PROPOSED DEVELOPMENT
3-5 FINGAL STREET, BRUNSWICK HEADS
CIVIL ENGINEERING WORKS

LOCALITY PLAN
SCALE NTS

DRAWING INDEX	
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REVISIONS

REVISIONS

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PROJECT: PROPOSED DEVELOPMENT
3-5 FINGAL STREET, BRUNSWICK HEADS

STATUS: ISSUED FOR INFORMATION
NOT TO BE USED FOR CONSTRUCTION

DRAWN	DESIGNED	CHECKED	APPROVED
KH	KH	CGO	CGO

DATUM	GRID	SCALE	
AHD	MGA	1:100	AT A1 SIZE

TITLE: LOCALITY PLAN AND DRAWING INDEX

PROJECT No.	DRAWING No.	REV.
GCE240006	UC-0000	C

N:\BGE\BNE\SOT\PROJECTS\BGE\BNE\GCE24006 3-5 FINGAL ST BRUNSWICK HEADS\100 DRAW\100.2 CI & WA\AUTOCAD\GCE240006-UC-0000 LOCALITY PLAN AND DRAWING INDEX.DWG

GENERAL NOTES

1. ALL CONSTRUCTION WORK SHALL BE CARRIED OUT IN ACCORDANCE WITH THE PROJECT SPECIFICATION.
2. ALL CONSTRUCTION WORK SHALL BE COORDINATED WITH ADJACENT CONTRACTS AND CONTRACTORS IS APPLICABLE.
3. PRIOR TO ANY DEMOLITION, EXCAVATION, OR CONSTRUCTION ON SITE, THE CONTRACTOR SHALL CONTACT THE RELEVANT AUTHORITIES AND VERIFY THE LOCATION OF ALL UNDERGROUND SERVICES ON THE SITE AND OBTAIN NECESSARY CLEARANCES.
4. SURFACES WHICH LIE OUTSIDE THE GENERAL LIMITS OF LANDSCAPING AND RESTORATION WHICH ARE DISTURBED DURING THE CONSTRUCTION OF THE WORKS SHALL BE RESTORED BY THE CONTRACTOR, AT CONTRACTOR'S EXPENSE, TO AT LEAST THEIR PRE-CONSTRUCTION CONDITION. THESE SURFACES INCLUDE, BUT ARE NOT NECESSARILY LIMITED TO, PAVEMENTS, PAVING, GRASSING, ETC.
5. ALL COVER LEVELS ARE SHOWN ARE FOR GUIDANCE ONLY AND SHALL BE CONFIRMED ONSITE.
6. DESIGN LEVELS SHOWN ARE A.H.D.
7. PROPRIETARY ITEMS ARE ANY ITEM IDENTIFIED BY NAMING THE MANUFACTURER, SUPPLIER, INSTALLER, TRADE NAME, BRAND NAME, CATALOGUE OR REFERENCE NUMBER. THE IDENTIFICATION OF A PROPRIETARY ITEM DOES NOT NECESSARILY IMPLY EXCLUSIVE PREFERENCE FOR THE ITEM BUT INDICATES THE REQUIRED PROPERTIES.
8. UNLESS OTHERWISE SPECIFIED, ALL MATERIALS, METHODS AND WORKMANSHIP MUST BE IN ACCORDANCE WITH RELEVANT AUSTRALIAN STANDARD.
9. WORK AS-CONSTRUCTED DRAWINGS ARE CALLED FOR IN THE CONTRACT, PREPARE DRAWINGS SHOWING THE "AS CONSTRUCTED" LOCATIONS AND DETAILS OF ELEMENTS OF THE WORKS AND ANY TEMPORARY WORKS LEFT IN PLACE. SHOW DIMENSIONS AND LEVELS
19. UNLESS OTHERWISE APPROVED, IT IS REQUIRED THAT THE CONTRACTOR OBTAIN THE FOLLOWING MATERIALS AND SERVICES FROM SUPPLIERS WHO MAINTAIN QUALITY ASSURANCE SYSTEMS CERTIFIED BY QUALIFIED THIRD PARTIES AS COMPLYING WITH AS/NZS/ISO 9001.
    - 19.1. PAVEMENT SUB BASE AND BASE COURSE MATERIALS.
    - 19.2. ASPHALTIC CONCRETE MATERIAL.
    - 19.3. LAYING OF ASPHALTIC CONCRETE.
    - 19.4. CONCRETE.
    - 19.5. PRECAST CONCRETE PRODUCTS.
    - 19.6. DRAINAGE PIPES.
    - 19.7. GULLY GRATES.
    - 19.8. MANHOLE COVERS AND FRAMES.
    - 19.9. GABIONS AND MATTRESSES.
    - 19.10. GEOTEXTILES.
    - 19.11. UPVC PIPES.
    - 19.12. PAVING UNITS.
    - 19.13. TRAFFIC SIGNS.
    - 19.14. PAVEMENT MARKING.
    - 19.15. STREET LIGHTING AND TRAFFIC SIGNAL INSTALLATIONS.
    - 19.16. TOPSOIL

SAMPLES

20. QUANTITY: SUBMIT AT LEAST ONE OF EACH ITEM AND TWO COPIES OF ANY SUPPORTING DOCUMENTATION FOR REVIEW. KEEP APPROVED SAMPLES IN GOOD CONDITION ON THE SITE, FOR REFERENCE, UNTIL PRACTICAL COMPLETION.
21. SUITABILITY: DO NOT COMMENCE WORK AFFECTED BY SAMPLES UNTIL THE SAMPLES HAVE BEEN APPROVED. SUBMIT FURTHER SAMPLES AS REQUIRED.
22. DELAY: DELAY CAUSED BY LATE SUBMISSION OR INADEQUACY OF SAMPLES IS NOT A REASON FOR AN EXTENSION OF TIME.
23. APPROVAL: APPROVAL OF SAMPLES DOES NOT AFFECT THE RESPONSIBILITIES OF THE CONTRACTOR UNDER THE CONTRACT.
24. CRITERIA: MATCH APPROVED SAMPLES, PROTOTYPES AND SAMPLE PANELS THROUGHOUT THE WORKS.

INSPECTIONS

25. WHERE NOTICE IS TO BE GIVEN FOR INSPECTION OF ANY PART OF THE WORKS, DO NOT COVER UP THAT PART WITHOUT APPROVAL.
26. LEVELS: SPOT LEVELS TAKE PRECEDENCE OVER CONTOUR LINES AND GROUND PROFILE LINES.
27. MINIMUM WORKING DAYS' NOTICE FOR INSPECTIONS

INSPECTION	TYPE	MIN REQ'D
PRE-START	MANDATORY	5
DURING CONSTRUCTION (CIVIL, ELECTRICAL, ITS)	AS REQUIRED	2
TRAFFIC SIGNALS AND ITS PRE-COMMISSIONING	MANDATORY	10
TRAFFIC SIGNALS AND ITS COMMISSIONING	MANDATORY	10
ON-MAINTENANCE(CIVIL, ELECTRICAL, LANDSCAPING)	MANDATORY	5
TRAFFIC SIGNALS AND ITS OFF-MAINTENANCE	MANDATORY	10
OFF-MAINTENANCE(CIVIL, ELECTRICAL, LANDSCAPING)	MANDATORY	5

ENVIRONMENTAL COMPLIANCE

28. CARRY OUT ALL WORK UNDER THE CONTRACT IN ACCORDANCE WITH THE APPROVED ENVIRONMENTAL MANAGEMENT PLAN.

FIRE ANT MANAGEMENT

29. HIGH RISK ACTIVITIES: THOSE ACTIVITIES THAT HAVE THE POTENTIAL TO DISTURB OR DISTRIBUTE THE RED IMPORTED FIRE ANTS (SOLENOPSIS INVICTA) AND RESULT IN THE SPREAD OF FIRE ANTS ACROSS A SITE BOUNDARY. HIGH RISK ACTIVITIES CAN INCLUDE:
    - 29.1. EARTHWORKS OF A MINOR OR MAJOR SCALE.
    - 29.2. REVEGETATION OR REHABILITATION.
    - 29.3. IMPORT OF FILL ONTO A SITE
    - 29.4. EXPORT OF FILL OR OTHER MATERIALS SUCH AS SOILS, GRAVEL, MULCH, AND PLANTS.
    - 29.5. EXPORT OFF OR IMPORT ONTO A SITE OF CONSTRUCTION AND DEMOLITION WASTE AND MATERIALS OR GREEN WASTE.
30. HIGH RISK MATERIALS OR ITEMS: MATERIALS OR ITEMS THAT ARE LIKELY TO HOUSE FIRE ANTS. HIGH RISK MATERIALS CAN INCLUDE:
    - 30.1. ANY SOIL EITHER SEPARATELY OR ASSOCIATED WITH OTHER ITEMS, POTTING MEDIA AND ORGANIC MULCHES (E.G. TOPSOIL, LANDSCAPING MATERIALS, GREEN WASTE, PLANT STOCK, FILL/SPOIL).
    - 30.2. PLANTS (INCLUDING TURF) WITH ROOTS AND SOIL OR POTTING MEDIA ATTACHED.
    - 30.3. BALED HAY AND BALED STRAW.
    - 30.4. SOIL MOVING EQUIPMENT OR OTHER SOILED VEHICLES (INCLUDING AGRICULTURAL MACHINERY).
    - 30.5. ANY OTHER ITEM SUCH AS TIMBER PRODUCT, PREPARED STOCK FOODS AND PROTEIN MEALS, SHIPPING CONTAINERS, CARAVANS, MOTOR VEHICLE BODIES, BOAT AND BOX TRAILERS AND CONSTRUCTION MATERIAL, THAT IS INFESTED WITH FIRE ANTS OR CONTAMINATED WITH SOIL.
31. PRECAUTIONARY AND QUARANTINE PROCEDURES: UNDERTAKE THE NECESSARY PRECAUTIONARY AND QUARANTINE PROCEDURES IN ACCORDANCE WITH THE APPROVED SITE-SPECIFIC ENVIRONMENTAL MANAGEMENT PLAN OR THE SPECIAL CONTRACT CONDITIONS. IF THE AFOREMENTIONED DOCUMENTS DO NOT FORM PART OF THE CONTRACT DOCUMENTATION, UNDERTAKE THE NECESSARY PRECAUTIONARY AND QUARANTINE PROCEDURES PRESCRIBED IN THE DEPARTMENT OF PRIMARY INDUSTRIES CORPORATE PROCEDURE FOR MANAGING FIRE ANTS.

TESTING

32. USE TEST METHODS AS SPECIFIED FOR THE PARTICULAR ASPECT OF THE WORK.
33. USE TESTING FACILITIES CERTIFIED BY NATA FOR THE PARTICULAR TEST REQUIRED. NOTIFY THE TESTING FACILITY OF ALL INTERESTED PARTIES AND ARRANGE FOR IT TO SUBMIT COPIES OF TEST RESULTS DIRECTLY TO ANY INTERESTED PARTY.
34. THE INSPECTION AND TEST PLAN MUST PROVIDE FOR TESTING AT LEAST AT THE FREQUENCIES SPECIFIED HEREIN. PERFORM ADDITIONAL TESTS OF THE TYPE AND FREQUENCY NECESSARY TO ADEQUATELY CONTROL THE MATERIALS AND PROCESSES USED IN THE CONSTRUCTION OF THE WORKS.
35. RECORD THE RESULTS OF PROCESS CONTROL TESTS ON CONTROL CHARTS OR GRAPHS UPDATED AFTER EACH DAY'S TESTING. RECORD THE LOCATION OF THE TEST ON SUITABLE SKETCHES. PROVIDE COPIES TO ANY INTERESTED PARTY ON REQUEST.
36. COMPLIANCE ACCEPTANCE TESTS ARE THE CONTRACTORS RESPONSIBILITY HOWEVER, THE SUPERINTENDENT/ENGINEER MAY CARRY OUT COMPLIANCE ASSESSMENT TESTING AT A LEVEL UP TO 50% OF THE PROCESS CONTROL TESTING SPECIFIED. ALLOW 3 WORKING DAYS FOR DETERMINATION OF TEST RESULTS.

AS-CONSTRUCTED REQUIREMENTS

37. THE ENGINEER IS RESPONSIBLE FOR ENSURING THAT THE AS-CONSTRUCTED INFORMATION (DRAWINGS AND ASSET REGISTER) ARE ACCURATE AND REFLECTS THE ACTUAL CONSTRUCTION, ENDORSED BY A LICENSED SURVEYOR.
38. THE SURVEY ACCURACY SHALL BE SUCH THAT THE AS-CONSTRUCTED INFORMATION IS FIT FOR THE PURPOSE TO WHICH THE INFORMATION WILL BE USED.
39. WHERE A NON-CONFORMANCE IS IDENTIFIED BETWEEN THE DESIGN REQUIREMENTS AND ACTUAL AS-CONSTRUCTED POSITION, THE CONTRACTOR SHAL PROVIDE CERTIFICATION AS TO DEMONSTRATE THAT THE NON-CONFORMANCE SATISFIES THE ORIGINAL DESIGN REQUIREMENTS.
40. WHERE THE WHOLE OR PART OF THE INFRASTRUCTURE OR ASSET HAS BEEN IDENTIFIED DURING THE AS-CONSTRUCTED PROCESS AS HAVING INFRINGED UPON AN ADJOINING PROPERTY, ONE OF THE FOLLOWING ACTIONS IS TO OCCUR:
    - 40.1. OBTAIN WRITTEN AGREEMENT FROM THE OWNER OF THE ADJOINING PROPERTY FOR APPROVAL OF THE ASSET TO REMAIN AND TO ACCEPT FUTURE LIABILITY FOR THAT PART OF THE ASSET;
    - 40.2. ACQUIRE THE LAND TO ADJUST THE PROPERTY BOUNDARY AND ENSURE THE ASSET IS CONTAINED WITHIN A SINGLE PROPERTY BOUNDARY; OR
    - 40.3. MODIFY THE ASSET TO ENSURE THE ASSET IS CONTAINED WITHIN A SINGLE PROPERTY BOUNDARY.
41. EARTHWORKS
    - 41.0.1. THE CONTRACTOR SHALL PROVIDED AS QUALITY ASSURANCE IN ACCORDANCE WITH THE SPECIFICATION TO DEMONSTRATE THE EARTHWORKS HAS BEEN COMPLETED. THESE RECORDS ARE AS FOLLOWS:
        - 41.0.1.1. VENM & ENM CERTIFICATES FOR IMPORT MATERIALS
        - 41.0.1.2. TEST RESULTS FROM NATA CERTIFIED LAB.
        - 41.0.1.3. SURVEY CONFORMANCE OF FOUNDATION LEVEL AND FSL TO DEMONSTRATE LEVEL CONFORMANCE.
        - 41.0.1.4. LEVEL 1 CERTIFICATION AND REPORT WHERE SPECIFIED.
42. ROADWORKS AND PATHS
    - 42.1. SUBMIT CERTIFICATION THAT THE AS-CONSTRUCTED GRADE AND CROSS SECTIONAL INFORMATION IS CONFIRMED IN AREAS WHERE ROADWAY AND PATH OVERLAND FLOW CAPACITIES ARE CRITICAL, AND BUILT TO WITHIN THE SPECIFIED CONSTRUCTION TOLERANCES.
    - 42.2. THE AS-CONSTRUCTED DRAWINGS SHOULD ALSO DEPICT THE PERMANENT STREET, WARNING AND REGULATORY SIGNS AND ROAD PAVEMENT MARKINGS ARE INSTALLED INCLUDING PATH SIGNS IN ACCORDANCE WITH THE APPROVED ENGINEERING DRAWINGS;
    - 42.3. PAVEMENT AND SUBGRADE DETAILS:
        - 42.3.0.1. CROSS SECTIONS OF PAVEMENT COMPOSITION AND ASSOCIATED THICKNESS FOR EVERY DIFFERENT CONFIGURATION.
        - 42.3.0.2. THE MINIMUM CBR VALUES FOR THE SUBGRADE AND PAVEMENT MATERIALS SHALL BE NOTED ON THE LONGITUDINAL SECTIONS.
        - 42.3.0.3. CONFORMANCE SURVEYS TO DEMONSTRATE FINISHED LEVEL OF EACH LAYER AS PER THE DOCUMENTATION.
43. STORMWATER AND ROOFWATER DRAINAGE
    - 43.1. THE FOLLOWING INFORMATION SHOULD BE DEPICTED ON AS-CONSTRUCTED DRAWINGS:
        - 43.1.1. INSPECTION PITS – LOCATION ESTABLISHED BY TWO TIES, SURFACE AND INVERT LEVELS AND DEPTH OF COVER TO PIPE (INLET AND OUTLET).
        - 43.1.2. STORMWATER – DIAMETER, CLASS, MATERIAL TYPE, LENGTH, GRADE, DEPTH OF COVER, ALIGNMENT AND BEDDING SUPPORT TYPE.
        - 43.1.3. STORMWATER LINE INLETS AND OUTLETS – ROAD AND FIELD GULLY TYPES, SURFACE AND INVERT LEVELS, GRATE TYPES AND LINTEL SIZES;
        - 43.1.4. ROOFWATER HOUSE CONNECTIONS – LOCATION ESTABLISHED BY TWO TIES, SURFACE AND INVERT LEVEL.
        - 43.1.5. OVERLAND FLOW PATH – SURFACE LEVELS AND PROFILE.
        - 43.1.6. WSUD DEVICES – MANUFACTURER MODEL NUMBER AND TYPE, TREATMENT AREA, BATTER SLOPES, LANDSCAPING AREAS, SAFETY FENCES AND ACCESS DRIVEWAYS.
44. DIGITAL TERRAIN MODEL, THE CONTRACTORS LICENSED SURVEYOR SHALL PROVIDED THE FOLLOWING INFORMATION:
    - 44.1. DIGITAL TERRAIN MODEL (XYZ FILE WITH BREAKLINES) OF THE DEVELOPMENT. THE ACCURACY OF THE SURVEY DATA SHOULD GENERALLY CONFORM TO THE CONSTRUCTION TOLERANCES SPECIFIED IN THE REFERENCE SPECIFICATIONS. HOWEVER, IN NON-CRITICAL AREAS SUCH AS ALLOTMENTS AND AREAS WITH NO HARD SURFACING, THE PLANIMETRIC PRECISION OF 0.2M AND VERTICAL PRECISION OF 0.15M ARE USUALLY SUFFICIENT.
    - 44.2. A HARDCOPY PLAN DEPICTING THE 0.25M CONTOUR INTERVALS AND SURVEY SPOT LEVELS OF THE DEVELOPMENT. CERTIFICATION BY A LICENSED SURVEYOR IS REQUIRED TO ENSURE THAT THE ACCURACY AND RELIABILITY OF THE DATASET IS MAINTAINED.
45. STREET LIGHTING
    - 45.1. STREET LIGHTING AS-CONSTRUCTED DRAWINGS INCLUDING DETAILS OF SCHEDULE OF ALL ITEMS MUST BE SUBMITTED PRIOR TO HAND OVER.
46. ELECTRICAL
    - 46.1. POINT OF SUPPLY DOCUMENTATION AND SUPPLIER NUMBERS SHALL BE INCLUDED ON THE AS CONSTRUCTED DOCUMENTATION FOR THE SITE.
47. COMMUNITY SERVICES CONDUITS
    - 47.1. CONDUIT PLAN/S IN AUTOCAD (DWG AUTOCAD V2009) INDICATING THE ROUTE AND EACH PIT AND ITS RESPECTIVE NUMBER ARE REQUIRED. THE PLAN SHALL BE PROVIDED IN BOTH HARD AND SOFT COPY.
48. TRAFFIC SIGNAL DETAILS
    - 48.1. ACCOMPANIED BY THE TRAFFIC SIGNAL SUBMISSION FORM, AS-CONSTRUCTED IN AUTOCAD OF ALL ASSETS DETAILED ON THE APPROVED FOR CONSTRUCTION DRAWINGS.
49. WATER AND SEWERAGE INFRASTRUCTURE
    - 49.1. REFER TO SOUTH EAST QUEENSLAND WATER AND SEWER CODES FOR AS-CONSTRUCTED REQUIREMENTS.
50. LODGEMENT OF AS-CONSTRUCTED DRAWINGS
51. ONE SET OF AS-CONSTRUCTED DRAWINGS FOR ALL ASSET CATEGORIES SHALL BE SUBMITTED ELECTRONICALLY AS A PDF FILE AND SHALL BE CERTIFIED BY A SUITABLY QUALIFIED REGISTERED PROFESSIONAL ENGINEER QUEENSLAND (RPEQ). PDF FILES GENERATED FROM REDUCED (SCALED) DRAWINGS WILL NOT BE ACCEPTABLE.
52. TO ENABLE COMPARISON WITH THE APPROVED DESIGN DRAWINGS, ALL DESIGN DISTANCES, LEVELS AND VALUES ARE TO REMAIN IN BLACK ON THE DRAWINGS AND 'STRUCK OUT' WITH A DIAGONAL LINE IN RED. ALL AS CONSTRUCTED DISTANCES, LEVELS AND VALUES (TEXT), REGARDLESS OF VARIANCE, ARE TO BE MARKED ON THE DRAWINGS AND LONGITUDINAL SECTIONS IN RED. THE REDRAWN PARTS OF ANY LAYOUT DETAILS (PLAN) AND LONGITUDINAL OR CROSS SECTIONS ARE TO BE DRAFTED IN RED WITH THE ORIGINAL LINEWORK TO REMAIN IN BLACK BUT 'STRUCK OUT' IN RED AS REQUIRED. ENCIRCLING WITH A NOTATED CLOUD USUALLY DENOTES OTHER AMENDMENTS AND IS NOT TO BE USED ON AS-CONSTRUCTED DRAWINGS.

