



**LLANDUDNO JUNCTION  
MATERIALS RECYCLING  
FACILITY  
WASTE PLANNING  
ASSESSMENT**

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## Introduction

Conwy County Borough Council (CCBC) is part of a regional waste treatment project known as the North Wales Residual Waste Treatment Partnership (NWRWTP). As part of this project, all Local Authorities are responsible for the bulking and transfer of residual waste arising in their Local Authority area.

The proposed development will support CCBC in merging its existing Materials Recycling Facility (MRF) currently located at Bron-y-Nant Road, Mochdre with a new residual waste transfer station which will accept municipal waste arising in the Conwy County area. Merging the two operations into a central location will maintain efficiency and minimise travel time for waste, street cleansing, parks and highways vehicles. Existing MRF operational staff, plant and management will operate the new site.

This Waste Planning Assessment has been produced in accordance with TAN 21. The information provided within this Waste Planning Assessment reflects the nature, size and scale of the proposed development. It should be noted that the proposed development is a new waste transfer facility. For Environmental Permitting purposes the site will be considered and regulated under one Environmental Permit.

This Waste Planning Assessment supports the planning pre-application process for the construction of this depot comprising of a Waste Transfer Station (WTS), also termed a collection facility in accordance with section 4.57 of Technical Advice Note (TAN) 21\*

For the purposes of this Waste Planning Assessment, both the use of external bays and areas will be considered as well as the bays and processes undertaken in the main building.

## Waste Planning Assessment

Towards Zero Waste (TZW) is the overarching waste strategy document for Wales. TZW is supported by a suite of sector plans and guidance documents which comprise the statutory waste management plan for Wales. The Collections, Infrastructure and Markets Sector Plan (CIMS) is the most relevant in terms of the proposed development and its contribution to delivering TZW in Wales.

TZW is a long-term framework for resource efficiency and waste management between now and 2050. The framework looks to address the most significant and new challenges facing Wales, namely;

- Sustainability – ensuring that waste management in Wales contributes towards and enhances the economic, social and environmental welling of people and communities
- Ecological footprint – the need to measure, monitor and reduce the level of material and resource consumption in Wales
- Climate change – ensuring there is a reduction in greenhouse gas emissions produced from waste
- Security of resources – ensuring that Wales have enough resources, at an affordable price, to sustain the Welsh economy and way of life.

The Collections, Infrastructure and Markets Sector Plan (CIMS Plan) was published on 10 July 2012 and is particularly relevant for the land use planning process. The CIMS Plan updates the picture of infrastructure requirements, in relation to technology choices and the best overall environmental option for specific waste materials. The waste assessments in the

CIMS Plan establish the need for residual waste treatment and disposal, as well as describing the move towards higher levels of re-use and recycling.

The plan is aimed primarily at those who collect and manage waste – including Local Authorities. The aim is to facilitate delivery of the most effective, efficient, and sustainable collection systems.

The sector plan focuses on a number of ‘priority materials’ – materials arising from all sectors specifically referred to in the Waste Framework Directive and/or which have the highest ecological footprint associated with them, and for which appropriate management is of paramount importance and ensures the collection of high-quality materials.

For Residual waste and elements of residual waste such as Absorbent Hygiene Products (AHP) the CIMs plan looks to reduce reliance on landfill and increase the treatment of residual waste through energy efficient EfW.

[Microsoft Word - CL-01-12 Planning and Waste - Interim Planning Position.doc \(gov.wales\) Overview | Collection Blueprint \(collectionsblueprint.wales\)](#)

The proposed relocation of waste activities from the existing MRF site, Bron-y-Nant Road, Mochdre and the addition of a new residual waste transfer station will assist CCBC to deliver Welsh Governments aspirations as laid out in TZW and the CIMs plan by proving a centralised depot where materials can be deposited, bulked and baled for onward transportation for recycling or recovery.

