

# Technical Note

<b>Project</b>	Plots 23-26, The Oxford Science Park	<b>Project No</b>	13886
<b>Subject</b>	Section 73-Undercroft Amendments	<b>Date</b>	6 December 2023
<b>File Ref</b>	13886-CRH-ZZ-XX-TN-C-0004-P1_TN-Undercroft Removal.docx	<b>Pages</b>	10

This Technical Note has been prepared in support of a Section 73 amendment application and discharge of condition application to Plots 23-26 of Oxford Science Park to discuss changes made to the undercroft across the proposed development and the impact this change has on both the proposed site surface water drainage strategy and flood risk. The original planning application was submitted to Oxford City Council in September 2022 ref. 22/02168/FUL

## Undercroft Amendments - Background

During design development of the scheme, extensive detailed analysis of ground water levels has been undertaken on site and have concluded that the water table levels are higher than was understood at planning application stage. This has identified the need to apply for an abstraction license from the Environment Agency which can take circa 12 months. These timescales would cause unacceptable delay to the project. As a result of this the lower level of undercroft car parking (FFL 57.500) has been removed from the scheme. This resulted in a shortfall of car parking spaces which needed to be provided elsewhere. To resolve this issue the decision was taken to extend the upper undercroft level beneath Building 3. As a result, the scheme now comprises of 1 level of undercroft car parking which now extends beneath all three buildings. The finished floor level of the undercroft is now set at 60.050mAOD. The updated site masterplan is attached at Appendix 1 for reference.

## Impact on Site Drainage

Following changes to the undercroft carparking arrangements updates were required to the below ground drainage system.

As the foul drainage system relies on a pumped connection to the existing private foul drainage system the changes required were minimal and predominantly comprised minor amendments to the main drainage runs along with the realignment of the foul branch connections to align with the updated pop-up locations. Therefore, it can be concluded that the FW drainage strategy remains unchanged and aligns with what was set out in the approved flood risk assessment for the site ref. 13886-CRH-ZZ-XX-RP-C-0002-P2.

Changes to the surface water drainage system are also minimal as the changes to the scheme associated with the undercroft amendments do not affect the proposed surface water catchment areas and discharge locations. For full details of the site surface water drainage strategy along with catchment splits and discharge rates into the wider site drainage system please refer to the following approved documents:

Flood Risk Assessment - 13886-CRH-ZZ-XX-RP-C-0002-P2.

Tech Note to respond to LLFA comments - 13886-CRH-ZZ-XX-TN-C-0001-P1\_TN-FRA

Tech Note to respond to further LLFA comments - 13886-CRH-ZZ-XX-TN-C-0002-P1\_TN-SWDrainage  
Tech Note to respond to EA comments - 13886-CRH-ZZ-XX-TN-C-0003-P2\_TN-SWPond

Updated drawings to reflect the changes to the site are provided at Appendix 2 and include the following:

- 13886-CRH-ZZ-XX-DR-C-5057-P1-Proposed Drainage Strategy
- 13886-CRH-ZZ-XX-DR-C-5058-P1-Proposed Drainage Strategy
- 13886-CRH-ZZ-XX-DR-C-5059-P1-Proposed Drainage Strategy
- 13886-CRH-ZZ-XX-DR-C-5060-P1-Proposed Drainage Strategy
- 13886-CRH-ZZ-XX-DR-C-5400\_P2 RPZ Overlaid on Drainage Layout (Sheet 1 of 2)
- 13886-CRH-ZZ-XX-DR-C-5401\_P2 RPZ Overlaid on Drainage Layout (Sheet 2 of 2)

### Impact on Flood Risk

Flood risk with respect to the proposed development in terms of both on-site and offsite is discussed in the approved flood risk assessment ref. 13886-CRH-ZZ-XX-RP-C-0002-P2. The changes to the development associated with the undercroft do NOT have any effect on off site flood risk as the proposed changes are within the footprint of the building and do not alter the proposed drainage catchments or offsite discharge rates.

However, in terms of on-site flood risk it can be concluded that flood risk has been reduced further. The design flood level (DFL) established in the Edenvale Young report ref. EVY0994\_Hydraulic\_Modelling\_Report\_v04\_RevA was set at 58.310m AOD. This was above the original lower undercroft finished floor level of 57.500. In the flood risk assessment, it was recommended that flood resilient construction measures were adopted in the lower undercroft level up to a level of 58.610 which was 300mm above the DFL. This combined with the fact that external levels around the undercroft entrance were already set above the DFL were considered to have reduced flood risk to acceptable levels.

With regard to the updated scheme proposals the lower undercroft has been removed in its entirety. Therefore, the lowest level of the building is now set at a level of 60.050m AOD. This is 1.74m above the design flood level and as such can be classed at a very low risk of flooding. Furthermore, the undercroft areas will only be used for car parking. The lowest habitable level of the buildings is set above 63.000m AOD which is significantly above the DFL.

The flood risk assessment discussed flood compensation in section 9.2 and concluded that flood compensation was not required providing those external levels located below the DFL remained as such. The proposed modifications to the undercroft do not alter this strategy as external road levels located within flood zone 3 have been kept at existing ground levels (or below).

### Conclusion

In summary the proposed changes to the undercroft car parking arrangements across the scheme do not have any significant impacts on the approved surface water and foul water drainage strategy. Furthermore flood risk to the development has reduced as the lower level of undercroft car parking

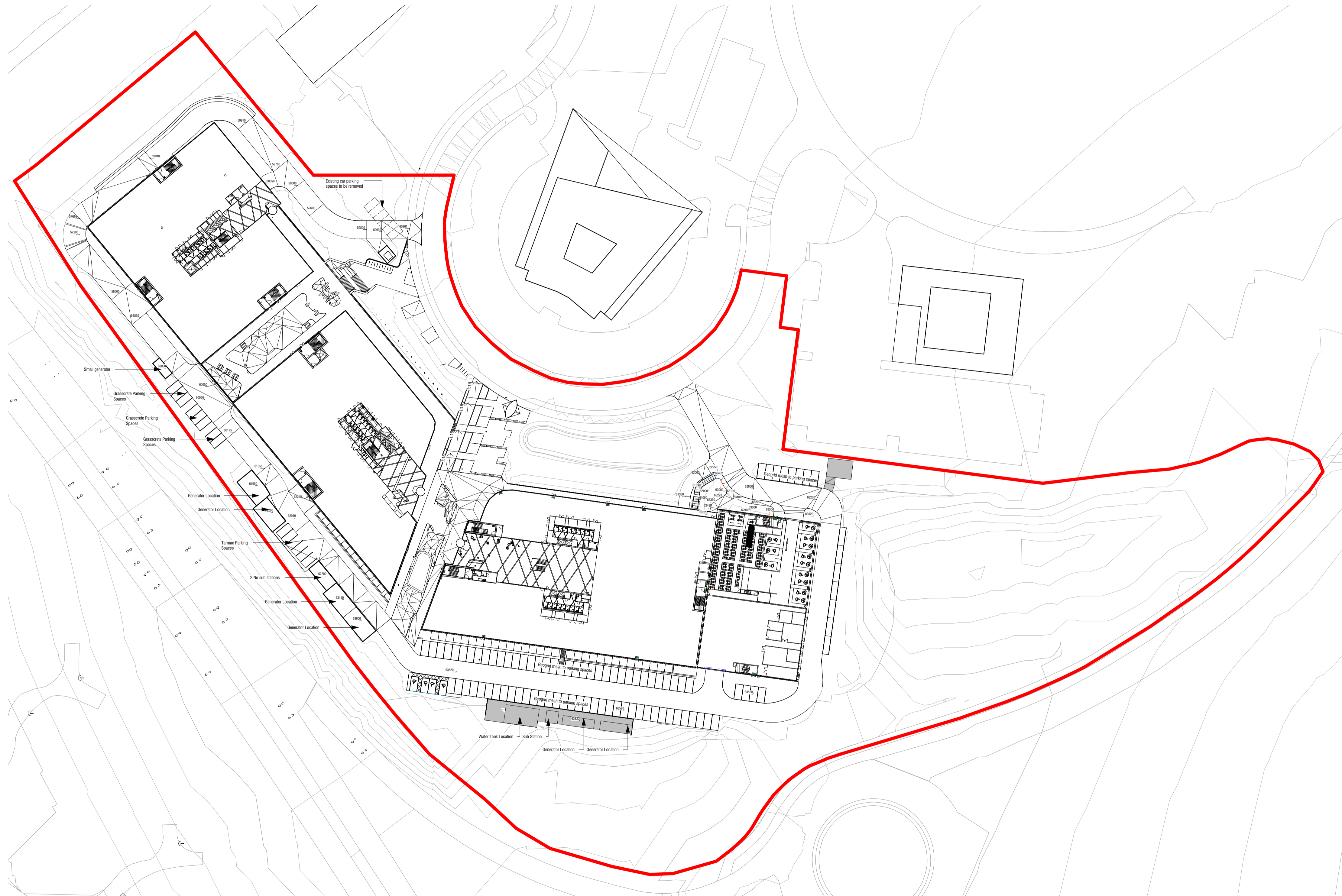
has been omitted from the scheme. Off site flood risk remains unchanged as the site external levels strategy and drainage strategy remain unchanged.