PROCESS TO ACHIEVE ON-MAINTENANCE:

53. WITHIN TWO WEEKS FROM THE DATE OF THE ON-MAINTENANCE INSPECTION, THE ENGINEER IS REQUIRED TO LODGE THE FOLLOWING DOCUMENTATION WITH COUNCIL, SO THAT THE FORMAL ACCEPTANCE OF THE DEVELOPMENT ON-MAINTENANCE CAN BE PROCESSED. IF THE DOCUMENTATION IS NOT SUPPLIED WITHIN THE NOMINATED PERIOD, THE DATE OF WORKS BEING ACCEPTED ON-MAINTENANCE WILL BE DEFERRED TO THE DATE WHEN ALL THE INFORMATION IS SATISFACTORILY LODGED. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDED THE REQUIRED INFORMATION TWO WEEKS PRIOR TO GIVE SUFFICIENT TIME FOR THE ENGINEER TO MAKE THE COUNCIL SUBMISSION.
54. LETTER CONFIRMING SATISFACTORY COMPLETION OF THE ON-MAINTENANCE INSPECTION AND REQUESTING THAT THE MAINTENANCE PERIOD COMMENCE FROM THE DATE OF INSPECTION AND ACKNOWLEDGE THAT ANY DEFECTS WILL BE ATTENDED TO AS SOON AS POSSIBLE WITHIN THE MAINTENANCE PERIOD.
    - 54.1. A FORMAL CERTIFICATE OF COMPLETION IS ISSUED BY THE PRINCIPAL ENGINEERING CONSULTANT.
    - 54.2. NON-COMPLIANCE RECORDS AND REMEDIAL ACTIONS HAVE BEEN INCORPORATED INTO THE CERTIFICATE OF COMPLETION IN ORDER TO EXPEDITE THE CHECKING AND APPROVAL PROCESS BY PLACING THE RESPONSIBILITY FOR IDENTIFYING AND REPORTING NONCONFORMING WORKS WITH THE ENGINEER. COUNCIL WILL ONLY UNDERTAKE RANDOM AUDIT CHECKS.
    - 54.3. A BOND PROVIDED FOR ANY OUTSTANDING WORKS REQUIRED TO BRING WSUD DEVICES IN OPEN SPACES TO THEIR FINAL OPERATING FORM. THIS INCLUDES: REMOVAL OF PROTECTIVE LAYERS, TESTING OF FILTER MEDIA AND SUPPLY, PLANT, ESTABLISHMENT AND MAINTENANCE OF VEGETATION.
    - 54.4. A LETTER CERTIFYING THAT ALL WSUD DEVICES HAVE BEEN INSPECTED IN ACCORDANCE WITH THE APPROPRIATE REQUIREMENTS OF THE HEALTHY WATERWAYS – WATER BY DESIGN SUITE OF GUIDELINES. THE LETTER IS TO INCLUDE THE APPROPRIATE CERTIFICATES, SURVEY OF THE SURFACE LEVELS OF SWALES, BIO RETENTIONS, SEDIMENT BASINS AND WETLANDS AND COMPLETED AND SIGNED WATER BY DESIGN CHECKLISTS;
    - 54.5. ONE SET OF ELECTRONIC (PDF) AS-CONSTRUCTED DRAWINGS, ENDORSED BY A LICENSED SURVEYOR SHALL BE LODGED PRIOR TO THE ON MAINTENANCE INSPECTION.
    - 54.6. AS-CONSTRUCTED ASSET REGISTER.
    - 54.7. ALL QUALITY CONTROL TESTING AND MONITORING RESULTS INCLUDING CONSTRUCTION TOLERANCES AS PER THE SPECIFICATION.
    - 54.8. A LANDSCAPE PARK MAINTENANCE PROGRAM INCLUDING THE MAINTENANCE OF CULTURAL HERITAGE ARTIFACTS.
    - 54.9. WHERE APPLICABLE, BUILDING APPROVALS AND RPEQ CERTIFICATION OF STRUCTURES SUCH AS RETAINING WALLS AND SHADE STRUCTURES.
    - 54.10. WHERE APPLICABLE, CERTIFICATION OF DESIGN, MANUFACTURE AND INSTALLATION OF PLAY AND FITNESS EQUIPMENT.
    - 54.11. WHERE APPLICABLE, MAINTENANCE MANUALS AND REPORTS FOR SPECIALISED INFRASTRUCTURE SUCH AS ARTWORK, IRRIGATION SYSTEMS, PUMPS AND TOILET HOISTS ETC.
    - 54.12. ADVISE FORM OF PROPOSED MAINTENANCE SECURITY. ALTERNATIVES MAY INCLUDE OFFSETTING AGAINST AN EXISTING BOND, ADDITIONAL CASH PAYMENT, OR BANK GUARANTEE. THE MAINTENANCE SECURITY FOR A PARK, REHABILITATION AND OFFSET AREA SHOULD BE A MINIMUM $10,000 BUT NOT LESS THAN 5% OF THE CONTRACT SUM. THE MAINTENANCE SECURITY FOR A STREETSCAPE SHOULD BE A MINIMUM $5,000 BUT NOT LESS THAN 5% OF THE CONTRACTED SUM. AN ADDITIONAL $1.00 PER M2 OF PARK AREA IS REQUIRED TO COVER THE DAY TO DAY MAINTENANCE DEMANDS ON PARKS, INCLUDING THE COST OF GARDEN BEDS, MOWN AREAS, LANDSCAPING, CLEANING OF BUILDINGS AND FURNITURE, AND REGULAR INSPECTION AND MAINTENANCE TO PLAYGROUNDS INSTALLED IN THE PARK.
    - 54.13. EVIDENCE OF PUBLIC LIABILITY INSURANCE FOR THE PARK/STREETSCAPE/REHABILITATION AREA/OFFSET AREA OF $20 MILLION IS TO BE PROVIDED.
55. FORMAL ACCEPTANCE OF ON-MAINTENANCE WILL BE IN THE FORM OF CORRESPONDENCE FROM COUNCIL TO THE ENGINEER, CONFIRMING THE ON-MAINTENANCE DATE AND LISTING THE DEFECTS REQUIRING RECTIFICATION DURING THE MAINTENANCE PERIOD, AND ADVISING HOW THE MAINTENANCE SECURITY WILL BE EXECUTED.

PROCESS TO ACHIEVE OFF-MAINTENANCE

56. WORK THAT MAY HAVE BEEN BONDED FOR CONSTRUCTION DURING THE MAINTENANCE PERIOD SUCH AS FOOTPATHS AND BIKEWAYS SHOULD BE COMPLETED PRIOR TO THE DEVELOPMENT BEING TAKEN OFF MAINTENANCE. ALL TEMPORARY FACILITIES, SUCH AS IRRIGATION SYSTEMS INSTALLED FOR PARK ESTABLISHMENT, SHOULD BE REMOVED. HOWEVER, DEFERRED CONSTRUCTION MAY BE CONSIDERED IN MULTI-STAGE DEVELOPMENTS. ANY OUTSTANDING QUALITY CONTROL TEST RESULTS SUCH AS ASPHALT CORE TESTS AND 28 DAY CONCRETE STRENGTHS NOT AVAILABLE AT THE ON-MAINTENANCE INSPECTION SHOULD BE SUPPLIED DURING THE MAINTENANCE PERIOD.
57. THE PURPOSE OF THE OFF-MAINTENANCE INSPECTION IS TO ENSURE THAT THE CONSTRUCTED WORKS HAD PERFORMED SATISFACTORILY DURING THE MAINTENANCE PERIOD AND OMISSIONS AND DEFECTS HAVE BEEN RECTIFIED. THE ENGINEER IS RESPONSIBLE FOR MAKING SURE THAT ALL UNSATISFACTORY WORK AND DEFECTS HAVE BEEN RECTIFIED PRIOR TO THE OFF-MAINTENANCE INSPECTION.
58. WHERE COUNCIL DEEMS THAT THE OFF-MAINTENANCE INSPECTION IS SATISFACTORY, THE ENGINEER SHOULD REQUEST IN WRITING FOR THE DEVELOPMENT TO BE TAKEN OFF-MAINTENANCE AND THAT THE MAINTENANCE SECURITY AND ANY OTHER BOND MONIES BE RELEASED.
59. FORMAL ACCEPTANCE OF OFF-MAINTENANCE AND RELEASE OF SECURITY DEPOSIT WILL BE IN THE FORM OF A CORRESPONDENCE FROM COUNCIL TO THE ENGINEER. AT THIS TIME, THE CONTRIBUTED ASSETS ARE FORMALLY TRANSFERRED TO COUNCIL OWNERSHIP.

ABBREVIATIONS

AL	ALIGNMENT
BCC	BRISBANE CITY COUNCIL
BEWL	BULK EARTHWORKS LEVEL
BK	BARRIER KERB
BOW	BOTTOM OF WALL
CGCC	CITY OF GOLD COAST COUNCIL
CH	CHAINAGE
CL	COVER LEVEL
CTB	CONCRETE THRUST BLOCK
CTP	CONCRETE THRUST PIER
DBYD	DIAL BEFORE YOU DIG
DEJ	DOWELLED EXPANSION JOINT
DP	DOWN PIPE
DWG	DRAWING
EJ	EXPANSION JOINT
E.SEW.MH	EXISTING SEWER MANHOLE
E.SW.MH	EXISTING STORMWATER MANHOLE
FHR	FIRE HOSE REEL
FSL	FINISHED SURFACE LEVEL
FRC	FIBRE REINFORCED CONCRETE
FFL	FINISHED FLOOR LEVEL
HYD	HYDRANT
HER	HIGH END RISER
HW	HEAD WALL
IL	INVERT LEVEL
IJ	ISOLATION JOINT
IP	INTERSECTION POINT
IR	INTERMEDIATE RISER
KB	KERB BACK
KC	KERB CONTROL
KL	KERB LIP
KR	KERB RETURN
KT	KERB TOP
LCC	LOGAN CITY COUNCIL
MBRC	MORETON BAY REGIONAL COUNCIL
MH	MANHOLE
MS	MOWING STRIP
NTS	NOT TO SCALE
OCI	OPEN CONCRETE INVERT
PC	PRAM CROSSING
PR	PRAM RAMP
QUU	QUEENSLAND URBAN UTILITIES
RCP	REINFORCED CONCRETE PIPE
RL	REDUCED LEVEL
ROCI	REINFORCED OPEN CONCRETE INVERT
RVC	REINFORCED VEHICLE CROSSING
SC	STOP COCK
SJ	SAWCUT JOINT
SS	SUBSOIL DRAIN
SRM	SEWER RISING MAIN
STD	STANDARD
SV	STOP VALVE
TOW	TOP OF WALL
TOF	TOP OF FOOTING
TP	TANGENT POINT
TS	TRENCH STOP
TW	THRUST WALL
UW	UNITY WATER
VC	VEHICULAR CROSSING

C

LEGEND

- PROPERTY BOUNDARY
- X — EXISTING SERVICE TO BE REMOVED
- DESIGN CONTOURS MAJOR
- DESIGN CONTOURS MINOR
- PROPOSED BUILDING OUTLINE
- PROPOSED ROOF/AWNING OUTLINE
- K&C — PROPOSED KERB AND CHANNEL
- PROPOSED ROAD CENTRELINE
- PROPOSED ROAD SHOULDER
- PROPOSED EDGE OF PAVEMENT
- •1.00 — PROPOSED SURFACE LEVEL
- BUILDING WORKS HATCH
- CONCRETE FOOTPATH HATCH
- EXISTING PAVEMENT HATCH
- CONCRETE PAVEMENT HATCH
- LANDSCAPED AREA HATCH
- EXTENT OF WORKS
- B — REVISION TRIANGLE
- •040 — SETOUT POINT

REV	DATE	DESCRIPTION	RVD
C	27.05.25	ISSUED FOR DA APPROVAL	KH
B	21.02.25	ISSUED FOR APPROVAL	CGO
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REVISIONS

REVISIONS

CLIENT: Momentum Projects

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PROJECT: PROPOSED DEVELOPMENT
3-5 FINGAL STREET, BRUNSWICK HEADS

STATUS: ISSUED FOR INFORMATION
NOT TO BE USED FOR CONSTRUCTION

DRAWN	DESIGNED	CHECKED	APPROVED
KH	KH	CGO	CGO

DATUM	GRID	SCALE	
AHD	MGA	1:100	AT A1 SIZE

TITLE: GENERAL NOTES AND LEGEND

PROJECT No. GCE240006 | DRAWING No. UC-0001 | REV. C

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EROSION AND SEDIMENT CONTROL NOTES:

SITE CONTEXT

1. THE SITE IS LOCATED AT: XXXX
2. DISCHARGES TO THE EXISTING STORMWATER SYSTEM ARE TO BE CONTROLLED AT ALL TIMES INCLUDING TESTING OF WATER FOR DISCHARGE QUALITY. THE ONLY UNTESTED DISCHARGE PERMITTED IS HIGH FLOW BYPASS EVENTS DUE TO WEATHER OF HIGHER INTENSITY THAT THE ESCP DESIGN STANDARD.

GENERAL

3. REFERENCES THROUGHOUT THIS DOCUMENT TO "THE ENGINEER" MAY BE SUBSTITUTED WITH "COUNCIL" OR "THE SUPERINTENDENT" AS REQUIRED.
4. THIS EROSION AND SEDIMENT CONTROL PLAN REPRESENTS THE BASE STANDARD DEVELOPED FOR THE SITE. AT THE TIME OF CONSTRUCTION, THE PLAN IS TO BE REVIEWED FOR CHANGES TO THE CIRCUMSTANCES INCLUDING ASSESSMENT OF CHANGES TO DESIGN AND PREVAILING WEATHER. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES MUST BE IMPLEMENTED AND A REVISED EROSION AND SEDIMENT CONTROL PLAN (ESCP) MUST BE SUBMITTED FOR APPROVAL IN THE EVENT THAT SITE CONDITIONS CHANGE SIGNIFICANTLY FROM THOSE CONSIDERED WITHIN THE ESCP.
5. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES MUST BE IMPLEMENTED AND A REVISED EROSION AND SEDIMENT CONTROL PLAN (ESCP) MUST BE SUBMITTED FOR APPROVAL IN THE EVENT THAT THE IMPLEMENTED WORKS FAIL TO ACHIEVE THE STATED "OBJECTIVE" OF THE ESCP, THE LOCAL GOVERNMENT ESC STANDARD, OR THE STATE'S ENVIRONMENTAL PROTECTION REQUIREMENTS.
6. IN CIRCUMSTANCES WHERE IT IS CONSIDERED NECESSARY TO PREPARE AN AMENDED EROSION AND SEDIMENT CONTROL PLAN (ESCP), AND WHERE THE DELIVERY OF SUCH AN AMENDED ESCP IS NOT IMMINENT, THEN ALL NECESSARY NEW OR MODIFIED EROSION AND SEDIMENT CONTROL WORKS MUST BE IN ACCORDANCE TO THE IECA BEST PRACTICE EROSION AND SEDIMENT CONTROL GUIDELINES. UPON APPROVAL OF THE AMENDED ESCP, ALL WORKS MUST BE IMPLEMENTED IN ACCORDANCE WITH THE AMENDED PLAN.

WATER TESTING

7. THE CONTRACTOR IS TO UNDERTAKE BASELINE WATER TESTING OF RECEIVING WATER BODIES TO CONFIRM WATER QUALITY STANDARDS.
8. WATER BEING DISCHARGED FROM SITE IS TO CONFORM TO THE STANDARDS BELOW:
   a) A SUSPENDED SOLIDS CONTENT OF LESS THAN 50 MILLIGRAMS PER LITER
   b) TURBIDITY (NTU) VALUE LESS THAN OR EQUAL TO 8
   c) pH OF 6.5 TO 8.5 REGARDLESS OF THE RECEIVING WATER Ph value

SITE SOIL TESTING

10. THE CONTRACTOR IS TO UNDERTAKE SITE SOIL TESTING OF ALL MATERIAL THAT IS TO BE STOCKPILED OR USED IN NEAR-SURFACE EARTHWORKS.
11. MATERIAL THAT IS IDENTIFIED AS DISPERSIVE IS TO BE USED IN LOWER FILL STRATA ONLY AND IF REQUIRED TO BE STOCKPILED IS TO BE COVERED.

LAND CLEARING

12. LAND CLEARING MUST BE DELAYED AS LONG AS PRACTICABLE AND MUST BE UNDERTAKEN IN CONJUNCTION WITH DEVELOPMENT OF EACH STAGE OF WORKS, UNLESS OTHERWISE APPROVED BY THE ENGINEER.
13. ALL REASONABLE AND PRACTICABLE EFFORTS MUST BE TAKEN TO DELAY THE REMOVAL OF, OR DISTURBANCE TO, EXISTING GROUND COVER (ORGANIC OR INORGANIC) PRIOR TO LAND-DISTURBING ACTIVITIES.
14. BULK TREE CLEARING MUST OCCUR IN A MANNER THAT MINIMISES DISTURBANCE TO EXISTING GROUND COVER (ORGANIC OR INORGANIC).
15. BULK TREE CLEARING AND GRUBBING OF THE SITE MUST BE IMMEDIATELY FOLLOWED BY SPECIFIED TEMPORARY STABILISATION MEASURES (E.G. TEMPORARY GRASSING, OR MULCHING) PRIOR TO COMMENCEMENT OF EACH STAGE OF CONSTRUCTION WORKS.
16. DISTURBANCE TO NATURAL WATERCOURSES (INCLUDING BED AND BANKS) AND THEIR ASSOCIATED RIPARIAN ZONES MUST BE LIMITED TO THE MINIMUM PRACTICABLE.
17. NO LAND CLEARING SHALL BE UNDERTAKEN UNLESS PRECEDED BY THE INSTALLATION OF ADEQUATE DRAINAGE AND SEDIMENT CONTROL MEASURES, UNLESS SUCH CLEARING IS REQUIRED FOR THE PURPOSE OF INSTALLING SUCH MEASURES, IN WHICH CASE, ONLY THE MINIMUM CLEARING REQUIRED TO INSTALL SUCH MEASURES SHALL OCCUR.
18. LAND CLEARING MUST BE LIMITED TO 5m FROM THE EDGE OF PROPOSED CONSTRUCTED WORKS, 2m OF ESSENTIAL CONSTRUCTION TRAFFIC ROUTES, AND A TOTAL OF 10m WIDTH FOR CONSTRUCTION ACCESS, UNLESS OTHERWISE APPROVED BY THE ENGINEER.
19. PRIOR TO LAND CLEARING, AREAS OF PROTECTED VEGETATION, AND SIGNIFICANT AREAS OF RETAINED VEGETATION MUST BE CLEARLY IDENTIFIED (E.G. WITH HIGH-VISIBILITY TAPE, OR LIGHT FENCING) FOR THE PURPOSES OF MINIMISING THE RISK OF UNNECESSARY LAND CLEARING.
20. ALL REASONABLE AND PRACTICABLE MEASURES MUST BE TAKEN TO MINIMISE THE REMOVAL OF, OR DISTURBANCE TO, THOSE TREES, SHRUBS AND GROUND COVERS (ORGANIC OR INORGANIC) THAT ARE INTENDED TO BE RETAINED.
21. ALL LAND CLEARING MUST BE IN ACCORDANCE WITH THE FEDERAL, STATE AND LOCAL GOVERNMENT VEGETATION PROTECTION/PRESERVATION REQUIREMENTS AND/OR POLICIES.
22. LAND CLEARING IS LIMITED TO THE MINIMUM PRACTICABLE DURING THOSE PERIODS WHEN SOIL EROSION DUE TO WIND, RAIN OR SURFACE WATER IS POSSIBLE.
23. LAND CLEARING MUST NOT EXTEND BEYOND THAT NECESSARY TO PROVIDE UP TO EIGHT (8) WEEKS OF SITE ACTIVITY DURING THOSE MONTHS WHEN THE ACTUAL OR AVERAGE RAINFALL IS LESS THAN 45mm, SIX (6) IF BETWEEN 45mm AND 100mm, FOUR (4) WEEKS IF BETWEEN 100mm AND 225mm, AND TWO (2) WEEKS IF GREATER THAN 225mm.

