

Our Reference: 209139

22 October 2020

The Manager Stiletto Homes PO Box 270 WARILLA NSW 2528

Attention: Mr Jim Ristevski

Dear Jim,

Re: <u>Seniors Living Development - No. 14 Hamilton Road, Albion Park</u>

Further to your instructions we have reviewed the plans for the proposed seniors living development at the above site prepared by LandTeam and referenced 209139 DA01 to 209139_DA021 issue K, which indicates existing ground surface levels to the Australian Height Datum (AHD) in conjunction with Shellharbour City Council's (SCC) Flood Enquiry Certificate No.ENG0115/2020 dated 14 October 2020 (FEC), the Macquarie Rivulet Flood Study (MRFS) dated February 2017, appendix 9 Floodplain Risk Management of the Shellharbour Development Control Plan (DCP) and the NSW State Emergency Services (SES) "Shellharbour Local Flood Plan" (SLFP).

The site is located at No. 14 Hamilton Road, Albion Park and on the eastern side of Hamilton Road, immediately to the north of its intersection with Tripoli Way.

It is proposed to subdivide the site into thirty nine (39) community title residential lots with one (1) additional lot, comprising the road and community open space.

The FEC advises that flood inundation levels at the site during the 1% AEP event range from 10.04m AHD at the eastern site boundary to 10.72m AHD at the western site boundary. During the PMF even flood inundation levels rage from 10.50m AHD at the eastern site boundary to 11.31m AHD at the western site boundary.

Proposed lots 29 to 39 are the northern most lots in the proposal and are located closest to the Macquarie Rivulet.

Existing ground levels at the northern ends of proposed lots 29 to 39 range from about 11.3m AHD at the common boundary of proposed lots 29 and 30 to about 11.0m AHD at the common boundary of proposed lots 33 and 34 to 11.4m AHD at the western boundary of proposed lot 39. These existing ground levels are between 0.5m and 1.3m above the 1% AEP level and up to 0.8m above the PMF level.

Habitable floor levels of the proposed residences at proposed lots 29 to 39 range from 11.495m AHD at Proposed lot 29 to 12.405m AHD at proposed lot 39. These levels are between 1.45m and 1.65m above the 1% AEP flood level and between 1.0m and 1.1m above the PMF level.

Having regard to the foregoing we find that the proposed residences on the site are not affected by flooding during the 1% AEP or PMF events.



However, road access to the site is restricted, during the 1% AEP event, with inundation depths of up to 0.5 metres in roads leading to the Albion Park Town centre. During the PMF event these inundation depths are in excess of 0.5 metres. Access beyond the Albion Park Town Centre to other areas is not viable during the 1% AEP and PMF events.

The MRFS has classified the site for the 1% AEP and PMF events in accordance with the Technical Flood Risk Management Guideline: Flood Emergency Response Planning Classification of Communities. The site has been classified as having rising road access during the 1% AEP event and as being a high island during the PMF event. That is, during the 1% AEP event, road access is available out of the site, but only to the Albion Park Town Centre and nearby schools. During the PMF event the site is not inundated but vehicular or pedestrian access out of the site is not available.

Having regard to the foregoing we find that during the PMF event evacuation from the site will not be available but evacuation within the site will be available. We note that typically, flooding in the Illawarra is of a short duration of the order of less than about twenty four (24) hours and it is expected that access from the site would typically be available after subsidence of flood waters.

Evacuation is available within each of the residences above the PMF level.

We have reviewed the 'Shellharbour Local Flood Plan' proposed by the SES, in particular, clause 2.5 which relates to Albion Park.

Overall management of flood rescue operations is under the control of the NSW SES Incident Controller. During times of flood Occupants should monitor emergency radio broadcasts and following the directions of NSW SES Incident Controller.

During Times of Heavy Rainfall:-

During times of heavy rainfall or predicted heavy rainfall occupants should have a flood evacuation strategy in place which would include the following:

- Be aware of emergency radio broadcasts and other flood warning systems.
- Comply with the directions of emergency personnel, such as Police and State Emergency Services personnel.
- Be ready to evacuate if directed by emergency personnel.
- Ensure that mobile phone with charged batteries is accessible
- Ensure that sufficient stocks of flood, fresh water, medication, battery powered radio, battery powered lighting and other essential items and documents are stored in the residence which is about the PMF level (all of the proposed lots are above the PMF level).



The site is at a level which is above the inundation level of the PMF, however if required to evacuate, follow the directions of emergency personnel:

- During the 1% AEP and PMF events private vehicular access to nearby hospitals is not available. If medical assistance is required then dial 000.
- Information of local flooding is available on the NSW SES Facebook page, twitter and on the NSW SES website <u>www.ses.nsw.gov.au</u>.
- While evacuation is available to the houses within the site; the residents may consider the formation of a committee to coordinate support and assistance for people and pets within the subdivision during the times of flooding.

Yours Faithfully **LandTeam**

Peter Lockhart

B.E., M.I.E. (Aust), N.P.E.R-3

PL:KT



Appendix A

Shellharbour City Council's Flood Certificate No.ENG0115/2020 Dated 14 October 2020



All Communication address to the General Manager

Shellharbour City Council, Locked Bag 155 Shellharbour City Centre, NSW 2529 p. 02 4221 6111 f. 02 4221 6016 e. records@shellharbour.nsw.gov.au www.shellharbour.nsw.gov.au

DX 26402 Shellharbour City Centre

14 October 2020

Stiletto Homes Pty Ltd PO Box 270 WARILLA NSW 2528

Details Flooding Enquiry Certificate

Property Address: 14 Hamilton Road ALBION PARK NSW 2527

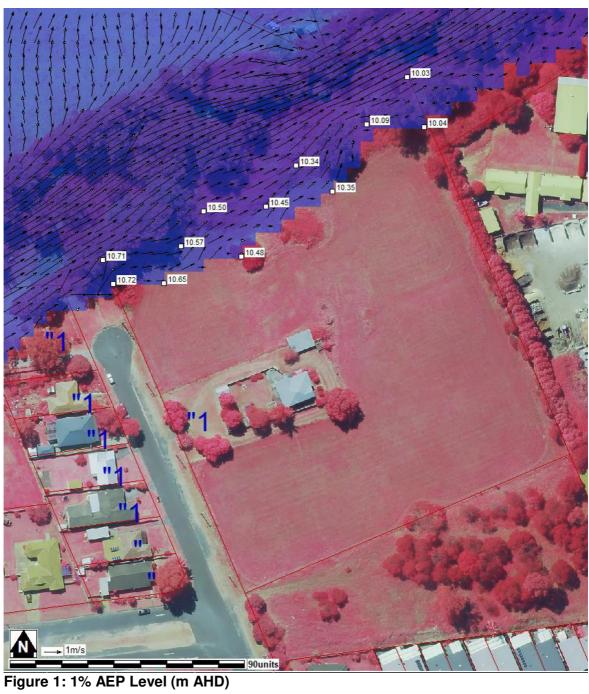
Legal Description: Lot 1 DP 1069961 **Our Reference:** ENG0115/2020

Council manages flood prone land in accordance with the NSW Governments Flood Prone Land Policy. The procedures for the management of flood prone land are detailed in the NSW Governments Floodplain Development Manual 2005. The manual identifies a 4-step process for floodplain managers to follow:

- 1. Flood Study Determines the nature and extent of the flooding.
- 2. Floodplain Risk Management Study Evaluates the management options available for both existing and future development within the floodplain.
- 3. Floodplain Risk Management Plan The adoption of a plan of management for the floodplain by Council.
- 4. Implementation of the Plan Construction of flood mitigation works to protect existing development, planning controls to ensure new development is compatible with the flood hazard.

The most recent flooding information from the adopted Macquarie Rivulet Flood Study (2017) identifies the design 1% Annual Exceedance Probability (AEP) and Probable Maximum Flood (PMF) levels and velocities that are relevant to the subject property as shown in the Figures 1 to 4.

Note: The flood information in the **Figures 1 to 4** applies as of the date of this letter.



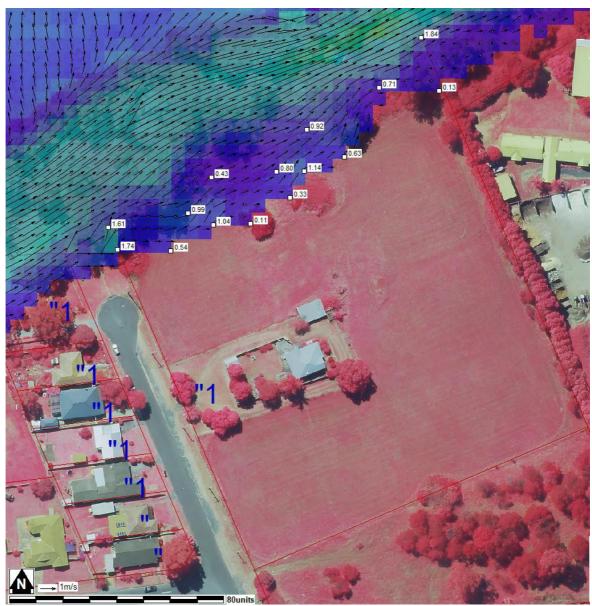
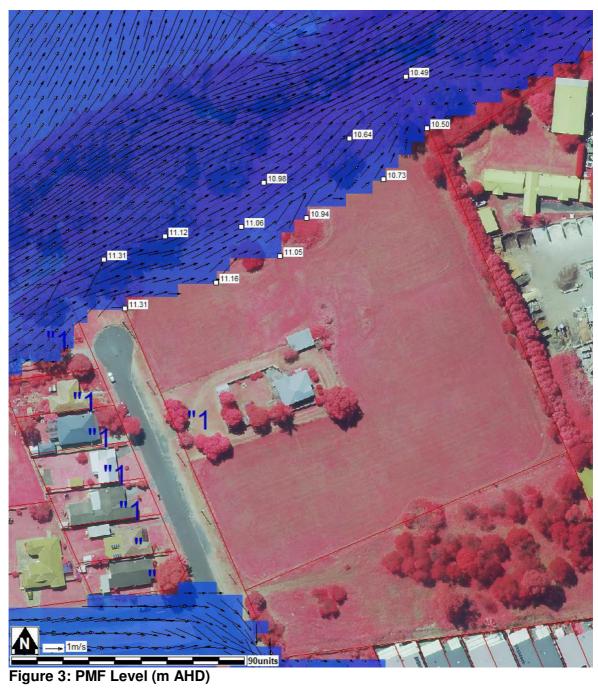


Figure 2: 1% AEP Velocity (m/s)



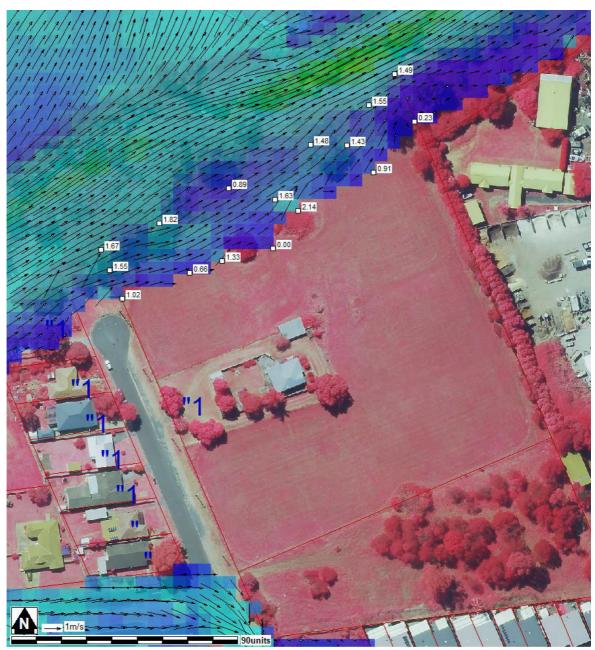


Figure 4: PMF Velocity (m/s)

The Macquarie Rivulet Flood Study (2017) also identifies potential climate change scenarios for the 1% Annual Exceedance Probability (AEP) event that are relevant to the subject property as follows:

Flood Information for 14 Hamilton Road ALBION PARK	10% increase in rainfall intensity	20% increase in rainfall intensity	30% increase in rainfall intensity	0.4m Sea Level Rise	0.9m Sea Level Rise
Water Level (m AHD)	10.8	10.9	10.9	10.7	10.7

Council is in the process of developing a Climate Change Adaption Plan which will include provisions for the management of land affected by potential impacts of Climate Change. In the future, Council may adopt Scenarios for Increase in Sea Level Rise and Rainfall Intensity for the purposes of development assessment, such as the scenarios identified above. You are advised to contact Council prior to lodging your development application to confirm what flood information applies to your proposal.

