
Title:	Drainage Strategy
Document Reference:	11165 DS
Proposed Development:	Part Retrospective Application for the Proposed Installation of Portable Concrete Manufacturing Plant to be used in Association with the Existing Business and the General Public.
Prepared By:	Technia Environment and Planning Limited
Client:	Derwen Plant Ltd
Site:	Neath Abbey Wharf, Neath Abbey Wharf Access Road, Skewen, Neath Port Talbot, SA10 6BL
Date:	8th September 2026



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Document Revision

Version	Date	Author	Checked / App'd	Revision
DRAFT	03/09/26	SB	SCW	FOR APPROVAL
1.0	08/09/26	SB	MD	ISSUED FOR SUBMISSION

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1 INTRODUCTION

1.1 Background

101 Technia Environment and Planning Limited has been commissioned by Derwen Plant Ltd (the Applicant) to produce a Drainage Strategy report to support the planning application (planning ref. P2025/0811) for *“part retrospective application for the proposed installation of portable concrete manufacturing plant to be used in association with the existing business and the general public”* at Derwen Plant Ltd, Neath Abbey Wharf, Neath Abbey Wharf Access Road, Skewen, Neath Port Talbot, SA10 6BL.

1.2 Application of Sustainable Drainage Principles (SuDS)

102 From 7th January 2019, all new developments of more than 1 dwelling house or where the construction area is 100 square meters or more, require sustainable drainage systems (SuDS) to manage surface water. The SuDS must be designed and built in accordance with Statutory SuDS Standards published by the Welsh Ministers and SuDS schemes must be approved by the local authority acting in its role as the SuDS Approving Body (SAB), before construction work begins.

103 Schedule 3 to the Flood and Water Management Act 2010 establishes SABs in local authorities, giving them statutory responsibility for approving and in defined circumstances, adopting approved SuDS drainage systems.

104 This report summarises the drainage approach for the proposed development, including the implementation of SuDS for surface water. It is not intended to represent detailed design, as full details will be prepared and submitted to the SAB in parallel with, or following the submission of the planning application.

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2 SITE LOCATION AND DEVELOPMENT PROPOSAL

2.1 Site Location and Setting

201 The site is located at Derwen Plant Ltd, Neath Abbey Wharf, Neath Abbey Wharf Access Road, Skewen, Neath Port Talbot, SA10 6BL (drawing 11165 – 000 – A).

2.2 Geological Setting

202 An assessment of the British Geological Survey maps show that the site is located on Tidal Flat Deposits, consisting of silts and sands. The drift overlies the solid bedrock, which is Carboniferous, Hughes Member Mudstone, consisting of mudstone, siltstone and sandstones.

2.3 Proposed Development

203 The development comprises the construction of a concrete pad and installation of a concrete batching plant, construction of a compacted stone hardstand loading and circulation area, fencing and drainage.

204 The concrete batching plant will be wholly located on the concrete pad with an area of 479m².

205 The hardstand access and turning areas occupy 474m².

206 Drawing 11165 - 000 - B shows the layout of the proposed development.

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3 PROPOSED DRAINAGE SYSTEM

3.1 Application of Sustainable Drainage Principles (SuDS)

301 The Welsh Government Statutory Standards for Sustainable Drainage Systems- Designing, Constructing, Operating and Maintaining Surface Water Drainage System 2018, require all developments with an area of $>100\text{m}^2$ to obtain approval for a drainage scheme from the SuDS Approval Body (SAB) prior to commencement. The Standards require the most effective surface water drainage methods to be used, following a hierarchy of Levels 1 to 5, with Level 1 being the preferred approach. Where Level 1 cannot be achieved, this must be justified before progressing to the next level in the hierarchy.

302 The proposed scheme will adopt the approaches detailed below.

3.1.1 Level 1 Rainwater is Collected for Use

303 Water from the concrete pad and compacted stone hardstand area will be collected for use in underground storage tanks.

