Client:	Designer:	Local Planning Agent:	Environm. Consultant:

PROJECT: **124054 WEPA UK – VESTA PROJECT**

CLIENT: **WEPA**

PHASE: **PRE-APPLICATION**

DOCUMENT: **PROJECT_AND_PROCESS_DESCRIPTION**

ID: **01.01**

Content

1. EXECUTIVE SUMMARY

1.1. PROJECT DATA

PROJECT NAME

WEPA UK BRIDGEND – VESTA PROJECT

CLIENT / PROJECT MANAGER

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LOCATION

BRIDGEND PAPER MILLS
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United Kingdom

1.2. ABBREVIATIONS

AGV/LGV	Automtatic / Laser Guided Vehicle
CHP	Combined Heat + Power
FPS	Finished Product Storage
HBS	High Bay Storage
HV	High Voltage
MV	Medium Voltage
PM	Paper Machine
m, m2	meter, square meter
MCC	Motor Control Center
SDP	Site Development Plan

1.3. GENERAL

Wepa Bridgend facility

WEPA is one of the biggest suppliers of toilet paper, napkins, kitchen rolls, etc. in Europe.

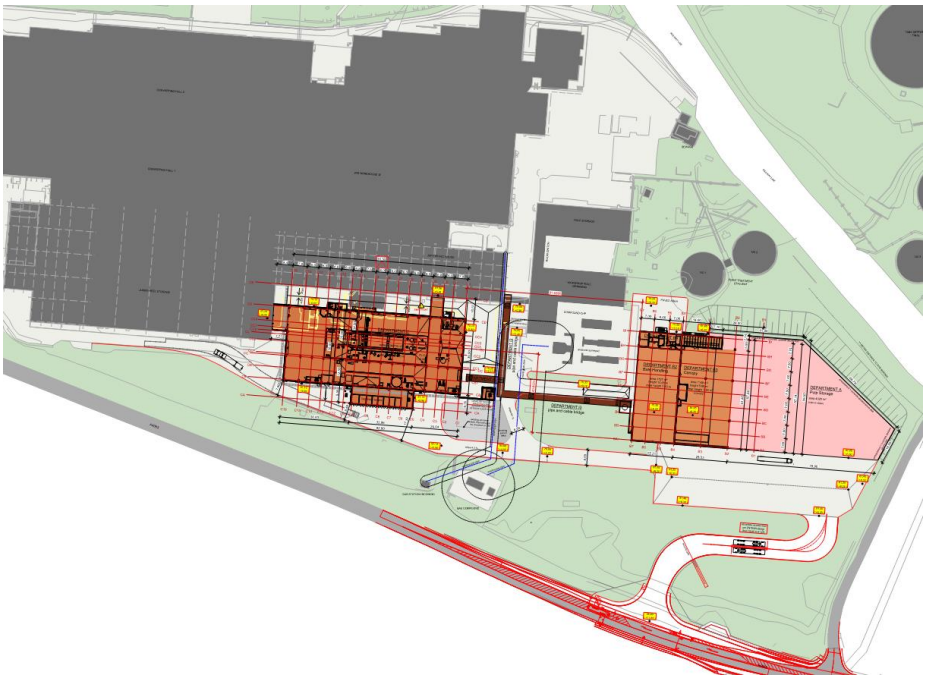
WEPA is a German company founded more than 75 years ago and has several production facilities in allover Europe in Germany (5 locations), Italy (2 locations) France (3 locations), Poland (1 locations), Netherlands (1 locations) and UK. The WEPA UK facility is located in Bridgend (Wales) and is a growing business selling high quality hygiene paper products in the UK retail sector.

Prior to the acquisition of the Bridgend facility by Northwood & Wepa, Wepa UK investigated a Green-field integrated solution to increase its production capacity, evaluating:

- suitable sites options;
- capex costs to execute a project on each option;
- operating costs projected for each option.

Each Greenfield options were eliminated due to different reasons. After the acquisition of N&W, the only feasible option became to enlarge the Bridgend mill dimension and to increase its production capacity.

In 2019 WEPA started the project named “NEPTUNE” for the construction and installation of a second hygiene paper production line at the facility in Bridgend / UK. The extension included a new pulp storage for bales (virgin fibre), a bale handling area, a new sludge press building, a paper machine building for a second production line (including the stock preparation). These works were completed in 2022, although some of the development permitted under that planning permission has not been constructed.



Wepa Bridgend facility – Neptune project

The paper production at the current existing plant is guaranteed by the old paper machine called “JUPITER”, installed during the middle of the 70s and by the recently installed “NEPTUNE” machine. In addition to the two indicated paper machine buildings, several other buildings are part of the mill, such as a pulp storage and bale handling area, multiple jumbo reel storage areas, several converting lines, a finish product storage and shipping.

