



Technical Submission

Project	Sunlight House, Manchester	Project Ref.	1394
Tech Sub Ref.	TS-M- 0010	Issued By	Lee Holland
Date	20/06/2024	Authorised	Daniel Broxhome

Technical Submission	Cold Water Tank		
SPECIFICATION COMPLIANCE		In compliance with schedule CSD1298-ZZ-ZZ-SH-M-53003	
DEROGATIONS	✓	Tricel proposed than Dutypoint - Usable capacity 9900l	
CALCULATIONS PROVIDED	✓	Calculations provided	

This technical submission has been issued by G&H Building Services Ltd for the approval of Sectional cold water storage tank

Water Storage Tank

Tricel Sectional water tank

Information Required From	Myco
Latest Date Required	05/07/2024

Acceptance/Refusal			
STATUS A	STATUS B	STATUS C	

Response From	
Response Date	

COLD WATER TANK SCHEDULE

Project:	Sunlight House - Manchester			
Project No:	CSD1298			
Revision:	Rev 0			
Schedule No:	CSD1298-ZZ-ZZ-SH-M-53003			
Date:	05.06.24			
REFERENCE	T01			
TYPE	2 Compartment GRP Sectional			
MINIMUM USABLE CAPACITY	11,120 Litres ideally (Please confirm max achievable)			
NOMINAL SIZE	3.0 x 2.0 x 2.0m high			
SPLITTER FOR MAINTENANCE	YES (each to be 1.5 x 2.0 x 2.0)			
RAISED BALL VALVE	YES (AB air gap)			
VALVE TYPE	Adjustable			
INLET PIPE	54mm x 2			
OUTLET PIPE	76mm x 2			
OVERFLOW SIZE	80mm x 2			
DRAIN SIZE	42mm x 2			
WARNING PIPE SIZE	28mm (screened) x 2			
MANHOLE	YES x 2			
LEVEL SWITCHES	yes- 200mm below the water level and 200mm above the bottom, hard wired to booster. All 4 connected to BMS			
TEMPERATURE SENSOR	yes (Pocket provision, sensor by BMS)			
LADDERS	yes - 2 x internal & 1 x external			
FILTER VENT	yes - with insect screens			
PRE-INSULATED	yes			
FLANGED	internally flanged base externally flanged sides			
BASE	mounted on steels			



- NOTES:**
- 1) Tank to be suitable for the storage of potable water. Tank shall be WRAS approved and comply with TM13, HSE L8, BS EN 806, BS EN 13280
 - 2) Tank to be pre insulated - minimum thickness to comply with regulations

CALCULATION SHEET

PROJECT: Sunlight House

PROJECT No: CSD1298

Sheet1of...1..