304 The site has a need for non-potable water and in the case of the concrete batching plant there is a daily need for 5m^3 per day. Consequently, for 360 operational days per year, there is a direct annual water demand of $1,800\text{m}^3$. Within the wider site, water is needed for dust suppression and for use in the aggregates processing plant. The current use of water overall at the site is approximately $20\text{m}^3/\text{day}$.

305 Whilst the calculations within this report relate solely to water usage within the concrete batching plant, water may be taken from the concrete batching area's storage tanks for use in other parts of the site. These calculations are considered conservative when compared to the likely real-world water usage within the site.

306 The site has an existing borehole which currently supplies the needs of the site for process water. This is a valuable resource and the use of collected rainfall will reduce the need for pumping water when sufficient rainwater has been collected and stored. Abstraction from the borehole is limited to $15\text{m}^3/\text{day}$, which in combination with the collection of rainwater from the concrete pad adjacent to the aggregates wash plant, largely satisfies the current demand. Regular top-ups from other sources are not required.

3.1.2 Calculations

SAAR 9120 = 1304mm (annual rainfall)

Drained Area = 953m^2

$1.304\text{m} \times 953\text{m}^2 = 1,242.7\text{m}^3$ of rainfall per year (excluding evaporative losses)

Water required per day = 5m^3

$1,242.7\text{m}^3$ of Rainfall per year = 248.5 days of water supplied from collected rainfall

1-in-100-year, 6-hour event plus 30% climate change

1-in-100-year, 6-hour rainfall $\times 1.3 = 80.4\text{mm}$ (0.08437m)

$0.08437\text{m} \times 953\text{m}^2 = 80.4\text{m}^3$ of water from the 1 in 100 plus 30% climate change.

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3.1.3 Tank Sizing

307 The tanks need sufficient capacity to store the 1-in-100-year, 6-hour event plus 30% climate change allowance, with an additional 50% capacity to accommodate a subsequent storm. Using a tank of 120m³ would meet the volumetric compliance, as it will be assumed that 5m³ will be removed in the 24 hr period after the storm.

$$1 \text{ in } 100 \text{ plus } 30\% \text{ CC} = 80.4\text{m}^3 + (80.4/2)\text{m}^3 = 120.6\text{m}^3$$

308 With 5m³ removed for use, 115.6m³ will be available for use and freeboard of 4.4m³ with a 23 day period to remove all of the water.

309 4 no. SPEL (or equivalent) T400 30,000 litre tanks are proposed.

310 The complete drainage works will comprise channel drains along the southern boundary of the concrete pad and a French drain along the southern boundary of the access area. Both drainage systems will convey rainwater by gravity to a silt trap before discharging into the underground storage tanks.

3.2 Interception

311 Table G2.1 of the Sustainable Drainage Systems Standards for Wales allows for rainwater harvesting systems to be assumed compliant with meeting interception as there is a defined daily use for non-potable water.

3.3 Exceedance Flows

312 The sizing of the tanks has been carried out on the 1-in-100-year, 6-hour event plus a 30% climate change allowance and an additional 50% capacity for storms soon after the modelled storm event. This storm event equates to 6.47% of the annual rainfall and in most cases the tanks will not be full. In the unlikely event of the tanks overflowing, rainwater will discharge onto the adjacent hardstanding and infiltrating into the surrounding ground. Any exceedance flow will ultimately enter the River Neath having been contained wholly within the Derwen Plant site.

313 With additional water being taken from the tanks for use in the aggregates processing wash plant, the likelihood of an exceedance flow occurring is low.

3.4 Maintenance of the System

314 The drainage system will be inspected and maintained regularly to ensure it remains free-flowing and effective. Channel drains, the French drain and associated grates will be checked for blockages, silt and debris, with cleaning undertaken as required.

315 The silt trap will be inspected and emptied periodically, particularly following periods of heavy rainfall, to prevent sediment entering the underground storage tanks.