CampbellReith  
consulting engineers

## Appendix 1

### Updated Site Masterplan



Revision	Description	Date	Drawn	Checked
2	Plan updated with NMA Application layout	22.11.23	SH	MH
1	Drawing updated to show scheme to be issued for NMA	15.11.23	SH	MH



St Catherine's Court  
 46-48 Portsmouth Road  
 Guildford GU2 4DU  
 T +44 (0)1483 568686  
 W scottbrownrigg.com

Client's Name  
 The Oxford Science Park



Job Title  
 Plots 23 - 26 Oxford Science Park

Drawing Title  
 PROPOSED SITE PLAN SKETCH FOR NMA

Scale  
 1 : 750 @A1

Practice Project No. Originator Volume Level Type Role Number  
**20034-SBR-ZZ-ZZ-SK-A-03100**

Subsidiary Code Status  
 S2 - FOR INFORMATION Rev 2



CampbellReith  
consulting engineers

## Appendix 2

### Updated Site Drainage Strategy

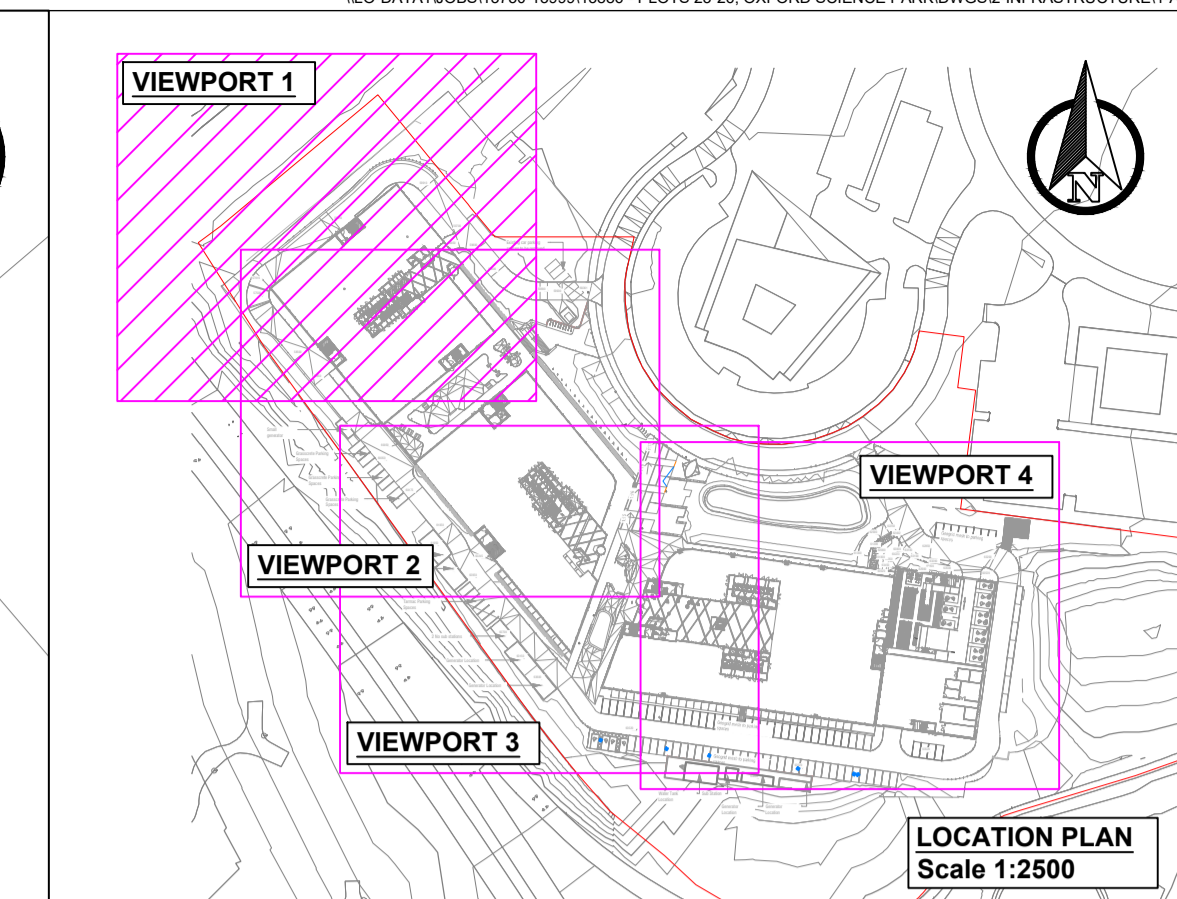
**KEY**

- Surface water pipe
- Surface water rising main
- Foul water pipe
- Foul water rising main
- Perforated Pipe
- Grass road permeable car park link pipe
- Land drainage
- Low flow channel
- Aco kerb drain
- Linear slot drain
- Linear channel drain
- Surface water MH
- Surface water gully
- Surface Water Inspection Chamber
- Foul Water MH
- Grass road permeable parking system (Golpla with grass infill)
- Bioretention feature potential TBC by landscape architect
- Vent pipe (indicative routing TBC by M&E)
- Electrical Duct (indicative routing TBC by M&E)
- Site boundary
- Diffuser boxes within permeable parking

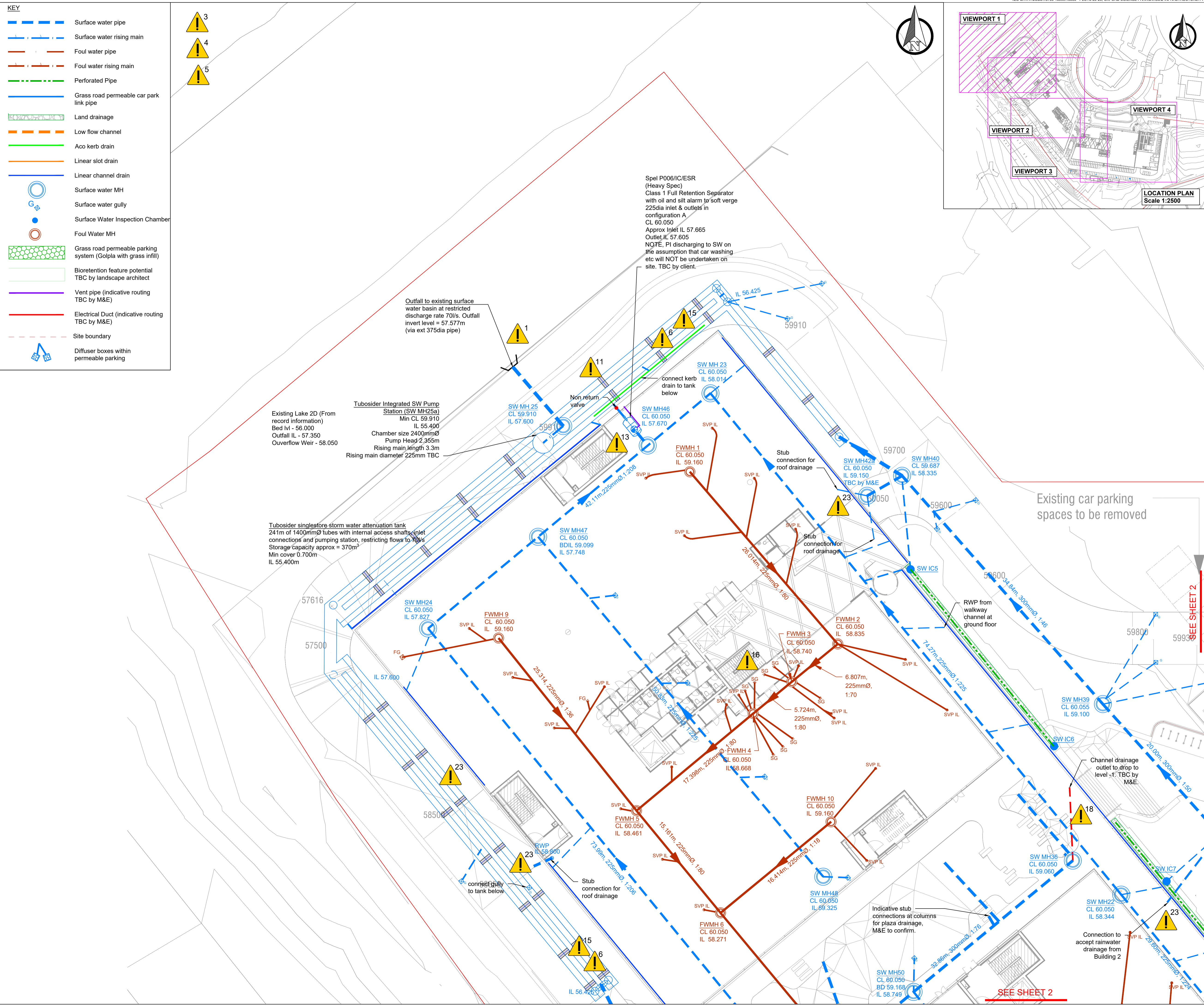
3

4

5



- Notes**
1. Do not scale from this drawing on print or electronically. Work from figured dimensions only.
  2. No deviation from the details on this drawing is allowed without CampbellReith's prior permission in writing.
  3. Read this drawing with all Architect's, Service Engineer's and CampbellReith's relevant details, specifications and drawings.
  4. All work is to be done in accordance with the relevant specifications issued by CampbellReith, British Standard Codes of Practice, Statutory Requirements and the Contract Documents.
  5. Drawing status:  
**P: Preliminary** Evolving drawings for approvals, tenders, billings etc.  
**C: Construction** Fully developed drawings issued under instructions for construction.
  6. Only status C drawings to be used for construction.
  7. Suitability code:  
 Work in progress  
**S0** - Work in progress  
 Shared (Non-contractual)  
**S1** - For coordination, **S2** - For information, **S3** - For internal review and comment, **S4** - For construction approval.  
 Documentation (For contractors purposes)  
**D1** - For Costing, **D2** - For Tender, **D3** - For contractor design, **D4** - for manufacture/procurement.  
 Construction  
**A** - For construction, **B** - For construction but with comments (i.e. areas in abeyance), **CR** - Construction Record (Final Construction ONLY). Any deviations to that which is on site is not the liability of CampbellReith



8. Utilities:  
The positions of Statutory Undertakers mains & services shown on this drawing have been based on information extracted from records obtained from various Utilities Companies. These must be regarded as approximate only. The accuracy or completeness of the information or the location of such apparatus as shown on this drawing is not guaranteed and no warranty is given or implied regarding the position, depth, size, gradient thereof. The Contractor must make his own enquiries of the Utilities Companies and Public Authorities and satisfy himself as to the exact position of services and depth, sizes, gradient thereof. In the interests of safety, the approximate position of underground cables should be obtained by use of electronic cable locators and this position confirmed by careful trial-holing using hand-dug methods.
9. All details in this drawing shall be read in conjunction with Building Regulations 2015 Approved Document H.
10. External rainwater pipes are to be roddable above ground. All SVPs to have rodding plates at ground floor level.
11. At least one soil pipe at the head of each run shall vent to the atmosphere.
12. All control stations and dimensions shall be checked and verified prior to commencement of works and any other discrepancies shall be reported to the engineer.
13. Proposed Masterplan based on 20034-SBR-ZZ-ZZ-SK-A-03100 (Received from Scott Brownrigg on 28/11/23). This Masterplan has been inserted onto the topographical survey and no guarantee as to the accuracy of the layout in relation to the survey is given or implied. Masterplan shown for information only.
13. All existing survey information shown or referred to is based upon topographical survey prepared by Sumo Services Ltd, Dwg Ref SUMO-08198-1, dated August 2022 as supplied to CampbellReith - no warranty as to the accuracy of the information is given or implied.
14. Refer to Civil Engineering Design Risks ref. 13886-CRH-XX-XX-HS-C-0001 for reference.