Council has adopted The Shellharbour Development Control Plan 2013 (DCP). Chapter 24 of the DCP relates to Floodplain Risk Management and outlines development controls specific to individual sites based on the flood risk associated with specific development types and their location within the floodplain.

These are known as High, Medium and Low Flood Risk Precincts and are defined as:

High Flood Risk Precinct: This has been defined as the area within the envelope of land subject to a high hydraulic hazard or defined as floodway (in accordance with the provisional criteria outlined in the Floodplain Development Manual) in a 1% AEP flood event. The high flood risk precinct is where high flood damages, potential risk to life and evacuation problems would be anticipated or development would significantly and adversely effect flood behaviour. Only in exceptional circumstances will development be permitted in this precinct. In this precinct, there would be a significant risk of flood damages without compliance with flood related building and planning controls.

Medium Flood Risk Precinct: This has been defined as land below the 1% AEP flood level (plus 0.5m freeboard) that is not within the High Flood Risk Precinct. It is land subject to low hydraulic hazard (in accordance with the provisional criteria outlined by the Floodplain Management Manual). In this precinct there would still be a significant risk of flood damage, but these damages can be minimised by the application of appropriate development controls.

Low Flood Risk Precinct: This has been defined as all other land within the floodplain (ie. within the extent of the probable maximum flood) but not identified within either the High Flood Risk or the Medium Flood Risk Precinct where risk of damages are low for most land uses. The Low Flood Risk Precinct is that area above the 1% AEP flood level (plus 0.5m freeboard) to the Probable Maximum Flood level. Most land uses would be permitted within this precinct.

To confirm which Flood Risk Precinct your property is within, it is recommended that the services of a suitably qualified engineer and/or surveyor be engaged. A detailed survey of your property may be required and it is possible for your property to be located within more than one flood risk precinct. Further information can be found within the adopted Flood Study and/or Floodplain Risk Management Study and Plan.

The Shellharbour DCP can be downloaded from Council's website here - www.shellharbour.nsw.gov.au. Further enquiries relating to development constraints should be directed to Council's Development Assessment Officers on 4221 6111.

I trust this information is of assistance.

Yours sincerely

Prabin Kayastha

Senior Civil Engineer



Appendix B

Development Plans

Nos. 209139-DA01 to 209139-DA21 (Issue K)

PROPOSED SELF CONTAINED DWELLING SENIORS LIVING DEVELOPMENT

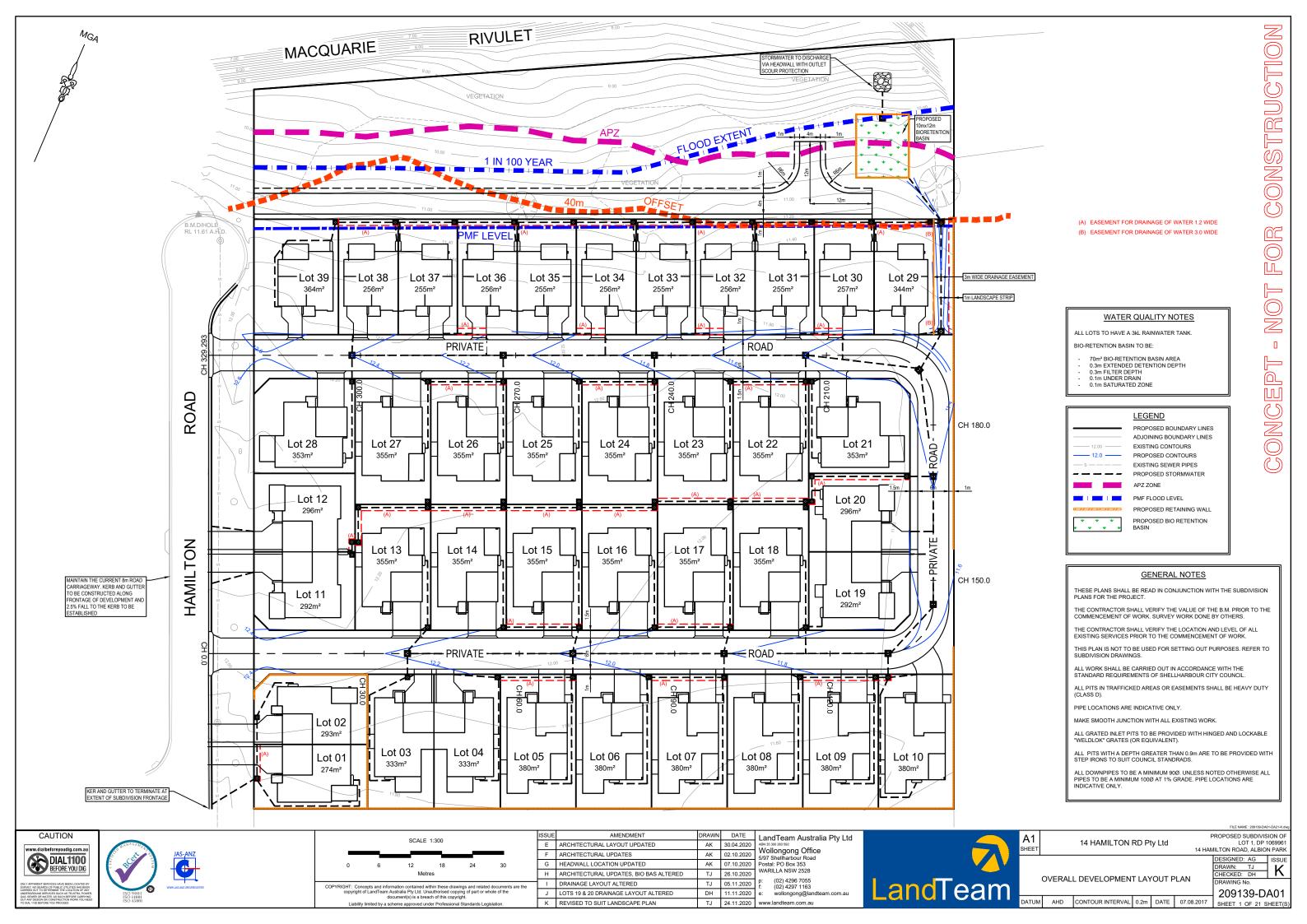
LOT 1 DP 1069961 14 HAMILTON ROAD, ALBION PARK

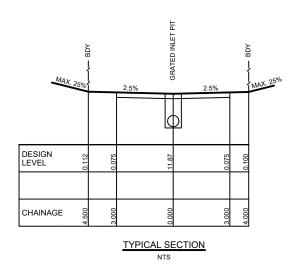
> SCHEDULE OF DA DRAWINGS 209139 ISSUE K

DA00. COVER SHEET & DRAWING LIST DA01. OVERALL DEVELOPMENT LAYOUT PLAN DA02. PRIVATE ROAD LONG SECTION & TYPICAL SECTION DA03. PRIVATE ROAD CROSS SECTIONS DA04. SOIL & WATER MANAGEMENT PLAN DA05. CONCEPT DRAINAGE DESIGN LOTS 1 - 2 DA06. CONCEPT DRAINAGE DESIGN LOTS 3 - 5 DA07. CONCEPT DRAINAGE DESIGN LOTS 6 - 8 DA08. CONCEPT DRAINAGE DESIGN LOTS 9 - 10 DA09. CONCEPT DRAINAGE DESIGN LOTS 11 - 12 DA10. CONCEPT DRAINAGE DESIGN LOTS 13 - 15 DA11. CONCEPT DRAINAGE DESIGN LOTS 16 - 18 DA12. CONCEPT DRAINAGE DESIGN LOTS 19 - 20 DA13. CONCEPT DRAINAGE DESIGN LOTS 21 DA14. CONCEPT DRAINAGE DESIGN LOTS 22 - 24 DA15. CONCEPT DRAINAGE DESIGN LOTS 25 - 27 DA16. CONCEPT DRAINAGE DESIGN LOTS 28 DA17. CONCEPT DRAINAGE DESIGN LOTS 29 - 30 DA18. CONCEPT DRAINAGE DESIGN LOTS 31 - 34 DA19. CONCEPT DRAINAGE DESIGN LOTS 35 - 38 DA20. CONCEPT DRAINAGE DESIGN LOTS 39 DA21. CONCEPT DRAINAGE DESIGN STORMWATER DISPOSAL PLAN

Prepared for: 14 HAMILTON ROAD Pty Ltd







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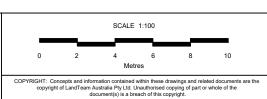
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F	ARCHITECTURAL UPDATES	AK	02.10.2020	,
G	HEADWALL LOCATION UPDATED	AK	07.10.2020	F
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_	DRAINAGE LAYOUT ALTERED	TJ	05.11.2020	f
J	LOTS 19 & 20 DRAINAGE LAYOUT ALTERED	DH	11.11.2020	6
K	REVISED TO SUIT LANDSCAPE PLAN	TJ	24.11.2020	١

LandTeam Australia Pty Ltd

ABIN 30 300 283 992

Wollongong Office
5/97 Shellharbour Road
Postal: PO Box 353

WARILLA NSW 2528

(02) 4296 7055 (02) 4297 1163 wollongong@landteam.com.au www.landteam.com.au



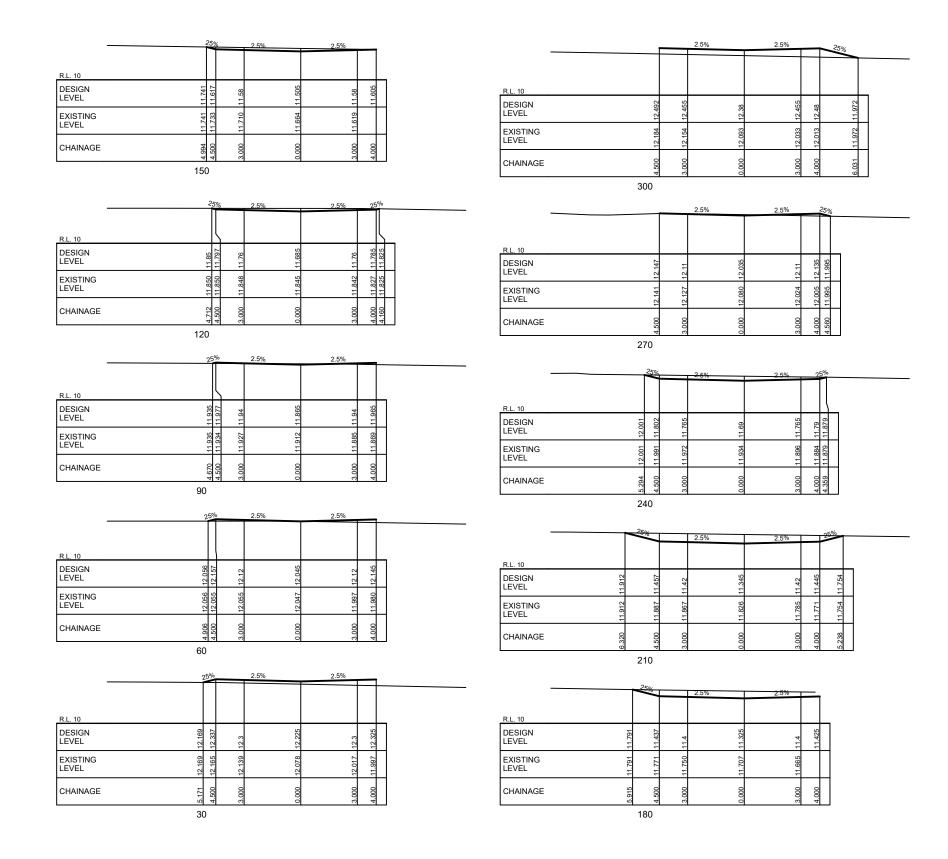
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PROPOSED SUBDIVISION OF LOT 1, DP 1069961 14 HAMILTON ROAD, ALBION PARK Ltd

