

Appendix 24: Surface water drainage system SuDS, incl. Approval



Drainage Management and Maintenance Strategy

For the site of:
WEPA UK LTDS

DRAINAGE MAINTENANCE STRATEGY

1.0 Introduction

Water Management Techniques aim to prevent run-off as it drains from a site. There are a number of techniques that can be applied to help manage water, as a result of development, including:

SuDS (Sustainable Drainage Systems), which provide a sustainable solution to help reduce and manage surface water run off, which might otherwise cause flooding, and pollution. These are systems created to receive surface water run-off and provide drainage solutions that mimic natural processes rather than piped solutions (e.g. ponds, wetlands, detention basins, underground storage, swales, filter & infiltration trenches, filter strips and permeable surfaces.) The Council will require the provision of SuDS techniques in all householder proposals that involve changes to a sites drainage characteristic, in order to minimise the impact of surface water runoff from the site. Details on SuDS techniques can be found in the CIRIA publication 'The SUDS Manual (C697)' available from their website: www.ciria.org.

The proposed drainage system for the site WEPA UK LTD adopts a series of SuDS measures to control the rate of storm water discharge and the quality of the water in line with current practice. It is important that residents are aware of the requirements to maintain the drainage to ensure that SuDS elements operate effectively for their lifetime.

This drainage management and maintenance plan will be incorporated within the Operation and Maintenance (O&M) manual for the buildings and be accessible to those who undertake maintenance. This document should be read in conjunction with the drainage system drawings.

2.0 Overview of Maintenance

All drainage systems, whether piped systems or SuDS systems require regular maintenance. The maintenance of the SuDS system should be included alongside other regular maintenance tasks. The table below gives an overview of typical maintenance tasks and the frequency with which they need to be undertaken.

Activity	Indicative frequency	Typical tasks
Routine/regular maintenance	Monthly to annually (for normal care of SuDS)	Litter picking Inspection of inlets, outlets and control structures
Occasional maintenance	Annually up to 25 years (dependent on the design)	Silt control around components Vegetation management around components Suction sweeping of permeable paving Silt removal from catchpits, soakaways and cellular storage
Remedial maintenance	As required (tasks to repair problems due to damage or vandalism)	Inlet/outlet repair Erosion repairs Reinstatement of edgings Reinstatement following pollution Removal of silt build up

3.0 Typical maintenance tasks and frequency for SUDs drainage

The required maintenance for each of the elements that make up the SuDS system is scheduled below. The following guidance is based on CIRIA C753 – The SuDS Manual. It is noted that this is a live document and changes to the types of system and maintenance will be as a result of the detailed design and installation therefore the schedule below may include greater options than required.

O & M activity	SuDS component																	
	Pond/wetland	Detention basin	Infiltration basin	Silt traps and catchpits	Soakaway	Infiltration trench	Filter trench	Modular storage	Pervious pavement	Swale/bioretention/green	Filter strip	Sand filter	Pre-treatment systems	Perforated ring soakaways	Bio retention areas	Rain gardens	Oil interceptors	Flow control devices
Regular maintenance																		
Inspection	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Litter/debris removal	■	■	■	□	□	■	■	□	■	■	■	■	■	■	■	■	□	□
Grass cutting	■	■	■	□	□	■	■	□	□	■	■	□	□		■		□	□
Weed/invasive plant control	□	□	□			□	□		□	□	□	□	□		□	■		
Shrub management	□	□	□						□	□	□		□		□	■		
Shoreline vegetation management	■	□											□					
Aquatic vegetation management	■	□											□					
Sediment management (*)	■	■	■	■	■	■	■	■	■	■	■	■	■		■	■	■	■
Vegetation/plant replacement	□	□	□							□	□		□		□	□		
Vacuum sweeping and brushing										■								
Structure rehabilitation/repair	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□
Infiltration surface reconditioning			□		□	□	□		□	□	□	□		□	□	□		

■ Will be required

□ May be required

* Sediment should be collected and managed in pre-treatment systems, upstream of the main device.

4.0 Pipes (Including Oversized) & Manholes

4.1 Description

Pipes are proprietary products and the materials can vary across the site and as such where used the manufacture's recommendations should be followed. Regardless of the product used the pipes will be fully compliant with the drainage specification.

4.2 Operation

Pipes are intended to be the main conveyance across the development. They are intended to be dry except for during rainfall events. These have been designed to be self-cleansing where possible for smaller diameter pipes, and for larger diameters the risk is reduced due to the overall pipe size.

Access for maintenance is provided through access chambers, manholes, rodding plates and rodding eyes.

4.3 Inspection and Maintenance Regime

Regular inspection and maintenance is important to identify areas which may have been obstructed/clogged and may not be drainage correctly thus exposing the development to a greater level of flood risk. Maintenance responsibility for the pipes should be placed with Landowner.

Sediment/material removal should be undertaken in consultation with the environmental regulator to confirm appropriate protocols, as run-off is taken from potentially contaminated areas such as car parks/service yards.

