H.9 Stormwater360 Proprietary Devices

H.9.1 STORMFILTER®

The second potential SQID proposed for SICEEP PPP development is the StormFilter, also a Stormwater 360 product. As a stormwater management device, the StormFilter (see Figure H.11) is a best management practice designed to remove a range of target pollutants including fine solids, soluble heavy metals, oils and total nutrients. Apart from meeting stringent regulatory requirements, the StormFilter systems are usually installed below ground allowing savings in land space and hence increase development yield. StormFilter's compact design reduces construction and installation costs by limiting excavation. Small to medium sized chambers can be delivered on-site fully assembled, whereas the larger types can be constructed from precast components or cast-in-place. Shown in Figure H.12 and Figure H.13 are examples of a fully assembled chamber and a chamber that is constructed out of precast components respectively.

StormFilter systems can be configured to suit flat sites and sites with shallow groundwater levels. Hydraulic drops for StormFilters range from 0.55 to 0.93 m. Likewise, with no metallic component, StormFilters are also suited at sites with salty groundwater conditions (personal communication with Stormwater360). We note that the SICEEP is close to the Darling Harbour and salty groundwater could potentially inundate the system during high tide events.

Figure H.11 A fully installed and operational StormFilter system
(Source: Stormwater360)

Figure H.12 A fully assembled treatment chamber being hoisted in place
(Source: Stormwater360)

Figure H.13 A treatment chamber constructed out of precast panels
(Source: Stormwater360)

The StormFilter system usually includes the inlet and outlet pipes, a treatment chamber, an internal weir and bypass mechanism. The bypass mechanism protects the chamber from high flows and ensures the captured pollutants are not lost during high intensity storm events. The system can be configured to either create the required drop or work around the limited drop without impacting the performance of the system.

Stormwater360 recommends the use StormFilter in combination with Enviropod pit inserts to ensure treatment of the whole spectrum of stormwater pollutants. This combination or treatment train approach, called SFEP, uses the Enviropod pit inserts as the at-source or primary treatment measure and the StormFilter, usually located near the outlet of the catchment, as the secondary treatment measure. The SFEP screening and enhanced filtration process is indicated in Figure H.14.

As with pit inserts, the StormFilter devices may be substituted, during design development by landscape features or alternative devices such as centralised GPTs. Further modelling will be undertaken during the design development stage, to investigate alternative solutions.

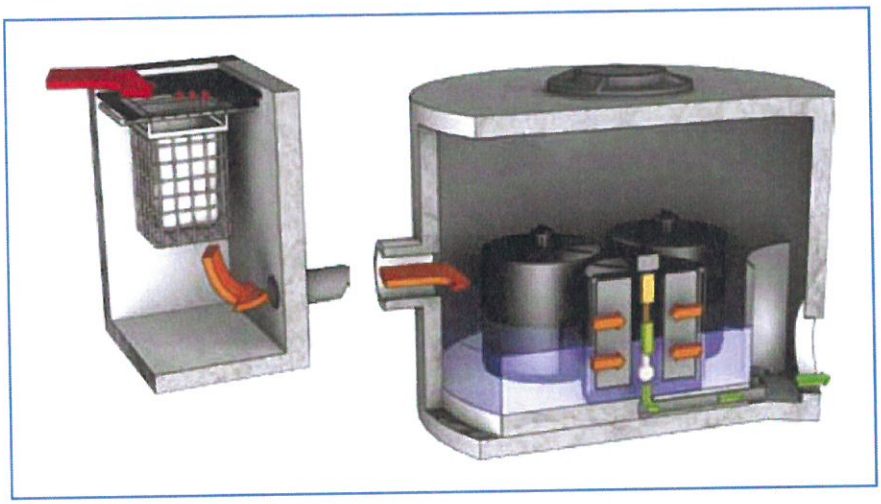


Figure H.14 Screening and enhanced filtration of stormwater pollutants in an SFEP treatment train
(Source: Stormwater360)

Stormwater360 has conducted field testing of the StormFilter device under Australian conditions with the assistance of experts from the Australian academe. The treatment efficiencies of the StormFilter system, when used in the SFEP treatment train in reducing gross pollutants, TSS, TP and TN are 100%, 74%, 49% and 32% respectively. As with the Enviropods, these treatment efficiencies were derived from the result of the Kuranda field testing that is discussed in Appendix H.

Like any infiltration system, pollutants retained by the StormFilter system must be periodically removed to restore the system to its fully efficiency and effectiveness. Maintenance requirements and frequency are dependent on the pollutant load requirements of the site. Additional maintenance activities may be required in the event of a chemical spill or due to excessive sediment loading from site erosion or extreme storms.

In consideration of Council and developers, StormFilters are specifically designed to reduce maintenance requirements compared to alternatives such as raingardens. Annual maintenance only involves cleaning of the chamber and the cartridges. Replacement of the filtration media cartridge is required after a designated period.

Stormwater360 offers a Maintenance Service for a designated period to achieve a cost-effective turnkey solution for maintaining the stormwater system and to ensure ongoing regulatory compliance.

StormFilter systems will be installed, either on-line or off-line, at appropriate locations within SICEEP generally within the shared zones and adjoining the Boulevard.

H.9.2 SFEP Treatment Train Field Testing (Information provided by Stormwater360)

In 2005, a field evaluation of the SFEP technology was undertaken near the township of Kuranda. Stormwater360 supplied the product, sampling equipment and guidance on installation of the devices. The site was installed and wholly funded by QLD Department of Main Roads and was monitored over an extended period of time by James Cook University (JCU, 2008). This study was extended by Stormwater360 (Kuranda) for an additional 2 years to expand the data set. The results obtained by Stormwater360 were also independent as Cairns Water was engaged for sampling collection and analysis together with the program being overseen by a peer reviewer from Queensland University of Technology. The research referred to herein provides information to inform the performance claims of both the Enviropod and StormFilter technologies.

The site setup, equipment and monitoring protocols were independent and identical for both the JCU and Kuranda studies. The peer reviewer's assessment of the Kuranda study found that "...the data collection has been based on a very rigorous and technically demanding monitoring program. This adds further credibility to the field evaluation undertaken." (Goonetilleke, 2010). The data from the JCU and Kuranda studies have been correlated and published in the Australia Water Association's Water Journal in September 2011.

Table 2. Summary of results.

Analyte	No. of events	Range of Influent EMCs (mg/L)	Median Influent EMC (mg/L)	Range of Effluent EMCs (mg/L)	Median Effluent EMC (mg/L)	Mean Removal Efficiency (Sum of Loads)
SSC	6	75 to 4384	1181	8 to 63	20	99%
SSC < 500 micron	6	48 to 180	105	8 to 62	20	78%
TP	6	0.08 to 0.19	0.123	0.02 to 0.15	0.055	47%
TN	6	0.6 to 1.5	1.045	0.2 to 0.9	0.615	44%
TKN	6	0.6 to 1.2	1.007	0.175 to 0.800	0.515	49%
NH3-N	6	0.05 to 0.15	0.050	0.05 to 0.07	0.050	31%
TOC	6	3 to 16	7	3 to 10	5	32%
DOC	6	3 to 12	7	3 to 11	6	21%

H.9.2 LiveRoof® System

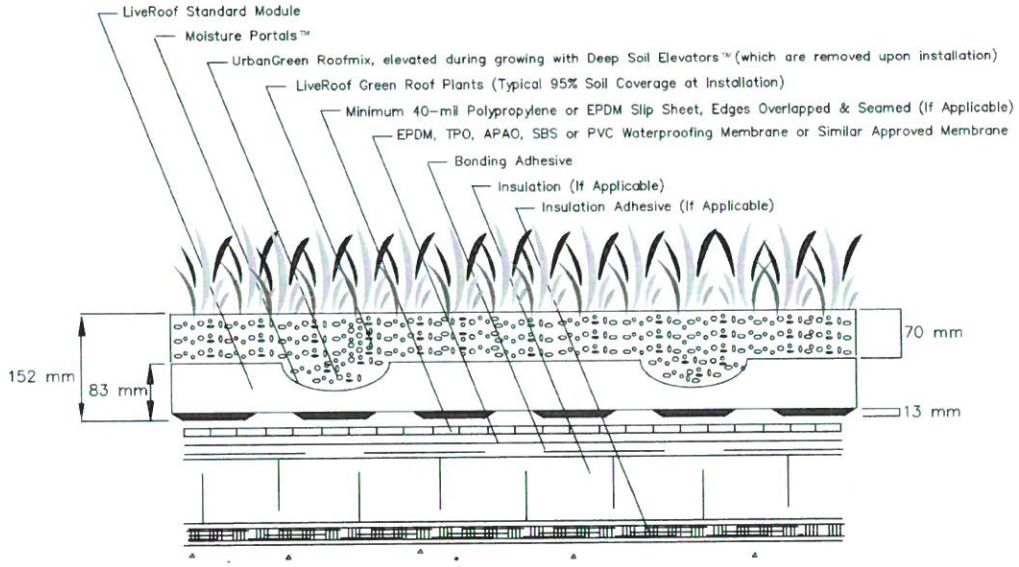
LiveRoof is a modular a pre-vegetated engineered green roof system that is easily installed onto the roofing membrane in a similar manner to readymade lawn products. Pre-vegetation of LiveRoof® is undertaken at local nurseries using localised plant stock for approximately three months prior to installation. This means that only strong, mature plants are installed onto the roof top. The LiveRoof solution can be applied to the green roof of the ICC Exhibition south building. The system can also be utilised for the sloping roofs of the

entrance of the ICC Exhibition south building. Given the roof's steep pitches, LiveRoof will ensure a healthy strong living roof in the shortest possible time to reduce the possibility of wind and rain scour.

Recently Stormwater360 has developed the 'UrbanGreen' range of Low Impact Design solutions. One of these products being the LiveRoof® modular green roof system. LiveRoof® is a pre-vegetated engineered solution that is easily installed onto the roofing membrane in a similar manner to readymade lawn products.

LiveRoof® is pre-vegetated at local nurseries using localised plant stock for approximately three months prior to installation. This means that only strong, mature plants are installed onto the roof top. Given that the project has steep roof pitches, this approach will ensure a healthy strong living roof in the shortest possible time to reduce the possibility of wind and rain scour.

LiveRoof® is a modular pre-vegetated green roof system developed by horticulturalists in a collaborative effort with experts in the fields of logistics, architecture, manufacturing, construction, green roofing and ergonomics. Stormwater360 works with experienced local nurseries and horticultural specialists to offer the most appropriate planting for the project.

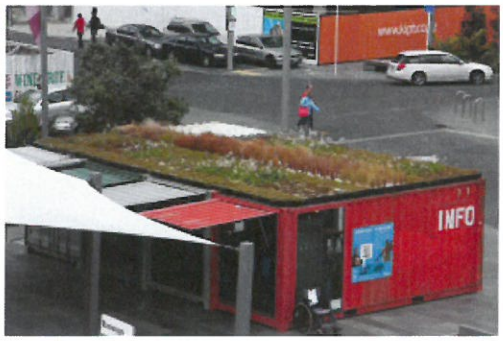


Each LiveRoof® module arrives at the job site with full-grown plants inside the container and is simply set in place on the rooftop. The Soil Elevators™ are then removed for a seamless fit, meaning there is no need to start with a brown roof and farm it for years, waiting for it to become a green roof.

The main difference between LiveRoof® and a traditional 'built in place' approach to construct a green roof is that LiveRoof® is:

- pre-grown at a nursery and
- installed using minimal equipment,

This means less chance of penetrating the waterproofing membrane during installation and higher success rate of planting, with minimal maintenance costs.



The unique features and benefits of LiveRoof® are as follows:

- Quick & easy installation: Most of the installation work can be done on the ground. It's safer, faster, and costs less than working on the roof. Arranging/installing modules on the roof is all that's required.

- Quality assurance process: The LiteRoofTM soil mix and vegetated tray undergo stringent quality assurance procedures to ensure that they meet New Zealand and international guidelines and to ensure that only the strong and healthy plants are installed.

- Fully grown upon installation: LiveRoof® is delivered and installed pre-vegetated for immediate enjoyment of the appearance and benefits from day one.

- Unique Hybrid Design: No visible seams or grid appearance upon installation.

- No filter fabric or drainage board is required. The drainage board is integrated in the module and the carefully engineered growing medium minimises the amount of fines to preventing clogging. Unlike the built-in-place systems, there aren't heavy layers of additional water-retention fabrics, drainage layers, etc. which can be prone to clogging over time.

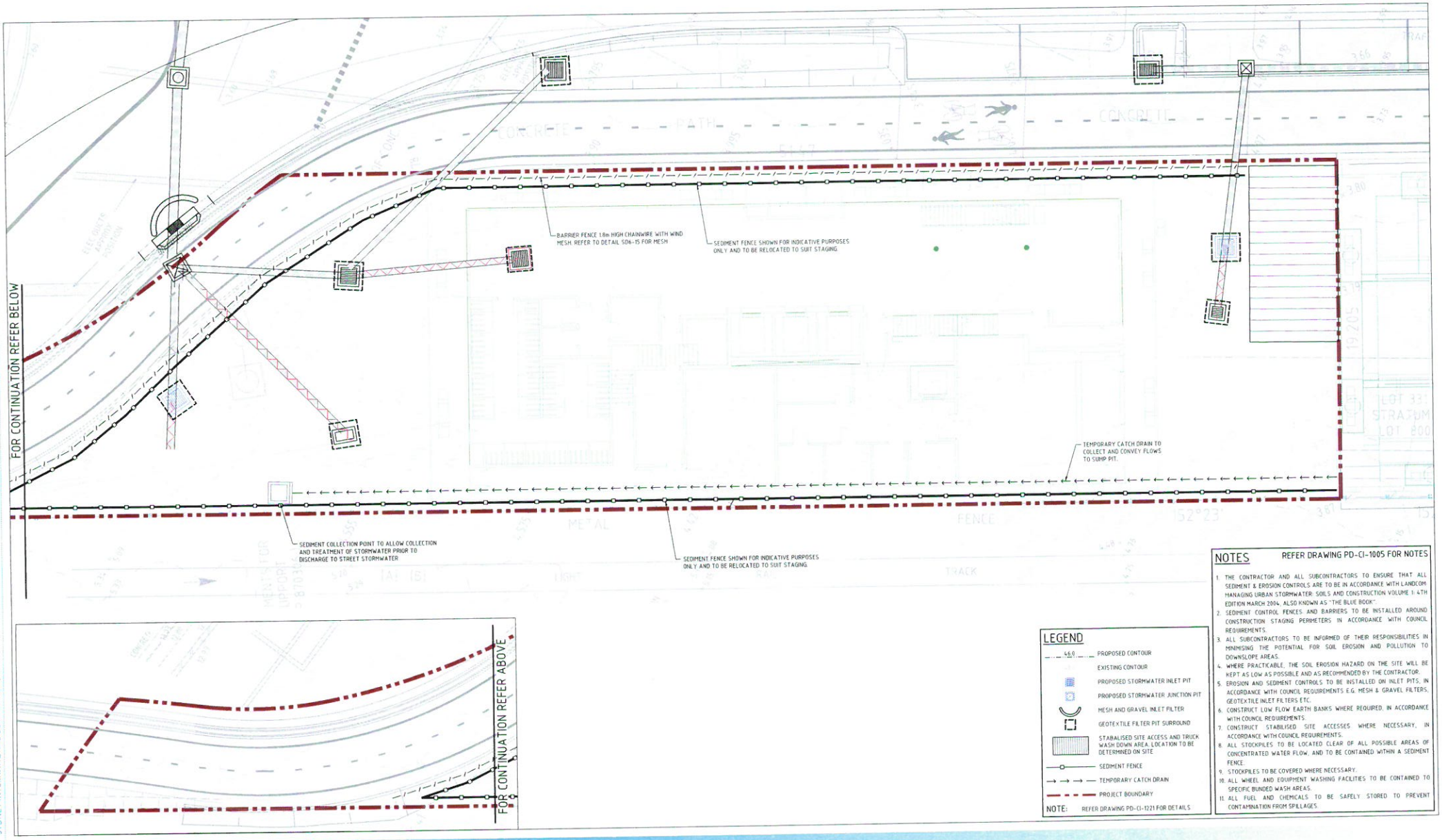
- No water reservoirs are present in the patented LiveRoof® modules as water build-up causes root rot.