P1	Issued for information	28/11/23	ZA
Rev	Description	Date	By

**CampbellReith**  
consulting engineers

London 020 7340 1700  Manchester 0161 819 3060  
 Surrey 01737 784 500  Birmingham 01675 467 484  
 Bristol 0117 916 1066  Dubai 00 971 4345 7088  
 www.campbellreith.com

Job Title  
**Plots 23-26, Oxford Science Park**

Client  
**The Oxford Science Park**

**Proposed Drainage Layout**  
Sheet 1 of 4

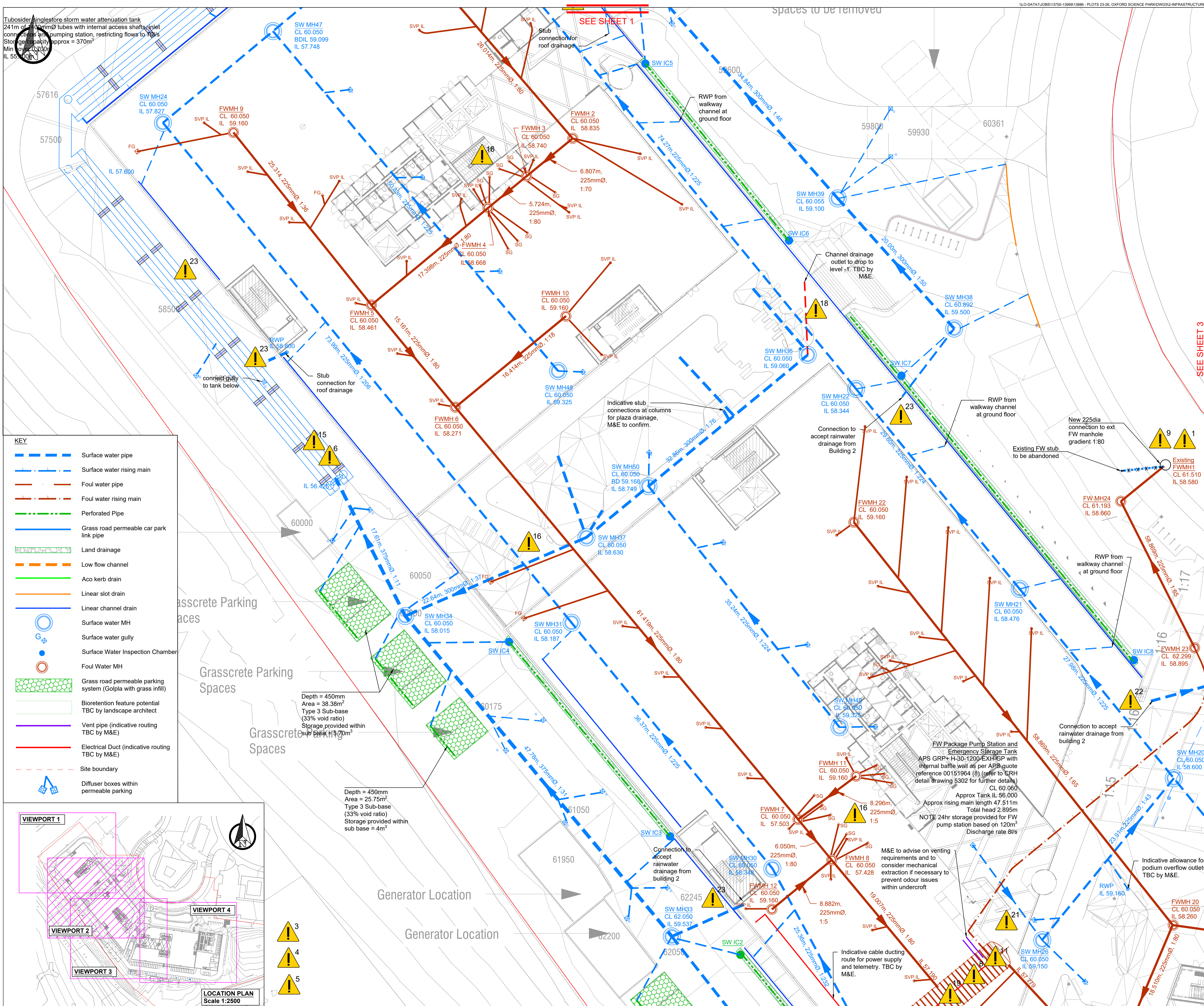
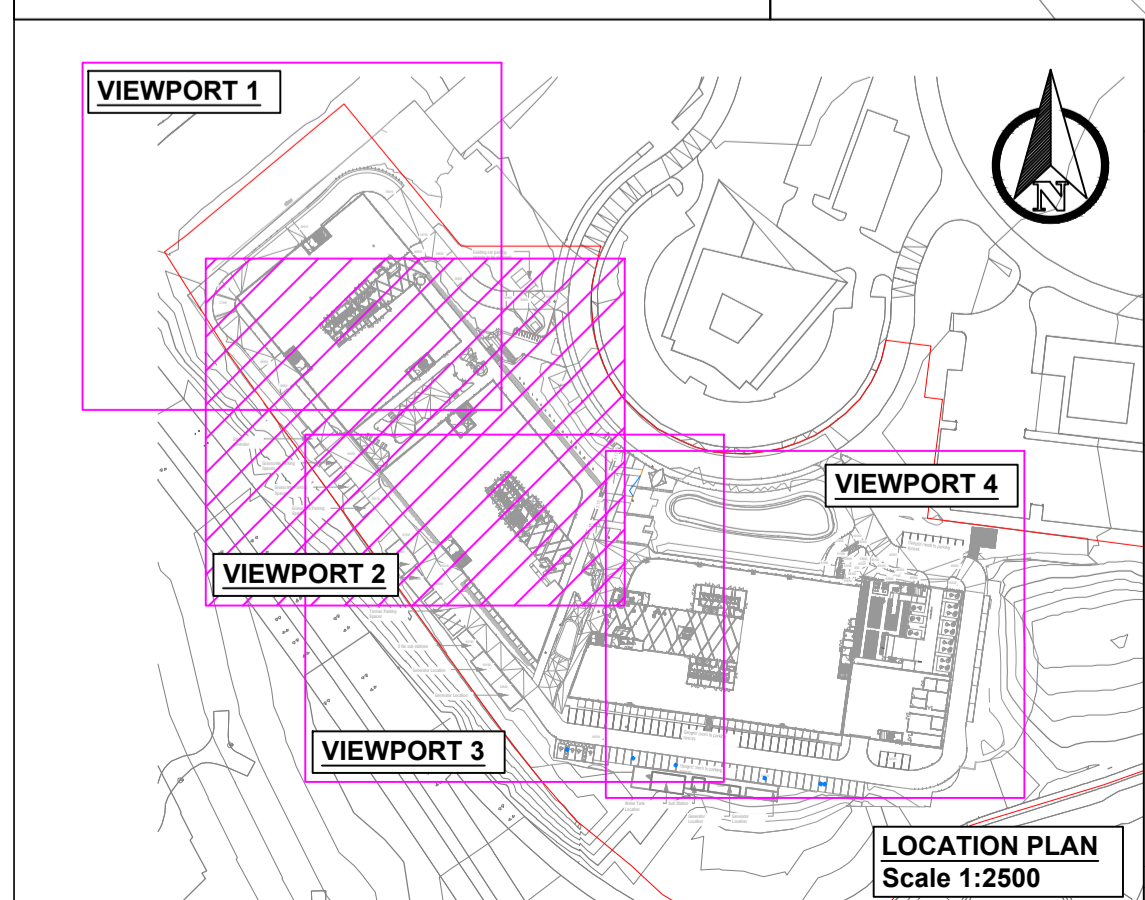
Drawn by	Date made	Scale @ A1	Checked by	Suitability	CR Project
ZA	28/11/23	1:200	LM	S2	13886

Project No.	Originator	Volume	Lvl/Loc	Type	Role	Number	Rev
13886	CRH	ZZ	XX	DR	C	5057	P1

Tubosider singlestore storm water attenuation tank  
 241m of 100mmØ tubes with internal access shafts, inlet  
 connections and pumping station, restricting flows to 700l/s  
 Storage capacity approx = 370m³  
 Min level = 0.700m  
 IL 57.400m

**KEY**

- Surface water pipe
- Surface water rising main
- Foul water pipe
- Foul water rising main
- Perforated Pipe
- Grass road permeable car park link pipe
- Land drainage
- Low flow channel
- Aco kerb drain
- Linear slot drain
- Linear channel drain
- Surface water MH
- Surface water gully
- Surface Water Inspection Chamber
- Foul Water MH
- Grass road permeable parking system (Golpia with grass infill)
- Bioretention feature potential TBC by landscape architect
- Vent pipe (indicative routing TBC by M&E)
- Electrical Duct (indicative routing TBC by M&E)
- Site boundary
- Diffuser boxes within permeable parking



