LEGEND

PHASE 1 AND PHASE 2 BOUNDARY EXTENTS

THE PROPOSED SURFACE WATER SEWER NETWORK AS DENOTED BY THE DARK BLUE LINES REPRESENTS A MAXIMUM 100M LENGTH OF 225MM DIAMETER PIPEWORK LAID AT A GRADIENT OF 1:170.

THE PROPOSED SURFACE WATER SEWER NETWORK AS DENOTED BY THE GREEN LINES REPRESENTS A MAXIMUM 120M LENGTH OF 300MM DIAMETER PIPEWORK LAID AT A GRADIENT OF 1:245.

THE PROPOSED SURFACE WATER SEWER NETWORK AS DENOTED BY THE MAGENTA LINES REPRESENTS AN EXTENDED 300MM DIAMETER PIPEWORK LAID AT A GRADIENT OF 1:245. THIS WILL REQUIRED THE RAISING OF FINISHED FLOOR LEVELS WITHIN THE VICINITY OF THIS NETWORK BEYOND THE MINIMUM FLOOR LEVEL OF 3.33m IMPOSED AS PART OF PLANNING CONDITION 16.

THE ABOVE DESIGN PARAMETERS WILL MEET THE ANGLIAN WATER DESIGN REQUIREMENTS NECESSARY FOR ADOPTION, INCLUDING MINIMUM COVER TO THE SEWER AND SELF CLEANSING VELOCITY (SUBJECT TO THE DETAILED SITE LEVEL DESIGN).

THE EXISTING ONSITE DITCH NETWORK SHALL BE EXTENDED & DIVERTED AS REQUIRED TO SERVE 'CATCHMENT AREA A' AND 'CATCHMENT AREA F'. THE DITCH NETWORK WILL THEN CONVEY THE SURFACE WATER RUNOFF INTO THE ATTENUATION LAGOON LOCATED TO THE SOUTH OF THE SITE WHILE ALSO PROVIDING THE INITIAL STAGE OF POLLUTION TREATMENT. THE DITCH NETWORK SHALL REMAIN IN PRIVATE OWNERSHIP AND WILL BE MAINTAINED VIA THE DEVELOPMENTS PRIVATE MANAGEMENT COMPANY.

IN ADDITION TO CONVEYING SURFACE WATER RUNOFF TOWARDS THE ATTENUATION LAGOON, THE DITCH NETWORK WILL ALSO PROVIDE STORAGE DURING MORE EXTREME STORM EVENTS.

THE DITCH NETWORK WILL BE UPTO 2.0m DEEP WITH A 0.6m BED WIDTH. ASSUMING A 1:1.5 BANK BATTER, THE OVERALL WIDTH OF THE DITCH BETWEEN THE TOP OF BANKS WILL RANGE BETWEEN 5.0m AND 6.5m WIDE.

THE DITCH NETWORK SHALL BE CULVERTED/PIPED AS INDICATED FOR PHASES 1 & 2. PIPE DIAMETERS SHALL BE APPROXIMATELY 900mm BUT WILL BE SUBJECT TO CAPACITY CHECKS DURING THE DETAILED DESIGN STAGE AND WILL BE DEPENDANT OF THE OVERALL CATCHMENT DRAINING THROUGH EACH INDIVIDUAL CULVERT/PIPE. (SEE FULL NOTES BELOW).

ALL WORKS UNDERTAKEN TO THE EXISTING DRAINAGE NETWORK WILL BE SUBJECT TO A SECTION 23 CONSENT IN CONSULTATION WITH THE INTERNAL DRAINAGE BOARD.

THE DITCH NETWORK SHALL BE CULVERTED/PIPED AS INDICATED FOR PHASES 1 & 2. THE CULVERTING/PIPING OF THE REMAINING DEVELOPMENT IS INDICATIVE AT THIS STAGE AND WILL BE AGREED DURING THE RESERVED MATTERS APPLICATION FOR EACH FUTURE PHASE.