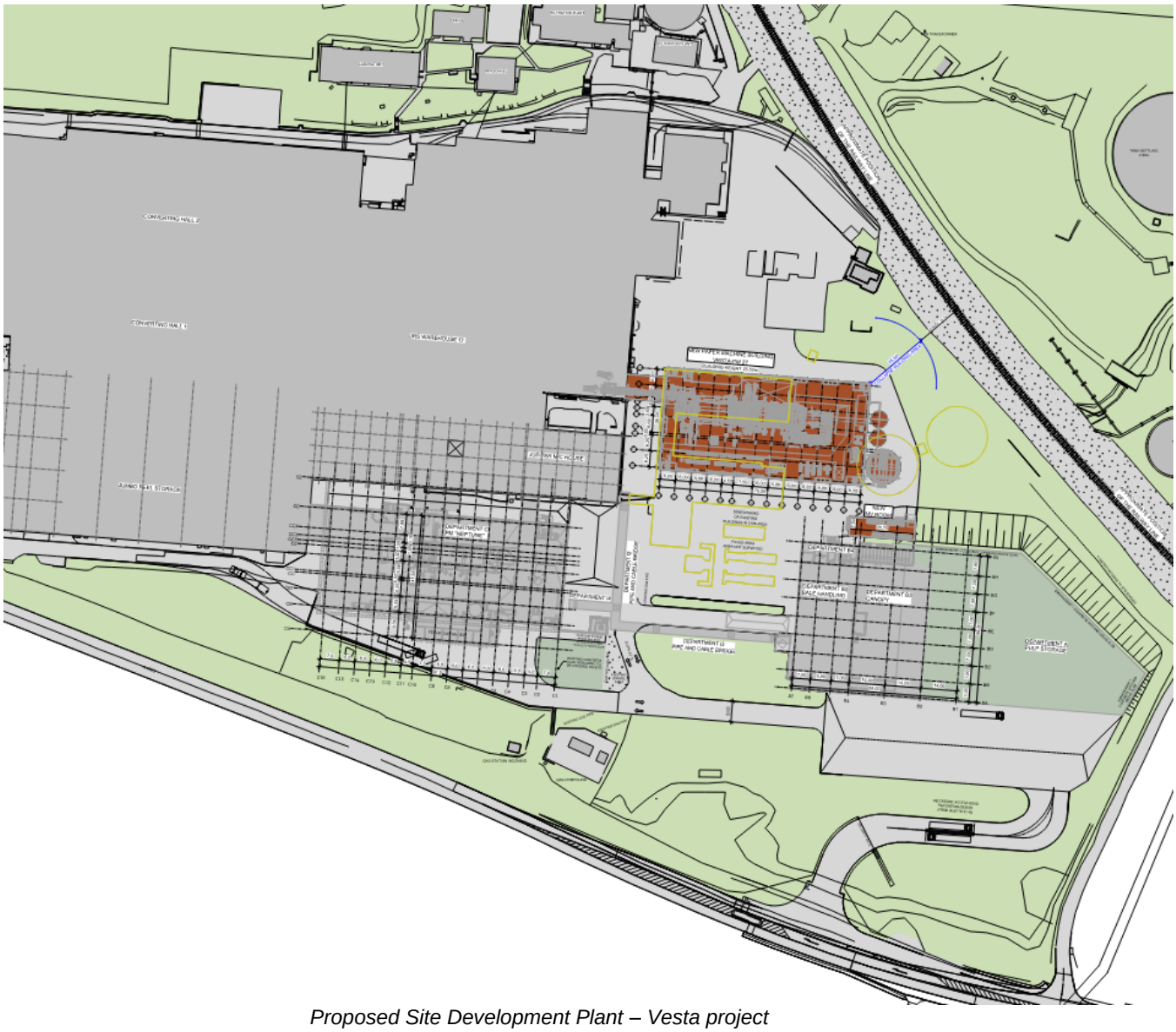
WEPA is currently working on the substitution of the existing CHP plant with a Steam Boiler House that is going to be constructed in the next few months on the west side of the Neptune building under planning application P/24/406/FUL.

The existing Jupiter machine, installed in the 70s, is based on e-tad technology for structured tissue paper. The machine has a high energy demand and water consumption that is not sustainable anymore. The produced paper does not add value to the final products currently required by the market.
In order to enhance the production capacity, produce higher paper quality and reduce the power and water consumptions, WEPA is planning to replace the old Jupiter machine with a new machine, named Vesta.

