



Government of **Western Australia**
Department of **Health**

Our ref F-AA-31116
Enquiries Henry Tan (9388 4936)

Tony D'Agnone
General Manager
Maddington Concrete Products
66 Kelvin Road
Maddington WA 6109

Dear Mr D'Agnone,

APPROVAL OF THE MADDINGTON CONCRETE PRODUCTS SEPTIC TANKS

I am pleased to advise that the above approval has been granted for use of the Maddington Concrete Products Septic Tanks in Western Australia under:

Brand name: Maddington Concrete Products
Model name: 1500 x 1500mm (MCP S1)
 1200 x 1500mm (MCP S2)
 1800 x 1830mm (MCP S3)
 1800 x 1530mm (MCP S4)

Approval is granted in accordance with the attached conditions of approval and the approved plans.

The above documents all bear the official approval stamp of the Western Australian Department of Health (DOH). These documents may not be altered in any manner without the prior approval of the Executive Director Public Health.

If you have any questions regarding this approval, please contact Henry Tan on (08) 9388 4936.

Yours sincerely

Richard Theobald
delegate of
EXECUTIVE DIRECTOR
PUBLIC HEALTH

14 October 2015



Delivering a Healthy WA

MADDINGTON CONCRETE PRODUCTS SEPTIC TANKS

APPROVAL NUMBER F-AA-31116

CONDITIONS OF APPROVAL

This is to certify that the Maddington Concrete Products Septic Tank

Model Designation: **1500 x 1500mm (MCP S1)**
1200 x 1500mm (MCP S2)
1800 x 1830mm (MCP S3)
1800 x 1530mm (MCP S4)

Manufactured by: **Maddington Concrete Products**
66 Kelvin Road
Maddington WA 6109

is approved by the Executive Director, Public Health under the Health (Treatment of Sewage and Disposal of Effluent and Liquid Waste) Regulations 1974 for use within Western Australia in accordance with the conditions specified in Schedules 1 and 2.

Date of Issue: **14 October 2015**

This approval is valid till 18 February 2020 or until withdrawn by the Executive Director, Public Health

Richard Theobald
delegate of
EXECUTIVE DIRECTOR
PUBLIC HEALTH

SCHEDULE 1: GENERAL DESCRIPTION

SPECIFICATION SUMMARY

Maddington Concrete Products Septic Tanks	1500 (ID) X 1500 (H)	1200 (ID) X 1500 (H)	1800 (ID) X 1830 (H)	1800 (ID) X 1530 (H)
Type of Concrete used	N32 Concrete			
Tank Specifications				
Effective Volume, L	1970	1269	3335	2571
Tank Weight empty, kg	1840	1380	3600	3100
Tank Height, mm	1530	1530	1830	1530
Tank Inlet level height, mm	1210	1160	1510	1210
Tank Outlet level height, mm	1160	1160	1460	1160
Internal Diameter, mm	1500	1200	1800	1800
External Diameter, mm	1630	1350	1980	1980
Wall thickness, mm	65	65	90	90
Base thickness, mm	75	75	150	150
Diameter of inlet and outlet, mm	Up to 100 mm pipe installed in 110 mm hole			
Lifting Eye size & weight bearing	Lids: 1.3 tonne Capacity Ancon lifting anchor and clutch Tanks: No lifting cast in. Lifting done with spreader bar through cast in holes.			
Lid thickness				
Trafficable Lid, mm	150	150	150	150
Non-Trafficable Lid, mm	65	65	N/A	N/A
Method of attaching lid to tank	Lid self weight			