SITE ACCESS

24. THE PLAN DEPICTS THE TYPE AND LOCATION OF SITE ACCESS POINTS. PRIOR TO THE COMMENCEMENT OF SITE WORKS, THE LOCATION OF THE SITE ACCESS POINTS MUST BE VERIFIED BY COUNCIL.
25. SITE EXIT POINTS MUST BE APPROPRIATELY MANAGED TO MINIMISE THE RISK OF SEDIMENT BEING TRACKED ONTO SEALED, PUBLIC ROADWAYS.
26. STORMWATER RUNOFF FROM ACCESS ROADS AND STABILISED ENTRY/EXIT POINTS MUST DRAIN TO AN APPROPRIATE SEDIMENT CONTROL DEVICE.
27. INSTALL AND MAINTAIN THE ACCESS POINT SO THAT IT CAN OPERATE EFFECTIVELY AT ALL TIMES.
28. INSPECT THE ACCESS POINT DAILY.
29. IF MATERIAL IS EXPORTED ONTO THE EXTERNAL ROADWAY, NOTIFY THE ENGINEER. CLEAN THE EXTERNAL ROADWAY IMMEDIATELY (BY SWEEPING THE AREA AND NOT WASHING DOWN) OF ALL EXPORTED MATERIAL AND CLEAN/RECTIFY THE ACCESS POINT CONFIGURATION TO PREVENT FURTHER EXPORT OF MATERIAL ONTO THE ROADWAY.

SOIL AND STOCKPILE MANAGEMENT

30. ALL REASONABLE AND PRACTICABLE MEASURES MUST BE TAKEN TO OBTAIN THE MAXIMUM BENEFIT FROM EXISTING TOPSOIL, INCLUDING:
   (i) WHERE THE PROPOSED AREA OF SOIL DISTURBANCE DOES NOT EXCEED 2500m², AND THE TOPSOIL DOES NOT CONTAIN UNDESIRABLE WEED SEED, THE TOP 100mm OF SOIL LOCATED WITHIN AREAS OF PROPOSED SOIL DISTURBANCE (INCLUDING STOCKPILE AREAS) MUST BE STRIPPED AND STOCKPILED SEPARATELY FROM THE REMAINING SOIL.
   (ii) WHERE THE PROPOSED AREA OF SOIL DISTURBANCE EXCEEDS 2500m², AND THE TOPSOIL DOES NOT CONTAIN UNDESIRABLE WEED SEED, THE TOP 50mm OF SOIL MUST BE STRIPPED AND STOCKPILED SEPARATELY FROM THE REMAINING TOPSOIL, AND SPREAD AS A FINAL SURFACE SOIL.
   (iii) IN AREAS WHERE THE TOPSOIL CONTAINS UNDESIRABLE WEED SEED, THE AFFECTED SOIL MUST BE SUITABLY BURIED OR REMOVED FROM THE SITE.
31. STOCKPILES OF ERODIBLE MATERIAL THAT HAS THE POTENTIAL TO CAUSE ENVIRONMENTAL HARM IF DISPLACED, MUST BE:
   (i) APPROPRIATELY PROTECTED FROM WIND, RAIN, CONCENTRATED SURFACE FLOW AND EXCESSIVE UP-SLOPE STORMWATER SURFACE FLOWS.
   (ii) LOCATED AT LEAST 2m FROM ANY HAZARDOUS AREA, RETAINED VEGETATION, OR CONCENTRATED DRAINAGE LINE.
   (iii) LOCATED UP-SLOPE OF AN APPROPRIATE SEDIMENT CONTROL SYSTEM.
   (iv) PROVIDED WITH AN APPROPRIATE PROTECTIVE COVER (SYNTHETIC, MULCH OR VEGETATIVE) IF THE MATERIALS ARE LIKELY TO BE STOCKPILED FOR MORE THAN 28 DAYS.
   (v) PROVIDED WITH AN APPROPRIATE PROTECTIVE COVER (SYNTHETIC, MULCH OR VEGETATIVE) IF THE MATERIALS ARE LIKELY TO BE STOCKPILED FOR MORE THAN 10 DAYS DURING THOSE MONTHS THAT HAVE A HIGH EROSION RISK.
   (vi) PROVIDED WITH AN APPROPRIATE PROTECTIVE COVER (SYNTHETIC, MULCH OR VEGETATIVE) IF THE MATERIALS ARE LIKELY TO BE STOCKPILED FOR MORE THAN 5 DAYS DURING THOSE MONTHS THAT HAVE A EXTREME EROSION RISK.
32. A SUITABLE FLOW DIVERSION SYSTEM MUST BE ESTABLISHED IMMEDIATELY UP-SLOPE OF A STOCKPILE OF ERODIBLE MATERIAL THAT HAS THE POTENTIAL TO CAUSE ENVIRONMENTAL HARM IF DISPLACED, IF THE UP-SLOPE CATCHMENT AREA DRAINING TO THE STOCKPILE EXCEEDS 1500M².

SITE MANAGEMENT

33. ALL OFFICE FACILITIES AND OPERATIONAL ACTIVITIES MUST BE LOCATED SUCH THAT ANY LIQUID EFFLUENT (E.G. PROCESS WATER, WASH-DOWN WATER, EFFLUENT FROM EQUIPMENT CLEANING, OR PLANT WATERING), CAN BE TOTALLY CONTAINED AND TREATED WITHIN THE SITE.
34. THE CONSTRUCTION SCHEDULE MUST AIM TO MINIMISE THE DURATION THAT ANY AND ALL AREAS OF SOIL ARE EXPOSED TO THE EROSIVE EFFECTS OF WIND, RAIN AND SURFACE WATER.
35. LAND-DISTURBING ACTIVITIES MUST BE UNDERTAKEN IN ACCORDANCE WITH THE EROSION AND SEDIMENT CONTROL PLAN (ESCP) AND ASSOCIATED DEVELOPMENT CONDITIONS.
36. LAND-DISTURBING ACTIVITIES MUST BE UNDERTAKEN IN SUCH A MANNER THAT ALLOWS ALL REASONABLE AND PRACTICABLE MEASURES TO BE UNDERTAKEN TO:
   (i) ALLOW STORMWATER TO PASS THROUGH THE SITE IN A CONTROLLED MANNER AND AT NON-EROSIVE FLOW VELOCITIES UP TO THE SPECIFIED DESIGN STORM DISCHARGE;
   (ii) MINIMISE SOIL EROSION RESULTING FROM RAIN, WATER FLOW AND/OR WIND;
   (iii) MINIMISE ADVERSE EFFECTS OF SEDIMENT RUNOFF, INCLUDING SAFETY ISSUES;
   (iv) PREVENT, OR AT LEAST MINIMISE, ENVIRONMENTAL HARM RESULTING FROM WORK-RELATED SOIL EROSION AND SEDIMENT RUNOFF;
   (v) ENSURE THAT THE VALUE AND USE OF LAND/PROPERTIES ADJACENT TO THE DEVELOPMENT (INCLUDING ROADS) ARE NOT DIMINISHED AS A RESULT OF THE ADOPTED ESC MEASURES.
37. ALL EROSION AND SEDIMENT CONTROL MEASURES MUST CONFORM TO THE STANDARDS AND SPECIFICATIONS CONTAINED IN:
   (i) THE DEVELOPMENT APPROVAL CONDITION ISSUED BY COUNCIL; AND
   (ii) THIS ESCP AND SUPPORTING DOCUMENTATION; AND
   (iii) THE LATEST VERSION OF THE IECA BEST PRACTICE EROSION AND SEDIMENT CONTROL GUIDELINE AND STANDARD DETAILS AS REFERENCED BY THIS ESCP.
38. ANY WORKS THAT MAY CAUSE SIGNIFICANT SOIL DISTURBANCE AND ARE ANCILLARY TO ANY ACTIVITY FOR WHICH REGULATORY BODY APPROVAL IS REQUIRED, MUST NOT COMMENCE BEFORE THE ISSUE OF THAT APPROVAL.
39. ADDITIONAL AND/OR ALTERNATIVE ESC MEASURES MUST BE IMPLEMENTED IN THE EVENT THAT SITE INSPECTIONS, THE SITE'S MONITORING AND MAINTENANCE PROGRAM, OR THE COUNCIL, IDENTIFIES THAT UNACCEPTABLE OFF-SITE SEDIMENTATION IS OCCURRING AS A RESULT OF THE WORK ACTIVITIES WITH THE MEASURES INSTALLED IN ACCORDANCE WITH THIS EROSION AND SEDIMENT CONTROL PLAN.
40. LAND-DISTURBING ACTIVITIES MUST NOT CAUSE UNNECESSARY SOIL DISTURBANCE IF AN ALTERNATIVE CONSTRUCTION PROCESS IS AVAILABLE THAT ACHIEVES THE SAME OR EQUIVALENT OUTCOMES AT AN EQUIVALENT COST.
41. SEDIMENT (INCLUDING CLAY, SILT, SAND, GRAVEL, SOIL, MUD, CEMENT AND CERAMIC WASTE) DEPOSITED OFF THE SITE AS A DIRECT RESULT OF AN ON-SITE ACTIVITY, MUST BE COLLECTED AND THE AREA APPROPRIATELY CLEANED/REHABILITATED AS SOON AS REASONABLE AND PRACTICABLE, AND IN A MANNER THAT GIVES APPROPRIATE CONSIDERATION TO THE SAFETY AND ENVIRONMENTAL RISKS ASSOCIATED WITH THE SEDIMENT DEPOSITION.
42. WHEREVER REASONABLE AND PRACTICABLE, BRICK, TILE AND MASONRY CUTTING MUST BE CARRIED OUT ON A PERVIOUS SURFACE, SUCH AS GRASS, OR OPEN SOIL, OR IN SUCH A MANNER THAT ALL SEDIMENT-LADEN RUNOFF IS PREVENTED FROM DISCHARGING INTO A GUTTER, DRAIN, OR WATER BODY.
43. ADEQUATE WASTE COLLECTION BINS MUST BE PROVIDED ON-SITE AND MAINTAINED SUCH THAT POTENTIAL AND ACTUAL ENVIRONMENTAL HARM RESULTING FROM SUCH MATERIAL WASTE IS MINIMISED.
44. CONCRETE WASTE AND CHEMICAL PRODUCTS, INCLUDING PETROLEUM AND OIL-BASED PRODUCTS, MUST BE PREVENTED FROM ENTERING AN INTERNAL WATER BODY, OR AN EXTERNAL DRAIN, STORMWATER SYSTEM, OR WATER BODY.
45. ALL FLAMMABLE AND COMBUSTIBLE LIQUIDS, INCLUDING ALL LIQUID CHEMICALS IF SUCH CHEMICALS COULD POTENTIALLY BE WASHED OR DISCHARGED FROM THE SITE, ARE STORED AND HANDLED ON-SITE IN ACCORDANCE WITH RELEVANT STANDARDS SUCH AS AS1940 THE STORAGE AND HANDLING OF FLAMMABLE AND COMBUSTIBLE LIQUIDS.
46. TRENCHES NOT LOCATED WITHIN ROADWAYS MUST BE BACKFILLED, CAPPED WITH TOPSOIL, AND COMPACTED TO A LEVEL AT LEAST 75mm ABOVE ADJOINING GROUND LEVEL AND APPROPRIATELY STABILISED.
47. ALL STORMWATER, SEWER LINE AND OTHER SERVICE TRENCHES, NOT LOCATED WITHIN ROADWAYS, MUST BE MULCHED AND SEEDED, OR OTHERWISE APPROPRIATELY STABILISED WITHIN 7 DAYS AFTER BACKFILL.
48. NO MORE THAN 150m OF A STORMWATER, SEWER LINE OR OTHER SERVICE TRENCH MUST TO BE OPEN AT ANY ONE TIME.
49. SITE SPOIL MUST BE LAWFULLY DISPOSED OF IN A MANNER THAT DOES NOT RESULT IN ONGOING SOIL EROSION OR ENVIRONMENTAL HARM.
50. ALL FILL MATERIAL PLACED ON SITE MUST COMPRISE ONLY NATURAL EARTH AND ROCK, AND IS TO BE FREE OF CONTAMINANTS, BE FREE DRAINING, AND BE COMPACTED IN LAYERS NOT EXCEEDING 300mm TO 90% MODIFIED MAXIMUM DRY DENSITY IN ACCORDANCE WITH AS1289.

DUST CONTROL

51. AT ALL TIMES THE PREVAILING WINDS ARE TO BE MONITORED TO ASSESS THE IMPACT OF WIND ON PLANNED OPERATIONS AND THE POTENTIAL FOR DUST PRODUCTION.
52. THE CONTRACTOR IS REQUIRED TO MAINTAIN THE SITE SURFACE IN A ROUGHENED CONDITION AT APPROPRIATE TIMES TO MINIMISE DUST PRODUCTION. FINAL EARTHWORKS SURFACES ARE TO BE TIGHTLY BOUND AND FREE FROM LOOSE DUST.
53. WATER CARTS AND/OR SOIL STABILISERS ARE TO BE UTILISED TO SUPPRESS DUST AT ALL TIMES.

DRAINAGE CONTROL

54. ALL DRAINAGE CONTROL MEASURES MUST BE APPLIED AND MAINTAINED IN ACCORDANCE WITH THIS ESCP AND THE SITE BASED STORMWATER MANAGEMENT PLAN AS IT APPLIES TO THIS STAGE OF WORKS.
55. WHEREVER REASONABLE AND PRACTICABLE, STORMWATER RUNOFF ENTERING THE SITE FROM EXTERNAL AREAS, AND NON-SEDIMENT LADEN (CLEAN) STORMWATER RUNOFF ENTERING A WORK AREA OR AREA OF SOIL DISTURBANCE, MUST BE DIVERTED AROUND OR THROUGH THAT AREA IN A MANNER THAT MINIMISES SOIL EROSION AND THE CONTAMINATION OF THAT WATER FOR ALL DISCHARGES UP TO THE SPECIFIED DESIGN STORM DISCHARGE.
56. DURING THE CONSTRUCTION PERIOD, ALL REASONABLE AND PRACTICABLE MEASURES MUST BE IMPLEMENTED TO CONTROL FLOW VELOCITIES IN SUCH A MANNER THAN PREVENTS SOIL EROSION ALONG DRAINAGE PATHS AND AT THE ENTRANCE AND EXIT OF ALL DRAINS AND DRAINAGE PIPES DURING ALL STORMS UP TO THE RELEVANT DESIGN STORM DISCHARGE.
57. TO THE MAXIMUM DEGREE REASONABLE AND PRACTICABLE, ALL WATERS DISCHARGED DURING THE CONSTRUCTION PHASE MUST DISCHARGE ONTO STABLE LAND, IN A NON-EROSIVE MANNER, AND AT A LAWFUL POINT OF DISCHARGE.
58. WHEREVER REASONABLE AND PRACTICABLE, "CLEAN" SURFACE WATERS MUST BE DIVERTED AWAY FROM SEDIMENT CONTROL DEVICES AND ANY UNTREATED, SEDIMENT-LADEN WATERS.
59. DURING THE CONSTRUCTION PERIOD, ROOF WATER MUST BE MANAGED IN A MANNER THAT MINIMISES SOIL EROSION THROUGHOUT THE SITE, AND SITE WETNESS WITHIN ACTIVE WORK AREAS.

EROSION CONTROL

60. EROSION CONTROL IS TO BE IMPLEMENTED UTILISING THE TECHNIQUE APPROPRIATE TO THE CONSTRUCTION TASK.
61. ALL EROSION CONTROL MEASURES MUST BE APPLIED AND MAINTAINED IN ACCORDANCE WITH THIS ESCP AND SUPPORTING DOCUMENTATION AND THE LATEST VERSION OF THE IECA BEST PRACTICE EROSION AND SEDIMENT CONTROL GUIDELINE AND STANDARD DETAILS AS REFERENCED BY THIS ESCP.
62. THE APPLICATION OF LIQUID-BASED DUST SUPPRESSION MEASURES MUST ENSURE THAT SEDIMENT-LADEN RUNOFF RESULTING FROM SUCH MEASURES DOES NOT CREATE A TRAFFIC OR ENVIRONMENTAL HAZARD.
63. ALL TEMPORARY EARTH BANKS, FLOW DIVERSION SYSTEMS, AND EMBANKMENTS ASSOCIATED WITH CONSTRUCTED SEDIMENT BASINS MUST BE MACHINE-COMPACTED, SEEDED AND MULCHED FOR THE PURPOSE OF ESTABLISHING A TEMPORARY VEGETATIVE COVER WITHIN 10 DAYS AFTER GRADING.
64. UNPROTECTED SLOPE LENGTHS MUST NOT EXCEED 35m, OR AN EQUIVALENT VERTICAL FALL OF 1.8m PRIOR TO SPECIFIED SHUTDOWN PERIODS OR WHEN RAINFALL IS EXPECTED TO EXCEED 10mm WITHIN A 24 HOUR PERIOD. COUTOUR DRAINS ARE TO BE FORMED PRIOR TO RAINFALL
65. THE CONSTRUCTION AND STABILISATION OF EARTH BATTERS STEEPER THAN 6:1 (H:V) MUST BE STAGED SUCH THAT NO MORE THAN 3 VERTICAL-METRES OF ANY BATTER IS EXPOSED TO RAINFALL AT ANY INSTANT. THESE BATTERS ARE TO BE STABILISED WITH JUTE MAT, COIR MAT GEOTEXTILES OR SOIL BINDER AS THEY ARE FORMED
66. SYNTHETIC REINFORCED EROSION CONTROL MATS AND BLANKETS MUST NOT BE PLACED WITHIN, OR ADJACENT TO, RIPARIAN ZONES AND WATERCOURSES IF SUCH MATERIALS ARE LIKELY TO CAUSE ENVIRONMENTAL HARM TO WILDLIFE OR WILDLIFE HABITATS.
67. A MINIMUM 60% GROUND COVER MUST BE ACHIEVED ON ALL NON-COMPLETED EARTHWORKS EXPOSED TO ACCELERATED SOIL EROSION IF FURTHER CONSTRUCTION ACTIVITIES OR SOIL DISTURBANCES ARE LIKELY TO BE SUSPENDED FOR MORE THAN 30 DAYS DURING THOSE MONTHS WHEN THE EXPECTED RAINFALL IS LESS THAN 30mm; MINIMUM 70% COVER WITHIN 30 DAYS IF BETWEEN 30mm AND 45mm; MINIMUM 70% COVER WITHIN 20 DAYS IF BETWEEN 45mm AND 100mm; MINIMUM 75% COVER WITHIN 10 DAYS IF BETWEEN 100mm AND 225mm; AND MINIMUM 80% COVER WITHIN 5 DAYS IF GREATER THAN 225mm. (ALTERNATIVE TO ABOVE)

SITE REHABILITATION

68. ALL DISTURBED AREAS IDENTIFIED AS VERY LOW, LOW, MEDIUM, HIGH, OR EXTREME EROSION RISK MUST BE SUITABLY STABILISED WITHIN 30, 30, 20, 10 OR 5 DAYS RESPECTIVELY, OR PRIOR TO ANTICIPATED RAINFALL, WHICHEVER IS THE GREATER, FROM THE DAY THAT SOIL DISTURBANCES ON THE AREA HAVE BEEN FINALISED.
69. STABILISATION IS TO BE ACHIEVED BY 70% STABLE VEGETATIVE GROUND COVER OR 90% POLYMER STABILISATION
70. NO COMPLETED EARTHWORK SURFACE MUST REMAIN DENUDED FOR LONGER THAN 10 DAYS.
71. UNLESS OTHERWISE DIRECTED BY THE COUNCIL OR WHERE DIRECTED BY THE APPROVED REVEGETATION PLAN, TOPSOIL MUST BE PLACED AT A MINIMUM DEPTH OF 100mm ON SLOPES 4:1 (H:V) OR FLATTER, AND 50mm ON SLOPES STEEPER THAN 4:1.
72. THE PH LEVEL (SOIL:WATER 1:5) OF TOPSOIL MUST BE ADEQUATE TO ENABLE ESTABLISHMENT AND GROWTH OF THE SPECIFIED VEGETATION.
73. SOIL AMELIORANTS MUST BE ADDED TO THE SOIL IN ACCORDANCE WITH THE APPROVED LANDSCAPE/REVEGETATION PLANS AND/OR SOIL ANALYSIS.
74. ALL UNSTABLE OR DISTURBED SOIL SURFACES MUST BE ADEQUATELY STABILISED AGAINST EROSION (MINIMUM 70%) PRIOR TO COMMENCEMENT OF USE, OR SURVEY PLAN ENDORSEMENT.