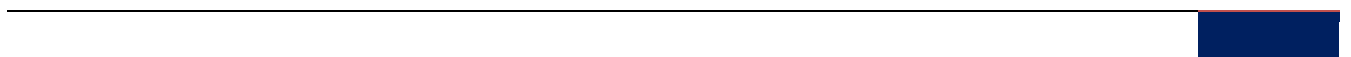
316 The storage tanks and associated pipework will also be inspected periodically for blockages, damage or excessive sediment, with any necessary cleaning or repairs undertaken promptly.

317 Maintenance records will be retained, including inspection dates, defects identified and remedial works completed.

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3.5 Amenity and Biodiversity

318 As a rainwater harvesting scheme there are limited opportunities for biodiversity and amenity improvements directly associated with the SuDS system. Measures to enhance biodiversity have been proposed within the GIS accompanying this application.



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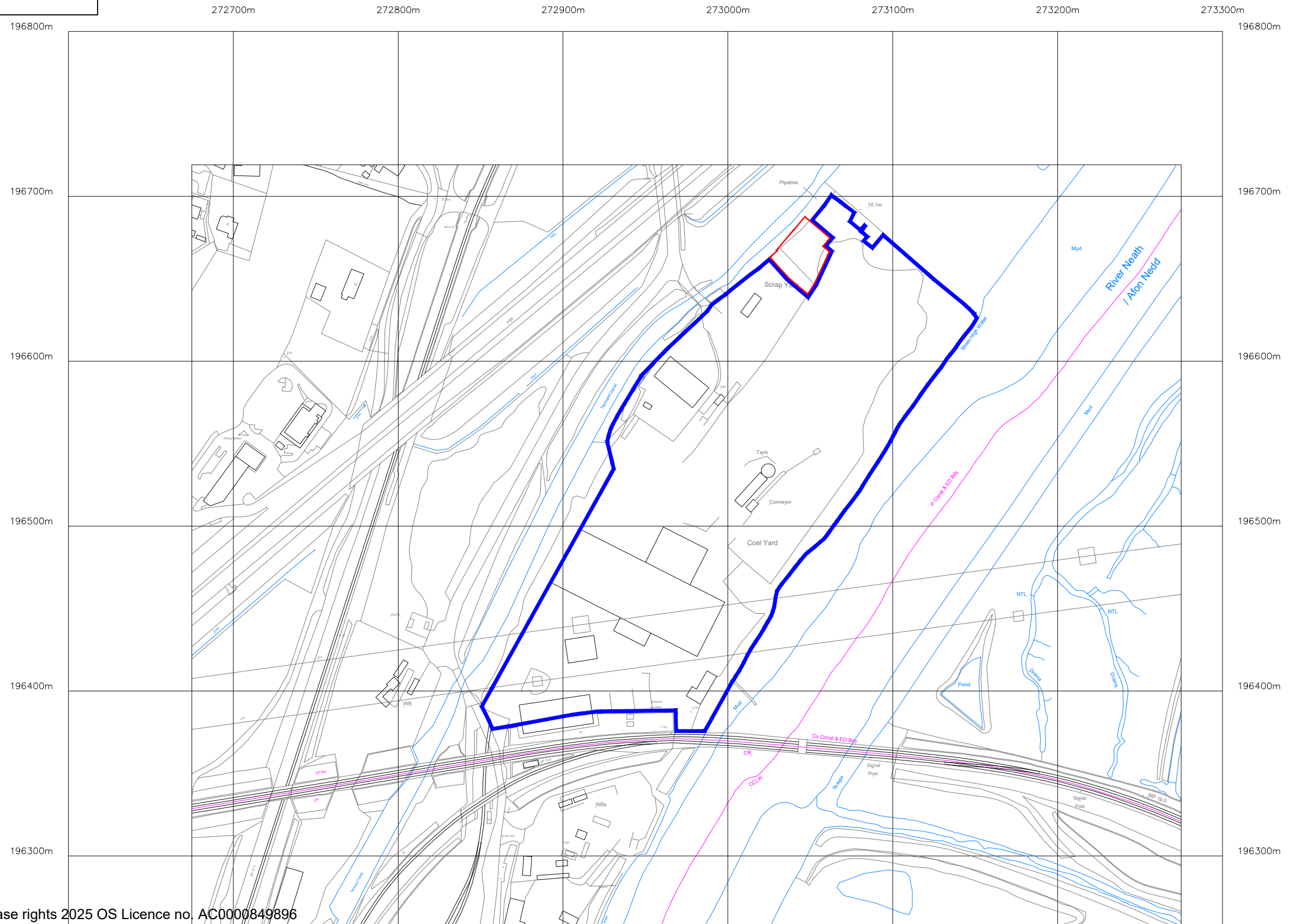
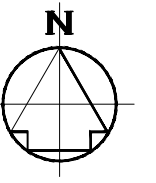
4 CONCLUSION