Project benefits:

- the new machine is optimised to produce lower g/m2 and high quality toilet paper;
- allows the use of higher content of recycled fiber;
- possibility to further reduce water consumption achieving in future 100 % to a closed water loop;
- reuse the waste heat energy;
- reduce the environmental footprint in tissue production by saving energy, water and reducing CO2;
- overall higher efficiency due to reduction of paper waste and improvement of machinery performance, including reduction of waste at the converting lines.

Before the start-up of the new Vesta machine, the old machine Jupiter will be shut down and dismantled. The Jupiter building will be re-used as Jumbo reel Storage.
The maximum daily capacity of the Vesta paper machine will be 227ton/day.

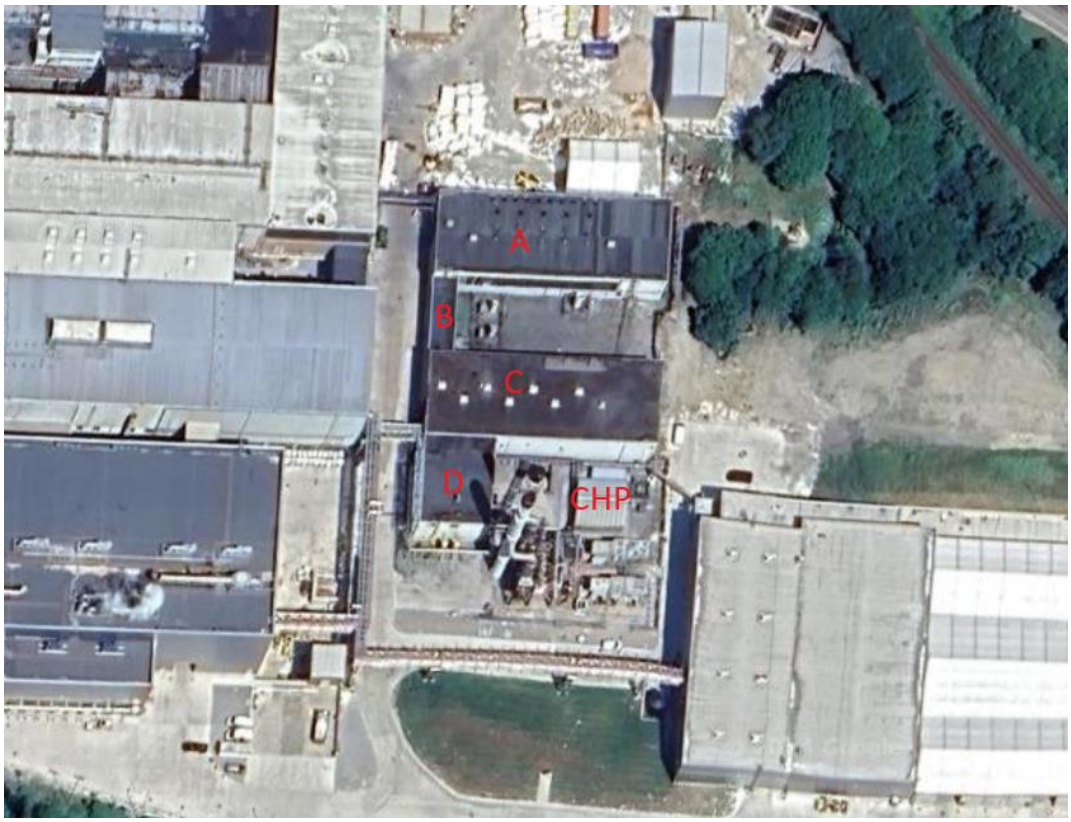


Proposed Site Development Plant – Vesta project

Project phases

MV Substation construction
The MV substation will be constructed as first building and well in advance to the Vesta building as it shall be in operation before the demolition of the existing MV substation currently located within the buildings that needs to be demolished (buildings indicated with codes A, C, D within the picture below). This will be constructed under a separate planning application due to its imminent requirement.

Demolitions
The existing buildings indicated within the picture below with code A, B, C, so called “Old Diesel station building” and “Roll Grinding building” will be demolished to create the space required for the construction of the new Vesta building.
In addition, the existing CHP plant (indicated D within the picture below) is going to be demolished by Wepa after the construction of the new Steam Boilers on the west side of the Neptune building as per Planning Application P/24/406/FUL.