PRIVATE ROAD LONG SECTION & TYPICAL SECTION
 & TYPICAL SECTION
 209139-DA02

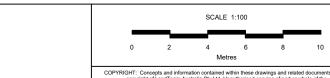
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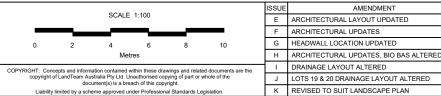
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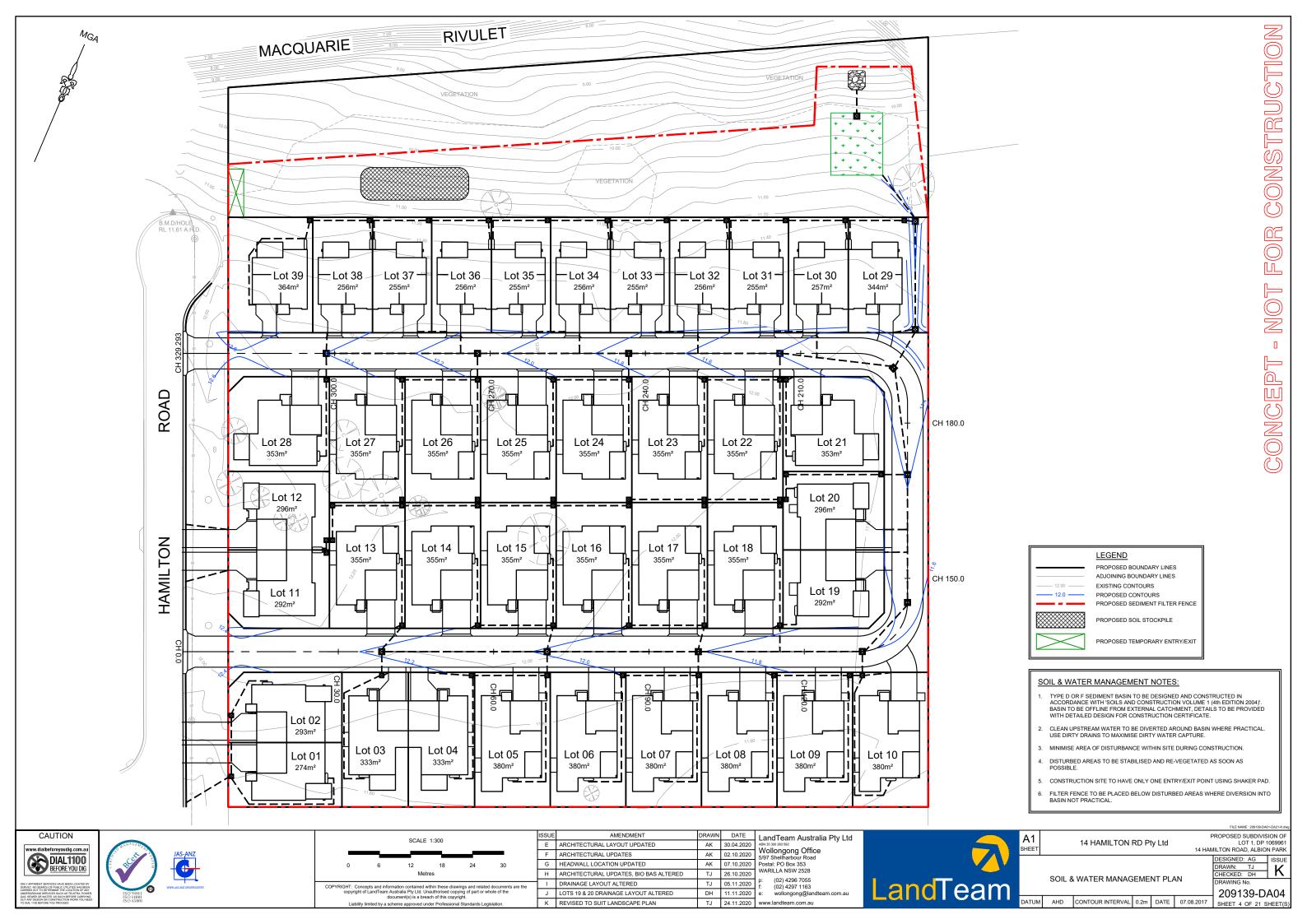


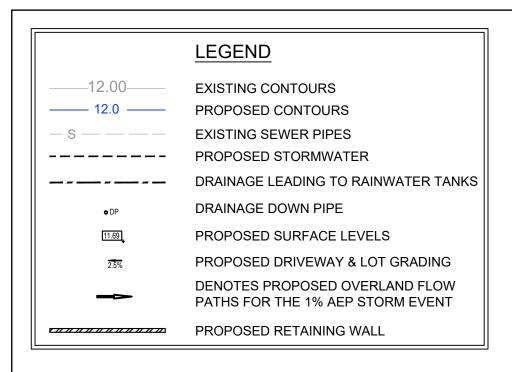


TJ 24.11.2020 www.landteam.com.au

LandTeam

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PUMPS TO BE INSTALLED AND TANKS CONNECTED TO FIXTURES IDENTIFIED BY THE BASIX CERTIFICATE. WORK TO BE CARRIED OUT BY A LICENSED PLUMBER.

NOTE:

STORMWATER DRAINAGE PIPES & DOWNPIPES UPSTREAM OF WATER STORAGE TANKS TO BE SOLVENT WELD JOINTED

NOTE:

OVERLAND FLOW PATHS TO REMAIN FREE FROM OBSTRUCTION. WHERE OVERLAND FLOW PATH PASSES A FENCE LINE, ENSURE 100mm CLEARANCE BETWEEN BOTTOM OF FENCE AND FINISHED GROUND LEVEL.

(A) EASEMENT FOR DRAINAGE OF WATER 1.2 WIDE





ISSUE

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AMENDMENT

RE-ISSUE

ARCH. & BASIN UPDATED

DRAINAGE LAYOUT ALTERED

LOTS 19 & 20 DRAINAGE ALTERED

REV'D TO SUIT LANDSCAPE PLAN 24.11.2020

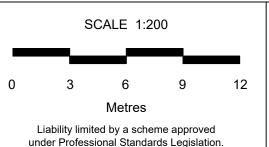
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11.11.2020



PROPOSED DIRECT CONNECTION TO KERB

LandTeam Australia Pty Ltd Wollongong Office 5/97 Shellharbour Road Postal: PO Box 353

WARILLA NSW 2528 p: (02) 4296 7055 f: (02) 4297 1163

HAMILTON

EXISTING POWER POLE TO BE RELOCATED

_andTeam e: wollongong@landteam.com.au

DATE: 30.04.2020 DESIGNED: AK DRAWN: ΑK CHECKED: DH DRAWING No. **CONCEPT DRAINAGE DESIGN** LOTS 1 - 2 AHD CONTOUR INTERVAL 0.2m SHEET 5 OF 21 SHEET(S)

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NOT FOR CONSTRUCTION

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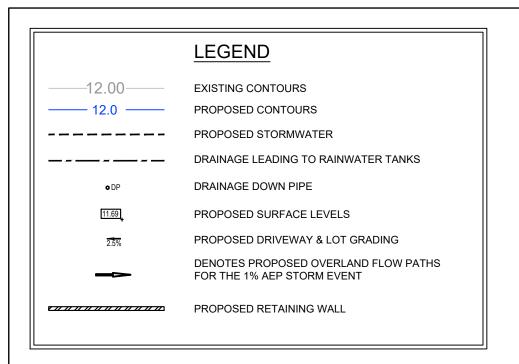
PROPOSED RETAINING WALL

A3 14 HAMILTON RD Pty Ltd

209139-DA05

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ISSUE



PUMPS TO BE INSTALLED AND TANKS CONNECTED TO FIXTURES IDENTIFIED BY THE BASIX CERTIFICATE. WORK TO BE CARRIED OUT BY A LICENSED PLUMBER.

NOTE:

STORMWATER DRAINAGE PIPES & DOWNPIPES UPSTREAM OF WATER STORAGE TANKS TO BE SOLVENT WELD JOINTED

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(A) EASEMENT FOR DRAINAGE OF WATER 1.2 WIDE





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DRAINAGE LAYOUT ALTERED

LOTS 19 & 20 DRAINAGE ALTERED

REV'D TO SUIT LANDSCAPE PLAN 24.11.2020

AMENDMENT DATE **SCALE 1:200 RE-ISSUE** 07.10.2020 ARCH. & BASIN UPDATED 26.10.2020 6

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11.11.2020

Metres Liability limited by a scheme approved under Professional Standards Legislation.

PROPOSED RETAINING WALL

LandTeam Australia Pty Ltd Wollongong Office 5/97 Shellharbour Road Postal: PO Box 353

WARILLA NSW 2528 p: (02) 4296 7055 f: (02) 4297 1163

LandTeam

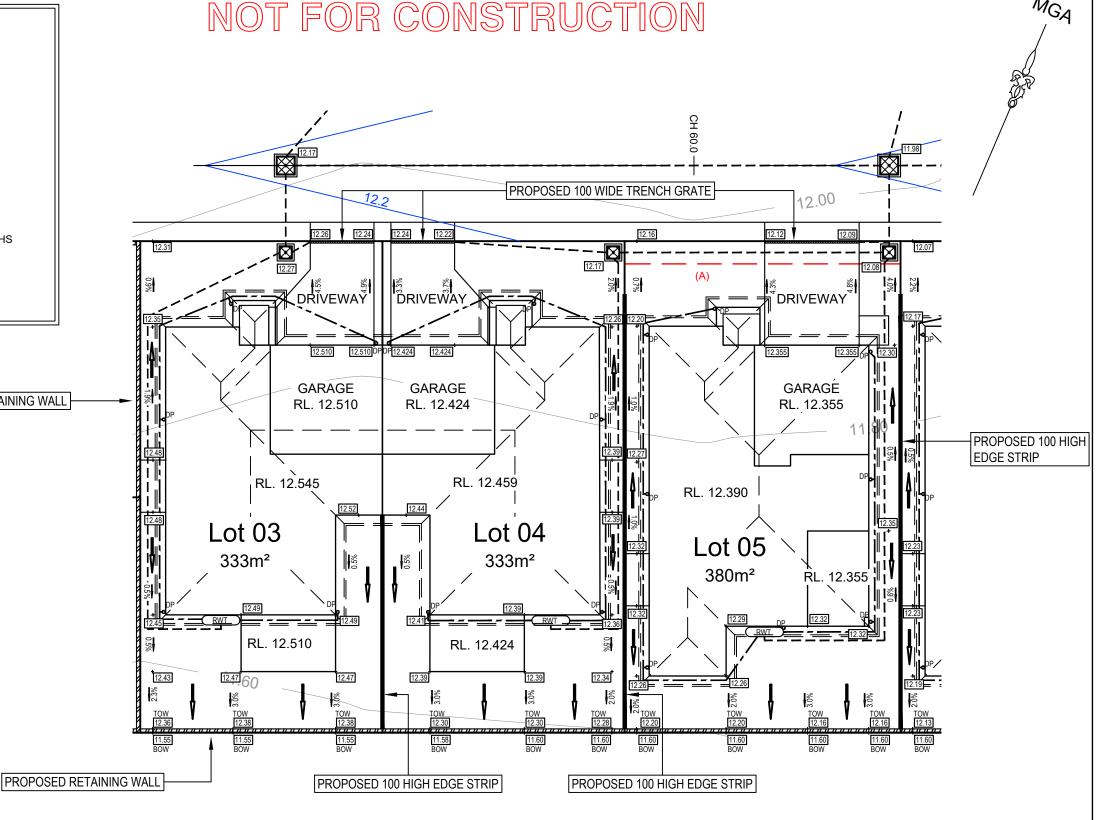
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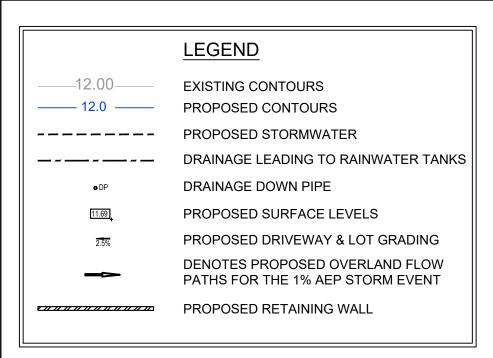
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209139-DA06 SHEET 6 OF 21 SHEET(S)

