coopers
chartered consulting engineers

8664

Former McCarthy Haulage Site,

First Avenue, Redwither Industrial Estate, Wrexham

Foul Drainage Statement

1. Introduction

Coopers have been commissioned to produce a foul drainage statement to consider the impact on foul discharge to support a change of use planning application at the McCarthy Group haulage site.

2. Planning Requirements

In January 2021, Natural Resources Wales (NRW) introduced stringent standards on the discharge of phosphorus into the River Dee and Bala Lake Special Area of Conservation (SAC). The site lies within the catchment for the SAC.

Any development could potentially lead to an increase of phosphorus load from the receiving wastewater treatment works into the River Dee and Bala Lake Special Area of Conservation. The majority of the River Dee catchment in Wales is currently failing to meet water quality targets for phosphorus. The nutrient impacts of new connections need to be considered on a case-by-case basis within the Habitats Regulations Assessment process. Whilst NRW permitting service has completed a Review of Water Company Discharge Permits they are currently undertaking further data analysis for the River Dee following a number of enquiries and questions from stakeholders and several ongoing Appeals.

3. Background

We find phosphorus in sewage, while some of the phosphorus contained in the food and drinks we consume is taken up by our body, most of it is excreted. Phosphorus can also be found in detergents, cleaning products and some toothpastes.

Sources Of Phosphorous Pollution:
Agriculture - Fertilizers usually contain Phosphorous, as it is a plant food, but excess phosphorous can run off the land, or enter land drains that discharge into watercourses, during spells of wet weather.
Sewage Discharges - All raw sewage contains Phosphorous, up to 17mg/litre.

It is estimated that typically only about 40% is digested by the bacteria in sewage treatment plants and the concentration level remains too high to discharge to sensitive waters.

4. Proposals

The site is currently used by a McCarthy Group as a warehousing / distribution/ haulage company. This statement has been produced to support a change of use application to an industrial use for the shredding of WEEE goods (laptops/mobiles etc).

The site will receive and process:

- Printed circuit boards
- Copper wire
- Copper-bearing materials
- Small Domestic Appliances (SDA)
- General WEEE or WEEE with non-ferrous value
- Work for UK Compliance Schemes
- Loose aluminium, stainless steel, and ferrous steel

All materials will be inspected and processed as required before export to refineries or approved outlets.

For clarity: no household waste, low-value WEEE, bio-materials, food, or waste that could attract vermin will be accepted. Ferrous Steel will only be produced from other materials.

It should also be noted that no water is used in any planned processes. Furthermore, the number vehicles on site will be far less than the previous site operations.

There are no proposed alterations to toilet / kitchen appliances within the office welfare facilities.

5. Existing Foul Drainage

The haulage depot is in use 24-hours, 7 days a week:

Staff:

- Drivers: 26
- Staff: 10
- Total: 36 employees

The exact daily foul flow produced within the building is unknown but can be estimated in accordance with the **British Water Code of Practice Flows and Loads 4** (refer to Appendix 4).

Industrial – Office / factory without canteen = **50** litres/person/day.
(Drivers will be classed as part-time due to limited time at site = **45** litres/person/day)

<u>Total discharge over 7-day period</u>

26 persons x 45 litres x 7 working days = **8,190 litres / week**
10 persons x 50 litres x 7 working days = **3,500 litres / week**

Total discharge = **11,690 litres / week**

6. Proposed Foul Drainage

The warehouse operations:

Monday - Friday:	07:00 to 18:00
Saturday - Sunday:	No weekend activity is planned

Staff:

- Total: 12 employees

The exact daily foul flow produced within the building is unknown but can be estimated in accordance with the **British Water Code of Practice Flows and Loads 4.**

Industrial – Office / factory without canteen = **50** litres/person/day

Total discharge over 7-day period

12 persons x 50 litres x 5 working days = **3,000 litres / week**

7. Conclusion

The existing and proposed foul flow rates for the site have been estimated using British Water Code of Practice Flows and Loads 4. These calculations demonstrate that the proposed change of use will have a significant reduction in foul flows due to the reduction in employees and operational times. Therefore, the proposals of change of use will not have a negative impact on phosphorous concentration levels within the River Dee and Bala Lake Special Area of Conservation (SAC).

Planning Authorities are still able to determine applications that does not increase the volume or concentration of wastewater.