PIPE DIAMETERS SHALL BE APPROXIMATELY 900mm BUT WILL BE SUBJECT TO CAPACITY CHECKS DURING THE DETAILED DESIGN STAGE AND WILL BE DEPENDANT OF THE OVERALL CATCHMENT DRAINING THROUGH EACH INDIVIDUAL CULVERT/PIPE.

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THE DITCH NETWORK SHALL BE CULVERTED/PIPED AS INDICATED FOR PHASES 1 & 2. THE CULVERTING/PIPING OF THE REMAINING DEVELOPMENT IS INDICATIVE AT THIS STAGE AND WILL BE AGREED DURING THE RESERVED MATTERS APPLICATION FOR EACH FUTURE PHASE.

PIPE DIAMETERS SHALL BE APPROXIMATELY 900mm BUT WILL BE SUBJECT TO CAPACITY CHECKS DURING THE DETAILED DESIGN STAGE AND WILL BE DEPENDANT OF THE OVERALL CATCHMENT DRAINING THROUGH EACH INDIVIDUAL CULVERT/PIPE.

IDB EASEMENT

MAGENTA DASHED LINE DENOTED THE INTERNAL DRAINAGE BOARD (IDB) DRAIN TO BE REALIGNED TO CREATE A SMOOTH CONTINUATION OF THE DRAIN AND TO REMOVE THE CURRENT TIGHT ANGLED CURVATURES AT THIS LOCATION (SUBJECT TO SECTION 23 CONSENT FROM SOUTH HOLLAND IDB).

CATCHMENT AREA B - ATTENUATION LAGOON TO CONTAIN CRITICAL 100-YEAR PLUS CLIMATE CHANGE (+40%) STORM EVENT. THE ATTENUATION LAGOON SHALL REMAIN IN PRIVATE OWNERSHIP AND WILL BE MAINTAINED VIA THE DEVELOPMENTS PRIVATE MANAGEMENT COMPANY.

THE ATTENUATION LAGOON SHALL INCORPORATE FOREBAYS AT THE LAGOON ENTRY POINTS TO PROVIDE THE INITIAL STAGE OF POLLUTION TREATMENT PRIOR TO ENTERING THE MAIN LAGOON.

TOP OF BANK LEVEL = 3.0m (BLACK DASHED LINE)
MAX. DESIGN WATER LEVEL = 2.30m (DARK BLUE LINE)
LAGOON BASE LEVEL = 1.30m (MAGENTA LINE)
BANK SLOPE = 1:3

FLOW CONTROL CHAMBER WITH VORTEX FLOW CONTROL TO RESTRICT DISCHARGE INTO THE INTERNAL DRAINAGE BOARD (IDB) DRAIN.

MAX. DISCHARGE RATE = 3.0 l/S
DESIGN HEAD = 1.0m
MIN. ORIFICE SIZE = 80mm

HEADWALL OUTFALL

CATCHMENT AREA C - 6.0m WIDE x 20.5m LONG x 0.8m DEEP, BELOW GROUND GEO-CELLULAR ATTENUATION TANK TO CONTAIN STORM EVENTS BETWEEN THE 30-YEAR AND 100-YEAR PLUS CLIMATE CHANGE (+40%) EVENTS. THE ATTENUATION TANK SHALL REMAIN IN PRIVATE OWNERSHIP AND BE MAINTAINED VIA THE DEVELOPMENTS PRIVATE MANAGEMENT COMPANY.

HEADWALL OUTFALL

IDB EASEMENT REDUCED TO 6.0M ON SOUTH SIDE OF DRAIN.

CATCHMENT AREA C - THE ORANGE DRAINAGE NETWORK DENOTES 129.8 m OF 900 mm DIAMETER PIPEWORK TO PROVIDE ATTENUATION UPTO THE CRITICAL 30-YEAR STORM EVENT. THE DRAINAGE SYSTEM SHOULD BE OFFERED FOR ADOPTION TO ANGLIAN WATER OR LINCOLNSHIRE COUNTY COUNCIL HIGHWAYS DEPARTMENT.