- Engineered UrbanGreen LiteRoofTM Mix inorganic soil has minimal degradation, so plant crowns do not become exposed and damaged, and soil structure is retained over time to ensure good drainage.

- Minimal maintenance is required, and minimal watering is necessary under normal climate conditions.

APPENDIX B

SEDIMENT AND EROSION CONTROL PLAN



LEGEND

- 46.0 — PROPOSED CONTOUR
- EXISTING CONTOUR
- PROPOSED STORMWATER INLET PIT
- PROPOSED STORMWATER JUNCTION PIT
- MESH AND GRAVEL INLET FILTER
- GEOTEXTILE FILTER PIT SURROUND
- STABALISED SITE ACCESS AND TRUCK WASH DOWN AREA. LOCATION TO BE DETERMINED ON SITE
- SEDIMENT FENCE
- TEMPORARY CATCH DRAIN
- PROJECT BOUNDARY

NOTE: REFER DRAWING PD-CI-1221 FOR DETAILS.

NOTES

REFER DRAWING PD-CI-1005 FOR NOTES

1. THE CONTRACTOR AND ALL SUBCONTRACTORS TO ENSURE THAT ALL SEDIMENT & EROSION CONTROLS ARE TO BE IN ACCORDANCE WITH LANDCOM: MANAGING URBAN STORMWATER: SOILS AND CONSTRUCTION VOLUME 1: 4TH EDITION MARCH 2004, ALSO KNOWN AS "THE BLUE BOOK".
2. SEDIMENT CONTROL FENCES AND BARRIERS TO BE INSTALLED AROUND CONSTRUCTION STAGING PERIMETERS IN ACCORDANCE WITH COUNCIL REQUIREMENTS.
3. ALL SUBCONTRACTORS TO BE INFORMED OF THEIR RESPONSIBILITIES IN MINIMISING THE POTENTIAL FOR SOIL EROSION AND POLLUTION TO DOWNSLOPE AREAS.
4. WHERE PRACTICABLE, THE SOIL EROSION HAZARD ON THE SITE WILL BE KEPT AS LOW AS POSSIBLE AND AS RECOMMENDED BY THE CONTRACTOR.
5. EROSION AND SEDIMENT CONTROLS TO BE INSTALLED ON INLET PITS, IN ACCORDANCE WITH COUNCIL REQUIREMENTS E.G. MESH & GRAVEL FILTERS, GEOTEXTILE INLET FILTERS ETC.
6. CONSTRUCT LOW FLOW EARTH BANKS WHERE REQUIRED, IN ACCORDANCE WITH COUNCIL REQUIREMENTS.
7. CONSTRUCT STABILISED SITE ACCESSES WHERE NECESSARY, IN ACCORDANCE WITH COUNCIL REQUIREMENTS.
8. ALL STOCKPILES TO BE LOCATED CLEAR OF ALL POSSIBLE AREAS OF CONCENTRATED WATER FLOW, AND TO BE CONTAINED WITHIN A SEDIMENT FENCE.
9. STOCKPILES TO BE COVERED WHERE NECESSARY.
10. ALL WHEEL AND EQUIPMENT WASHING FACILITIES TO BE CONTAINED TO SPECIFIC BUNDED WASH AREAS.
11. ALL FUEL AND CHEMICALS TO BE SAFELY STORED TO PREVENT CONTAMINATION FROM SPILLAGES.

SYDNEY INTERNATIONAL CONVENTION, EXHIBITION AND ENTERTAINMENT PRECINCT

DARLING HARBOUR LIVE

REFERENCE MAP

NOTES:

1. DO NOT SCALE FROM DRAWINGS. USE WRITTEN DIMENSIONS ONLY.
2. ALL DIMENSIONS IN MILLIMETRES UNLESS NOTED OTHERWISE.
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REV	DESCRIPTION	DATE
06	ISSUE FOR DEVELOPMENT APPLICATION	11/09/15
04	ISSUE FOR DEVELOPMENT APPLICATION	07/09/15
03	ISSUE FOR DEVELOPMENT APPLICATION	04/09/15
02	ISSUE FOR DEVELOPMENT APPLICATION	01/09/15
01	DRAFT ISSUE	19/08/15

CLIENT
urbanest student accommodation
URBANEST STUDENT ACCOMMODATION
SUITE 102, LEVEL 1, AUSTRALIA SQUARE,
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PROJECT
SICEEP - DARLING HARBOUR LIVE
DARLING SQUARE
WESTERN PLOT BUILDING W1

DRAWING TITLE
SEDIMENT AND EROSION CONTROL PLAN

STATUS
DA APPROVAL

SCALE @ A1	DRAWN	DESIGNED	REVIEWED	APPROVED
1:100	JW	JW	MAK	-

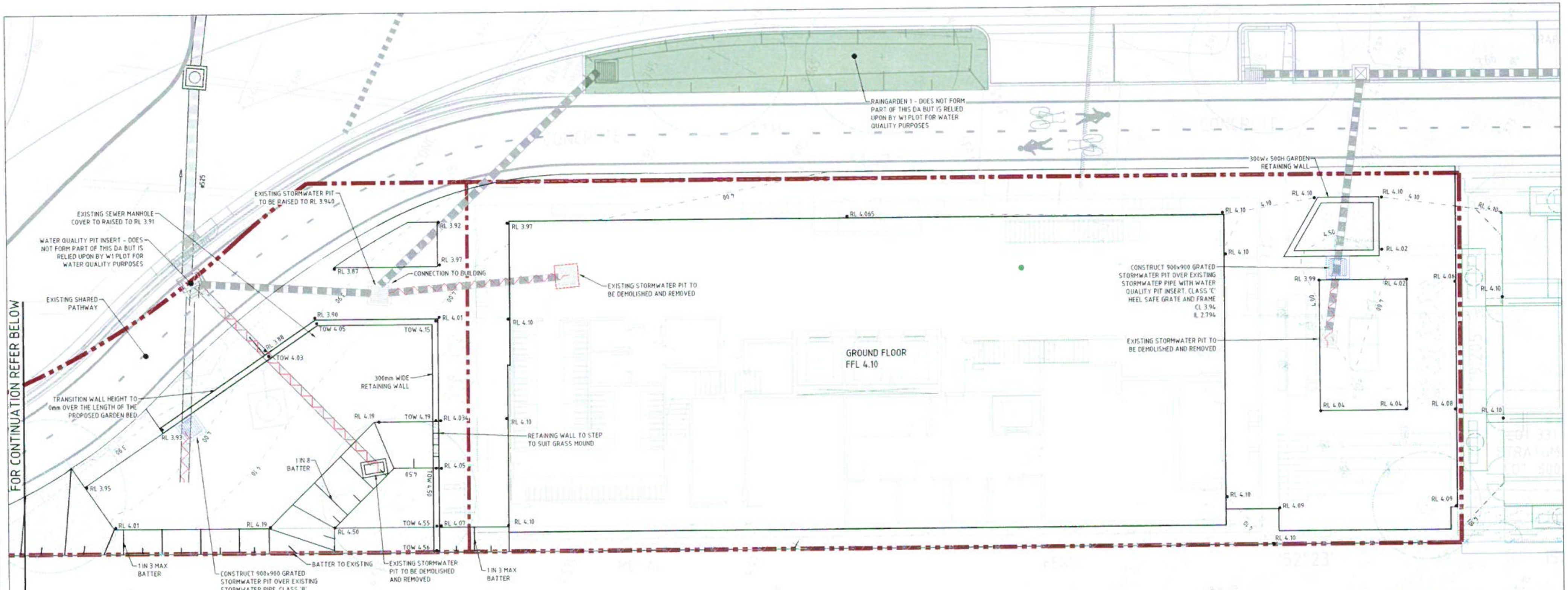
PROJECT NUMBER	DRAWING NUMBER	REV
AA004399	PD-CI-1	05

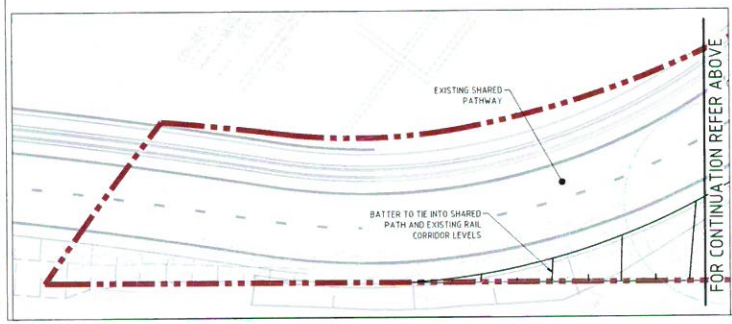
Original Sheet Size A1 - 841 x 594mm

Date Plotted: 11 Sep 2015 - 04:53P... F:\AA004399\E-CAD\C-CIVIL\D-FinalNB-PDA\4-W1 Building (PD-CI-1001 - PD-CI-1999)\PD-CI-1201-SedimentAndErosionControlPlan.dwg

APPENDIX C

CIVIL WORKS AND STORMWATER PLAN





STORMWATER NOTES

1. EXISTING DRAINAGE SYSTEMS ARE NOT TO BE DECOMMISSIONED UNLESS DETAILED SURVEY CLEARLY DEMONSTRATES THE SYSTEMS DO NOT SERVE UPSTREAM CATCHMENT

NOTES

1. REFER DRAWING PD-CI-1005 FOR GENERAL NOTES.

LEGEND

- 4.6.0 — PROPOSED CONTOUR
- EXISTING CONTOUR
- K&G — PROPOSED KERB & GUTTER
- CK&G — PROPOSED CASTELLATED KERB & GUTTER
- DC — PROPOSED DISH CROSSING
- MK — PROPOSED MOUNTABLE KERB
- K&T — PROPOSED KERB & TOE
- KO — PROPOSED KERB ONLY
- CKO — PROPOSED CASTELLATED KERB ONLY
- TE — PROPOSED THICKENED EDGE

LEGEND (CONTINUED)

- EXISTING STORMWATER PIPE / CULVERT TO BE RETAINED AND PROTECTED
- EXISTING STORMWATER PIPE / CULVERT TO BE DEMOLISHED AND BACKFILLED
- EXISTING STORMWATER PIT TO BE RETAINED (OUTLINE SHOWN INDICATIVE ONLY)
- EXISTING STORMWATER PIT TO BE DEMOLISHED (OUTLINE SHOWN INDICATIVE ONLY)
- PROPOSED STORMWATER PIPE / CULVERT
- PRELIMINARY PROPOSED STORMWATER PIPE / CULVERT AS PART OF OTHER PLOTS. REFER RELEVANT PLOT DRAWINGS FOR DETAILS
- HA\1 — STORMWATER PIT NUMBER
- PROPOSED SURFACE INLET PIT
- PROPOSED JUNCTION PIT
- PROJECT BOUNDARY

DARLING HARBOUR LIVE

SYDNEY INTERNATIONAL CONVENTION, EXHIBITION AND ENTERTAINMENT PRECINCT

REFERENCE MAP

SA

NOTES:
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REV	DESCRIPTION	DATE
04	ISSUE FOR DEVELOPMENT APPLICATION	11/09/15
03	ISSUE FOR DEVELOPMENT APPLICATION	04/09/15
02	ISSUE FOR DEVELOPMENT APPLICATION	01/09/15
01	DRAFT ISSUE	19/08/15

CLIENT
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PROJECT
SICEEP - DARLING HARBOUR LIVE
DARLING SQUARE
WESTERN PLOT BUILDING W1

DRAWING TITLE
CIVIL WORKS AND STORMWATER PLAN

STATUS
DA APPROVAL

SCALE @ A1	DRAWN	DESIGNED	REVIEWED	APPROVED
1:100	JW	JW	MAK	-

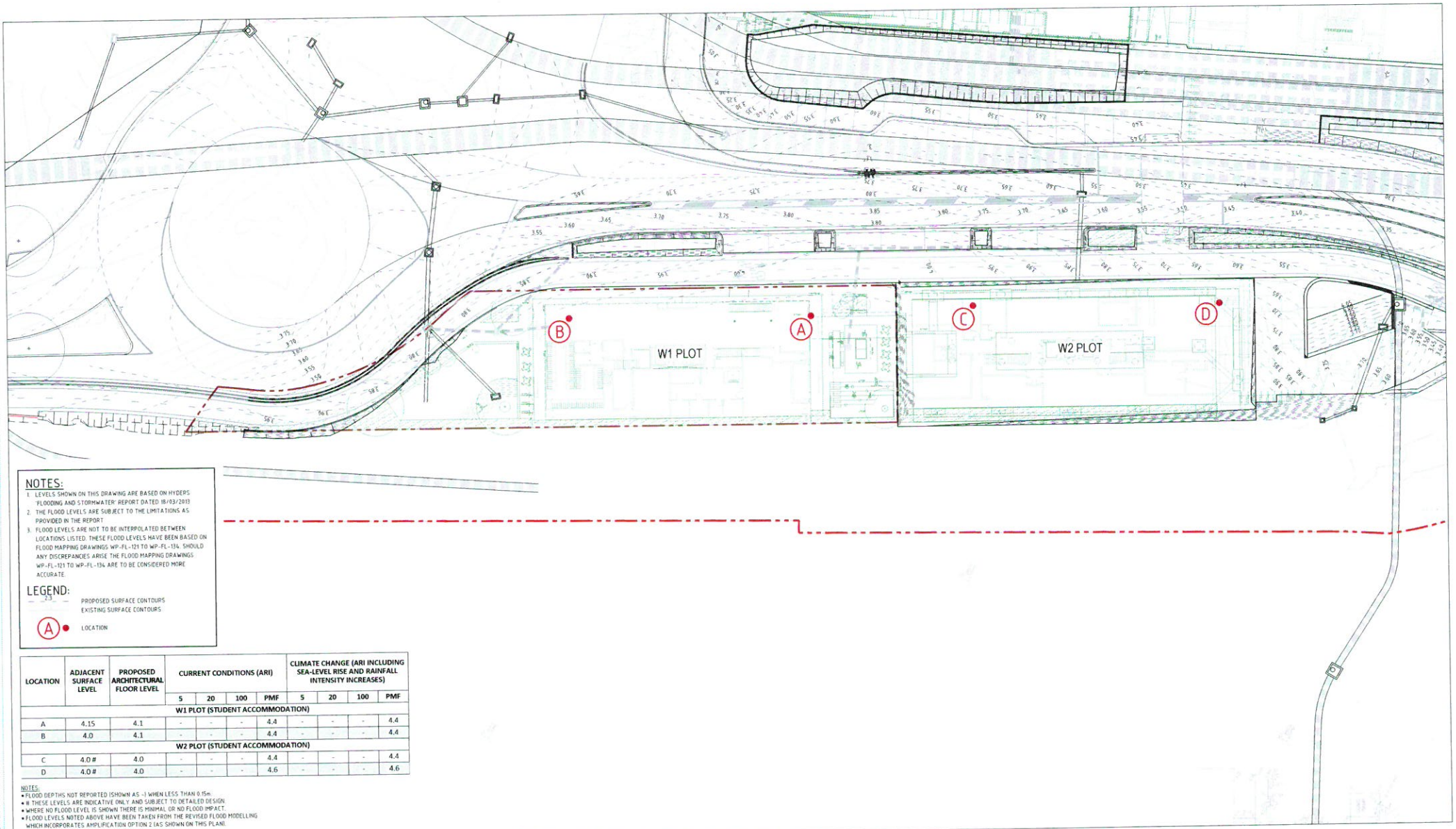
PROJECT NUMBER	DRAWING NUMBER	REV
AA004399	PD-CI-1	04

