATE - 30-17
DRAWING REVISION - A

DESIGNER - NUJULUS H20K DRAWING REVISION - A
DATE - 30-4-17

FOR INFORMATION			
DATE	A/W	WCH	A
DATE	DRAWN	CYCD	APPR. REV.
NOTES.			
PROJECT MANAGER:-			
WILLIAM OTENG MENSAH			
ASSISTANT:-			
NAME OF ASSISTANT			
AUGUST 2017			
SCALE & SHEET SIZE:-			
15000 @ A1			

- **Waste to Value (AD/Bioogas)**
- **Industrial Effluent Treatment**
- **Sewage Treatment**
- **Flood Risk Management/SUDS**
- **Design Consultancy**
- **Service and Maintenance**

[Email: H2OK Ltd. | info@h2oindustries.com | www.h2oindustries.com]
 Head Office: +44 (0)353 7000 007 | www.h2oindustries.com/contact-us

Trade Office | Nanjing Court of Appeal | Yarra,
 Consul | TR4 9DU | United Kingdom
 Website: www.nanjingcourt.org

British Office | Unit 10, Americana Industrial
Centre
Aromouth, Bristol | BS11 9DE
United Kingdom

CONTENTS

AWAY RESORTS

PROJECT

WILL RY THE PROPOSED HOLIDAY PARK
DEVELOPMENT

DRAWING TITLE

TOUL DRAINAGE GENERAL

ARRANGEMENT (2 OF 2)

INVERT No.	NO. OF INVERTS	QTY
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PRODUCT NO.	J-11713	STOCKING NO.	3102	PLANT	A
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ANNEX C: FLOWS AND LOADS CALCULATIONS

Flows and Loads 4 Calculations

Existing

Type	No. dwellings	Occupancy	Population (P)	Adjusted P value (12-25 P x 0.9. 26-50 P x 0.8)	Flow L/day/p	Total Flow / day
Static Fully Serviced	5	2.5	12.5	12	150	1800
Chalets	260	2.5	650	520	150	78000
Restaurant	1	200	200	-	25	5000
Laundry facilities	1	2	2	-	500	1000
Swimming pool	1	200	200	-	10	2000
Office staff	1	20	20	-	50	1000

Total flows (litres/day)		88800
Population Equivalent (PE)		592

Proposed

Type	No. dwellings	Occupancy	Population (P)	Adjusted P value (12-25 P x 0.9. 26-50 P x 0.8)	Flow L/day/p	Total Flow / day
Static Fully Serviced	203	2.5	507.5	406	150	60900
Chalets	87	2.5	217.5	174	150	26100
Restaurant	1	200	200	-	25	5000
Laundry facilities	1	4	4	-	500	2000
Swimming pool facilities	1	200	200	-	10	2000
Office staff	1	20	20	-	50	1000

Total flows (litres/day)		96000
Population Equivalent (PE)		640
Average flow (l/s)		1.1
Design flow peaking factor of 6 (l/s)		6.7

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