Maintenance Schedule	Required Action	Frequency
Monitoring (to be undertaken more regularly within the first year of operation and adjusted as required)	Initial inspection should be provided as post construction CCTV survey.	N/A
	Inspect for evidence of poor operation via water level in chambers. If required take remedial action.	3-monthly, 48 hours after large storms.
Occasional maintenance	Check and remove large vegetation growth near pipe runs.	6 monthly
Remedial actions	Rod through poorly performing runs as initial remediation.	As required.
	If continued poor performance jet and CCTV survey poorly performing runs.	As required.
	Seek advice as to remediation techniques suitable for the type of performance issue and location.	As required If above does not improve performance.

5.0 Flow Control Devices – Hydro Brake, Orifice Plates

It is envisaged that infiltration will be the main method of drainage. Should additional discharge measures be required to a public sewer a flow control device shall be utilised to reduce any flows to greenfield runoff figures.

Maintenance to be undertaken according to manufacturer's specification. As a general guide, this should include the following:

Maintenance Schedule	Required Action	Typical Frequency
Routine Maintenance	Inspection	Quarterly
	Litter / debris removal	Monthly or as required
Occasional Maintenance	Sediment removal	6 monthly
Remedial Maintenance	Repair (as a result of damage or vandalism)	As required

5.1 GEOCELLULAR/MODULAR SYSTEMS

5.1 DESCRIPTION

Modular plastic geocellular systems with a high void ratio, that can be used to create a below ground storage structure.

5.2 OPERATION AND MAINTENANCE REQUIREMENTS

Regular inspection and maintenance is required to ensure the effective long-term operation of below ground modular storage systems. Maintenance responsibility for systems should be placed with a responsible organization. Maintenance requirements for modular systems are described in the table below. Maintenance plans and schedules should be developed during the design phase. Specific maintenance needs of the system should be monitored, and maintenance schedules adjusted to suit requirements.

Regular maintenance	Inspect and identify any areas that are not operating correctly. If required, take remedial action.	Monthly for 3 months, then six monthly
	Debris removal from catchment surface (where may cause risks to performance)	Monthly
	Where rainfall infiltrates from above, check surface of filter for blockage by silt, algae or other matter. Remove and replace surface infiltration medium as necessary.	Monthly (and after large storms)
	Remove sediment from pre-treatment structures	Annually, or as required
Remedial actions	Repair/rehabilitation of inlets, outlet, overflows and vents	As required
Monitoring	Inspect/check all inlets, outlets, vents and overflows to ensure that they are in good condition and operating as designed	Annually and after large storms

All drainage will be maintained as required. It is envisaged that minimal maintenance would be needed of the proposed system. Were alterations to the proposed drainage strategy are made, this document shall be updated to include any additional measures that may be required.

The proposed suds systems proposed will seek to reduce runoff and the volume of runoff to mimic the natural process as far as possible thus reducing flood risk elsewhere.

Schedule 3 of the Flood and Water Management Act 2010 (FWMA)

Sustainable Drainage System (SuDS) Approved

Mr Joel Saunders (on behalf of)
WEPA UK Ltd
Bridgend Paper Mills,
Llangynwyd,
Maesteg
CF34 9RS

Application No: D/20/0004/SAB

Proposal : Proposed Modifications to Existing Car Park, Additional Access and New Paper Mill – Phase A, B & C

Location : Bridgend Paper Mills, Llangynwyd, Maesteg, CF34 9RS

The Sustainable Drainage Approval Body (SAB) for Bridgend County Council hereby approves the SuDS proposed by you as shown on the full application form and plan(s) and supporting document(s) subject to the following condition(s):

CONDITIONS

1. The SuDS hereby approved shall be commenced before the expiration of five years from the date of this permission.
2. The SuDS hereby approved shall be carried out strictly in accordance with the details shown on the following schedule of plans and documentation:-
 - 119003_51100-0100-SDP Bridgend_site_layout_20191218;
 - 57300_OVE_7615_Drainage-and-Ducts-Layout-Full-Site_FC_09;
 - 57300_OVE_7600_Drainage-and-Ducts-Sheet-1_FC_06;
 - 57300_OVE_7601_Drainage-and-Ducts-Sheet-2_FC_07;
 - 57300_OVE_7602_Drainage-and-Ducts-Sheet-3_FC_07;
 - 57300_OVE_7603_Drainage-and-Ducts-Sheet-4_FC_06;
 - 57300_OVE_7604_Drainage-and-Ducts-Sheet-5_FC_06;
 - 57300_OVE_7605_Drainage-and-Ducts-Sheet-6_FC_05;
 - 57300_OVE_7606_Drainage-and-Ducts-Sheet-7_FC_05;
 - 57300_OVE_7607_Drainage-and-Ducts-Sheet-8_FC_06;
 - 57300_DET_7608_Attenuation-Tank-Details-North_FC_02;
 - 57300_DET_7609_Attenuation-Tank-Details-South_FC_02A
 - 57300_DET_7611_Typical-Manhole-and-Drainage-Details_FC_04
 - Proposed SUDS Rev C.