The construction of the new facility will have the following benefits:

- Key infrastructure in place necessary for the regional waste treatment project (residual waste will be bulked and transported at CCBC facility rather than having to use a private sector waste transfer station).
- Meets CCBC’s future requirements for waste provision.
- Annual cost avoidance through using own site compared to using private waste transfer station.
- Construction of WTS at central location close to A55/A470 junction will reduce carbon emissions from waste collection vehicles.
- Central location maintains efficiency and minimises travel time for street cleansing, parks, and highways vehicles.
- Existing MRF operational staff, plant and management will operate the new site.
- Positive impact on Bron-y-Nant Road/Dinerth Road, Mochdre, Colwyn Bay, local environment due to relocation of MRF site, including benefits to Crematorium/Cemetery which is located adjacent to the existing site.
- Contribute positively to social and economic development in North Wales.

Section 4.60 of TAN21 notes that WTSs, such as that proposed, are of “*significant importance as they serve to manage the flow of waste more effectively and can reduce overall reliance upon landfill as increasingly the capture of recyclable materials takes place at these facilities. Sited carefully, they can enhance the area in which they are sited and*

*reduce costs to waste carriers by providing alternative markets for targeted bulk materials rather than to deposit small volumes continuously to landfill.”*

The ERA shows the proposed site will not have any adverse environmental impacts on the surrounding location and population.

## Development

The proposed development provides CCBC with a long-term solution to provide bulk storage, treatment and transfer of waste arising in the Local Authority area.

### Location and sensitive receptors

The development is to be constructed on the Tre-Marl Industrial Estate in Llandudno Junction commonly known as The Old Brickworks (“Brickworks”) and is adjacent to the Ffordd Maelgwn Road. The Brickworks along with adjoining land in the control of third-party landowners has been subject to a number of commercial development proposals for nearly two decades.

The site is located in a largely industrial area within close proximity (40m) to commercial and leisure premises (a cinema, leisure centre, restaurants and a supermarket), as well as residential areas (115m). The impact of the proposed operation on these sensitive receptors will be reduced by the large earth mound surrounding the west and north of the Llandudno Junction site.

The development will include new site access, car parking areas, buildings containing plant and equipment, a vehicle wash, fuelling station and two weighbridges.

The location of the proposed facility meets the location requirements for waste management facilities as specified in section 3.27 of TAN21.



## Operating Hours

Proposed operating Hours are as per table 1:

Day	Time
Monday – Saturday (Excluding Christmas Day & New Years' Day)	06:00 – 18:00
Sunday	08:00 – 17:00

Table 1.

It is a requirement for the site to operate during weekends in order for CCBC to provide a tipping location for street cleansing vehicles, street sweeping vehicles and for skips to be deposited for the Mobile Recycling Centre Service (MRC) which operates on the first, second and third Saturday of each month.

## Environmental Impacts

The environmental impacts of the site have been considered in an Environmental Risk Assessment (ERA) produced to support the Environmental Permitting application processes. The ERA has been submitted with the planning application.

The ERA assesses the potential environmental risks from the entire waste site and assesses potential risks and impacts from:

- Noise
- Odour
- Dust
- Emissions of water from stockpiles and the site surface
- Birds, vermin, and insects
- Mud & litter
- Spillages and leakages
- Fire
- Vandalism and security
- Flooding

\* *Technical Advice Note 21, Waste, February 2014, Welsh Government.*

## Waste types and quantity

The maximum quantity of waste for the proposed development is 74,999t, however the operating tonnage is anticipated to be significantly lower. For illustrative purposes, actual data for 2022/23 has been used as detailed in table 2 below:

Waste Type	Annual Tonnage (2022/23)	Material Source	Storage Requirements	End Destination
<b>Fridges &amp; Freezers</b>	92.64t	Fly tip Bulky waste collection service Community Skips Mobile Recycling Service	Storage in waste reception bay pending transfer	CCBC is part of a National WEEE compliance scheme. Fridges and freezers are collected and recovered by REPIC.
<b>TV's</b>	14.41t	Fly tip Bulky waste collection service Community Skips Mobile Recycling Service	Storage in 20ft ISO container pending transfer	CCBC is part of a National WEEE compliance scheme. Fridges and freezers are collected and recovered by REPIC.
<b>Small Domestic Appliances (SDA)</b>	31.92t	Fly tip Bulky waste collection service Community Skips Mobile Recycling Service	Storage in 40 cu yard skip pending transfer	CCBC is part of a National WEEE compliance scheme. SDA is collected by ERP (European Recycling Platform)