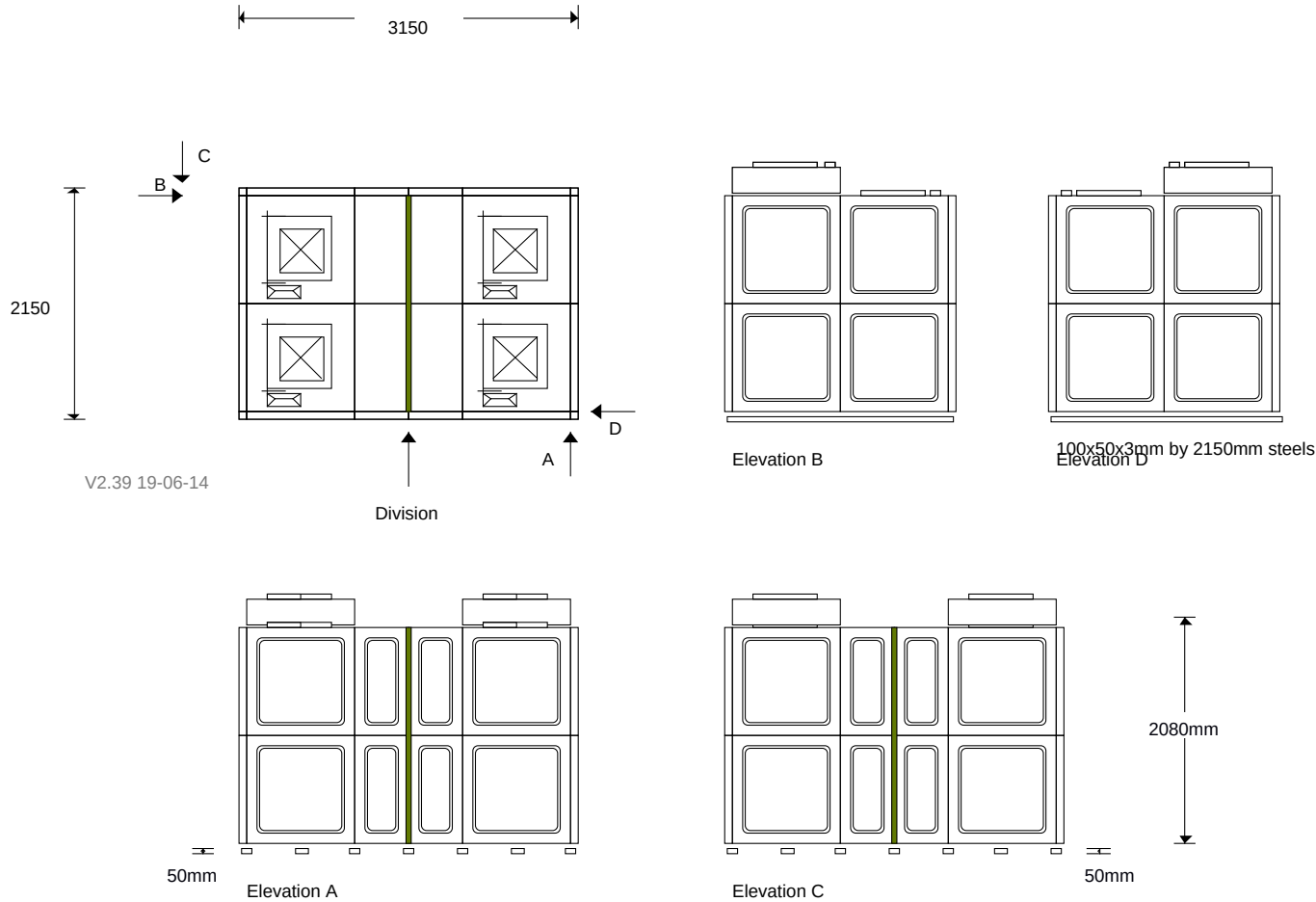
Date: 05/06/2024

SUBJECT: Cold water storage calculation rev2

CALCS BY: D.Broxholme

Ref	CALCULATIONS	OUTPUT																																													
	<p><u>Cold water storage calculation</u></p> <p>Storage capacity shall be based on 15litres/person/day. In accordance with BCO Guide to specification.</p> <p>The storage allowance shall be based on 7.5 litres/person based on 12 hours storage.</p> <p><u>Occupancy</u></p> <table border="1"> <thead> <tr> <th>Level</th><th>Area</th><th>Occupants</th></tr> </thead> <tbody> <tr><td>L01</td><td>1029</td><td>102.9</td></tr> <tr><td>L02</td><td>1292</td><td>129.2</td></tr> <tr><td>L03</td><td>1239</td><td>123.9</td></tr> <tr><td>L04</td><td>1319</td><td>131.9</td></tr> <tr><td>L05</td><td>1323</td><td>132.3</td></tr> <tr><td>L06</td><td>1305</td><td>130.5</td></tr> <tr><td>L07</td><td>1297</td><td>129.7</td></tr> <tr><td>L08</td><td>1284</td><td>128.4</td></tr> <tr><td>L09</td><td>1286</td><td>128.6</td></tr> <tr><td>L10</td><td>1119</td><td>111.9</td></tr> <tr><td>L11</td><td>1023</td><td>102.3</td></tr> <tr><td>L12</td><td>898</td><td>89.8</td></tr> <tr><td>L13</td><td>413</td><td>41.3</td></tr> <tr><td></td><td></td><td>1482.7</td></tr> </tbody> </table> <p><u>Cold Water Storage</u> 1482.7people x 7.5l/p = 11,120litres</p> <ul style="list-style-type: none"> <i>The above calculations make no allowance for the ground floor retail units or basement gym.</i> 	Level	Area	Occupants	L01	1029	102.9	L02	1292	129.2	L03	1239	123.9	L04	1319	131.9	L05	1323	132.3	L06	1305	130.5	L07	1297	129.7	L08	1284	128.4	L09	1286	128.6	L10	1119	111.9	L11	1023	102.3	L12	898	89.8	L13	413	41.3			1482.7	
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CALCULATIONS CHECKED BY: BW..... Initials Name D.Broxholme.....Date 05.06.24