3. Please notify SAB@bridgend.gov.uk no less than seven days before commencement of works, quoting the above SAB application number for reference, and upon completion of the works.
4. The SAB will inspect the system at an agreed time during and post construction. The dates and times are to be agreed between the SAB and the applicant.
5. Ordinary watercourse consent applications to be submitted to BCBC land drainage team and approved prior to works associated with connections to the existing culverted watercourse and new headwall to Nant Gwyn.
6. Surface water discharge from car parks or service areas should be served with an appropriate grade of hydrocarbon interceptor.
7. No surface water is allowed to discharge to the public highway.
8. This SAB Application is valid for 5 years from the date of approval. If any changes are made to the plans, this may result in the applicant needing to submit a new SuDS Approval Application or a Stop Notice being served if construction work has already commenced.

DATED: 11th January 2021



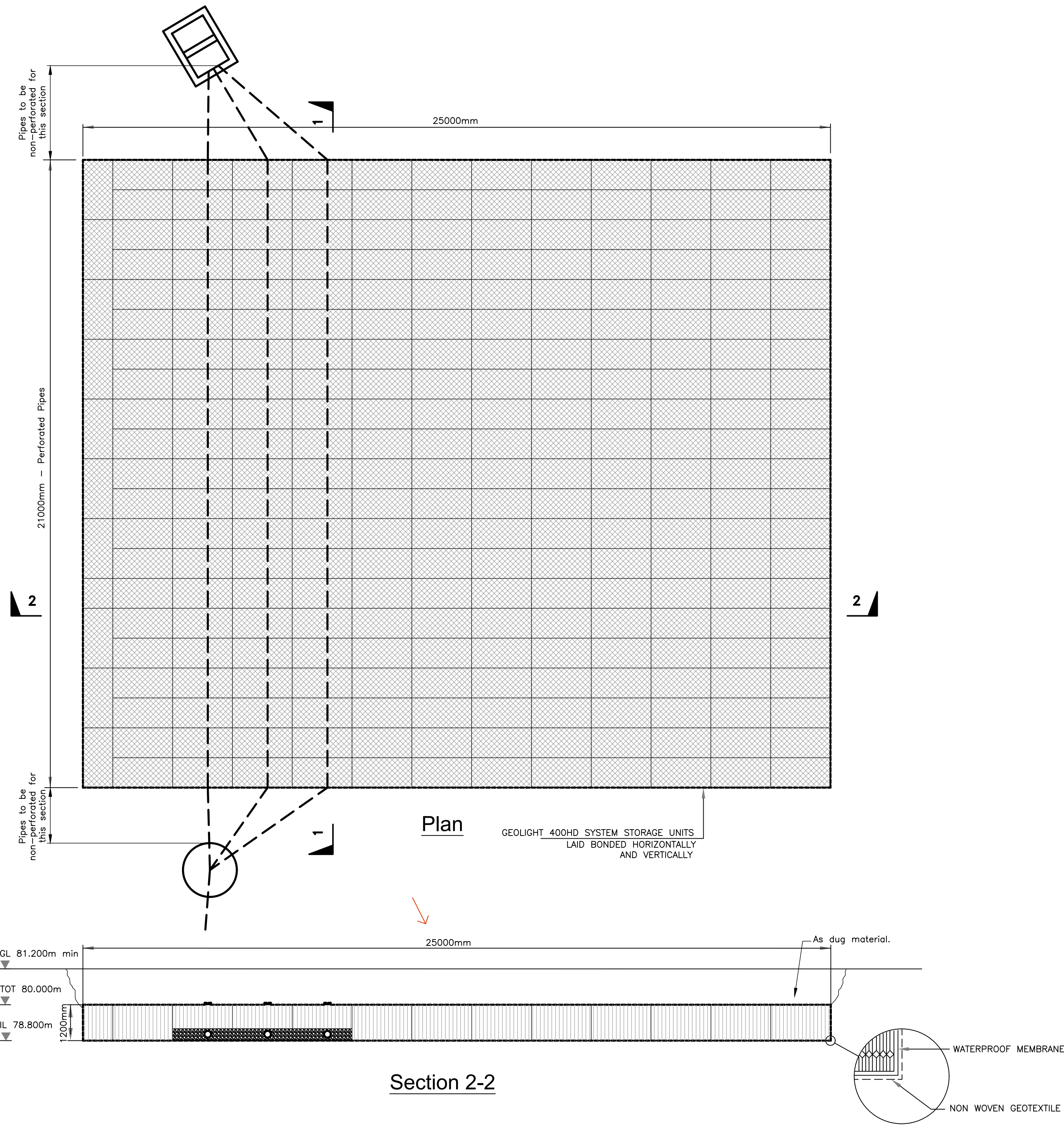
SIGNED:

Jason Jenkins

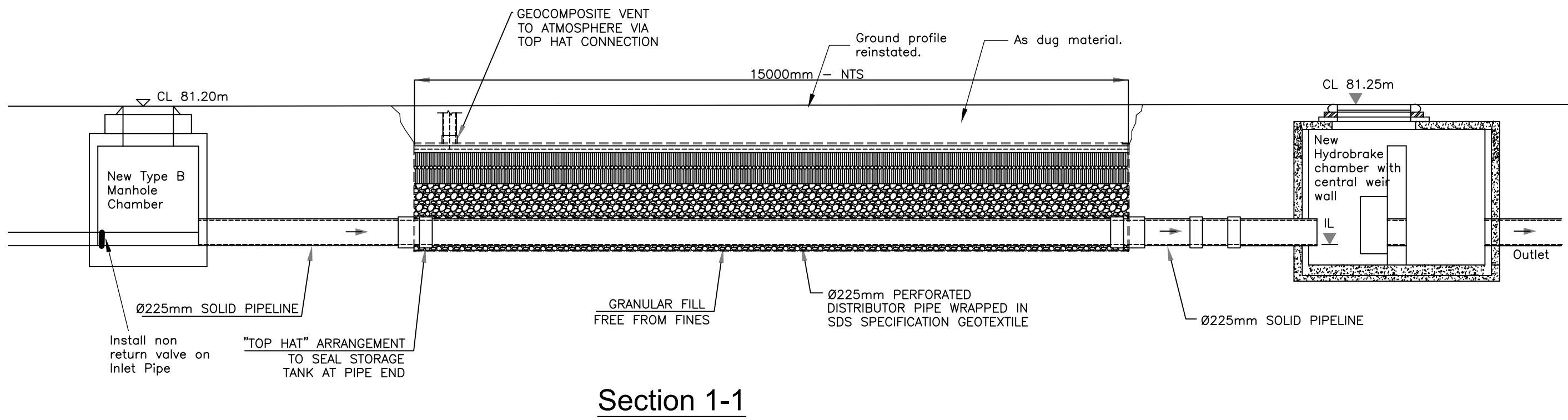
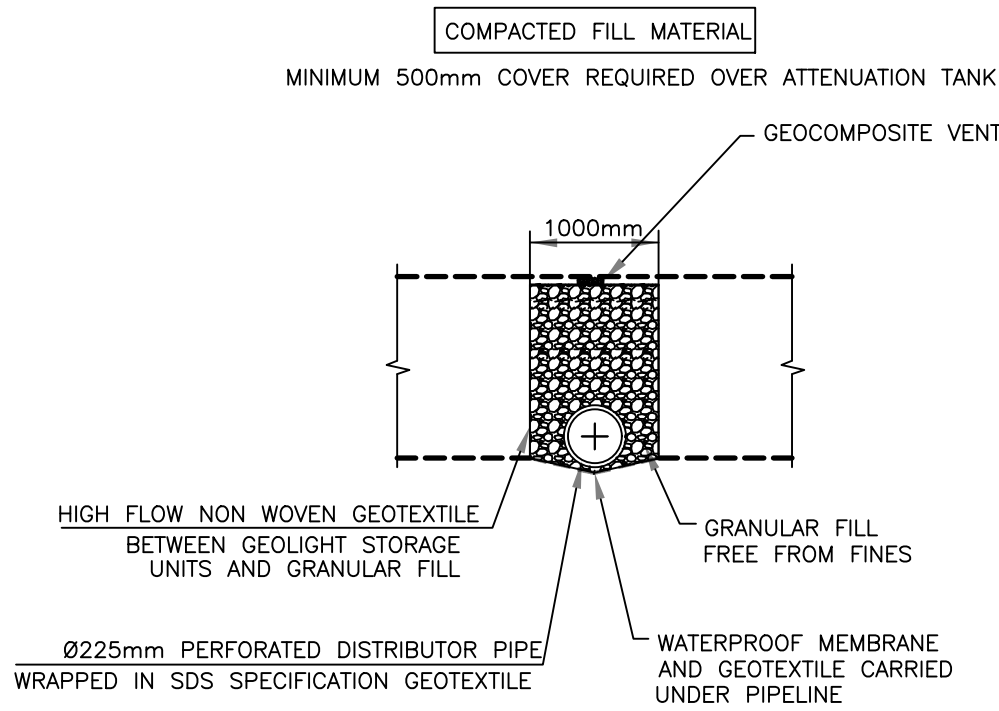
Highways Network Manager

Rydym yn croesawu gohebiaeth yn Gymraeg. Rhowch wybod i ni os mai Cymraeg yw eich dewis iaith.

We welcome correspondence in Welsh. Please let us know if your language choice is Welsh.



Tank Inlet and Outlet locations to be in accordance with drainage layout 57300_OVE_7604



KEY FIRE COMPARTMENTS			
<div></div>	FIRE MAIN COMPARTMENT	<div></div>	FIRE SUB COMPARTMENT
<div></div>		<div></div>	SMOKE COMPARTMENT
KEY MATERIALS			
<div></div>	REINFORCED CONCRETE	<div></div>	PRECAST CONCRETE ELEMENT
<div></div>	BRICKWORK	<div></div>	PRECAST CONCRETE ELEMENT
<div></div>	PLASTERBOARD	<div></div>	HEAT INSULATION RIGID
<div></div>	EXISTING BUILDING	<div></div>	DEMOLITION
<div></div>		<div></div>	HEAT INSULATION SOFT
<div></div>		<div></div>	SANDWICH PANEL
<div></div>		<div></div>	GLASS
KEY ROOM			
TFF = TOP FINISH FLOOR	RH = ROOM HEIGHT	TL = TOP LEVEL	<div></div>
TRS = TOP ROUGH SLAB	CH = CLEAR HEIGHT	BL = BOTTOM LEVEL	
A = AREA	TLP = TOP LEVEL PARAPETE		
P = PERIMETER	BLL = BOTTOM LEVEL LINTEL		

Notes

This drawing is to be read in conjunction with all relevant drawings and the specification.

