



Structural and Civil Engineers
Construction Consultants
Principle Designers
Project Managers

Central House
2nd Floor
142 Central Street
London EC1V 8AR

T: 020 7916 1744
E: london@vertexeng.co.uk
www.vertexeng.co.uk

SURFACE WATER MANAGEMENT STRATEGY

FOR

CONSTRUCTION PHASE

AT

**NEW OFFICE DEVELOPMENT
146 - 150 ROYAL COLLEGE STREET
LONDON
NW1 0TA**

FOR

R.E.D. CONSTRUCTION LTD

Our Ref: 25046-0001REP

Revision: 1

Date: JUNE 2022

Revision History

Revision	Date	Prepared by	Approved by	Reason for Revision
0	08/06/22	AEP	RE	DRAFT First Issue.
1	10/06/22	AEP	RE	FIRST ISSUE

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1.0 INTRODUCTION

1.1 Vertex Engineers has prepared this Construction Phase Surface Water Management Strategy for R.E.D. Construction Ltd, on behalf of the Developer, as a document to part-discharge planning condition C8 (construction phase) for the proposed 4-storey office block adjacent to Regents Canal at 146-150 Royal College Street, Camden NW1 0TA in northwest London.

1.2 Planning Permission (Reference 2021/2472/P) was granted by London Borough of Camden on 28th April 2022.

1.3 Planning Condition C8 states:

8 Surface water drainage

Prior to the commencement of the development hereby permitted, full details of the proposed surface water drainage, for the construction, and operational phases of the development, shall be submitted to and agreed in writing by the Local Planning Authority (in consultation with the Canal and River Trust), and thereafter implemented in accordance with the approved details.

Reason: To determine the potential for pollution of the waterway and likely volume of water, prior to work commencing. Potential contamination of the waterway and ground water from wind blow, seepage or spillage at the site, and high volumes of water should be avoided to safeguard the waterway environment and integrity of the waterway infrastructure in accordance with Camden Local Plan policies CC1, CC2 and CC3.

1.4 The Lead Local Flood Authority (LLFA) is London Borough of Camden (<https://www.camden.gov.uk/flooding>) (greencamden@camden.gov.uk).

1.5 Reference was made to the ‘Camden Flood Risk Management Strategy’ (2013) and the ‘Surface Water Management Plan’ (2011) by London Borough of Camden, and the ‘London Borough of Camden Strategic Flood Risk Assessment’ (2014) by URS. Reference was also made to ‘Sustainable Design and Construction (SPG) (2014) by the Mayor of London.

1.6 Reference was also made to the planning application document ‘Flood Risk and SuDS Statement’ (April 2021) by Hart Dixon Consulting Engineers, along with the RED Construction document ‘RCS Site Logistics (draft)’.

- 1.7 This Construction Phase Surface Water Management Strategy should be read in conjunction with other construction phase Risk Assessments and Method Statements (RAMS) including the Method Statement 'Control of Surface Water Drainage During Construction' by TRAC dated 26/4/2022.
- 1.8 The site is majority hardpaved to provide parking for the adjacent building with only a small strip of landscaping along the top of the canal bank on the northern boundary of the site. The parking area and adjacent building are served by a combined drain discharging into the public sewer in Royal College Street to the west. A footbridge passes over the parking area, providing access to the adjacent building from the public footway on Royal College Street to the west.
- 1.9 Site location and site layout plans can be found in Appendix A.

