JOHN DAVIES ASSOCIATES
Consulting Engineers

OSBORNE HOUSE PROPERTIES LTD

PROPOSED CONVERSION OF

REGENT HOUSE,
REGENT STREET
WREXHAM LL11 1PR

FROM OFFICES TO APARTMENTS

DRAINAGE STATEMENT

JDA/648/1/3 **July 2026**

Registered Address: 1, St. John's Road, Queen's Park, Chester, Cheshire CH4 7AL
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Directors: J.C. Davies MSc CEng FICE MCIOB MIWM, Micklethwaite B.Sc(Hons) C.Eng MICE

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Description of Status	**Date**	**Reviewer Initials**	**Authors Initials**
Initial Report	08:07: 26	MM	JCD
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1. INTRODUCTION

1.1 Osborne House Group Ltd; propose to convert their vacant Office Block located at 36 Regent Road, Wrexham LL11 1PR from offices to 36 No Studios Apartments – see Architects Layout Drawings at Appendix 1.

1.2 They have commissioned John Davies Associates to advise them on the adequacy or otherwise of the existing drainage arrangements to cope with the flows from the proposed conversion.

2. FOUL DRAINAGE

2.1 The proposed future foul flows from the proposed 36 Studios Apartments and the three Common Rooms together with additional toilets at the entrance to the blocks have been calculated – see Appendix 2 for the calculations and the resulting flows compared with the capacity of the existing drainage.

2.2 It will be seen from Appendix 2 that the existing 150mms diameter foul sewer connection has a greater capacity than the maximum calculated flow and therefore no alterations to the foul drainage system are required.

3. STORMWATER

3.1 No alterations are proposed to the footprint of the building or the external areas – all of the conversion works will take place within the existing building and therefore the existing stormwater drainage system will not be affected by the proposed internal changes and no works are required to the existing stormwater drainage system.

4. CONCLUSIONS

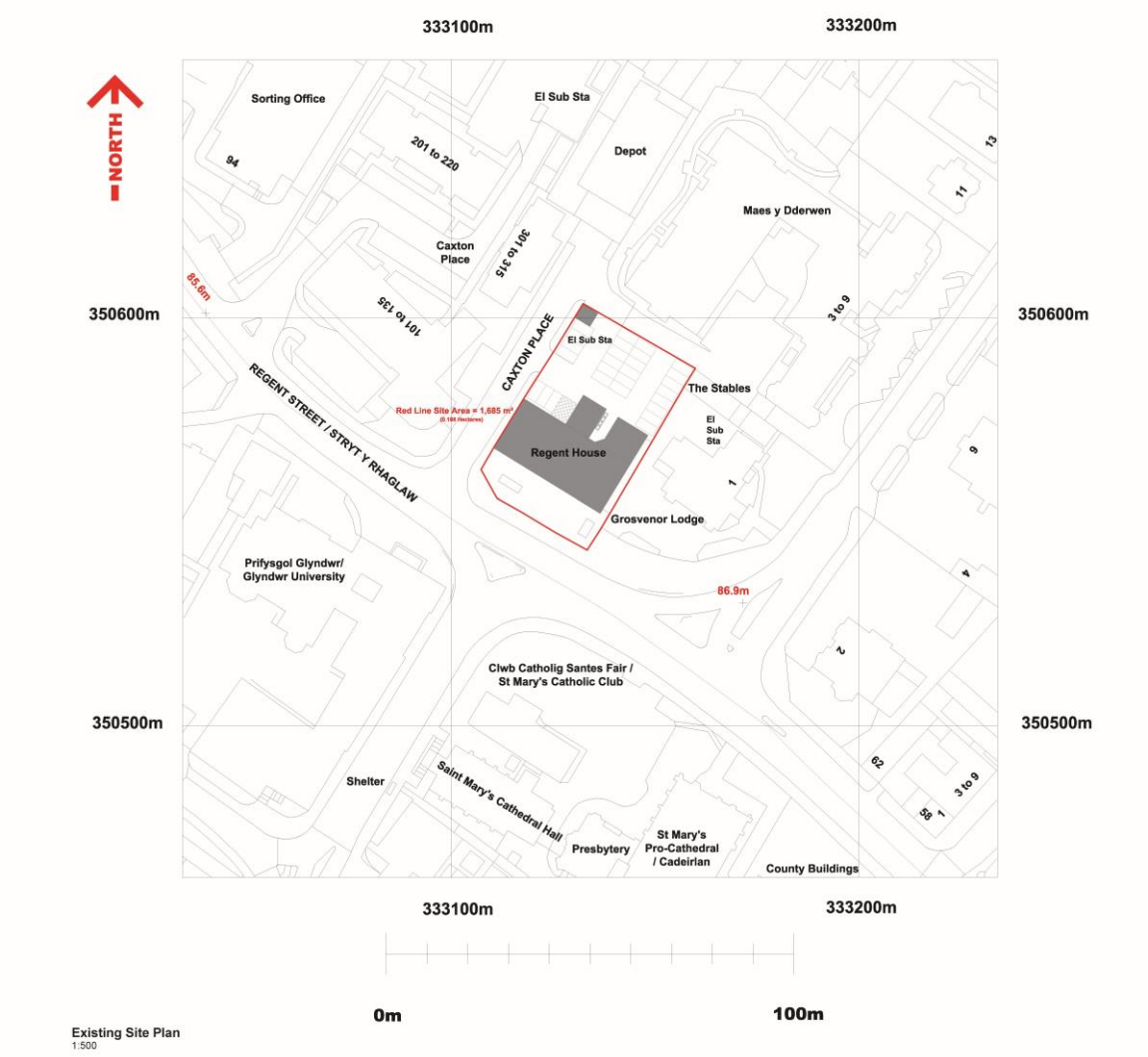
4.1 The existing external drainage arrangements serving the Office Block known as Regent House, Regent Street, Wrexham LL11 1PR are satisfactory for its proposed conversion to 36 No Studios.