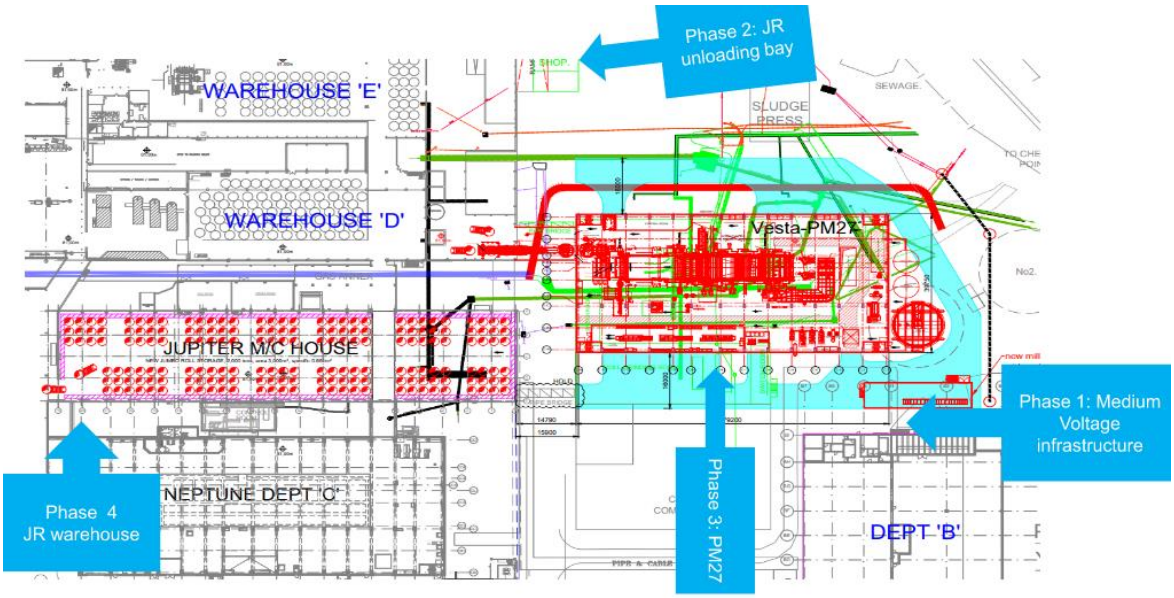
Buildings to be demolished

Approximate areas of buildings to be demolished:

Building	approx. floor level areas m²
CHP	400
Roll Grinding	850
Roll Grinding (basement)	850
Pulp Store	850
Pulp Store (basement)	850
Substation and Office to above	220
Boiler W/Shop	250
Filter Plant	385
TOT.	**4.655 m²**

Culvert re-routing and utilities relocation
below the existing mill an underground culverted river named the Nant Gwtn is running west to east direction, as indicated in violet within the picture below, it flows into the River Llynfi.
To avoid constructing the new Vesta building on top of the culvert, the last section of the existing culvert will be re-routed northside to the new building as indicated by the red line in the picture below.
The open course of the Nant Gwyn will be culverted over a distance of approx. 30 m and returned to open flow before it leaves the site.

The other existing underground utilities located in this area will be also relocated if still required for the operation of the mill. The ones that are not in use anymore will be removed.



Proposed construction phases – Vesta project

Decomisioning of the Jupiter Machine and repurposing of the building as Jumbo Reels Storage
The existing Jupiter machine will be decommissioned, prior to start up of the Vesta machine. As as such the machine house will become redundant for production purposes. The area will be repurposed as a warehouse facility storing Jumbo Reels following some structural repairs, in due course. The footprint of space removed from production purposes will be 4250sqm at machine hall level and 4250sqm at basement level, totalling some 8500sqm.

Constrution of Vesta building
The Vesta building will be constructed after the demolition of the existing buildings indicated above and after the new MV substation will be in operation. The construction of the Vesta building will be the longer site activity and will be followed by the Tissue Machine process equipment installation that will take approximately 7 months + 1 month for commissioning. The start-up of the new Vesta Machine is expected in the last quarter of 2026.

1.4. TARGET PROJECT SCHEDULE

In the following table the Project Schedule including permit application process, building construction, equipment installation up to the start up of the machine is described.

- MV substation civil works construction start: January 2025
- MV substation civil completion construction: March 2025
- MV substation process installation: April-May 2025
- MV substation start-up: 15th May 2025
- Demolition of existing buildings: February-May 2025
- Decommissioning of Jupiter: September 2026
- Vesta building piling works start: June/July 2025
- Vesta building civil works start: August 2025
- Vesta building process equipment installation start: April 2026
- Vesta Tissue Machine start-up: November 2026

1.5. PERMISSION PROCESS

- MV Substation planning permit:
  - Submission: 04th October 2024
  - Expected approval: 29th November 2024