Original Sheet Size A1 - 841 x 594mm

Date Plotted: 11 Sep 2015 - 04:54PM ... F:\AA004399\E-CAD\C-Civil\D-Final\B-PDA\-W1 Building (PD-CI-1001 - PD-CI-1999)\PD-CI-1301-CivilWorksAndStormwaterPlan.dwg

APPENDIX D

PROPOSED FLOOR LEVEL GRADING AND FLOOD LEVEL (INCLUDING CLIMATE CHANGE) PLAN



SYDNEY INTERNATIONAL CONVENTION, EXHIBITION AND ENTERTAINMENT PRECINCT

NOTES:

1. LEVELS SHOWN ON THIS DRAWING ARE BASED ON HYDERS 'FLOODING AND STORMWATER' REPORT DATED 18/03/2013
2. THE FLOOD LEVELS ARE SUBJECT TO THE LIMITATIONS AS PROVIDED IN THE REPORT
3. FLOOD LEVELS ARE NOT TO BE INTERPOLATED BETWEEN LOCATIONS LISTED. THESE FLOOD LEVELS HAVE BEEN BASED ON FLOOD MAPPING DRAWINGS WP-FL-121 TO WP-FL-134. SHOULD ANY DISCREPANCIES ARISE THE FLOOD MAPPING DRAWINGS WP-FL-121 TO WP-FL-134 ARE TO BE CONSIDERED MORE ACCURATE.

LEGEND:

PROPOSED SURFACE CONTOURS
EXISTING SURFACE CONTOURS
A LOCATION

LOCATION	ADJACENT SURFACE LEVEL	PROPOSED ARCHITECTURAL FLOOR LEVEL	CURRENT CONDITIONS (ARI)				CLIMATE CHANGE (ARI INCLUDING SEA-LEVEL RISE AND RAINFALL INTENSITY INCREASES)			
			5	20	100	PMF	5	20	100	PMF
W1 PLOT (STUDENT ACCOMMODATION)										
A	4.15	4.1	-	-	-	4.4	-	-	-	4.4
B	4.0	4.1	-	-	-	4.4	-	-	-	4.4
W2 PLOT (STUDENT ACCOMMODATION)										
C	4.0#	4.0	-	-	-	4.4	-	-	-	4.4
D	4.0#	4.0	-	-	-	4.6	-	-	-	4.6

NOTES:
- FLOOD DEPTHS NOT REPORTED (SHOWN AS -) WHEN LESS THAN 0.15m.
- # THESE LEVELS ARE INDICATIVE ONLY AND SUBJECT TO DETAILED DESIGN.
- WHERE NO FLOOD LEVEL IS SHOWN THERE IS MINIMAL OR NO FLOOD IMPACT.
- FLOOD LEVELS NOTED ABOVE HAVE BEEN TAKEN FROM THE REVISED FLOOD MODELLING WHICH INCORPORATES AMPLIFICATION OPTION 2 (AS SHOWN ON THIS PLAN).

DARLING HARBOUR LIVE

REFERENCE MAP

P.P.P.

NOTES:
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REV	DESCRIPTION	DATE
02	ISSUE FOR REPORT	11/09/15
01	ISSUE FOR INFOR	18/08/15

CLIENT
lendlease
LEND LEASE (HAYMARKET) PTY. LTD.
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SURRY HILLS, NSW 2010

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PROJECT
SICEEP
DARLING HARBOUR
PRIVATE DEVELOPMENT AREA (PDA)

DRAWING TITLE
W1 PLOT PROPOSED FLOOR LEVEL GRADING AND FLOOD LEVEL (INCLUDING CLIMATE CHANGE) PLAN

STATUS
PRELIMINARY ONLY

SCALE @ A1	DRAWN	DESIGNED	REVIEWED	APPROVED
1 : 500	JW	CM	MK	MK

PROJECT NUMBER	DRAWING NUMBER	REV
AA004399	SKCPD	02

Original Sheet Size A1 - 841 x 594mm

Date Plotted: 11 Sep 2015 - 05:40Pk
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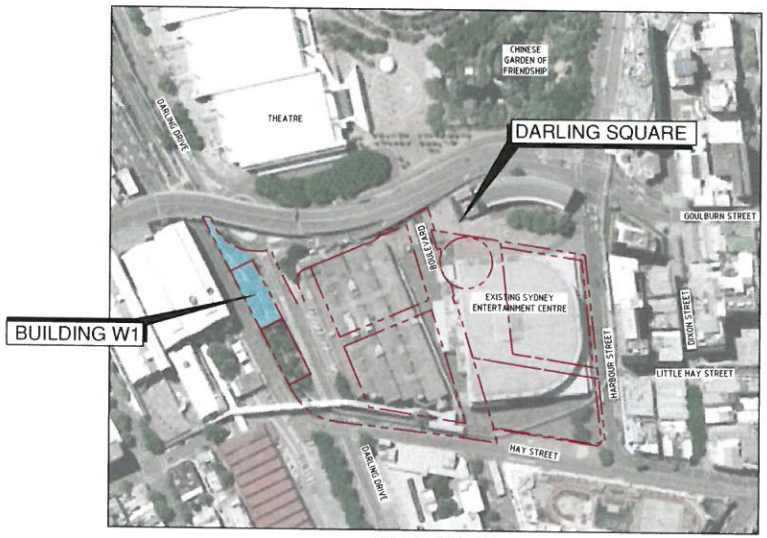
SYDNEY INTERNATIONAL CONVENTION, EXHIBITION AND ENTERTAINMENT PRECINCT (SICEEP)

DARLING SQUARE
WESTERN PLOT BUILDING W1
DEVELOPMENT APPLICATION



LOCALITY PLAN
N.T.S.

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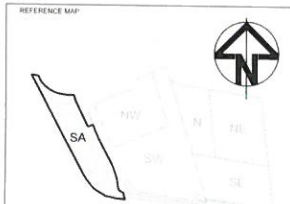
New South Wales

DARLING HARBOUR LIVE

SYDNEY INTERNATIONAL CONVENTION, EXHIBITION AND ENTERTAINMENT PRECINCT

DARLING HARBOUR LIVE

REFERENCE MAP



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Hyder

PROJECT
SICEEP - DARLING HARBOUR LIVE
DARLING SQUARE
WESTERN PLOT BUILDING W1

DRAWING TITLE
TITLE SHEET AND LOCALITY PLAN

STATUS
DA APPROVAL

SCALE @ A1	DRAWN	DESIGNED	REVIEWED	APPROVED
N.T.S.	JW	JW	MAK	-

PROJECT NUMBER	DRAWING NUMBER	REV
AA004399	PD-CI-1001	04

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GENERAL	
PD-CI-1001	TITLE SHEET AND LOCALITY PLAN
PD-CI-1002	DRAWING LIST
PD-CI-1005	GENERAL NOTES SHEET 1
PD-CI-1006	GENERAL NOTES SHEET 2
PD-CI-1011	GENERAL ARRANGEMENT PLAN
PD-CI-1021	SURVEY AND EXISTING SERVICES PLAN (DBYD)
PD-CI-1022	SURVEY AND EXISTING SERVICES PLAN (ROBERT BIRD GROUP)
SITE PREPARATION	
PD-CI-1151	BULK EARTHWORKS PLAN
SEDIMENT AND EROSION CONTROL	
PD-CI-1201	SEDIMENT AND EROSION CONTROL PLAN
PD-CI-1221	SEDIMENT AND EROSION CONTROL DETAILS
CIVIL WORKS	
PD-CI-1301	CIVIL WORKS AND STORMWATER PLAN
STORMWATER DRAINAGE	
PD-CI-1541	STORMWATER DRAINAGE CATCHMENT PLAN
SERVICES	
PD-CI-1902	COMBINED SERVICES PLAN (ROBERT BIRD GROUP)

SYDNEY INTERNATIONAL CONVENTION, EXHIBITION AND ENTERTAINMENT PRECINCT

DARLING HARBOUR LIVE

REFERENCE MAP

NOTES:
1. DO NOT SCALE FROM DRAWINGS. USE WRITTEN DIMENSIONS ONLY.
2. ALL DIMENSIONS IN MILLIMETRES UNLESS NOTED OTHERWISE.
3. ALL COORDINATES TO MGA. ALL LEVELS TO AHD.
4. ALL DIMENSIONS, COORDINATES AND LEVELS TO BE VERIFIED ON SITE BEFORE PROCEEDING WITH WORK. HYDER SHALL BE NOTIFIED IN WRITING OF ANY DISCREPANCIES.
5. THIS DRAWING MUST BE READ IN CONJUNCTION WITH ALL RELEVANT CONTRACTS, SPECIFICATIONS AND DRAWINGS.
6. THIS DRAWING CONTAINS COLOUR AND MUST ONLY BE PRINTED OR COPIED IN COLOUR.

REV	DESCRIPTION	DATE
04	ISSUE FOR DEVELOPMENT APPLICATION	11/09/15
03	ISSUE FOR DEVELOPMENT APPLICATION	04/09/15
02	ISSUE FOR DEVELOPMENT APPLICATION	01/09/15
01	DRAFT ISSUE	19/08/15

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NERAL NOTES

1. ALL WORKS SHALL BE CARRIED OUT IN ACCORDANCE WITH R.M.S, AUSTRALIAN STANDARDS, AUSTROADS, SHFA AND CITY OF SYDNEY COUNCIL'S DESIGN GUIDELINES AND SPECIFICATIONS AND/OR AS DIRECTED BY THE PRINCIPLE. WHERE DISCREPANCIES OCCUR THE MORE STRINGENT SPECIFICATION WILL TAKE PRECEDENCE.
2. THE CONTRACTOR SHALL LOCATE AND DETERMINE ALL LEVELS OF EXISTING SERVICES PRIOR TO COMMENCING CONSTRUCTION AND SHALL MAKE ALL NECESSARY ARRANGEMENTS WITH THE RELEVANT AUTHORITY TO RELOCATE OR ADJUST AS REQUIRED. ALL COSTS TO BE BORNE BY THE APPLICANT, (NOT AT COUNCIL'S EXPENSE)
3. NO ONE SHALL ENTER UPON OR DO ANY WORK WITHIN ADJACENT LANDS WITHOUT PRIOR WRITTEN PERMISSION OF THE LAND OWNER.
4. SURVEY MARKS SHALL BE MAINTAINED AT ALL TIMES. WHERE RETENTION IS NOT POSSIBLE THE PRINCIPLE SHALL BE NOTIFIED AND CONSENT RECEIVED PRIOR TO THEIR REMOVAL.
5. SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED PRIOR TO SOIL DISTURBANCE IN KEEPING WITH THE "MANAGING STORMWATER MANUAL", 2004 BY LANDCOM AND TO COUNCIL'S SOIL EROSION AND SEDIMENT CONTROL POLICY.
6. ALL LAND DISTURBED BY EARTHWORKS SHALL BE HYDROMULCHED, OR SIMILARLY TREATED TO ESTABLISH GRASS COVER. SEED MIXTURES ARE TO BE APPROVED BY URBANEST PRIOR TO SPRAYING. ALL GRASSED AREAS SHALL BE REGULARLY WATERED AND MAINTAINED UNTIL EXPIRATION OF THE MAINTENANCE PERIOD.
7. THE CONTRACTOR SHALL MAINTAIN DUST CONTROL THROUGHOUT THE DURATION OF THE PROJECT.
8. ALL DRAINAGE LINES SHALL BE CONTAINED WITHIN THEIR EASEMENTS AND CONFORM WITH COUNCIL'S STANDARDS.
9. SUBSOIL DRAINS SHALL BE CONSTRUCTED TO THE SATISFACTION OF THE COUNCIL OR R.M.S SPECIFICATION WHERE APPLICABLE.
10. MINIMUM 100mm THICK TOPSOIL SHALL BE SPREAD ON ALL FOOTPATHS, BERMS, BATTERS AND SITE REGRADING AREAS. EXCESS TOPSOIL SHALL BE DISPOSED OF AS DIRECTED BY THE PRINCIPLE.
11. THE CONTRACTOR SHALL PROVIDE MINIMUM 48 HOURS NOTICE TO THE PRINCIPLE FOR ALL INSPECTIONS.
12. THE CONTRACTOR SHALL MAINTAIN SERVICES AND ALL WEATHER ACCESS AT ALL TIMES TO THE ADJOINING PROPERTIES INCLUDING PEDESTRIAN ACCESS.
13. THE CONTRACTOR SHALL UNDERTAKE TRAFFIC CONTROL MANAGEMENT MEASURES IN ACCORDANCE WITH THE RMS TRAFFIC CONTROL AT WORK SITES MANUAL AND TO THE PRINCIPLE'S SATISFACTION AND SHALL DISPLAY APPROPRIATE WARNING SIGNS THROUGHOUT THE DURATION OF CONSTRUCTION.
14. ALL NATURAL SURFACE DATA HAS BEEN DETERMINED BY TERRAIN MODELLING. ALL CONSTRUCTION SITE WORKS MUST BE CARRIED OUT USING THE BENCH MARKS NOTED IN THIS DRAWINGS.
15. 100 YEAR FLOW PATHS TO BE FORMED AT TIME OF CONSTRUCTION.
16. ALL WORKS ADJACENT TO THE RAIL ARE TO BE UNDERTAKEN IN ACCORDANCE WITH RAILCORP, TRANSPORT FOR NSW AND THE RAIL OPERATOR REQUIREMENTS AND SPECIFICATIONS.
17. ALL WORKS TO BE CARRIED OUT IN COORDINATION WITH ADJACENT EXISTING AREAS, PPP AND PUBLIC REALM WORKS.