e: wollongong@landteam.com.au AHD CONTOUR INTERVAL 0.2m COPYRIGHT: Concepts and information within these drawings and related documents are the copyright of LandTeam Australia Pty Ltd. Unauthorised copying of part or whole of the document(s) is a breach of this copyright.





PUMPS TO BE INSTALLED AND TANKS CONNECTED TO FIXTURES IDENTIFIED BY THE BASIX CERTIFICATE. WORK TO BE CARRIED OUT BY A LICENSED PLUMBER.

NOTE:

STORMWATER DRAINAGE PIPES & DOWNPIPES UPSTREAM OF WATER STORAGE TANKS TO BE SOLVENT WELD JOINTED PVC PIPES.

(A) EASEMENT FOR DRAINAGE OF WATER 1.2 WIDE

PROPOSED 100 HIGH EDGE STRIP

NOTE:

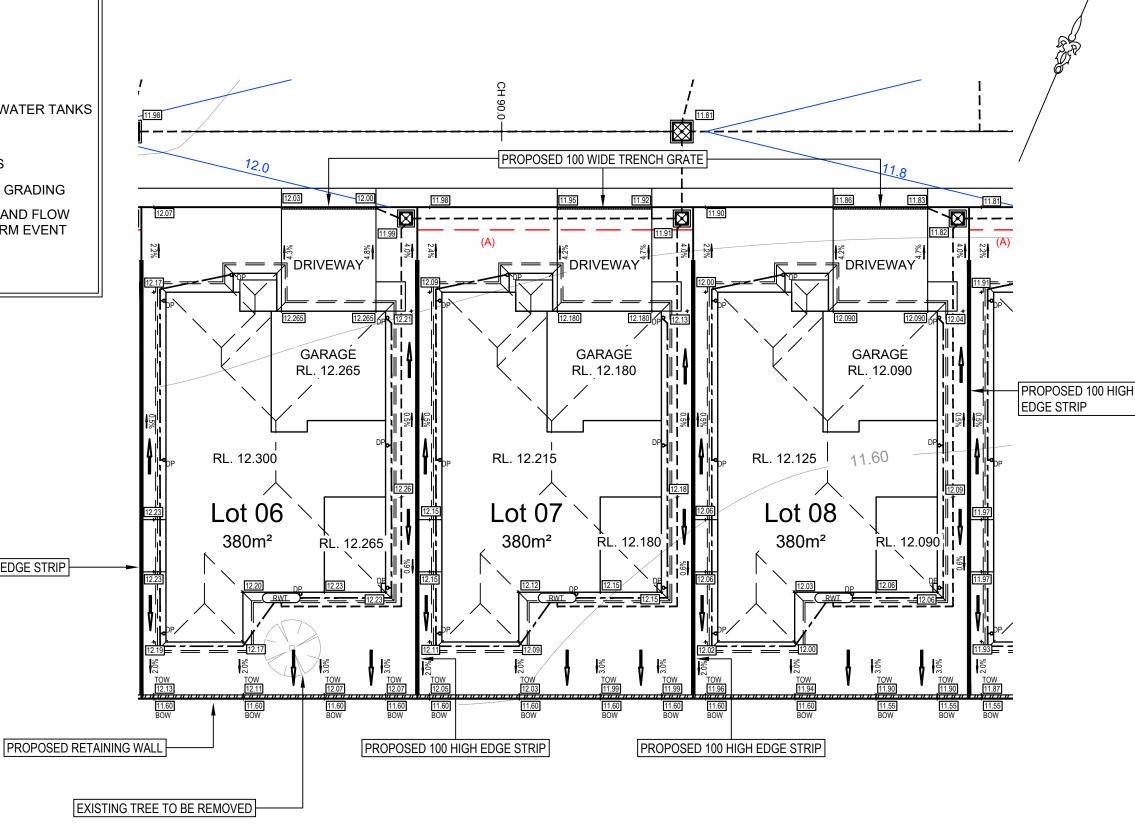
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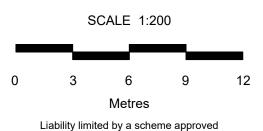






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ISSUE	AMENDMENT	DATE
G	RE-ISSUE	07.10.2020
Н	ARCH. & BASIN UPDATED	26.10.2020
I	DRAINAGE LAYOUT ALTERED	05.11.2020
J	LOTS 19 & 20 DRAINAGE ALTERED	11.11.2020
K	REV'D TO SUIT LANDSCAPE PLAN	24.11.2020



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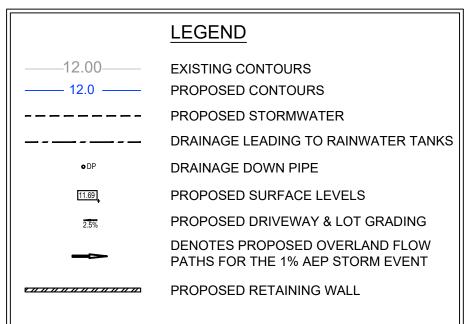
LandTeam Australia Pty Ltd ABN 35 300 283 592 Wollongong Office 5/97 Shellharbour Road Postal: PO Box 353 WARILLA NSW 2528

p: (02) 4296 7055 f: (02) 4297 1163 e: wollongong@landteam.com.au

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NOTE:

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(A) EASEMENT FOR DRAINAGE OF WATER 1.2 WIDE





PROPOSED 100 HIGH EDGE STRIP

380m² PROPOSED RETAINING WALL LandTeam Australia Pty Ltd Wollongong Office 5/97 Shellharbour Road

_andTeam

NOT FOR CONSTRUCTION

PROPOSED 100 WIDE TRENCH GRATE

DRIVEWAY

GARAGE

RL. 12.005

RL. 12.005

RL. 12.040

Lot 09

A3 14 HAMILTON RD Pty Ltd

DRIVEWAY

GARAGE

RL. 12.055

RL. 12.055

RL. 12.090

Lot 10

380m²

CONCEPT DRAINAGE DESIGN LOTS 9 - 10

CONTOUR INTERVAL 0.2m

AHD

DATE: 30.04.2020 DESIGNED: AK **ISSUE** DRAWN: ΑK CHECKED: DH DRAWING No.

FILE NAME: 209139-DA01-DA21-K.dwg

PROPOSED RETAINING WALL

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209139-DA08 SHEET 8 OF 21 SHEET(S)

ISSUE **AMENDMENT** DATE G **RE-ISSUE** 07.10.2020 Η ARCH. & BASIN UPDATED 26.10.2020 DRAINAGE LAYOUT ALTERED 05.11.2020 LOTS 19 & 20 DRAINAGE ALTERED 11.11.2020 REV'D TO SUIT LANDSCAPE PLAN 24.11.2020

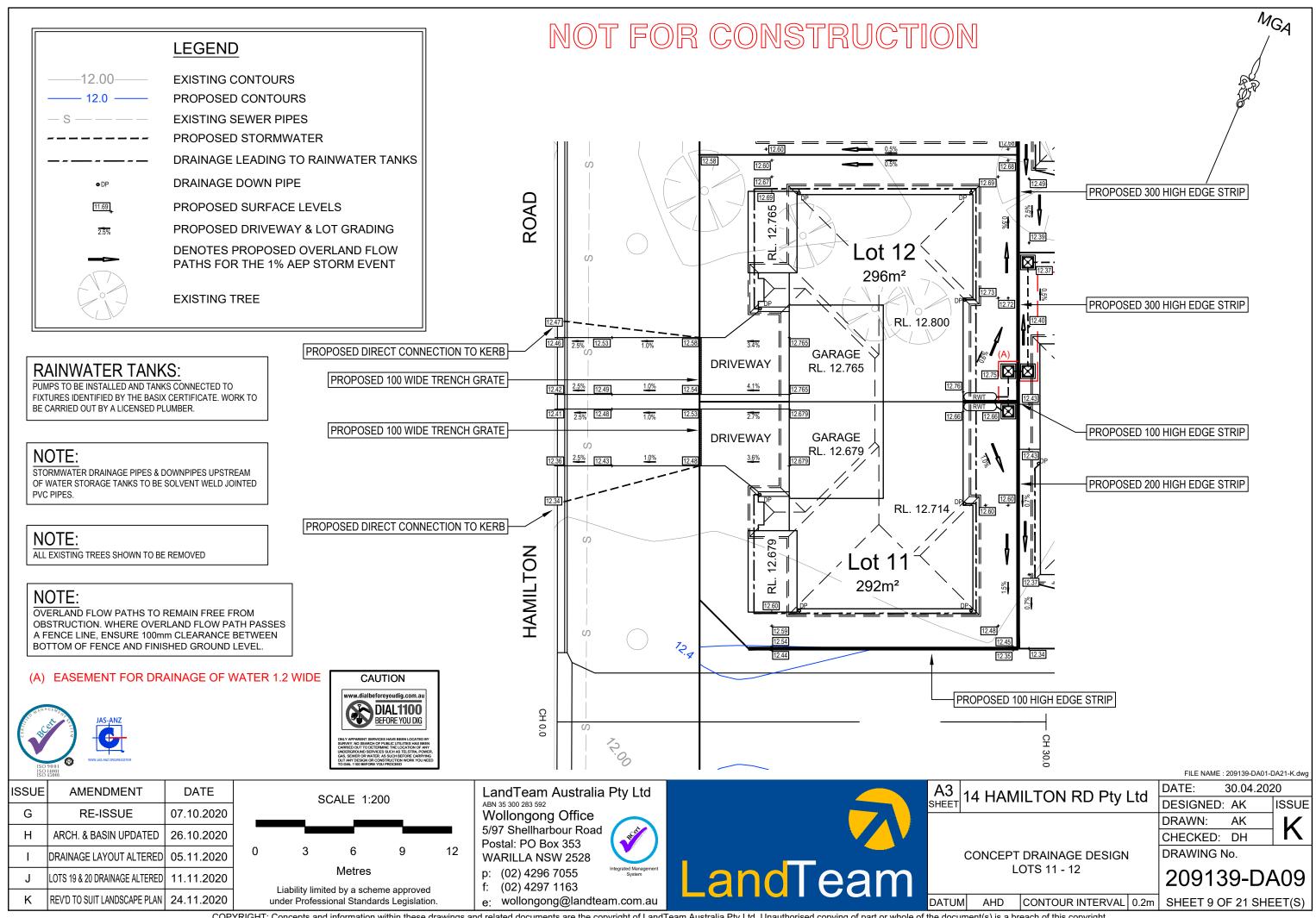
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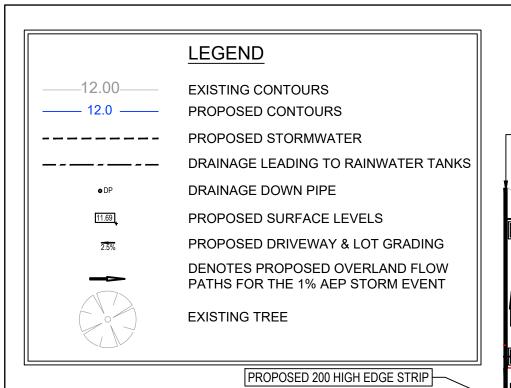
under Professional Standards Legislation.