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|------|------|--|
| (A). | (A). | 2 No . 900103 . Inlet . 2" Keraflo Float Valve Type KAX SF |
| (B). | (B). | 2 No . 900027 . Overflow . 4" Screened Overflow Assembly + Internal Elbow (Type 16) |
| (C). | (C). | 2 No . 821201 . Warning pipe . 3/4" Screened Overflow / Warning Pipe - R30E |
| (D). | (D). | 2 No . 104149 . Outlet . 3" PVC Flanged Tank Connector Assembly (Male BSP) c/w Down Elbow |
| (E). | (E). | 2 No . 900134 . Drain . 1 1/2" PVC Flanged Tank Connector (Male BSP) |
| (F). | (F). | 2 No . 900120 . Temp sensor mount . 1/2" Threaded PVC Flange (Female BSP) |
| (G). | (G). | 2 No . 900376 . Level switch low . LS7 PPS Level Switch c/w half inch NPT Threaded Flange - Low Level Switch |
| (H). | (H). | 2 No . 900377 . Level switch high . LS7 PPS Level Switch c/w half inch NPT Threaded Flange - High Level Switch |

In accordance with our normal policy on product development, this specification is subject to change without notice.

SCALE : n/a	DRAWN BY: ITRAK	TITLE: Cold Water Storage Tank - General Arrangement	G and H Building Services
TW-169493-686392	DATE: 17-06-2024	SIZE: Internal 3,000 X 2,000 X 2,000, External 3,150 X 2,150 X 2,080	Sunlight House Manchester

To Manufacture, deliver and assemble 1 no GRP Sectional Cold Water Storage tank(s) as follows.

QUOTATION DETAILS

GRP Hot Press Moulded Pre-Insulated Tank {Nominal 38mm Thickness} and Heavy Duty Cover complete with 2 no. Manholes and screened vents

Tank External Dimensions (L x W x H):	3,150 X 2,150 X 2,080 mm
Tank Internal Dimensions (L x W x H):	3,000 X 2,000 X 2,000 mm
Nominal Capacity:	12,000 Litres
S/S Bolts Under Water	✓
S/S Bolts throughout	✓
Internally Flanged Base	✓
Externally Flanged Side	✓
Ball Valve Box with standard top access (350mm High)	(2 Item) ✓
Airgap AB Fluid Category 5	✓
Across Tank Maintenance Division - 50:50 Division	✓
Internal Ladder - GRP	(2 Item) ✓
External Ladder - Aluminium No Safety Hoops	(1 Item) ✓
Assembly Cost	(1 Item) ✓
Delivery Cost	(1 Item) ✓
Base Levelling Steels	(1 Item) ✓

Extras and Connections - Included

Category	Code	Description	Quantity
Inlet	900103	2" Keraflo Float Valve Type KAX SF	2
Overflow	900027	4" Screened Overflow Assembly + Internal Elbow (Type 16)	2
Warning pipe	821201	3/4" Screened Overflow / Warning Pipe - R30E	2
Outlet	104149	3" PVC Flanged Tank Connector Assembly (Male BSP) c/w Down Elbow	2
Drain	900134	1 1/2" PVC Flanged Tank Connector (Male BSP)	2
Temp sensor mount	900120	1/2" Threaded PVC Flange (Female BSP)	2
Level switch low	900376	LS7 PPS Level Switch c/w half inch NPT Threaded Flange - Low Level Switch	2
Level switch high	900377	LS7 PPS Level Switch c/w half inch NPT Threaded Flange - High Level Switch	2

Ref: Sunlight House Manchester
Approx Actual Capacity 10700 litres; Approx Usable capacity 9900 litres