SCHEDULE 2: CONDITIONS OF APPROVAL

1. General

- 1.1** Approval is granted in accordance with the drawings submitted and stamped by Department of Health.
- 1.2** No alteration to the design or specification of the MADDINGTON CONCRETE PRODUCTS Septic Tanks shall occur without prior approval of the Executive Director, Public Health.
- 1.3** Any changes to the design or the construction of the MADDINGTON CONCRETE PRODUCTS Septic Tanks shall be submitted for assessment and approval to the Department of Health before being made commercially available in Western Australia.
- 1.4** Conditions of approval may be varied or withdrawn at the discretion of the Executive Director, Public Health.
- 1.5** The serviceable life of the MADDINGTON CONCRETE PRODUCTS Septic Tanks and associated fittings shall be a minimum of 15 years provided it is installed in accordance with MADDINGTON CONCRETE PRODUCTS Pty Ltd recommendations.
- 1.6** Each MADDINGTON CONCRETE PRODUCTS Septic Tank shall be permanently and legibly marked on a non-corrosive metal plaque or equivalent, attached on the top external face of the tank adjacent to the inlet fitting with the following information:
 - The brand name of the system;
 - The manufacturer's name or registered trademark;
 - The month and year of manufacture.
 - The capacity in litres
 - Top load limitations and maximum depth of cover
 - The weight of tank
 - Top load limitations and maximum depth of coverAll marking shall be permanent, legible and clearly visible.
- 1.7** The manufacturer shall provide the following information to each Local Government where it is intended to install a MADDINGTON CONCRETE PRODUCTS Septic Tank:
 - Statement of serviceable life
 - Quality Assurance Certification
 - Installation Manual
 - Owner's Manual
 - Engineering Drawings on A3 format
 - Detailed Specifications
 - A4 Plans
 - Approval documentation from Department of Health WA.

2 Installation and Commissioning

- 2.1** For each installation, an application for approval to install shall be in the form of an application to install an apparatus as required under the *Health (Treatment of Sewage and Disposal of Effluent and Liquid Waste) Regulations 1974*. Each application for installation shall be made to the Local Government and include full plans and specifications, a completed *Application to Construct or Install an Apparatus for the Treatment of Sewage* form, and pay all fees as prescribed.
- 2.2** The installation of each MADDINGTON CONCRETE PRODUCTS Septic Tank shall comply with the installation instructions specified by MADDINGTON CONCRETE PRODUCTS Pty Ltd and shall comply with minimum clearances from buildings and property boundaries as per Local Government requirements.
- 2.3** The MADDINGTON CONCRETE PRODUCTS Septic Tanks shall be installed so that the inspection openings of the tank are at (or above) ground level and installation shall be in accordance with the installation instructions specified by MADDINGTON CONCRETE PRODUCTS Pty Ltd.
- 2.4** The installer is to certify that the system has been installed in accordance to the installation manual, the construction approval and any additional requirements of the Local Government.
- 2.5** The MADDINGTON CONCRETE PRODUCTS Septic Tanks shall be supplied, constructed and installed in accordance with this approval.
- 2.6** The manufacturer shall supply with each MADDINGTON CONCRETE PRODUCTS Septic Tanks an owner's manual, which sets out the care, operation, and maintenance and on-going management requirements of the system.

3 On-going Management

- 3.1** The owner's manual prepared by the manufacturer shall contain a plan for the on-going management of the MADDINGTON CONCRETE PRODUCTS Septic Tanks which include details of:
- the treatment process,
 - procedures to be followed in the event of a system failure,
 - emergency contact numbers,
 - maintenance requirements including de-sludging operations.

4 Permitted uses

- 4.1** The MADDINGTON CONCRETE PRODUCTS Septic Tanks are only approved for below ground installations.

5 Reduction in nutrient levels

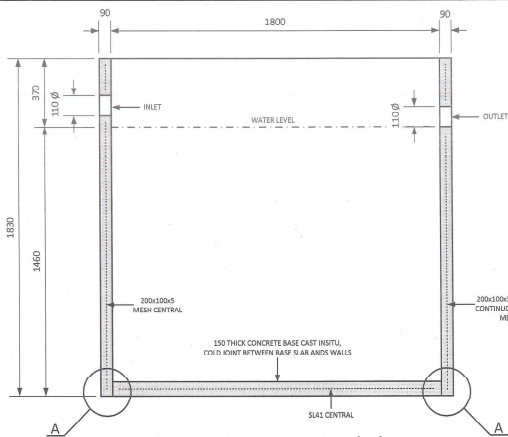
- 5.1** The MADDINGTON CONCRETE PRODUCTS Septic Tanks are not approved as a phosphorus or nitrogen removal system.

A handwritten signature in black ink, appearing to read 'R. Theobald', with a stylized, cursive script.

