

APPENDIX 4

WELSH WATER SEWER PLANS

Wrexham



LEGEND(Representative of most common features)

- [illegible]

Notes:

Whilst every reasonable effort has been taken to correctly record the pipe material of DCWW assets, there is a possibility that in some cases, pipe material (other than Asbestos Cement or Pitch Fibre) may be found to be asbestos cement (AC) or Pitch Fibre (PF). It is therefore advisable that the possible presence of AC or PF pipes be anticipated and considered as part of any risk assessment prior to excavation.

[illegible]

EXACT LOCATIONS OF ALL APPARATUS TO BE DETERMINED ON SITE.

Map Ref: 337494,349462
Map scale: 1:1250
Printed by: Twidle David
Printed on: 31 Aug 2017

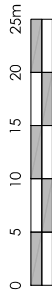
APPENDIX 5

PROPOSED SITE MASTERPLAN

- All dimensions and levels are to be checked on site.
- Any discrepancies are to be reported to the architect before any work commences.
- This drawing shall be used to ascertain any dimensions work to, figured dimensions only.
- This drawing shall not be reproduced without the express written permission from AEM.
- All property, materials and working boundaries are to be marked using acceptable methods. AEM cannot be responsible for the accuracy or safety discrepancy of basic plans supplied to them.
- All works are to be undertaken in accordance with Building Regulations and the latest British Standards.
- All proprietary materials and products are to be used strictly in accordance with the manufacturer's recommendations.

Client notified of duties: XXX/XX/XXXX
 Performed Design: XXXX

Unless noted below, all known hazards have been highlighted on the drawing:



Red line site and ownership boundary
subject to confirmation.

Unknown Radio
Low Voltage
High Voltage
Water
Unknown GPR
Surface Water Detection

Plot Boundary =
2.22 acres / 0.90 ha

S2 For Information

FI Real Estate Management Ltd

product

Clywedog Road North (Site 2)
Wrexham

Proposed Site Plan

date	24/10/18	organ	ES
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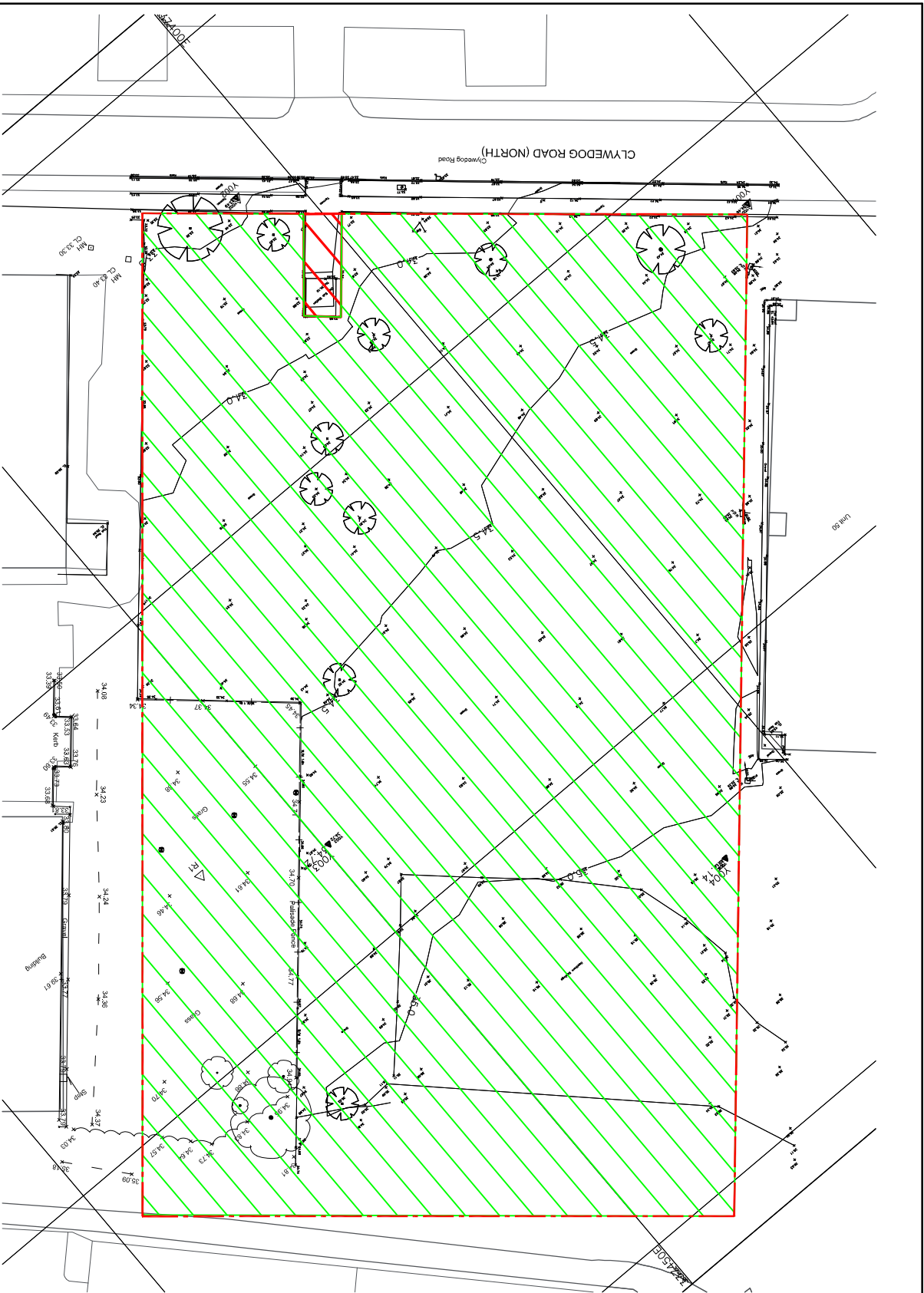
date	24/10/18	organ	ES
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APPENDIX 6