SURVEY NOTES

1. DETAILED GROUND SURVEY WITHIN THE SITE AND BOUNDARIES WERE SUPPLIED BY RYGATE & COMPANY PTY. LTD. REFERENCE NUMBER 75717, DATED 22/08/2013 AND UPDATED ON 08/05/2014.
2. THE INFORMATION IS SHOWN TO PROVIDE A BASIS FOR DESIGN. HYDER CONSULTING DOES NOT GUARANTEE THE ACCURACY OR COMPLETENESS OF THE SURVEY BASE.
3. SHOULD DISCREPANCIES BE ENCOUNTERED DURING CONSTRUCTION BETWEEN THE SURVEY DATA AND ACTUAL FIELD DATA, CONTACT URBANEST.

LOCAL SURVEY MARKS

SSM 168145	E 333679.368 N 6249942.260
ORIGIN OF COORDINATES	SSM 54327 TO SSM 168146
ORIGIN OF LEVELS	PM 55082 RL 3.288

SUBSOIL DRAINAGE NOTES

1. SUBSOIL DRAINAGE TO BE INSTALLED UNDER ALL KERBS IN ACCORDANCE WITH CITY OF SYDNEY COUNCIL SPECIFICATIONS AND R.M.S SPECIFICATIONS WHERE APPLICABLE.
2. CLEANOUT TO BE PROVIDED IN ACCORDANCE WITH CITY OF SYDNEY COUNCIL SPECIFICATIONS.

BOUNDARY LEGEND

- SICEEP BOUNDARY
- PDA DA BOUNDARY
- LIMITED IN STRATUM BOUNDARY

SITEWORKS NOTES

1. ORIGIN OF LEVELS: REFER SURVEY NOTES.
2. CONTRACTOR MUST VERIFY ALL DIMENSIONS AND EXISTING LEVELS ON SITE PRIOR TO COMMENCEMENT OF WORK. ANY DISCREPANCIES TO BE REPORTED TO HYDER CONSULTING.
3. MAKE SMOOTH CONNECTION WITH EXISTING WORKS.
4. ALL TRENCH BACKFILL MATERIAL SHALL BE COMPACTED TO THE SAME DENSITY AS THE ADJACENT MATERIAL.
5. SEWER, POTABLE WATER AND RECYCLED WATERMAINS BACKFILL TO BE IN ACCORDANCE WITH WSA03-2002-2.2, WAT-1201, WAT-1202, WAT-1203 AND WAT-1204-V. ALL OTHER SERVICE TRENCHES UNDER VEHICULAR PAVEMENTS SHALL BE BACKFILLED WITH SAND TO 300mm ABOVE PIPE. WHERE PIPE IS UNDER PAVEMENTS BACKFILL REMAINDER OF TRENCH TO UNDERSIDE OF PAVEMENT WITH CEMENT STABILISED SAND OR APPROVED GRANULAR MATERIAL COMPACTED IN 150mm LAYERS TO MINIMUM 98% MODIFIED MAXIMUM DRY DENSITY IN ACCORDANCE WITH AS 1289 5.2.1. (OR A DENSITY INDEX OF NOT LESS THAN 75)
6. PROVIDE 10mm WIDE EXPANSION JOINTS BETWEEN BUILDINGS AND ALL CONCRETE OR UNIT PAVEMENTS.
7. ASPHALTIC CONCRETE SHALL CONFORM TO R.M.S. SPECIFICATION R116.
8. ALL BASECOURSE MATERIAL SHALL BE IGNEOUS ROCK QUARRIED MATERIAL TO COMPLY WITH R.M.S. QA SPECIFICATION 3051 COMPACTED TO MINIMUM 98% MODIFIED DENSITY IN ACCORDANCE WITH AS 1289 5.2.1. FREQUENCY OF COMPACTION TESTING SHALL NOT BE LESS THAN 1 TEST PER $50m^3$ OF BASECOURSE MATERIAL PLACED.
9. ALL SUB-BASE COURSE MATERIAL SHALL BE IGNEOUS ROCK QUARRIED MATERIAL TO COMPLY WITH R.M.S. QA SPECIFICATION 3051 AND 3051.1 AND COMPACTED TO MINIMUM 95% MODIFIED DENSITY IN ACCORDANCE WITH A.S 1289 5.2.1 AND RMS SPECIFICATION R71. FREQUENCY OF COMPACTION TESTING SHALL NOT BE LESS THAN 1 TEST PER $50m^3$ OF SUB-BASE COURSE MATERIAL PLACED.
10. AS AN ALTERNATIVE TO THE USE OF IGNEOUS ROCK AS A SUB-BASE MATERIAL IN (9) A CERTIFIED RECYCLED CONCRETE MATERIAL COMPLYING WITH R.M.S. QA SPECIFICATION 3051 AND 3051.1 WILL BE CONSIDERED. SUBJECT TO MATERIAL SAMPLES AND APPROPRIATE CERTIFICATIONS BEING PROVIDED TO THE SATISFACTION OF HYDER CONSULTING.
11. SHOULD THE CONTRACTOR WISH TO USE A RECYCLED PRODUCT THIS SHALL BE CLEARLY INDICATED IN THEIR TENDER AND THE PRICE DIFFERENCE BETWEEN AN IGNEOUS PRODUCT AND A RECYCLED PRODUCT SHALL BE CLEARLY INDICATED.
12. WHERE NOTED ON THE DRAWINGS THAT WORKS ARE TO BE CARRIED OUT BY OTHERS. (eg. ADJUSTMENT OF SERVICES), THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CO-ORDINATION OF THESE WORKS.
13. ALL FOOTPATHS AND CYCLEWAYS TO BE IN ACCORDANCE WITH CITY OF SYDNEY COUNCIL DESIGN GUIDELINES.

REMEDIATION AND WASTE MANAGEMENT NOTES

1. CONTAMINATED SOILS EXIST ON THE PROJECT SITE. AREAS OF ASBESTOS CONTAMINATION ARE KNOWN ON THE PROJECT SITE. A DETAILED REMEDIAL ACTION PLAN (RAP) (SITE SPECIFIC REMEDIAL ACTION PLAN FOR THE HAYMARKET PLANNING APPLICATION, HAYMARKET, SYDNEY, NSW 13 JANUARY 2014) AND A REMEDIAL WORKS PLAN (RWP) HAS BEEN PREPARED FOR THE REMOVAL AND MANAGEMENT OF ALL CONTAMINATION.
2. THERE IS POTENTIAL FOR THE DISCOVERY OF PREVIOUSLY UNKNOWN CONTAMINATION DURING ALL CIVIL WORKS.
3. THE RWP DESCRIBES THE WORK REQUIRED TO BE COMPLETED DURING CONSTRUCTION TO REMEDIATE THE SITE INCLUDING PROCEDURES AND CONTROLS FOR REMOVING KNOW AND MANAGING UNEXPECTED FINDS OF CONTAMINATION.
4. THE CONTRACTOR SHALL INCORPORATE INTO WORK METHOD STATEMENTS ALL RELEVANT SOIL CONTAMINATION MANAGEMENT MEASURES DOCUMENTED IN THE RWP.
5. ALL CONTRACTOR STAFF MUST BE INDUCTED INTO THE CONTAMINATED SOIL 'UNEXPECTED FINDS PROCEDURE' (INCLUDED IN THE RWP).
6. REMEDIATION OF SOIL CONTAMINATION WILL INVOLVE THE PROCESS OF VALIDATION (CONFIRMING CONTAMINATED AREAS HAVE BEEN REMEDIATED TO APPROPRIATE REQUIREMENTS). VALIDATION ACTIVITIES (COLLECTION SOIL SAMPLES, INSPECTIONS, ETC. WILL BE UNDERTAKEN BY SPECIALIST CONSULTANTS. THE CONTRACTOR SHALL COOPERATE WITH AND FACILITATE ALL VALIDATION ACTIVITIES.
7. DISPOSAL OFF SITE OR REUSE OF SOIL / ROCK ON THE PROJECT SITE MUST BE IN ACCORDANCE WITH THE PROCEDURES AND SET OUT IN THE RAP AND RWP.
8. FOR ALL MATTERS NOTIFICATION OF THE PRINCIPLE MUST BE MADE IMMEDIATELY.

TRAFFIC CONTROL NOTES

1. A TRAFFIC MANAGEMENT PLAN IS TO BE PREPARED IN ACCORDANCE WITH THE R.M.S TRAFFIC CONTROL AT WORK SITES BY THE CONTRACTOR AND APPROVED BY THE PRINCIPLE AND RMS AT LEAST 5 DAYS PRIOR TO COMMENCEMENT OF CONSTRUCTION TO SUIT PROGRAM REQUIREMENTS.
2. THE CIVIL WORKS CONTRACTOR IS RESPONSIBLE FOR OBTAINING ANY REQUIRED R.O.L FROM THE RELEVANT AUTHORITY INCLUDING RMS AND RMS TCS, CITY OF SYDNEY COUNCIL AND SHFA.

STORMWATER DRAINAGE NOTES

1. STORMWATER DESIGN CRITERIA:
   (A) AVERAGE RECURRENCE INTERVAL:
   STORMWATER DRAINAGE
   20 YEAR ARI — MINOR STORM
   100 YEAR ARI — MAJOR STORM
   (B) REFER TO HYDER'S BROADER PROJECT CATCHMENT FLOOD MODELLING OF DARLING HARBOUR (USING TUFLOW SOFTWARE) FOR DEFINITION OF OVERLAND FLOW REGIMES.
2. PROPOSED PIPES 375mmø AND LARGER TO BE REINFORCED CONCRETE MINIMUM CLASS '4' MARINE GRADE APPROVED SPIGOT AND SOCKET WITH RUBBER RING JOINTS. U.N.O. ALL PRECAST CONCRETE PIPES ARE TO COMPLY WITH AS4058:2007. MINIMUM CONCRETE COVER TO STEEL REINFORCEMENT IS TO BE IN ACCORDANCE WITH TABLE 3.1 FOR MARINE ENVIRONMENTS. FIBRE REINFORCED CONCRETE PIPES ARE NOT TO BE USED.
3. PIPES TO BE INSTALLED TO TYPE HS3 SUPPORT IN ACCORDANCE WITH AS 3725 AND RMS R11 SPECIFICATION.
4. ALL INTERNAL WORKS WITHIN PROPERTY BOUNDARIES ARE TO COMPLY WITH THE REQUIREMENTS OF AS/NZS 3500.
5. CARE IS TO BE TAKEN WITH LEVELS OF STORMWATER LINES. LEVELS AND GRADES SHOWN ARE NOT TO BE CHANGED WITHOUT PRIOR APPROVAL.
6. GRATES AND COVERS SHALL CONFORM TO CITY OF SYDNEY COUNCIL AND R.M.S REQUIREMENTS AND AS3996.9. AT ALL TIMES DURING CONSTRUCTION OF STORMWATER PITS, ADEQUATE SAFETY PROCEDURES SHALL BE TAKEN TO ENSURE AGAINST THE POSSIBILITY OF PERSONNEL FALLING DOWN PITS.
7. ALL EXISTING STORMWATER DRAINAGE LINES AND PITS TO REMAIN ARE TO BE INSPECTED AND CLEANED. DURING THIS PROCESS ANY PART OF THE STORMWATER DRAINAGE SYSTEM THAT WARRANTS REPAIR SHALL BE REPORTED TO THE SUPERINTENDENT AND URBANEST FOR FURTHER DIRECTIONS.
8. CCTV ALL PIPES AFTER CONSTRUCTION AND PRIOR TO PRACTICAL COMPLETION. THIS INCLUDES ALL EXISTING PIPES THAT ARE TO BE RETAINED.
9. PIPES ARE DESIGNED FOR OPERATIONAL TRAFFIC LOADS ONLY. APPROPRIATE MEASURES SHOULD BE TAKEN TO PROTECT PIPES DURING CONSTRUCTION.
10. CONFIRM EXISTING PIT AND PIPE LEVELS AT ALL JUNCTIONS WITH PROPOSED STORMWATER PRIOR TO ANY UPSTREAM PIPEWORK INSTALLATIONS. SHOULD LEVELS VARY FROM THE DESIGN HYDER CONSULTING SHALL BE NOTIFIED IMMEDIATELY.
11. ALL PITS DEEPER THAN 1.2m SHALL HAVE STEP IRONS PROVIDED IN ACCORDANCE WITH R.M.S. STANDARDS.
12. ALL REDUNDANT PIPES ARE TO BE REMOVED OR GROUT FILLED AS DIRECTED BY URBANEST. ALL REDUNDANT PITS ARE TO BE REMOVED AND BACKFILLED.
13. PRECAST CONCRETE PITS MAY BE USED BUT MUST BE IN ACCORDANCE WITH R.M.S. SPECIFICATION R11 CLAUSE 2.5.4.

ALL RELEVANT WORKS TO BE CARRIED OUT BY SYDNEY WATER ACCREDITED CONTRACTORS.

PROPOSED SERVICES NOTES

1. THESE DRAWING ARE TO BE READ IN CONJUNCTION WITH:- SERVICE AUTHORITY DRAWINGS AND SPECIFICATIONS.
2. THE CONTRACTOR SHALL ATTEND, MANAGE & SUPERVISE THE PROVISION OF ALL SERVICE PIT COVERS TO BE INSTALLED FLUSH WITH PROPOSED VERGE LEVELS AND GRADES.
3. ALL PIT LIDS (OTHER THAN GRATES) ARE TO FACILITATE PAVER INFILL (I.E. RECESSED). PAVER DEPTH TO LANDSCAPE ARCHITECTS DETAILS.
4. ALIGNMENT OF PIT LIDS TO BE PERPENDICULAR OR PARALLEL TO THE PUBLIC REALM PROPOSED PAVEMENT LAYOUT WHERE POSSIBLE.
5. ALL PIT LEVELS TO BE COORDINATED WITH AND CONSISTENT WITH THE FINAL LEVELS.
6. ALL PIT COVERS/GRATES TO BE MINIMUM CLASS 'D' UNLESS NOTED OTHERWISE.

HERITAGE NOTES

1. THE ADJACENT PROJECT SITE CONTAINS SUB-SURFACE REMNANTS OF HISTORICAL (ABORIGINAL & EUROPEAN) INTEREST. SITE INVESTIGATIONS HAVE DETERMINED THE LOCATION OF KEY ITEMS TO BE RETAINED AND PROTECTED IN SITU. THERE IS A PROBABILITY OF DISCOVERING ITEMS OF HISTORICAL INTEREST DURING ALL SUBSURFACE CONSTRUCTION WORKS.
2. THE CONTRACTOR SHALL, IF NECESSARY, INCORPORATE INTO WORK METHOD STATEMENTS ALL ARCHAEOLOGICAL MANAGEMENT MEASURES DOCUMENTED IN THE PROJECT ARCHAEOLOGICAL MANAGEMENT SUB PLAN.
3. THE CONTRACT SHALL, IF NECESSARY, IMPLEMENT AND COMPLY WITH THE ARCHAEOLOGICAL 'UNEXPECTED FINDS MANAGEMENT PROTOCOL' FOR ALL WORKS CARRIED OUT ONSITE. ALL CONTRACTOR STAFF MUST BE INDUCTED INTO THE ARCHAEOLOGICAL 'UNEXPECTED FINDS MANAGEMENT PROTOCOL'.