2.0 CONSTRUCTION PHASE SURFACE WATER MANAGEMENT STRATEGY

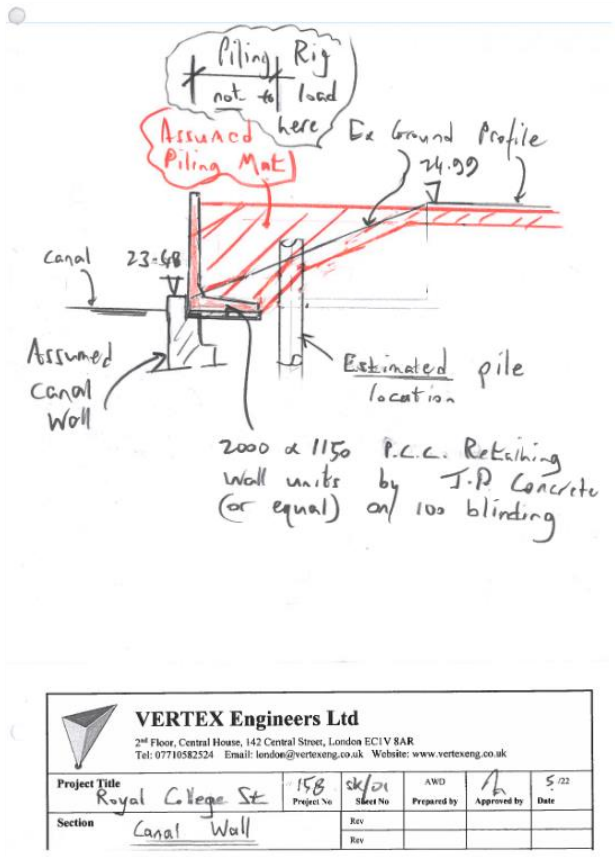
2.1 This Construction Phase Surface Water Management Strategy has been developed to provide 'source control' of potentially contaminated runoff from the construction phase of the development and prevent it from entering Regents Canal. This Strategy has been developed with reference to the documents referenced in Section 1.0. Refer to documents by others for the Permanent Works SUDS Strategy.

2.2 The general sequencing of construction works is shown below:

1. [Existing hardpaved parking surface will remain in situ to provide working surface for the duration of construction]
2. Remove footbridge
3. Remove canal bank vegetation and cut existing canal bank to form level surface on top of existing canal bank wall
4. Install temporary PCC L-Wall
5. Install piling mat
6. Groundworks - install piling
7. Groundworks - install new drainage
8. Groundworks - construct pile caps & ground beams
9. Construct building
10. Strike scaffolding etc
11. Remove pile mat adjacent to canal
12. Remove temporary PCC L-Wall
13. Restore canal bank & landscaping
14. Construct External Works to remainder of building perimeter

2.3 The above sequencing can be split into 3 stages for the purposes of surface water management to prevent contaminated/silted runoff entering the canal:

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- 2.3.1 Stage 1 - Sequence 1 to 4 - Site Clearance and installation of temporary L-Wall
 - 2.3.2 Stage 2 - Sequence 5 to 11 - Main Site Construction Works
 - 2.3.3 Stage 3 - Sequence 12 to 14 - Removal of temporary L-Wall and installation of External Works
- 2.4 Stage 1 - Site Clearance and installation of temporary L-Wall**
- 2.4.1 Sand-bag (say, 300mm height) the top of the canal wall in conjunction with an impermeable membrane.
 - 2.4.2 Excavate a small 'collection pit' (say, 450mm deep to 600mm deep) towards one end of the line of the temporary PCC L-Wall suitable for installation of a dewatering pump. The dewatering pump should discharge to the existing combined drain via an appropriately sized silt settlement unit. A temporary trapped yard/road gully maybe required on the existing drainage upstream of the combined drain to prevent foul odours escaping. The volume of surface water runoff and the installation sequencing of the L-Wall may require two or more 'collection pits'.
 - 2.4.3 Install the PCC L-Wall (as shown in the sketch below) ensuring that the base and vertical joints between wall units are sealed with a suitable sealant and/or impermeable membrane to prevent surface water runoff from discharging into the canal. Special care should be taken to ensure that the ends of the L-Wall are adequately sealed. Keep the sand bagging and impermeable membrane on the canal wall insitu.



Arrangement of PCC L-Wall and Piling Mat

2.5 Stage 2 - Main Site Construction Works

2.5.1 Install a dewatering sump within the pile mat on top of the base of the L-Wall. The dewatering sump can be constructed of a vertically installed perforated twin-wall pipe of 300mm to 450mm diameter to suit a dewatering pump. The dewatering pump should discharge to the existing combined drain via an appropriately sized silt settlement unit as discussed in 2.4.2 above.

