

# MACASA HOMES PTY LTD

PROPOSED DEVELOPMENT

LOT 9 NO. 9 RAVEN CIRCUIT, WARRIEWOOD. NSW

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CONCEPT PLAN FOR COUNCIL SUBMISSION NOT FOR CONSTRUCTION

	REV	BY	DATE	ISSUE / REVISION DESCRIPTION	CHK	APP	RI	EV E	BY	DATE	ISSUE / REVISION DESCRIPTION	CHK	APP	TITLE	NAME	DATE	NORTH
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)   S	2	DM	24/04/2023	ISSUED FOR REVIEW AND COMMENT, NOT FOR CONSTRUCTION	DM	GP	ISIO							ENG. CHECK	НС	15/11/2022	
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MACASA HOMES PTY LTD

OWNER: The owner is responsible for maintenance of building and site. Refer to the CSIRO 'Guide to Home Owners on Foundation Maintenance and Performance'.



PROPOSED DEVELOPMENT
AT
LOT 9 NO. 9 RAVEN CIRCUIT,
WARRIEWOOD. NSW

COVER SHEET & DRAWING LIST

CLIENT REF. No.

N/A

SCALE

N/A

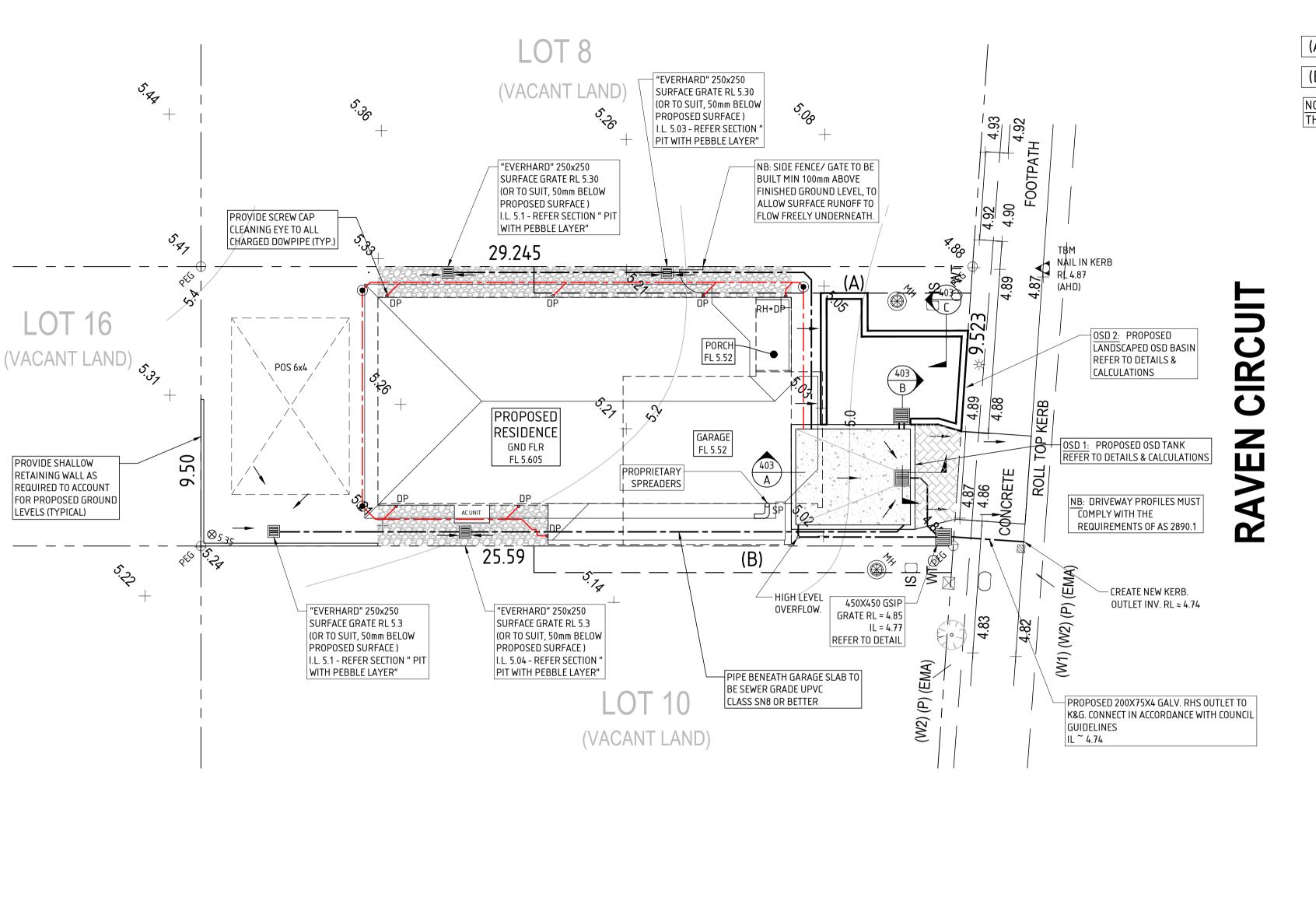
STRUCTERRE JOB No.