- Notes**
- Do not scale from this drawing on print or electronically. Work from figured dimensions only.
  - No deviation from the details on this drawing is allowed without CampbellReith's prior permission in writing.
  - Read this drawing with all Architect's, Service Engineer's and CampbellReith's relevant details, specifications and drawings.
  - All work is to be done in accordance with the relevant specifications issued by CampbellReith, British Standard Codes of Practice, Statutory Requirements and the Contract Documents.
  - Drawing status:  
**P: Preliminary** Evolving drawings for approvals, tenders, billings etc.  
**C: Construction** Fully developed drawings issued under instructions for construction.
  - Only status C drawings to be used for construction.
  - Suitability code:  
 Work in progress  
**S0** - Work in progress  
**S1** - For coordination, **S2** - For information, **S3** - For internal review and comment, **S4** - For construction approval.  
 Documentation (For contractors purposes)  
**D1** - For Costing, **D2** - For Tender, **D3** - For contractor design, **D4** - for manufacture/procurement.  
 Construction  
**A** - For construction, **B** - For construction but with comments (i.e. areas in abeyance), **CR** - Construction Record (Final Construction ONLY). Any deviations to that which is on site is not the liability of CampbellReith
  - Utilities:  
 The positions of Statutory Undertakers mains & services shown on this drawing have been based on information extracted from records obtained from various Utilities Companies. These must be regarded as approximate only. The accuracy or completeness of the information or the location of such apparatus as shown on this drawing is not guaranteed and no warranty is given or implied regarding the position, depth, size, gradient thereof. The Contractor must make his own enquiries of the Utilities Companies and Public Authorities and satisfy himself as to the exact position of services and depth, sizes, gradient thereof. In the interests of safety, the approximate position of underground cables should be obtained by use of electronic cable locators and this position confirmed by careful trial-holing using hand-dug methods.
  - All details in this drawing shall be read in conjunction with Building Regulations 2015 Approved Document H.
  - External rainwater pipes are to be roddable above ground. All SVPs to have rodding plates at ground floor level.
  - At least one soil pipe at the head of each run shall vent to the atmosphere.
  - All control stations and dimensions shall be checked and verified prior to commencement of works and any other discrepancies shall be reported to the engineer.
  - Proposed Masterplan based on 20034-SBR-ZZ-SK-A-03100 (Received from Scott Brownrigg on 28/11/23). This Masterplan has been inserted onto the topographical survey and no guarantee as to the accuracy of the layout in relation to the survey is given or implied. Masterplan for information only.
  - All existing survey information shown or referred to is based upon topographical survey prepared by Sumo Services Ltd, Dwg Ref. SUMO-08198-1, dated August 2022 as supplied to CampbellReith - no warranty as to the accuracy of the information is given or implied.
  - Refer to Civil Engineering Design Risks ref. 13886-CR-XX-XX-HS-C-0001 for reference.

P1	Issued for information	28/11/23	ZA
Rev	Description	Date	By

**CampbellReith**  
 consulting engineers

London 020 7340 1700 Manchester 0161 819 3060  
 Surrey 01737 784 500 Birmingham 01675 467 484  
 Bristol 0117 916 1066 Dubai 00 971 4345 7088  
 www.campbellreith.com

Job Title  
**Plots 23-26, Oxford Science Park**

Client  
**The Oxford Science Park**

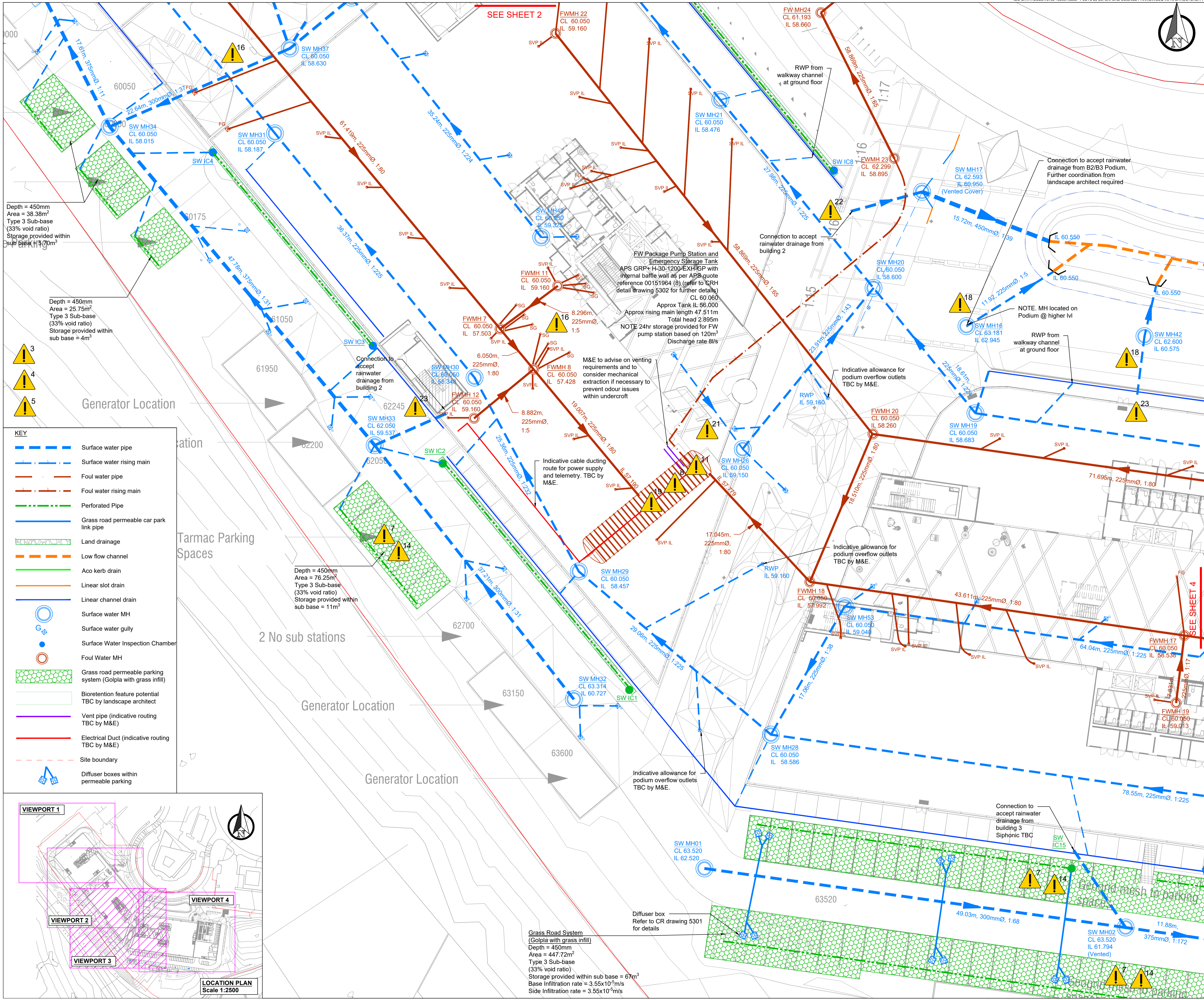
**Proposed Drainage Layout Sheet 2 of 4**

Drawn by	Date made	Scale @ A1	Checked by	Suitability	CR Project
ZA	28/11/23	1:200	LM	S2	13886

Project No.	Originator	Volume	Lvl/Loc	Type	Role	Number	Rev
13886	CRH	ZZ	XX	DR	C	5058	P1