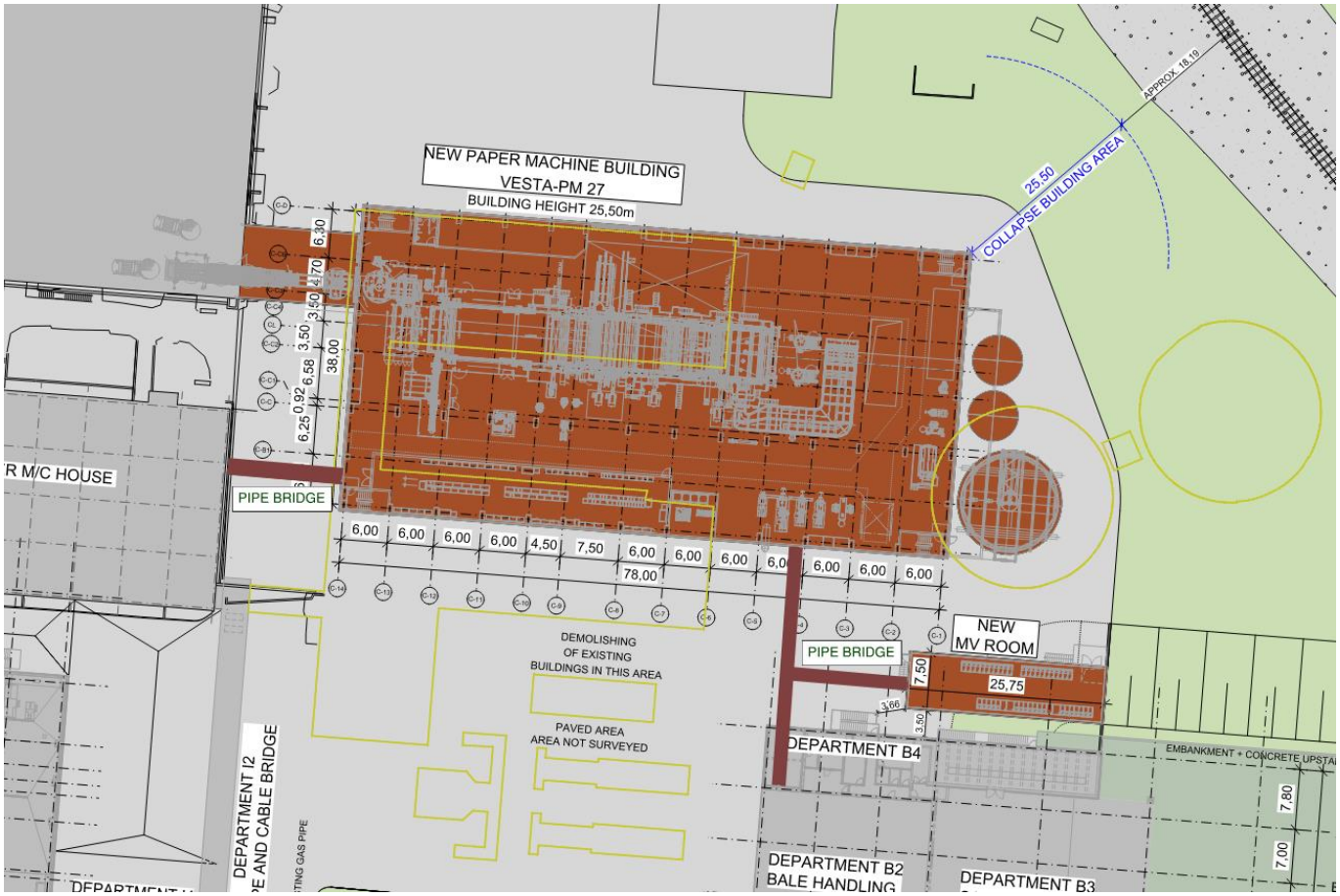
- Demolition application:
  - Submission: 04th October 2024
  - Expected approval: 29th November 2024

- Culvert re-routing application:
  - Submission: 15th November 2024
  - Expected approval: 24th January 2024

- Vesta building application:
  - Submission: 1st February 2025
  - Expected approval: 30th May 2025

1.6. BUILDINGS

The following buildings will be constructed within the Vesta project.