<b>Scrap Metal &amp; Large Domestic Appliances (LDA)</b>	140.85t	Fly tip Bulky waste collection service Community Skips Mobile Recycling Service	Storage in 40cu yard skip pending transfer	G Lock Port Penhryn Bangor Gwynedd LL57 4HN CBDU6976
<b>Cardboard</b>	1174	Kerbside collection Trade collection Removed from litter bin waste via sorting process	Baled on site	Smurfit Kappa; Smurfit Kappa, Philips Road, Whitebirk Industrial Estate, Blackburn, England, BB1 5SW Permit exemption: HF0103XD
<b>Mixed plastic (PTT)</b>	25.64t	Kerbside collection Trade collection Removed from litter bin waste via sorting process	Sorted over picking line to remove contamination Baled on site	J PLAS; J Plas, Berristow Lane, South Normanton, Derbyshire DE55 2DT Directions Industrial Facility Address: Cotton Way, Loughborough, Leicestershire LE11 Phone:01536 462300
<b>Glass</b>	60t	Domestic collection	Storage in 28cu yard skip pending transfer	Sibelco; Sibelco Green Solutions UK Limited SGS Sheffield Glass Recycling Facility Attercliffe Road Sheffield South Yorkshire S4 7WT
<b>Mattresses</b>	58.86t	Fly tip Bulky waste collection service Community Skips Mobile Recycling Service	Storage in 20ft ISO container pending transfer	CAD Recycling 3 Bryn Estyn House, Llwyn Estyn Deganwy Conwy LL31 9RA 01492 545954 Or: 01745 812661 Company Registration Number – 6792400



<b>Green Waste</b>	189.25t	CCBC grounds maintenance teams	Storage in 40cu yard skip pending transfer	FCC, Llanddulas Quarry Abergele Road Llanddulas LL228HP BU08001Z
<b>Wood Waste</b>	220.30t	CCBC grounds maintenance teams Fly tip Community Skips Mobile Recycling Service	Storage in 40cu yard skip pending transfer	Bodens Group, Minshulls Farm Lower Green Lane Astley Manchester M29 7JL
<b>Waste Oil</b>	~2500L	Machine oil Fly tipped oil containers	1000L Oil tank	Oil Recoveries Ltd Scarbrick Hall, Southport Rd, Scarbrick, Ormskirk L40 9RQ
<b>Gas Bottles</b>	0.50t	Fly tip	Storage in cage pending transfer	J J JONES, Llandudno Junction, Plot 2, Tremarl Industrial Estate, Ffordd Maelgwyn
<b>Tyres (mixed size)</b>	4.20t	Fly tip	Storage in waste reception bay prior to transfer	J J JONES, Llandudno Junction, Plot 2, Tremarl Industrial Estate, Ffordd Maelgwyn
<b>Rubble</b>	485.18t	CCBC Highways CCBC Open Spaces/Grounds maintenance teams	Storage in waste reception bay prior to bulk transfer	KM Environmental, St Asaph, Holywell Rd, Saint Asaph LL17 0DS
<b>Street Sweepings</b>	3606.145t	CCBC Highways CCBC Open Spaces/Grounds maintenance teams	Storage in waste reception bay prior to bulk transfer	Parry Harry Morris Gwrtaith Gwynedd, Glanllynnau, Pwllheli, Gwyned, LL53 6SJ

<p><b>Residual Waste (arising from domestic &amp; commercial collections, MRF activities and Street Cleansing)</b></p>	<p>19395.90t</p>	<p>Domestic collections Commercial collections CCBC Street cleansing teams MRF litter waste bag splitting</p>	<p>Storage in waste reception bay prior to bulk transfer</p>	<p>Parc Adfer, EFW Facility, Deeside, Flintshire at part of the NWRWTP</p>
<p><b>Absorbent Hygiene Products (AHP)</b></p>	<p>676.88t</p>	<p>Domestic collections</p>	<p>Storage in waste reception bay prior to bulk transfer</p>	<p>AHP to be sent to a purpose built facility commissioned by Welsh Government. (Site to be confirmed)</p>
<p><b>Coffee Pods</b></p>	<p>7.78t</p>	<p>Domestic collections</p>	<p>Storage in pallet boxes</p>	<p><b>Food Waste (coffee):</b> GWE Biogas, Sandhill Biogas Plant, Garton Road, Kirkburn, Driffield, YO25 9DR. <b>Aluminium Pods:</b> Tandom Metallurgical Group Ltd. (Radnor Park Industrial Estate, Congleton, Cheshire, CW12 4XE) <b>Plastic Pods:</b> Allensway (Prospect House, Howden Rd, Holme-on-Spalding-Moor, York YO43 4BT)</p>