© Campbell Reith Hill LLP 2020



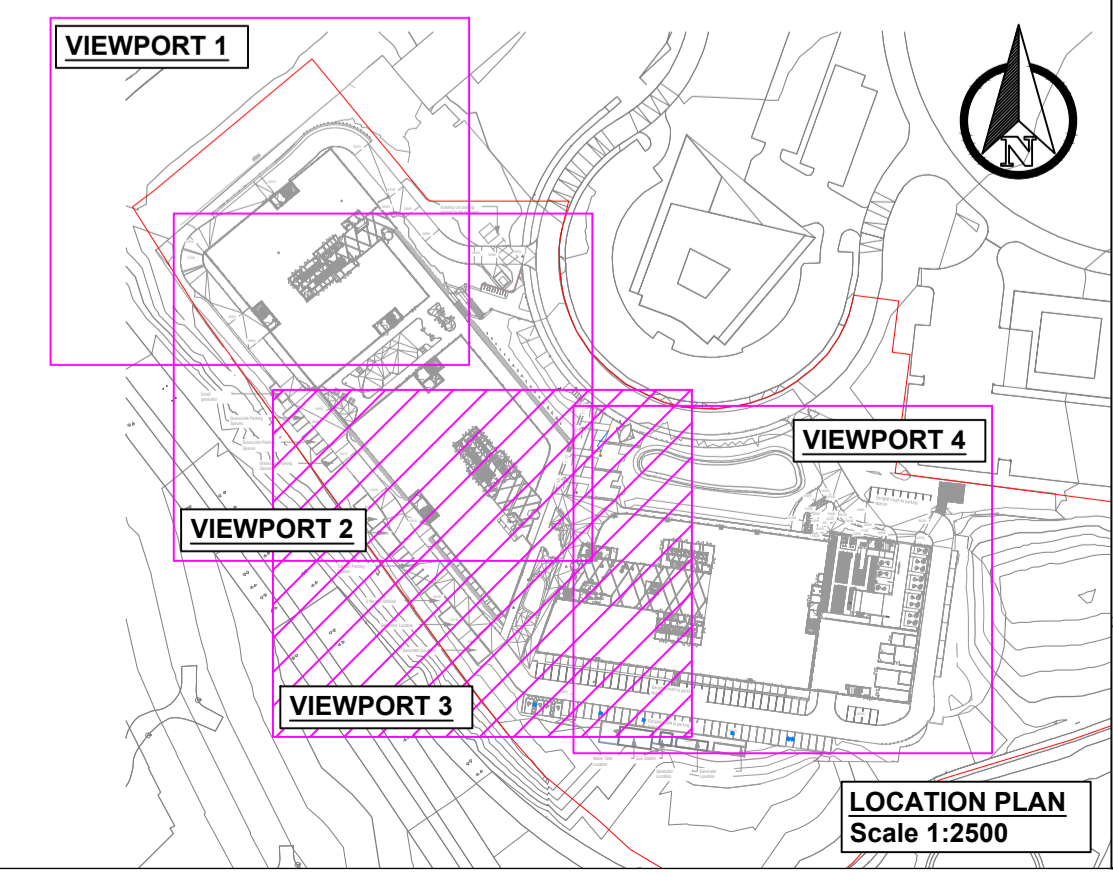


- Notes**
- Do not scale from this drawing on print or electronically. Work from figured dimensions only.
  - No deviation from the details on this drawing is allowed without CampbellReith's prior permission in writing.
  - Read this drawing with all Architect's, Service Engineer's and CampbellReith's relevant details, specifications and drawings.
  - All work is to be done in accordance with the relevant specifications issued by CampbellReith, British Standard Codes of Practice, Statutory Requirements and the Contract Documents.
  - Drawing status:
    - P: Preliminary** Evolving drawings for approvals, tenders, billings etc.
    - C: Construction** Fully developed drawings issued under instructions for construction.
  - Only status C drawings to be used for construction.
  - Suitability code:
    - Work in progress**
    - S0** - Work in progress Shared (Non-contractual)
    - S1** - For coordination, **S2** - For information, **S3** - For internal review and comment, **S4** - For construction approval. Documentation (For contractors purposes)
    - D1** - For Costing, **D2** - For Tender, **D3** - For contractor design, **D4** - for manufacture/procurement.
    - Construction**
    - A** - For construction, **B** - For construction but with comments (i.e. areas in abeyance), **CR** - Construction Record (Final Dashed ONLY). Any deviations to that which is on site is not the liability of CampbellReith
  - Utilities:
    - The positions of Statutory Undertakers mains & services shown on this drawing have been based on information extracted from records obtained from various Utilities Companies. These must be regarded as approximate only. The accuracy or completeness of the information or the location of such apparatus as shown on this drawing is not guaranteed and no warranty is given or implied regarding the position, depth, size, gradient thereof. The Contractor must make his own enquiries of the Utilities Companies and Public Authorities and satisfy himself as to the exact position of services and depth, sizes, gradient thereof. In the interests of safety, the approximate position of underground cables should be obtained by use of electronic cable locators and this position confirmed by careful trial-holing using hand-dug methods.
  - All details in this drawing shall be read in conjunction with Building Regulations 2015 Approved Document H.
  - External rainwater pipes are to be roddable above ground. All SVPs to have rodding plates at ground floor level.
  - At least one soil pipe at the head of each run shall vent to the atmosphere.
  - All control stations and dimensions shall be checked and verified prior to commencement of works and any other discrepancies shall be reported to the engineer.
  - Proposed Masterplan based on 20034-SBR-ZZ-SK-A-03100 (Received from Scott Brownrigg on 28/11/23). This Masterplan has been inserted onto the topographical survey and no guarantee as to the accuracy of the layout in relation to the survey is given or implied. Masterplan shown for information only.
  - All existing survey information shown or referred to is based upon topographical survey prepared by Sumo Services Ltd, Dwg Ref SULO-08198-1, dated August 2022 as supplied to CampbellReith - no warranty as to the accuracy of the information is given or implied.
  - Refer to Civil Engineering Design Risks ref. 13886-CRH-XX-HS-C-0001 for reference.

Depth = 450mm  
Area = 38.38m<sup>2</sup>  
Type 3 Sub-base  
(33% void ratio)  
Storage provided within sub base = 9.70m<sup>3</sup>

Depth = 450mm  
Area = 25.75m<sup>2</sup>  
Type 3 Sub-base  
(33% void ratio)  
Storage provided within sub base = 4m<sup>3</sup>

- KEY**
- Surface water pipe
  - Surface water rising main
  - Foul water pipe
  - Foul water rising main
  - Perforated Pipe
  - Grass road permeable car park link pipe
  - Land drainage
  - Low flow channel
  - Aco kerb drain
  - Linear slot drain
  - Linear channel drain
  - Surface water MH
  - Surface water gully
  - Surface Water Inspection Chamber
  - Foul Water MH
  - Grass road permeable parking system (Golpia with grass infill)
  - Bioretention feature potential TBC by landscape architect
  - Vent pipe (indicative routing TBC by M&E)
  - Electrical Duct (indicative routing TBC by M&E)
  - Site boundary
  - Diffuser boxes within permeable parking



**Grass Road System**  
(Golpia with grass infill)  
Depth = 450mm  
Area = 447.72m<sup>2</sup>  
Type 3 Sub-base  
(33% void ratio)  
Storage provided within sub base = 67m<sup>3</sup>  
Base infiltration rate = 3.55x10<sup>-2</sup>m/s  
Side infiltration rate = 3.55x10<sup>-4</sup>m/s

P1	Issued for information	28/11/23	ZA
Rev	Description	Date	By

**CampbellReith**  
consulting engineers

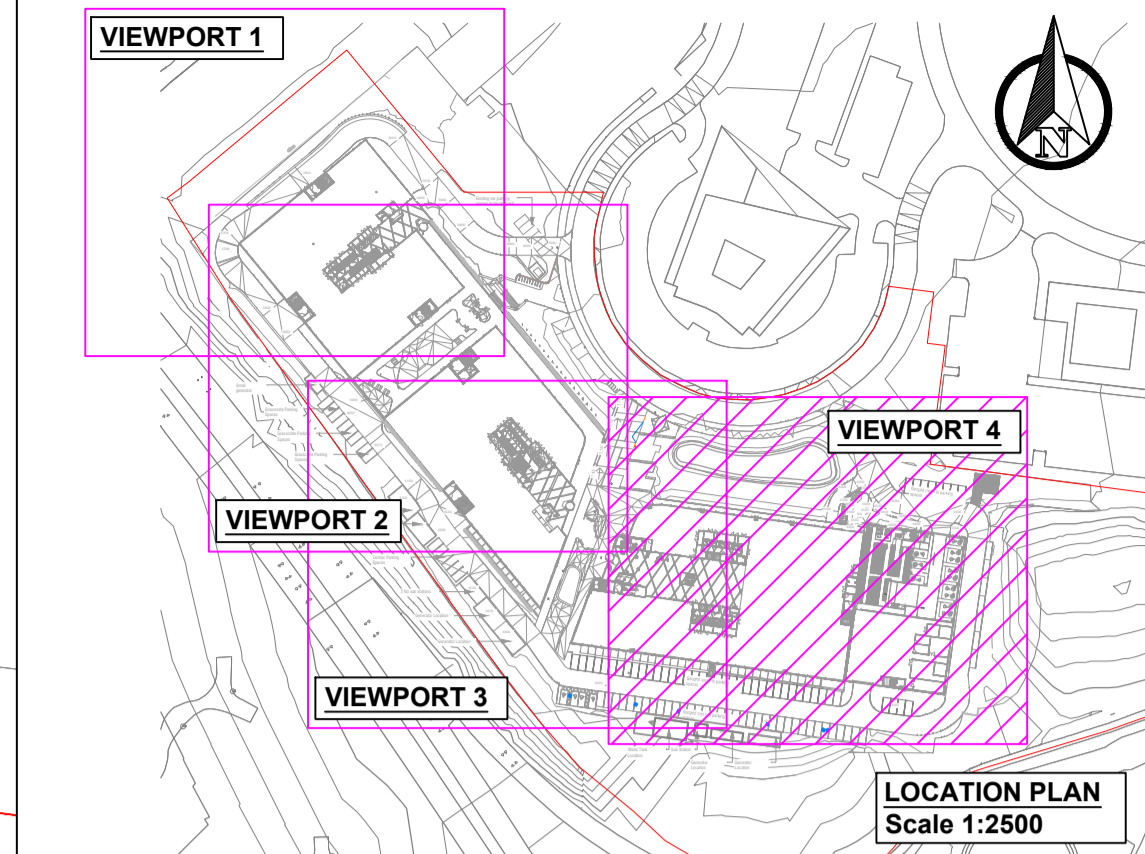
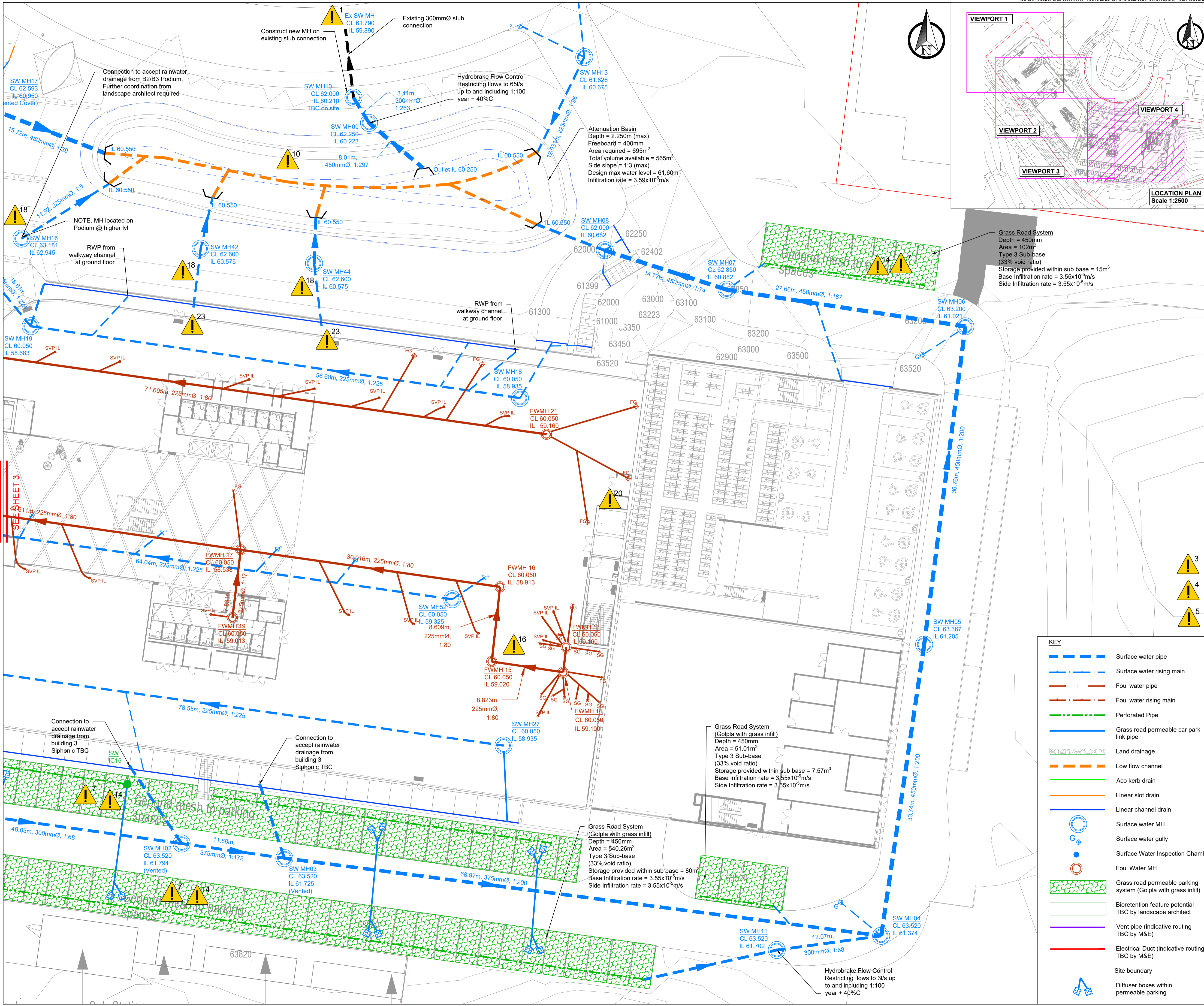
London 020 7340 1700  Manchester 0161 819 3060  
 Surrey 01737 784 500  Birmingham 01675 467 484  
 Bristol 0117 916 1066  Dubai 00 971 4345 7088  
 www.campbellreith.com