SEDIMENT BASIN REHABILITATION

75. REQUIRED DRAINAGE, EROSION AND SEDIMENT CONTROL MEASURES DURING THE DECOMMISSIONING AND REHABILITATION OF A SEDIMENT BASIN MUST COMPLY WITH SAME STANDARDS SPECIFIED FOR THE NORMAL CONSTRUCTION WORKS.
76. UPON DECOMMISSIONING OF A SEDIMENT BASIN, ALL WATER AND SEDIMENT MUST BE REMOVED FROM THE BASIN PRIOR TO REMOVAL OF THE EMBANKMENT (IF ANY). ANY SUCH MATERIAL, LIQUID OR SOLID, MUST BE DISPOSE OF IN A MANNER THAT WILL NOT CREATE AN EROSION OR POLLUTION HAZARD.
77. A BASIN'S CATCHMENT CONDITIONS ASSOCIATED WITH THE STAGED DECOMMISSIONING OF THE BASIN FROM A TYPE 1 TO A TYPE 2 SEDIMENT TRAP MUST COMPLY WITH THE SPECIFIED SEDIMENT CONTROL STANDARD.
78. IF AN ALTERNATIVE, PERMANENT, OUTLET STRUCTURE IS TO BE CONSTRUCTED PRIOR TO STABILISATION OF THE UP-SLOPE CATCHMENT AREA, THEN THIS OUTLET STRUCTURE MUST NOT BE MADE OPERATIONAL IF IT WILL ADVERSELY AFFECT THE REQUIRED OPERATION OF THE SEDIMENT BASIN.
79. THE PERMANENT STORMWATER TREATMENT FEATURES (E.G. VEGETATION AND FILTRATION MEDIA) MUST BE APPROPRIATELY PROTECTED FROM THE ADVERSE EFFECTS OF SEDIMENT RUNOFF.
80. A SEDIMENT BASIN MUST NOT BE DECOMMISSIONED UNTIL ALL UP-SLOPE SITE STABILISATION MEASURES HAVE BEEN IMPLEMENTED AND ARE APPROPRIATELY WORKING TO CONTROL SOIL EROSION AND SEDIMENT RUNOFF IN ACCORDANCE WITH THE SPECIFIED ESC STANDARD.

SITE MONITORING

81. ALL WATER QUALITY DATA, INCLUDING DATES OF RAINFALL, DATES OF TESTING, TESTING RESULTS AND DATES OF WATER RELEASE, MUST BE KEPT IN AN ON-SITE REGISTER. THE REGISTER IS TO BE MAINTAINED UP TO DATE FOR THE DURATION OF THE APPROVED WORKS AND BE AVAILABLE ON-SITE FOR INSPECTION BY THE ENGINEER ON REQUEST.
82. AT NOMINATED INSTREAM WATER MONITORING SITES, A MINIMUM OF 3 WATER SAMPLES MUST BE TAKEN AND ANALYSED, AND THE AVERAGE RESULT USED TO DETERMINE QUALITY.
83. SEDIMENT BASIN WATER QUALITY SAMPLES MUST BE TAKEN AT A DEPTH NO GREATER THAN 200mm ABOVE THE LEVEL OF SETTLED SEDIMENT.
84. ALL ENVIRONMENTALLY RELEVANT INCIDENTS MUST BE RECORDED IN A FIELD LOG THAT MUST REMAIN ACCESSIBLE TO ALL RELEVANT REGULATORY AUTHORITIES.

SITE MAINTENANCE

85. ALL EROSION AND SEDIMENT CONTROL MEASURES, INCLUDING DRAINAGE CONTROL MEASURES, MUST BE MAINTAINED IN PROPER WORKING ORDER AT ALL TIMES.
86. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES, INCLUDING DRAINAGE CONTROL MEASURES, MUST BE FULLY OPERATIONAL AND MAINTAINED IN PROPER WORKING ORDER AT ALL TIMES DURING THE MAINTENANCE PERIOD AS SPECIFIED BY THE COUNCIL.
87. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES, INCLUDING DRAINAGE CONTROL MEASURES, MUST BE REMOVED AFTER ACHIEVING A SATISFACTORY "OFF-MAINTENANCE INSPECTION" WITH COUNCIL.
88. ALL DRAINAGE, EROSION AND SEDIMENT CONTROL MEASURES MUST BE INSPECTED:
   (a) AT LEAST DAILY (WHEN WORK IS OCCURRING ON-SITE);
   (b) AT LEAST WEEKLY (WHEN WORK IS NOT OCCURRING ON-SITE);
   (c) WITHIN 24 HOURS PRIOR TO EXPECTED RAINFALL; AND
   (d) WITHIN 18 HOURS OF A RAINFALL EVENT OF SUFFICIENT INTENSITY AND DURATION TO CAUSE RUNOFF ON-SITE).
   (e) WITHIN 12 HOURS OF RUNOFF CEASING FROM THE SITE.
89. SEDIMENT REMOVED FROM SEDIMENT TRAPS AND PLACES OF SEDIMENT DEPOSITION MUST BE DISPOSED OF IN A LAWFUL MANNER THAT DOES NOT CAUSE ONGOING SOIL EROSION OR ENVIRONMENTAL HARM.
90. MAINTENANCE MOWING OF ALL ROAD SHOULDERS, TABLE DRAINS, BATTERS AND OTHER SURFACES LIKELY TO EXPERIENCE ACCELERATED SOIL EROSION MUST AIM TO LEAVE THE GRASS LENGTH NO SHORTER THAN 50mm WHERE REASONABLE AND PRACTICABLE.
91. MAINTENANCE MOWING MUST BE DONE IN A MANNER THAT WILL NOT DAMAGE THE PROFILE OF FORMED, SOFT EDGES, SUCH AS THE CREST OF EARTH EMBANKMENTS.

EROSION AND SEDIMENT CONTROL LEGEND:

PROPOSED SEDIMENT FENCE

VIBRATION GRID AND WASH DOWN

GULLY BAG INLET PROTECTION
REFER IECA STD DRG GB-01

ON-GRADE INLET TRAP
REFER IECA STD DRG OG-01

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B	27.05.25	ISSUED FOR DA APPROVAL	KH
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REVISIONS

CLIENT

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E / info@bgeeng.com
bgeeng.com—

PROJECT
PROPOSED DEVELOPMENT
3-5 FINGAL STREET, BRUNSWICK HEADS

STATUS
ISSUED FOR INFORMATION
NOT TO BE USED FOR CONSTRUCTION

DRAWN	DESIGNED	CHECKED	APPROVED
KH	KH	CGO	CGO

DATUM	GRID	SCALE	
AHD	MGA	1:100	AT A1 SIZE

TITLE
EROSION AND SEDIMENT CONTROL NOTES AND LEGEND

PROJECT No.	DRAWING No.	REV.
GCE240006	UC-0100	B

C:\USERS\KH\1 BGE\ENDEAVOUR - BGEENG.COM\DESKTOP\DA DRAWINGS\1 URBAN CIVIL\UC-0100 EROSION AND SEDIMENT CONTROL NOTES.DWG

REV	DATE	DESCRIPTION	RVD
D	04.06.25	ISSUED FOR DA APPROVAL	KH
C	27.05.25	ISSUED FOR DA APPROVAL	KH
B	21.02.25	ISSUED FOR APPROVAL	CGO
A	12.02.25	ISSUED FOR INFORMATION	CGO

REVISIONS

REV	DATE	DESCRIPTION	RVD

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BG&E

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3-5 FINGAL STREET, BRUNSWICK HEADS

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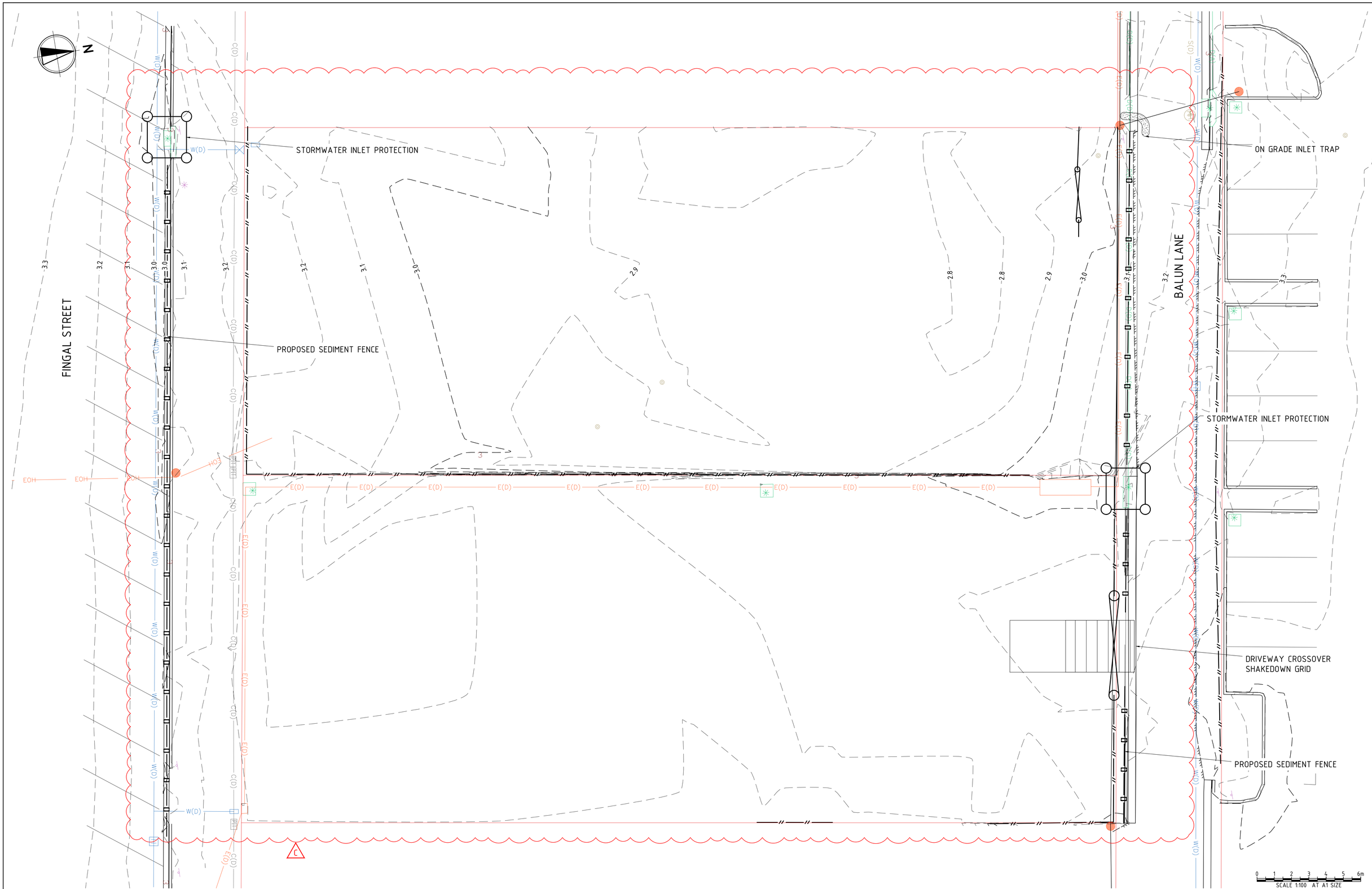
AHD	MGA	1:100 AT A1 SIZE

TITLE
GENERAL ARRANGEMENT PLAN

PROJECT No.	DRAWING No.	REV.
GCE240006	UC-0010	D

\\BGEBNEFS01\PROJECTS\BGE\BNE\GCE24006 3-5 FINGAL ST BRUNSWICK HEADS\100 DRAW\100.2 CI & WA\AUTOCAD\GCE240006-UC-0010 GENERAL ARRANGEMENT PLAN.DWG



REV	DATE	DESCRIPTION	RVD
C	30.04.25	ISSUED FOR DA APPROVAL	KH
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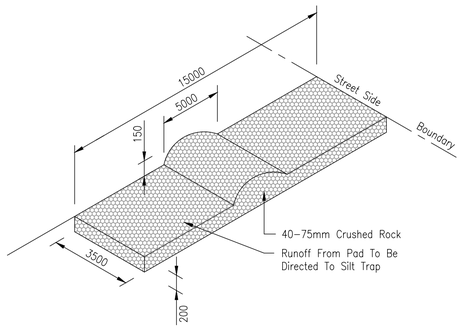
AHD	MGA	1:100 AT A1 SIZE

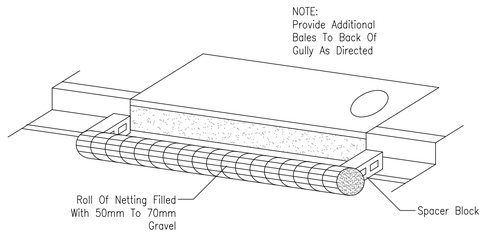
TITLE
EROSION AND SEDIMENT CONTOL PLAN

PROJECT No.	DRAWING No.	REV.
GCE240006	UC-0110	C

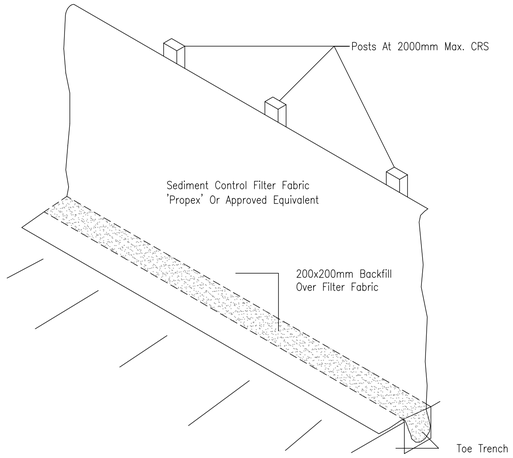
\\BGEBNEFS01\PROJECTS\BGE\BNE\GCE240006 3-5 FINGAL ST BRUNSWICK HEADS\100 DRAW\100.2 CI & WA\AUTOCAD\GCE240006-UC-0110 EROSION AND SEDIMENT CONTOL PLAN.DWG
27/05/2025 4:23:38 PM



CONSTRUCTION ENTRY/EXIT



KERB INLET PROTECTION



SILTATION FENCE

0 1 2 3 4 5 6m
SCALE 1:100 AT A1 SIZE

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DATUM	GRID	SCALE	
AHD	MGA	NTS	AT A1 SIZE

TITLE: EROSION AND SEDIMENT CONTROL DETAILS

PROJECT No.	DRAWING No.	REV.
GCE240006	UC-0120	B

\\BGEBNESTOR\PROJECTS\BGE\BNE\GCE240006 3-5 FINGAL ST BRUNSWICK HEADS\100 DRAW\100.2 CI & WA\AUTOCAD\GCE240006-UC-0120 EROSION AND SEDIMENT CONTROL DETAILS.DWG

N

EARTHWORKS VOLUMES FROM EXISTING TO EARTHWWORKS SURFACE					
CUT -1 FILL -2	Color	Minimum Elevation (m)	Maximum Elevation (m)	2D Area (m^2)	Volume (m^3)
1		-1.000	0.000	1095.3	261.0
2		0.000	10.000	946.6	545.0

C

A
UC-220

B
UC-220

FINGAL STREET

BALUN LANE

COMMERCIAL
BEL 3.200m
EXRL 3.010m
DEPTH 0.184m

CARPARK

BEL 3.146m

BUILDING
BEL 3.177m
EXRL 2.967m
DEPTH 0.212m

BUILDING
BEL 3.330m
EXRL 3.068m
DEPTH 0.258m

DRIVEWAY

RL 3.318m

COMMERCIAL
BEL 3.200m
EXRL 3.374m
DEPTH -0.167m

LIFT

COMMERCIAL
BEL 3.400m
EXRL 3.462m
DEPTH -0.062m

PUBLIC LINK

C
UC-221

D
UC-221

E
UC-221

0 1 2 3 4 5 6m
SCALE 1:100 AT A1 SIZE

REV	DATE	DESCRIPTION	RVD
C	04.06.25	UPDATED FOR CO-ORDINATION	KH
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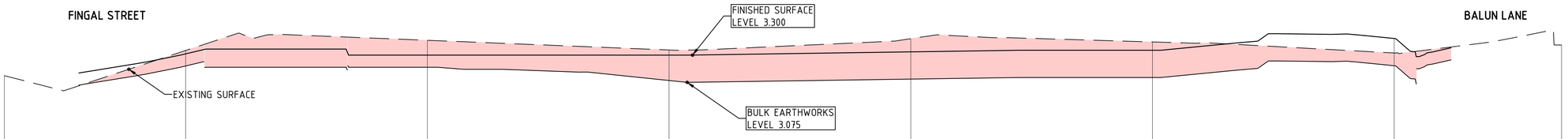
DATUM	GRID	SCALE	
AHD	MGA	1:100	AT A1 SIZE

TITLE
BULK EARTHWORKS PLAN

PROJECT No.	DRAWING No.	REV
GCE240006	UC-0210	C

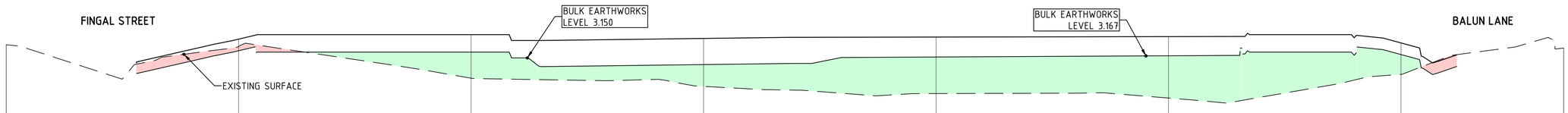
B



DATUM 2.50

EARTHWORKS SURFACE		3.31	3.30	3.30	3.33	3.34	3.44
EXISTING SURFACE	3.13	3.34	3.42	3.34	3.44	3.41	3.32
DEPTH		0.128	0.223	0.252	0.334	0.294	0.105

B LONG SECTION



DATUM 2.50

EARTHWORKS SURFACE	3.21	3.20	3.09	3.16	3.17	3.18
EXISTING SURFACE	3.25	2.98	2.90	2.84	2.80	3.01
DEPTH	0.037	-0.225	-0.188	-0.315	-0.364	-0.170

A LONG SECTION

0 0.2 0.4 0.6 0.8 1.0 1.2m
SCALE 1:20 AT A1 SIZE

0 1 2 3 4 5 6m
SCALE 1:100 AT A1 SIZE

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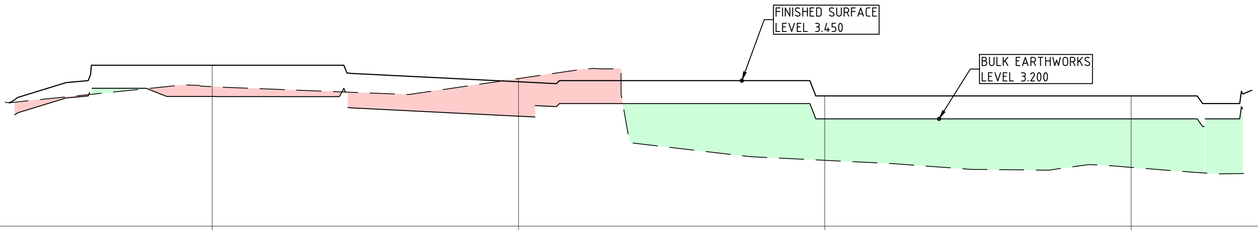
DATUM	GRID	SCALE	
AHD	MGA	1:100	AT A1 SIZE

TITLE: BULK EARTHWORKS SECTIONS - SHEET 1

PROJECT No.	DRAWING No.	REV.
GCE240006	UC-0220	B

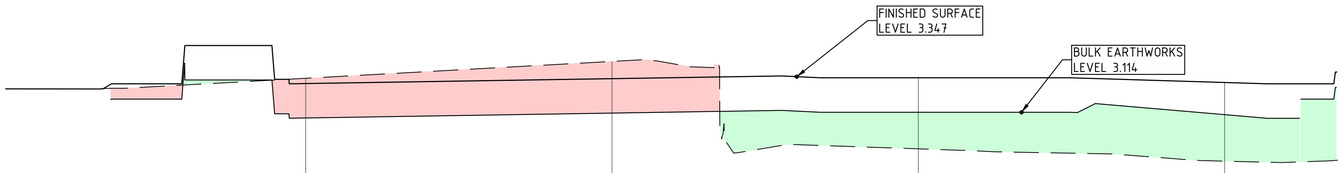
\\BGEBNEFS01\PROJECTS\BGE\BNE\GCE24\006 3-5 FINGAL ST BRUNSWICK HEADS\100 DRAW\100.2 CI & WA\AUTOCAD\GCE24006-UC-0210 BULK EARTHWORKS.DWG