Do not scale this drawing.

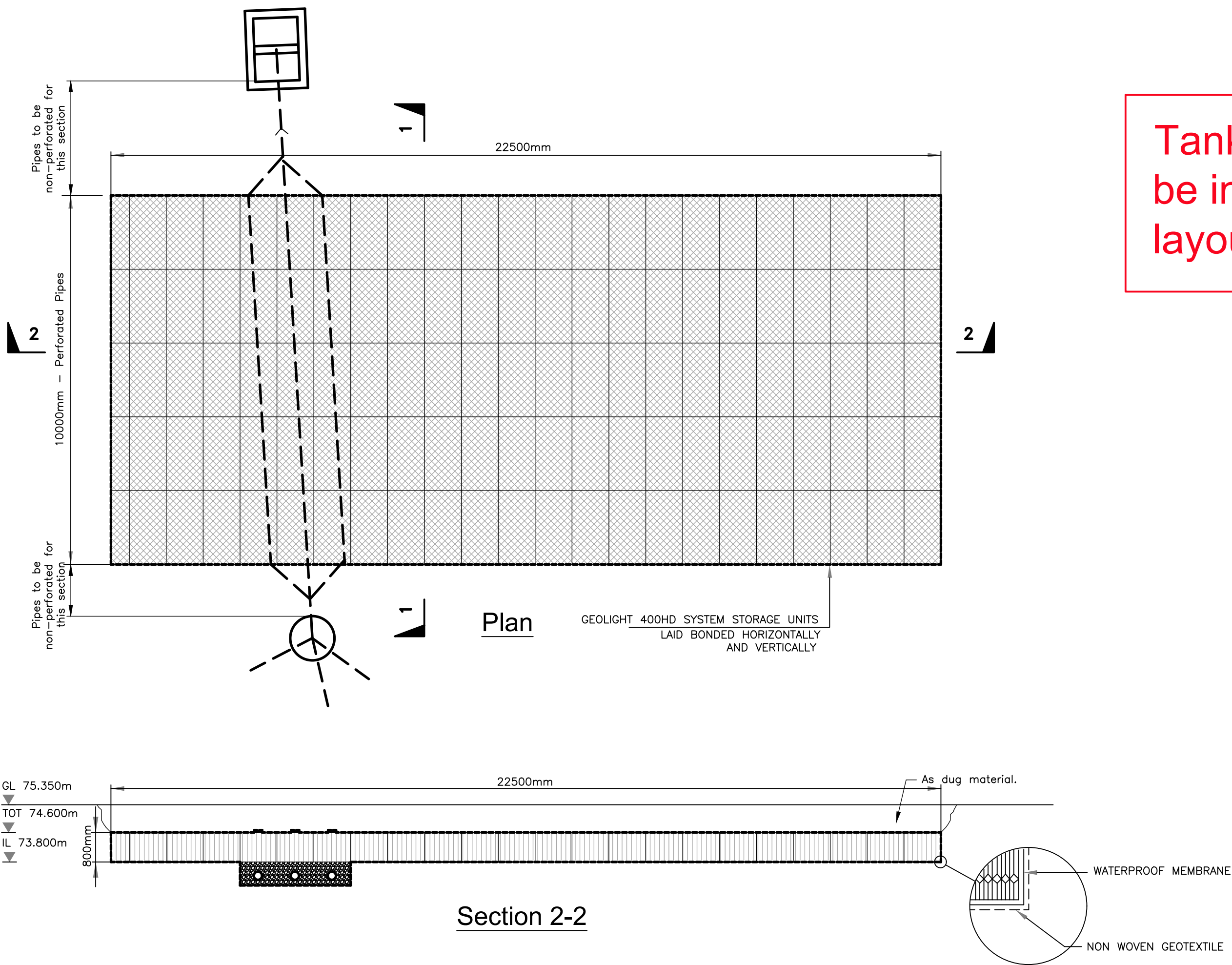
All dimensions are in millimetres.
All levels are in metres.

The contractor is responsible for the accuracy of the setting-out on site and the fabrication of materials prior to construction.

