

Mark	Revision	Date	Drawn	Chkd	Appd

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 UTILITIES NOTE: The position of any existing public or private sewers, utility services, plant or apparatus shown on this drawing is believed to be correct, but no warranty to this is expressed or implied. Other such plant or apparatus may also be present but not shown. The Contractor is therefore advised to undertake his own investigation where the presence of any existing sewers, services, plant or apparatus may affect his operations.

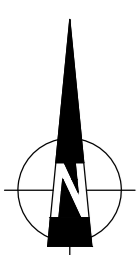
Drawing Issue Status: **PRELIMINARY**

**EXISTING UTILITIES**  
**SHEET 2 OF 6**  
**WEST CAMBRIDGE DENSIFICATION**

Client  
**UNIVERSITY OF CAMBRIDGE**

Date of 1st Issue	Designed	Drawn
24.12.15	DRM	DRM
As Scale	Checked	Approved
1:500 @ A0	ST	-
Drawing Number	Revision	
31500/2001/SK21	-	





Mark	Revision	Date	Drawn	Chkd	Appd

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**EXISTING UTILITIES**

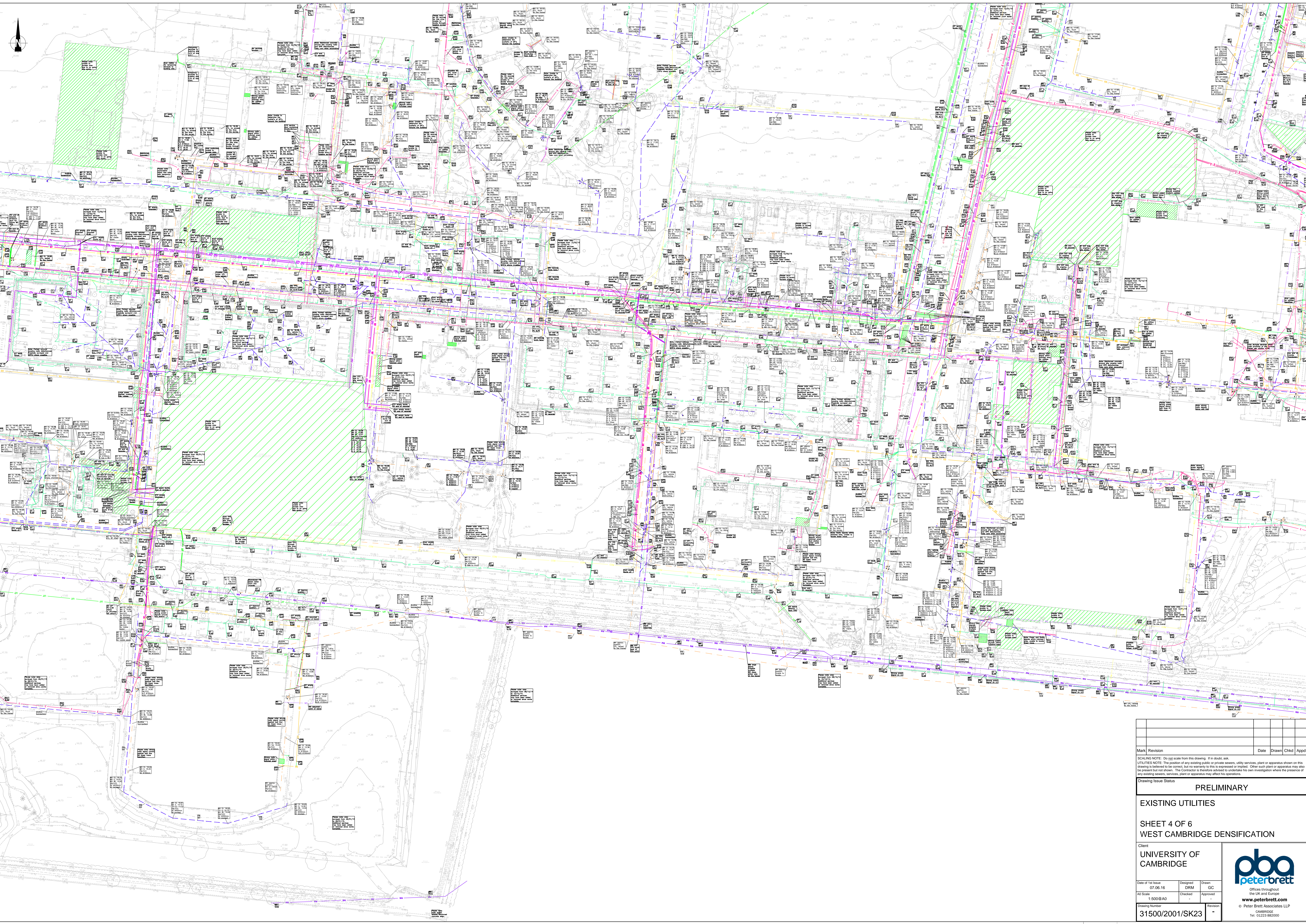
**SHEET 3 OF 6  
WEST CAMBRIDGE DENSIFICATION**