B



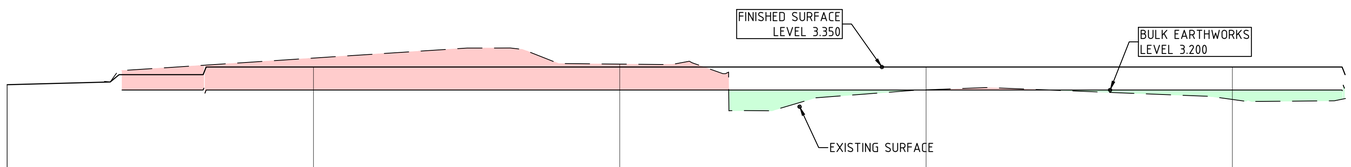
DATUM 2.50					
EARTHWORKS SURFACE	3.55	3.44	3.35	3.35	
EXISTING SURFACE	3.41	3.46	2.93	2.88	
DEPTH	0.064	0.246	-0.270	-0.317	

E LONG SECTION



DATUM 2.50					
EARTHWORKS SURFACE	3.30	3.33	3.34	3.31	
EXISTING SURFACE	3.34	3.45	2.88	2.80	
DEPTH	0.000	0.000	0.000	0.000	

D LONG SECTION



DATUM 2.50					
EARTHWORKS SURFACE	3.23	3.35	3.35	3.35	3.35
EXISTING SURFACE		3.41	3.37	3.20	3.14
DEPTH		0.208	0.169	0.001	-0.062

C LONG SECTION

0 0.2 0.4 0.6 0.8 1.0 1.2m
SCALE 1:20 AT A1 SIZE

0 1 2 3 4 5 6m
SCALE 1:100 AT A1 SIZE

REV	DATE	DESCRIPTION	RVD
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3-5 FINGAL STREET, BRUNSWICK HEADS

STATUS: ISSUED FOR INFORMATION
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KH	KH	CGO	CGO

DATUM	GRID	SCALE	
AHD	MGA	1:100	AT A1 SIZE

TITLE: BULK EARTHWORKS SECTIONS - SHEET 2

PROJECT No.	DRAWING No.	REV.
GCE240006	UC-0221	B

STORMWATER NOTES

GENERAL

1. ALL WORKS ARE TO COMPLY WITH THE CONTRACT DOCUMENTS, BELOW SPECIFICATION AND RELEVANT COUNCIL SPECIFICATIONS WHICH EVER IS THE GREATER STANDARD.
2. ITS THE CONTRACTORS RESPONSIBILITY TO ENSURE COMPLIANCE WITH ALL ASPECTS OF THE DOCUMENTS TO ENSURE CERTIFICATION OF THE WORKS CAN BE ACHIEVED AND DEMONSTRATED.
3. UNLESS SPECIFIED OTHERWISE ALL MATERIALS AND WORK SHALL COMPLY WITH THE RELEVANT AUSTRALIAN STANDARDS AS NOTED IN THE STORMWATER DRAINAGE SPECIFICATION.
4. BEDDING FOR STORMWATER LINES SHALL BE TO AS3725 (100 SAND BEDDING MIN.). BACKFILL ALL STORMWATER TRENCHES WITH COMPACTED SAND TO 150 MIN. ABOVE THE TOP OF THE PIPE IN NON-PAVED AREAS AND TO SUBGRADE LEVEL IN PAVED AREAS AND UNDER BUILDING SLABS.
5. MINIMUM GRADE OF ANY PIPE SHALL BE 1 IN 200 UNLESS NOTED OTHERWISE.
6. INVERT LEVELS SHOWN ON THE DRAINAGE LONGITUDINAL SECTIONS ARE THE LEVELS CALCULATED AT THE CENTRE OF MANHOLES.
7. GRADE STORMWATER AND ROOFWATER PIPES INVERT TO INVERT UNLESS NOTED OTHERWISE. MAINTAIN 50mm DROP THROUGH STRUCTURES BETWEEN OBVERTS OF THE SAME SIZE PIPES.
8. MINIMUM COVER TO STORMWATER AND ROOFWATER PIPES UNDER ROAD PAVEMENTS SHALL BE 600mm UNLESS NOTED OTHERWISE.
9. MINIMUM COVER TO STORMWATER PIPES IN LANDSCAPED AREAS SHALL BE 300mm UNLESS NOTED OTHERWISE.
10. KERB ENTRY ADAPTORS SHALL BE PROVIDED IN KERB AND CHANNEL AT THE LOW SIDE OF PROPERTIES WHICH DRAIN TO ROADWAYS. THESE SHALL BE KACEY TYPE OR EQUIVALENT.
11. ALL MANHOLE LIDS SHALL FINISH FLUSH WITH ADJACENT FINISHED SURFACE LEVELS.
12. PROVIDE A Ø100 SUBSOIL DRAIN WITH SOCK DISCHARGING INTO DRAINAGE STRUCTURES FROM UPSTREAM PIPE BEDDING. EXTEND 1000mm INTO BEDDING.

DEFINITIONS

13. PIPE SURROUND: PIPE BED, HAUNCH, SIDE AND OVERLAY ZONES AS APPLICABLE AND AS DEFINED IN THE RELEVANT AUSTRALIAN STANDARDS.
14. HALF ROUND PIPE DRAINS: SURFACE DRAINS LINED WITH HALF ROUND PIPE INCLUDING THE NECESSARY BEDDING AND JOINTING.
15. GRATED TRENCH: PRECAST OR CAST IN SITU CONCRETE LINED TRENCH WITH HOT-DIPPED BITUMEN COATED CAST IRON OR GALVANISED STEEL GRATING. A HIGH MAINTENANCE DEVICE – NOT ACCEPTABLE FOR USE ON PUBLIC ROADS OR PATHWAYS..

QUALITY

INSPECTION – WITNESS POINTS

16. EXCAVATED SURFACES PRIOR TO PLACING PIPE BEDDING MATERIAL.
17. PIPES AND OTHER PRECAST CONCRETE COMPONENTS PRIOR TO ACCEPTANCE ON SITE
18. PIPE JOINTS PRIOR TO COVERING.
19. FORMWORK AND REINFORCEMENT PRIOR TO PLACING CAST IN SITU CONCRETE
20. PLACING OF CAST IN SITU CONCRETE.
21. WORKS READY FOR SPECIFIC TESTING.
22. SURFACES PRIOR TO APPLICATION OF COATINGS AND APPLIED FINISHES.
23. CONCEALED AND UNDERGROUND WORK PRIOR TO COVERING, CONCEALING OR BACKFILLING.

CONTRACTOR'S SUBMISSIONS

24. MANUFACTURER'S CONFORMANCE REPORT FOR EACH BATCH OF PRECAST PRODUCTS DELIVERED TO THE SITE, CONFIRMING THAT THESE PRODUCTS COMPLY WITH THE REQUIREMENTS OF THE NOMINATED AUSTRALIAN STANDARDS.
25. DETAILS OF THE PROPOSED PRECAST MANHOLES, GULLIES, PITS AND HEAD WALLS, AND METHODS FOR CONCRETE REPAIRS.
26. SAMPLE TEST RESULT FOR PROPOSED MATERIALS DEMONSTRATING POTENTIAL CONFORMANCE TO THE SPECIFICATION.
27. AN OUTLINE OF THE SAMPLING AND TEST PROGRAM BY WHICH THE MANUFACTURER MONITORS COMPLIANCE WITH THIS SPECIFICATION.
28. FIELD DENSITY TESTING OF TRENCHES IS AS PER SPECIFICATION ON BULK EARTHWORKS NOTES AND LEGEND.
29. CCTV OF COMPLETE STORMWATER ASSETS

TOLERANCES

PIPELINE MAXIMUM TOLERANCES

ALIGNMENT	ANGULAR DEVIATION FROM REQ'D ALIGNMENT	DISPLACEMENT FROM REQ'D ALIGNMENT
HORIZONTAL	1V IN 300H	15 mm
VERTICAL	1V IN 500H	5 mm

MATERIALS

30. ALL MANHOLE LIDS, GRATES AND SURROUNDS SHALL BE HEAVY DUTY TRAFFICABLE TYPE D UNLESS INDICATED OTHERWISE.
31. ALL PRECAST REINFORCED CONCRETE PIPES RCP CLASS 2 AND CLASS 4 RUBBER JOINTS UNLESS OTHERWISE NOTED.
32. ALL REINFORCED CONCRETE PIPE TO BE SPIGOT AND SOCKET UNLESS OTHERWISE NOTED.
33. ALL PIPE BEDDING TO BE IN ACCORDANCE WITH BCC STANDARD DRAWING BSD-8011, TYPE HS1.
34. ALL FIELD INLETS WITH DEPTH GREATER THAN 1200mm TO HAVE STEP IRONS.
35. ALL MANHOLES WITH DEPTH 850 TO 3000mm TO HAVE STEP IRONS.
36. ALL uPVC PIPES TO COMPLY WITH AS1254.
37. CONTRACTOR IS RESPONSIBLE FOR ALL COUNCIL PERMITS TO CONNECT TO COUNCIL INFRASTRUCTURE.

ROOF DRAINAGE

38. ALL DOWN PIPES AND CONNECTION TO BE A SEALED SYSTEM.
39. ALL DOWN PIPES TO BE CONNECTED VIA A 90° LONG RADIUS BEND.
40. ENSURE THAT THERE IS SUFFICIENT ABLEFLEX BETWEEN THE PVC DOWN PIPE AND THE CONCRETE SLAB.
41. ALL ROOFWATER DRAINAGE PIPES SHALL BE 100Ø uPVC CLASS SN8 WITH SOLVENT WELDED JOINTS UNO.
42. GRADE OF ROOF WATER DRAINAGE LINES, SHALL BE 1 IN 100.
43. ALL DRAINLINES SHALL BE OFFSET 1.5m FROM BUILDING ALIGNMENT UNLESS NOTED OTHERWISE
44. ALL CONNECTIONS FROM DOWNPIPES TO MAINLINES SHALL BE MADE WITH PROPRIETARY FITTINGS UNLESS NOTED OTHERWISE.
23. ALL ROOFWATER INSPECTION PITS SHALL BE 600 x 600 WITH PEDESTRIAN FRIENDLY WEBFORGE GSG 66H GRATE AND FRAME UNLESS NOTED OTHERWISE.

1. SUB-SOIL DRAIN PIPES SHALL BE Ø100mm MIN DRAIN AS SPECIFIED BY RELEVANT COUNCIL
2. GRADE OF ALL SUB-SOIL DRAINS SHALL BE 1 IN 100.
3. CONSTRUCT SUB-SOIL DRAINS AND MITRE DRAINS IN ACCORDANCE WITH THE DETAILS SHOWN ON THE DRAWINGS. THE SUPERINTENDENT SHALL CONFIRM THE LOCATION BEFORE COMMENCEMENT.
4. PROVIDE FLUSHING POINTS TO SUB-SOIL DRAIN PIPES WITH SCREWED END CAP, CAST IRON ACCESS BOX AND COVER, AND BRASS MARKER DISK FIXED TO THE KERB, AT 50m MAX. CENTRES OR AS SHOWN ON THE DRAWINGS.
5. SUB-SOIL DRAIN PIPES SHALL BE EMBEDDED IN AND SURROUNDED WITH AN APPROVED 5mm AGGREGATE FILTER MATERIAL.
6. SUB-SOIL DRAIN FILTER MATERIAL SHALL BE WRAPPED IN 1 LAYER OF TERRAFIX 270R GEOTEXTILE OR EQUIVALENT.
7. THE CONTRACTOR SHALL ALLOW TO SUPPLY AND INSTALL 50m OF SUBSOIL DRAIN TO THE DETAILS SHOWN ON THE DRAWINGS. THE SUPERINTENDENT SHALL CONFIRM THE LOCATION BEFORE COMMENCEMENT.
8. ALL AGG/SUBSOIL DRAINS AND FITTINGS SHALL COMPLY WITH AS2439.
9. FILTER MATERIAL SHALL BE 5mm MAXIMUM AGGREGATE AND OF A UNIFORM SIZE WITH NO FINES WITH THE FOLLOWING GRADING:
   - 9.1. METRIC SIEVE MAXIMUM PERCENTAGE PASSING (BY WEIGHT)
   - 9.1.1. 4.75MM 6% ;
   - 9.1.2. 2.36MM 1%
10. GRAVEL GRADING . THE CONTRACTOR SHALL SUPPLY CERTIFICATION THAT THE PROPOSED MATERIAL COMPLIES AT LEAST TWO WEEKS BEFORE DELIVERY TO SITE OF SUCH MATERIAL.

STORMWATER AND PAVEMENT LEGEND

- PROPOSED STORMWATER
- PROPOSED BUILDING OUTLINE
- PROPOSED ROOF/AWNING OUTLINE
- PROPOSED KERB AND CHANNEL (K&C)
- PROPOSED ROAD CENTRELINE
- PROPOSED ROAD SHOULDER
- PROPOSED EDGE OF PAVEMENT
- •1.00 PROPOSED SURFACE LEVEL
- BUILDING WORKS HATCH
- CONCRETE FOOTPATH HATCH
- EXISTING PAVEMENT HATCH
- CONCRETE PAVEMENT HATCH
- LANDSCAPED AREA HATCH

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TITLE: STORMWATER AND SITE GRADING NOTES AND LEGEND

PROJECT No.	DRAWING No.	REV.
GCE240006	UC-0400	B

\\BGEBNEPSSYS\PROJECTS\BGE\BNE\GCE24\006 3-5 FINGAL ST BRUNSWICK HEADS\100 DRAW\100 2 CI & WA\AUTOCAD\GCE240006-UC-0400 STORMWATER NOTES AND LEGEND.DWG

N

EXISTING STORMWATER PIT
ø350 OUTLET

FINGAL STREET

BALUN LANE

COMMERCIAL
FFL 3.350m

PROPOSED 450x450
STORMWATER PITS (TYP)

BUILDING
FFL 3.350m

BUILDING
FFL 3.550m

CARPARK

DRIVEWAY

COMMERCIAL
FFL 3.350m

COMMERCIAL
FFL 3.550m

PUBLIC LINK

CONSTRUCT NEW KERB TYPE B1
IN ACCORDANCE WITH NORTHERN RIVERS
LOCAL GOVERNMENT ROAD/STREET
STANDARD DRAWING R-03

EXISTING STORMWATER PIT
WITH 350ø OUTLET

PROPOSED OCEANGUARD®
JELLYFISH JF-2250-60-1
STORMWATER TREATMENT DEVICE

EXISTING KERB & CHANNEL

SCALE 1:100 AT A1 SIZE

REV	DATE	DESCRIPTION	RVD
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AHD	MGA	1:100 AT A1 SIZE

TITLE: STORMWATER AND SITE GRADING PLAN

PROJECT No. GCE240006 | DRAWING No. UC-0410 | REV. C

P:\BGE\BNE\GCE24000 3-5 FINGAL ST BRUNSWICK HEADS\100 DRAW\100.2 CI & WA\AUTOCAD\GCE240006-UC-0410 STORMWATER AND SITE GRADING PLAN.DWG

PAVEMENT NOTES

GENERAL

1. ALL WORKS ARE TO COMPLY WITH THE CONTRACT DOCUMENTS, BELOW SPECIFICATION AND RELEVANT COUNCIL SPECIFICATIONS WHICH EVER IS THE GREATER STANDARD.
2. ITS THE CONTRACTORS RESPONSIBILITY TO ENSURE COMPLIANCE WITH ALL ASPECTS OF THE DOCUMENTS TO ENSURE CERTIFICATION OF THE WORKS CAN BE ACHIEVED AND DEMONSTRATED.
3. UNLESS SPECIFIED OTHERWISE ALL MATERIALS AND WORK SHALL COMPLY WITH THE RELEVANT AUSTRALIAN STANDARDS.
4. SHOULD THE CONTRACTOR PROCEED THROUGH HOLD POINTS OR FAIL TO PROVIDE RELEVANT QUALITY ASSURANCE DOCUMENTS BG&E ARE UNDER NO OBLIGATION TO CERTIFY THE WORKS AS COMPLIANT UNTIL SUITABLE EVIDENCE IS PROVIDED TO DEMONSTRATE COMPLIANCE. ALL REQUISITE EVIDENCE WILL BE AT THE COST OF THE CONTRACTOR.
5. REINSPECTION OF WITNESS OR HOLD POINTS AS A RESULT OF CONTRACTORS FAILURE TO COMPLY SHALL BE SUBJECT TO ADDITIONAL INSPECTION FEES.

DEFINITIONS

6. BASE COURSE: THAT PORTION OF THE PAVEMENT IMMEDIATELY SUPPORTING THE SURFACING. IT IS AND PRINCIPALLY INTENDED TO DIRECTLY SUPPORT THE TRAFFIC LOADS.
7. PAVEMENT: THAT PART OF THE ROAD PLACED ABOVE THE SUBGRADE FOR THE SUPPORT OF, AND TO FORM A RUNNING SURFACE FOR, VEHICULAR TRAFFIC. THE PAVEMENT COMPRISES ONE OR MORE LAYERS OF MATERIAL REFERRED TO AS SURFACING, BASE COURSE AND SUB-BASE COURSE.
8. ROADS SUBJECT TO LIGHT TRAFFIC LOADING: THESE ROADS HAVE PAVEMENTS DESIGNED FOR THE 20 YEAR DESIGN TRAFFIC LOADING UP TO TL20 OF 1 X 106 ESA. THESE ROADS WILL TYPICALLY HAVE GRANULAR PAVEMENTS WITH THIN ASPHALT SURFACES.
9. ROADS SUBJECT TO HEAVY TRAFFIC LOADING: THESE ROADS HAVE PAVEMENTS DESIGNED FOR THE 20 YEAR DESIGN TRAFFIC LOADING GREATER THAN TL20 OF 1 X 106 ESA. THESE ROADS WILL TYPICALLY HAVE FULL-DEPTH ASPHALT PAVEMENTS ON A GRANULAR WORKING PLATFORM.
10. SUB-BASE COURSE: THAT PORTION OF THE PAVEMENT BELOW THE BASE COURSE TO PROVIDE ADDITIONAL THICKNESS OF MATERIAL REQUIRED ABOVE THE SUBGRADE. IT IS PRINCIPALLY INTENDED TO DISTRIBUTE TO THE SUBGRADE THE LOADS FROM OVERLYING COURSES.
11. SUBGRADE: THE PREPARED FORMATION ON WHICH A PAVEMENT OR SLAB IS CONSTRUCTED OR THE TOP PORTION OF EARTHWORKS IMMEDIATELY BELOW THE PAVEMENT OR SLAB. SUBGRADE IS CONSIDERED TO BE THE TOP 150 MM IN CUTTINGS AND THE TOP 300 MM IN EMBANKMENT UNLESS STATED OTHERWISE.

QUALITY

INSPECTION – WITNESS POINTS

12. THE CONTRACTOR IS TO GIVE SUFFICIENT NOTICE SO THAT INSPECTION MAY BE MADE AT THE FOLLOWING STAGES:
13. BEDDING MATERIAL PREPARED FOR KERB AND CHANNEL.
14. PLACING SUB-BASE AND BASE.
15. COMPLETION OF EACH COMPACTED LAYER.
16. AT THE COMMENCEMENT OF ASPHALT SURFACING.
17. PAVEMENT MARKING SET OUT READY FOR MARKING.
18. PRIOR TO THE PLACEMENT OF CONCRETE TO VERIFY FORMWORK AND REINFORCEMENT.

HOLD POINTS

19. DO NOT PROCEED WITHOUT APPROVAL. GIVE SUFFICIENT NOTICE SO THAT INSPECTION MAY BE MADE AT THE FOLLOWING STAGES:
20. PROOF ROLLING OF THE COMPLETED BASE SURFACE.
21. PRIOR TO PLACING CONCRETE PAVEMENTS.
22. SURFACES PREPARED FOR PRIMING, SEALING OR SURFACING.

CONTRACTOR'S SUBMISSIONS

23. IMPORTED MATERIALS: THE CONTRACTOR IS TO IDENTIFY THE SUPPLIER, SOURCE AND DESCRIPTION OF ALL IMPORTED MATERIALS. SUBMIT CERTIFICATION OR TEST RESULTS, WHICH ESTABLISH THE COMPLIANCE OF IMPORTED MATERIALS.
24. RECYCLED PRODUCTS: NOTIFY THE NATURE, SOURCE, PROPORTIONS AND METHOD OF INCORPORATION OF ANY ADDED FILLERS OR BINDERS.
25. SUB-BASE AND BASE DELIVERY: SUBMIT A DELIVERY DOCKET AT THE TIME OF DELIVERY FOR EACH TRUCKLOAD OF SUB-BASE AND BASE MATERIAL. ENDORSE IT TO SHOW THE LOCATION OF THE MATERIAL IN THE WORKS. INFORMATION SHOULD INCLUDE:
    - 25.1. EMPTY AND LOADED MASS OF VEHICLE.
    - 25.2. DATE AND TIME OF DISPATCH.
    - 25.3. SUPPLIER AND LOCATION OF MIXING PLANT.
    - 25.4. REGISTRATION NUMBER OF THE VEHICLE.
    - 25.5. NATURE OF MATERIAL.