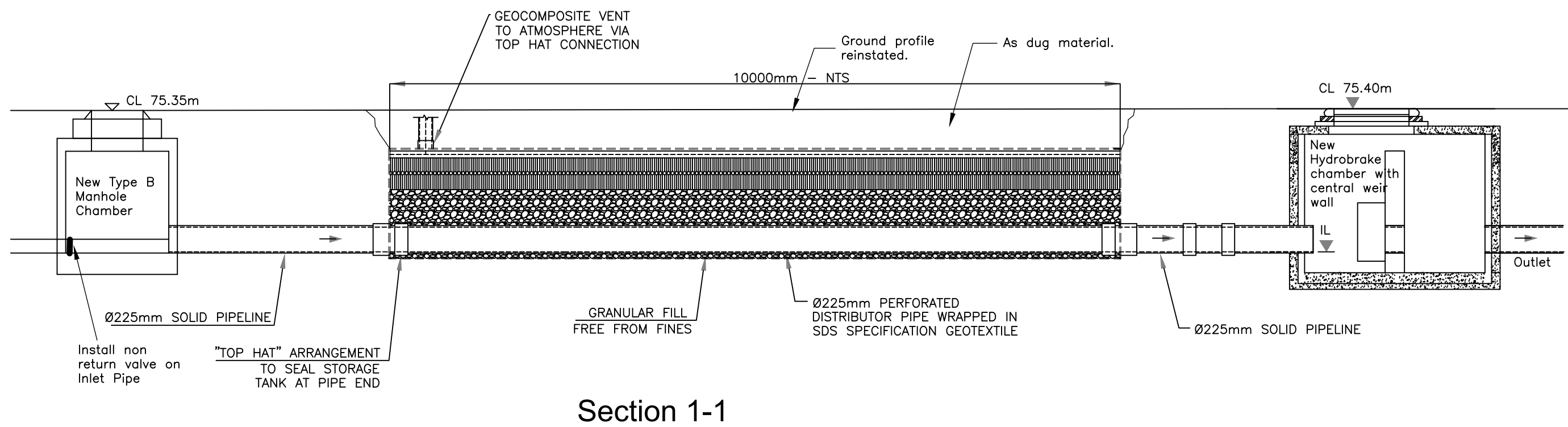
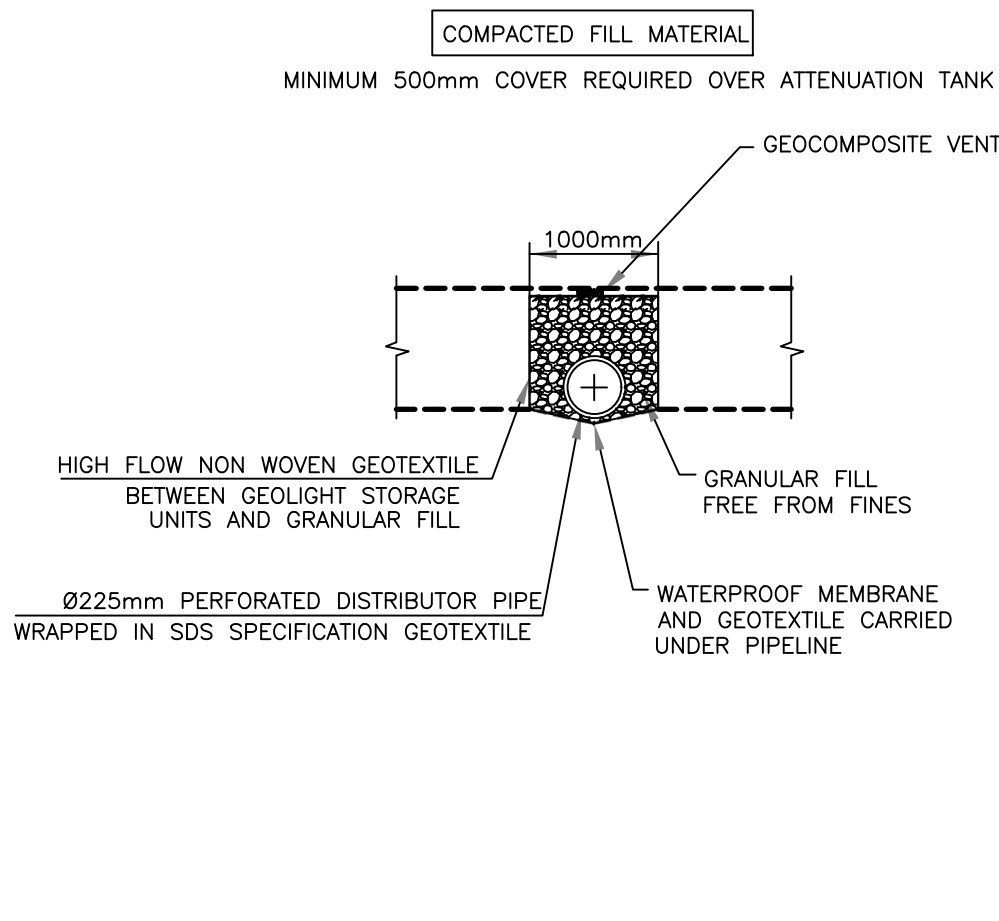
All work to be carried out in accordance with the building regulations and all relevant British Standards and codes of practice.