WARILLA NSW 2528 p: (02) 4296 7055 f: (02) 4297 1163

Postal: PO Box 353

e: wollongong@landteam.com.au





PUMPS TO BE INSTALLED AND TANKS CONNECTED TO FIXTURES IDENTIFIED BY THE BASIX CERTIFICATE. WORK TO BE CARRIED OUT BY A LICENSED PLUMBER.

NOTE:

STORMWATER DRAINAGE PIPES & DOWNPIPES UPSTREAM OF WATER STORAGE TANKS TO BE SOLVENT WELD JOINTED

PROPOSED 100 HIGH EDGE STRIP

NOTE:

ALL EXISTING TREES SHOWN TO BE REMOVED

NOTE:

OVERLAND FLOW PATHS TO REMAIN FREE FROM OBSTRUCTION. WHERE OVERLAND FLOW PATH PASSES A FENCE LINE, ENSURE 100mm CLEARANCE BETWEEN BOTTOM OF FENCE AND FINISHED GROUND LEVEL.

(A) EASEMENT FOR DRAINAGE OF WATER 1.2 WIDE

DATE

07.10.2020

26.10.2020

05.11.2020

11.11.2020



ISSUE

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AMENDMENT

RE-ISSUE

ARCH. & BASIN UPDATED

DRAINAGE LAYOUT ALTERED

LOTS 19 & 20 DRAINAGE ALTERED

REV'D TO SUIT LANDSCAPE PLAN 24.11.2020





SCALE 1:200 6 Metres Liability limited by a scheme approved under Professional Standards Legislation.

LandTeam Australia Pty Ltd ABN 35 300 283 592 Wollongong Office 5/97 Shellharbour Road Postal: PO Box 353

PROPOSED 300 HIGH EDGE STRIP

355m²

RL. 12.500

RL. 12.465

GARAGE

RL. 12.465

DRIVEWAY

WARILLA NSW 2528 p: (02) 4296 7055 f: (02) 4297 1163

e: wollongong@landteam.com.au

andTeam

NOT FOR CONSTRUCTION

OVERLAND FLOW PATH TO REMAIN

RL. 12.375

GARAGE

RL. 12.375

DRIVEWAY

PROPOSED 100 WIDE TRENCH GRATE

FREE FROM OBSTRUCTION

355m²

RL. 12.410

A3 SHEET 14 HAMILTON RD Pty Ltd **CONCEPT DRAINAGE DESIGN** LOTS 13 - 15

AHD

OVERLAND FLOW PATH TO REMAIN

FREE FROM OBSTRUCTION

355m²

GARAGE RL. 12.290

DRIVEWAY

RL. 12.325

DATE: 30.04.2020 DESIGNED: AK **ISSUE** DRAWN: ΑK CHECKED: DH

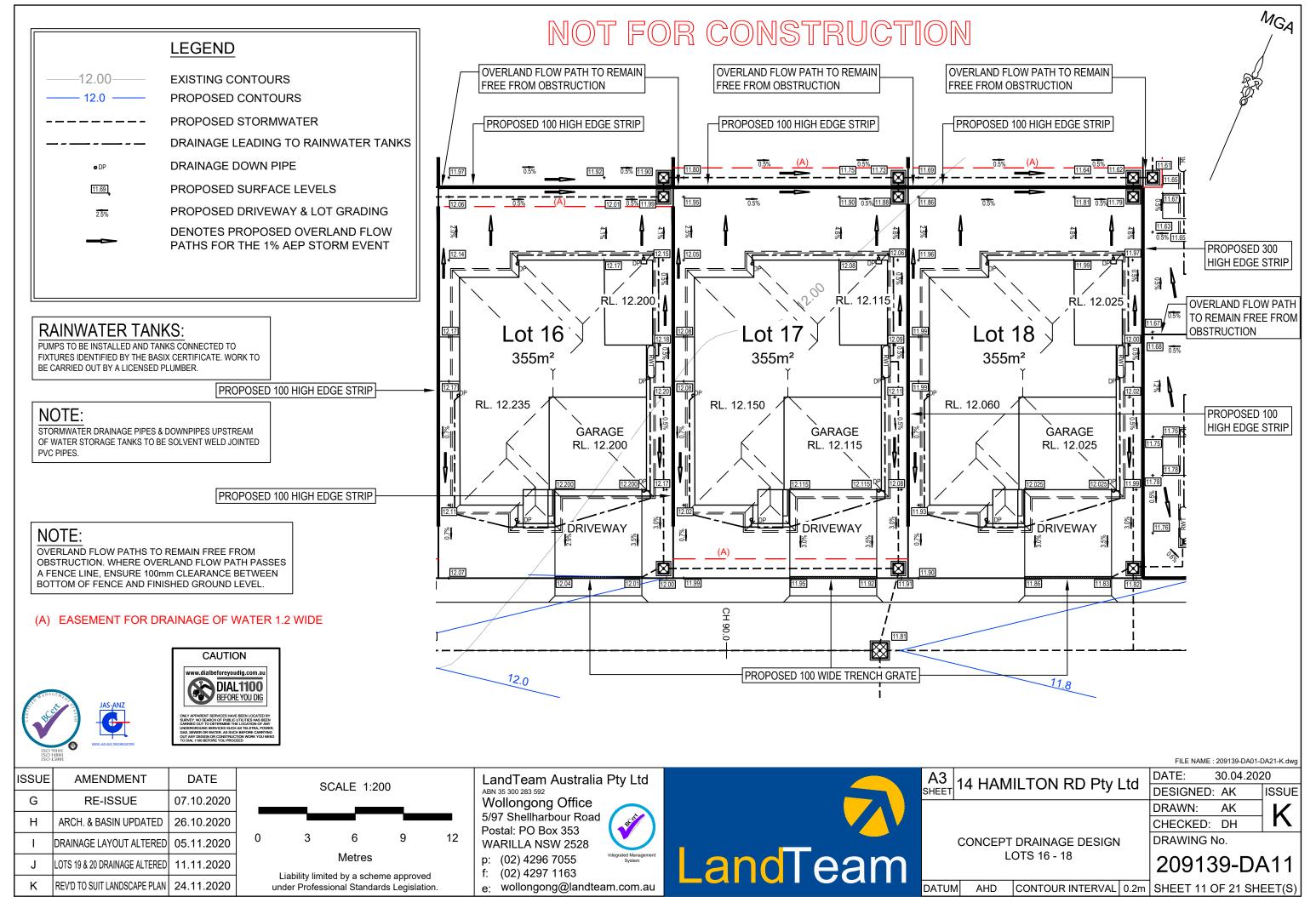
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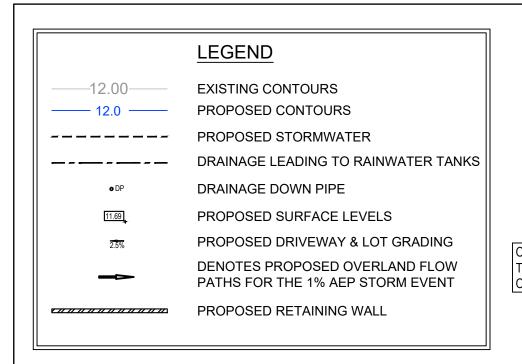
PROPOSED 100 HIGH EDGE STRIP

PROPOSED 100 HIGH EDGE STRIP

DRAWING No.

209139-DA10 CONTOUR INTERVAL 0.2m | SHEET 10 OF 21 SHEET(S)





NOT FOR CONSTRUCTION

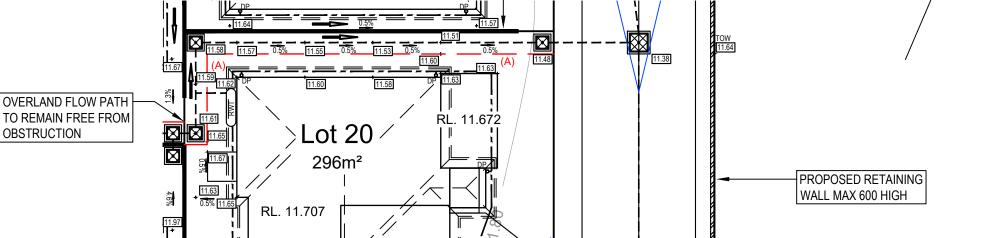
GARAGE 11.672

11.758

RL. 11.672

GARAGE

RL. 11.758



DRIVEWAY

'DRIVEWAY

RL. 11.758

PROPOSED 100 HIGH EDGE STRIP

RAINWATER TANKS:

PUMPS TO BE INSTALLED AND TANKS CONNECTED TO FIXTURES IDENTIFIED BY THE BASIX CERTIFICATE. WORK TO BE CARRIED OUT BY A LICENSED PLUMBER.

NOTE:

STORMWATER DRAINAGE PIPES & DOWNPIPES UPSTREAM OF WATER STORAGE TANKS TO BE SOLVENT WELD JOINTED PVC PIPES.

NOTE:

OVERLAND FLOW PATHS TO REMAIN FREE FROM
OBSTRUCTION. WHERE OVERLAND FLOW PATH PASSES
A FENCE LINE, ENSURE 100mm CLEARANCE BETWEEN
BOTTOM OF FENCE AND FINISHED GROUND LEVEL.

(A) EASEMENT FOR DRAINAGE OF WATER 1.2 WIDE

DATE

07.10.2020

26.10.2020

05.11.2020

11.11.2020





ISSUE

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AMENDMENT

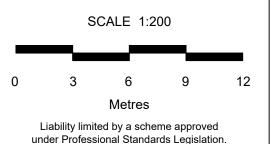
RE-ISSUE

ARCH. & BASIN UPDATED

DRAINAGE LAYOUT ALTERED

LOTS 19 & 20 DRAINAGE ALTERED

REV'D TO SUIT LANDSCAPE PLAN 24.11.2020



LandTeam Australia Pty Ltd

ABN 35 300 283 592

Wollongong Office
5/97 Shellharbour Road
Postal: PO Box 353

WARILLA NSW 2528

11.67

1.68

RL. 11.793

Lot 19

292m²

0.5%

OVERLAND FLOW PATH TO REMAIN FREE FROM OBSTRUCTION

PROPOSED 300 HIGH EDGE STRIP

p: (02) 4296 7055 Integrated Management System
f: (02) 4297 1163
e: wollongong@landteam.com.au

PROPOSED 100 HIGH EDGE STRIP

LandTeam

43	14 HAMILTON RD Pty Ltd	DA					
HEET	14 HAMILTON RD Ply Lid						
		DF					
		CH					
	CONCEPT DRAINAGE DESIGN	DF					
	LOTS 10 20	_					

AHD

-CH 150.0

DATE: 30.04.2020

DESIGNED: AK ISSUE

DRAWN: AK

CHECKED: DH

FILE NAME: 209139-DA01-DA21-K.dwg

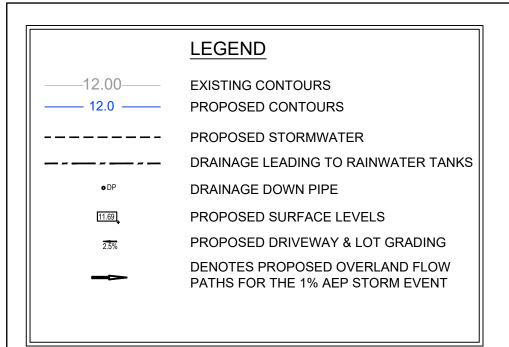
DRAWING No.