2.6 Stage 3 - Removal of temporary L-Wall and installation of External Works

2.6.1 Remove the L-Wall whilst keeping the sand bagging on the canal wall insitu. Adjust/reset the sand bagging and impermeable membrane if they had become dislodged during removal of the L-Wall.

2.6.2 If weather conditions are very wet during the earthworks to reconstruct the canal bank above the canal wall, install a ‘collection pit’ and dewatering pump as described in 2.4.2 above.

2.6.3 After landscaping works to the newly reconstructed canal bank are complete, remove the ‘collection pit’ (if present) and remove the sand bagging and impermeable membrane.

3.0 WATER QUALITY

3.1 The water quality objectives of preventing silty or contaminated construction phase surface water runoff entering the canal will be met by undertaking the measures discussed in Section 2.0.

4.0 MANAGEMENT AND MAINTENANCE PLAN

4.1 The management and maintenance of the construction phase surface water drainage elements is not onerous or complicated. The following measures should be implemented:

Construction Phase Management and Maintenance Plan		
Drainage Component	Management	Maintenance
Sand bagging and impermeable membrane	Inspect weekly or after rain storm event	Reset sandbags as necessary. Repair/replace impermeable membrane if damaged.
‘Collection Pit’ for dewatering pump	Inspect daily	Re-excavate if sides collapse or install vertical perforated pipe to act as pump sump
Dewatering pump and silt settlement unit	Inspect daily. Refer to Contractor’s RAMS	Refer to Contractor’s RAMS
Vertical perforated pipe for sump for dewatering pump	Inspect daily	No specific requirements. Refer to Contractor’s RAMS
Trapped road/yard gully (if installed) on existing drain	Inspect weekly or after rain storm event	Clear silt if present as required. Refer to Contractor’s RAMS

5.0 CONCLUSIONS

- 5.1 The Construction Phase Surface Water Management Strategy for the surface water runoff from the construction phase of the office block development is not complicated or onerous.
- 5.2 Sections 2.0 demonstrates simple, robust methods of construction phase surface water management that will mitigate the risk of potential contaminants or silt entering Regents Canal adjacent to the site.
- 5.3 Section 3.0 demonstrates that the construction phase of the development will not affect the water quality of Regents Canal.
- 5.4 Section 4.0 demonstrates that the drainage elements of the surface water management of the construction phase of development will be simple to manage and maintain.

Prepared by: A E Pennington

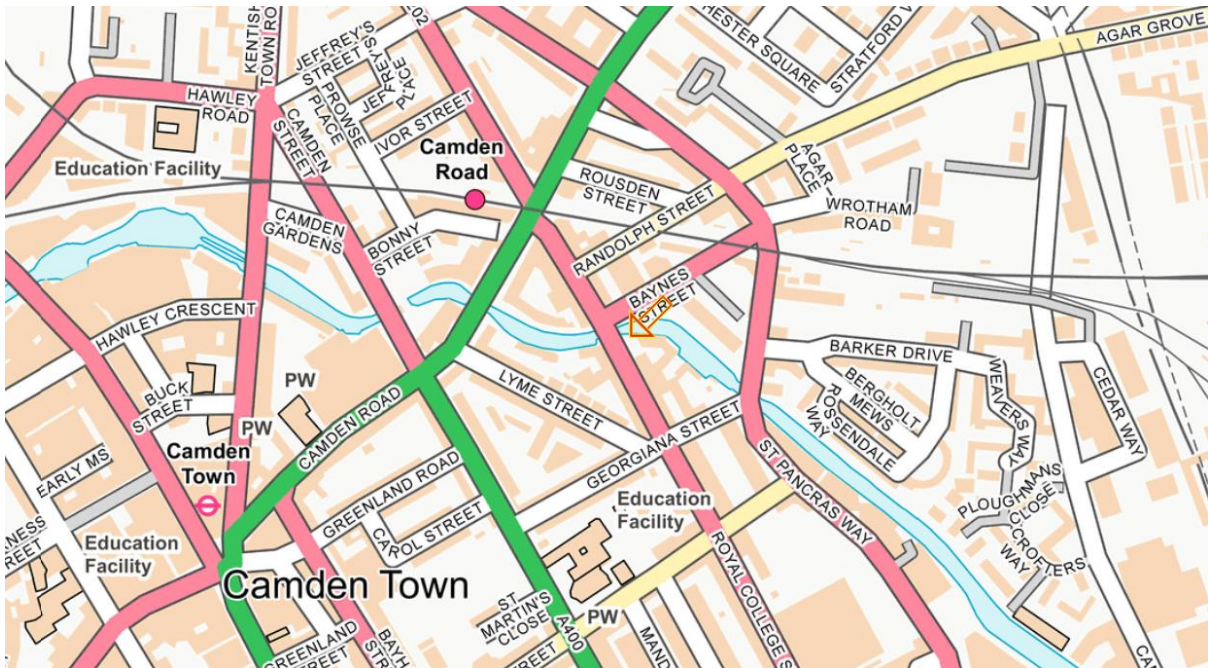
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Approved by: R Elezi