Proposed project

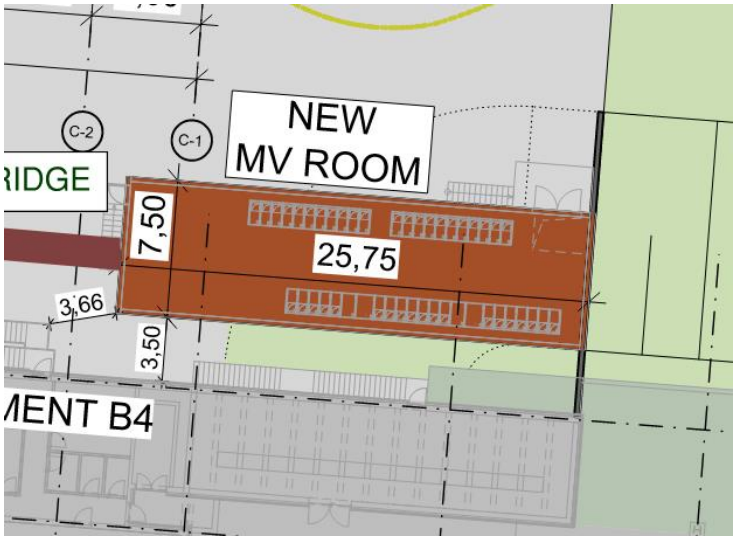
Approximate buildings surface areas:

Building	approx. floor level areas m²	approx. Footprint m²	Approx. Length m
Medium Voltage substation - cable vault	210	210	
Medium Voltage substation – cabinets level	210		
Vesta Paper Machine Building - Basement	3.000	3.138	
Vesta Paper Machine Building – Machine level	3.000		
Vesta Paper Machine Building – Mezzanine	975		
Vesta connection bridge to existing facility	138		
External Paved Areas		2.000	
Pipe Bridge dep. B – Vesta – MV Substation			31+11
Pipe Bridge Vesta – Jupiter			15
TOT.	**7.533 m²**		

It should be noted that the MV substation project is subject to a separate planning application, as there is advanced need to construct this building; to accommodate current and future electrical demand.

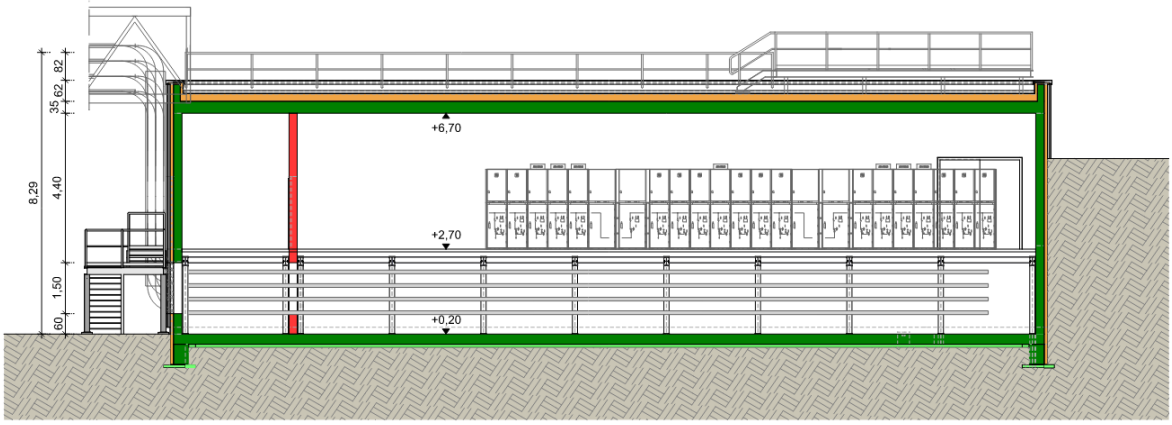
2. PROJECT DESCRIPTION – MILL DEPARTMENTS