Table 2 – Annual waste throughput, storage requirements and end destination detail by waste type

## Design, layout, buildings, and plant

### Design, Layout and Buildings

The proposed site layout is shown in drawing LJW-TACP-PS-XX-DR-A-7001 which is submitted with the application and in Appendix A.

All waste types will be managed in line with the site's operating techniques document and in compliance with its Environmental permit to mitigate any risk to the surrounding environment.

The proposed main depot building will measure 79m (length) x 35m (width). It will have a pitched roof with a ridge height of 12.5m and eaves height of 9m. This will be with Kingspan Composite walls and roofing creating a 2,765m<sup>2</sup> building, see illustration below.



The design and building elevations for the proposed development can be seen in Appendix B.

All waste types will be accepted, stored, treated, and transferred in line with Table 2 – Annual Waste.

### Mobile Plant and Equipment

Plant and equipment required for site operations are as follows:

Description	Activity
CASE 590ST – Backhoe loader/Waste Grab	Loading, transfer of waste
CASE 480ST – Backhoe loader/Waste Grab	Loading, transfer of waste
CASE Loading Shovel (hi tip) 821G	Loading, transfer of waste
Terex Waste Handler TWH 215	Loading, transfer of waste
JCB Tele Truck	Loading, transfer of waste
Horizontal Baler	Baling of cardboard.

Table 3

All plant, equipment and machinery are subject to maintenance and service agreements in line with manufacturers guidance.

### Amenity and Nuisance

Environmental impacts have been considered in the ERA which address the risk from noise, odour, dust, litter, pests and vermin, fire and potential fugitive emissions (solid, liquid and gaseous emissions) to land, air and water.

Arbtech Consulting LTD have undertaken an extensive ecology assessment to consider protected species and the ecological impact of the proposed development.

A Transport Assessment for the proposed development, will be undertaken on XXXX has stated there is no issue with access to the site.

Paragraph 4.61 of TAN21 states *“Transfer stations can create issues with odour, noise, dust, vermin and visual amenity where storage of waste occurs in the open.”*

The bulking and loading of residual waste (including litter bin waste) and AHP waste will be carried out inside the building. In addition to the baling of cardboard arising from kerbside recycling collections.

Waste arising from highways and street cleansing activities will be placed in external waste reception bays.

### Air Pollution

There will be no significant emissions to the atmosphere from both the internal and external Operations as identified by the ERA.

Appendix A – Site Layout



- General Notes
1. Contractor to verify all dimensions and check level datum on site
  2. All of the designs are the sole property of TACP Architects Ltd and may not be used without their written agreement
  3. All prints, specifications and their copyrights are the property of TACP Architects Ltd
  4. Do not scale off drawings
  5. All dimensions shall be checked on site before commencement of shop drawings, manufacture and all discrepancies must be reported to TACP Architects Ltd

Revisions

Rev	Date	Description	By	Check
001	20/02/23	Issue for information	KA	DM
002	20/02/23	Revised in accordance with clients comments	DM	KA
003	31/03/23	Updated location of Perforation and Substation	KAT	KA
004	04/04/23	Sub-station relocated and weighbridge moved	KA	