Andy Jones
Principal Infrastructure Engineer

Coopers

20th October 2025

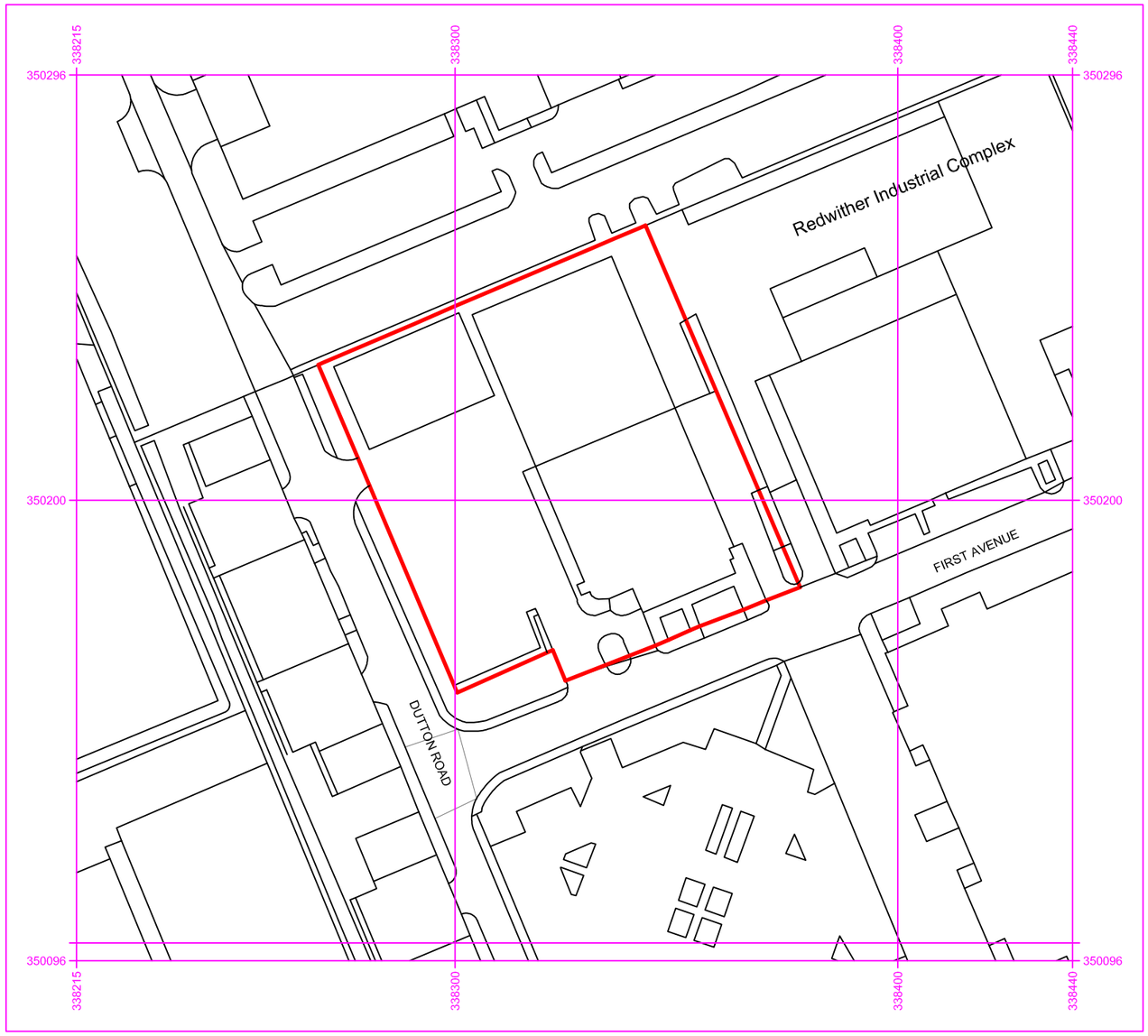
Appendix 1

Site Location

NORTH

Ordnance Survey©
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0 10 20 30 40 50
metres

NORTH

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SITE LOCATION PLAN
UNIT 1, 1st. AVENUE
REDWITHER BUSINESS CENTRE
WREXHAM INDUSTRIAL ESTATE
WREXHAM LL13 9XP

0 20 40 60 80 100

1:1250 scale bar in metres

Dwg No.	**WIE 003**
Scale:	**1: 1250 @ A3**
date:	**10.09.25**
drawn:	**jon evans**

Appendix 2

Existing Site Layout

NORTH

A

B

C

D

part of adjacent shed

existing external
fire stairs

existing roller
shutter door

office shutter door

OFFICE

ENTRANCE
LOBBY

DISABLED
WC

FEMALE
WC

MALE WC's

up

WAREHOUSE

WAREHOUSE

GROUND FLOOR PLAN

DRAFT

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NOTE:
this drawing is for the purposes of the proposed Planning Application and is not for construction, all dimensions to be checked on site.