Job Title  
**Plots 23-26, Oxford Science Park**

Client  
**The Oxford Science Park**

**Proposed Drainage Layout**  
Sheet 3 of 4

Drawn by	Date made	Scale @ A1	Checked by	Suitability	CR Project		
ZA	28/11/23	1:200	LM	S2	13886		
Project No.	Originator	Volume	Lvl/Loc	Type	Role	Number	Rev
13886	CRH	ZZ	XX	DR	C	5059	P1



- ### Notes
- Do not scale from this drawing on print or electronically. Work from figured dimensions only.
  - No deviation from the details on this drawing is allowed without CampbellReith's prior permission in writing.
  - Read this drawing with all Architect's, Service Engineer's and CampbellReith's relevant details, specifications and drawings.
  - All work is to be done in accordance with the relevant specifications issued by CampbellReith, British Standard Codes of Practice, Statutory Requirements and the Contract Documents.
  - Drawing status:  
**P: Preliminary** - Evolving drawings for approvals, tenders, billings etc.  
**C: Construction** - Fully developed drawings issued under instructions for construction.
  - Only status C drawings to be used for construction.
  - Suitability code:  
 Work in progress  
**S0** - Work in progress  
 Shared (Non-contractual)  
**S1** - For coordination, **S2** - For information, **S3** - For internal review and comment, **S4** - For construction approval.  
 Documentation (For contractors purposes)  
**D1** - For Costing, **D2** - For Tender, **D3** - For contractor design, **D4** - for manufacture/procurement.  
 Construction  
**A** - For construction, **B** - For construction but with comments (i.e. areas in abeyance), **CR** - Construction Record (Final Construction ONLY). Any deviations to that which is on site is not the liability of CampbellReith

- Utilities:  
 The positions of Statutory Undertakers mains & services shown on this drawing have been based on information extracted from records obtained from various Utilities Companies. These must be regarded as approximate only. The accuracy or completeness of the information or the location of such apparatus as shown on this drawing is not guaranteed and no warranty is given or implied regarding the position, depth, size, gradient thereof. The Contractor must make his own enquiries of the Utilities Companies and Public Authorities and satisfy himself as to the exact position of services and depth, sizes, gradient thereof. In the interests of safety, the approximate position of underground cables should be obtained by use of electronic cable locators and this position confirmed by careful trial-holing using hand-dug methods.
- All details in this drawing shall be read in conjunction with Building Regulations 2015 Approved Document H.
- External rainwater pipes are to be roddable above ground. All SVPs to have rodding plates at ground floor level.
- At least one soil pipe at the head of each run shall vent to the atmosphere.
- All control stations and dimensions shall be checked and verified prior to commencement of works and any other discrepancies shall be reported to the engineer.
- Proposed Masterplan based on 20034-SBR-ZZ-ZK-A-03100 (Received from Scott Brownrigg on 28/11/23). This Masterplan has been inserted onto the topographical survey and no guarantee as to the accuracy of the layout in relation to the survey is given or implied. Masterplan shown for information only.
- All existing survey information shown or referred to is based upon topographical survey prepared by Sumo Services Ltd, Dwg Ref SUMO-08198-1, dated August 2022 as supplied to CampbellReith - no warranty as to the accuracy of the information is given or implied.
- Refer to Civil Engineering Design Risks ref. 13886-CRH-XX-XX-HS-C-0001 for reference.



### KEY

	Surface water pipe
	Surface water rising main
	Foul water pipe
	Foul water rising main
	Perforated Pipe
	Grass road permeable car park link pipe
	Land drainage
	Low flow channel
	Aco kerb drain
	Linear slot drain
	Linear channel drain
	Surface water MH
	Surface water gully
	Surface Water Inspection Chamber
	Foul Water MH
	Grass road permeable parking system (Golpla with grass infill)
	Bioretention feature potential TBC by landscape architect
	Vent pipe (indicative routing TBC by M&E)
	Electrical Duct (indicative routing TBC by M&E)
	Site boundary
	Diffuser boxes within permeable parking

P1	Issued for information	28/11/23	ZA
Rev	Description	Date	By

## CampbellReith

consulting engineers

London 020 7340 1700 Manchester 0161 819 3060  
 Surrey 01737 784 500 Birmingham 01675 467 484  
 Bristol 0117 916 1066 Dubai 00 971 4345 7088  
 www.campbellreith.com

Job Title  
**Plots 23-26, Oxford Science Park**

Client  
**The Oxford Science Park**

## Proposed Drainage Layout

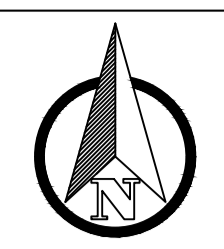
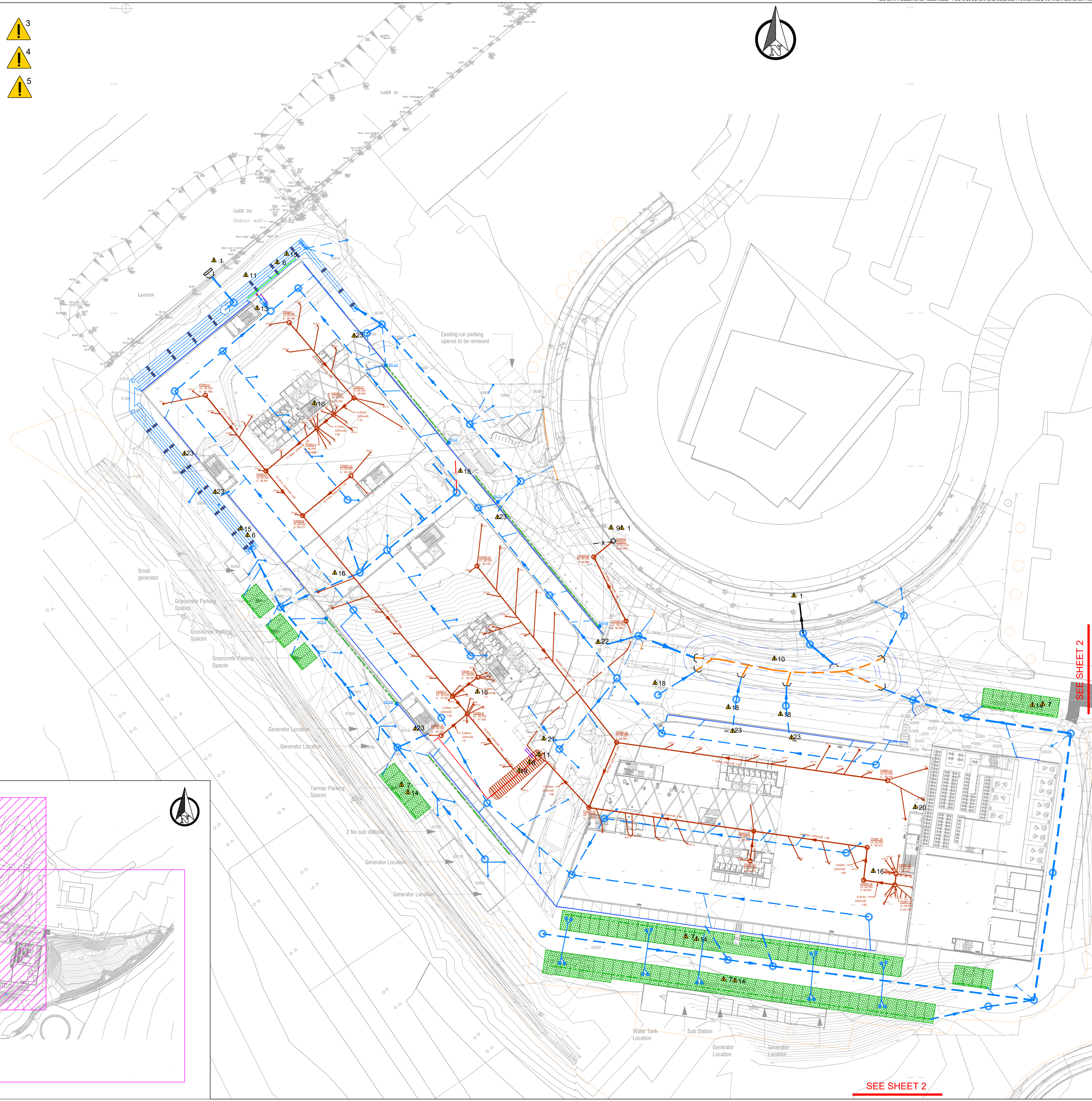
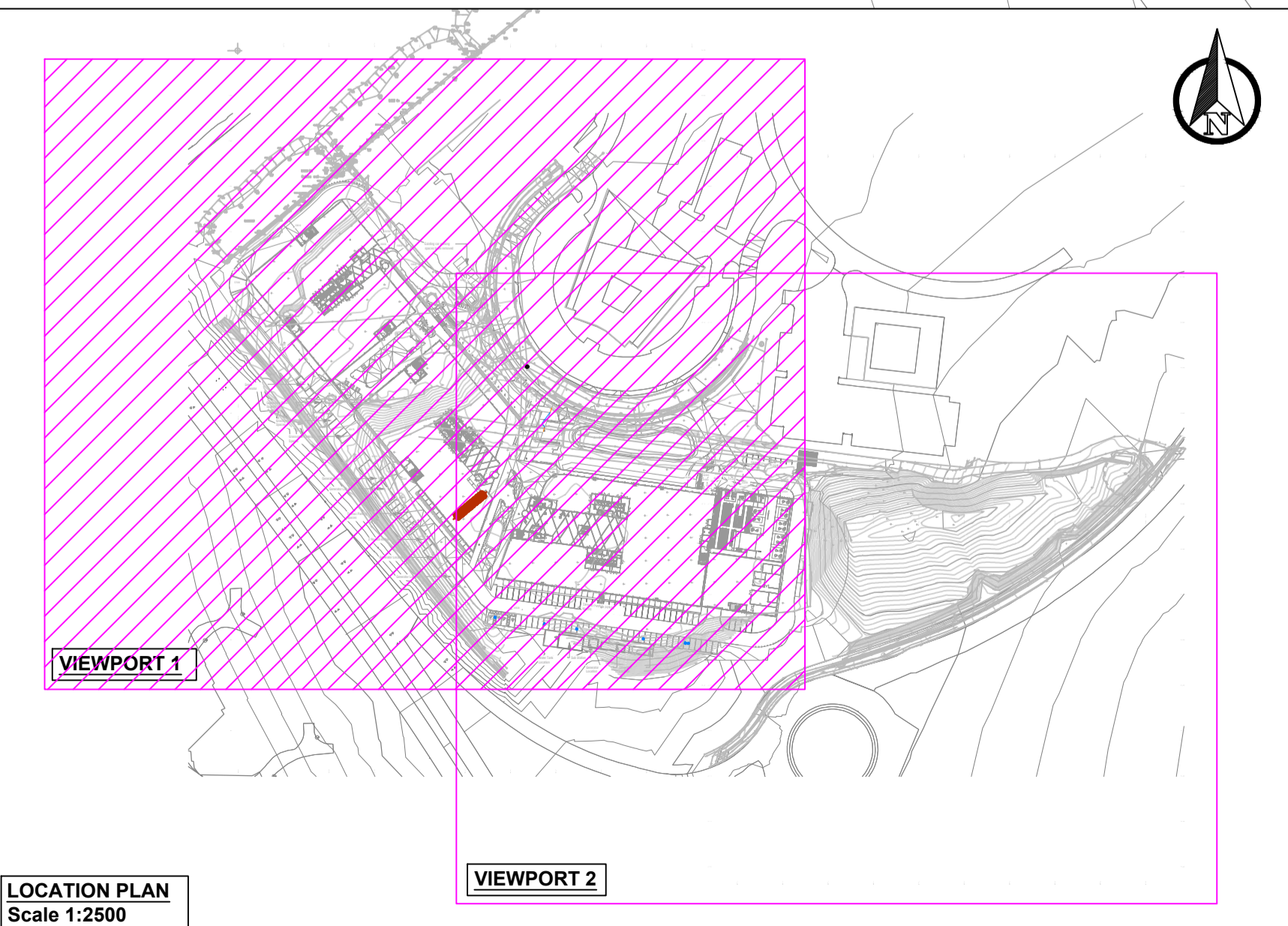
### Sheet 4 of 4