Client: **UNIVERSITY OF CAMBRIDGE**

Date of 1st Issue	Designed	Drawn
24.12.15	DRM	DRM
AD Scale	Checked	Approved
1:500@A0	ST	-

Drawing Number: **31500/2001/SK22**





Mark	Revision	Date	Drawn	Chkd	Appd

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**EXISTING UTILITIES**

**SHEET 4 OF 6  
 WEST CAMBRIDGE DENSIFICATION**

Client:  
**UNIVERSITY OF  
 CAMBRIDGE**

Date of 1st Issue	Design	Drawn
07.06.16	DM	GC
AI Scale	Checked	Approved
1:500@AO	-	-

Drawing Number: **31500/2001/SK23**



File Location: J:\2012 west cambridge densification\program\2102\_411\pba\existing utilities 1:500.dwg (1/1)



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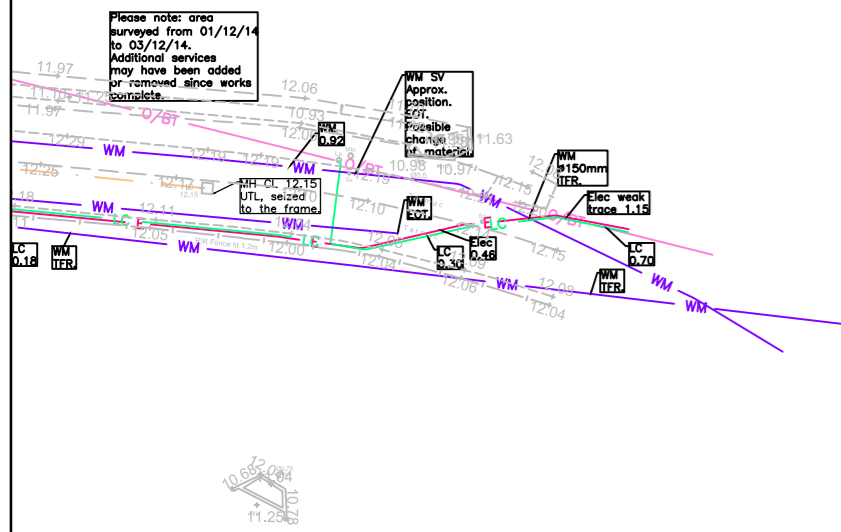
Drawing Issue Status  
**PRELIMINARY**

**EXISTING UTILITIES**  
**SHEET 5 OF 6**  
**WEST CAMBRIDGE DENSIFICATION**

Client  
**UNIVERSITY OF CAMBRIDGE**

Date of 1st Issue	Designed	Drawn
07.06.16	DRM	GC
A0 Scale	Checked	Approved
1:500 @ A0	-	-
Drawing Number	Revision	
31500/2001/SK24	-	