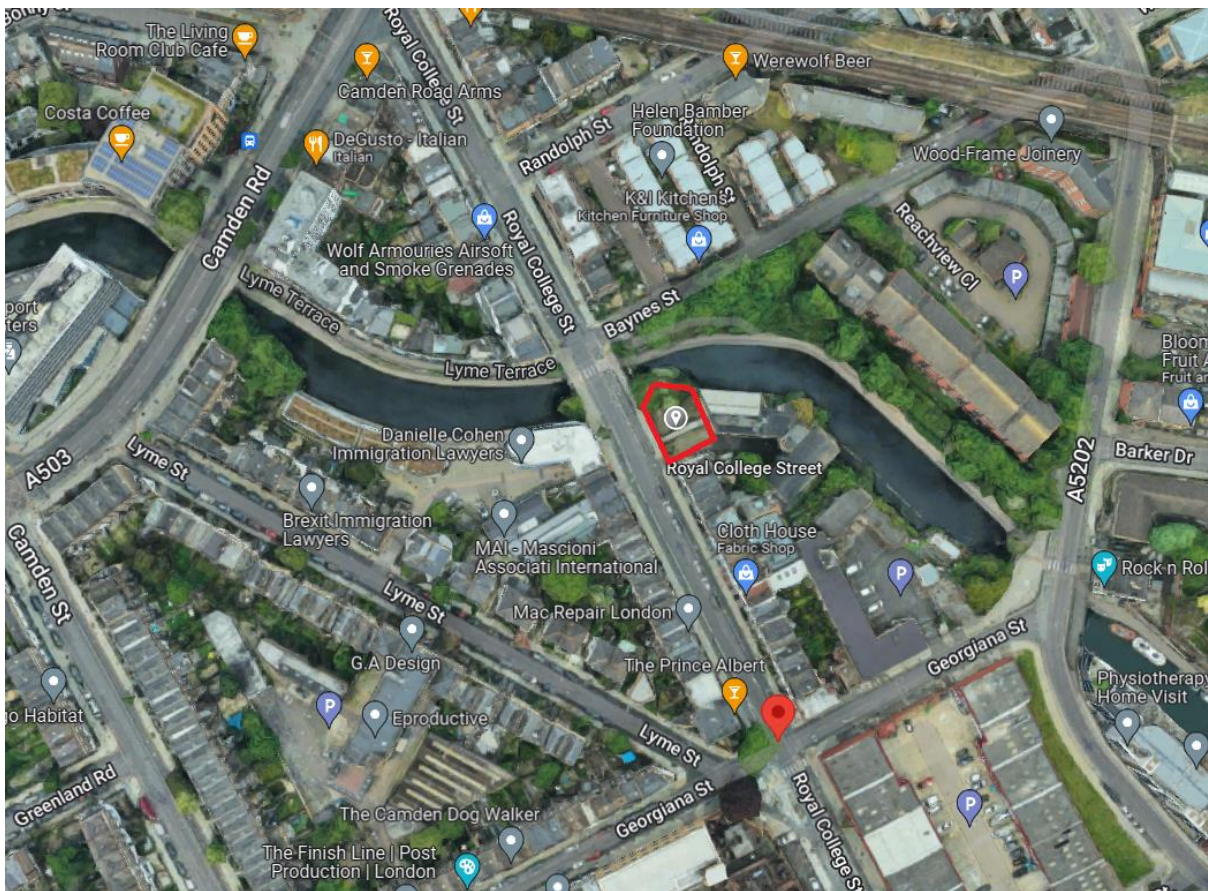
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APPENDIX A