- 401 The site has a defined use for non-potable water. The rainwater harvesting system has been designed to ensure compliance with volumetric and interception criteria.
- 402 The scheme will meet the Sustainable Drainage Standards 2018.

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DRAWINGS

- 11165 – 000 – A Location Plan
- 11165 – 000 – B Site Plan
- 11165 – 000 – F Drainage Plan

OTHER LAND IN
APPLICANT'S OWNERSHIP

AMENDMENTS	REV REF	DETAILS	DATE	MADE BY	CHKD BY
	A	REVISE RED AND BLUE LINE BOUNDARIES	29/05/26	SCW	MMD



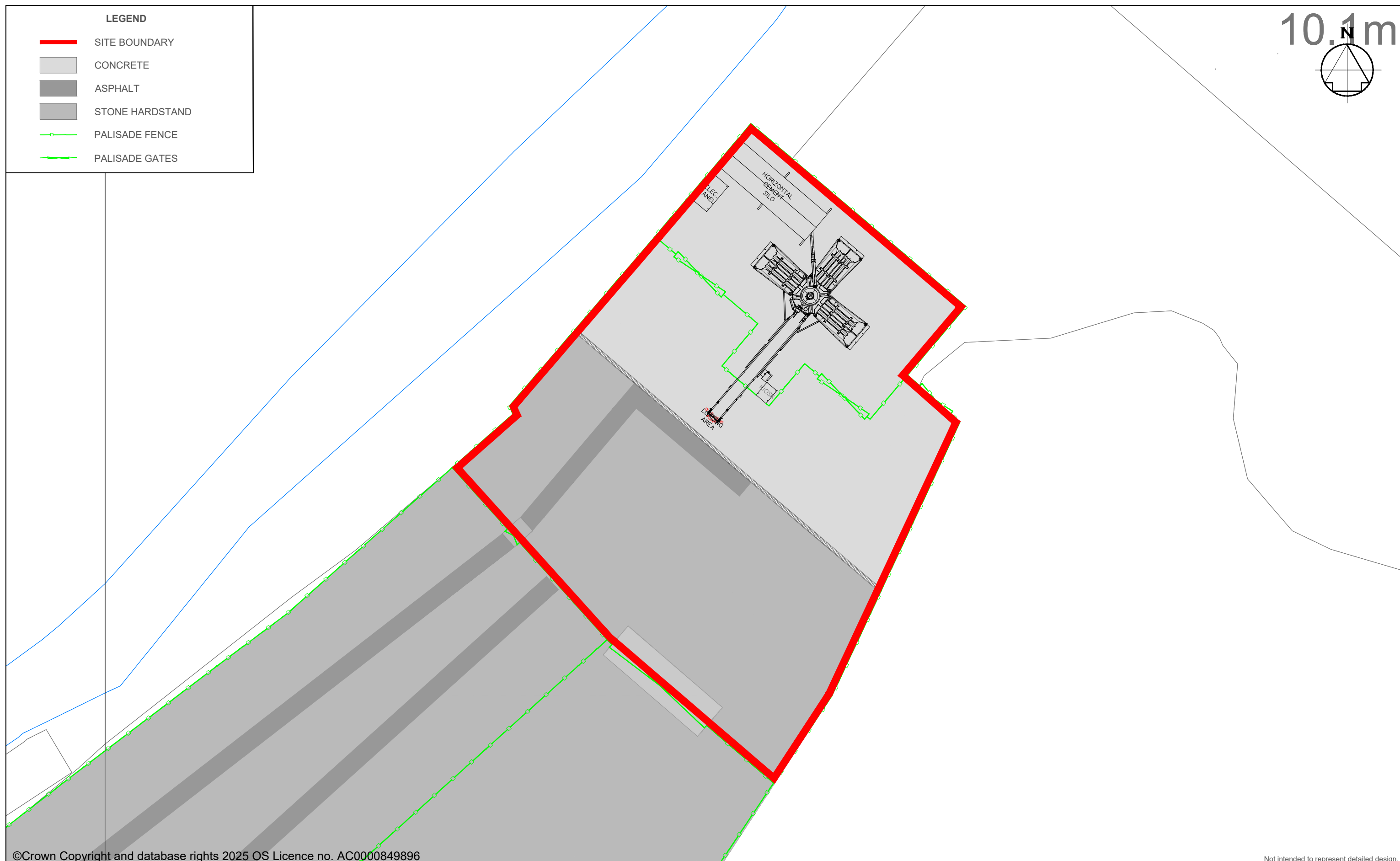
TECHNIA ENVIRONMENT AND PLANNING LIMITED
UNIT 1 FOXES LANE, OAKDALE BUSINESS PARK
BLACKWOOD, NP12 4AB
TEL: 02921 900400
EMAIL: PLANNING@TEPL.EU