TOLERANCES

26. HORIZONTAL GEOMETRY: CONDUCT HORIZONTAL TOLERANCE CHECK AT THE FINISHED BASE COURSE SURFACE FOR SPRAYED BITUMINOUS SEALED PAVEMENT AT A FREQUENCY OF NOT LESS THAN 1 TEST EVERY 50 M INTERVALS. WHERE DIRECTED, REDUCE SECTION INTERVALS FOR COMPLEX GEOMETRY.
27. VERTICAL GEOMETRY: CONDUCT PRIMARY VERTICAL TOLERANCE CHECK ON THE FINISHED SURFACE OF THE SUB BASE AND BASE COURSES AT A FREQUENCY OF NOT LESS THAN 1 TEST EVERY 20 M INTERVALS. WHERE DIRECTED, REDUCE SECTION INTERVALS FOR COMPLEX GEOMETRY. MINIMUM 3 POINTS ON EACH CROSS-SECTION, INCLUDING ONE AT THE CROWN AND OFFSETS SPACED EVENLY AT NOT MORE THAN 3 M FROM THE CROWN.
28. CONTRACTOR TO PROVIDE CERTIFIED SURVEY OF FINISHED SUB-BASE AND BASE SURFACES, WHICH ARE EVENLY GRADED BETWEEN LEVEL POINTS, FREE DRAINING AND CONFORM TO THE REQUIRED TOLERANCES.

ITEM	LEVEL TOLERANCE	
	ABSOLUTE	RELATIVE TO 3m STRAIGHTEDGE
SUBBASE	+10mm -30mm	10mm
BASE	±10mm	5mm

UNBOUND MATERIALS

29. MATERIAL PROPERTIES: ALL FLEXIBLE PAVEMENT MATERIALS ARE TO BE IN ACCORDANCE WITH DTMR MRTS05 SPECIFICATION
30. BASE COURSE FOR ROADS SUBJECT TO LIGHT TRAFFIC: USE CLASS 1 MATERIAL. PROVIDE A MINIMUM 100 MM THICK COURSE.
31. SUB-BASE COURSE FOR ROADS SUBJECT TO LIGHT TRAFFIC: USE CLASS 2 MATERIAL (OR ALTERNATIVELY CLASS 1 MATERIAL) TO CONSTRUCT A MINIMUM 100 MM THICK TOP LAYER. USE CLASS 3 MATERIAL (OR ALTERNATIVELY CLASS 2 MATERIAL) TO CONSTRUCT SUBSEQUENT SUB-BASE COURSES AS REQUIRED TO OBTAIN DESIGN PAVEMENT THICKNESS.
32. WORKING PLATFORM FOR ROADS SUBJECT TO HEAVY TRAFFIC: USE CLASS 1 MATERIAL. PROVIDE A MINIMUM 150 MM THICK COURSE. WHERE SPECIFIED USE CLASS 2 MATERIAL (OR ALTERNATIVELY CLASS 1 MATERIAL) TO CONSTRUCT AN ADDITIONAL 150 MM THICK SUB-BASE COURSES. USE CLASS 3 MATERIAL (OR ALTERNATIVELY CLASS 2 MATERIAL) TO CONSTRUCT SUBSEQUENT SUB-BASE COURSES AS REQUIRED FOR SUBGRADE IMPROVEMENT.
33. UNSEALED ROADS AND SHOULDERS: CLASS 1 OR CLASS 2 SOIL AGGREGATE.
34. MATERIAL MAXIMUM SIZE: DO NOT USE CLASS 1 CRUSHED ROCK EXCEEDING 25 MM NOMINAL SIZE IN BASE COURSES WHERE SURFACING IS SPRAY SEAL OR ASPHALT LESS THAN 50 MM THICK.
35. STABILISED OR MODIFIED MATERIALS (WHERE SPECIFIED): INCORPORATE STABILISING AGENT (CEMENT AND MIX IN PLACE USING APPROVED SPECIALISED PLANT OR MIX OFF-SITE IN A SUITABLE BATCHING PLANT.
36. PAVEMENT WIDENING OR REHABILITATION: SELECT PAVING MATERIALS TO MATCH THE CHARACTERISTICS OF THE EXISTING PAVEMENT PROFILE. USE LOW OR HIGH PERMEABLE MATERIAL AS APPROPRIATE TO MINIMISE DIFFERENTIAL PERMEABILITY.
37. SITE TESTING: IN ADDITION TO THE SUPPLIER'S MATERIAL COMPLIANCE TESTS, DETERMINE PLASTICITY INDEX AND PARTICLE SIZE DISTRIBUTION TO CHECK THAT SEGREGATION OR CROSS CONTAMINATION OF MATERIAL HAS NOT OCCURRED ON SITE. THE NOMINATED TEST LOT SIZE OF UP TO 500 M3 (SOLID) REFERS TO MATERIAL DELIVERED TO SITE STOCKPILE OR DELIVERED DIRECT TO THE PAVEMENT OR THE INSITU PAVEMENT MATERIAL AS APPROPRIATE. PERFORM INSITU TESTING IN CONJUNCTION WITH FIELD DENSITY TESTS.
38. CROSS-REFERENCING: CROSS-REFERENCE EACH LOT OF CONSTRUCTED PAVEMENT TO THE ACCEPTED LOT IN THE QUARRY AND/OR SITE STOCKPILES FROM WHICH THE PAVEMENT MATERIAL WAS OBTAINED.
39. TIME OF SAMPLING: UNDERTAKE SAMPLING OF STOCKPILED MATERIAL WITHIN 3 DAYS OF COMPLETING A STOCKPILE.
40. MOISTURE CONTENT: DURING SPREADING AND COMPACTION, MAINTAIN MATERIALS WITHIN THE RANGE OF – 2% TO + 1% FROM THE OPTIMUM MOISTURE CONTENT (MODIFIED COMPACTION) APPROPRIATE TO EACH MATERIAL.
41. SEGREGATION: THERE MUST BE NO VISIBLE SIGNS OF SEGREGATION ON EACH LOT. TAKE SAMPLES FROM EACH LOT TO CHECK THAT SEGREGATION OF THE MATERIAL IN THE LOT HAS NOT OCCURRED. TAKE ADDITIONAL SAMPLES AS DIRECTED FROM AREAS THAT SHOW VISIBLE SIGNS OF SEGREGATION. ASSESSMENT MUST BE BASED ON THE COMBINED ORIGINAL TESTING AND ADDITIONAL TESTING RESULTS.

PLACING BASE, SUBBASE AND WORKING PLATFORM

GENERAL

42. MATERIAL SEPARATION: PLACE MATERIALS OF DIFFERENT GRADING OR FROM DIFFERENT SOURCES IN SEPARATE LAYERS OR SEPARATE SECTIONS OF THE WORK.
43. SPREADING: SPREAD MATERIAL IN UNIFORM LAYERS. DO NOT SEGREGATE THE MATERIAL.
44. LAYER THICKNESS: 100–150 MM (AFTER COMPACTION) TO SUIT THE CONSTRUCTION PROCESS. USE EQUAL LAYERS IN MULTI LAYER COURSES.
45. MOISTURE CONTENT OF UNDERLYING LAYERS: ADJUST THE SURFACE MOISTURE CONTENT OF UNDERLYING LAYERS TO PREVENT NEW MATERIAL LOSING MOISTURE.

JOINTS

46. PLAN THE SPREADING AND DELIVERY TO MINIMISE THE NUMBER OF JOINTS. OFFSET JOINTS IN SUCCESSIVE LAYERS BY AT LEAST 300 MM.

EXISTING ROAD SURFACE AS SUBGRADE

47. CARRY OUT MINOR RESHAPING TO IMPROVE VERTICAL ALIGNMENT AS DIRECTED. DO NOT OTHERWISE LOWER OR EXCAVATE THE EXISTING ROADWAY. AFTER FINAL SHAPING OF THE METAL BOX, SCARIFY THE EXISTING PAVEMENT FORMING THE SUBGRADE BEFORE PLACEMENT OF THE PAVEMENT MATERIAL.

JUNCTIONS WITH EXISTING PAVEMENTS

48. GRANULAR PAVEMENT: WHERE THE PAVEMENT IS TO BE JOINED TO AN EXISTING GRANULAR PAVEMENT, REMOVE A STRIP OF THE EXISTING PAVEMENT AT LEAST 300 MM WIDE FOR ITS FULL DEPTH AND TRIM THE EDGE TO AN ANGLE OF APPROXIMATELY 45° IN STEPS OF MAXIMUM HEIGHT 150 MM BEFORE PLACING NEW PAVEMENT MATERIAL.
49. ASPHALT PAVEMENT: WHERE THE PAVEMENT IS TO BE JOINED TO AN EXISTING FULL DEPTH ASPHALT PAVEMENT, CUT BACK INTO THE EXISTING ASPHALT BY AT LEAST 100 MM. EXTEND EACH SUBSEQUENT LAYER OF STRUCTURAL ASPHALT INTO THE EXISTING PAVEMENT BY AT LEAST 100 MM. THE SURFACE LAYER OF ASPHALT IS TO EXTEND INTO THE EXISTING PAVEMENT AT LEAST 150 MM BEYOND THE UPPER MOST STRUCTURAL LAYER PLACED. TREAT EACH LAYER AS A COLD JOINT.

BASE, SUBBASE AND WORKING PLATFORM COMPACTION

COMPACTION

50. MODIFIED MAXIMUM DRY DENSITY: AS SPECIFIED ON THE DRAWINGS OR TO AS 1289.5.2.1.
51. MINIMUM RELATIVE COMPACTION: 95% OF MODIFIED MAXIMUM DRY DENSITY.
52. FIELD DRY DENSITY: TO AS 1289.5.3.1, AS 1289.5.3.5 OR AS 1289.5.8.1. IF USING AS 1289.5.8.1, CALIBRATE THE SURFACE MOISTURE-DENSITY GAUGE IN ACCORDANCE WITH AS 1289.5.8.4 BEFORE USE ON SITE.
53. TEST LOT: UP TO 300 M3 (SOLID VOLUME) FOR A SINGLE COMPACTED LAYER OF WORK THAT IS ESSENTIALLY HOMOGENEOUS. THIS OCCURS WHEN MATERIAL ORIGIN, GENERAL APPEARANCE, MOISTURE CONDITION DURING COMPACTION, COMPACTION TECHNIQUE, RESPONSE TO COMPACTORS, AND THE STATE OF THE UNDERLYING MATERIALS ARE SUBSTANTIALLY ALIKE. TREAT AREAS THAT ARE DIFFERENT AS INDEPENDENT TEST LOTS.
54. SAMPLING SITES: SELECT 5 SITES FOR IN SITU DENSITY TESTING. THE LOCATION OF EACH IN SITU DRY DENSITY TEST MUST BE CHOSEN BY A METHOD OF RANDOM STRATIFIED SAMPLING.

RECTIFICATION

55. IF A SECTION OF PAVEMENT MATERIAL FAILS TO MEET THE REQUIRED CONFORMANCE CRITERIA AS SPECIFIED IN THE SPECIFICATION, REMOVE THE NON-COMPLYING MATERIAL, REPLACE WITH NEW PAVEMENT MATERIAL, AND RECOMPACT.

LEVEL CORRECTIONS

56. HIGH AREAS: GRADE OFF.
57. LOW AREAS: REMOVE TO A MINIMUM DEPTH OF 75 MM, REPLACE WITH NEW MATERIAL AND RECOMPACT.

PROOF ROLLING

58. GENERAL: ALL PAVEMENT LAYERS MUST BE CAPABLE OF WITHSTANDING PROOF ROLLING TO VERIFY THEIR STABILITY. WHERE DIRECTED BY THE SUPERINTENDENT, CARRY OUT PROOF ROLLING OF SUBBASE LAYERS.
59. REQUIREMENT: TEST THE FINISHED BASE FOR PERCEPTIBLE SURFACE DEFORMATION BY PROOF ROLLING IN THE PRESENCE OF THE SUPERINTENDENT.
60. TEST METHOD: USE A TRUCK WITH A SINGLE REAR AXLE WITH DUAL TYRES WITH A LOADED AXLE MASS OF 9 TONNES OR A TRUCK WITH TANDEM REAR AXLES WITH DUAL TYRES WITH A TOTAL LOADED MASS ON THE TANDEM AXLES OF 16.5 TONNES. USE A MINIMUM 600 KPA TYRE PRESSURE. TESTING FOR PERCEPTIBLE SURFACE DEFORMATION IS EXEMPT FROM THE REQUIREMENT FOR NATA ACCREDITATION.
61. CORRECTIVE ACTION: IN AREAS OF PERCEPTIBLE SURFACE DEFORMATION, REMOVE AND REPLACE THE MATERIAL, OR UNDERTAKE OTHER CORRECTIVE ACTION TO THE SATISFACTION OF THE SUPERINTENDENT.

ASPHALT PAVEMENT NOTES

PROCESS CONTROL TESTS

1. ASPHALT AGGREGATES TO BE TESTED IN ACCORDANCE WITH RELEVANT COUNCIL SPECIFICATION AND/OR DTMR SPECIFICATION, WHICH EVER IS THE GREATER STANDARD.
2. ASPHALT MANUFACTURING, TO BE SUPPLIED AND TESTED IN ACCORDANCE WITH RELEVANT COUNCIL SPECIFICATION AND/OR DTMR SPECIFICATION, WHICH EVER IS THE GREATER STANDARD.

LAYING OF ASPHALT – COMPACTION

3. LOT SIZE: UP TO 500 TONNES OF THE ONE TYPE OF ASPHALT PLACED IN A SINGLE DAY UNDER ESSENTIALLY UNIFORM CONDITIONS.
4. TIME OF TESTING: CARRY OUT DENSITY TESTING AS SOON AS POSSIBLE AFTER FINAL ROLLING AND, WHERE POSSIBLE, PRIOR TO TRAFFICKING. IF TESTS ARE TO BE TAKEN MORE THAN TWO DAYS AFTER THE PAVEMENT IS OPEN TO TRAFFIC, TEST OUTSIDE THE TRAFFICKED WHEEL PATHS. DENSITY TEST MAY BE PERFORMED USING THE CALIBRATED NUCLEAR GAUGE.
5. SAMPLING SITES: PERFORM IN SITU DENSITY TESTING:

LOT SIZE	MINIMUM No OF TESTS	
	CORES FROM THE PAVEMENT	CALIBRATED NUCLEAR GAUGE
≤50m²	1 PER LAYER	2 PER LAYER
51m² TO 500m²	3 PER LAYER	6 PER LAYER
>500m²TO 1000m²	4 PER LAYER	8 PER LAYER

6. WHERE THE PAVEMENT LOT EXCEEDS 1000 M2, SUBDIVIDE THE AREA INTO 2 OR MORE LOTS NOT EXCEEDING 1000 M2. WHERE THE PAVEMENT LOT IS A SMALL PRODUCTION LOT, THE MINIMUM NUMBER OF TESTS FOR RELATIVE COMPACTION MAY BE VARIED, SUBJECT TO THE APPROVAL OF THE SUPERINTENDENT.
7. THE LOCATION OF EACH SITE MUST BE CHOSEN BY A METHOD OF RANDOM STRATIFIED SAMPLING. DO NOT SELECT SITES WITHIN 150 MM OF A JOINT OR FREE EDGE.
8. RELATIVE COMPACTION: RELATIVE COMPACTION IS THE PERCENTAGE RATIO OF THE IN SITU DENSITY OF THE COMPACTED ASPHALT AND THE REPRESENTATIVE MAXIMUM DENSITY OF THE ASPHALT FOR THE PARTICULAR LOT.

LAYING OF ASPHALT – GEOMETRY

9. HORIZONTAL GEOMETRY: MINIMUM 1 TEST PER 50 M. WHERE DIRECTED, REDUCE SECTION INTERVALS FOR COMPLEX GEOMETRY.
10. VERTICAL GEOMETRY: MINIMUM 1 TEST PER 20 M. WHERE DIRECTED, REDUCE SECTION INTERVALS FOR COMPLEX GEOMETRY. MINIMUM 3 POINTS ON EACH CROSS-SECTION, INCLUDING ONE AT THE CROWN AND OFFSETS SPACED EVENLY AT NOT MORE THAN 3 M FROM THE CROWN.

LAYING OF ASPHALT – THICKNESS

11. CORE SAMPLES: MEASURE THICKNESS OF ALL CORE SAMPLES CUT FOR DENSITY DETERMINATION.
12. DEPTH GAUGE: RECORD THICKNESS AT THE TIME OF LAYING AND COMPACTION AT 20 M MINIMUM INTERVALS FOR 3 POINTS ON EACH CROSS-SECTION. INCORPORATE THE APPROPRIATE ADDITIONAL THICKNESS REQUIRED TO ACHIEVE THE FINAL COMPACTED COURSE THICKNESS.

CONCRETE PAVEMENT NOTES

GENERAL

1. SCOPE: FOOTPATHS, BIKEWAYS, VEHICULAR CROSSINGS, KERB RAMPS, MEDIAN INFILLS AND OTHER LIKE ELEMENTS.
2. FORMWORK: PROVIDE FORMWORK TO SIDES, CONSTRUCTION JOINTS AND ENDS. CLASS 3 SURFACE FINISH TO AS 3610.
3. CONCRETE: ALL CONCRETE TO BE N32 GRADE UNO.
4. PLACING AND CURING: PROVIDE CONCRETE WITH NO CRACKS GREATER THAN 0.3 MM WIDE (OTHER THAN IN CONTROL JOINTS) AND WITH UNIMPAIRED SLIP RESISTANCE AND COLOUR UNIFORMITY. PLACING & CURING IS TO BE IN ACCORDANCE WITH RELEVANT COUNCIL SPECIFICATIONS, AS3600 OR DTMR SPECIFICATIONS, WHICH EVER IS THE GREATER STANDARD.

JOINTS

5. SPACING: SPACE TO MATCH SERVICE PITS AND OTHER DISCONTINUITY IN CROSS-SECTION.
6. CONSTRUCTION JOINTS: LOCATE AT CONTRACTION OR EXPANSION JOINTS.
7. CONTRACTION OR SHRINKAGE CONTROL JOINTS: UNLESS SPECIFIED OTHERWISE, MAXIMUM SPACING IN UNREINFORCED OR NOMINALLY REINFORCED CONCRETE IS 4 M. USE WEAKENED PLANE JOINTS TO AT LEAST ONE-THIRD DEPTH AND 6 MM WIDE. SAW CUT OR USE CRACK INDUCERS WITH A LIFE OF 25 YEARS. BOLSTER CUT JOINTS MUST BE TO HALF DEPTH AND FAIRED TO SURFACE WITH A RADIUS OF 5 – 6 MM. WHERE RELEVANT, LOCATE JOINTS TO LINE UP WITH CONTRACTION JOINTS IN ADJACENT STRUCTURES OR EDGE RESTRAINTS.
8. EXPANSION JOINTS: UNLESS SPECIFIED OTHERWISE, THE MAXIMUM SPACING IN UN-REINFORCED OR NOMINALLY REINFORCED CONCRETE IS 16 M. PROVIDE ADDITIONAL EXPANSION JOINTS BETWEEN THE CONCRETE SLAB AND ABUTTING EDGE RESTRAINTS. FORM JOINTS WITH FULL DEPTH 10 MM CLOSED CELL CLOSE LINKED POLYETHYLENE FOAM 85 – 150 KG/M3 (WITH 10 MM REMOVABLE TOP SECTION) SECURELY TAPED TO THE END FORM. SEAL SURFACE OF JOINT WITH A POLYURETHANE SEALANT SUITABLE FOR SEALING CONTINUOUS AND PRONOUNCED CYCLIC MOVEMENTS IN CONCRETE JOINTS.

TOLERANCES

9. PAVEMENT EDGES: SHAPE NEW PAVEMENT SURFACE TO MATCH EXISTING FEATURES SUCH AS PIT COVERS OR DRIVEWAYS TO WITHIN 5 MM.
10. ABSOLUTE LEVEL TOLERANCE: ±25 MM.
11. MAXIMUM DEVIATION RELATIVE TO A 3 M STRAIGHTEDGE: 5 MM.
12. DISCONTINUITY IN PAVEMENT SURFACE LEVELS: FOR PEDESTRIAN AREAS 1.5 MM, FOR ROADWAYS 2 MM.
13. MAXIMUM DEVIATION OF EDGE FROM DESIGN ALIGNMENT: 25 MM.
14. WIDTH: – 0 MM, + 35 MM.
15. THICKNESS: – 5 MM, + 30 MM.
16. MAXIMUM DEVIATION FROM A 3 M STRAIGHTEDGE PLACED ON VERTICAL, OR SLOPING SURFACES REQUIRED TO BE STRAIGHT: 10 MM.
17. DRAINAGE: ALL SURFACES MUST BE FREE DRAINING.

