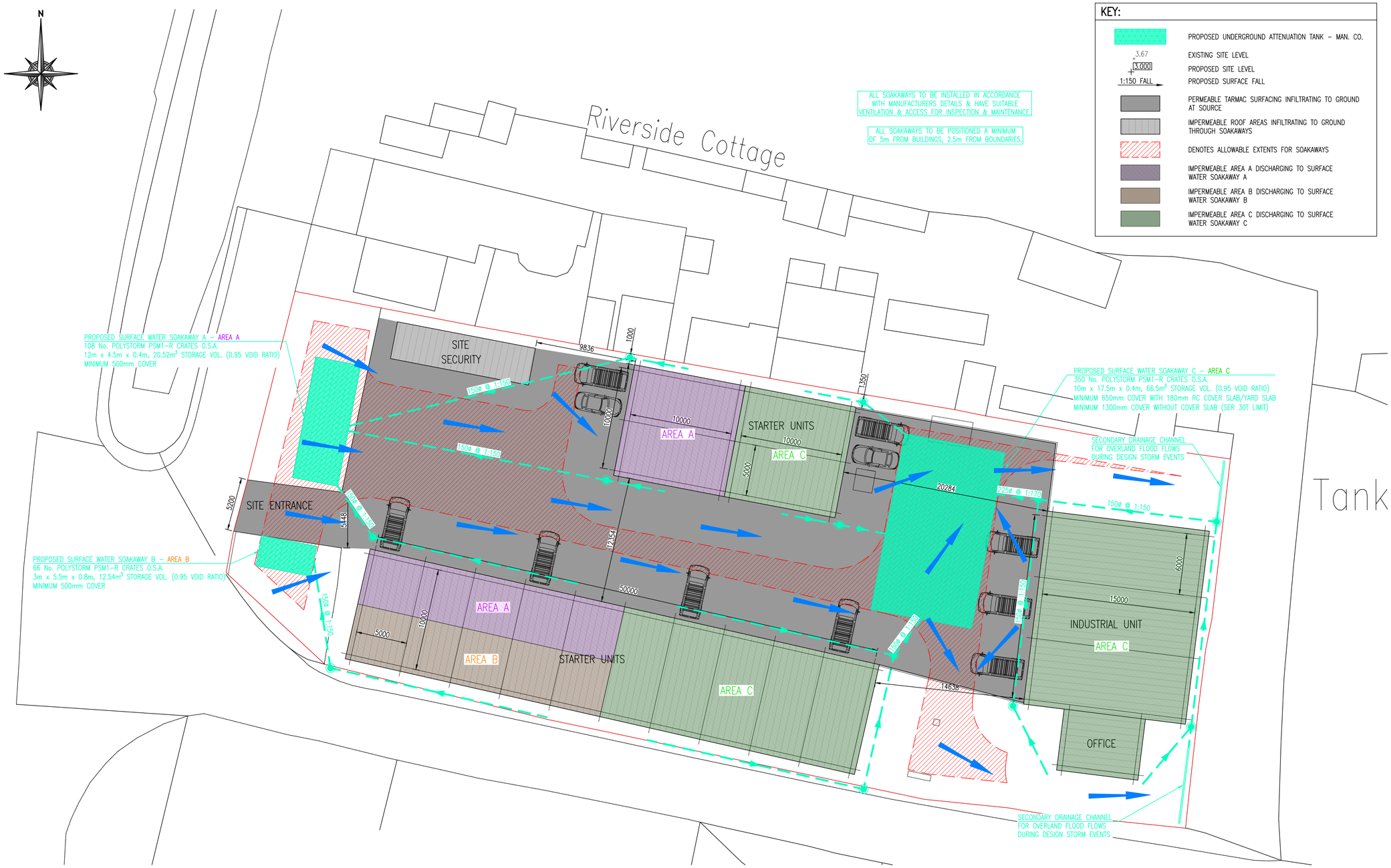


KEY:

- PROPOSED UNDERGROUND ATTENUATION TANK – MAN. CO.
- 3.67 — EXISTING SITE LEVEL
- 3.000 — PROPOSED SITE LEVEL
- 1:150 FALL — PROPOSED SURFACE FALL
- PERMEABLE TARMAC SURFACING INFILTRATING TO GROUND AT SOURCE
- IMPERMEABLE ROOF AREAS INFILTRATING TO GROUND THROUGH SOAKAWAYS
- DENOTES ALLOWABLE EXTENTS FOR SOAKAWAYS
- IMPERMEABLE AREA A DISCHARGING TO SURFACE WATER SOAKAWAY A
- IMPERMEABLE AREA B DISCHARGING TO SURFACE WATER SOAKAWAY B
- IMPERMEABLE AREA C DISCHARGING TO SURFACE WATER SOAKAWAY C

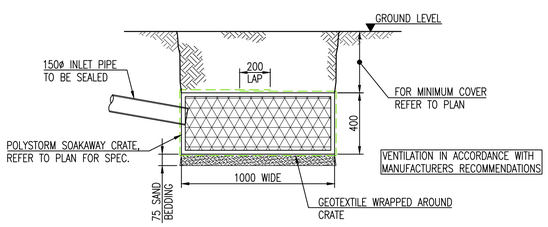
PLEASE REFER TO ARCHITECTS DRAWINGS FOR CONFIRMATION OF ALL WALL/SETTING OUT DIMENSIONS PRIOR TO COMMENCING OF WORKS

THIS DRAWING MUST BE READ IN CONJUNCTION WITH ALL RELEVANT DRAWINGS & STRUCTURAL CALCULATIONS

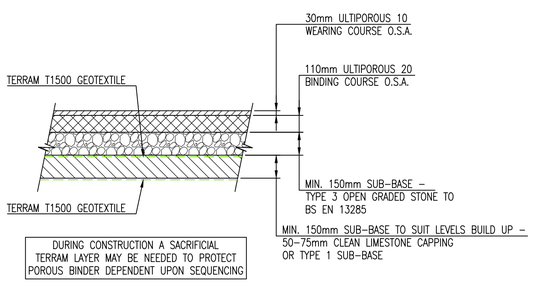
PROPOSED SURFACE WATER DRAINAGE STRATEGY SUMMARY:

- THE SITE IS LOCATED TO THE EAST OF SPALDING DROVE, WEST OF THE CORONATION CHANNEL IN CLAY LAKE, SPALDING.
- THE EXISTING SITE IS A CONCRETE SURFACED YARD WITH A NUMBER OF CABINS, SHEDS, CONTAINERS AND TANKS TO BE REMOVED PRIOR TO ANY DEVELOPMENT.
- THE EXISTING SITE TOPOGRAPHY HAS A NOTICEABLE FALL FROM THE ROAD AT THE WEST OF THE SITE DOWN TO THE EAST BOUNDARY OF THE SITE BACKING ON TO A PRIVATE GATED ACCESS WAY. LIDAR DATA INDICATES THE SITE HAVING LEVELS FROM +3.0m AOD TO THE WEST FALLING DOWN TO +2.2m AOD TO THE EAST, WITH THE ROAD TO THE WEST BEING SITUATED AT APPROXIMATED +4.1m AOD.
- THERE IS LIMITED EXISTING SURFACE WATER DRAINAGE ON SITE, WITH EVIDENCE OF A FEW GULLIES AND POTENTIAL CEOCELLUAR INFILTRATION CRATES BENEATH THE CONCRETE SURFACE. THIS INDICATES THAT INFILTRATION MAY BE POSSIBLE.
- INFILTRATION TESTING WAS UNDERTAKEN BY SHIELDS WILSON ON THE 14/04/25, WITH A WORST CASE INFILTRATION RATE OF 1.005E-05 m/s. NO GROUND WATER WAS ENCOUNTERED DURING OUR INVESTIGATIONS, AND UTILISING BGS PUBLICLY AVAILABLE BOREHOLE RECORDS, THEY INDICATED WATER LEVEL TO BE APPROXIMATELY 3m B.G.L.
- DUE TO THE INFILTRATION RATE WHICH WE WOULD CONSIDER AS BEING ABOVE AVERAGE FOR THE AREA, AS WELL AS THE AVAILABLE ROOM FOR SOAKAWAYS, INFILTRATION WAS PREFERED AS THE INITIAL OPTION FOR DRAINING THE PROPOSED DEVELOPMENT, DUE TO IT MEETING THE HIGHEST LEVEL OF THE SuDS HIERARCHY.
- WHERE POSSIBLE, SOAKAWAYS HAVE BEEN DESIGNED AS 1 CRATE DEEP TO KEEP THE BOTTOM OF THE SOAKAWAYS AS HIGH AS POSSIBLE, AND KEEP THEM OUT OF GROUNDWATER DUE TO THE VICINITY OF THE CORONATION CHANNEL CAUSING VARIATIONS IN THE GROUND WATER LEVEL. HOWEVER SOAKAWAY B TO THE SOUTH-WESTERN BOUNDARY HAS BEEN DESIGNED AS 2 DEEP AS IT IS TOWARDS THE HIGHER SIDE OF SITE AND IS IN THE SOFT SO CAN HAVE MINIMAL COVER. THE DEEPEST BASE OF ANY SOAKAWAY ON SITE IS 1.3m B.G.L. WHICH WE WOULD CONSIDER WELL ABOVE THE POTENTIAL GROUND WATER LEVEL FROM BGS PUBLICLY AVAILABLE BOREHOLE RECORDS.
- PROPOSED UNIT ROOFS HAVE BEEN DESIGNED TO ENTER THE SOAKAWAY SYSTEM BENEATH THE YARD, WHILST THE YARD CONSTRUCTION IS PROPOSED TO BE PERMEABLE TO REDUCE THE AREA NEEDED FOR SOAKAWAYS. THIS PERMEABLE SURFACE HAS BEEN DESIGNED UTILISING AN INFILTRATION RATE OF 1.005E-05 m/s. UTILISATION OF INFILTRATION IS FEASIBLE FOR THE YARD CONSTRUCTION BECAUSE OF THE SHALLOW DEPTH OF CONSTRUCTION & THE CLEARANCE BENEATH THE GROUND WATER LEVELS. YARD LEVELS ARE PROPOSED TO MIMIC THE EXISTING LEVELS/TOPOGRAPHY, WITH THE UNITS FFL SET A MINIMUM OF 150mm ABOVE THESE TO STOP ANY SURFACE WATER RUN OFF FROM BEING ABLE TO ENTER THE UNITS.
- ALL SOAKAWAYS HAVE BEEN MODELED USING CAUSEWAY FLOW+ UTILISING FSR RAINFALL DATA AND BEING MODELED UP TO 1:100 YEAR STORM EVENT PLUS A 40% ALLOWANCE FOR CLIMATE CHANGE. NO FLOODING WAS PRESENT IN ANY STORM EVENTS.
- PROPOSED OVERLAND FLOOD FLOWS HAVE BEEN CONSIDERED THOROUGHLY TO LIMIT ANY OFF SITE FLOOD RISK. THE FLOOD ROUTE IS TO MIMIC THE EXISTING SCENARIO WHERE POSSIBLE. 2 NO. DRAINAGE CHANNELS HAVE BEEN PROPOSED TO BE SITUATED ON THE EASTERN BOUNDARY TO RESTRICT OFF SITE FLOODING IN LARGE STORM EVENTS ONLY WHERE WATER EXCEEDS THE 110mm HB2 UPSTAND KERBS ON SITE.

0 2 4 6 8 12 16 20m
1:200



TYPICAL SOAKAWAY CRATE DETAIL
SCALE 1:20



PRIVATE PERMEABLE TARMAC SHARED DRIVEWAY CONSTRUCTION DETAIL
SCALE 1:20

REV.	DESCRIPTION	DRN.	APP.	DATE
–	FIRST ISSUE – FOR INFORMATION	MRB	APW	04.07.25

SHIELDS WILSON
e: info@shieldswilson.co.uk t: 01775 729252
STRUCTURAL AND CIVIL ENGINEERING

STATUS: FOR INFORMATION

CLIENT: SALTERS LANDSCAPING

PROJECT: SURFACE WATER SOAKAWAY SIZING
CLAY LAKE, SPALDING, LINCS, PE12 6BL

TITLE: PROPOSED SURFACE WATER DRAINAGE STRATEGY ARRANGEMENT

DATE	JUN. '25	SCALE @A1 1:200	DRAWING NO. SW25-258-001	REV. –
DRAWN	MRB			