SITE LOCATION MAPS & SITE LAYOUT PLAN



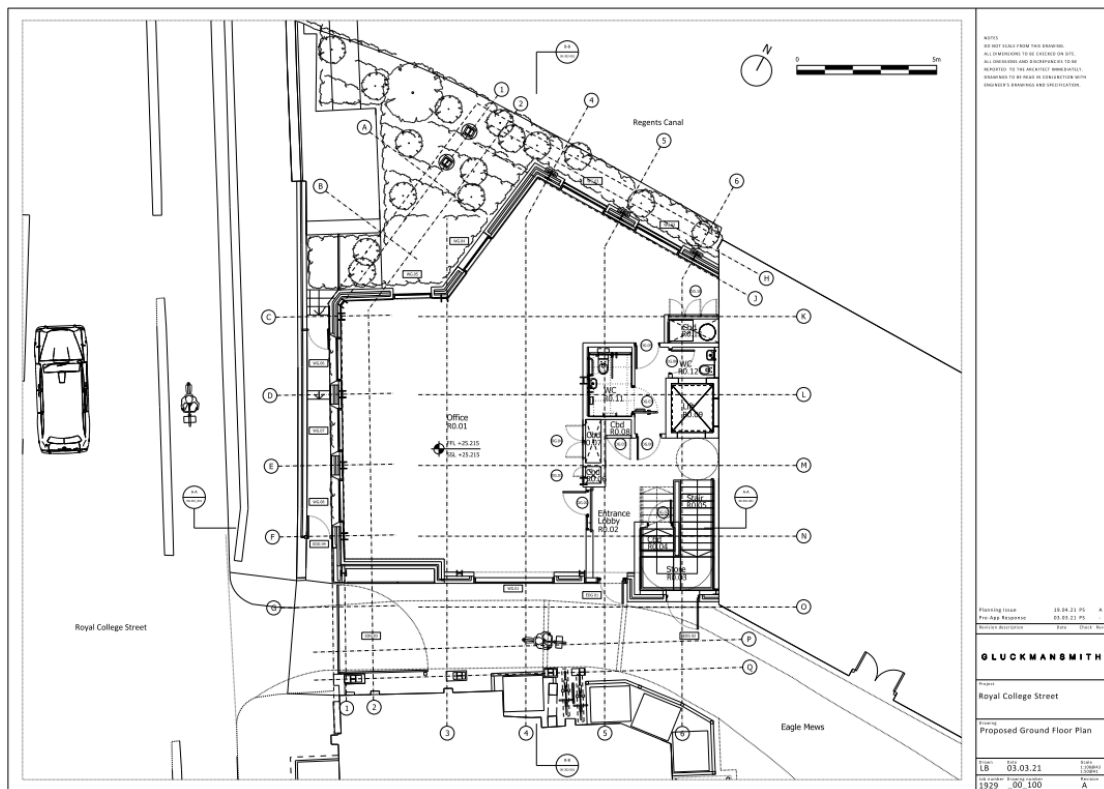
Site Location Map



Aerial Photographic Site Location Map



Aerial Photographic Map (small scale)



Architect Site Layout (NTS)