2.1. MV SUBSTATION



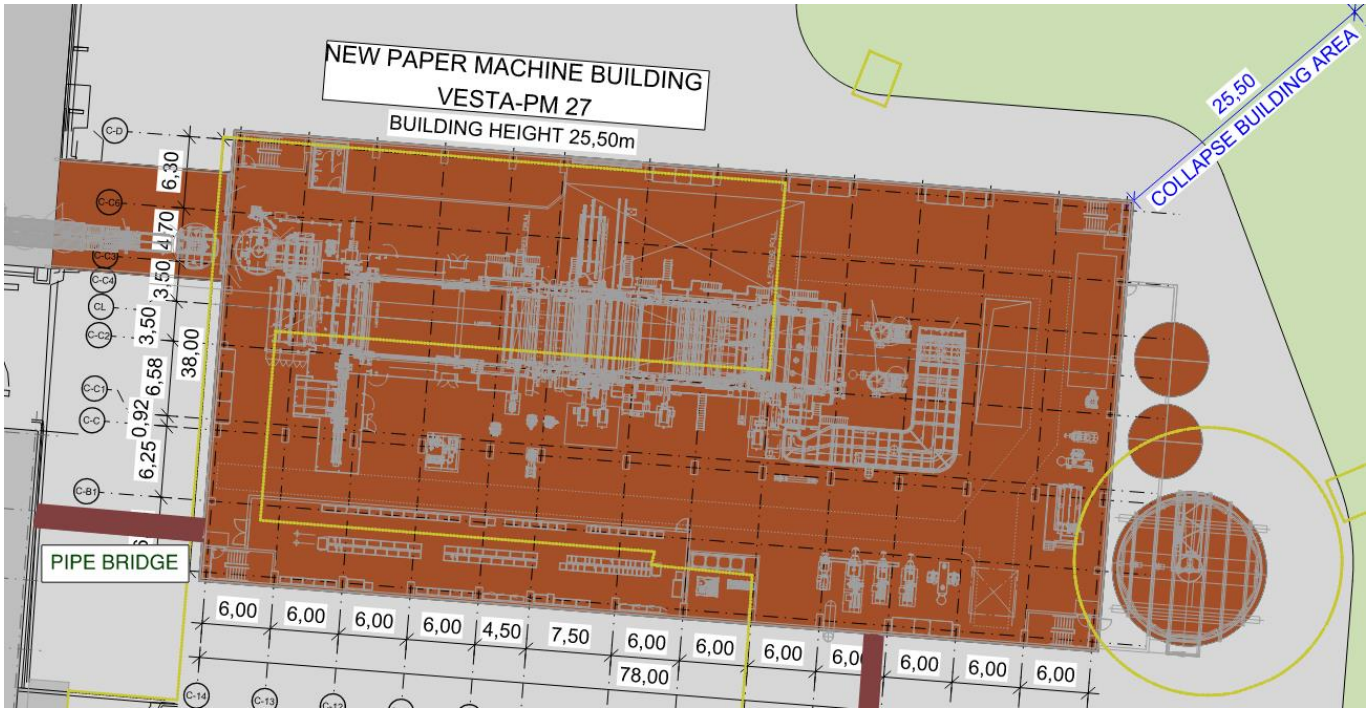
MV substation

The new MV substation will be located north to the existing dept B Bale Handling department. Underground MV cables enter the Wepa site running below the railway on the east side of the plot. The cables will be routed within the MV substation within a dedicated pit and will be connected to the electrical cabinets that will be installed on a steel elevated floor at level approx. +2,70m.
The MV substation is a concrete structure made of concrete foundations, concrete walls and concrete roof slab. Inside the building, the supporting structure for the electriucal cabinets is a steel structure raised floor. The area below the cabinets will be occupied by cable trays and is used to run the cables between each electrical cabinet.



MV substation - section

2.2. PAPER MACHINE "VESTA"



Vesta building

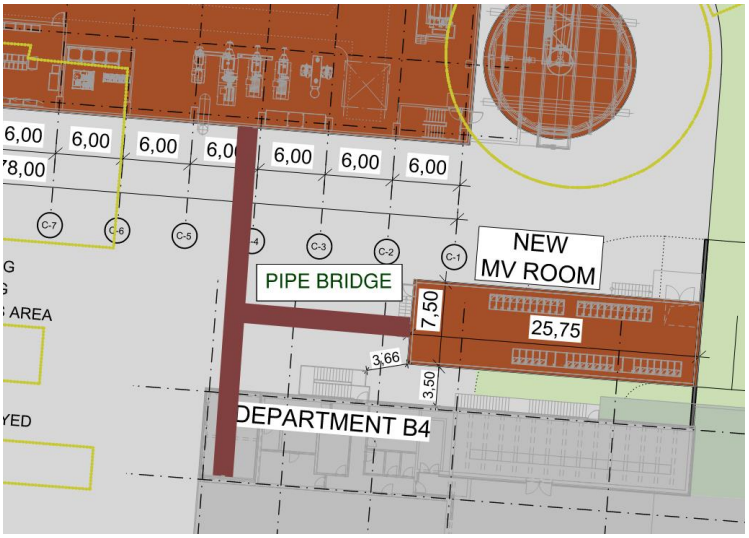
The paper machine building will be located north to the existing department B building and east to the existing Jupiter building.

The Paper Machine Building is the most complicated building of all of the designed/proposed structures at the WEPA site. The entire construction is planned out of pre-cast and in-situ concrete elements. The entire building is also statically isolated from the rest of the factory buildings.
Considering the long term value of this department, fire protection, corrosion protection and low maintenance are considered within the basic design. It is mandatory to design (and build) the PM-Buildings out of precast and/or in-situ concrete structures. All columns, beams, girders and floors will be in concrete. In addition, wall panels and roof slabs will be prefabricated and in accordance to the required fire resistance classes and regional codes.
The whole paper machine and all related process equipment are controlled and monitored in the PM control room.
The approx. footprint of this building will be 3.100 m^2.