Drawn by	Date made	Scale @ A1	Checked by	Suitability	CR Project
ZA	28/11/23	1:200	LM	S2	13886

Project No.	Originator	Volume	Lvl/Loc	Type	Role	Number	Rev
13886	CRH	ZZ	XX	DR	C	5060	P1

KEY	
	Surface water pipe
	Surface water rising main
	Foul water pipe
	Foul water rising main
	Perforated Pipe
	Grass road permeable car park link pipe
	Land drainage
	Low flow channel
	Aco kerb drain
	Linear drainage channel
	Surface water MH
	Surface water gully
	Foul Water MH
	Grass road permeable parking system (Golpia with grass infill)
	Vent pipe (indicative routing TBC by M&E)
	Electrical Duct (indicative routing TBC by M&E)
	Site Boundary
	Root Protection Zone (RPZ)

- 3
- 4
- 5



- Notes**
- Do not scale from this drawing on print or electronically. Work from figured dimensions only.
  - No deviation from the details on this drawing is allowed without CampbellReith's prior permission in writing.
  - Read this drawing with all Architect's, Service Engineer's and CampbellReith's relevant details, specifications and drawings.
  - All work is to be done in accordance with the relevant specifications issued by CampbellReith, British Standard Codes of Practice, Statutory Requirements and the Contract Documents.
  - Drawing status:**  
**P: Preliminary** Evolving drawings for approvals, tenders, billings etc.  
**C: Construction** Fully developed drawings issued under instructions for construction.
  - Only status C drawings to be used for construction.
  - Suitability code:  
**Work in progress**  
**S0** - Work in progress  
**Shared (Non-contractual)**  
**S1** - For coordination, **S2** - For information, **S3** - For internal review and comment, **S4** - For construction approval.  
**Documentation (For contractors purposes)**  
**D1** - For Costing, **D2** - For Tender, **D3** - For contractor design, **D4** - for manufacture/procurement.  
**Construction**  
**A** - For construction, **B** - For construction but with comments (i.e. areas in abeyance), **CR** - Construction Record (Final Construction ONLY). Any deviations to that which is on site is not the liability of CampbellReith

- Utilities:**  
The positions of Statutory Undertakers mains & services shown on this drawing have been based on information extracted from records obtained from various Utilities Companies. These must be regarded as approximate only. The accuracy or completeness of the information or the location of such apparatus as shown on this drawing is not guaranteed and no warranty is given or implied regarding the position, depth, size, gradient thereof. The Contractor must make his own enquiries of the Utilities Companies and Public Authorities and satisfy himself as to the exact position of services and depth, sizes, gradient thereof. In the interests of safety, the approximate position of underground cables should be obtained by use of electronic cable locators and this position confirmed by careful trial-holing using hand-dug methods.
- All details in this drawing shall be read in conjunction with Building Regulations 2015 Approved Document H.
- External rainwater pipes are to be roddable above ground. All SVPs to have rodding plates at ground floor level.
- At least one soil pipe at the head of each run shall vent to the atmosphere.
- All control stations and dimensions shall be checked and verified prior to commencement of works and any other discrepancies shall be reported to the engineer.
- Proposed Masterplan based on 20034-SBR-ZZ-ZZ-SK-A-03100 (Received from Scott Brownrigg on 28/11/23). This Masterplan has been inserted onto the topographical survey and no guarantee as to the accuracy of the layout in relation to the survey is given or implied. Masterplan shown for information only.
- All existing survey information shown or referred to is based upon topographical survey prepared by Sumo Services Ltd, Dwg Ref SUMO-08198-1, dated August 2022 as supplied to CampbellReith - no warranty as to the accuracy of the information is given or implied.
- Refer to Civil Engineering Design Risks ref. 13886-CRH-XX-XX-HS-C-0001 for reference.



P2	Drainage Updated	05/12/23	ZA
P1	Issued for information	22/02/23	IC
Rev	Description	Date	By

**CampbellReith**  
consulting engineers

London 020 7340 1700  Manchester 0161 819 3060  
 Surrey 01737 784 500  Birmingham 01675 467 484  
 Bristol 0117 916 1066  Dubai 00 971 4345 7088  
 www.campbellreith.com

Job Title  
**Plots 23-26, Oxford Science Park**

Client  
**The Oxford Science Park**

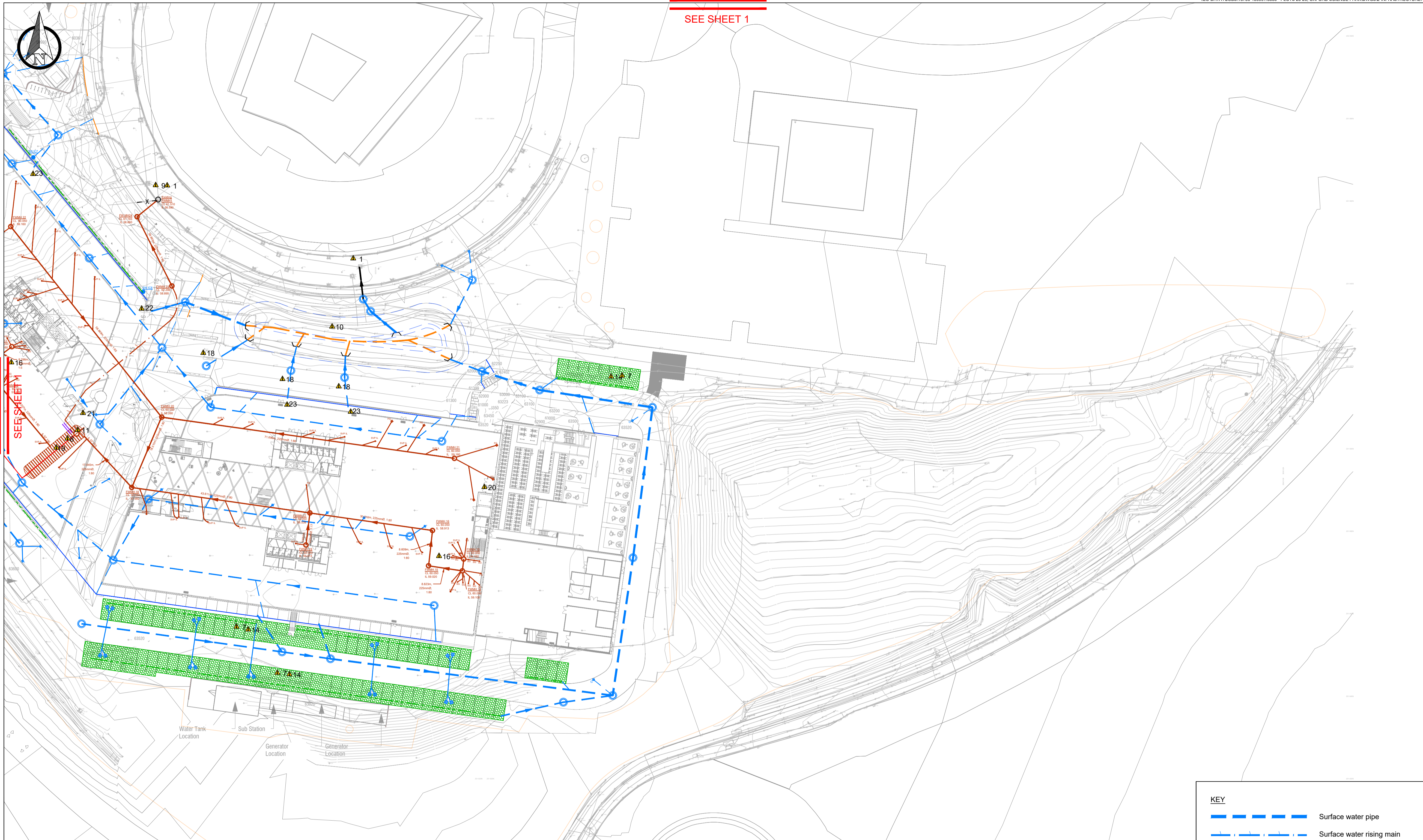
**RPZ Overlaid on  
Drainage Layout  
Sheet 1 of 2**