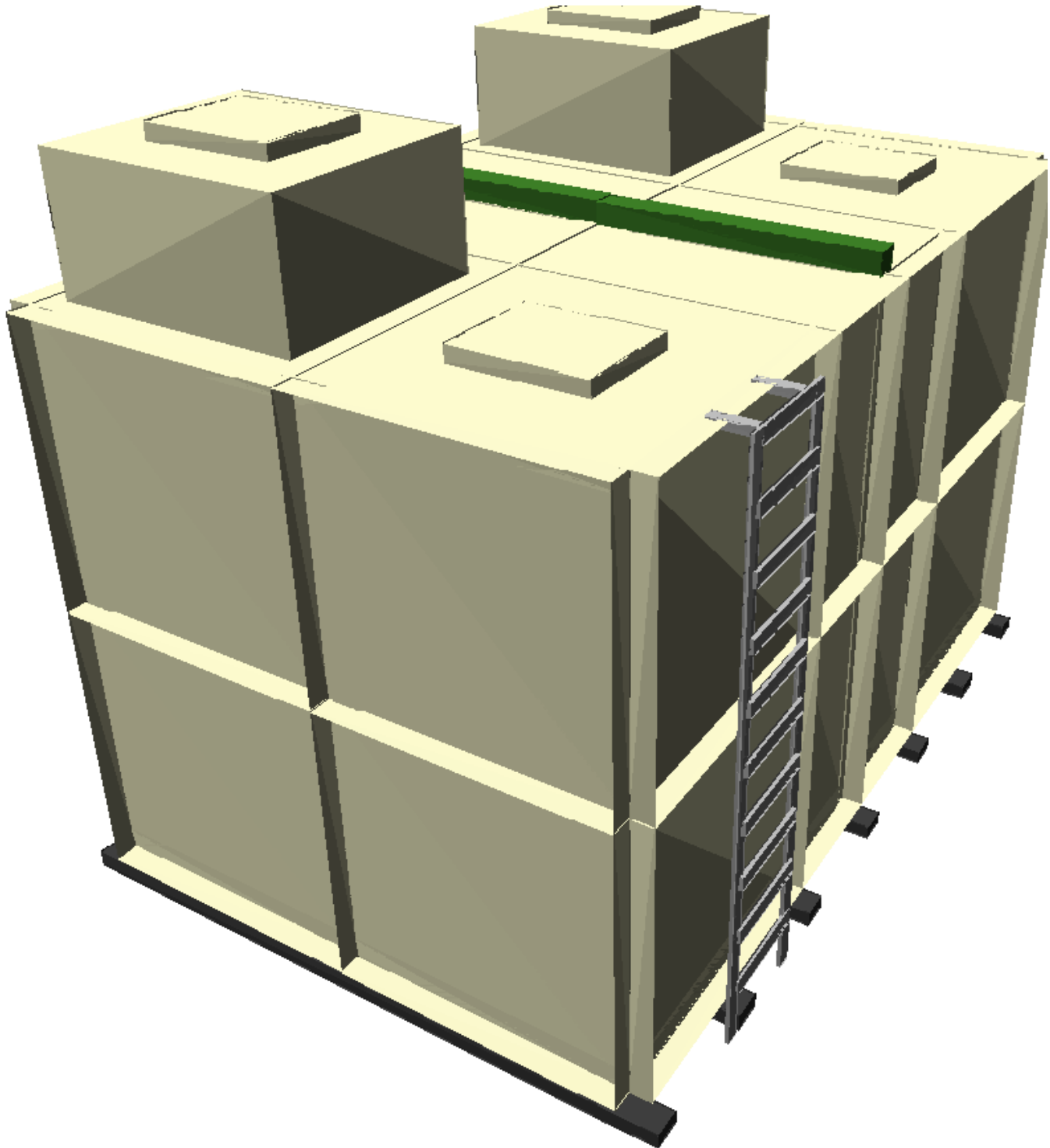
OPTIONAL QUOTE ITEMS

Product Name	
Externally Flanged Base	Price on Request
Internally Flanged Side	Price on Request
Additional Manhole	Price on Request
Full Length Maintenance Division	Price on Request
Insulated Base (Nominal 38mm)	Price on Request
Condensation Tray	Price on Request
Side Access Hatch	Price on Request

COMMENTS ON QUOTED METRIC TANK:

Additional components: Prices quoted are only valid on individual items if they are ordered with the tank.
Additional carriage and assembly charges may apply if ordered separately.
Tank colour is cream
All Bolts are S/S, External Steel Supports to panel flanges are Galvanised.
The Ball Valve Housing increases the height of the tank by 350mm. Ball Valve Housing dimension is 1000x1000x350mm.

