

Yard Extension at Former Tyson Building, Miners Road, Llay Industrial Estate, Wrexham

Drainage Statement for Planning

Document No: 21338/E01

December 2021



Contents	Page
1 INTRODUCTION	2
2 SUSTAINABLE DRAINAGE	3

Appendices

- A** Welsh Water Utility Map
- B** Drainage Scheme

1. INTRODUCTION

Datrys have been commissioned by Magellan Aerospace (UK) Limited to prepare a drainage statement in support of a planning application for the extension of the existing service yard and access road at the Former Tyson Building on Miners Road in Llay Industrial Estate, Wrexham (grid reference SJ 32594 56508). The levels within the site fall south towards the existing industrial estate highway.

This document will set out the proposed solution to address the surface water runoff associated with the new elements of the development.

2. SUSTAINABLE DRAINAGE

Scheme Approach to Sustainable Drainage

The design for surface water disposal from the site will be considered in line with the CIRIA SuDS manual. This approach seeks to manage the quantity and quality of surface water runoff on or as close to the surface and as close to the source of the runoff as possible as well as providing amenity and biodiversity to the end users and flora and fauna.

In order for the surface water design to be approved by SAB (SuDS Approval Body), the design has to show compliance with Statutory National Standards for Sustainable Drainage Systems.

These Standards are:

- S1 – Surface water runoff destination
- S2 – Surface water runoff hydraulic control
- S3 – Water quality
- S4 – Amenity
- S5 – Biodiversity
- S6 – Design of drainage for Construction and Maintenance and Structural Integrity

Compliance with Standard Principles

My proposed surface water drainage scheme will comply in the following way/s:

Surface water will be managed close to the surface and as close to the source of the runoff as possible by using 3 no. swales.

Porosity Investigations showed the ground conditions to be unsuitable for infiltration, therefore the surface water will be discharged to the DCWW surface water sewer adjacent to the site via the existing onsite network.

In storm events, storage will be provided via the wet swales. There will be no discharge from the new hard surfaces resulting from the first 5mm of any rainfall event.

Compliance with Standard S1 - Surface water runoff destination

My proposed surface water drainage scheme will comply in the following way/s:

The opportunity for collection for re-use is limited due to the nature of the site as a yard and the associated pollutants that this will give rise to.

Porosity testing proved that soakaways are not feasible within the site whilst there is no nearby watercourse to direct discharge to.

The existing on site surface water discharge is collected and discharged to an existing DCWW surface water sewer in the adjacent road. As infiltration is not feasible and no opportunity for discharge to a watercourse, as per the destination hierarchy, a connection into the existing surface water network will be sought, subject to agreement with SAB and Welsh Water.

Compliance with Standard S2 - Surface water runoff hydraulic control

My proposed surface water drainage scheme will comply in the following way/s:

The surface water runoff will be routed through the wet swales to slow the conveyance of flows and maximise the opportunity for evapotranspiration.

Flows will be managed to mimic existing runoff rates to avoid any detrimental effect upon the existing network.

There will be no discharge from the proposed site from the first 5mm of any rainfall event.

Compliance with Standard S3 – Water Quality

My proposed surface water drainage scheme will comply in the following way/s:

Given this involves the further development of an existing site, the drainage of the extended service yard will connect to the general site surface water drainage system and due to the proposed use of the site will need to be subjected to some form of treatment. This will be achieved by routing the drainage through the wet swales.

Table 26.2 of the SuDS Manual identifies the site as a medium pollution hazard level with indices varying between 0.6 – 0.7. Table 26.3 suggests a swale offers a mitigation index of 0.5 - 0.6 whilst a filter drain will offer an index of 0.4. These combined, accounting for a factor of 0.5 for the secondary component ensure that adequate measures are provided.

Catchpits will collect silts prior to entering the onsite network whilst the wet swales provides an effective measure to trap suspended solids and hydrocarbons thus improving the water quality before discharging into the drainage network.

Compliance with Standard S4 – Amenity

My proposed surface water drainage scheme will comply in the following way/s:

The use of 3no. wet swales and retained grass verges within the site will promote multi-functionality and maximise the legibility of the water network, whilst also providing aesthetically pleasing vegetated corridors.