3.22.11581.5

DRAWING REF. No.

WAW0009-C-000

1



(A): EASEMENT FOR ACCESS AND MAINTENANCE 0.9 WIDE

#### (B): EASEMENT FOR ACCESS AND MAINTENANCE 0.9 WIDE

NOTE: SURFACE DRAINAGE HAS BEEN TREATED AS UNCONTROLLED TO THE DISCHARGE POINT. OSD STORAGE VOLUME MODIFIED TO SUIT.

> \*NB: PRECISE DETAILS OF ALL EXISTING SERVICES (PITS/PIPES ETC.), SUCH AS DIAMETER, DEPTH, ALIGNMENTS ETC., TO BE OBTAINED ON SITE PRIOR TO COMMENCEMENT OF CONSTRUCTION. REFER ANY DISCREPANCIES TO THIS OFFICE PRIOR TO PROCEEDING.

#### OSD CALCULATIONS SUMMARY:

SSR = 9.0m3 (OR AS CLOSE AS POSSIBLE GIVEN LEVELS) PSD = 3.40L/s(AS PER COUNCIL RFI DATED 1 MARCH 2023)

#### SITE AREA SUMMARY:

TOTAL SITE AREA =  $246.2 \text{m}^2$ PROPOSED ROOF AREA = 126.5m<sup>2</sup> PROPOSED PAVED AREA = 20m<sup>2</sup> TOTAL IMPERVIOUS AREA = 146.5m<sup>2</sup> TOTAL PERVIOUS AREA =  $99.7 \text{m}^2$ 

TOTAL INTO OSD = 228.5m2 TOTAL BYPASS = 17.7m2 (7.2% OF TOTAL SITE AREA)

#### VOLUME CALCULATIONS:

OSD 1 VOLUME PROVIDED = 4.8m3 OSD 2 VOLUME PROVIDED = 2.94m3 TOTAL VOLUME PROVIDED = 7.74m3 (MAX POSSIBLE)

#### **ORIFICE SIZING CALCULATIONS:**

## USING ORIFICE EQUATION

ORIFICEØ =  $21.9 \times (PSD/(H)^{0.5})^{0.5} = 50.46 \text{mm}$ WHERE PSD = 3.40 L/s, DEPTH TO ORIFICE CL = 0.41 m (H), THEREFORE PROVIDE 50mm SHARP EDGED OPENING IN ORIFICE PLATE

## **GENERAL NOTES**

- G1. THE DRAWINGS SHALL BE READ IN CONJUNCTION WITH ALL OTHER WORKING DRAWINGS AND SPECIFICATIONS AND SUCH OTHER WRITTEN INSTRUCTIONS AS MAY BE ISSUED DURING THE COURSE OF CONSTRUCTION. ALL DISCREPANCIES AND VARIATIONS SHALL BE REFERRED TO THE ENGINEER BEFORE PROCEEDING WITH THE WORK.
- G2. ALL STRUCTURAL WORK SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF ALL RELEVANT AND CURRENT CODES.
- G3. ALL DIMENSIONS RELEVANT TO SETTING OUT AND OFF SITE WORK SHALL BE VERIFIED BEFORE CONSTRUCTION AND/OR FABRICATION IS COMMENCED.
- G4. DIMENSIONS SHALL NOT BE OBTAINED BY SCALING THE STRUCTURAL DRAWINGS. G5. DURING CONSTRUCTION THE STRUCTURE SHALL BE MAINTAINED IN A STABLE CONDITION
- AND NO PART SHALL BE OVERSTRESSED. G6. ALL PIPES, ORIFICE PLATES, FLAP VALVES ETC SHALL BE IN ACCORDANCE WITH
- HYDRAULIC DRAWINGS.

## **CONCRETE NOTES**

C1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE CURRENT EDITION OF AS 3600 AND OTHER RELEVANT CODES.