Base Levelling Steels
To supply, deliver, level and align 100x50x3mm x 2,150mm box section galvanised steels at 500mm centres. Price included above.
Note: Not delivered on hi-ab vehicle, max shim height = 18mm



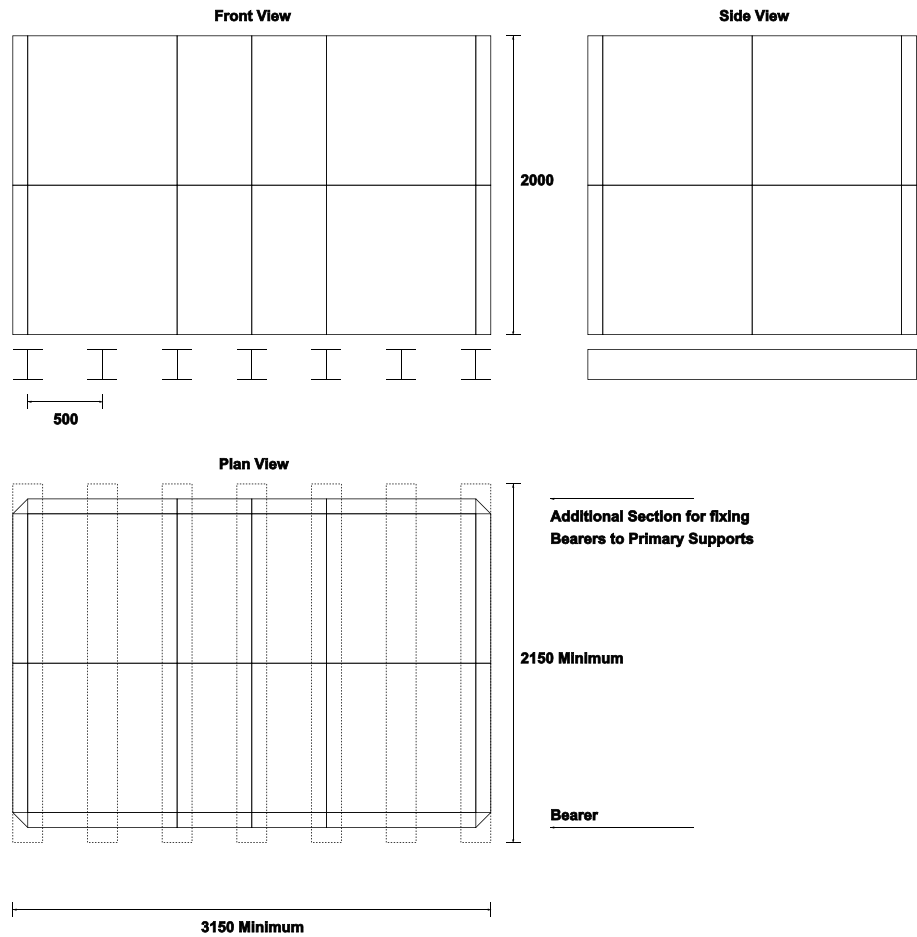
Disclaimer : This drawing is shown for information purposes only. The drawing is not to scale and colours of components shown may not be representative of the items quoted.

Product Details	
Size:	3,150 X 2,150 X 2,080 mm
Divider:	50 50 Across Divider
Base:	Internal Flanged Base

Data Sheet No 12,000
Base Support Details



Internally Flanged Base



Note: Support bearer minimum width 100mm

THE ABOVE DRAWING MUST BE READ IN CONJUNCTION WITH DETAILS ON PAGE 2

Drawing not to scale

Product Details

Size: 3,150 X 2,150 X 2,080 mm
Divider: 50 50 Across Divider
Base: Internal Flanged Base

**Data Sheet No 12,000
Base Support Details****Internally Flanged Base**

Nominal tank capacity:	12,000 Litres 2,640 Gallons
Tank weight empty:	1,440 Kg.
Tank weight full:	13,440 Kg.
Working space required around tank:	525 mm
Minimum space required to assemble:	4,200 X 3,200 mm
Space required above tank:	750mm

Bearer, Universal Beam, R.S.J. Beams, Brick Course Etc.

The tank requires 7 no bearers by minimum length of 2,150mm + any extra required for fixing.

OR

If placed along tank 5 no bearers by minimum length of 3,150mm + any extra required for fixing.