Compliance with Standard S5 – Biodiversity

My proposed surface water drainage scheme will comply in the following way/s:

Despite the site being within an industrial estate, there are opportunities for providing biodiversity. The proposed 3no. wet swales and retained grass verges will provide opportunities for wildlife and potentially increase the number of species. This will include a variety of planting of known wildlife value local to the area – providing habitat and food for insects, invertebrates, and birds.

Compliance with Standard S6 – Design of drainage for Construction and Maintenance and Structural Integrity

My proposed surface water drainage scheme will comply in the following way/s:

All SuDS features will be installed by a competent contractor and will be situated in locations and at shallow depths where they can be easily maintained. A maintenance plan will state the maintenance requirements for the SuDS features for them to remain at their optimum capacity.

All materials and components, where possible, will have a minimum design life equivalent to the design life of the development, including an appropriate factor of safety.

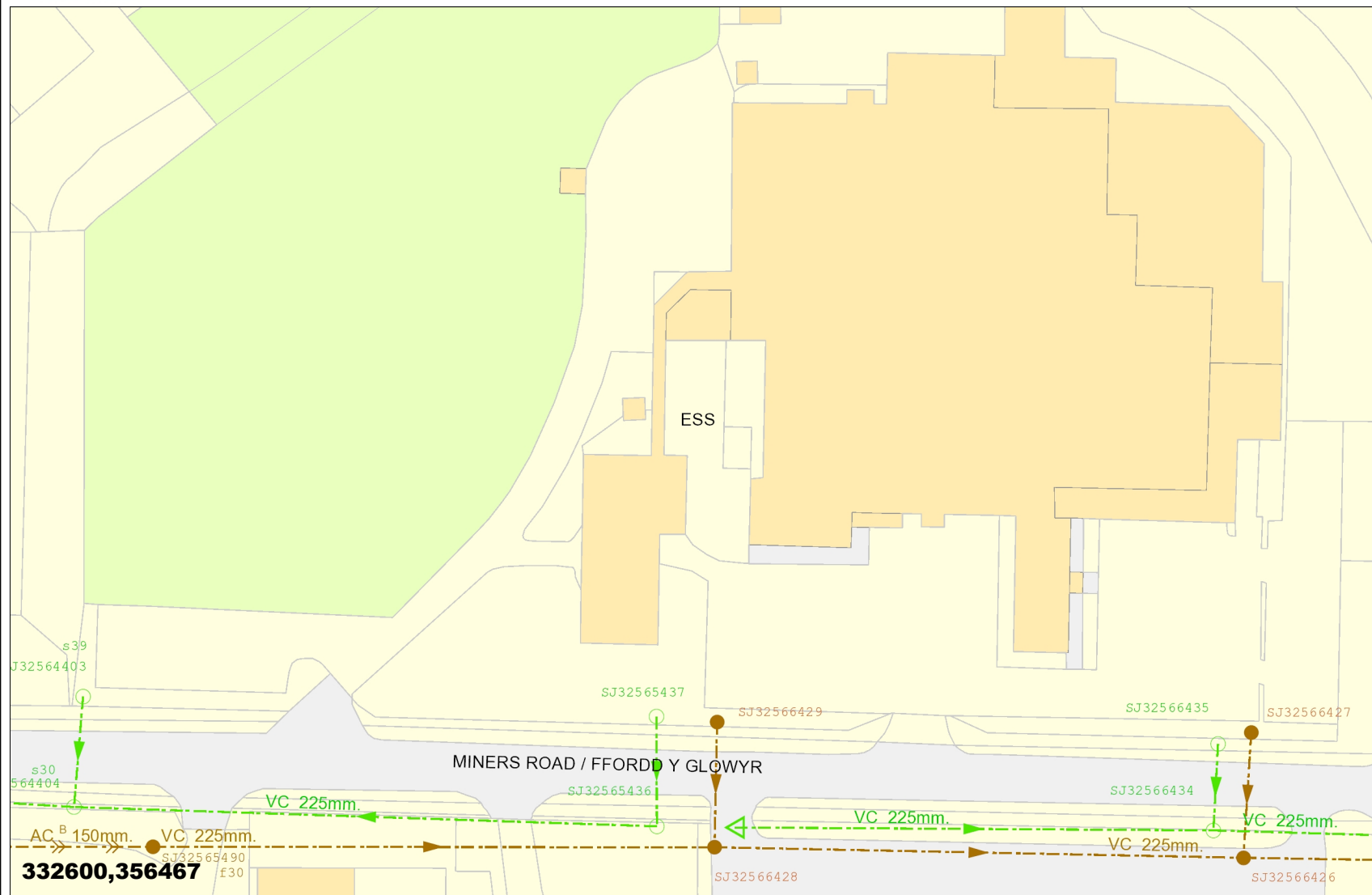
APPENDICES

APPENDIX A – WELSH WATER UTILITY MAPS

Yard Extension at Former Tyson Building



Scale: 1: 1000



LEGEND

Clean Water

- Sluice Val
- Air Val, SINGLE
- Tap
- Pressure Reducing Valve
- Meter
- BULK Meter
- FH
- Cap
- Existing Main
- NON COMPANY

Sewerage External

- Foul
- Surface Water