Client: Conwy County Council

Project Title: Llandudno Junction Waste Transfer Site

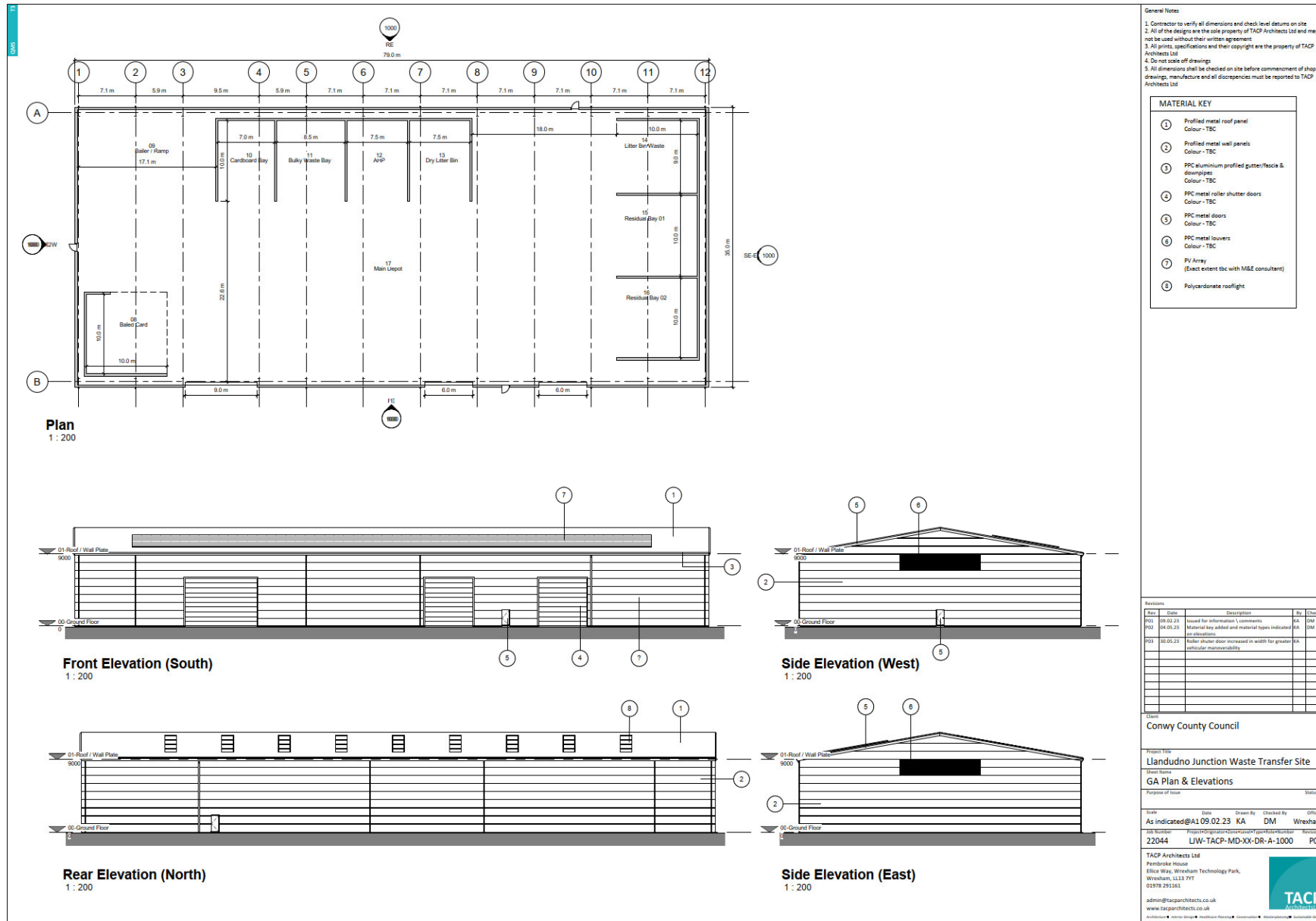
Site layout

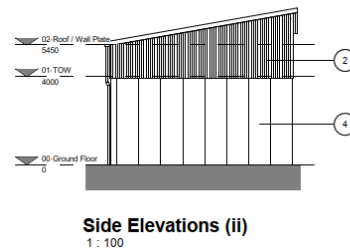
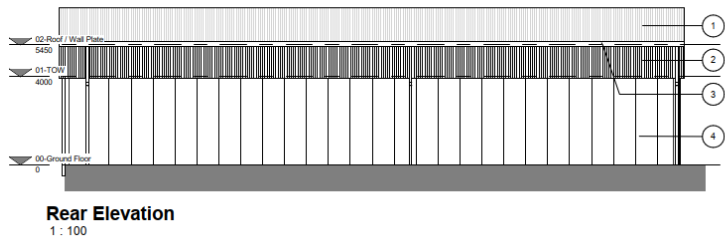
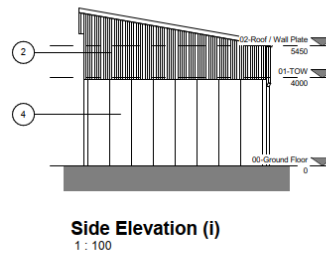
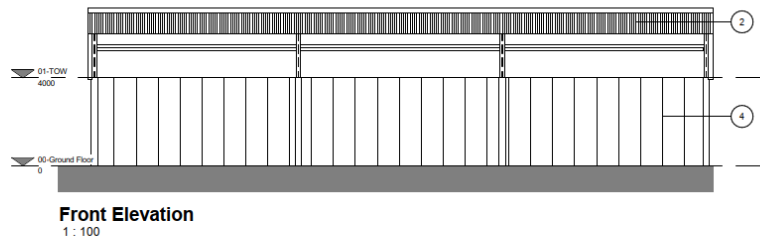
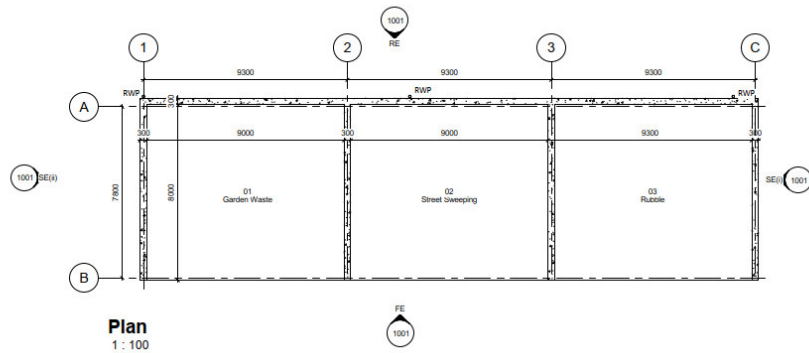
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Job Number: 22044 Project/Drawings/Revision/Type/Revision Number: LW-TACP-PS-XX-DR-A-7001 P04

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Appendix B





**General Notes**

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**NOTES:**

All levels of floor and top of steel / concrete walls to be confirmed by structural engineer.  
Location, type and size of structural steel sections to be in accordance with structural engineers detailed drawings.

**MATERIAL KEY**

- ① Profiled metal roof panel  
Colour - TBC
- ② Profiled metal wall panels  
Colour - TBC
- ③ PPC aluminium profiled gutter/fascia & downpipes  
Colour - TBC
- ④ Concrete panel walling structure

Rev	Date	Description	By	Check
01	20.03.23	Issued for information / comments	KA	DM
P2	20.03.23	Bay sizes increased to accommodate skips in accordance with clients requirements	KA	DM
P3	04.05.23	Material key added and material types indicated on elevations	KA	DM