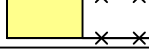
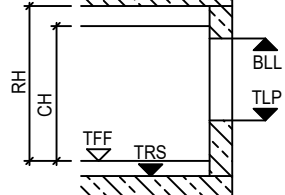
REFERENCE DOCUMENT				
09				
08				
07				
06				
05				
04				
03				
02	28.08.20	PRF	SGR	Construction Issue. Updated to latest layout + Inlet & Outlet positions shown.
01	09.03.20	PRF	DPM	Issued for Tender.
INDEX	DATE	DRAWN	CHECKED	MODIFICATION

MILL SITE ±0.00m = 75.15 AOD (above ordnance datum)				
WEPA UK BRIDGEND				
CONTENT OF PLAN GENERAL/OVERVIEW				
ATTENUATION TANK DETAILS - SOUTH				
PHASE FOR CONSTRUCTION				
PROJECT NO.	119003	SCALE	1:100 1:50	DRAWN
PLAN NO.	57300_DET_7609	INDEX	02	PRF
PLAN NO. EXT.		CHECKED	DPM	DATE
BHM INGENIEURE - ENGINEERING & CONSULTING GMBH				05.02.2020
Runastraße 90, 6800 Feldkirch, Austria, Telefon +43 / 5522 / 46101				SIZE
Fax +43 / 5522 / 46104, office@bhm-ing.com, www.bhm-ing.com				A1
BHM INGENIEURE				



Tank Inlet and Outlet locations to be in accordance with drainage layout 57300_OVE_7607



KEY FIRE COMPARTMENTS			
 FIRE MAIN COMPARTMENT		 FIRE SUB COMPARTMENT	 SMOKE COMPARTMENT
KEY MATERIALS			
 REINFORCED CONCRETE	 PRECAST CONCRETE ELEMENT	 HEAT INSULATION SOFT	
 BRICKWORK	 PRECAST CONCRETE ELEMENT	 SANDWICH PANEL	
 PLASTERBOARD	 HEAT INSULATION RIGID	 GLASS	
 EXISTING BUILDING	 DEMOLITION		
KEY ROOM			
TFF = TOP FINISH FLOOR	RH = ROOM HEIGHT	TL = TOP LEVEL	
TRS = TOP ROUGH SLAB	CH = CLEAR HEIGHT	BL = BOTTOM LEVEL	
A = AREA	TLP = TOP LEVEL PARAPETE		
P = PERIMETER	BLL = BOTTOM LEVEL LINTEL		

Notes

This drawing is to be read in conjunction with all relevant drawings and the specification.

Do not scale this drawing.

All dimensions are in millimetres.


All levels are in metres.

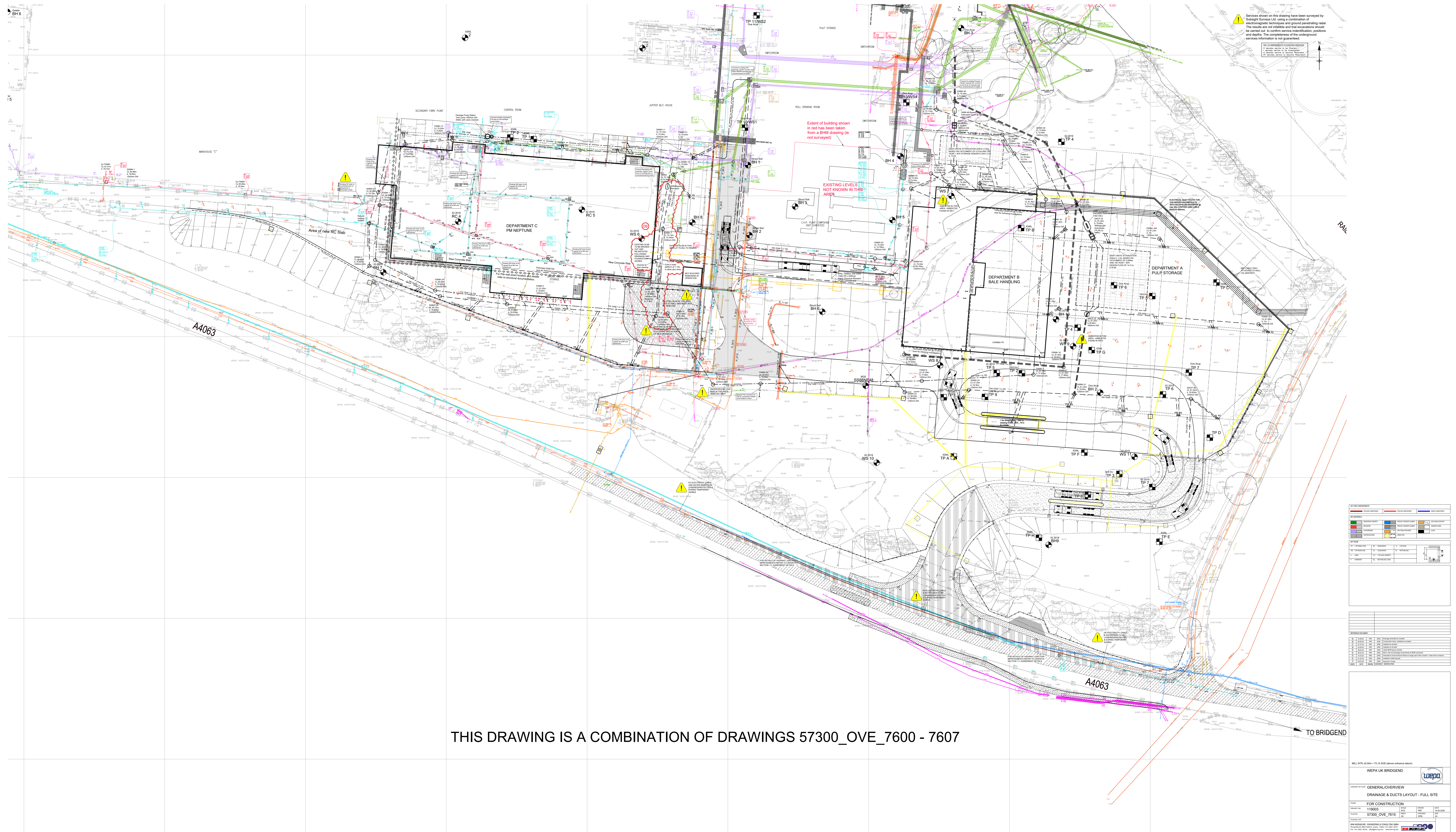
The contractor is responsible for the accuracy of the setting-out on site and the fabrication of materials prior to construction.