#### STORMWATER NOTES

- ST1. ALL DRAINAGE PIPES TO BE Ø100 SEWER GRADE uPVC AT 1% MIN. FALL, U.N.O. ST2. A CONTINUOUS SILT BARRIER FENCE IS TO BE PROVIDED ALONG LOWER BOUNDARIES FOR
- DURATION OF CONSTRUCTION REFER DETAIL ST3. HAYBALE BARRIERS TO BE PROVIDED AROUND INLET PITS FOR DURATION OF
- CONSTRUCTION REFER DETAIL ST4. DRAINAGE HAS BEEN DESIGNED IN ACCORDANCE WITH METHODS SET OUT IN 'AUSTRALIAN
- RAINFALL AND RUNOFF' (1987). ST5. ALL NECESSARY WORK INVOLVED IN THE CREATION OF EASEMENT/RIGHT OF CONNECTION TO ANY EXISTING SERVICES AND/OR COVENANTS/RESTRICTIONS TO USER SHALL BE THE RESPONSIBILITY OF THE OWNER/APPLICANT.

## **EROSION CONTROL NOTES**

- E1. EROSION CONTROL MEASURES TO BE IN PLACE PRIOR TO COMMENCEMENT OF ANY
- CONSTRUCTION WORK. E2. REHABILITATION INCLUDES COMPLETION OF ALL CONSTRUCTION WORK AND LANDSCAPING,
- SEEDING OR TURFING OF ALL BATTERS AND FILL AREAS. E3. A PROGRAM OF PROGRESSIVE REHABILITATION SHOULD BE IMPLEMENTED TO MINIMISE
- E4. TOP SOIL STOCKPILES TO BE SOWN IF LEFT UNDISTURBED FOR MORE THAN FOUR
- E5. THE NEAREST COUNCIL PIT SHALL BE PROTECTED WITH SAND BAG SEDIMENT TRAPS
- AND TRAFFIC BARRIERS ACCORDING TO AS 1742.3 1985.
- E6. ONLY ONE CONSTRUCTION ENTRY/EXIT SHALL BE USED DURING CONSTRUCTION. E7. DURING WET WEATHER MUD IS TO BE HOSED OFF ON THE RAMP PRIOR TO VEHICLES
- LEAVING THE SITE. E8. EXTRA HAY BALES TO BE STORED AT SITE FOR THE USE OF ANY OPEN TRENCHES,
- E9. SEDIMENT TRAPS SHALL BE INSPECTED AFTER EACH STORM. CLEAN OR REPLACE IF

PAVEMENT AND LANDSCAPING AREAS, WITH COUNCIL APPROVAL.

NECESSARY. E10. BALE BARRIERS TO BE REMOVED FOLLOWING COMPLETION OF ALL CONSTRUCTION WORKS,

## LEGEND

40.0 - EXISTING CONTOURS

40.0 - PROPOSED CONTOURS

DP。 - PROPOSED DOWNPIPE (100x50/Ø90 U.N.O.-REFER DETAILS)

- PROPOSED PIPE (SIZES AS SHOWN ON PLAN/NOTES)

- PROPOSED PIPE SEALED TO TANK (SIZES AS SHOWN ON PLAN/NOTES)

- - - EXISTING PIPE

- DIRECTION OF FALL (1% MIN U.N.O.) 

> INSPECTION RISER/CLEANING EYE (DIA. TO MATCH PIPE) WITH SEALED SCREWCAP LID.

 $\times$ 10<sup>30</sup> - EXISTING SPOT LEVEL

⊗\0.5<sup>2</sup> - PROPOSED SPOT LEVEL

- PROPOSED GRATED SURFACE INLET PIT (GSIP)

- PROPOSED JUNCTION PIT (JP)

PROPOSED DEVELOPMENT LOT 9 NO. 9 RAVEN CIRCUIT,

Warriewood. NSW **STORMWATER DRAINAGE PLAN & DETAILS** 

3.22.11581. RAWING REF. No. WAW0009-C-401

CONCEPT PLAN FOR COUNCIL SUBMISSION NOT FOR CONSTRUCTION

OWNER: The owner is responsible for maintenance of building and site. Refer to the CSIRO 'Guide to Home Owners on Foundation Maintenance and Performance'. ISSUE / REVISION DESCRIPTION ISSUE / REVISION DESCRIPTION ISSUED FOR REVIEW AND COMMENT, NOT FOR CONSTRUCTION ESIGNER DM GP 2 DM 24/04/2023 ISSUED FOR REVIEW AND COMMENT, NOT FOR CONSTRUCTION ENG. CHECK | HC JTHORISED BY: GERVASE PURICH FIEAust CPEng NER BPB RBP RPEQ