Client:  
Conwy County Council

Project Title:  
Llandudno Junction Waste Transfer Site

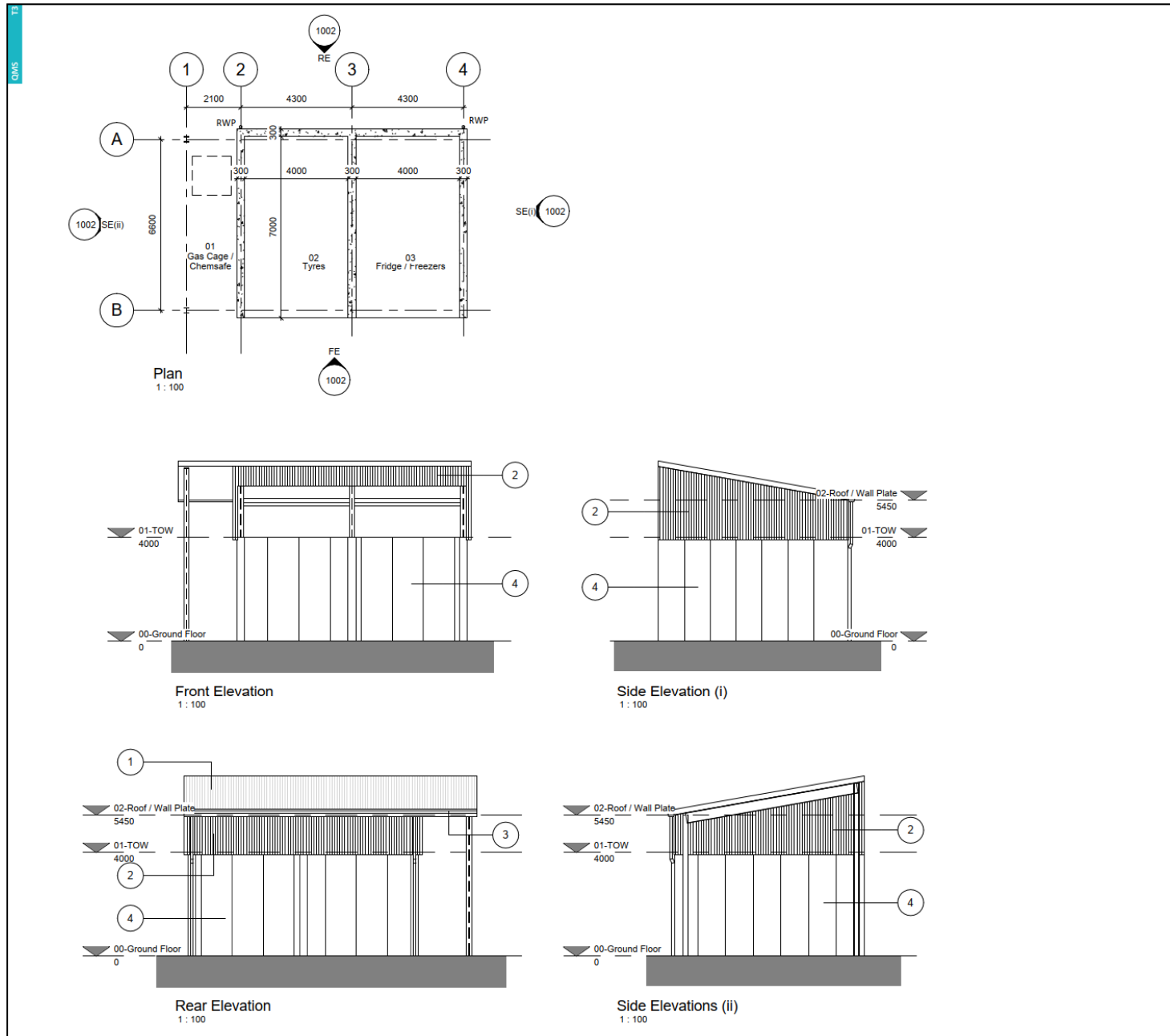
Sheet Name:  
Out-building 01 - Plans & Elevations

Purpose of Issue: \_\_\_\_\_ Status: \_\_\_\_\_

Scale	Date	Drawn By	Checked By	Office
1 : 100@A1	09.02.23	KA	DM	Wrexham
Job Number	22024	Project/Client/Job Number	22024	Revision

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Location, type and size of structural steel sections to be in accordance with structural engineers detailed drawings

**MATERIAL KEY**

1	Profiled metal roof panel Colour - Merlin Grey
2	Profiled metal wall panels Colour - Merlin Grey
3	PPC aluminium profiled gutter/fascia & downpipes Colour - Anthracite
4	Concrete panel walling structure

Revisions

Rev	Date	Description	By	Check
P1	09.02.23	Issued for information \ Comments	KA	DM
P2	04.05.23	Material key added and material types indicated on elevations	KA	DM

Client  
**Conwy County Council**

Project Title  
**Llandudno Junction Waste Transfer Site**

Sheet Name  
**Out-building 02 - Plans & Elevations**

Purpose of Issue \_\_\_\_\_ Status \_\_\_\_\_

Scale: 1:100@A2 Date: 09.02.23 Drawn By: KA Checked By: DM Office: Wrexham

Job Number: 22024 Project/Originator/Zone/Level/Type/Role/Number: LW- TACP-OB-XX-DR- A- 1002 Revision: P2

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