The bearers should have a minimum width of not less than 100mm

Warning ! ALL BEARERS TO BE FLAT, LEVEL AND LEVEL WITH NEIGHBOURING BEARERS

Concrete/Timber Plinth

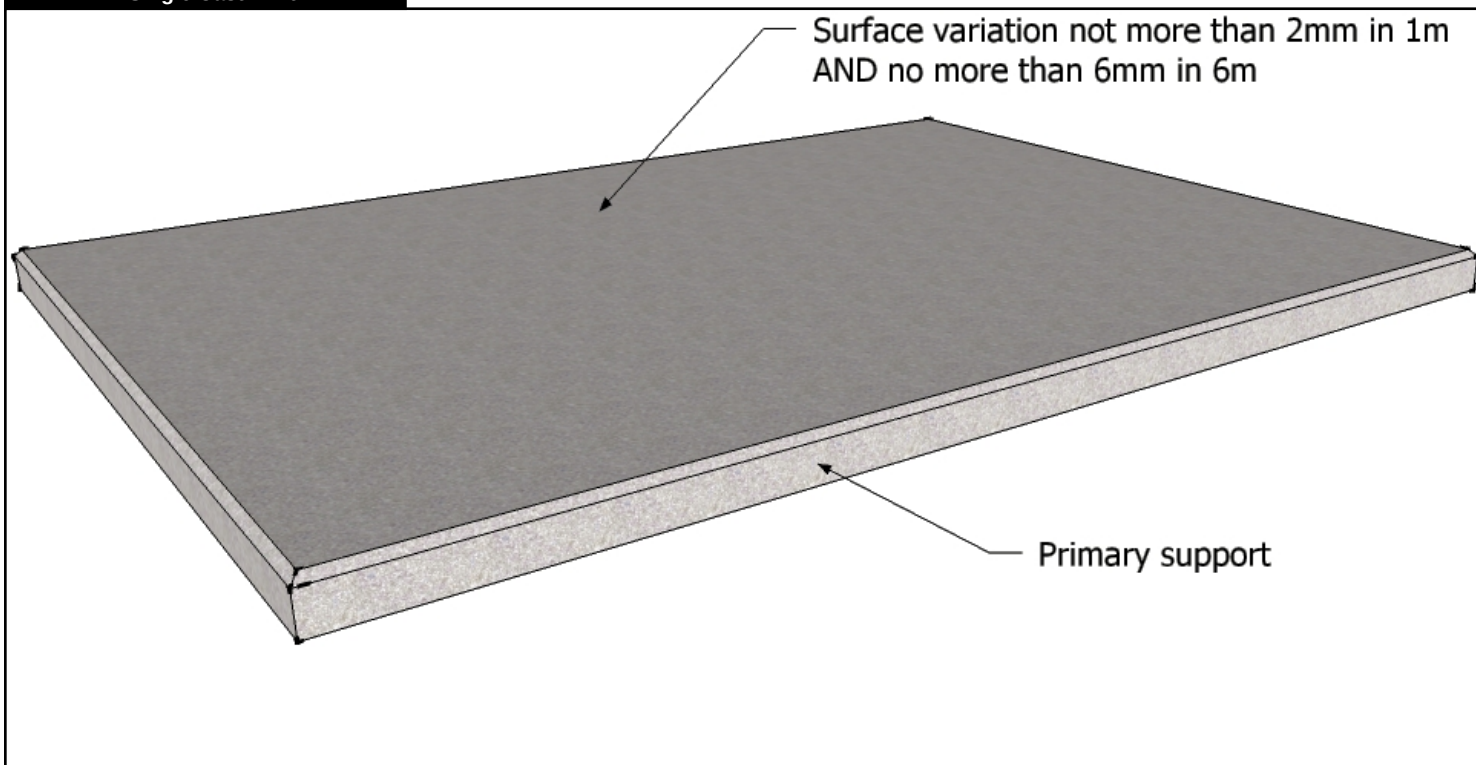
Standard base tanks (internal flanges) may be laid directly on a concrete plinth having a smooth finish, brushed clean and free from any local protuberances. It should be flat, level and not vary more than 6mm in any 6m, measured laterally or diagonally with a maximum variance of 2mm per metre. The minimum plinth dimensions are: 3,200 X 2,200 mm

General Notes

- 1.Client to design suitable bearers to suit load conditions. Water load = 1000 kg/m³ + 20% for tank.
- 2.Bearers can run in either direction.
- 3.Deflection must not exceed 1/500th of the unsupported span of the bearers.The unsupported span can only be in one direction.
- 4.Adequate overflows must be fitted and connected to suitable drain, to prevent the tank from being pressurised.
- 5.Tanks in exposed places may be susceptible to movement in high winds especially when empty. These may need to be anchored to the base, this work is to be carried out by others.
- 6.Weight of the tank does not include the weight of the tank supports.

In accordance with normal policy of product development this specification is subject to change without notice.

Single Cast Plinth



Cast Plinth with Levelling Steels