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1. ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE.
2. ALL LEVELS ARE IN METRES RELATIVE TO ORDNANCE DATUM NEWLYN UNLESS NOTED OTHERWISE.
3. ALL COORDINATES ARE IN METRES RELATIVE TO ORDNANCE SURVEY NATIONAL GRID.
4. THE CONTRACTOR IS TO VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK OR PREPARING SHOP DRAWINGS.
5. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL ENGINEERS AND ARCHITECTS DRAWINGS AND SPECIFICATIONS.
6. FOR FURTHER INFORMATION ON SITE WIDE PROPOSED STORAGE PROVISIONS AND ARRANGEMENTS PLEASE REFER TO PBA DRAWING 31500-2006-116, 117 & 118
7. ALL EXISTING INVERT LEVELS SHOWN ON THIS PLAN HAVE BEEN BASED OFF THE FOLLOWING:
  - GREEN HATCH TOPOGRAPHICAL SURVEY.
  - CAMLINE SERVICES CCTV SURVEY.
9. ON PLOT STORAGE ESTIMATES SHOWN ON THIS PLAN ARE BASED OFF THE 1:100 YEAR + 40%cc STORM EVENT AND ARE ASSUMING EACH PLOT WILL UTILISE A SINGLE CONTROL RELEASING WATER AT THE 1:1yr GREENFIELD RUNOFF RATE (MIN FLOW RATE OF 1 l/s - SEE NOTE 14).
10. THE PIPE SIZES SHOWN ON THIS PLAN HAVE BEEN TESTED FOR FLOODING FOR THE 1:30 YEAR RETURN PERIOD STORM ONLY. IT WILL ALSO NEED TO BE DEMONSTRATED THAT FLOODING TO BUILDING AREAS DOES NOT OCCUR DURING THE 1:100 YEAR STORM EVENT + 40% CLIMATE CHANGE EVENT. WITHOUT ADEQUATE PROPOSED LEVELS HOWEVER, THIS CANNOT BE SATISFACTORILY DETERMINED AT THIS STAGE AND THEREFORE THE PIPE SIZES SHOWN ON THIS PLAN ARE SUBJECT TO RUNNING THIS SIMULATION WHEN PLOT LEVELS BECOME AVAILABLE
11. ALL STORAGE VOLUMES SHOWN ON THIS PLAN HAVE INCLUDED FOR AN ADDITIONAL 40% ALLOWANCE FOR CLIMATE CHANGE. THIS REPRESENTS THE "UPPER" LIMIT OF GOVERNMENT GUIDANCE
12. THE COVER LEVELS SHOWN NORTH OF THE "ORIGINAL WATERSHED" LINE ON THIS PLAN ARE SUBJECT TO CHANGE AS PART OF THE OVERALL SITE EARTHWORKS. THESE SHOULD THEREFORE BE SEEN AS HIGHLY INDICATIVE AT THIS STAGE
13. AREAS SHOWN HATCHED PINK ON THIS PLAN INDICATE AREAS WHERE ONSITE PLOT STORAGE (REFER TO NOTE 9) IS REQUIRED. INDIVIDUAL SITE DEVELOPERS ARE FREE TO DELIVER ON PLOT SURFACE WATER STORAGE AS THEY DEEM NECESSARY AND FITTING IN WITH THE CHARACTERISTICS OF THEIR DEVELOPMENT. IT IS ENVISAGED THIS WILL MEAN UTILISING SUDS FEATURES SUCH AS GREEN / BLUE ROOFS, SWALES AND PERMEABLE PAVING.
14. IT IS ASSUMED THE MINIMUM SW DISCHARGE RATE FROM INDIVIDUAL PLOTS WILL BE CAPPED AT 1 l/s. IN ORDER TO REDUCE BLOCKAGE RISK ASSOCIATED WITH FLOW CONTROLS, MONTHLY INSPECTIONS OF ALL FLOW CONTROLS (IN ACCORDANCE WITH THE CAMBRIDGESHIRE SUDS ADOPTION GUIDE) WILL BE CARRIED OUT AND OVERFLOW WEIRS INSTALLED)
15. PEAK FOUL FLOW RATES SHOWN ON THIS PLAN HAVE BEEN DETERMINED BY MULTIPLYING TOTAL PLOT DEVELOPABLE FLOOR AREAS (TAKEN FROM AECOM DEVELOPMENT SCHEDULE VERSION 5, DATES 10.02.2016) BY 2.25l/s/ha. THIS CAPACITY HAS BEEN AGREED WITH ANGLIAN WATER.
16. ALL FINISHED FLOOR LEVELS WILL BE ESTABLISHED TAKING IN TO FULL ACCOUNT DRAINAGE CONNECTIONS.
17. WHILST AREAS SHOWN HATCHED GREEN ON THIS PLAN HAVE A FREE FLOW DISCHARGE TO THE EXISTING WESTERN LAKE, INDIVIDUAL PARCEL OCCUPIERS WILL BE REQUIRED TO IMPLEMENT MEASURES ONSITE TO PROVIDE TREATMENT OF FLOWS LEAVING PLOTS.
18. ALL DEVELOPMENT PARCELS IMPLEMENTING SERVICE YARDS WILL BE REQUIRED TO ENSURE ALL RUNOFF LEAVING THESE AREAS IS PASSED THROUGH A CLASS 1 BYPASS SEPARATOR PRIOR TO RUNOFF ENTERING THE WIDER SURFACE WATER NETWORK
19. SUDS FEATURES SHOWN ON THIS PLAN ARE INDICATIVE. ALL LOCATIONS SHOWN ARE SUBJECT TO VERIFICATION AND CO-ORDINATION WITH EXISTING AND PROPOSED UNDERGROUND UTILITY INFRASTRUCTURE. ALL FEATURES TO BE IN ACCORDANCE WITH CAMBRIDGESHIRE SUDS DESIGN AND ADOPTION GUIDE

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Drawing Issue Status  
**PRELIMINARY**

**EXISTING UTILITIES**

**SHEET 6 OF 6**

**WEST CAMBRIDGE DENSIFICATION**

Client  
**UNIVERSITY OF CAMBRIDGE**

Date of 1st Issue	Designed	Drawn
07.06.16	DRM	GC
A2 Scale	Checked	Approved
1:500 @ A2	-	-
Drawing Number	Revision	
<b>31500/2001/SK25</b>	-	

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