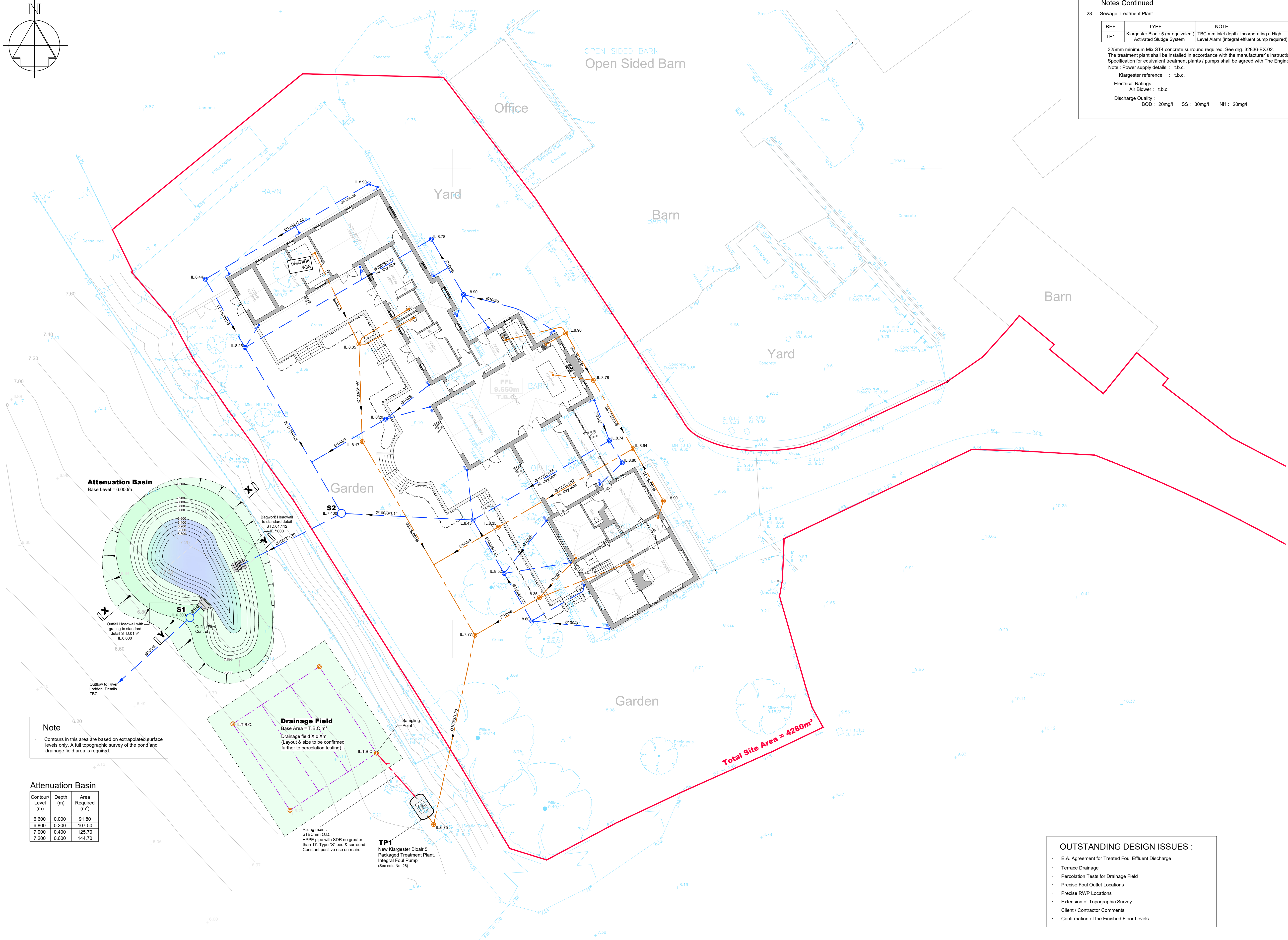
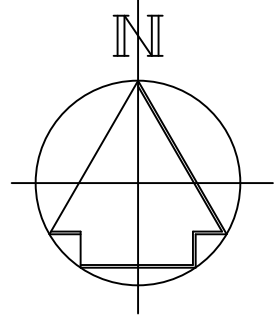




Note

Contours in this area are based on extrapolated surface levels only. A full topographic survey of the pond and drainage field area is required.

Contour Level (m)	Depth (m)	Area Required (m²)
6.600	0.000	91.80
6.800	0.200	107.50
7.000	0.400	125.70
7.200	0.600	144.70

Drainage Field

Base Area = T.B.C.m²

Drainage field X x Xm

(Layout & size to be confirmed further to percolation testing)

Rising main :

at B.C.m O.D.

HPPE pipe with SDR no greater than 17. Type 'S' bed & surround.