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APPENDIX 1

ARCHITECTS PROPOSED LAYOUT PLANS

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Existing Site Plan
1:500

PROPOSED PART CHANGE OF USE TO RESIDENTIAL STUDIOS
REGENT HOUSE, REGENT STREET, WREXHAM LL11 1PR
EXISTING SITE & LOCATION PLAN

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2nd Floor



PROPOSED FLOOR PLANS

12 x 1 Bed Studios Per Floor x 3 Floors

Total = 36 Units

3rd Floor



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APPENDIX 2

FOUL DRAINAGE CALCULATIONS

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FOUL DRAINAGE CALCUATION IN ACCORDANCE WITH BS EN 752-4:1997 ANNEX C

NUMBER OF DWELLINGS	1

TYPE OF APPLIANCE	TYPICAL VALUE OF DISCHARGE UNITS	UNITS PER DWELLING
Wash Basin	0.3	41
Bidet	0.3	0
Shower without plug	0.4	36
Shower with plug	1.3	0
Urinal with Cistern	0.4	0
Bath	1.3	0
Kitchen Sink	1.3	41
Dishwasher (household)	0.2	0
Washing Machine (up to 6kg)	0.6	0
Washing Machine (up to 12kg)	1.2	1
WC with 4l cistern	1.2	41
WC with 6l cistern	1.5	0
WC with 7.5l cistern	1.6	0
WC with 9l cistern	1.8	0
Floor Gully DN50	0.6	0
Floor Gully DN70	0.8	0
Floor Gully DN100	1.2	0

1. This spreadsheet is to establish the minimum flow required in a particular length of pipe.
2. First count up the number of appliances per dwelling , or total number of appliances on the pipe and input into relevant columns above.
3. Check K_{DU} value is correct.
4. Then check minimum flow required (Q) against the actual flow provided from the flow tables.

TOTAL UNITS PER DWELLING	130.4

TOTAL UNITS PER SITE	130.4

$$Q = k_{DU}\sqrt{\sum DU}$$

TYPE OF BUILDING	TYPICAL FREQUENCY
Dwelling, Guesthouse, Office (Intermittent use)	0.5
Hospital, school, restaurant, hotel (frequent use)	0.7
Public toilets / showers (congested use)	1.0
Laboratory buildings (special use)	1.2

EXAMPLE FLOWS @ ks = 1.5

100mm pipe @ 1:80 = 5.8 l/s
100mm pipe @ 1:15 = 13.6 l/s
150mm pipe @ 1:100 = 15.46 l/s
150mm pipe @ 1:15 = 40 l/s

k_{DU} = 0.7

DU = 130.4

Min Flow Req'd (Q) = 7.993 l/s

PIPE DIA SELECTED	PIPE GRAD SELECTED	VELOCITY (m/s)	DISCHARGE (l/s)
150	80	0.96	16.95

SELF-CLEANSING VELOCITY		
PEAK FLOW RATE	PIPE CAPACITY	PROPORTIONAL DISCHARGE
7.993	16.95	0.472

PEAK VELOCITY (m/s)	PROPORTIONAL VELOCITY	
0.96	0.98	0.9408

0.941 is greater than 0.7 therefore OK

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