CONTOUR INTERVAL 0.2m | SHEET 12 OF 21 SHEET(S)

PROPOSED 100 WIDE TRENCH GRATE

PROPOSED 100 WIDE TRENCH GRATE

209139-DA12



PUMPS TO BE INSTALLED AND TANKS CONNECTED TO FIXTURES IDENTIFIED BY THE BASIX CERTIFICATE. WORK TO BE CARRIED OUT BY A LICENSED PLUMBER.

NOTE:

STORMWATER DRAINAGE PIPES & DOWNPIPES UPSTREAM OF WATER STORAGE TANKS TO BE SOLVENT WELD JOINTED PVC PIPES.

NOTE:

OVERLAND FLOW PATHS TO REMAIN FREE FROM OBSTRUCTION. WHERE OVERLAND FLOW PATH PASSES A FENCE LINE, ENSURE 100mm CLEARANCE BETWEEN BOTTOM OF FENCE AND FINISHED GROUND LEVEL

(A) EASEMENT FOR DRAINAGE OF WATER 1.2 WIDE

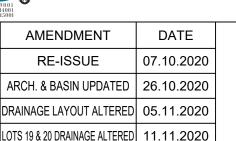




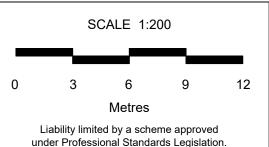
ISSUE

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REV'D TO SUIT LANDSCAPE PLAN 24.11.2020



LandTeam Australia Pty Ltd Wollongong Office 5/97 Shellharbour Road Postal: PO Box 353

WARILLA NSW 2528 p: (02) 4296 7055 f: (02) 4297 1163



A3 14 HAMILTON RD Pty Ltd **CONCEPT DRAINAGE DESIGN** LOT 21

AHD

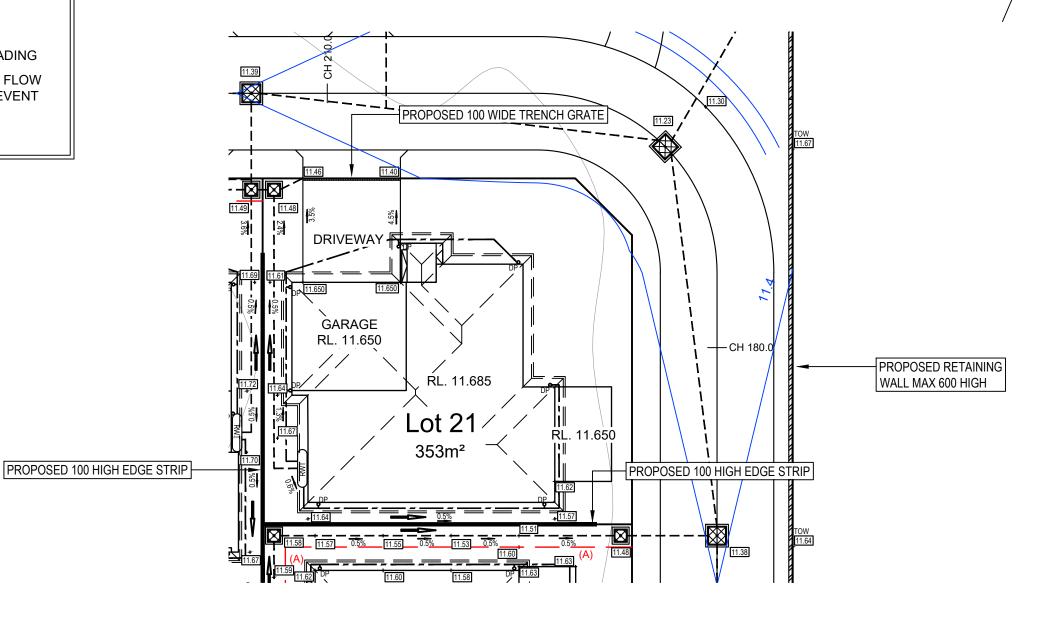
DATE: 30.04.2020 DESIGNED: AK **ISSUE** DRAWN: ΑK CHECKED: DH DRAWING No.

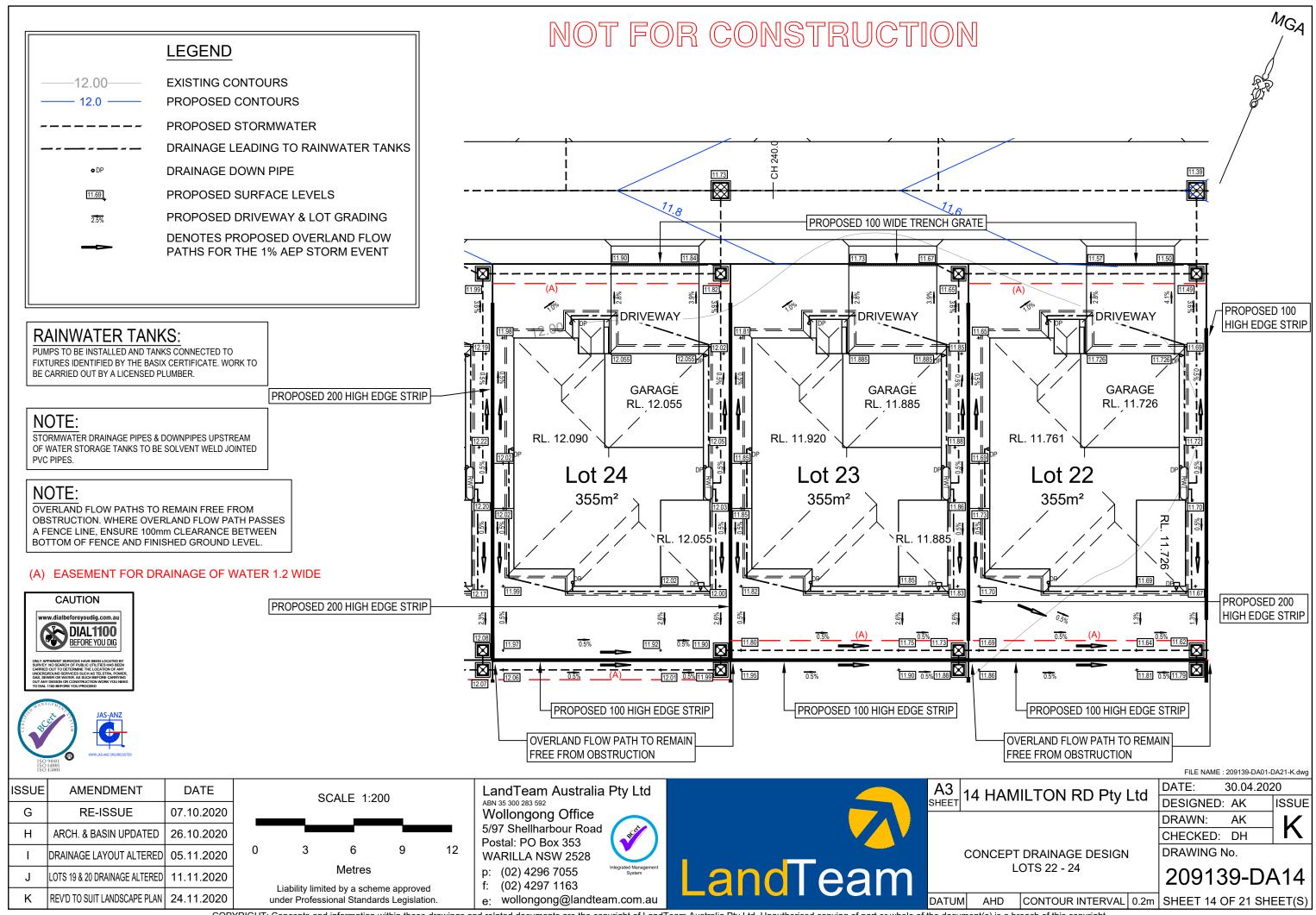
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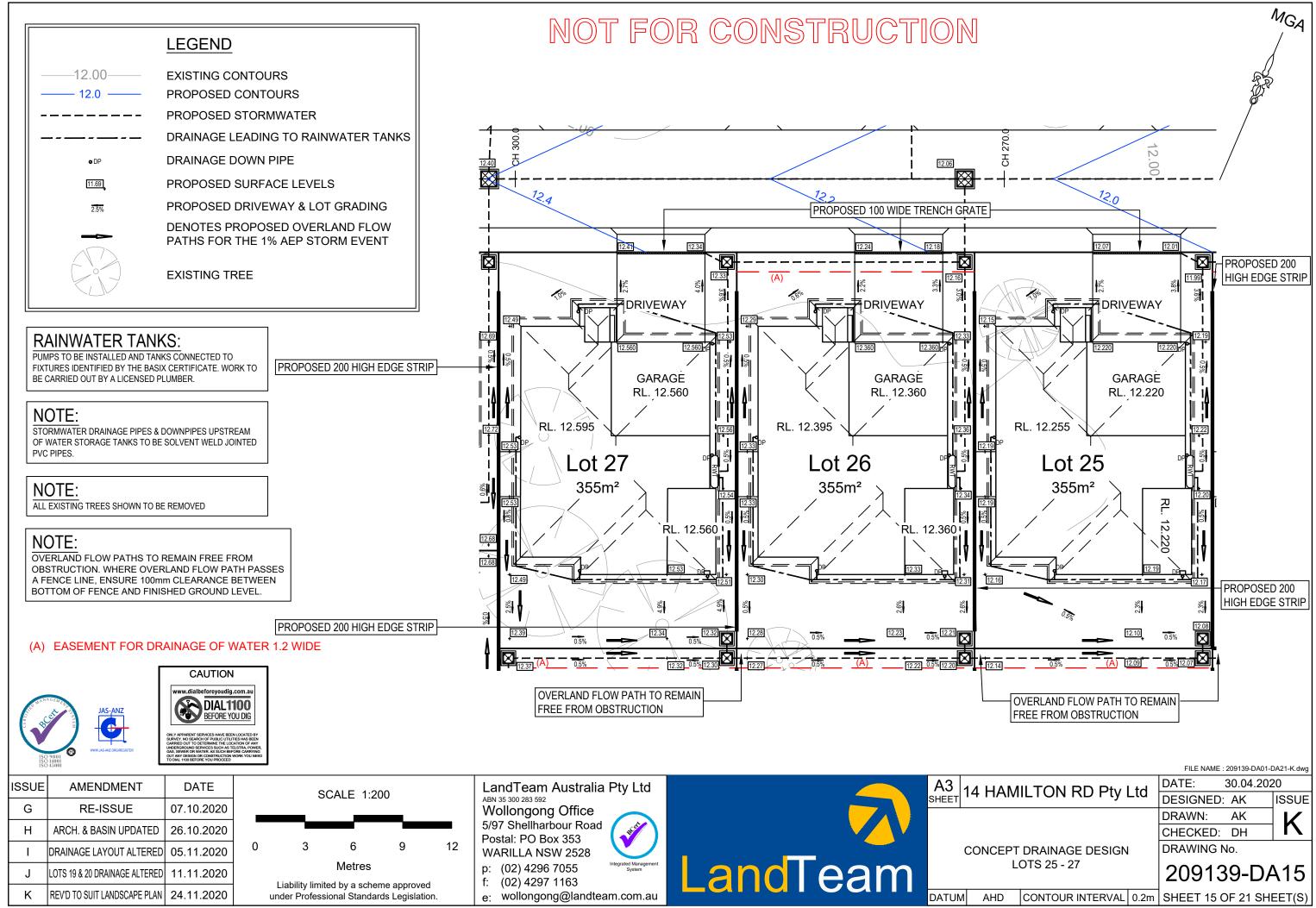
CONTOUR INTERVAL 0.2m | SHEET 13 OF 21 SHEET(S)

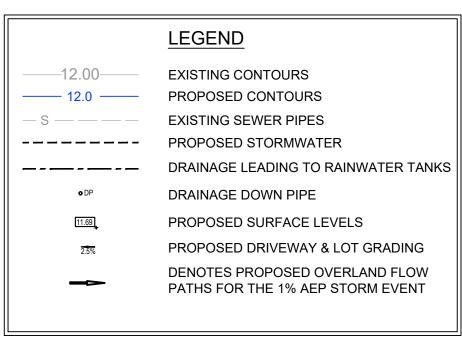
209139-DA13

NOT FOR CONSTRUCTION









PUMPS TO BE INSTALLED AND TANKS CONNECTED TO FIXTURES IDENTIFIED BY THE BASIX CERTIFICATE. WORK TO BE CARRIED OUT BY A LICENSED PLUMBER.