Richard Theobald
delegate of
EXECUTIVE DIRECTOR
PUBLIC HEALTH

14 October 2015

W:\Public Health\EHD\Water Unit\WASTEWATER MANAGEMENT\WASTE\Product Approvals\PreApproval Documents\Septic Tanks\Concrete\Maddington Concrete\Typing\151014th1a - Maddington Concrete Products Septic Tank Approval.doc

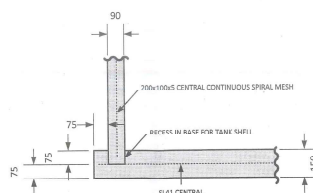


1800mm DIAMETER TANK (S3)

SCALE 1:20

CONCRETE:

- C1. WORKMANSHIP AND MATERIALS TO COMPLY WITH AS3600, AS2870, AS3610, AS1379, AS1478, AS3582, AS5100.5 AND AS3972. FOR LIQUID RETAINING STRUCTURES ALSO COMPLY WITH AS5735.
- C2. WET CONCRETE TO BE UNIFORM, HOMOGENEOUS, COHESIVE AND ABLE TO WORK READILY INTO CORNERS AND AROUND REINFORCEMENT COMPLETELY FILLING FORMWORK WITHOUT SEGREGATION, EXCESS FREEWATER ON SURFACE, LOSS OF MATERIAL OR CONTAMINATION.
- C3. FINISHED CONCRETE TO BE DURABLE, DENSE, HOMOGENEOUS MASS COMPLYING WITH ALL RELEVANT STANDARDS, INCLUDING REINFORCEMENT AND TENDONS, AND FREE OF STONE POCKETS, OR UNIFORM COLOUR AND TEXTURE WITH LOW PERMEABILITY AND ADEQUATE BUT NOT EXCESSIVE STRENGTH FOR GRADE.
- C4. REVIEW LOCATION OF EMBEDDED ITEM TO MINIMIZE POSSIBLE ZONES OF POOR COMPACTION THAT MAY COMPROMISE STRUCTURAL INTEGRITY.
- C5. SLUMP TO BE AS REQUIRED FOR PLACEMENT (EG PUMPING, ETC), COMPACTION AND FINISHING USE SUPERPLASTICISERS AND HIGH RANGE WATER REDUCERS TO AS1478 TO ACHIEVE ADEQUATE WORKABILITY.
- C6. DO NOT ADD WATER TO CONCRETE ONCE TRUCK HAS LEFT BATCHING PLANT.
- C7. COMMENCE CURING OF CONCRETE TO AS3600 AS SOON AS POSSIBLE AFTER PLACING AND FINISHING OR STRIPPING, AND WITHIN ONE HOUR, ENSURE EXPOSED SURFACES ARE NOT STAINED. ACCEPTABLE METHODS OF CURING INCLUDE:
 - RETENTION OF FORMWORK
 - PONDING OR CONTINUOUS SPRINKLING WATER (MOIST CURING)
 - AN IMPERMEABLE MEMBRANE (USE WHITE OR LIGHT COLOURED PLASTIC IN HOT CONDITIONS), SEAL AROUND EDGES
 - AN ABSORPTIVE COVER KEPT CONTINUOUSLY WET AND COVERED BY IMPERMEABLE MEMBRANE
- C8. COVER IS CLEAR DISTANCE BETWEEN ANY REINFORCEMENT (INCLUDING HOOKS, TIES, WIRE, ETC) AND OUTSIDE SURFACE OF STRUCTURAL CONCRETE.
- C9. COVER MUST NOT BE LESS THAN SPECIFIED.
- C10. ALL CONCRETE TO BE MINIMUM NS2/20/100



DETAIL A
SCALE 1:20

STRUCTURAL:

- S1. STRUCTURAL LOAD HAS BEEN DESIGNED FOR THE FOLLOWING LOADS:
 - PERMANENT LOAD OF STRUCTURE AS SHOWN ON DRAWINGS
 - SUPERIMPOSED LIVE LOAD (TRAFFICABLE LID ONLY) TANDEM-AXLE SINGLE TYRES
 - SOIL DESIGN 11 kN/m²
- S2. SEPTIC TANK LID TYPE STL1 IS A TRAFFICABLE LID AND IS STRUCTURALLY DESIGNED TO BE INSTALLED AT NO DEEPER THAN 300mm BELOW GROUND LEVEL.
- S3. SEPTIC TANK LID TYPE STL2 IS A NON-TRAFFICABLE LID AND IS STRUCTURALLY DESIGNED TO BE INSTALLED AT GROUND LEVEL.