MACASA HOMES PTY LTD

consulting

Structerre Consulting Engineers (NSW) Pty Ltd (ACN 131 748 260) SUITE 1, LEVEL 2, 42 BIRNIE AVENUE, LIDCOMBE NSW 2141 TEL (02) 9475 3000 FAX (02) 9646 2311 EMAIL: sydney@structerre.com.a

(A): EASEMENT FOR ACCESS AND MAINTENANCE 0.9 WIDE (B): EASEMENT FOR ACCESS AND MAINTENANCE 0.9 WIDE (VACANT LAND) \* NB: PRECISE DETAILS OF ALL EXISTING SERVICES (PITS/PIPES ETC.), SUCH AS DIAMETER, DEPTH, ALIGNMENTS ETC., TO BE OBTAINED ON SITE PRIOR TO COMMENCEMENT OF CONSTRUCTION. REFER ANY DISCREPANCIES TO THIS OFFICE PRIOR TO PROCEEDING. 29.245 **GENERAL NOTES OSD CALCULATIONS SUMMARY:** CIRCUIT G1. THE DRAWINGS SHALL BE READ IN CONJUNCTION WITH ALL OTHER WORKING DRAWINGS AND SPECIFICATIONS AND SUCH OTHER WRITTEN INSTRUCTIONS AS MAY BE ISSUED SSR = 9.0m3 (OR AS CLOSE AS POSSIBLE GIVEN LEVELS) DURING THE COURSE OF CONSTRUCTION. ALL DISCREPANCIES AND VARIATIONS SHALL BE PSD = 3.40L/sREFERRED TO THE ENGINEER BEFORE PROCEEDING WITH THE WORK. (VACANT LAND) 5.37 (AS PER COUNCIL RFI DATED 1 MARCH 2023) G2. ALL STRUCTURAL WORK SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF ALL RELEVANT AND CURRENT CODES. SITE AREA SUMMARY: G3. ALL DIMENSIONS RELEVANT TO SETTING OUT AND OFF SITE WORK SHALL BE VERIFIED BEFORE CONSTRUCTION AND/OR FABRICATION IS COMMENCED. TOTAL SITE AREA =  $246.2 \text{m}^2$ G4. DIMENSIONS SHALL NOT BE OBTAINED BY SCALING THE STRUCTURAL DRAWINGS. PROPOSED ROOF AREA = 126.5m<sup>2</sup> G5. DURING CONSTRUCTION THE STRUCTURE SHALL BE MAINTAINED IN A STABLE CONDITION PROPOSED PAVED AREA = 20m<sup>2</sup> AND NO PART SHALL BE OVERSTRESSED. TOTAL IMPERVIOUS AREA = 146.5m<sup>2</sup> G6. ALL PIPES, ORIFICE PLATES, FLAP VALVES ETC SHALL BE IN ACCORDANCE WITH UNHATCHED AREA TOTAL PERVIOUS AREA = 99.7m<sup>2</sup> DENOTES OSD BYPASS HYDRAULIC DRAWINGS. TOTAL AREA = 17.7m<sup>2</sup> TOTAL INTO OSD = 228.5m2 **CONCRETE NOTES** TOTAL BYPASS = 17.7m2 (7.2% OF TOTAL SITE AREA) C1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE CURRENT VOLUME CALCULATIONS: EDITION OF AS 3600 AND OTHER RELEVANT CODES. NB: DRIVEWAY PROFILES MUST COMPLY WITH THE STORMWATER NOTES REQUIREMENTS OF AS 2890.1 OSD 1 VOLUME PROVIDED = 4.8m3 OSD 2 VOLUME PROVIDED = 2.94m3 TOTAL VOLUME PROVIDED = 7.74m3 (MAX POSSIBLE) ST1. ALL DRAINAGE PIPES TO BE Ø100 SEWER GRADE uPVC AT 1% MIN. FALL, U.N.O. 25.59 ST2. A CONTINUOUS SILT BARRIER FENCE IS TO BE PROVIDED ALONG LOWER BOUNDARIES FOR ORIFICE SIZING CALCULATIONS: DURATION OF CONSTRUCTION - REFER DETAIL ST3. HAYBALE BARRIERS TO BE PROVIDED AROUND INLET PITS FOR DURATION OF BLUE HATCHED AREA — CREATE NEW KERB. USING ORIFICE EQUATION CONSTRUCTION - REFER DETAIL DENOTES OSD 1 CATCHMENT OUTLET INV. RL ≈ 4.74 ST4. DRAINAGE HAS BEEN DESIGNED IN ACCORDANCE WITH METHODS SET