EROSION AND SEDIMENT CONTROL N

GENERAL INSTRUCTIONS

1. THE CIVIL WORKS CONTRACTOR WILL ENSURE THAT ALL SOIL AND WATER MANAGEMENT WORKS ARE LOCATED AS DOCUMENTED.
2. ALL WORK SHALL BE GENERALLY CARRIED OUT IN ACCORDANCE WITH:
   a. LOCAL AUTHORITY REQUIREMENTS
   b. EPA REQUIREMENTS
   c. NSW DEPARTMENT OF HOUSING MANUAL "MANAGING URBAN STORMWATER, SOILS AND CONSTRUCTION", 4th EDITION, MARCH 2004.
3. MAINTAIN THE EROSION CONTROL DEVICES TO THE SATISFACTION OF THE PRINCIPLE AND THE LOCAL AUTHORITY.
4. THE WATER IN THE SEDIMENT BASIN(S) SHALL BE LOWERED PERIODICALLY TO MAINTAIN THE MINIMUM STORAGE VOLUME REQUIRED FOR FINE SOILS. AT ALL TIMES A WATER CART(S) SHALL BE MAINTAINED ON SITE TO:
   A. WATER THE AREAS OF HYDROMULCH
   B. CONTROL DUST

   WATERING OF MULCH, DUST OR VEGETATION MUST BE KEPT TO THE MINIMUM REQUIRED TO ACHIEVE SPECIFIED OUTCOMES. IN NO CASE SHALL AREAS BE OVER WATERED TO SATURATION OR TO THE POINT WHERE WATER PONDS ON THE SURFACE.
5. STORMWATER IN THE SETTLING ZONE SHALL BE DRAINED OR PUMPED OUT WITHIN 7 DAYS (NO LATER THAN 14 DAYS AS SITE CONDITIONS ALLOWS) FOLLOWING RAINFALL EVENT IF THE NOMINATED WATER QUALITY TARGETS CAN BE MET. THE LOWER LEVEL OF THE SETTLING ZONE SHALL BE IDENTIFIED WITH A PEG THAT SHOWS CLEARLY THE LEVEL WHICH DESIGN CAPACITY IS AVAILABLE.
   (B) STORED SEDIMENT SHALL NOT ENCROACH INTO SETTLING ZONE. SEDIMENT REMOVED FROM SEDIMENT BASIN SHALL BE DISPOSED OF IN PLACES THAT WILL NOT RESULT IN A FUTURE EROSION OR POLLUTION HAZARD.
6. WHEN STORMWATER PITS ARE CONSTRUCTED, PREVENT SITE RUNOFF ENTERING UNLESS SEDIMENT CONTROLS ARE ERECTED AROUND PITS.
7. CIVIL WORKS CONTRACTOR IS TO ENSURE ALL EROSION & SEDIMENT CONTROL DEVICES ARE MAINTAINED IN GOOD WORKING ORDER AND OPERATE EFFECTIVELY. REPAIRS AND OR MAINTENANCE SHALL BE UNDERTAKEN AS REQUIRED, PARTICULARLY FOLLOWING STORM EVENTS.

LAND DISTURBANCE

8. WHERE PRACTICAL, THE SOIL EROSION HAZARD ON THE SITE WILL BE KEPT AS LOW AS POSSIBLE. TO THIS END, WORKS SHOULD BE UNDERTAKEN IN THE FOLLOWING SEQUENCE:
   A. MAINTAIN EXISTING SECURITY / WIND FENCES INSTALLED AS PART OF THE ENABLING WORKS AND INSTALL NEW SECURITY / WIND FENCES AS SHOWN
   B. MAINTAIN EXISTING SEDIMENT FENCES INSTALLED AS PART OF THE ENABLING WORKS AND INSTALL NEW SEDIMENT FENCES AS SHOWN.
   C. INSTALL SEDIMENT FILTERS AND COLLECTION POINTS AS SHOWN ON PLAN AND AS REQUIRED.
   D. UNDERTAKE SITE DEVELOPMENT WORKS IN ACCORDANCE WITH THE ENGINEERING PLANS. WHERE POSSIBLE, PHASE DEVELOPMENT SO THAT LAND DISTURBANCE IS CONFINED TO AREAS OF WORKABLE SIZE.
   E. DISTURBED AREAS TO BE GRASSED TO THE FOLLOWING STANDARDS:
   - EMBANKMENTS - HYDRO MULCHED.
   - LOTS - SEEDED.
   - VERGES - TURFED TO LANDSCAPE ARCHITECT'S SPECIFICATION.

EROSION CONTROL

9. DURING WINDY WEATHER, LARGE, UNPROTECTED AREAS WILL BE KEPT MOIST (NOT WET) BY SPRINKLING WITH WATER TO KEEP DUST UNDER CONTROL.
10. FINAL SITE LANDSCAPING WILL BE UNDERTAKEN AS SOON AS POSSIBLE AND WITHIN 10 WORKING DAYS FROM COMPLETION OF CONSTRUCTION ACTIVITIES.

SEDIMENT CONTROL

11. STOCKPILES WILL NOT BE LOCATED WITHIN 2 METRES OF HAZARD AREAS, INCLUDING LIKELY AREAS OF CONCENTRATED OR HIGH VELOCITY FLOWS SUCH AS WATERWAYS. WHERE THEY ARE BETWEEN 2 AND 5 METRES FROM SUCH AREAS, SPECIAL SEDIMENT CONTROL MEASURES SHOULD BE TAKEN TO MINIMISE POSSIBLE POLLUTION TO DOWNSLOPE WATERS, E.G. THROUGH INSTALLATION OF SEDIMENT FENCING.
12. ANY SAND USED IN THE CONCRETE CURING PROCESS (SPREAD OVER THE SURFACE) WILL BE REMOVED AS SOON AS POSSIBLE AND WITHIN 10 WORKING DAYS FROM PLACEMENT.
13. WATER WILL BE PREVENTED FROM ENTERING THE PERMANENT DRAINAGE SYSTEM UNLESS IT IS RELATIVELY SEDIMENT FREE, I.E. THE CATCHMENT AREA HAS BEEN PERMANENTLY LANDSCAPED AND/OR ANY LIKELY SEDIMENT HAS BEEN FILTERED THROUGH AN APPROVED STRUCTURE.
14. TEMPORARY SOIL AND WATER MANAGEMENT STRUCTURES WILL BE REMOVED ONLY AFTER THE LANDS THEY ARE PROTECTING ARE REHABILITATED/STABILISED.

STREET FURNITURE NOTES

1. ALL SIGNAGE TO BE IN ACCORDANCE WITH THE CURRENT VERSION OF THE R.M.S. REGULATORY SIGNS MANUAL. REFER TO ARCHITECTURAL FOR WAY-FINDING AND DIRECTIONAL SIGNAGE.
2. ALL STREET NAME SIGNS AND BUS SHELTERS TO BE TO CITY OF SYDNEY AND SHFA SATISFACTION. UNO
3. ALL LAMP COLUMNS TO BE IN ACCORDANCE WITH CITY OF SYDNEY COUNCIL, SHFA AND / OR AUSGRID SPECIFICATIONS. UNO

EROSION AND SEDIMENT CONTROL NOTES CONT.

OTHER MATTERS

15. ACCEPTABLE RECEPTORS WILL BE PROVIDED FOR CONCRETE AND MORTAR SLURRIES, PAINTS, ACID WASHINGS, LIGHT-WEIGHT WASTE MATERIALS AND LITTER.
16. ANY EXISTING TREES WHICH FORM PART OF THE FINAL LANDSCAPING PLAN WILL BE PROTECTED FROM CONSTRUCTION ACTIVITIES IN ACCORDANCE WITH LANDSCAPE ARCHITECT'S DETAILS.
17. ALL AREAS OF PUBLIC THOROUGHFARE MUST BE KEPT CLEAN AND FREE OF WATER RUNOFF, SEDIMENT AND CONSTRUCTION MATERIALS AT ALL TIMES. THIS INCLUDES AREAS OUTSIDE OF THE SITE BOUNDARY.
18. SITE SECURITY AND EROSION AND SEDIMENT CONTROL MEASURES MUST BE CHECKED AND DEEMED SAFE BY THE CIVIL WORKS CONTRACTOR PRIOR TO LEAVING THE SITE EACH DAY.

BULK EARTHWORKS NOTES

1. ORIGIN OF LEVELS: REFER SURVEY NOTES
2. STRIP ALL TOPSOIL/ORGANIC MATERIAL (50mm NOMINAL) FROM CONSTRUCTION AREA AND REMOVE FROM SITE OR STOCK PILE AS DIRECTED BY PRINCIPLE.
3. EXCAVATED MATERIAL MAY BE USED AS STRUCTURAL FILL PROVIDED THE PLACEMENT MOISTURE CONTENT OF THE MATERIAL IS +/- 2% OF THE OPTIMUM MOISTURE CONTENT AND THE GEOTECHNICAL ENGINEER PROVIDES WRITTEN APPROVAL THAT THE MATERIAL IS SUITABLE.
4. COMPACT FILL AREAS AND SUBGRADE TO NOT LESS THAN:

LOCATION	MINIMUM STANDARD DRY DENSITY (AS 1289 E 5.1.1)
UNDER SLABS ON GROUND	98%
UNDER ROADS, FOOTWAYS AND CAR PARKS	98%
LANDSCAPED AREAS UNLESS NOTED OTHERWISE	95%

5. BEFORE PLACING FILL, PROOF ROLL EXPOSED SUBGRADE WITH AN 8 TONNE (MIN) DEADWEIGHT SMOOTH DRUM NON-VIBRATORY ROLLER TO DETECT THEN REMOVE SOFT SPOTS (AREAS WITH MORE THAN 2mm MOVEMENT UNDER ROLLER). SOFT SPOTS ARE TO BE REPLACED WITH SUITABLE SELECT FILL FOR A DEPTH OF AT LEAST 0.5m OR AS ADVISED BY THE GEOTECHNICAL ENGINEER.
6. SELECT MATERIAL FOR BACKFILLING SHALL BE GRANULAR MATERIAL WHICH IS NATURALLY OCCURRING, RECYCLED OR MANUFACTURED HAVING A PARTICLE SIZE DISTRIBUTION, DETERMINED IN ACCORDANCE WITH AS 1289. 3.6.1. SELECT MATERIAL CAN BE CRUSHED ROCK, NATURAL SOIL, GRAVEL AND SAND, OR OTHER APPROVED GRANULAR MATERIAL CONSISTING OF CLEAN, SOUND, DURABLE FRAGMENTS, FREE FROM ORGANIC MATTER FROM AN APPROVED SOURCE. GRADING LIMITS FOR SELECT FILL SHALL BE IN ACCORDANCE WITH AS 3725 AS TABULATED IN CITY OF SYDNEY EARTHWORKS SPECIFICATION.
7. FREQUENCY OF COMPACTION TESTING SHALL BE NOT LESS THAN :-
   A. 1 TEST PER $200mm^3$ OF FILL PLACED PER 200 LAYER OF FILL.
   B. 3 TESTS PER LAYER.
   C. 1 TEST PER $2000m^2$ OF EXPOSED SUBGRADE.
   TESTING SHALL BE "LEVEL 1" TESTING IN ACCORDANCE WITH AS 3798 (2007).
7. FILLING TO BE PLACED AND COMPACTED IN MAXIMUM 150mm LAYERS.
8. NO FILLING SHALL TAKE PLACE TO EXPOSED SUBGRADE UNTIL THE AREA HAS BEEN PROOF ROLLED IN THE PRESENCE OF THE GEOTECHNICAL ENGINEER AND APPROVAL GIVEN IN WRITING THAT FILLING CAN PROCEED.
9. WHERE GROUNDWATER DISCHARGE OCCURS IN BULK EXCAVATIONS OR CUT FACES, SUBSOIL DRAINAGE SHALL BE INSTALLED IN ACCORDANCE WITH THE PRINCIPLE / GEOTECH INSTRUCTIONS TO DIRECT DISCHARGE WATER TO THE NEAREST STORMWATER / SEDIMENTATION CONTROL DEVICE. THE SUBSOIL DRAINAGE MUST BE INSTALLED AS SOON AS PRACTICALLY POSSIBLE AFTER EXCAVATION. SUBSOIL DRAINAGE SHALL ALSO BE INSTALLED AT LOW POINTS IN THE FINISHED EARTHWORK PROFILE IN ACCORDANCE WITH THE SITE SUPERINTENDENT / GEOTECH'S INSTRUCTIONS.
10. ENSURE TEMPORARY DIVERSION CHANNELS ARE CONSTRUCTED AROUND STOCKPILED MATERIALS AND DISTURBED AREAS GENERALLY AS DETAILED.
11. THE CONTRACTOR SHALL ALLOW FOR AND COORDINATE ALL MONITORING AND MAINTENANCE REQUIREMENTS IN RELATION TO SOIL AND GROUNDWATER CONDITIONS DURING CONSTRUCTION.
12. ALL EARTHWORKS TO BE CARRIED OUT IN ACCORDANCE WITH AS 3798 AND RMS SPECIFICATION R44.

TEMPORARY WORKS

1. DILAPIDATION SURVEY OF THE ADJACENT AREAS IS TO BE CARRIED OUT PRIOR TO COMMENCEMENT OF EXCAVATION.

EXISTING SERVI OTES

1. THE EXISTING STORMWATER SHOWN ON THESE DRAWINGS HAS BEEN PLOTTED FROM INFORMATION SUPPLIED FROM CITY OF SYDNEY COUNCIL AND SYDNEY WATER REPORT "CITY AREA SWC 30 CAPACITY ASSESSMENT - JULY 1996". THE EXISTING STORMWATER INFORMATION HAS BEEN PREPARED ONLY TO SHOW THE APPROXIMATE POSITIONS OF ANY KNOWN STORMWATER AND MAY NOT BE AS CONSTRUCTED OR ACCURATE. HYDER CONSULTING CAN NOT GUARANTEE THAT THE STORMWATER INFORMATION SHOWN ON THESE DRAWINGS ACCURATELY INDICATES THE PRESENCE OR ABSENCE OF STORMWATER INFRASTRUCTURE OR THEIR LOCATION AND WILL ACCEPT NO LIABILITY FOR INACCURACIES IN THE STORMWATER INFORMATION SHOWN FROM ANY CAUSE WHATSOEVER.
2. THE LOCATIONS OF UNDERGROUND DBYD SERVICES SHOWN ON THESE DRAWINGS HAVE BEEN PLOTTED FROM "DIAL BEFORE YOU DIG" DRAWINGS RECEIVED ON THE 05/7/11. THE SERVICE INFORMATION HAS BEEN PREPARED ONLY TO SHOW THE APPROXIMATE POSITIONS OF ANY KNOWN SERVICES AND MAY NOT BE AS CONSTRUCTED OR ACCURATE. HYDER CONSULTING CAN NOT GUARANTEE THAT THE SERVICES INFORMATION SHOWN ACCURATELY INDICATES THE PRESENCE OR ABSENCE OF SERVICES OR THEIR LOCATION AND WILL ACCEPT NO LIABILITY FOR INACCURACIES IN THE SERVICES INFORMATION SHOWN FROM ANY CAUSE WHATSOEVER.
3. THE CONTRACTOR IS TO UNDERTAKE A REVIEW OF ALL EXISTING PITS PRIOR TO CONSTRUCTION, TO IDENTIFY ALL EXISTING PITS THAT MAY REQUIRE ADJUSTMENT, WHICH ARE NOT PICKED UP ON THE CURRENT SURVEY.
4. THE CONTRACTOR IS TO REVIEW ALL EXISTING PIT ADJUSTMENTS WITH HYDER CONSULTING PRIOR TO CONSTRUCTION.
5. REFER TO HYDER SYDNEY WATER DRAWINGS FOR FURTHER DETAILS OF SEWER, WATER AND STORM DRAINAGE WORKS.
6. REFER TO WEBB DESIGN DRAWINGS FOR FURTHER DETAILS OF ELECTRICAL HV, LV AND LIGHTING WORKS.
7. REFER TO HYDER TELECOMMUNICATION DRAWINGS FOR FURTHER DETAILS OF COMMUNICATIONS WORKS.
8. REFER TO JEMENA GAS DRAWINGS FOR FURTHER DETAILS OF GAS WORKS.
9. CONTRACTOR SHALL LOCATE ALL OF THE EXISTING CONNECTIONS AFFECTED BY THE PROPOSED WORKS AND RECONNECT PRIOR TO DISCONNECTION OF EXISTING SUPPLY.
10. CONTRACTORS AND SUBCONTRACTORS SHALL TAKE DUE CARE WHEN EXCAVATING ONSITE INCLUDING HAND EXCAVATION WHERE NECESSARY.
11. CONTRACTORS ARE TO CONTACT THE RELEVANT SERVICE AUTHORITY PRIOR TO COMMENCEMENT OF EXCAVATION WORKS.
12. CONTRACTORS ARE TO UNDERTAKE A SERVICES SEARCH (POTHOLING), PRIOR TO COMMENCEMENT OF WORKS ON SITE. SEARCH RESULTS ARE TO BE KEPT ON SITE AT ALL TIMES.
13. CONTRACTORS ARE TO ALLOW TO PROTECT EXISTING SERVICES TO REMAIN INCLUDING TEMPORARY SUPPORT OR DIVERSION THROUGH THE WORKS AREA IF REQUIRED.
14. REFER TO HYDER PUBLIC REALM DRAWINGS FOR FURTHER DETAILS OF LIGHTING, POWER, CCTV & COMMUNICATIONS, PUBLIC ADDRESS & AV SERVICES AND INFRASTRUCTURE.