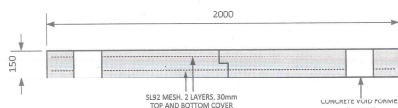
FOUNDATIONS:

- F1. ENSURE EXCAVATIONS ARE STABLE AND PROTECT SURROUNDING PROPERTIES AND SERVICES FROM ADVERSE EFFECTS OF GROUNDWORKS.
- F2. PROVIDE TEMPORARY WORKS AS REQUIRED. PROVIDE SHORING CERTIFIED BY A SUITABLY QUALIFIED STRUCTURAL ENGINEER TO ALL DEEP EXCAVATIONS WHERE REQUIRED.
- F3. MCP SEPTIC TANKS ARE NOT TO BE INSTALLED WHERE THEY WILL BE SUBJECTED TO GROUNDWATER OR ANY OTHER FORM OF FLOTATION UNLESS ADDITIONAL MEASURES ARE TAKEN TO ANCHOR THEM DOWN.
- F4. ENSURE TANK FOUNDATIONS ARE LEVEL AND PROVIDE A SAFE WORKING BEARING CAPACITY OF 50kPa.
- F5. ON CLAY SITES PROVIDE LEVEL SAND PAD SUB-BASE AS FOLLOWS:
 - CLASS "A": NOT REQUIRED
 - CLASS "B": 300mm THICK
 - CLASS "M": 450mm THICK
 - CLASS "H": 600mm THICK

SAND PAD TO BE WELL COMPACTED IN 150mm LAYERS TO ACHIEVE MINIMUM 7 BLOWS/300mm PENETRATION WITH STANDARD PERTH PENETROMETER

REINFORCEMENT:

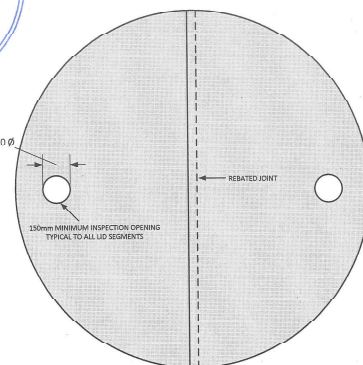
- R1. SYMBOLS ON DRAWING FOR GRADE AND TYPE OF REINFORCEMENT ARE AS FOLLOWS:
 - SL: DENOTES HARD DRAWN WIRE GRADE 500 SQUARE REINFORCING MESH CLASS L TO AS4671.
- R2. REINFORCEMENT TO BE CLEAN, FREE OF LOOSE MILL SCALE, RUST, OIL, GREASE, MUD OR OTHER MATERIAL THAT MIGHT REDUCE BOND BETWEEN REINFORCEMENT AND CONCRETE.
- R3. REINFORCEMENT IS REPRESENTED DIAGRAMMATICALLY AND IS NOT NECESSARILY IN TRUE PROJECTION. SET REINFORCEMENT OUT AT EQUAL CENTRES IF SPACING IS NOT NOMINATED.
- R4. SECURE REINFORCEMENT IN POSITION AGAINST DISPLACEMENT AND MAINTAIN SPECIFIED CLEAR CONCRETE COVER TO REINFORCEMENT (INCLUDING FITMENTS) BY APPROVED CHAIRS, SPACERS, LIGATURES OR TIES AT 800mm MAXIMUM CENTRES EACH WAY. PROVIDE ADEQUATE SUPPORT TO PREVENT DISPLACEMENT OF REINFORCEMENT BY WORKMEN OR EQUIPMENT DURING CONCRETE PLACEMENT.



TRAFFICABLE LID (STL1)

SCALE 1:20

INSTALLED NO DEEPER THAN 300mm BELOW GROUND



2000mm DIAMETER SPLIT TWO PIECE LID

SCALE 1:20

If in doubt please ask

94 Hardey Rd Glen Forrest WA 6071
Mobile: 0437 177 817 Email: joe.arena_cpe@westnet.com.au
www.joearenacpe.com.au

B	05/10/15	Re-issued for Use
A	01/10/15	Issued For Use
Rev	Date	Description

Project: Septic tank certification design and support
Drawing Title: Structural details S3