KERB AND CHANNEL NOTES

GENERAL

1. SCOPE: KERBS, CHANNELS, MOWING STRIPS AND OTHER LINEAR ELEMENTS.
2. PROFILE: TO RELEVANT COUNCIL STANDARDS
3. HAND PLACED (IN SITU) CONCRETE: GRADE N25.
4. PRECAST CONCRETE: GRADE N25.
5. MACHINE PLACED (SLIP FORMED OR EXTRUDED) CONCRETE: GRADE S32, MINIMUM CEMENTITIOUS CONTENT OF THE CONCRETE IS 320 KG/M3 FOR ALL ROADS.
6. SURFACE FINISH: A MORTAR SURFACING IS REQUIRED ON EXTRUDED WORK AND A COMPARABLE FINISH REQUIRED FOR OTHER PLACING METHODS.
7. PLACING AND CURING: PROVIDE KERBS AND CHANNELS WITH NO CRACKS GREATER THAN 0.3 MM WIDE (OTHER THAN AT CONTROL JOINTS) AND WITHOUT IMPAIRMENT OF SLIP RESISTANCE.
8. EXCAVATION LIMIT: WHEN EXCAVATING THE EXISTING PAVEMENT TO CONSTRUCT THE KERB AND CHANNEL, LIMIT EXCAVATION TO THE MINIMUM REQUIRED FOR A MECHANICAL COMPACTOR AND KERB MACHINE. EXCAVATE AT LEAST 75 MM PAST THE BACK OF THE KERB.
9. PRE-WETTING: WET THE BEDDING MATERIAL IMMEDIATELY BEFORE LAYING CONCRETE WITHOUT RESULTING IN FREE WATER REMAINING ON THE SURFACE.
10. BEDDING. CONSTRUCT BEDDING FROM THE SAME PAVEMENT MATERIAL OR APPROVED FREE DRAINING NON-PLASTIC MATERIAL WITH PERMEABILITY NOT LESS THAN THE ADJOINING PAVEMENT MATERIAL. CONTINUE PAVEMENT AT LEAST 75 MM PAST THE EXTREMITIES OF THE KERB TO ENSURE STABILITY OF THE PAVEMENT EDGE.EXTEND BEDDING TO THE BOTTOM OF THE PAVEMENT BOX, BUT THE MINIMUM BEDDING THICKNESS MUST NOT BE LESS THAN 75 MM.
11. CONTRACTION OR SHRINKAGE CONTROL JOINTS: INSTALL BETWEEN EXPANSION JOINTS AT REGULAR INTERVALS NOT EXCEEDING 4 M. CONSTRUCT JOINTS BY FORMING GROOVES 40 MM DEEP BY 6 MM WIDE IN ALL EXPOSED SURFACES OF THE CONCRETE KERB AND CHANNEL. PROVIDE GROOVES NORMAL TO THE TOP SURFACE AND SQUARE TO THE ALIGNMENT OF THE CONCRETE KERB AND CHANNEL. WHERE RELEVANT, LOCATE JOINTS TO LINE UP WITH CONTRACTION JOINTS IN ADJACENT STRUCTURES.
12. EXPANSION JOINTS: PROVIDE EXPANSION JOINTS BETWEEN THE CONCRETE KERB AND CHANNEL AND ANY ABUTTING STRUCTURES (SUCH AS BRIDGES, RIGID PAVEMENTS AND CONCRETE SLABS), OR WHERE DIRECTED. WHERE RELEVANT, LOCATE JOINTS TO LINE UP WITH THE EXPANSION JOINTS IN ADJACENT STRUCTURES. CONSTRUCT JOINTS BY INSTALLING 10 MM THICK COMPRESSIBLE PACKING FOR THE FULL WIDTH AND DEPTH OF THE CONCRETE KERB AND CHANNEL. SEAL SURFACE OF JOINT WITH A POLYURETHANE SEALANT SUITABLE FOR SEALING CONTINUOUS AND PRONOUNCED CYCLIC MOVEMENTS IN CONCRETE JOINTS.

PLACING CONCRETE

MACHINE PLACING

13. SLUMP: USE THE MAXIMUM SLUMP THAT WILL MAINTAIN SHAPE WITHOUT SUPPORT IMMEDIATELY AFTER LAYING.

HAND PLACING

14. MAXIMUM LENGTH: NO MORE THAN 20 METRES IN CONTIGUOUS LENGTHS (INCLUDING VEHICULAR ENTRANCES AND KERB RAMPS).
15. CAST TOGETHER: CAST THE KERB AND CHANNEL SIMULTANEOUSLY.

TOLERANCES

16. GENERAL REQUIREMENT: CHANNELS DO NOT POND WATER AND THE KERB LINE HAS NO NOTICEABLE KINKS IN LINE OR LEVEL.
17. VERTICAL ALIGNMENT: ± 10 MM FROM THE DESIGN LEVEL AT ANY POINT.
18. HORIZONTAL ALIGNMENT: ± 25 MM FROM THE DESIGN ALIGNMENT AT ANY POINT.
19. DEVIATION FROM A 3 M STRAIGHTEDGE LAID IN PARALLEL TO THE CENTRELINE: MAXIMUM 5 MM AT ANY POINT.
20. PROFILE DIMENSIONS: THE OVERALL WIDTH DOES NOT DIFFER BY MORE THAN 15 MM AND THE DIMENSION AT ANY POINT DOES NOT DIFFER BY MORE THAN 5 MM.

REV	DATE	DESCRIPTION	RVD
B	27.05.25	ISSUED FOR DA APPROVAL	KH
A	21.02.25	ISSUED FOR APPROVAL	CGO

REVISIONS

REV	DATE	DESCRIPTION	RVD

REVISIONS

CLIENT: Momentum Projects

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PROJECT: PROPOSED DEVELOPMENT
3-5 FINGAL STREET, BRUNSWICK HEADS

STATUS: ISSUED FOR INFORMATION
NOT TO BE USED FOR CONSTRUCTION

DRAWN	DESIGNED	CHECKED	APPROVED
KH	KH	CGO	CGO

DATUM	GRID	SCALE	
AHD	MGA	1:100	AT A1 SIZE

TITLE: PAVEMENT AND JOINTING NOTES AND LEGEND

PROJECT No.	DRAWING No.	REV.
GCE240006	UC-0500	B

\\BGEBNEFS01\PROJECTS\BGE\BNE\GCE24006 3-5 FINGAL ST BRUNSWICK HEADS\100 DRAW\100 2 CI & WA\AUTOCAD\GCE240006-UC-0500 PAVEMENT NOTES AND LEGEND.DWG

N

C

FINGAL STREET

BALUN LANE

6.10 5.64 4.56 4.61 5.05 4.28

COMMERCIAL
FFL 3.350m

3.62

1.60

3.96

3.24

4.24

2.37

2.75 1.63 1.03

SJ (TYP)

SJ

EJ

CARPARK
FFL 3.348m

BUILDING
FFL 3.350m

4.88

4.35

4.80

BUILDING
FFL 3.450m

4.99

3.23

RL 3.255m

CONSTRUCT DRIVEWAY CROSSOVER IN ACCORDANCE WITH NORTHERN RIVERS LOCAL GOVERNMENT ROAD/STREET STANDARD DRAWING R-05D

DRIVEWAY

RL 3.318m

COMMERCIAL
FFL 3.389m

SJ (TYP)

0 1 2 3 4 5 6m
SCALE 1:100 AT A1 SIZE

REV	DATE	DESCRIPTION	RVD
C	27.05.25	ISSUED FOR DA APPROVAL	KH
B	21.02.25	ISSUED FOR APPROVAL	CGO
A	12.02.25	ISSUED FOR INFORMATION	CGO

REVISIONS

REV	DATE	DESCRIPTION	RVD

REVISIONS

CLIENT
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PROJECT
PROPOSED DEVELOPMENT
3-5 FINGAL STREET, BRUNSWICK HEADS

STATUS
ISSUED FOR INFORMATION
NOT TO BE USED FOR CONSTRUCTION

DRAWN	DESIGNED	CHECKED	APPROVED
KH	KH	CGO	CGO

DATUM	GRID	SCALE	
AHD	MGA	1:100	AT A1 SIZE

TITLE
PAVEMENT AND JOINTING PLAN

PROJECT No.	DRAWING No.	REV.
GCE240006	UC-0510	C

\\BGEBNEFS01\PROJECTS\BGE\BNE\GCE24\006 3-5 FINGAL ST BRUNSWICK HEADS\100 DRAW\100 2 CI & WA\AUTOCAD\GCE240006-UC-0510 PAVEMENT SETOUT AND JOINTING PLAN.DWG

UTILITIES NOTES

GENERAL

1. ALL WORKS ARE TO COMPLY WITH THE CONTRACT DOCUMENTS, BELOW SPECIFICATION AND RELEVANT COUNCIL SPECIFICATIONS WHICH EVER IS THE GREATER STANDARD.
2. ITS THE CONTRACTORS RESPONSIBILITY TO ENSURE COMPLIANCE WITH ALL ASPECTS OF THE DOCUMENTS TO ENSURE CERTIFICATION OF THE WORKS CAN BE ACHIEVED AND DEMONSTRATED.
3. UNLESS SPECIFIED OTHERWISE ALL MATERIALS AND WORK SHALL COMPLY WITH THE RELEVANT AUSTRALIAN STANDARDS.
4. SHOULD THE CONTRACTOR PROCEED THROUGH HOLD POINTS OR FAIL TO PROVIDE RELEVANT QUALITY ASSURANCE DOCUMENTS BG&E ARE UNDER NO OBLIGATION TO CERTIFY THE WORKS AS COMPLIANT UNTIL SUITABLE EVIDENCE IS PROVIDED TO DEMONSTRATE COMPLIANCE. ALL REQUISITE EVIDENCE WILL BE AT THE COST OF THE CONTRACTOR.
5. REINSPECTION OF WITNESS OR HOLD POINTS AS A RESULT OF CONTRACTORS FAILURE TO COMPLY SHALL BE SUBJECT TO ADDITIONAL INSPECTION FEES.

INSTALLATION TECHNIQUES – NEW CONSTRUCTION PROJECTS

6. INSTALLATION OF SERVICES AS PART OF NEW CONSTRUCTION PROJECTS ARE TO BE UNDERTAKEN PRIOR TO CONSTRUCTING PAVEMENTS, FOOTPATHS, BIKEPATHS AND THE LIKE. SHOULD THIS NOT OCCUR, THE SERVICE SHALL BE INSTALLED USING TRENCHLESS TECHNOLOGY METHODS FOR ALL CATEGORIES OF ROADS.

INSTALLATION TECHNIQUES – EXISTING COUNCIL ASSETS

7. THE FOLLOWING OPTIONS, LISTED IN PREFERENCE ORDER, ARE AVAILABLE WHERE IT IS NECESSARY TO PLACE UNDERGROUND SERVICES BENEATH EXISTING ASSETS SUCH AS THE ROAD PAVEMENT:
   - 7.1. TRENCHLESS TECHNOLOGY METHODS;
   - 7.2. UTILISE EXISTING CONDUITS/CULVERTS; OR
   - 7.3. TRENCH EXCAVATION AND REINSTATEMENT.
8. WHERE UNDERGROUND SERVICES ARE TO BE PLACED BENEATH ALL EXISTING DISTRICT, SUBURBAN, INDUSTRIAL ACCESS AND ARTERIAL ROADS AND ANY EXISTING CONDUITS OR CULVERTS CANNOT BE USED, TRENCHLESS TECHNOLOGY METHODS SHALL BE USED UNLESS OTHERWISE APPROVED IN WRITING BY COUNCIL. TRENCHLESS TECHNOLOGY METHODS MAY ALSO BE USED TO CROSS ALL OTHER CATEGORIES OF EXISTING COUNCIL ROADS.
9. USING EXISTING CONDUITS OR CULVERTS – WHERE SERVICES CAN BE INSTALLED IN EXISTING COUNCIL OWNED CONDUITS OR CULVERTS, COUNCIL APPROVAL MUST BE OBTAINED PRIOR TO ANY INSTALLATION BEING UNDERTAKEN. GENERALLY CULVERTS SHOULD NOT BE USED FOR PERMANENT INSTALLATIONS AS THESE INTERFERE WITH WATER FLOW.
10. CULVERTS SHOULD ONLY BE USED FOR TEMPORARY SITUATIONS WHERE THERE IS LITTLE RISK TO THE ROAD INTEGRITY.
11. TRENCH EXCAVATION AND REINSTATEMENT – WHERE SERVICES ARE INSTALLED ACROSS OR ALONG EXISTING ASSETS OWNED BY BRISBANE CITY COUNCIL, REINSTATEMENT OF THE TRENCH BACKFILL, PAVEMENT AND SURFACING LAYERS SHALL BE UNDERTAKEN IN ACCORDANCE WITH THIS SPECIFICATION.

QUALITY

INSPECTION – WITNESS POINTS

12. TRENCHES EXCAVATED BEFORE LAYING THE SERVICE OR DRAIN.
13. SERVICES OR DRAINS LAID IN TRENCHES AND READY FOR BACKFILLING.
14. ANY BORING OR JACKING OPERATION.
15. SERVICE CONDUITS READY FOR TESTING.

CONDUIT TESTING

16. TIME: TEST ALL CONDUITS AFTER COMPLETION OF SUBGRADE PREPARATION OR TRENCH BACKFILLING AND BEFORE COMMENCEMENT OF PAVEMENT CONSTRUCTION.
17. TEST: CONDUITS MUST BE TESTED BY EASILY PASSING A MANDREL AT LEAST 80% OF THE CONDUIT'S NOMINAL INTERNAL DIAMETER THROUGH THE CONDUIT.

COMPACTION TESTING REQUIREMENTS

18. COMPACTION TESTING IS NOT REQUIRED FOR ISOLATED PATCHES LESS THAN 2 M2 IN SIZE. PATCHES ARE USUALLY ASSOCIATED WITH THE INSTALLATION OF SERVICE CONNECTIONS OR CARRYING OUT REPAIR WORK. PATCHES ARE TYPICALLY CHARACTERISED BY WIDTH TO LENGTH RATIOS LESS THAN TWO.

TRENCH BACKFILL TO SUBGRADE LEVEL

19. MAXIMUM DRY DENSITY: STANDARD COMPACTIVE EFFORT TO AS 1289.5.1.1.
20. FIELD DRY DENSITY: TO AS 1289.5.3.1, AS 1289.5.3.5 OR AS 1289.5.8.1.
21. DENSITY INDEX FOR COHESIONLESS SOILS: DETERMINE IN ACCORDANCE WITH AS 1289.5.6.1.
22. TEST FREQUENCY: 1 FIELD DENSITY TEST PER 2 LAYERS FOR EVERY 40 LINEAR METRES OF TRENCH OR FOR THE PART THEREOF.

UNBOUND PAVEMENT

23. MAXIMUM DRY DENSITY: MODIFIED COMPACTIVE EFFORT IN ACCORDANCE WITH AS 1289.5.2.1.
24. FIELD DRY DENSITY: TO AS 1289.5.3.1, AS 1289.5.3.5 OR AS 1289.5.8.1.
25. TEST FREQUENCY: 1 IN-SITU DENSITY TEST PER SINGLE COMPACTED LAYER OF WORK FOR EVERY 40 LINEAR METRES OF TRENCH OR FOR THE PART THEREOF

ASPHALT

26. TEST FREQUENCY: 1 DENSITY TEST PER SINGLE COMPACTED LAYER OF WORK FOR EVERY 40 LINEAR METRES OF TRENCH OR FOR THE PART THEREOF.

CONCRETE

27. CONCRETE SUPPLY: SUPPLY CONCRETE THAT IS SUBJECT TO PRODUCTION ASSESSMENT BY THE SUPPLIER IN ACCORDANCE WITH AS 1379.
28. SLUMP: TEST AT LEAST ONE SAMPLE FROM EACH BATCH BEFORE PLACING CONCRETE FROM THAT BATCH IN THE WORK. TAKE THE SAMPLES AT THE POINT OF DISCHARGE ON SITE.

SITE MANAGEMENT

TREE PROTECTION

29. IF THERE IS A CHANCE THAT ROOT SYSTEMS OR CANOPIES OF ANY STREET TREES MAY BE DAMAGED, NOTIFY COUNCIL'S ARBORICULTURE OFFICER AND ARRANGE AN INSPECTION PRIOR TO COMMENCING WORK.

EXISTING SERVICES

30. APPROVAL: OBTAIN APPROVAL FROM SERVICE OWNER TO UNDERTAKE EXCAVATION IN THE VICINITY OF THEIR SERVICES.
31. MARKING: BEFORE COMMENCING GROUND WORKS, LOCATE, MARK AND IDENTIFY EXISTING UNDERGROUND SERVICES IN THE AREAS THAT WILL BE AFFECTED BY THE EARTHWORKS OPERATIONS. HAND EXCAVATION OF TRIAL HOLES MAY BE NECESSARY TO DETERMINE THE ALIGNMENT AND DEPTH OF SERVICES PRIOR TO EXCAVATING WITH MACHINERY.
32. PROTECTION: PROTECT EXISTING SERVICES FROM DAMAGE DURING THE WORKS.
33. COMPLETION: PRIOR TO COMPLETION OF SURFACE REINSTATEMENT, REMOVE ANY TEMPORARY MARKS (EG PAINT) USED TO LOCATE, MARK AND IDENTIFY UNDERGROUND SERVICES.

INSTALLATION

GENERAL

34. NEW DEVELOPMENTS – LOCATE SERVICES WITHIN THE DESIGNATED CORRIDORS TO COMPLY WITH THE RELEVANT COUNCIL STANDARD DRAWINGS. PROVIDE MINIMUM COVER TO SERVICE AS SPECIFIED IN TABLE 5.1 OR AS REQUIRED BY THE SERVICE OWNER, WHICHEVER IS GREATER.
35. EXISTING DEVELOPED AREAS
   - 35.1. USE THE HORIZONTAL ALIGNMENT ASSIGNED TO THAT SERVICE TYPE AT THE TIME THAT THE AREA WAS ORIGINALLY DEVELOPED. CONSULT WITH COUNCIL TO CONFIRM THE ALIGNMENT FOR THAT PARTICULAR SERVICE.
   - 35.2. WHEN UPGRADING OR REPLACING EXISTING SERVICES, REUSE THE EXISTING ALIGNMENT AND REMOVE OLD CONDUITS AND EQUIPMENT WHERE PRACTICAL.
   - 35.3. SERVICES INSTALLED ACROSS EXISTING PAVEMENTS ARE TO BE PERPENDICULAR (90°) TO THE KERB OR SHOULDER. SERVICES INSTALLED ALONG EXISTING PAVEMENTS ARE TO BE PARALLEL TO THE CENTRELINE AND ARE NOT TO BE INSTALLED DIRECTLY BENEATH THE NORMAL 'WHEEL PATHS' OF ROAD USERS. MANHOLE(S), VALVE(S) OR OTHER SURFACE MOUNTED STRUCTURES ARE NOT TO BE INSTALLED DIRECTLY BENEATH THE NORMAL 'WHEEL PATHS' OF ROAD USERS.

REDUNDANT CONDUITS, PITS, SERVICES AND OTHER ASSETS

36. WHERE AN INSTALLATION IS TO REPLACE, ABANDON OR MAKE REDUNDANT AN EXISTING ASSET SUCH AS A CONDUIT, PIT, SERVICE OR ANY OTHER ASSET, THIS REDUNDANT OR ABANONED ASSET SHALL BE EXHUMED FROM ITS LOCATION AND THE AREA RESTORED.
37. EXCEPTIONS – WHERE IS NOT PRACTICABLE TO EXHUME AN EXISTING ASSET DUE TO SITE CONSTRAINTS SUCH AS PROTECTED VEGETATION, ADVERSE TOPOGRAPHY OR GROUND CONDITIONS, OR NOT BEING LOCATED WITHIN COUNCIL CONTROLLED AREA, THE REDUNDANT ASSET SHALL BE:
   - 37.1. CAP/SEAL BOTH ENDS;
   - 37.2. COMPLETELY FILLED WITH A NON-COMPRESSIBLE, FLOWABLE, SELF-SETTING MATERIAL SO AS TO ENSURE THAT THE REDUNDANT SERVICE CANNOT COLLAPSE OR FAIL; AND
   - 37.3. ENSURE THAT THE REDUNDANT ASSET IS RECORDED, AND IS REPORTABLE, ON LOCATION SERVICES SUCH AS DIAL BEFORE YOU DIG.

REDUNDANT ASBESTOS MATERIAL

38. ALL REDUNDANT ASBESTOS MATERIALS ARE TO BE EITHER:
   - 38.1. REMOVED IN A SAFE MANNER IN ACCORDANCE WITH CURRENT LEGISLATION AND GUIDELINES; AND/OR
   - 38.2. SEALED OR ENCAPSULATED IN-SITU IN A MANNER SO THAT THE MATERIAL WILL NOT BE DISTURBED OR ACCIDENTLY ACCESSED BY ANY FUTURE WORKS OR EXCAVATION.
39. ANY ASBESTOS MATERIAL LEFT IN-SITU SHALL BE CLEARLY IDENTIFIED AND RECORDED ON A LOCATION SERVICES SUCH AS DIAL BEFORE YOU DIG AND REMAINS THE PROPERTY AND RESPONSIBILITY OF THE ORIGINAL SERVICE AUTHORITY AND/OR OWNER. THE COST FOR ANY FUTURE REMOVAL AND REMEDIATION SHALL BE BORNE BY THE ORIGINAL SERVICE AUTHORITY AND/OR OWNER.