SERVICES - DUTY OF CARE NOTE

1. SERVICE COMPANIES PLANS SHOW ONLY THE PRESENCE OF CULVERTS, CABLES AND PLANT. THEY ONLY SHOW THEIR POSITION RELATIVE TO ROAD BOUNDARIES, PROPERTY FENCES ETC. AT THE TIME OF INSTALLATION AND THE SERVICE COMPANY DOES NOT WARRANT OR HOLD OUT THAT SUCH PLANS ARE ACCURATE THEREAFTER DUE TO CHANGES THAT MAY OCCUR OVER TIME. DO NOT ASSUME DEPTH OR ALIGNMENT OF CABLES OR PLANT AS THESE VARY SIGNIFICANTLY.
2. THE CONTRACTOR HAS A DUTY OF CARE WHEN EXCAVATING NEAR CULVERTS, CABLES AND PLANT. BEFORE USING MACHINE EXCAVATORS CULVERTS, CABLES AND PLANT MUST FIRST BE PHYSICALLY EXPOSED BY SOFT DIG POTHOLING TO IDENTIFY ITS LOCATION THE SERVICE COMPANY WILL SEEK COMPENSATION FOR DAMAGES CAUSED TO ITS PROPERTY AND LOSSES CAUSED TO IT AND ITS CUSTOMERS.

DESIGN DATA

1. THIS DESIGN WAS BASED ON THE FOLLOWING CODES AND ORDINANCES

COMPONENT	TO COMPLY WITH AUSTRALIAN STANDARD	YEAR
CONCRETE ELEMENT	AS 3600	2009
STEEL	AS 4100	1998
RETAINING STRUCTURES	AS 4678	2002

2. THE CONCRETE ELEMENTS HAVE BEEN DESIGNED FOR THE FOLLOWING EXPOSURE CLASSIFICATION IN ACCORDANCE WITH AS3600 TABLE 4.3

ELEMENT	CLASSIFICATION
BELOW GROUND	C2

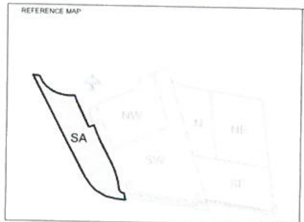
3. THE CONCRETE STRUCTURE HAS BEEN DESIGNED TO COMPLY WITH A STRONG DEGREE OF CONTROL OVER CRACKING IN ACCORDANCE WITH CL.9.4.3 OF AS3600

REFER DRAWING PD-CI-1006 FOR CONTINUATION OF NOTES

SYDNEY INTERNATIONAL CONVENTION, EXHIBITION AND ENTERTAINMENT PRECINCT

DARLING HARBOUR LIVE

REFERENCE MAP



NOTES:
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PROJECT
SICEEP - DARLING HARBOUR LIVE
DARLING SQUARE
WESTERN PLOT BUILDING W1

DRAWING TITLE
GENERAL NOTES
SHEET 1

STATUS
DA APPROVAL

SCALE @ A1	DRAWN	DESIGNED	REVIEWED	APPROVED
N.T.S.	JW	JW	MAK	-

PROJECT NUMBER	DRAWING NUMBER	REV
AA004399	PD-CI-1005	04

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Date Plotted: 11 Sep 2015 - 04:49PM File Name: F:\AA004399\E-CADC-Civil\D-Final\B-PDA\1-W1 Building (PD-CI-1001 - PD-CI-1999)\PD-CI-1005-GeneralNotesSheet1.dwg

REFER DRAWING PD-CI-1005 FOR BEGINNING OF NOTES

CONCRETE WORKS NOTES

1. ALL WORKMANSHIP AND MATERIALS
SHALL BE IN ACCORDANCE WITH AS 1379 AND AS/NZ 3600 AND OTHER APPLICABLE AUSTRALIAN STANDARDS (EXCEPT WHERE VARIED BY THE CONTRACT DOCUMENTS).

2. QUALITY
ALL REQUIREMENTS OF THE CURRENT ACSE CONCRETE SPECIFICATION DOCUMENT 1 SHALL APPLY TO THE FORMWORK, REINFORCEMENT AND CONCRETE UNLESS NOTED OTHERWISE.

ELEMENT	AS 3600 F'c MPa AT 28 DAYS	SPECIFIED SLUMP	NOMINAL AGG. SIZE
VEHICULAR BASE	32	60	20
KERBS, PATHS & PITS	32	80	20
RETAINING WALLS	32	80	20

- CEMENT TYPE SHALL BE (ACSE SPECIFICATION) TYPE SL.
- PROJECT CONTROL TESTING SHALL BE CARRIED OUT IN ACCORDANCE WITH AS 1379.

9. NO ADMIXTURES SHALL BE USED IN CONCRETE UNLESS APPROVED IN WRITING BY HYDER CONSULTING.

10. CONCRETE CLASS AND COLOUR
IT IS THE CONTRACTOR'S RESPONSIBILITY TO COMPLY WITH THE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR CONCRETE CLASS AND COLOUR REQUIREMENTS.

11. CEMENT GRADE
ALL CEMENT IS TO BE SHRINKAGE LIMITED (SL) CEMENT OR GENERAL BLENDED (GB) CEMENT OR TYPE SULPHATE-RESISTING CEMENT (SR) AS REQUIRED, COMPLYING WITH AS 3972 U.N.O. ON THE DRAWINGS.

CEMENT TYPE:
60% SL CEMENT
33% FLY ASH
7 % AMORPHOUS SILICA
MINIMUM CEMENT CONTENT = 370kg/m³
MAXIMUM WATER : CEMENT RATIO = 0.45

CONCRETE SUPPLIER MUST PROVIDE CONCRETE MIX CERTIFICATE PRIOR TO CONSTRUCTION COMMENCING

12. 'D' DURABLE CONCRETE
WHERE THE LETTER 'D' APPEARS BESIDE A CONCRETE ELEMENT, THIS SYMBOLISES SPECIAL DURABLE CONCRETE WHERE THE ELEMENT HAS AT LEAST ONE FACE EXPOSED TO THE WEATHER OR POSSIBLE CORROSIVE ATTACK. (THIS CONCRETE REQUIRES A SPECIAL TOLERANCE FOR THE COVERS OF -0mm +10mm). SPECIAL PRECAUTIONS ARE REQUIRED TO IMPROVE THE LONG TERM PERFORMANCE OF THESE FACES OF CONCRETE. IN PARTICULAR, NO METAL INSERTS, METAL BAR CHAIRS OR METAL FORM SPACES OF ANY KIND ARE TO BE PLACED IN THE COVER ZONE WITHOUT THE EXPRESS PERMISSION OF THE ENGINEER. TAKE SPECIAL CARE TO AVOID SCRAP TIE WIRE OR OTHER MATERIAL BEING PRESENT. ANY OFF-CUTS, SCRAP OR FOREIGN MATERIAL SHALL BE REMOVED BEFORE POUR BEGINS. REFER DRAWINGS FOR LOCATIONS.

13. MAXIMUM SLUMP ALLOWANCE
CONCRETE SLUMP SHALL BE 80mm IN COMPLIANCE WITH AS 1379 U.N.O. ON THE DRAWINGS.

14. CONCRETE POUR GUIDELINES
FREE DROPPING OF CONCRETE FROM HEIGHTS GREATER THAN 1000mm IS NOT PERMITTED UNLESS METHOD APPROVED BY THE ENGINEER.

15. MAXIMUM LIFT OF POUR AT ONE TIME FOR CONCRETE ELEMENTS SHALL BE 3000mm UNLESS METHOD OF PLACEMENT HAS BEEN APPROVED BY THE ENGINEER.

16. ALL CONCRETE SHALL BE MECHANICALLY VIBRATED IN THE FORM TO GIVE MAXIMUM COMPACTION WITHOUT SEGREGATION OF THE CONCRETE.

17. FORMWORK SHALL BE DESIGNED, CONSTRUCTED AND STRIPPED IN ACCORDANCE WITH AS 3610 AND AS 3600

18. SURFACES RECEIVING GROUT AND CONSTRUCTION JOINTS SHALL BE LEFT ROUGH AND FREE OF LAITANCE.

19. THE FINISHED CONCRETE SHALL BE A DENSE HOMOGENEOUS MASS, COMPLETELY FILLING THE FORMWORK, THOROUGHLY EMBEDDING THE REINFORCEMENT AND FREE OF STONE POCKETS. ALL CONCRETE INCLUDING SLABS ON GROUND AND FOOTINGS SHALL BE COMPACTED AND CURED IN ACCORDANCE WITH R.M.S. SPECIFICATION R83.

20. CURING PERIOD.
CONCRETE MUST BE CURED BY AN APPROVED METHOD IN ACCORDANCE WITH THE SPECIFICATION FOR SEVEN (7) DAYS AFTER POURING. CURING COMPOUNDS WHERE APPROVED MUST COMPLY WITH AS 3799.

21. PROPERTIES.
THE PROPERTIES OF THE REINFORCEMENT SHALL BE IN ACCORDANCE WITH AS/NZS 4671, REINFORCEMENT CLASSIFICATION.

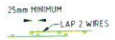
SHAPE	D - DEFORMED, R - ROUND.
STRENGTH GRADE	250,300,500 (LOWER CHARACTERISTICS VALUE OF YIELD STRESS).
DUCTILITY CLASS	L - LOW, N - NORMAL
SIZE OR DIAMETER OF BAR	N12, N16, N20, N24, N28, N32, N36.

CONCRETE WORKS NOTES CONTINUED

22. DUCTILITY CLASS
- N NORMAL DUCTILITY CLASS HOT ROLLED DEFORMED BARS OR MESH TO AS/NZ 4671 WITH f_{sy}= 500MPa
- R NORMAL DUCTILITY CLASS 250N PLAIN ROUND BAR TO AS/NZS 4671 WITH f_{sy}= 250MPa
- SL DENOTES COLD-DRAWN WIRE REINFORCING FABRIC TO AS 4671. THE FIGURE FOLLOWING THE FABRIC SYMBOL SL IS THE REFERENCE NUMBER FOR FABRIC TO AS 4671
- L LOW DUCTILITY CLASS 500L REINFORCING MESH OR BAR TO AS/NZS 4671 WITH f_{sy} 500MPa.
LOW DUCTILITY CLASS L REINFORCEMENT IS NOT TO BE USED OTHER THAN WHERE SHOWN ON DRAWINGS.
THE NUMBER FOLLOWING THE BAR SYMBOL IS THE NOMINAL BAR DIAMETER IN MILLIMETRES (REFER CLAUSE C19 ABOVE).

NUMBER OF BARS IN GROUP — BAR GRADE AND TYPE (TM20-250)
NOMINAL BAR SIZE IN mm — SPACING IN mm

23. FABRIC SHALL BE LAPPED IN ACCORDANCE WITH THE FOLLOWING DETAIL:



24. CLEAR CONCRETE COVER TO ALL REINFORCEMENT FOR DURABILITY SHALL BE 40mm TOP AND 70mm FOR EXTERNAL EDGES UNLESS NOTED OTHERWISE.

25. SPLICES IN REINFORCEMENT.
SHALL ONLY BE MADE IN THE POSITIONS SHOWN OR AS OTHERWISE APPROVED BY THE ENGINEER. MINIMUM LAP FOR ALL FABRICS SHALL BE THE SPACING OF TWO TRANSVERSE WIRES PLUS 25mm. GRADE 500N BARS SHALL BE LAPPED IN ACCORDANCE WITH THE TENSION DEVELOPMENT REFER TO STANDARD LAP LENGTH/SPLICE SCHEDULE ON DRAWINGS. TABLES IN REINFORCEMENT SECTION R88.

26. WELDING NOT PERMITTED.
WELDING OF REINFORCEMENT SHALL NOT BE PERMITTED WITHOUT THE APPROVAL OF THE ENGINEER.

27. REINFORCEMENT SUPPORT.
DURING CONCRETE PLACEMENT ALL REINFORCEMENT SHALL BE SECURELY SUPPORTED AND HELD IN ITS CORRECT POSITION BY APPROVED BAR CHAIRS, SPACERS OR SUPPORT BARS AT 1000mm MAXIMUM CENTRES. THE CHAIR MATERIAL WITHIN THE COVER ZONE SHALL SUIT THE EXPOSURE CONDITIONS.

28. REINFORCEMENT LENGTHS
REINFORCEMENT LENGTHS INDICATED ARE IN MILLIMETRES (mm). TURN DOWNS AND CRANKS ARE NOT INCLUDED IN THE DIMENSION. THE CONTRACTOR SHALL CHECK ALL LENGTHS BEFORE ORDERING.