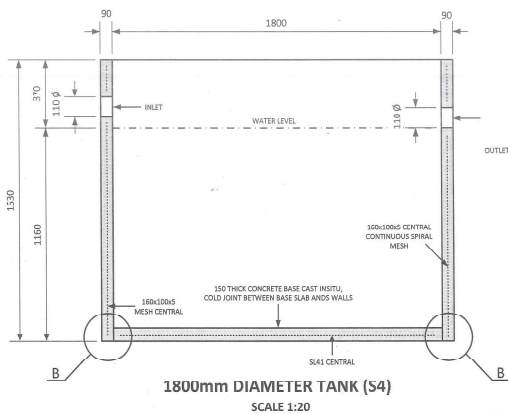
Client: Maddington Concrete Products

Structural Certification by: Joe Arena CPEng MIEAust NPFR 24918

Signed: *Joe Arena CPEng*

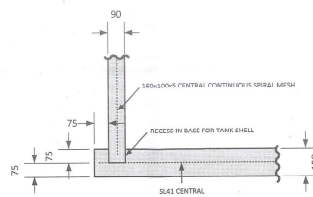
Drawing No.: J417-01 Rev B





CONCRETE:

- C1. WORKMANSHIP AND MATERIALS TO COMPLY WITH AS3600, AS2870, AS3610, AS1379, AS1478, AS3582, AS5100.5 AND AS3972. FOR LIQUID RETAINING STRUCTURES ALSO COMPLY WITH AS3735.
- C2. WET CONCRETE TO BE UNIFORM, HOMOGENEOUS, COHESIVE AND ABLE TO WORK READILY INTO CORNERS AND AROUND REINFORCEMENT COMPLETELY FILLING FORMWORK WITHOUT SEGREGATION, EXCESS FREEWATER ON SURFACE, LOSS OF MATERIAL OR CONTAMINATION.
- C3. FINISHED CONCRETE TO BE DURABLE, DENSE, HOMOGENEOUS MASS COMPLETELY FILLING FORMWORK, EMBEDDING REINFORCEMENT AND TENDONS, AND FREE OF STONE POCKETS, OR UNIFORM COLOUR AND TEXTURE WITH LOW PERMEABILITY AND ADEQUATE BUT NOT EXCESSIVE STRENGTH FOR GRADE.
- C4. REVIEW LOCATION OF EMBEDDED ITEM TO MINIMIZE POSSIBLE ZONES OF POOR COMPACTION THAT MAY COMPROMISE STRUCTURAL INTEGRITY.
- C5. SLUMP TO BE AS REQUIRED FOR PLACEMENT (EG PUMPING, ETC), COMPACTION AND FINISHING USE SUPERPLASTICISERS AND HIGH RANGE WATER REDUCERS TO AS1478 TO ACHIEVE ADEQUATE WORKABILITY.
- C6. DO NOT ADD WATER TO CONCRETE ONCE TRUCK HAS LEFT BATCHING PLANT.
- C7. COMMENCE CURING OF CONCRETE TO AS3600 AS SOON AS POSSIBLE AFTER PLACING AND FINISHING OR STRIPPING, AND WITHIN ONE HOUR. ENSURE EXPOSED SURFACES ARE NOT STAINED. ACCEPTABLE METHODS OF CURING INCLUDE:
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 - AN IMPERMEABLE MEMBRANE (USE WHITE OR LIGHT COLOURED PLASTIC IN HOT CONDITIONS), SEAL AROUND EDGES
 - AN ABSORPTIVE COVER KEPT CONTINUOUSLY WET AND COVERED BY IMPERMEABLE MEMBRANE
- C8. COVER IS CLEAR DISTANCE BETWEEN ANY REINFORCEMENT (INCLUDING LIGATURES, TIE WIRE, ETC) AND OUTSIDE SURFACE OF STRUCTURAL CONCRETE.
- C9. COVER MUST NOT BE LESS THAN SPECIFIED.
- C10. ALL CONCRETE TO BE MINIMUM NS2/20/100



DETAIL B
SCALE 1:20

STRUCTURAL:

- S1. STRUCTURAL LOAD HAS BEEN DESIGNED FOR THE FOLLOWING LOADS:
 - PERMANENT LOAD OF STRUCTURE AS SHOWN ON DRAWINGS
 - SUPERIMPOSED LIVE LOAD (TRAFFICABLE LID ONLY) TANDEM-AXLE SINGLE TYRES
 - SOIL DENSITY 20kN/m³
- S2. SEPTIC TANK LID TYPE STL1 IS A TRAFFICABLE LID AND IS STRUCTURALLY DESIGNED TO BE INSTALLED AT NO DEEPER THAN 300mm BELOW GROUND LEVEL.
- S3. SEPTIC TANK LID TYPE STL2 IS A NON-TRAFFICABLE LID AND IS STRUCTURALLY DESIGNED TO BE INSTALLED AT GROUND LEVEL.