Drawn by	Date made	Scale @ A1	Checked by	Suitability	CR Project
IC	22/02/23	1:500	LM	S2	13886

Project No.	Originator	Volume	Lvl/Loc	Type	Role	Number	Rev
13886	CRH	ZZ	XX	DR	C	5400	P2

**SEE SHEET 2**

SEE SHEET 1



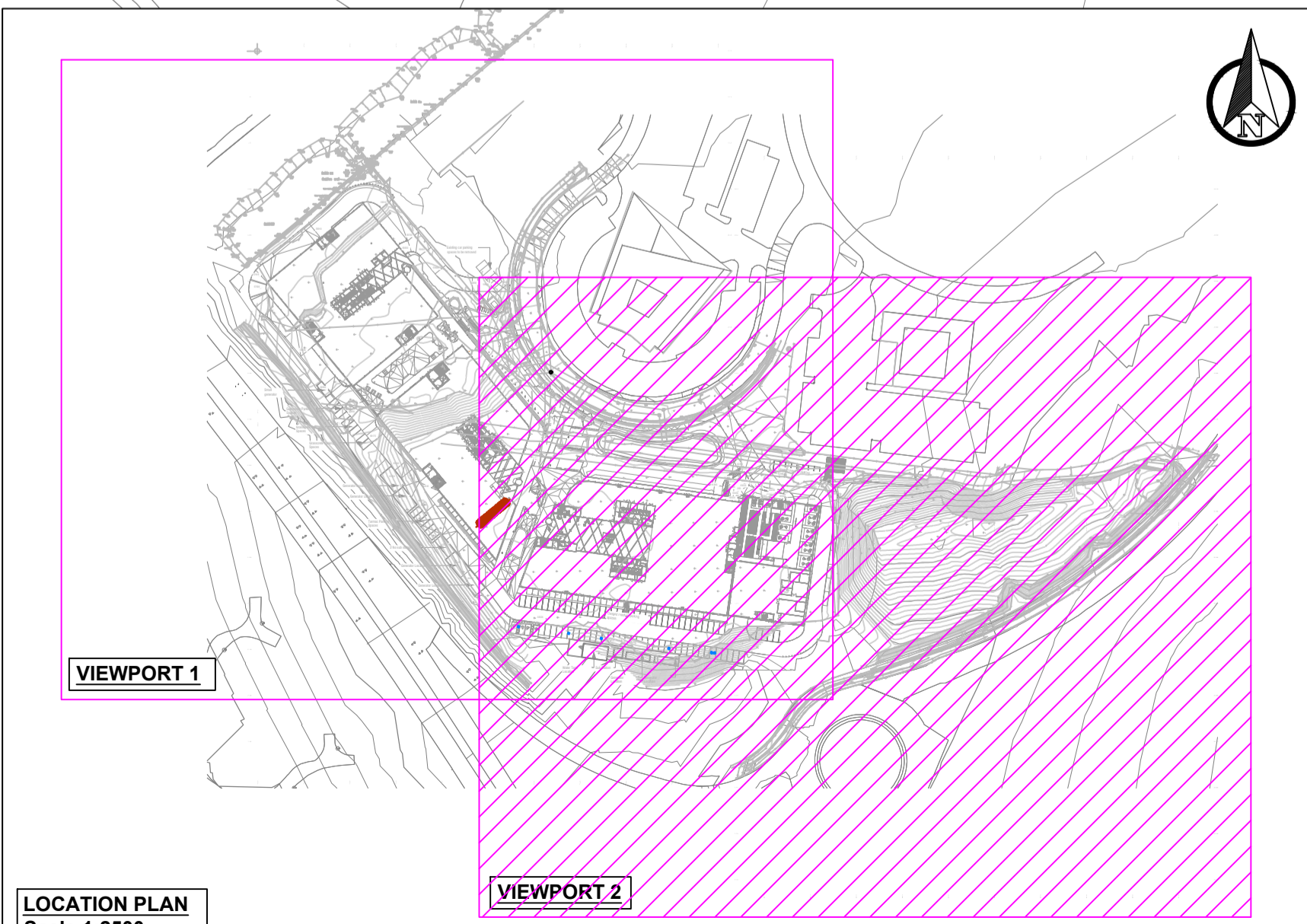
SEE SHEET 1

**Notes**

- Do not scale from this drawing on print or electronically. Work from figured dimensions only.
- No deviation from the details on this drawing is allowed without CampbellReith's prior permission in writing.
- Read this drawing with all Architect's, Service Engineer's and CampbellReith's relevant details, specifications and drawings.
- All work is to be done in accordance with the relevant specifications issued by CampbellReith, British Standard Codes of Practice, Statutory Requirements and the Contract Documents.
- Drawing status:  
**P: Preliminary** Evolving drawings for approvals, tenders, billings etc.  
**C: Construction** Fully developed drawings issued under instructions for construction.
- Only status C drawings to be used for construction.
- Suitability code:  
**Work in progress**  
**S0** - Work in progress  
**Shared (Non-contractual)**  
**S1** - For coordination, **S2** - For information, **S3** - For internal review and comment, **S4** - For construction approval.  
**Documentation (For contractors purposes)**  
**D1** - For Costing, **D2** - For Tender, **D3** - For contractor design, **D4** - for manufacture/procurement.  
**Construction**  
**A** - For construction, **B** - For construction but with comments (i.e. areas in abeyance), **CR** - Construction Record (Final Construction ONLY). Any deviations to that which is on site is not the liability of CampbellReith
- Utilities:  
 The positions of Statutory Undertakers mains & services shown on this drawing have been based on information extracted from records obtained from various Utilities Companies. These must be regarded as approximate only. The accuracy or completeness of the information or the location of such apparatus as shown on this drawing is not guaranteed and no warranty is given or implied regarding the position, depth, size, gradient thereof. The Contractor must make his own enquiries of the Utilities Companies and Public Authorities and satisfy himself as to the exact position of services and depth, sizes, gradient thereof. In the interests of safety, the approximate position of underground cables should be obtained by use of electronic cable locators and this position confirmed by careful trial-holing using hand-dug methods.
- All details in this drawing shall be read in conjunction with Building Regulations 2015 Approved Document H.
- External rainwater pipes are to be roddable above ground. All SVPs to have rodding plates at ground floor level.
- At least one soil pipe at the head of each run shall vent to the atmosphere.
- All control stations and dimensions shall be checked and verified prior to commencement of works and any other discrepancies shall be reported to the engineer.
- Proposed Masterplan based on 20034-SBR-ZZ-SK-A-03100 (Received from Scott Brownrigg on 28/11/23). This Masterplan has been inserted onto the topographical survey and no guarantee as to the accuracy of the layout in relation to the survey is given or implied. Masterplan shown for information only.
- Proposed Landscape layout based on 3241-MA-Working (Received from Macfalane + Assocs on 21/11/22). This layout has been inserted onto the topographical survey and no guarantee as to the accuracy of the layout in relation to the survey is given or implied. Layout shown for information only.
- All existing survey information shown or referred to is based upon topographical survey prepared by Sumo Services Ltd, Dwg Ref SUMO-08198-1, dated August 2022 as supplied to CampbellReith - no warranty as to the accuracy of the information is given or implied.
- Refer to Civil Engineering Design Risks ref. 13886-CRH-XX-XX-HS-C-0001 for reference.

- 3
- 4
- 5

LOCATION PLAN  
Scale 1:2500



**KEY**

	Surface water pipe
	Surface water rising main
	Foul water pipe
	Foul water rising main
	Perforated Pipe
	Grass road permeable car park link pipe
	Land drainage
	Low flow channel
	Aco kerb drain
	Linear drainage channel
	Surface water MH
	Surface water gully
	Foul Water MH
	Grass road permeable parking system (Golpla with grass infill)
	Vent pipe (indicative routing TBC by M&E)
	Electrical Duct (indicative routing TBC by M&E)
	Site Boundary
	Root Protection Zone (RPZ)

P1	Drainage Updated	05/12/23	ZA
P1	Issued for information	22/02/23	IC
Rev	Description	Date	By

**CampbellReith**  
consulting engineers

London 020 7340 1700  Manchester 0161 819 3060  
 Surrey 01737 784 500  Birmingham 01675 467 484  
 Bristol 0117 916 1066  Dubai 00 971 4345 7088  
 www.campbellreith.com

Job Title  
**Plots 23-26, Oxford Science Park**

Client  
**The Oxford Science Park**

**RPZ Overlaid on Drainage Layout  
Sheet 2 of 2**

Drawn by	Date made	Scale @ A1	Checked by	Suitability	CR Project
IC	22/02/23	1:500	LM	S2	13886

Project No.	Originator	Volume	Lvl/Loc	Type	Role	Number	Rev
13886	CRH	ZZ	XX	DR	C	5401	P2