29. ALTERNATE BAR PLACEMENT.
BARS SHOWN STAGGERED ON PLAN SHALL BE PLACED ALTERNATELY.

30. BAR DISTRIBUTION.
BARS SHALL BE EVENLY DISTRIBUTED OVER THE WIDTH OF THE STRIP INDICATED ON THE DRAWINGS U.N.O.

31. EMBEDMENTS.
ALL EMBEDMENTS SHALL BE HOT DIPPED GALVANISED (H.D.G) U.N.O.

32. CONCRETE BOND SEPARATION.
CONCRETE SHALL BE SEPARATED FROM SUPPORTING MASONRY BY TWO LAYERS OF MALTHOID (OR AN APPROVED EQUIVALENT). VERTICAL JOINTS IN CONCRETE EXCEPT FOR CONSTRUCTION JOINTS (CJ'S) SHALL BE KEPT FREE OF ADJOINING SURFACES BY 10mm THICKNESS OF ABLEFLEX (OR APPROVED EQUIVALENT) U.N.O. ON DRAWINGS.

33. CONCRETE SHRINKAGE.
SHRINKAGE OF CONCRETE SHALL NOT EXCEED 650 MICROSTRAN AT 56 DAYS. SUBMIT SAMPLES OF SHRINKAGE TESTS WITH (MIX DESIGN) FOR APPROVAL PRIOR TO COMMENCEMENT OF CONCRETE WORKS.

STRUCTURAL INSPECTIONS

1. STRUCTURAL INSPECTIONS ARE REQUIRED FOR STRUCTURES WHERE NOTED ON PLANS OR REQUIRED BY COUNCIL.

2. 48 HOURS NOTICE IS REQUIRED BY HYDER CONSULTING FOR ALL INSPECTIONS.

SYDNEY INTERNATIONAL CONVENTION, EXHIBITION AND ENTERTAINMENT PRECINCT

DARLING HARBOUR LIVE

REFERENCE MAP

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01	DRAFT ISSUE	19/08/15

CLIENT
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PROJECT
SICEEP - DARLING HARBOUR LIVE
DARLING SQUARE
WESTERN PLOT BUILDING W1

DRAWING TITLE
GENERAL NOTES
SHEET 2

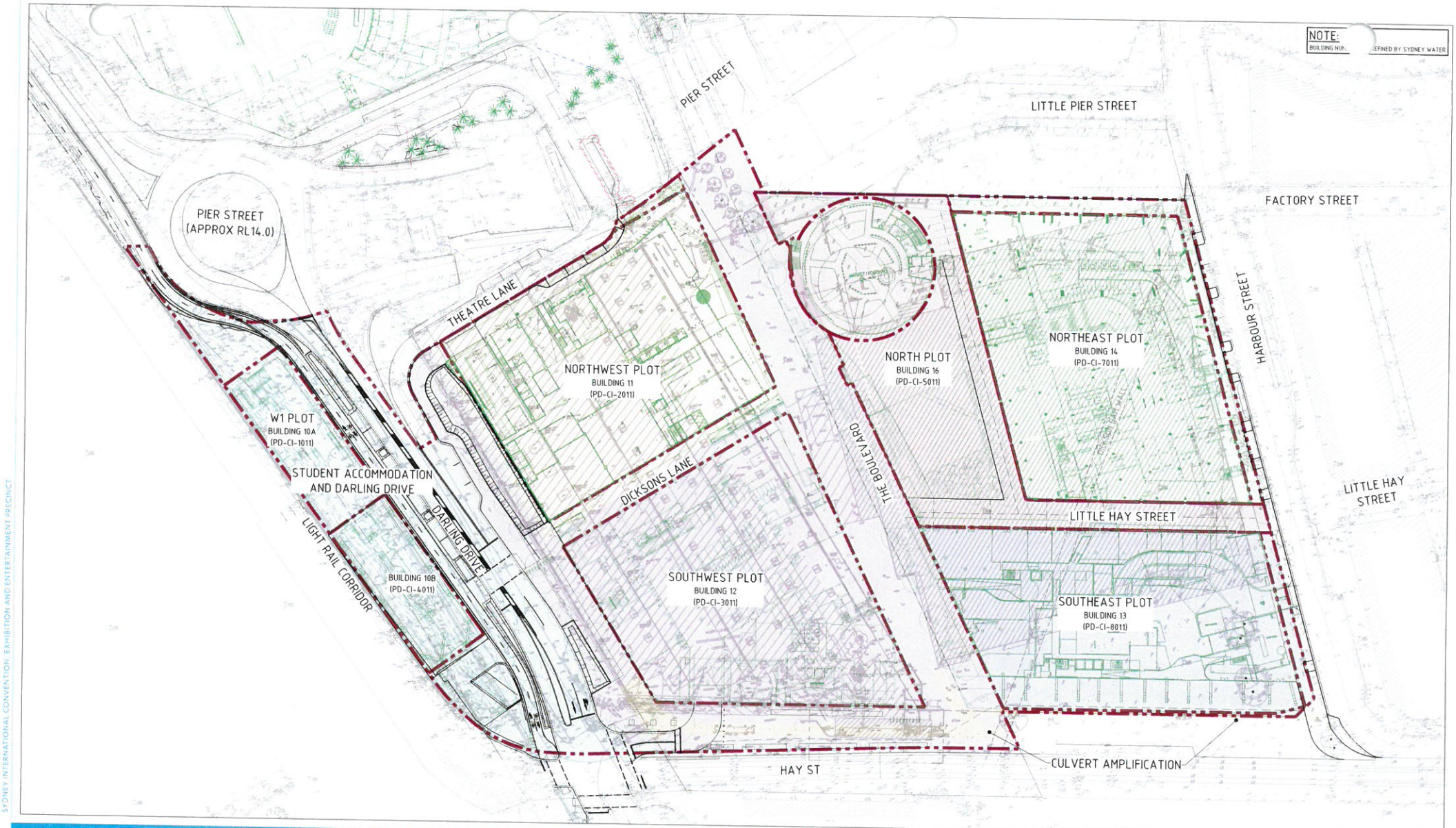
STATUS
DA APPROVAL

SCALE @ A1	DRAWN	DESIGNED	REVIEWED	APPROVED
N.T.S.	JW	JW	MAK	-

PROJECT NUMBER	DRAWING NUMBER	REV
AA004399	PD-CI-1	04

Original Sheet Size A1 - 841 x 594mm

Date Plotted: 11 Sep 2015 - 04:40PM ... F:\AA004399\AE-CAD\C-Civil\D-Final\B-PDN1-W1 Building (PD-CI-1001 - PD-CI-1999)\PD-CI-1006-GeneralNotesSheet2.dwg



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0 10 20 30 40 50m

1 : 500

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PROJECT

SICEEP - DARLING HARBOUR LIVE
DARLING SQUARE
WESTERN PLOT BUILDING W1

DRAWING TITLE

GENERAL ARRANGEMENT PLAN

STATUS

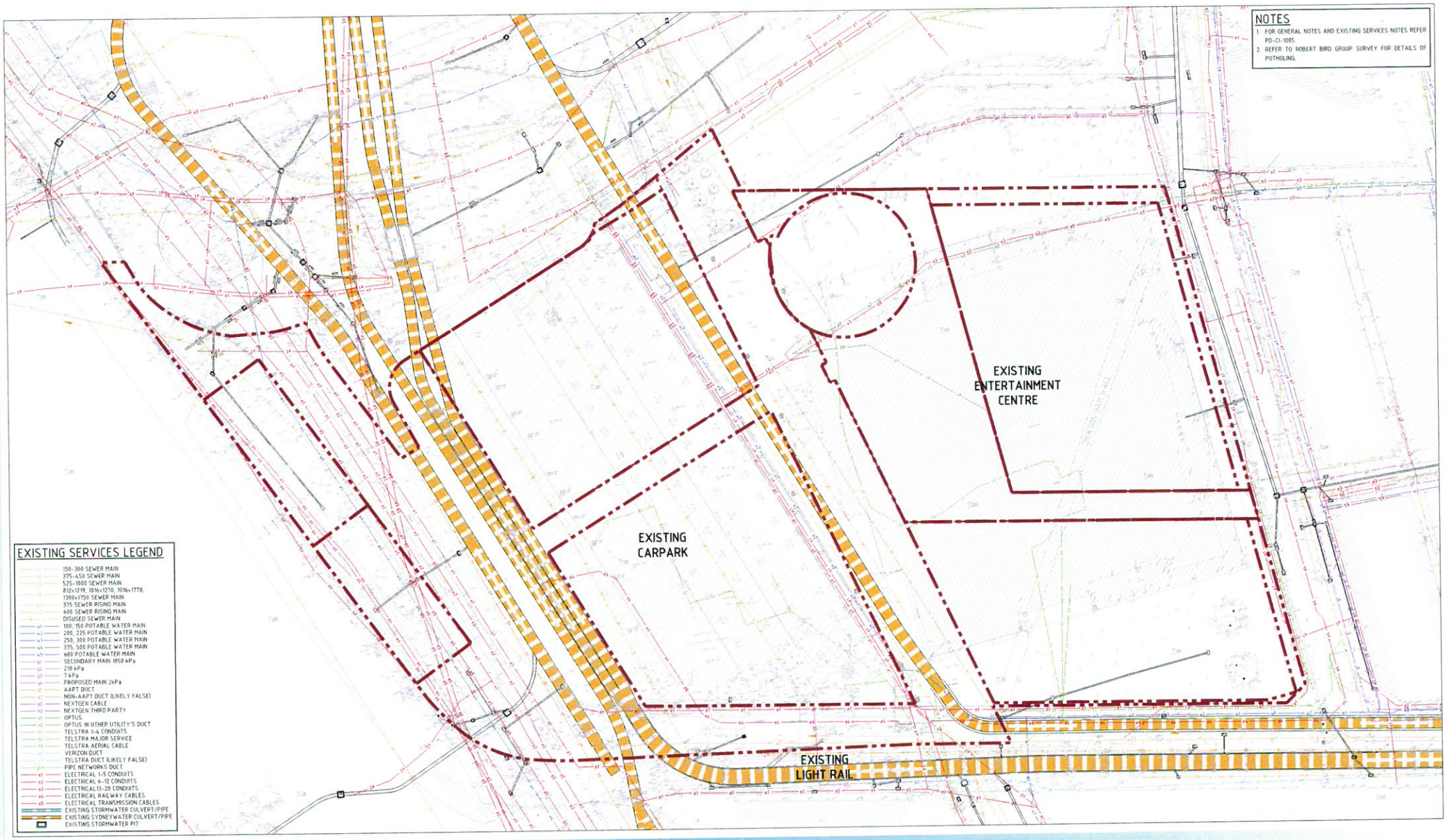
DA APPROVAL

SCALE @ A1	DRAWN	DESIGNED	REVIEWED	APPROVED
1 : 500	JW	JW	MAK	-

PROJECT NUMBER	DRAWING NUMBER	REV
AA004399	PD-CI-1011	04

Date Plotted: 11 Sep 2015 - 04:50PM File Name: F:\AA004399\E-CAD\C-Civil\D-Final\B-PDA1\W1 Building (PD-CI-1001 - PD-CI-1999)\PD-CI-1011-GeneralArrangementPlan.dwg

Original Sheet Size A1 - 841 x 594mm



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PROJECT
SICEEP - DARLING HARBOUR LIVE
DARLING SQUARE
WESTERN PLOT BUILDING W1

DRAWING TITLE
SURVEY AND EXISTING SERVICES PLAN (DBYD)

STATUS
DA APPROVAL

SCALE @ A1	DRAWN	DESIGNED	REVIEWED	APPROVED
1 : 500	JW	JW	MAK	-

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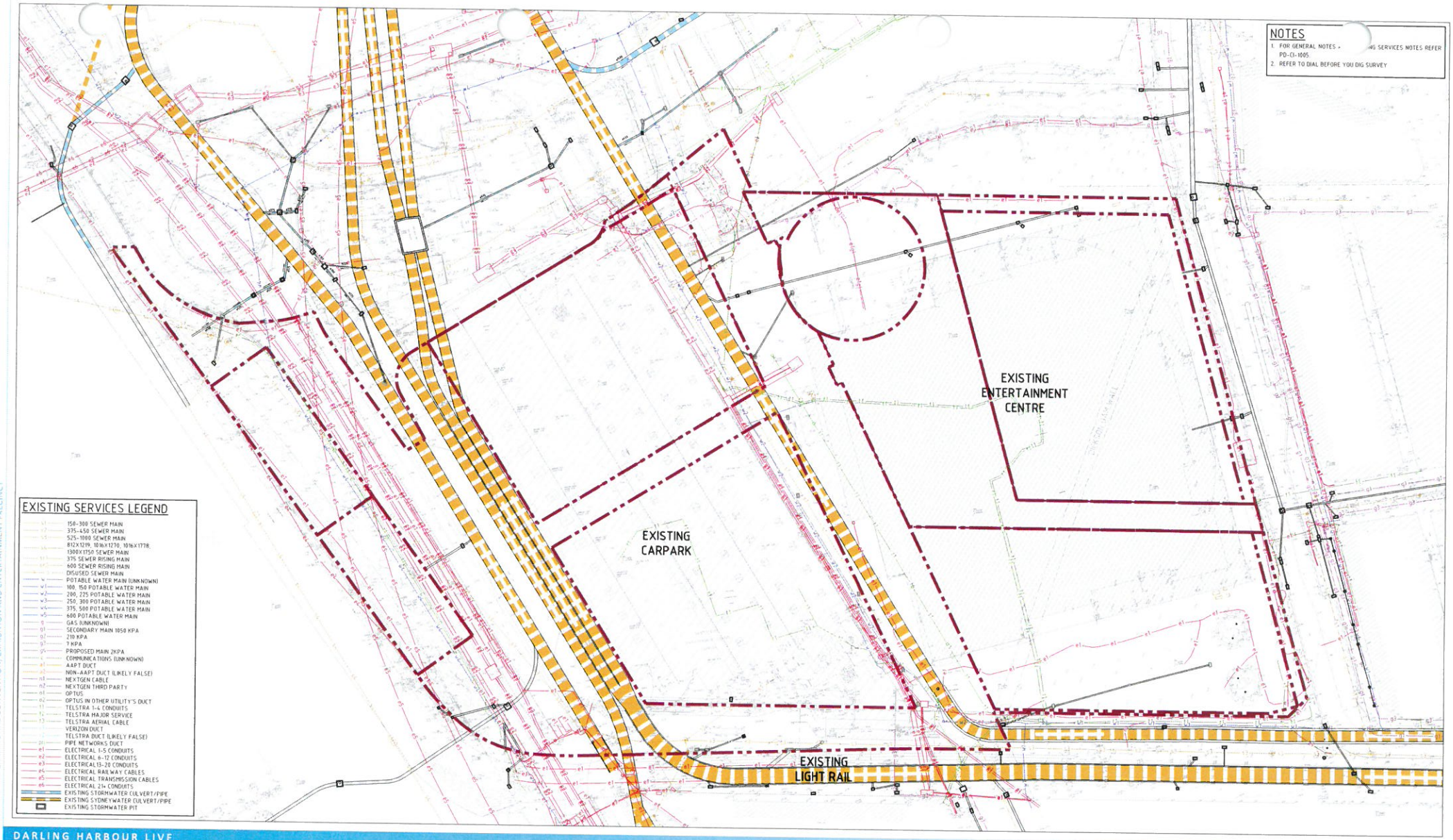
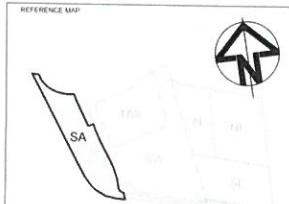