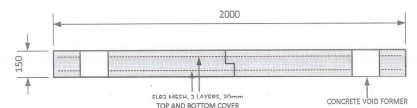
FOUNDATIONS:

- F1. ENSURE EXCAVATIONS ARE STABLE AND PROTECT SURROUNDING PROPERTIES AND SERVICES FROM ADVERSE EFFECTS OF GROUNDWORKS.
- F2. PROVIDE TEMPORARY WORKS AS REQUIRED. PROVIDE SHORING CERTIFIED BY A SUITABLY QUALIFIED STRUCTURAL ENGINEER TO ALL DEEP EXCAVATIONS WHERE REQUIRED.
- F3. MCP SEPTIC TANKS ARE NOT TO BE INSTALLED WHERE THEY WILL BE SUBJECTED TO GROUNDWATER OR ANY OTHER FORM OF FLOTATION UNLESS ADDITIONAL MEASURES ARE TAKEN TO ANCHOR THEM DOWN.
- F4. ENSURE TANK FOUNDATIONS ARE LEVEL AND PROVIDE A SAFE WORKING BEARING CAPACITY OF 50kPa.
- F5. ON CLAY SITES PROVIDE LEVEL SAND PAD 150mm THICK AS FOLLOWS:
 - CLASS "A": NOT REQUIRED
 - CLASS "B": 300mm THICK
 - CLASS "M": 450mm THICK
 - CLASS "H": 600mm THICK

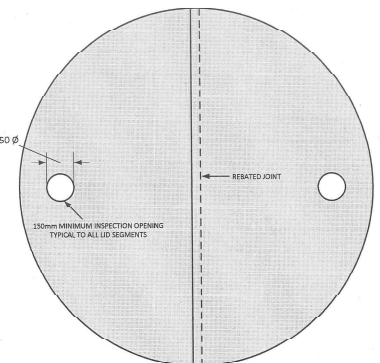
SAND PAD TO BE WELL COMPACTED IN 150mm LAYERS TO ACHIEVE MINIMUM 7 BLOWS/300mm PENETRATION WITH STANDARD PERTH PENETROMETER

REINFORCEMENT:

- R1. SYMBOLS ON DRAWING FOR GRADE AND TYPE OF REINFORCEMENT ARE AS FOLLOWS:
 - SL: DENOTES HARD DRAWN WIRE GRADE 500 SQUARE REINFORCING MESH CLASS L TO AS4671.
- R2. REINFORCEMENT TO BE CLEAN, FREE OF LOOSE MILL SCALE, RUST, OIL, GREASE, MUD OR OTHER MATERIAL THAT MIGHT REDUCE BOND BETWEEN REINFORCEMENT AND CONCRETE.
- R3. REINFORCEMENT IS REPRESENTED DIAGRAMMATICALLY AND IS NOT NECESSARILY IN TRUE PROJECTION. SET REINFORCEMENT OUT AT EQUAL CENTRES IF SPACING IS NOT NOMINATED.
- R4. SECURE REINFORCEMENT IN POSITION AGAINST DISPLACEMENT AND MAINTAIN SPECIFIED CLEAR CONCRETE COVER TO REINFORCEMENT (INCLUDING FITTINGS) BY APPROVED CHAIRS, SPACERS, LIGATURES OR TIES AT 800mm MAXIMUM CENTRES EACH WAY UNO. PROVIDE ADEQUATE SUPPORT TO PREVENT DISPLACEMENT OF REINFORCEMENT BY WORKMEN OR EQUIPMENT DURING CONCRETE PLACEMENT.



TRAFFICABLE LID (STL1)
SCALE 1:20
INSTALLED NO DEEPER THAN 300mm BELOW GROUND



2000mm DIAMETER SPLIT TWO PIECE LID
SCALE 1:20



Drawing No.: J417-02 Rev B

If in doubt please ask

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www.joearenacpe.com.au

B	05/10/15	Re-issued for use
A	01/10/15	Issued For Use
Rev	Date	Description

Project: Septic tank certification design and support
Drawing Title: Structural details S4
Client: Maddington Concrete Products
Structural Certification by: Joe Arena CPEng MIEAust NPER 24918
Signed: *Joe Arena CPEng*