- Combined
- Rising Main
- Private
- Treatment Works
- Pumping Station
- Special Purpose
- Unknown End
- Change, Combined Overflow
- Outfall, FOUL
- Lamp Hole, Foul
- Private Sewer Transfer
- Lateral Drain
- Inspection Chamber

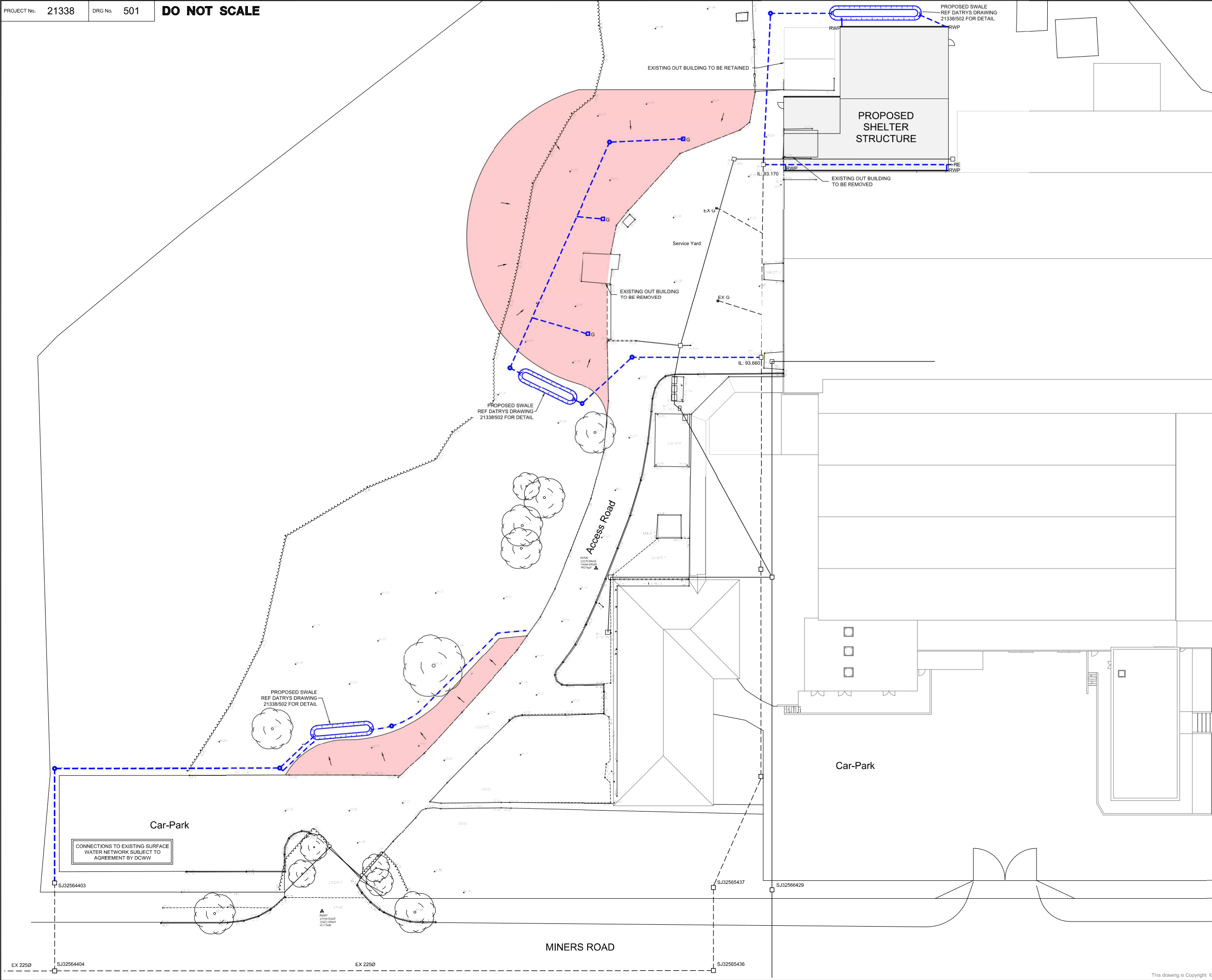
Dŵr Cymru Cyfyngedig ('the Company') gives this information as to the position of its underground apparatus by way of general guidance only and on the strict understanding that it is based on the best information available and no warranty as to its correctness is relied upon in the event of excavations or other works made in the vicinity of the company's apparatus and any onus of locating the apparatus before carrying out any excavations rests entirely on you. The information which is supplied hereby the company, is done so in accordance with statutory requirements of sections 198 and 199 of the water industry Act 1991 based upon the best information available and in particular, but without prejudice to the generality of the foregoing, it should be noted that the records that are available to the Company may not disclose the existence of a drain sewer or disposal main laid before 1 September 1989, or if they do, the particulars thereof including their position underground may not be accurate. It must be understood that the furnishing of this information is entirely without prejudice to the provision of the New Roads and Street Works Act 1991 and the company's right to be compensated for any damage to its apparatus.