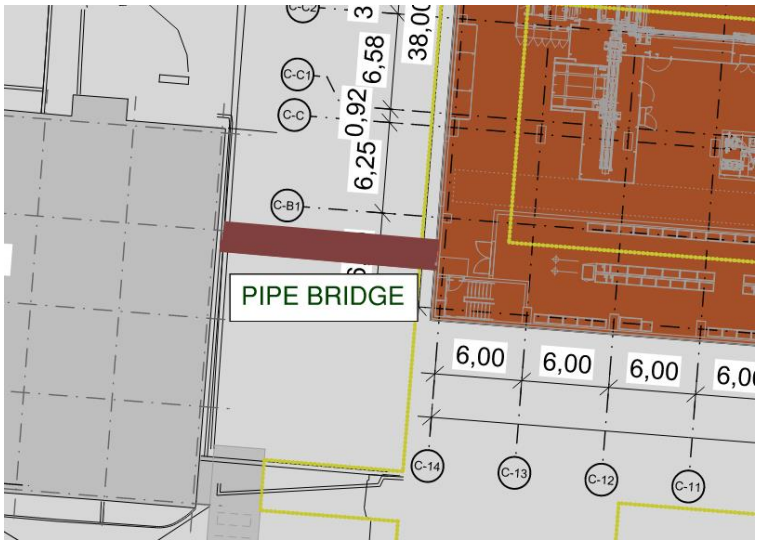
Within the paper machine hall the pulped fibre material is pumped to the heart of the paper production process, the paper machine. A highly diluted paper stock enters the forming and dewatering section in order to create the required quality properties for the jumbo reels. The paper machine (PM) is based on best available technology (BAT) and designed to produce a high quality product with low energy consumption and minimal environmental impact. A combination of fabrics & felts at a speed of upto 2.000m/min transfer the sheet from the forming section to the press section and into the drying section, which consists of a big steam heated yankee dryer (around 5,5m diameter) with gas fired high temperture hoods (500°C). At the end of the papermaking process, the sheet will be creped off the Yankee dryer and wound into a reel. The so called jumbo reels have a diameter of around 3m and a width of each 2,80m (2 parallel). Normally 2 employees per shift operate the paper machine.
The whole paper machine and all related process equipment are controlled from a central control room. Per shift 10 employees are working in this area at the same time. These persons are also responsible for normal maintenance activities for the process equipment in the paper machine building. The control room is occupied 24 hours/7 days a week.
The maximum daily capacity of the Vesta paper machine will be 227ton/day.

2.3. PIPE BRIDGE

For keeping the production process running, various mediums have to be supplied, shared or deduced. The bridge is mainly occupied with pipelines. Steam pipes, water pipes, cable trays, etc. and is connecting the existing department B Bale Handling with the new MV substation building and with the new Vesta Paper Machine Building. A second section of the pipe bridge will connect the Vesta building to the Jupiter existing building.



Pipe Bridge dept B – MV substation - Vesta



Pipe Bridge Vesta-Jupiter

3. UTILITIES AND SITE STORM WATER

The main incoming electricity supply is entering the Wepa property on the east side of the plot, with MV cables running underneath the railways. The, new MV substation is required to locate the electrical cabinets that will be connected to the new MV cables that are going to be installed.

Natural Gas is sufficient for both Paper Machines and will just require a new tie in for the new Vesta building.

The existing fresh (Process) water and potable water supply (intake from river Llynfi within current license) is considered to be sufficient to serve the needs of the new Vest building, also considering that the existing Jupiter machine will be shut down upfront to the start-up of the Vesta machine.

The Steam will be supplied from the new Steam Boilers under construction on the west side of the Neptune building, per planning application P/24/406/FUL. The existing CHP plant will be demolished as soon as the new boilers will be in operation.

The waste-water treatment plant was originally designed for 4 paper machines and is currently used for Jupiter and Neptune paper machines. The start up of Vesta will happen only after the shut down of Jupiter machine. Therefore, the waster water treatment plant doesn't need to be adjusted to enable operation of the Vesta machine. The waste-water treatment plant is located north of the railroad.

The storm water collection is going to be adjusted according to new paved areas and new buildings. Roof storm water coming from departments' roofs will be discharged to the river Llynfi.

4. TRAFFIC

Wepa has provided both existing traffic and projected traffic movement data relating to the substitution of the existing building with the new Vesta building works.

In essence, it expected that traffic will remain a Status Quo with no increase in delivery vehicles and no change in staff numbers as a result of Vesta building project with these works being described as a direct replacement of what is there currently.

A Transport Assessment (TA) will be undertaken in support of a forthcoming planning application which will include all traffic data.

Appointed Transport Consultant Entran Ltd will set up a scoping meeting to discuss a forthcoming Transport Assessment with Bridgend CBC before any assessment is started.