NOTE:

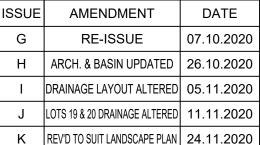
STORMWATER DRAINAGE PIPES & DOWNPIPES UPSTREAM OF WATER STORAGE TANKS TO BE SOLVENT WELD JOINTED PVC PIPES.

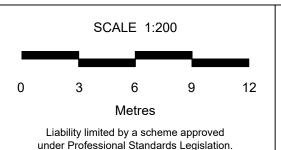
NOTE:

OVERLAND FLOW PATHS TO REMAIN FREE FROM OBSTRUCTION. WHERE OVERLAND FLOW PATH PASSES A FENCE LINE, ENSURE 100mm CLEARANCE BETWEEN BOTTOM OF FENCE AND FINISHED GROUND LEVEL.









LandTeam Australia Pty Ltd Wollongong Office 5/97 Shellharbour Road Postal: PO Box 353

WARILLA NSW 2528

e: wollongong@landteam.com.au



A3 14 HAMILTON RD Pty Ltd

CONCEPT DRAINAGE DESIGN LOT 28

30.04.2020 DESIGNED: AK **ISSUE** DRAWN: ΑK CHECKED: DH DRAWING No.

FILE NAME: 209139-DA01-DA21-K.dwg

209139-DA16 CONTOUR INTERVAL 0.2m | SHEET 16 OF 21 SHEET(S)

CH 329. PROPOSED 100 WIDE TRENCH GRATE ROAD 12.52 **DRIVEWAY** PROPOSED 200 HIGH EDGE STRIP **GARAGE** RL. 12.72 EXISTING TREE TO BE REMOVED RL. 12.755 HAMILTON

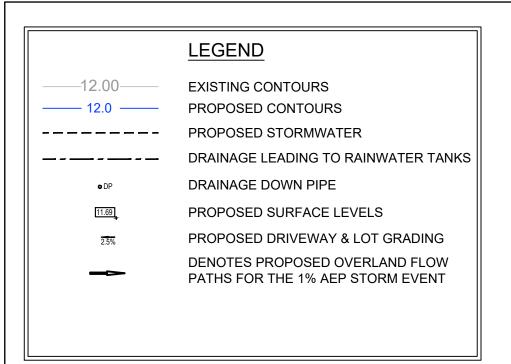
_ot 28

353m²

7.

NOT FOR CONSTRUCTION

p: (02) 4296 7055 f: (02) 4297 1163



PUMPS TO BE INSTALLED AND TANKS CONNECTED TO FIXTURES IDENTIFIED BY THE BASIX CERTIFICATE. WORK TO BE CARRIED OUT BY A LICENSED PLUMBER.

NOTE:

STORMWATER DRAINAGE PIPES & DOWNPIPES UPSTREAM OF WATER STORAGE TANKS TO BE SOLVENT WELD JOINTED PVC PIPES.

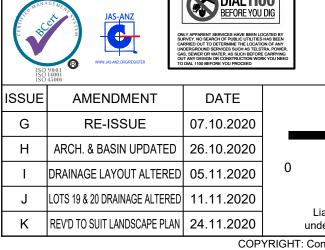
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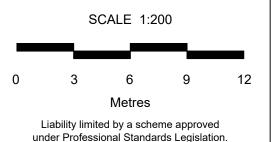
OVERLAND FLOW PATHS TO REMAIN FREE FROM OBSTRUCTION. WHERE OVERLAND FLOW PATH PASSES A FENCE LINE. ENSURE 100mm CLEARANCE BETWEEN BOTTOM OF FENCE AND FINISHED GROUND LEVEL.

- (A) EASEMENT FOR DRAINAGE OF WATER 1.2 WIDE
- (B) EASEMENT FOR DRAINAGE OF WATER 3.0 WIDE









DATE: 02.10.2020 DESIGNED: AK **ISSUE** DRAWN: ΑK CHECKED: DH DRAWING No.

PROPOSED RETAINING WALL

3m WIDE DRAINAGE EASEMENT

1m LANDSCAPE STRIP

PROPOSED RETAINING WALL PROPOSED 100 WIDE TRENCH GRATE FILE NAME: 209139-DA01-DA21-K.dwg A3 14 HAMILTON RD Pty Ltd LandTeam Australia Pty Ltd Wollongong Office 5/97 Shellharbour Road Postal: PO Box 353 **CONCEPT DRAINAGE DESIGN** LandTeam WARILLA NSW 2528 LOTS 29 - 30 p: (02) 4296 7055 209139-DA17 f: (02) 4297 1163 e: wollongong@landteam.com.au AHD CONTOUR INTERVAL 0.2m | SHEET 17 OF 21 SHEET(S)