**EXACT LOCATION OF
ALL APPARATUS TO
BE DETERMINED ON
SITE**

Reproduced from the Ordnance Survey's maps with the permission of the Controller of Her Majesty's Stationary Office. Crown Copyright. Licence No: WU298565.

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.

APPENDIX B – PRELIMINARY DRAINAGE SCHEME



- NOTES
1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS, ENGINEERS AND OTHER SPECIALISTS' DRAWINGS.
 2. PLEASE REFER TO ARCHITECTS DRAWINGS FOR FINAL BUILDING LOCATION
 3. REFER TO DATRYS DRAWING 21338/502 FOR DRAINAGE DETAILS.
 4. ALL DRAINAGE COMPONENTS ARE TO COMPLY WITH CURRENT BRITISH STANDARDS & BUILDING REGULATIONS REQUIREMENTS
 5. AT ALL OUTFALL POINTS TO AN EXISTING NETWORK, THE POSITION AND INVERT LEVEL OF EXISTING DRAINS MUST BE CONFIRMED WELL IN ADVANCE OF THE PROGRAMMED DATE FOR INSTALLING ANY OF THE UPSTREAM DRAINAGE, OR ORDERING ANY MATERIALS IN ORDER TO ALLOW TIME FOR ANY NECESSARY REVISIONS TO THE HYDRAULIC DESIGN.

- KEY
- □ — LINE OF EXISTING FOUL SEWER
 - - □ - - LINE OF EXISTING SURFACE WATER DRAIN/SEWER
 - - □ - - PROPOSED SURFACE WATER DRAIN AND INSPECTION CHAMBER
 - - □ - - PROPOSED PERFORATED PIPE
 - RWP - - □ - - DENOTES PROPOSED RAIN WATER PIPE
 - RE - - □ - - PROPOSED RODDING EYE
 - G - - □ - - PROPOSED GULLY
 - PROPOSED EXTENSION OF HARDSTANDING
 - DENOTES FALL IN NEW HARDSTANDING

REV	DATE	DESCRIPTION	BY	CHK	APP
REVISIONS					

FOR PLANNING

CLIENT
Magellan Aerospace (UK) Limited

PROJECT
Yard Extension at Former Tyson Building

TITLE
Drainage Scheme

 DATRYS

Caernarfon:
Unit 6 Block A, Oak Factory
Caernarfon, LL55 1TH
Tel: 01286 671027
Mold:
Suite 4A, Broncoed House
Wrexham Road, Mold, CH7 4UP
Tel: 01352 706205
info@datrys.coop | www.datrys.net

DRAWN AA	CHECKED AC	PASSED AC
DATE 15.12.21	CLIENT'S REF.	
SCALE AT A1 1:250	AUTOCAD REF: 21338/501	
DRAWING No. 21338/501	REVISION P1	