EXISTING DRAINAGE CONNECTIVITY

APPENDIX 7

EXISTING AND PROPOSED IMPERMEABLE AREA PLANS



Site Boundary: 8990m²



Denotes total impermeable areas: 58m²



Denotes total permeable areas: 8932m²

Contract
WREXHAM INDUSTRIAL
ESTATE

Title

SITE 2 – EXISTING
IMPERMEABLE AREAS

Tel : 0161 237 3400
Fax : 0161 237 3635
Email : manchester@integraconsulting.co.uk
Web : www.integraconsulting.co.uk

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integra
consulting

Civil & Structural Engineers

Suite 3
14-32 Hewitt Street
MANCHESTER
M15 4GB

Scale

1:5000A3

Drawn

RH

Checked

NS

Approved

2.03

Drawing No

10/18

Date

P1

Rev

P1



CLYWEDOG ROAD (NORTH)

integra

consulting

Civil & Structural Engineers

Suite 3
14-32 Hewitt Street
MANCHESTER
M15 4GB

Tel : 0161 237 3400
Fax : 0161 237 3635
Email : manchester@integroconsulting.co.uk
Web : www.integroconsulting.co.uk

Contract
WREXHAM INDUSTRIAL
ESTATE

Title

SITE 2 – PROPOSED
IMPERMEABLE AREAS

Scale	Drawn	Checked	Approved	Drawing No	Date	Rev
1:5000AS	RH	NS		204	10/18	P1

Site Boundary: 8990m²



Denotes total impermeable areas: 5487m²



Denotes total permeable areas: 3503m²

APPENDIX 8

GREENFIELD RUNOFF RATE

Calculated by: Rory Harris

Site name: Site 2

Site location: wrexham industrial estate

Site coordinates

Latitude: 53.04053° N

Longitude: 2.93495° W

This is an estimation of the greenfield runoff rate limits that are needed to meet normal best practice criteria in line with Environment Agency guidance "Preliminary rainfall runoff management for developments", W5-074/A/TR1/1 rev. E (2012) and the SuDS Manual, C753 (Ciria, 2015). This information on greenfield runoff rates may be the basis for setting consents for the drainage of surface water runoff from sites.

Reference: 6486313

Date: 2018-10-30T11:53:12

Methodology

IH124

Site characteristics

Total site area (ha)	0.899
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Methodology

Qbar estimation method	Calculate from SPR and SAAR
SPR estimation method	Calculate from SOIL type

	Default	Edited
SOIL type	1	4
HOST class	---	---
SPR/SPRHOST	0.1	0.47

Hydrological characteristics

	Default	Edited
SAAR (mm)	692	692
Hydrological region	9	9
Growth curve factor: 1 year	0.88	0.88
Growth curve factor: 30 year	1.78	1.78
Growth curve factor: 100 year	2.18	2.18

Notes:

(1) Is $Q_{BAR} < 2.0$ l/s/ha?

Normally limiting discharge rates which are less than 2.0 l/s/ha are set at 2.0 l/s/ha.

(2) Are flow rates < 5.0 l/s?

Where flow rates are less than 5.0 l/s consents are usually set at 5.0 l/s if blockage from vegetation and other materials is possible. Lower consent flow rates may be set in which case blockage work must be addressed by using appropriate drainage elements

(3) Is $SPR/SPRHOST \leq 0.3$?

Where groundwater levels are low enough the use of soakaways to avoid discharge offsite may be a requirement for disposal of surface water runoff.

Greenfield runoff rates

	Default	Edited
Qbar (l/s)	0.15	4.28
1 in 1 year (l/s)	0.13	3.77
1 in 30 years (l/s)	0.27	7.62
1 in 100 years (l/s)	0.32	9.34