DERWEN RECYCLING LIMITED

Drawn	SCW	Scale 1:2,500
Ch'kd	MMD	
Appr'd	MMD	@A3
Date	29/05/26	

LOCATION PLAN

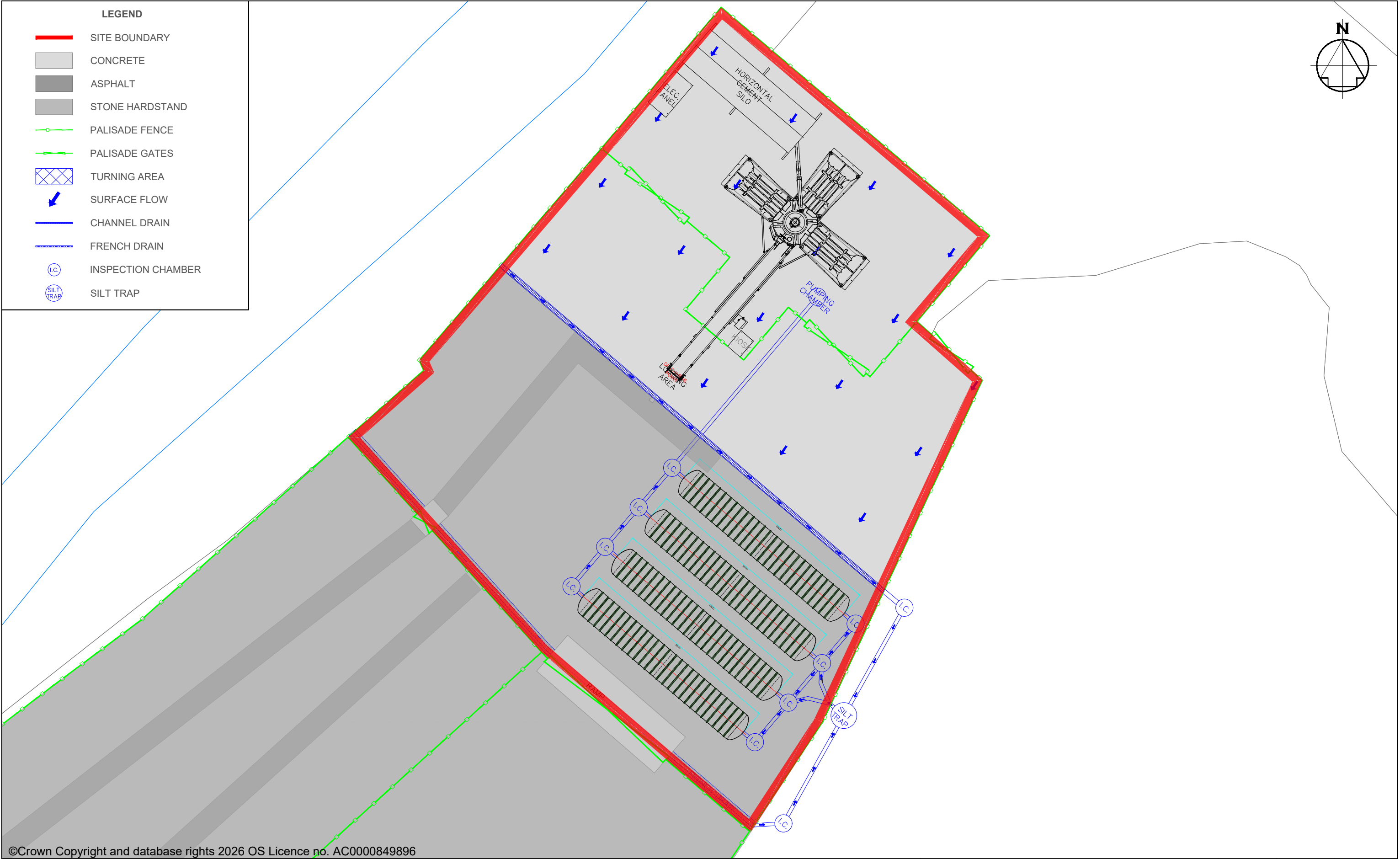
Job No.	DR	Drg No.	11165 - 000 - A
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AMENDMENTS	REV REF	DETAILS	DATE	MADE BY	CHKD BY	 TECHNIA ENVIRONMENT AND PLANNING LIMITED UNIT 1 FOXES LANE, OAKDALE BUSINESS PARK BLACKWOOD, NP12 4AB TEL: 02921 900400 EMAIL: PLANNING@TEPL.EU	DERWEN RECYCLING LIMITED				Drawn	SCW	Scale
	A	ROTATE PLANT, ADD TURNING AND WAITING DETAILS, ADD FENCES	17/02/26	SCW	MMD		Ch'kd	MMD	1:250				
	B	RELOCATE PLANT, ADD TURNING AND WAITING DETAILS, ADD SUMP, REVISE PARKING ARRANGEMENTS, REVISE RED AND BLUE LINE BOUNDARIES	29/05/26	SCW	MMD		Appr'd	MMD	@A3				
	C	ADD WALKWAYS	24/09/26	SCW	MMD		Date	24/09/26					
							Job No.	DR	Drg No.	11165 - 000 - B			



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AMENDMENTS	REV REF	DETAILS	DATE	MADE BY	CHKD BY	 TECHNIA ENVIRONMENT AND PLANNING LIMITED UNIT 1 FOXES LANE, OAKDALE BUSINESS PARK BLACKWOOD, NP12 4AB TEL: 02921 900400 EMAIL: PLANNING@TEPL.EU	DERWEN RECYCLING LIMITED				Drawn	SCW	Scale 1:500
	A	ADD SUMP, SILT TRAP AND PUMPING CHAMBER DETAIL	24/09/26	SCW	MMD						Ch'kd	MMD	
							DRAINAGE PLAN		Appr'd	MMD	@A3		
							Date	24/09/26					
							Job No.	DR	Drg No.	11165 - 000 - F			