EXISTING GROUND FLOOR PLAN
UNIT 1, 1st. AVENUE
REDWITHER BUSINESS CENTRE
WREXHAM INDUSTRIAL ESTATE
WREXHAM LL13 9XP

0 2m 4m 6m 8m
Scale bar in metres

Dwg No. WIE 002
Scale: 1: 100 @ A1
date: 10.09.25
drawn: jon evans

Appendix 3

Proposed Site Layout

NORTH

A

B

C

D

existing external fire stairs

roller shutter doors x 3

walkway

roller shutter door blocked

open-fronted canopy

CANOPY AREA

existing roller shutter door

MATERIAL FLOW OUT

SWITCH ROOM

OFFICE

ENTRANCE LOBBY

DISABLED WC

FEMALE WC

MALE WCs

up

SHREDDER PHASE 2 ZONE

MANUAL DISMANTLING ZONE (FED FROM THE SHREDDER)

DUST EXTRACTOR

SHREDDER PHASE 2 ZONE

LOADING ZONE FOR SHREDDER MATTER

WAREHOUSE

NOTE:
reduce floor level to allow trucks to feed shredder hopper, access way to be made through wall

MATERIAL FLOW IN

INTERNAL SILOS FOR SHREDDER

RE-USE INSPECTION AND TESTING AREA

NOTE - this drawing is for the purposes of a proposed Planning Application and NOT FOR CONSTRUCTION all dimensions, ground levels etc. to be checked on site.

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PROPOSED GROUND FLOOR PLAN
UNIT 1, 1st. AVENUE
REDWITHER BUSINESS CENTRE
WREXHAM INDUSTRIAL ESTATE
WREXHAM LL13 9XP

0 2m 4m 6m 8m
Scale bar in metres

Dwg No. WIE 005
Scale: 1: 100 @ A1
date: 23.09.25
drawn: jon evans

Appendix 4

British Water Code of Practice Flows and Loads 4

Table of Loadings for Sewage Treatment Systems

Per person / activity / day (unless otherwise specified)	FLOW (Litres)	BOD (Grams)	Ammonia as N (Grams)
DOMESTIC DWELLINGS			
Standard residential	150	60	8
Mobile home type caravans with full services	150	60	8
INDUSTRIAL			
Office / Factory without canteen	50	25	5
Office / Factory with canteen	100	38	5
Open industrial site, e.g. construction, quarry, without canteen	60	25	5
*Full-time Day Staff	90	38	5
*Part-time Staff (4 hr shift)	45	25	3
SCHOOLS			
Non-residential with canteen cooking on site	90	38	5
Non-residential without a canteen	50	25	5
Boarding school (i) residents	175	60	8
(ii) day staff (inc. mid-day meal)	90	38	5
HOTELS, PUBS & CLUBS			
Hotel Guests (Prestige hotels)	300	105	12
Hotel Guests (3^H & 4^H hotels)	250	94	10
Guests (Bedroom only – no meals)	80	50	6
Residential Training/Conference Guest (inclusive all meals)	350	150	15
Non residential Conference Guest	60	25	2.5
Drinkers	12	15	5
Holiday camp chalet resident	150	94	10
Resident Staff	180	75	10
Restaurants - Full Meals - luxury catering	30	38	4
- pre-prepared catering	25	30	2.5
- Snack Bars & bar meals	15	19	2.5
- Function Rooms including buffets	15	19	2.5
- Fast Food i.e. (roadside restaurants)	12	12	2.5
- Fast Food Meal (burger chain and similar)	12	15	4
Students (Accommodation only)	100	60	8
AMENITY SITES			
Toilet Blocks (per use)	10	12	2.5
Toilet (WC) (per use)	10	12	2.5
Toilet (Urinal) (per use)	5	12	2.5
Toilet Blocks in long stay car parks/lorry parks (per use)	10	19	4
Shower (per use)	40	19	2
Golf Club	20	19	5
Local community sports club, e.g. squash, rugby & football	40	25	6
Swimming (where a separate pool exists without an associated sports centre)	10	12	2.5
Health Club/Sports Centre	50	19	4
Tent sites	75	44	8
Caravan Sites - (i) Touring not serviced	100	44	8
(ii) Static not serviced	100	44	8
(iii) Static fully serviced	150	60	8
HOSPITALS & RESIDENTIAL CARE HOMES			
Residential old people / nursing	350	110	13
Small hospitals	450	140	Assess
Large hospitals	Assess individually		

*Staff figures also apply to other applications