MARKING SERVICES

40. TEMPORARY MARKERS: PROVIDE CLEARLY LABELLED 50 MM X 50 MM STAKES DIRECTLY ABOVE THE ENDS OF EACH CONDUIT RUN.
41. UNDERGROUND MARKING TAPE: PROVIDE BURIED MARKING TAPE TO ALL PUBLIC UTILITY SERVICES IN ACCORDANCE WITH THE REQUIREMENTS OF AS/NZS 2648.
42. BRASS MARKER DISCS: INSTALL BRASS MARKER DISCS EMBOSSED WITH THE RELEVANT SYMBOLS AT THE KERB AND CHANNEL TO INDICATE LOCATION OF EACH SERVICE OR CONDUIT CROSSINGS. IN LOCATION WHERE THERE IS NO KERB AND CHANNEL, CONSTRUCT 225 MM WIDE X 450 MM LONG X 75 MM THICK GRADE N25 CONCRETE BLOCK, WITH AN INDENTATION FOR THE INDICATOR DISC CENTRALLY PLACED ON THE TOP FACE OF EACH BLOCK. THE CONCRETE BLOCK SHALL BE LOCATED 500 MM FROM AND WITH THE LONG EDGE PARALLEL TO SEALED EDGE OF THE PAVEMENT AND SET FLUSH WITH THE SURROUNDING SURFACE.

SERVICE INSTALLATION

43. REQUIREMENT: INSTALL PIPES AND BEDDING FOR RETICULATED PIPE NETWORK SYSTEMS (WATER, SEWERAGE, GAS ETC), PIPES CONVEYING COMBUSTIBLE OR FLAMMABLE LIQUIDS AND COMMUNICATION AND ELECTRICAL CABLES AND CONDUITS IN ACCORDANCE WITH THE REQUIREMENTS OF THE APPROPRIATE SERVICE PROVIDER. BACKFILL TRENCHES AND REINSTATE EXISTING IN ACCORDANCE WITH THE SPECIFICATION.

SERVICE CONDUITS

44. PROVIDE CONDUITS THAT PASS INSPECTIONS AND TESTS REQUIRED BY THE APPROPRIATE SERVICE AUTHORITY.
45. MATERIALS
   - 45.1. ELECTRICITY CONDUIT: SUPPLY CONDUIT TO COMPLY WITH THE "HEAVY DUTY" REQUIREMENTS OF AS/NZS 2053. ALSO REFER TO ENERGEX PUBLICATION TITLED UNDERGROUND DISTRIBUTION CONSTRUCTION.
   - 45.2. GAS CONDUIT: SUPPLY CONDUIT TO COMPLY WITH AS/NZS 4130.
   - 45.3. WATER CONDUIT: SUPPLY CONDUIT TO COMPLY WITH AS/NZS 1477.
   - 45.4. TELECOMMUNICATIONS CONDUIT: SUPPLY WHITE UPVC CONDUIT TO COMPLY WITH AS 1477. CLASS PN 9 SHALL BE USED FOR 80 MM AND 100 MM DIAMETER, AND CLASS PN12 FOR 65 MM AND SMALLER DIAMETERS.
46. INSTALLATION
   - 46.1. UPVC PIPE SYSTEMS: CONFORM TO THE INSTALLATION REQUIREMENTS OF AS/NZS 2032 EXCEPT WHERE SPECIFIED HEREIN.
   - 46.2. POLYETHYLENE PIPE SYSTEMS: CONFORM TO THE INSTALLATION REQUIREMENTS OF AS/NZS 2033 EXCEPT WHERE SPECIFIED HEREIN.
   - 46.3. BEDDING MATERIAL: BEDDING SAND CONSISTING OF CLEAN SHARP WASHED RIVER SAND OR 5 – 7 MM NOMINAL SIZE SCREENINGS (RECYCLED CONCRETE OR CLEAN CRUSHED ROCK) FREE OF SALT, CLAY OR ORGANIC CONTAMINANTS. COMPLY WITH TABLE BELOW FOR GRADING REQUIREMENTS. IF THE RELEVANT SERVICE AUTHORITY REQUIRES A DIFFERENT FORM OF BEDDING MATERIAL, PROVIDE THAT BEDDING MATERIAL.

A.S. SIEVE (mm)	PERCENTAGE PASSING BY WEIGHT	
	BEDDING SAND	5-7mm SCREEENINGS
9.5	-	100
6.70	-	85-100
4.775	100	30-85
2.36	80-100	0-30
1.18	-	0-5
0.075	0-15	-

   - 46.4. PIPE SUPPORT: USE IDENTICAL BEDDING MATERIAL FOR PIPE UNDERLAY, SIDE SUPPORT AND OVERLAY. PLACE PIPE ON A MINIMUM 75 MM THICK COMPACTED UNDERLAY. EXTEND BEDDING MATERIAL TO PROVIDE A MINIMUM COVER OF 150 MM OVER THE CONDUIT.
   - 46.5. DRAW ROPE: FOR ELECTRICITY AND TELECOMMUNICATIONS CONDUITS, PROVIDE A 4 MM DIAMETER SYNTHETIC POLYPROPYLENE FILAMENT ROPE. INSTALL DRAW ROPES WITH A MINIMUM OF 1.5 M OF SLACK IN EACH PIT AND ROPE ENDS FIRMLY SECURED TO PREVENT THE ENDS BEING LOST IN THE CONDUIT. PROVIDE JOINTS IN THE ROPE CAPABLE OF RESISTING THE SAME TENSILE LOAD AS THE UNJOINTED ROPE AND THAT DO NOT APPRECIABLY INCREASE THE DIAMETER OF THE ROPE.
   - 46.6. END PLUGS: PLUG OR CAP THE ENDS OF ALL CONDUITS WITH SUITABLE FITTINGS TO PREVENT THE ENTRY OF FOREIGN MATTER.

BACKFILLING

GENERAL

47. EXTENT OF BACKFILL: UNLESS SPECIFIED OTHERWISE, ABOVE THE PIPE SURROUND BUT TERMINATE AT THE UNDERSIDE OF THE PAVEMENT, THAT IS, AT THE SUBGRADE LEVEL. DO NOT CAUSE DISCONTINUITY IN THE PAVEMENT STRUCTURE. DO NOT RE-USE EXCAVATED MATERIALS IN THE PAVEMENT STRUCTURAL LAYERS.
48. TIMING: BACKFILL TRENCHES AS SOON AS POSSIBLE AFTER THE PIPE OR SERVICE HAS BEEN LAID AND BEDDED, IF POSSIBLE ON THE SAME WORKING DAY.
49. CONSTRUCTION LOADS: SELECT APPROPRIATE COMPACTION PLANT COMPATIBLE WITH THE MINIMUM PIPE COVER TO THE SERVICE IN ACCORDANCE WITH MANUFACTURER/SUPPLIER RECOMMENDATION AND TO ENSURE THAT THE PIPE OR CONDUIT IS NOT OVERSTRESSED AT ANY STAGE DURING THE CONSTRUCTION ACTIVITY. THE COMPACTIVE EFFORT USED FOR EACH LAYER OF BACKFILL MUST BE LESS THAN THE LIVE LOAD CAPACITY OF THE PIPE WITH THE DEPTH OF COVER APPROPRIATE TO THAT LAYER.

PERMITTED MATERIALS

50. NEW CONSTRUCTION PROJECTS: CHOOSE BACKFILL MATERIAL TO SUIT THE PERMEABILITY CHARACTERISTICS OF THE SURROUNDING SOIL TO ENSURE THAT THE COMPLETED TRENCH DOES NOT HOLD WATER NOR OBSTRUCT EXISTING DRAINAGE PATHS THROUGH THE SOIL. CHOOSE BACKFILL MATERIAL THAT WILL PROVIDE UNIFORM SUPPORT TO MATCH THE ADJOINING SUBGRADE MATERIAL.
51. UNDER EXISTING ROAD CARRIAGEWAYS:
   - 51.1. CLASS 3 MATERIALS.
   - 51.2. STABILISED SAND, CONTROLLED LOW STRENGTH CEMENTITIOUS MATERIAL OR LEAN MIX CONCRETE
   - 51.3. LEAN MIX CONCRETE IN ISOLATED PATCHES LESS THAN 2 M2 IN SIZE OR WHERE THE MINIMUM SPECIFIED COVER TO SERVICE CANNOT BE ACHIEVED.
52. UNDER FOOTPATHS AND BIKEWAYS: EXCAVATED MATERIAL, PROVIDED ADEQUATE COMPACTION CAN BE OBTAINED, ALTERNATIVELY USE CLASS 3 MATERIAL, STABILISED SAND, CONTROLLED LOW STRENGTH MATERIAL OR LEAN MIX CONCRETE IN TRENCHES WHERE FREE DRAINAGE POINTS ARE NOT AVAILABLE OR TRENCHES IN IMPERMEABLE SOILS. USE GRANULAR FILL OR SAND IN TRENCHES WHERE FREE DRAINAGE POINTS ARE AVAILABLE OR WHERE TRENCHES ARE LOCATED IN PERMEABLE SOILS.

REQUIREMENTS OF ACCEPTABLE BACKFILL MATERIALS

53. CLASS 3 MATERIAL: USE QUEENSLAND DEPARTMENT OF TRANSPORT AND MAIN ROADS TYPE 2 UNBOUND MATERIAL, SUBTYPE 2.2, 2.3 OR 2.4 OR TYPE 3 UNBOUND MATERIAL, SUBTYPE 3.1, 3.2 OR 3.3 (TO DTMR TECHNICAL SPECIFICATION MRTS05), PROVIDED THE SOAKED CBR IS ≥ 15% AND THE PLASTICITY INDEX IS NOT < 4%.
54. CONTROLLED LOW-STRENGTH MATERIAL (FLOWABLE FILL): AN APPROVED PROPRIETARY FLOWABLE FILL THAT CONTAINS A MIXTURE OF CEMENTITIOUS BINDER, WATER AND AGGREGATE. THE CEMENTITIOUS BINDER MAY INCLUDE PORTLAND CEMENT, FLY ASH AND GROUND GRANULATED BLAST FURNACE SLAG. PROVIDE 28 DAY COMPRESSIVE STRENGTHS OF 0.5 – 2.0 MPA UNDER FOOTPATHS AND 3 – 5 MPA UNDER ROADS.
55. EXCAVATED MATERIAL: WELL GRADED INORGANIC NON-PERISHABLE MATERIAL, MAXIMUM SIZE 75 MM, PLASTICITY INDEX £ 55%.
56. GRANULAR FILL: 75 MM MAXIMUM SIZE CRUSHED ROCK, NON-PLASTIC OPEN GRADED MATERIAL OR CRUSHER RUN RECYCLED CONCRETE.
57. LEAN MIX CONCRETE: ACHIEVE 28 DAY CHARACTERISTIC COMPRESSIVE STRENGTH OF 5 MPA FOR CONCRETE. USE NOMINAL MAXIMUM AGGREGATE SIZE OF 40 MM. ACHIEVE TARGET SLUMPS OF 80 – 100 MM FOR WET CONCRETE AND LESS THAN 15 MM FOR DRY CONCRETE.
58. SAND: NATURAL SAND OR MANUFACTURED SAND OR A BLEND OF NATURAL AND MANUFACTURED SAND, COMPRISING HARD DURABLE PARTICLES. COMPLY WITH TABLE BELOW FOR MATERIAL PROPERTIES.

PROPERTY	NATURAL, BLENDED AND MANUFACTURER SAND
% BY WEIGHT PASSING THE 6.7mm A.S. SIEVE	100
% BY WEIGHT PASSING THE 0.075mm A.S. SIEVE	20 max
PLASTIC INDEX	10 max

59. STABILISED SAND: 1 PART EITHER TYPE GP OR TYPE GB CEMENT TO 12 PARTS SAND (BY VOLUME) MIXED WITH A MINIMUM QUANTITY OF WATER SUFFICIENT TO ALLOW EASE OF PLACEMENT AND COMPACTION.

SURFACE RESTORATION

60. REINSTATEMENT OF SURFACES: REINSTATE EXISTING SURFACES REMOVED OR DISTURBED BY TRENCH EXCAVATIONS TO MATCH THE TEXTURE, SURFACE TYPE AND COLOUR OF THE EXISTING AND ADJACENT WORK. JOIN SMOOTHLY TO ADJACENT WORK. REINSTATE PAVED SURFACES AND OTHER SURFACE FEATURES (SUCH AS LINE MARKING) DISTURBED OR REMOVED DURING EXCAVATION OF TRENCHES TO PROVIDE STRUCTURAL ADEQUACY AND SERVICEABILITY THAT IS AT LEAST EQUAL TO THAT IN EXISTENCE PRIOR TO THE DISTURBANCE.

EXTENT OF SURFACE REINSTATEMENT

61. ROAD PAVEMENTS
   - 61.1. TRANSVERSE TRENCH CROSSING: REINSTATE AS REQUIRED.
   - 61.2. LONGITUDINAL TRENCH: THE WHOLE OF THE ROAD LANE WIDTH SHALL BE RESURFACED TO MATCH THE EXISTING ROAD SURFACE. A ROAD LANE REFERS TO HALF OF UNMARKED ROADWAYS, A WIDTH OF 2.5 M FROM KERBS WHERE IT FORMS A PARKING ONLY LANE OR THE WIDTH OF MARKED LANES. WHERE AN EXISTING SECTION OF ROADWAY ADJACENT TO KERBS AND OTHER PAVEMENT EDGES IS UNDAMAGED FOR LESS THAN 1.0 M, RESURFACE THE UNDAMAGED SECTION OF ROADWAY AS PART OF RESTORATION OF THE TRENCH.
   - 61.3. WHERE THE TRENCH DISTURBANCE IS GREATER THAN HALF THE TOTAL WIDTH OF A ROAD WITHOUT LANE LINE-MARKING THAT IS LESS THAN 10 M WIDE, THEN THE WHOLE ROAD SHALL BE COLD PLANED AND RESURFACED AFTER THE APPROPRIATE RESTORATION OF THE TRENCH.
   - 61.4. DAMAGE TO EXISTING SURFACE: THE ADJACENT ROAD SURFACES SHALL BE APPROPRIATELY PROTECTED FROM DAMAGE FROM CONSTRUCTION VEHICLES, PLACEMENT OF MATERIAL, EXCAVATED ROCK INDENTATIONS ETC. WHERE DAMAGE OCCURS TO THE EXISTING ADJACENT ROAD/DRIVEWAY SURFACE, I.E. GOUGES, SCRAPES OR POTHOLES; THE SURFACE SHALL BE RETURNED TO ITS PREVIOUS CONDITION BY RESURFACING THE ENTIRE ROAD PAVEMENT (LANE) OR RESURFACING OF THE TOTAL DRIVEWAY CROSSING AREA AT THE DISCRETION OF COUNCIL.
   - 61.5. PARALLEL CRACKING: WHERE PARALLEL CRACKING OF THE EXISTING ROAD SURFACE OCCURS ALONG THE EDGE OF A TRENCH THEN THE REINSTATEMENT SHALL BE WIDENED TO A LINE AT LEAST 200 MM BEYOND THE EXTREMITY OF THE CRACKING AND PARALLEL TO THE TRENCH SO AS TO PRODUCE A CONSISTENT WIDTH OF RESTORATION.
62. FOOTPATHS AND BIKEWAYS
   - 62.1. CONCRETE – TRANSVERSE TRENCH CROSSING: REMOVE AND REPLACE FULL SECTION BETWEEN EXISTING ADJOINING JOINTS E.G. CONTRACTION JOINTS, SHRINKAGE CONTROL JOINTS OR PATTERN LINES.
   - 62.2. CONCRETE – LONGITUDINAL TRENCH: REMOVE AND REPLACE SURFACE FOR LENGTH OF TRENCH FOR FULL WIDTH OR TO THE NEAREST LONGITUDINAL JOINT OR EXISTING PATTERN LINES. COMMENCE AND END REINSTATEMENT AT EXISTING TRANSVERSE JOINTS E.G. CONTRACTION JOINTS, SHRINKAGE CONTROL JOINTS OR PATTERN LINES.
   - 62.3. ASPHALT – TRANSVERSE TRENCH CROSSING: REINSTATE AS REQUIRED.
   - 62.4. ASPHALT – LONGITUDINAL TRENCH: THE WIDTH OF THE EXISTING FOOTPATH SURFACING FOR THE LENGTH OF TRENCH SHALL BE RESURFACED TO MATCH THE CURRENT REGULATIONS FOR WIDTH AND SURFACE FINISH.

UTILITIES LEGEND

- D(D) — EXISTING STORMWATER SERVICES
- SV — W — EXISTING WATER SERVICES
- S(D) — EXISTING SEWER SERVICES
- E OH — EXISTING ELECTRICAL OVERHEAD
- E(D) — EXISTING ELECTRICAL UNDERGROUND
- C(D) — EXISTING COMMUNICATION SERVICES

REV	DATE	DESCRIPTION	RVD
B	30.04.25	ISSUED FOR DA APPROVAL	KH
A	21.02.25	ISSUED FOR APPROVAL	CGO

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CLIENT: Momentum Projects

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PROJECT: PROPOSED DEVELOPMENT
3-5 FINGAL STREET, BRUNSWICK HEADS

STATUS: ISSUED FOR INFORMATION
NOT TO BE USED FOR CONSTRUCTION

DRAWN	DESIGNED	CHECKED	APPROVED
KH	KH	CGO	CGO

DATUM	GRID	SCALE	
AHD	MGA	1:100	AT A1 SIZE

TITLE: UTILITIES NOTES AND LEGEND

PROJECT No. GCE240006 | DRAWING No. UC-1000 | REV. B

\\BGEBNE1SRV\PROJECTS\BGE\BNE\GCE24006 3-5 FINGAL ST BRUNSWICK HEADS\100 DRAWINGS\100 2 CI & WA\AUTOCAD\GCE240006-UC-1010 UTILITIES NOTES AND LEGEND.DWG

N

EXISTING STORMWATER PIT
ø350 OUTLET

EXISTING 150mm WATER CONNECTION
3 FINGAL STREET TO BE REMOVED

COMMERCIAL

FINGAL STREET

EXISTING ELECTRICAL
POLE AND CONNECTION
TO EXISTING BUILDING.

EXISTING TELSTRA PITS
TO BE ADJUSTED TO SUIT
NEW PAVEMENT LEVELS

EXISTING ELECTRICAL PILLAR

CARPARK

BUILDING

EXISTING ELECTRICAL SUBSTATION
AND UNDERGROUND ELECTRICAL LINE

PROPOSED OCEANGUARD® JELLYFISH
WATER TREATMENT DEVICE

PROPOSED 150ø STORMWATER

DRIVEWAY

EXISTING 150mm WATER CONNECTION
5 FINGAL STREET TO BE REUSED

PUBLIC LINK

COMMERCIAL

EXISTING ELECTRICAL
CONNECTION TO EXISTING BUILDING.
LOCATION OF EXISTING ELECTRICAL
POLE TO BE CONFIRMED ON SITE

EXISTING TELSTRA PIT

PROPOSED FEATURE WALL

BALUN LANE

EXISTING AC150 SEWER LINE

EXISTING POWER POLE
AND OVERHEAD ELECTRICITY

EXISTING SEWER MANHOLE
IL 1.93

EXISTING SEWER INSPECTION OPENING

EXISTING 350ø STORMWATER

EXISTING ø100 MPVC WATER LINE

EXISTING OVERHEAD ELECTRICAL

EXISTING UNDERGROUND ELECTRICAL

EXISTING STORMWATER PIT
WITH 350ø OUTLET

EXISTING POWER POLE
AND OVERHEAD ELECTRICITY

0 1 2 3 4 5 6m
SCALE 1:100 AT A1 SIZE

REV	DATE	DESCRIPTION	RVD
C	04.06.25	ISSUED FOR DA APPROVAL	KH
B	27.05.25	ISSUED FOR DA APPROVAL	KH
A	21.02.25	ISSUED FOR APPROVAL	CGO

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BG&E

PROJECT
PROPOSED DEVELOPMENT
3-5 FINGAL STREET, BRUNSWICK HEADS

STATUS
ISSUED FOR INFORMATION
NOT TO BE USED FOR CONSTRUCTION

DRAWN	DESIGNED	CHECKED	APPROVED
KH	KH	CGO	CGO

DATUM	GRID	SCALE	
AHD	MGA	1:100	AT A1 SIZE

TITLE
UTILITIES PLAN

PROJECT No.	DRAWING No.	REV.
GCE240006	UC-1010	C