Lot 29

344m²

RL. 11.495

RL. 11.46

GARAGE

RL. 11.46

DRIVEWAY

NOT FOR CONSTRUCTION

Lot 30

257m²

RL. 11.581

11.41

11.41

RL. 11.546

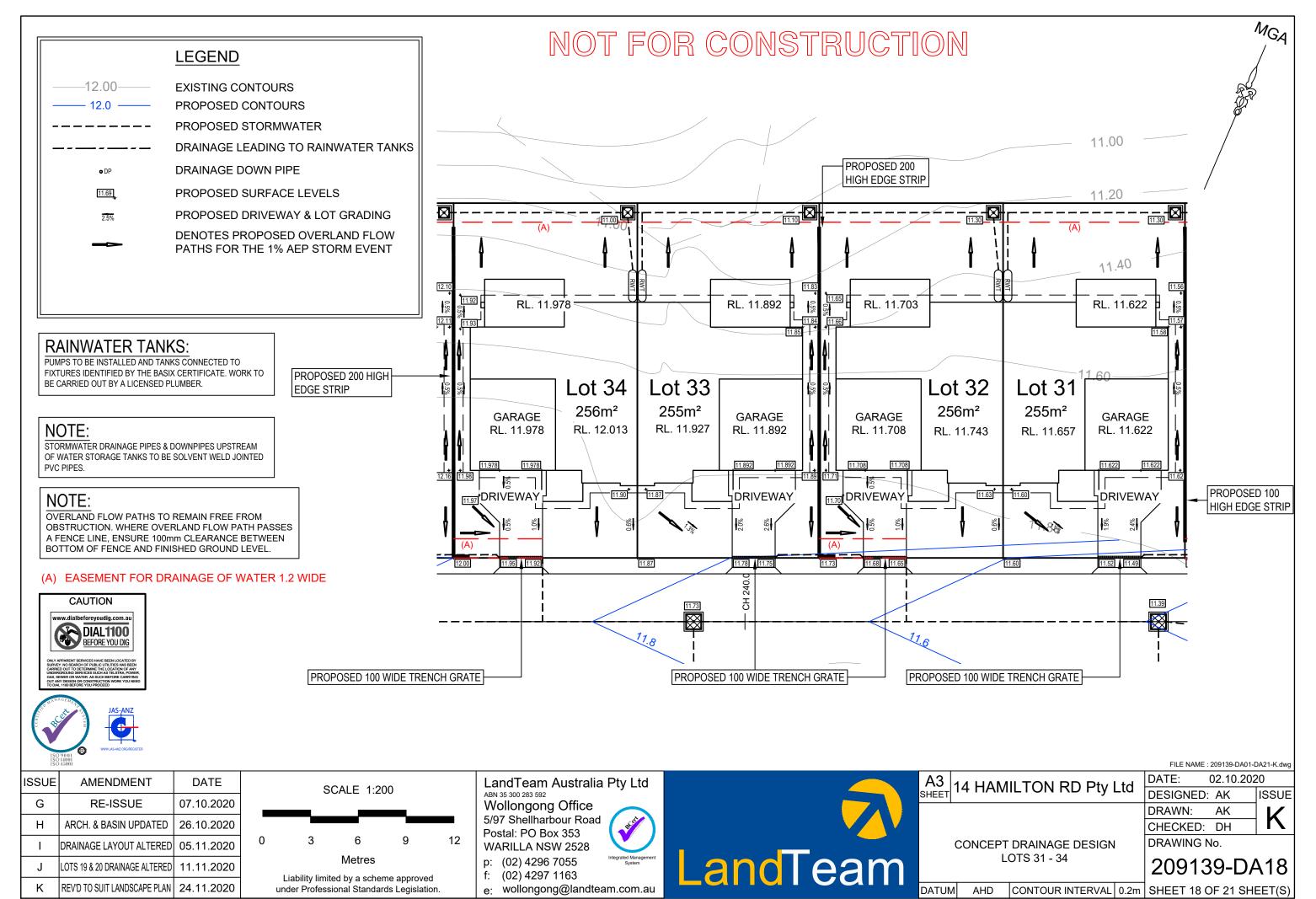
GARAGE

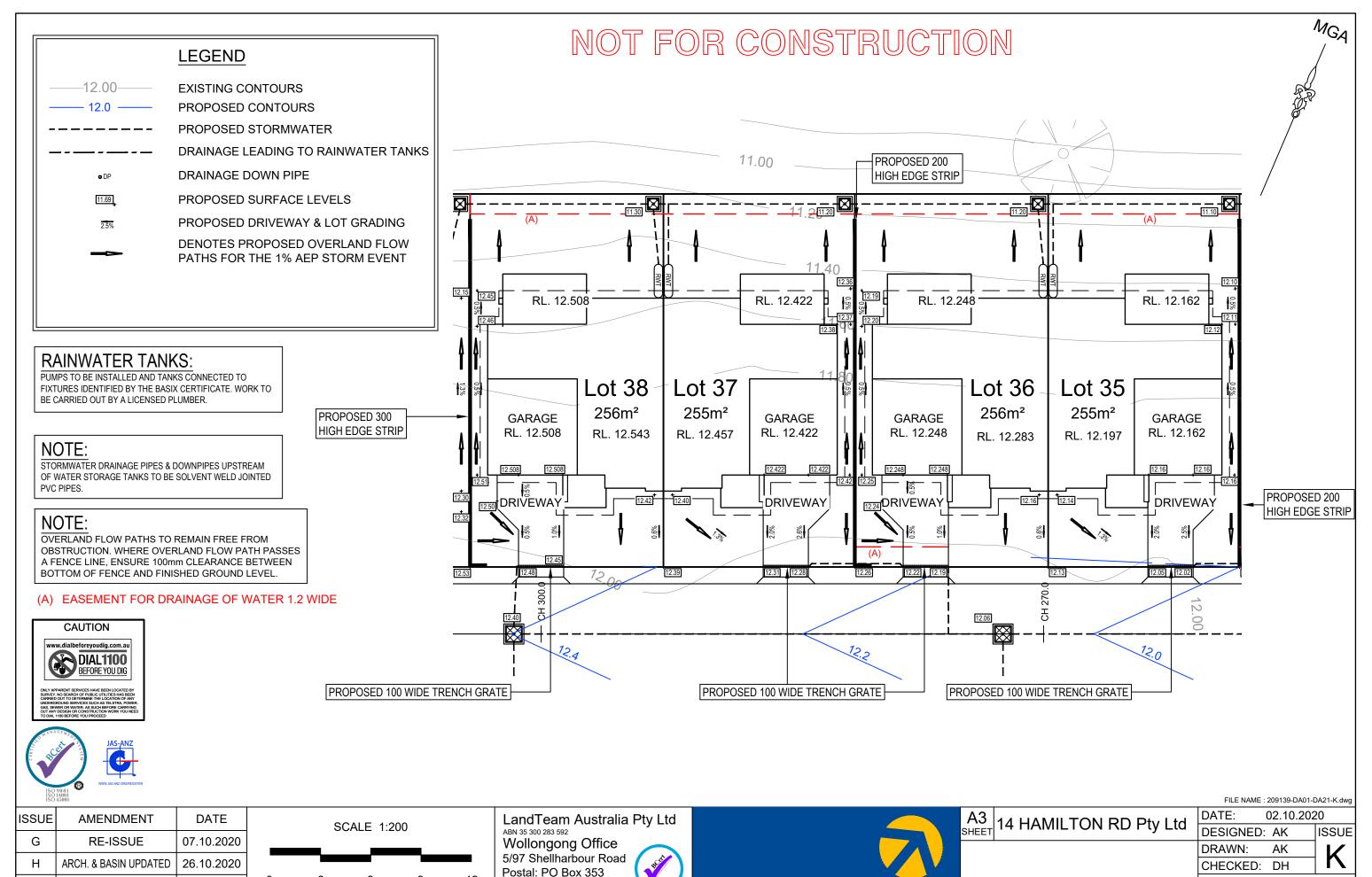
RL. 11.546

DRIVEWAY

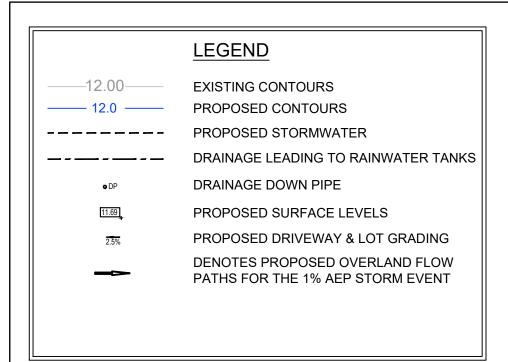
11.57

PROPOSED 100 HIGH EDGE STRIP





6 DRAWING No. **CONCEPT DRAINAGE DESIGN** DRAINAGE LAYOUT ALTERED 05.11.2020 WARILLA NSW 2528 _andTeam LOTS 35 - 38 p: (02) 4296 7055 Metres 209139-DA19 LOTS 19 & 20 DRAINAGE ALTERED 11.11.2020 f: (02) 4297 1163 Liability limited by a scheme approved REV'D TO SUIT LANDSCAPE PLAN 24.11.2020 e: wollongong@landteam.com.au under Professional Standards Legislation. AHD CONTOUR INTERVAL 0.2m SHEET 19 OF 21 SHEET(S)



PUMPS TO BE INSTALLED AND TANKS CONNECTED TO FIXTURES IDENTIFIED BY THE BASIX CERTIFICATE. WORK TO BE CARRIED OUT BY A LICENSED PLUMBER.

NOTE:

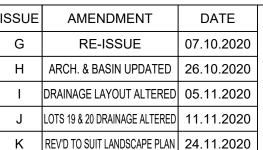
STORMWATER DRAINAGE PIPES & DOWNPIPES UPSTREAM OF WATER STORAGE TANKS TO BE SOLVENT WELD JOINTED PVC PIPES

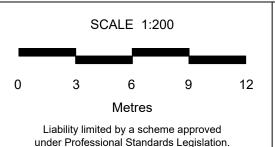
NOTE:

OVERLAND FLOW PATHS TO REMAIN FREE FROM OBSTRUCTION. WHERE OVERLAND FLOW PATH PASSES A FENCE LINE, ENSURE 100mm CLEARANCE BETWEEN BOTTOM OF FENCE AND FINISHED GROUND LEVEL









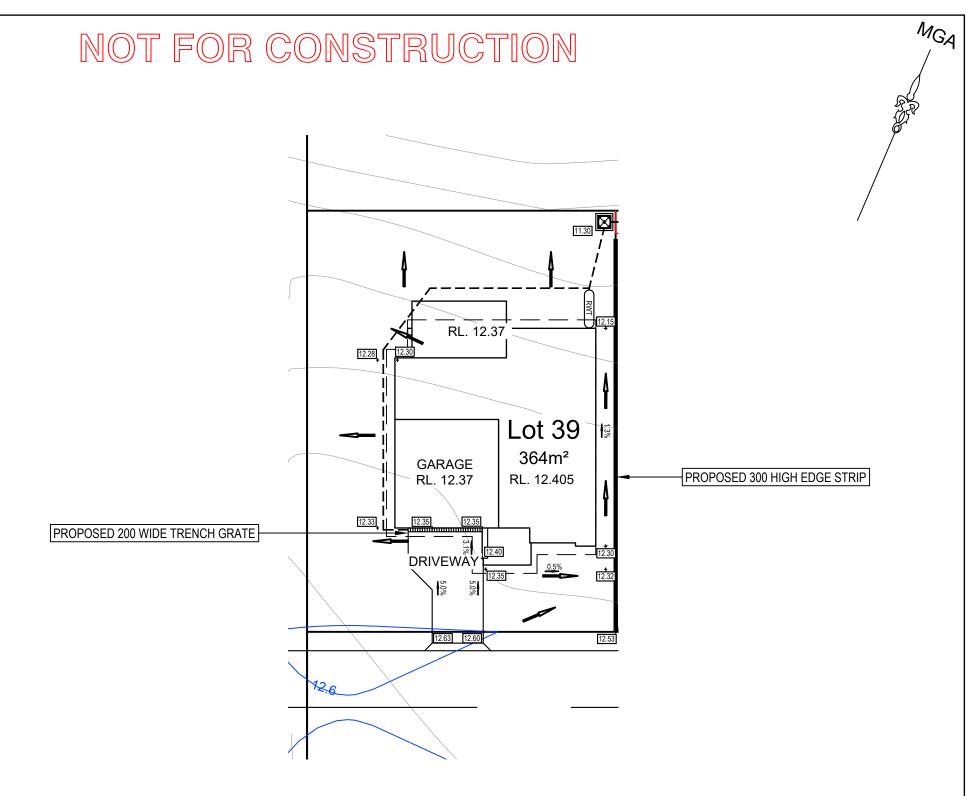
LandTeam Australia Pty Ltd Wollongong Office 5/97 Shellharbour Road Postal: PO Box 353 WARILLA NSW 2528

p: (02) 4296 7055

f: (02) 4297 1163 e: wollongong@landteam.com.au

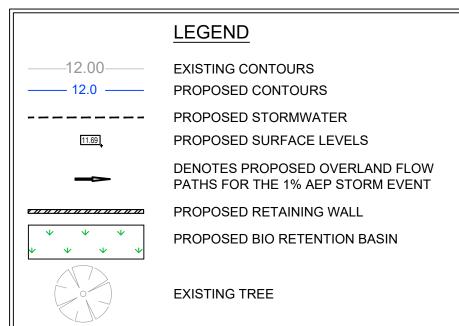






FILE NAME: 209139-DA01-DA21-K.dwg

ISSUE



DATE

07.10.2020

26.10.2020

05.11.2020

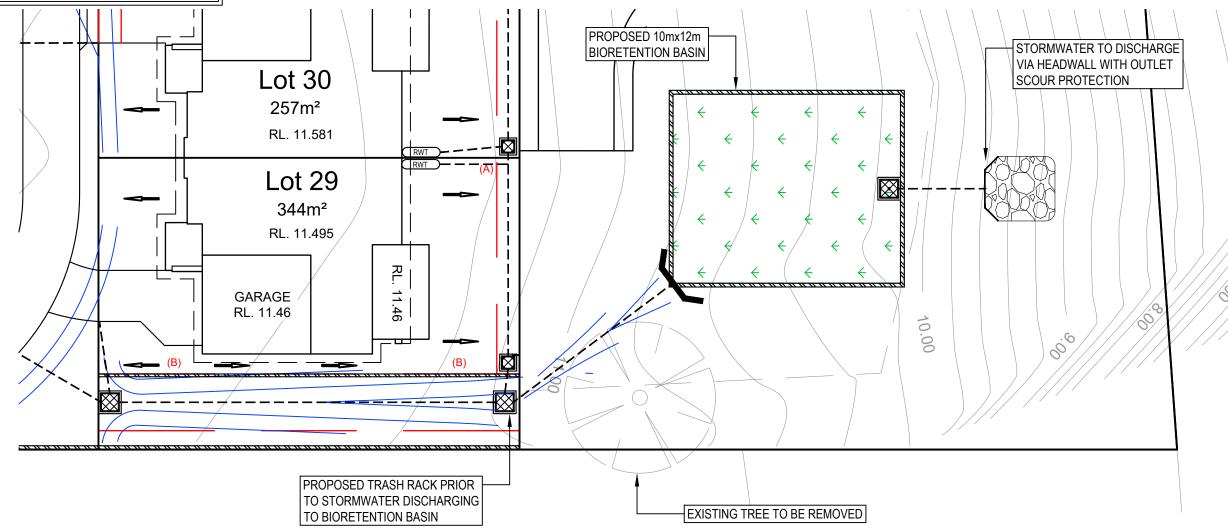
11.11.2020

NOT FOR CONSTRUCTION



OVERLAND FLOW PATHS TO REMAIN FREE FROM OBSTRUCTION. WHERE OVERLAND FLOW PATH PASSES A FENCE LINE, ENSURE 100mm CLEARANCE BETWEEN BOTTOM OF FENCE AND FINISHED GROUND LEVEL.

- (A) EASEMENT FOR DRAINAGE OF WATER 1.2 WIDE
- (B) EASEMENT FOR DRAINAGE OF WATER 3.0 WIDE



ISSUE **AMENDMENT** HEADWALL LOCATION UPDATED

ARCH. & BASIN UPDATED

DRAINAGE LAYOUT ALTERED

LOTS 19 & 20 DRAINAGE ALTERED

REV'D TO SUIT LANDSCAPE PLAN 24.11.2020

Η

CAUTION

SCALE 1:200 Metres Liability limited by a scheme approved

under Professional Standards Legislation.

LandTeam Australia Pty Ltd Wollongong Office 5/97 Shellharbour Road

Postal: PO Box 353 WARILLA NSW 2528 p: (02) 4296 7055

f: (02) 4297 1163 e: wollongong@landteam.com.au



A3 SHEET 14 HAMILTON RD Pty Ltd

CONCEPT DRAINAGE DESIGN STORMWATER DISPOSAL PLAN

AHD

DATE: 30.04.2020 DESIGNED: AK DRAWN: ΑK CHECKED: DH DRAWING No.

FILE NAME: 209139-DA01-DA21-K.dwg

209139-DA21 CONTOUR INTERVAL 0.2m | SHEET 21 OF 21 SHEET(S)