SYDNEY INTERNATIONAL CONVENTION, EXHIBITION AND ENTERTAINMENT PRECINCT

DARLING HARBOUR LIVE

REFERENCE MAP



NOTES:
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0 10 20 30 40 50m

1 : 500

REV	DESCRIPTION	DATE
04	ISSUE FOR DEVELOPMENT APPLICATION	11/09/15
03	ISSUE FOR DEVELOPMENT APPLICATION	04/09/15
02	ISSUE FOR DEVELOPMENT APPLICATION	01/09/15
01	DRAFT ISSUE	19/08/15

CLIENT
urbanest student accommodation
URBANEST STUDENT ACCOMMODATION
SUITE 102, LEVEL 1, AUSTRALIA SQUARE, PLAZA BUILDING, 95 PITT ST
SYDNEY, NSW 2000

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ASPECT STUDIOS
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SURRY HILLS, NSW 2010

AJ+C
ARCHITECT
79 MYRTLE STREET
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PROJECT
SICEEP - DARLING HARBOUR LIVE
DARLING SQUARE
WESTERN PLOT BUILDING W1

DRAWING TITLE
SURVEY AND EXISTING SERVICES PLAN (ROBERT BIRD GROUP)

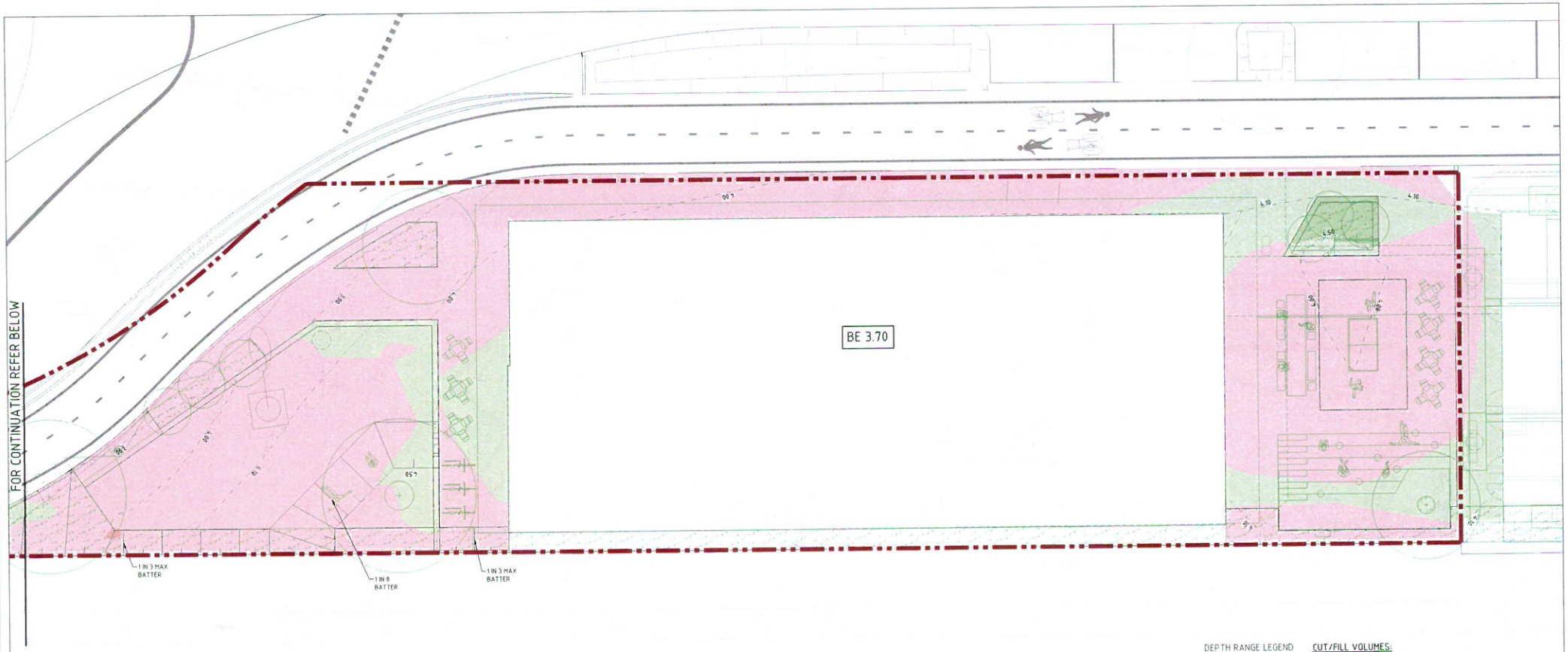
STATUS
DA APPROVAL

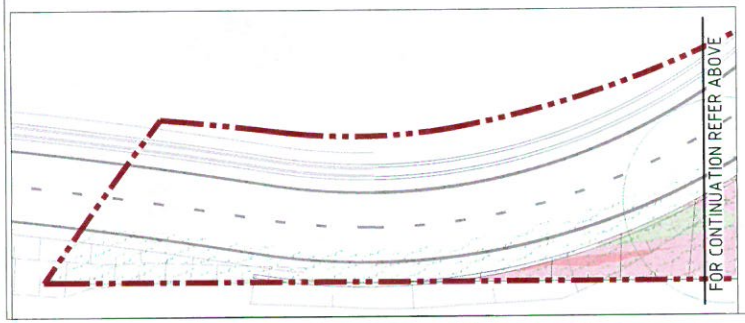
SCALE @ A1	DRAWN	DESIGNED	REVIEWED	APPROVED
1 : 500	JW	JW	MAK	-

PROJECT NUMBER	DRAWING NUMBER	REV
AA004399	PD-CI-1022	04

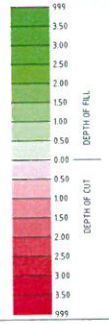
Date Plotted: 11 Sep 2015 - 04:51PM File Name: F:\AA004399\E-CAD\C-Civil\D-Final\B-PDA1-W1 Building\PD-CI-1001 - PD-CI-1999\PD-CI-1022-Survey\ndExistingServicesPlan-RBG.dwg

Original Sheet Size A1 - 841 x 594mm





DEPTH RANGE LEGEND



CUT/FILL VOLUMES:

TOTAL CUT	82m³
TOTAL FILL	16m³
TOTAL BALANCE	66m³
IE EXCESS OF CUT OVER FILL	66m³

FIGURES ABOVE ARE APPROXIMATE ONLY.

EARTHWORKS NOTES/ASSUMPTIONS:

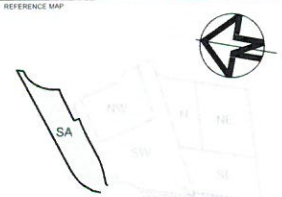
1. THE CUT/FILL VOLUMES DO NOT INCLUDE THE ACTUAL PAVEMENT MATERIALS (NOMINAL PAVEMENT THICKNESS ASSUMED 300mm) REQUIRED. THE VOLUMES ALLOW FOR THE EXCAVATION AND FORMATION OF THE SUBGRADE WITH RELATION TO THE EXISTING SURFACE (NO STRIPPING).
2. NO ALLOWANCE FOR BULKING FACTORS.
3. NO ALLOWANCE FOR TRENCH EXCAVATION.
4. CONTOURS SHOWN ON THIS PLAN ARE FINISHED SURFACE CONTOURS.

NOTES:
1. FOR GENERAL NOTES AND BULK EARTHWORKS, REFER DRAWING PD-CI-1005.

SYDNEY INTERNATIONAL CONVENTION, EXHIBITION AND ENTERTAINMENT PRECINCT

DARLING HARBOUR LIVE

REFERENCE MAP



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0 2 4 6 8 10m
1 : 100

REV	DESCRIPTION	DATE
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02	ISSUE FOR DEVELOPMENT APPLICATION	04/09/15
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PROJECT
SICEEP - DARLING HARBOUR LIVE
DARLING SQUARE
WESTERN PLOT BUILDING W1

DRAWING TITLE
BULK EARTHWORKS PLAN

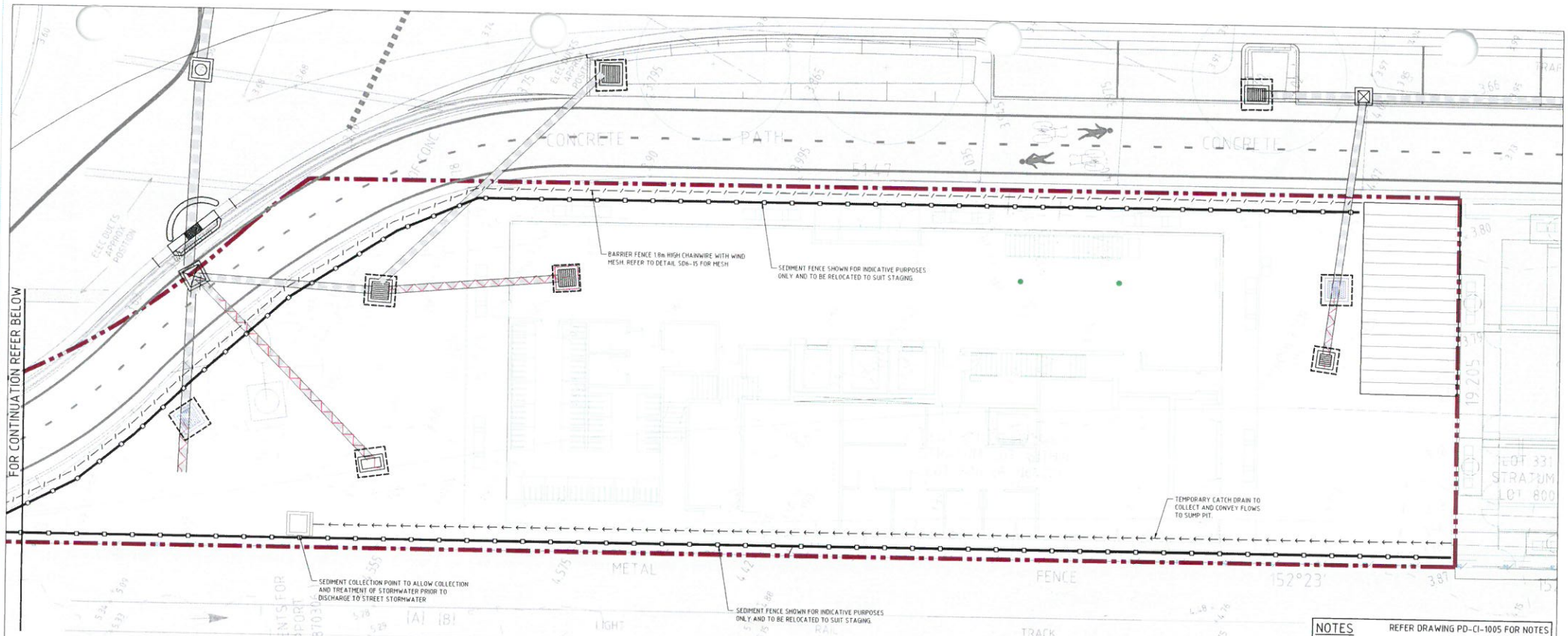
STATUS
DA APPROVAL

SCALE @ A1	DRAWN	DESIGNED	REVIEWED	APPROVED
1:100	JW	JW	MAK	-

PROJECT NUMBER	DRAWING NUMBER	REV
AA004399	PD-CI-'	03

Original Sheet Size A1 - 841 x 594mm

Date Plotted: 11 Sep 2015 - 04:51P... ...me: F:\AA004399\E-CAD\C-Civil\D-Final\B-PDA\I-W1 Building (PD-CI-1001 - PD-CI-1999)\PD-CI-1151-BulkEarthworksPlan.dwg



LEGEND

- PROPOSED CONTOUR
- EXISTING CONTOUR
- PROPOSED STORMWATER INLET PIT
- PROPOSED STORMWATER JUNCTION PIT
- MESH AND GRAVEL INLET FILTER
- GEOTEXTILE FILTER PIT SURROUND
- STABALISED SITE ACCESS AND TRUCK WASH DOWN AREA. LOCATION TO BE DETERMINED ON SITE
- SEDIMENT FENCE
- TEMPORARY CATCH DRAIN
- PROJECT BOUNDARY

NOTE: REFER DRAWING PD-CI-1221 FOR DETAILS

NOTES REFER DRAWING PD-CI-1005 FOR NOTES

1. THE CONTRACTOR AND ALL SUBCONTRACTORS TO ENSURE THAT ALL SEDIMENT & EROSION CONTROLS ARE TO BE IN ACCORDANCE WITH LANDCOM MANAGING URBAN STORMWATER: SOILS AND CONSTRUCTION VOLUME 1, 4TH EDITION MARCH 2004, ALSO KNOWN AS "THE BLUE BOOK".
2. SEDIMENT CONTROL FENCES AND BARRIERS TO BE INSTALLED AROUND CONSTRUCTION STAGING PERIMETERS IN ACCORDANCE WITH COUNCIL REQUIREMENTS.
3. ALL SUBCONTRACTORS TO BE INFORMED OF THEIR RESPONSIBILITIES IN MINIMISING THE POTENTIAL FOR SOIL EROSION AND POLLUTION TO DOWNSLOPE AREAS.
4. WHERE PRACTICABLE, THE SOIL EROSION HAZARD ON THE SITE WILL BE KEPT AS LOW AS POSSIBLE AND AS RECOMMENDED BY THE CONTRACTOR.
5. EROSION AND SEDIMENT CONTROLS TO BE INSTALLED ON INLET PITS, IN ACCORDANCE WITH COUNCIL REQUIREMENTS E.G. MESH & GRAVEL FILTERS, GEOTEXTILE INLET FILTERS ETC.
6. CONSTRUCT LOW FLOW EARTH BANKS WHERE REQUIRED, IN ACCORDANCE WITH COUNCIL REQUIREMENTS.
7. CONSTRUCT STABILISED SITE ACCESSES WHERE NECESSARY, IN ACCORDANCE WITH COUNCIL REQUIREMENTS.
8. ALL STOCKPILES TO BE LOCATED CLEAR OF ALL POSSIBLE AREAS OF CONCENTRATED WATER FLOW, AND TO BE CONTAINED WITHIN A SEDIMENT FENCE.
9. STOCKPILES TO BE COVERED WHERE NECESSARY.
10. ALL WHEEL AND EQUIPMENT WASHING FACILITIES TO BE CONTAINED TO SPECIFIC BUNDED WASH AREAS.
11. ALL FUEL AND CHEMICALS TO BE SAFELY STORED TO PREVENT CONTAMINATION FROM SPILLAGES.

SYDNEY INTERNATIONAL CONVENTION, EXHIBITION AND ENTERTAINMENT PRECINCT

DARLING HARBOUR LIVE

REFERENCE MAP

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1 : 100

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PROJECT
SICEEP - DARLING HARBOUR LIVE
DARLING SQUARE
WESTERN PLOT BUILDING W1

DRAWING TITLE
SEDIMENT AND EROSION CONTROL PLAN

STATUS
DA APPROVAL

SCALE @ A1	DRAWN	DESIGNED	REVIEWED	APPROVED
1:100	JW	JW	MAK	-

PROJECT NUMBER	DRAWING NUMBER	REV
AA004399	PD-CI-1201	05

Original Sheet Size A1 - 841 x 594mm

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