FLOW CONTROL CHAMBER WITH VORTEX FLOW CONTROL TO RESTRICT DISCHARGE INTO THE INTERNAL DRAINAGE BOARD (IDB) DRAIN.

MAX. DISCHARGE RATE = 3.0 l/S
DESIGN HEAD = 1.0m
MIN. ORIFICE SIZE = 80mm

PROPOSED PRIVATE PUMPING STATION TO REMAIN WITHIN THE OWNERSHIP OF THE SURROUNDING AGRICULTURAL LAND OWNER (CUIENT).

THE SURFACE WATER RUNOFF FROM THE ADJACENT ATTENUATION LAGOON WILL BE PUMPED TO AN OFFSITE COLLECTION RESERVOIR FOR AGRICULTURAL USE DURING THE SUMMER MONTHS.

THE PUMPING STATION WILL COMPRISE OF A DUTY STANDBY ARRANGEMENT TO MINIMISE THE RISK OF FAILURE AND AT THIS STAGE A DISCHARGE RATE OF 80.0 l/s HAS BEEN INCORPORATED INTO THE DEVELOPMENT DESIGN.

SURFACE WATER RISING MAIN DISCHARGING TO THE PROPOSED COLLECTION RESERVOIR

CATCHMENT AREA A & F - ATTENUATION LAGOON TO CONTAIN CRITICAL 100-YEAR PLUS CLIMATE CHANGE (+40%) STORM EVENT IN COMBINATION WITH THE STORAGE PROVIDED WITHIN THE ON-SITE DITCH NETWORK. THE ATTENUATION LAGOON SHALL REMAIN IN PRIVATE OWNERSHIP AND WILL BE MAINTAINED VIA THE DEVELOPMENTS PRIVATE MANAGEMENT COMPANY.

THE ATTENUATION LAGOON SHALL INCORPORATE FOREBAYS AT THE LAGOON ENTRY POINTS TO PROVIDE THE SECOND STAGE OF POLLUTION TREATMENT PRIOR TO ENTERING THE MAIN LAGOON.

ADDITIONAL STORAGE TO BE PROVIDED BELOW THE OUTFALL LEVEL (MIN. DESIGN WATER LEVEL). THIS ADDITIONAL STORAGE WILL ACT AS A SUMP TO SERVE THE PROPOSED PRIVATE PUMPING STATION LOCATED TO THE WEST OF THE LAGOON.

TOP OF BANK LEVEL = 3.0m (BLACK DASHED LINE)
MAX. DESIGN WATER LEVEL = 2.30m (DARK BLUE LINE)
MIN. DESIGN WATER LEVEL = 1.30m (MAGENTA LINE)
SUMP LEVEL = 0.7m (GREEN LINE)
BANK SLOPE = 1:3

PROPOSED PRE-CAST CONCRETE HEADWALL FORMING FINAL OUTFALL INTO THE INTERNAL DRAINAGE BOARD DRAIN.

INVERT LEVEL = 1.15m

FLOW CONTROL CHAMBER WITH VORTEX FLOW CONTROL TO RESTRICT DISCHARGE INTO THE INTERNAL DRAINAGE BOARD (IDB) DRAIN.

MAX. DISCHARGE RATE = 9.0 l/S
DESIGN HEAD = 1.0m
MIN. ORIFICE SIZE = 130mm

HALL GATE
OXFORD GARDENS
THE BOUNDARIES
FEN ROAD
TUDOR WAY
BAILEY'S CLOSE
Mill Farm
Station House
Forestry
Barrington
Garage
Tudor Lodge
Drain
B 1168
3.0m
2.7m

REV	DATE	DESCRIPTION	DRAWN	CHECKED BY

Revisions

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Ashwood Homes Ltd
CLIENT

Residential Development
Land South of Hall Gate
Holbeach
LOCATION

Surface Water Strategy Layout Plan
DRAWING

5244
PROJECT NO

72
DRAWING NO

P1
REVISION

03/04/2017
DATE

1:1000 @ A0
SCALE

RSM
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