Constant positive rise on main.

TP1

New Klargaster Bioair 5

Packaged Treatment Plant.

Integral Foul Pump

(See note No. 28)

SURFACE WATER MANHOLE SCHEDULE

M.H. REF.	INVERT LEVEL LOWEST PIPE.	COVER LEVEL	CHAMBER SIZE INTERNAL DIMS	COVER SIZE CLEAR OPENING	COVER TYPE	M.H. TYPE	COMMENT / DRG.
S1	6.300	7.200	Ø600 MARLEY FLOWLOC MH	B105 VENTED	B125	+	WITH ORIFICE PLATE
S2	7.400	8.750	750 x 675	750 x 600	B125	CP	STD.01.47

Notes Continued

28 Sewage Treatment Plant :

REF.	TYPE	NOTE
TP1	Klargaster Bioair 5 (or equivalent) Activated Sludge System	TBC mm inlet depth, Incorporating a High Level Alarm (integral effluent pump required)

325mm minimum Mix ST4 concrete surround required. See drg. 32836-EX.02. The treatment plant shall be installed in accordance with the manufacturer's instructions. Specification for equivalent treatment plants / pumps shall be agreed with The Engineer.

Note : Power supply details : t.b.c.

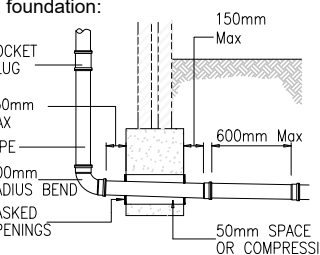
Klargaster reference : t.b.c.

Electrical Ratings : Air Blower : t.b.c.

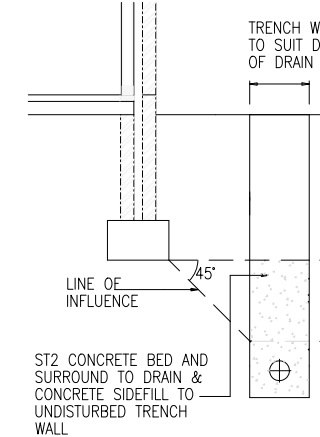
Discharge Quality : BOD : 20mg/l SS : 30mg/l NH : 20mg/l

Notes

- This drawing to be read in conjunction with all relevant Architects and Engineers drawings and specifications.
- Dimensions are in millimetres unless noted otherwise.
- Original topographic survey undertaken by The Survey House in May 2022. For full topographic survey information see Survey House drawing ref. 2022-1134-001. All co-ordinates & levels based on a local grid and datum.
- Existing levels shown thus : +6.775
- Before excavation commences, the Contractor shall ascertain the depths, sizes and locations of all services to be crossed. Any conflicts in levels between new works and existing services shall be notified to the Engineer.
- All drainage shall be in accordance with Building Regulations 2015: Part H & W.S.A Sewers for Adoption 7th edition.
- Details of existing sewers & drains shall be confirmed by the contractor on site prior to the commencement of works.
- Sewers of different diameters shall be laid soffit to soffit in manholes, unless backdrops are detailed.
- Private drains passing through walls and footings are to be sleeved and a 600mm length of rocker pipe shall be laid on each side of the wall or footing. Runs under building shall have a type 'S' bed and surround, unless depth below underside of slab is less than 300mm where a 150mm bed and surround of concrete is to be used. Where pipes pass beneath foundations 600mm length rocker pipes shall be laid on each side. Below is shown a typical detail of a pipe sleeved through a foundation:



- Manhole (M.H.) covers and inspection chamber (I.C.) shall be adjusted to suit final surface levels.
- Where trench foundation levels lie above original levels, levels shall be made up with either well compacted layers of D.O.T type 1 or mix ST2 concrete.
- For positions of SVP's stub stacks and rainwater pipes see detailed Architects layouts.
- Minimum gradients for pipes where no gradient is shown shall be 1:80.
- Dimensions of M.H. on private drains and sewers to be in accordance with requirements of the Building Regulations.
- Drainage trenches lower than foundations:
 - Where drainage trench is within 1.0 distance of a building the trench is to be filled with concrete mix ST 2 up to the level of the foundation, in accordance with Building Regulation 2002: Part H, diagram 8.
 - Where drainage trench is distance 'A' from footing and the depth of trench below foundation level is greater than 'A' the lower trench shall be infilled with concrete mix ST 2 such that the top level of concrete infill is no less than (A' - 150mm) below foundation level. Notes a) and b) are represented diagrammatically below:



- Pipe materials shall be:
 - For external private drain runs:
 - Clay pipes, extra strength or super strength in accordance with BS EN 295: 1991
 - UPVC pipes in accordance with BS 4661 & BS 5481: 1989 (flexible pipes)
 - For long crossings under building footprint:
 - Clay pipes, extra strength or super strength in accordance with BS EN 295: 1991
- Definition of 'rigid' and 'flexible' pipes shall be as Building Regulations Part H, table 7.
- Flexible pipes - Where private flexible pipes have more than 900mm cover under vehicular areas and more than 600mm cover under gardens, bedding and backfill shall be Type S as shown on drawing STD.01.85. For special protection where pipes are laid with less cover see notes below.
 - Where private flexible pipes have less than 900mm cover under vehicular areas, a reinforced concrete bridging slab shall be used (as Type 'Y' drawing STD.01.85) Reference Building Regulations 2002: Part H.
 - Where private flexible pipes have less than 600mm cover under gardens, concrete paving slabs laid as bridging slab shall be used (as Type 'X' drawing STD.01.85.) Reference Building Regulations 2002: Part H.
- Rigid pipes - Bedding and backfill shall be Type 'S' as shown on drawing STD.01.85, except on lengths where special protection is required (see notes below).
 - Where Ø 100mm private rigid pipes have less than 400mm cover under vehicular areas, a Type 'Z' concrete surround shall be used (see drawing STD.01.85) Reference Building Regulations 2002: Part H.
 - Where Ø 100mm private rigid pipes have less than 300mm cover under garden areas, a Type 'Z' concrete surround shall be used (see drawing STD.01.85) Reference Building Regulations 2002: Part H.
 - Where Ø 150mm private rigid pipes have less than 600mm cover under any areas, a Type 'Z' concrete surround shall be used (see drawing STD.01.85) Reference Building Regulations 2002: Part H.
- Private storm and foul drainage connections shall be detailed by the Architect.
- Flexible and rigid pipe lengths shall not exceed 3m.
- All external rainwater down pipes shall discharge through a proprietary bottle gully as shown on drawing STD.01.12.
- Trenches below existing carriageways and parking areas shall be reinstated with D.O.E Type 1 material in accordance with standard detail STD.02.05.
- Channel drains shall be Aco Multidrain MD150 with 0.5% in built gradient, or equivalent. They shall discharge via a sump by Aco or equivalent. Grating shall be Heelguard Class D400. To be installed in accordance with manufacturers instructions.
- All utility covers & frames within the extent of the works shall be adjusted as necessary. The Contractor shall ensure that all services within vehicular areas have appropriate grate covers & frames as shown below:

Vehicular areas:	D400	Pedestrian areas:	B125
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- Where drains are to be abandoned they shall be removed or infilled by grouting in accordance with The Civil Engineering Specification for the Water Industry - 6th Edition, clause 5.23. Drainage runs shall be CCTV Surveyed prior to being abandoned to ascertain whether any "blind" junctions exist.
- Redundant / abandoned gullies, soakaways and manholes shall be broken out to a depth of 600mm then infilled with well compacted Type 6F4/BF5 capping material.

OUTSTANDING DESIGN ISSUES :

- E.A. Agreement for Treated Foul Effluent Discharge
- Terrace Drainage
- Percolation Tests for Drainage Field
- Precise Foul Outlet Locations
- Precise RWP Locations
- Extension of Topographic Survey
- Client / Contractor Comments
- Confirmation of the Finished Floor Levels

KEY

- TOPOGRAPHICAL SURVEY
- PROPOSALS
- PROPOSED SURFACE WATER DRAINS Ø 100 UNLESS NOTED OTHERWISE
- SURFACE WATER MANHOLE/ Ø 450 INSPECTION CHAMBER/ RODDING EYE
- PROPOSED FOUL WATER DRAINS Ø 100 UNLESS NOTED OTHERWISE
- FOUL MANHOLE/ Ø 450 INSP. CHAMBER/ TRAPPED RODDABLE YARD GULLY
- GRADIENT BED TYPE (SEE STD.01.85) PIPE DIAMETER DISTANCE CHAMBER CENTRE TO CHAMBER CENTRE DIRECTION OF FALL
- CHANNEL DRAIN. SEE NOTE No. 24
- THRESHOLD DRAIN. TO ARCHITECT'S DETAILS
- Ø150 FULLY PERFORATED PIPE : FOUL EFFLUENT DISPERSAL

P3	SCHEME REDRAWN.	-	PF-12-03-24
P2	PRELIMINARY ISSUE.	IS	MB-01-03-24
REV	DESCRIPTION	CHECKED	DATE

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CLIENT
Wellington Estates

PROJECT
Stanford End Farm

Swallowfield
Drainage General Arrangement

DRAWN BY	CHECKED BY	DESIGNED BY
PF	IS	PF
SCALE @ A1	© DATE	STATUS
Plan 1:200	Nov. 2023	Preliminary
JOB NO.	DRAWING NO.	REVISION
32836	EX.01	P3