OUT IN 'AUSTRALIAN TOTAL AREA =  $126.5 \text{m}^2$ ORIFICEØ =  $21.9 \times (PSD/(H)^{0.5})^{0.5} = 50.46 \text{mm}$ RAINFALL AND RUNOFF' (1987). WHERE PSD = 3.40 L/s, DEPTH TO ORIFICE CL = 0.41 m (H), ST5. ALL NECESSARY WORK INVOLVED IN THE CREATION OF EASEMENT/RIGHT OF CONNECTION THEREFORE PROVIDE 50mm SHARP EDGED TO ANY EXISTING SERVICES AND/OR COVENANTS/RESTRICTIONS TO USER SHALL BE OPENING IN ORIFICE PLATE THE RESPONSIBILITY OF THE OWNER/APPLICANT. RED HATCHED AREA DENOTES TOTAL AREA =  $102.0 \text{m}^2$ **EROSION CONTROL NOTES** E1. EROSION CONTROL MEASURES TO BE IN PLACE PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION WORK. E2. REHABILITATION INCLUDES COMPLETION OF ALL CONSTRUCTION WORK AND LANDSCAPING, (VACANT LAND) SEEDING OR TURFING OF ALL BATTERS AND FILL AREAS. E3. A PROGRAM OF PROGRESSIVE REHABILITATION SHOULD BE IMPLEMENTED TO MINIMISE E4. TOP SOIL STOCKPILES TO BE SOWN IF LEFT UNDISTURBED FOR MORE THAN FOUR E5. THE NEAREST COUNCIL PIT SHALL BE PROTECTED WITH SAND BAG SEDIMENT TRAPS AND TRAFFIC BARRIERS ACCORDING TO AS 1742.3 - 1985. E6. ONLY ONE CONSTRUCTION ENTRY/EXIT SHALL BE USED DURING CONSTRUCTION. E7. DURING WET WEATHER MUD IS TO BE HOSED OFF ON THE RAMP PRIOR TO VEHICLES LEAVING THE SITE. E8. EXTRA HAY BALES TO BE STORED AT SITE FOR THE USE OF ANY OPEN TRENCHES, E9. SEDIMENT TRAPS SHALL BE INSPECTED AFTER EACH STORM. CLEAN OR REPLACE IF NECESSARY. E10. BALE BARRIERS TO BE REMOVED FOLLOWING COMPLETION OF ALL CONSTRUCTION WORKS, PAVEMENT AND LANDSCAPING AREAS, WITH COUNCIL APPROVAL. LEGEND \_\_\_\_\_\_\_ - EXISTING CONTOURS 40.0 - PROPOSED CONTOURS DP。 - PROPOSED DOWNPIPE (100x50/Ø90 U.N.O.-REFER DETAILS) - PROPOSED PIPE (SIZES AS SHOWN ON PLAN/NOTES) - PROPOSED PIPE SEALED TO TANK (SIZES AS SHOWN ON PLAN/NOTES) - - - EXISTING PIPE - DIRECTION OF FALL (1% MIN U.N.O.) INSPECTION RISER/CLEANING EYE (DIA. TO MATCH PIPE) WITH SEALED SCREWCAP LID. imes10 $^{30}$  - Existing spot level ⊗\0.5<sup>2</sup> - PROPOSED SPOT LEVEL - PROPOSED GRATED SURFACE INLET PIT (GSIP) - PROPOSED JUNCTION PIT (JP) CONCEPT PLAN FOR COUNCIL SUBMISSION NOT FOR CONSTRUCTION OWNER: The owner is responsible for maintenance of building and site. Refer to the CSIRO 'Guide to Home Owners on Foundation Maintenance and Performance'. ISSUE / REVISION DESCRIPTION ISSUE / REVISION DESCRIPTION PROPOSED DEVELOPMENT ISSUED FOR REVIEW AND COMMENT, NOT FOR CONSTRUCTION ESIGNER 2 DM 24/04/2023 DM GP ISSUED FOR REVIEW AND COMMENT, NOT FOR CONSTRUCTION ENG. CHECK | HC MACASA HOMES PTY LTD consulting LOT 9 NO. 9 RAVEN CIRCUIT, JTHORISED BY: Warriewood. NSW

GERVASE PURICH

FIEAust CPEng NER BPB RBP RPEQ

3.22.11581.

RAWING REF. No.

WAW0009-C-402

**OSD CATCHMENT PLAN** 

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