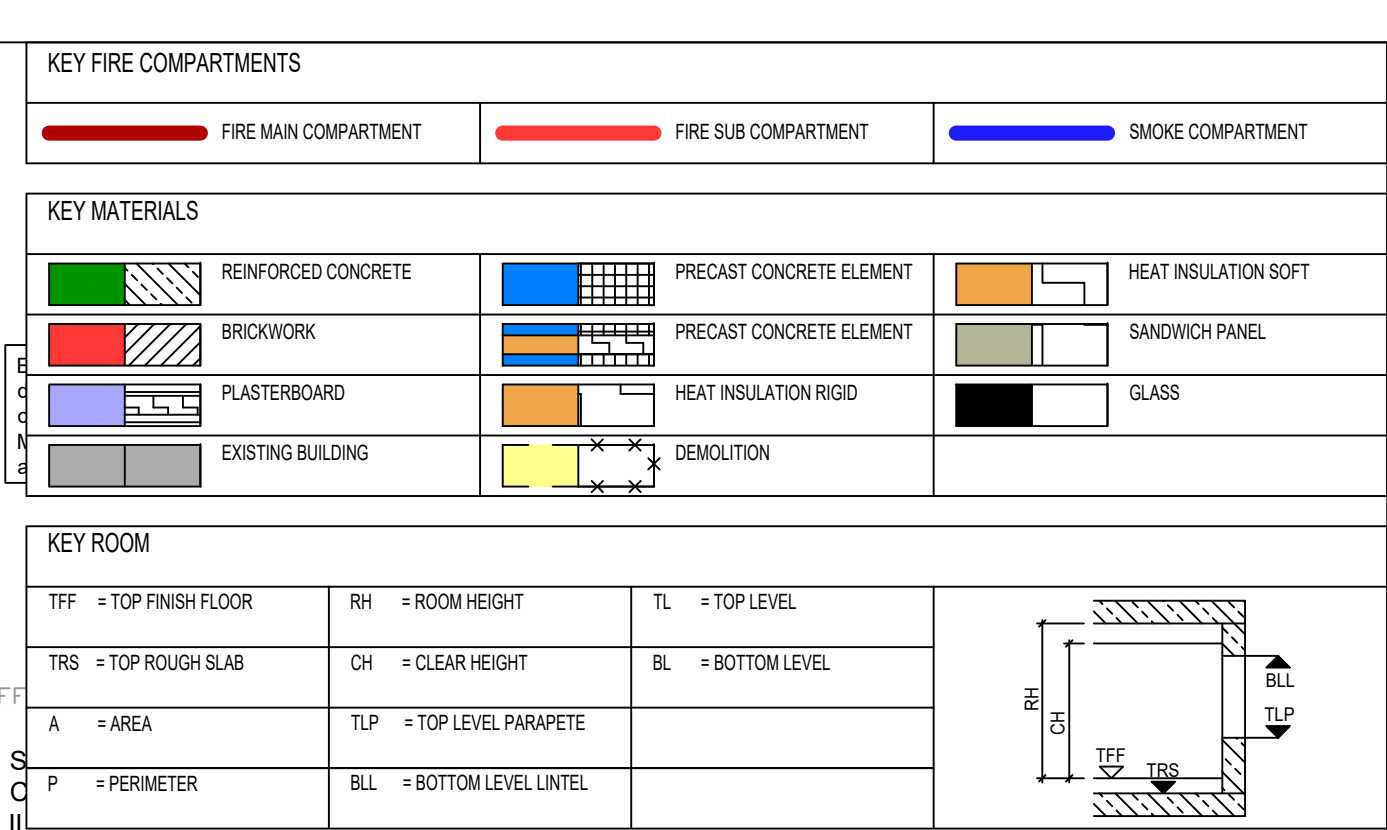
All work to be carried out in accordance with the building regulations and all relevant British Standards and codes of practice.

REFERENCE DOCUMENT				
09				
08				
07				
06				
05				
04				
03				
02	28.08.20	PRF	SGR	Construction Issue. Inlet and Outlet positions indicated.
01	09.03.20	PRF	DPM	Issued for Tender.
INDEX	DATE	DRAWN	CHECKED	MODIFICATION

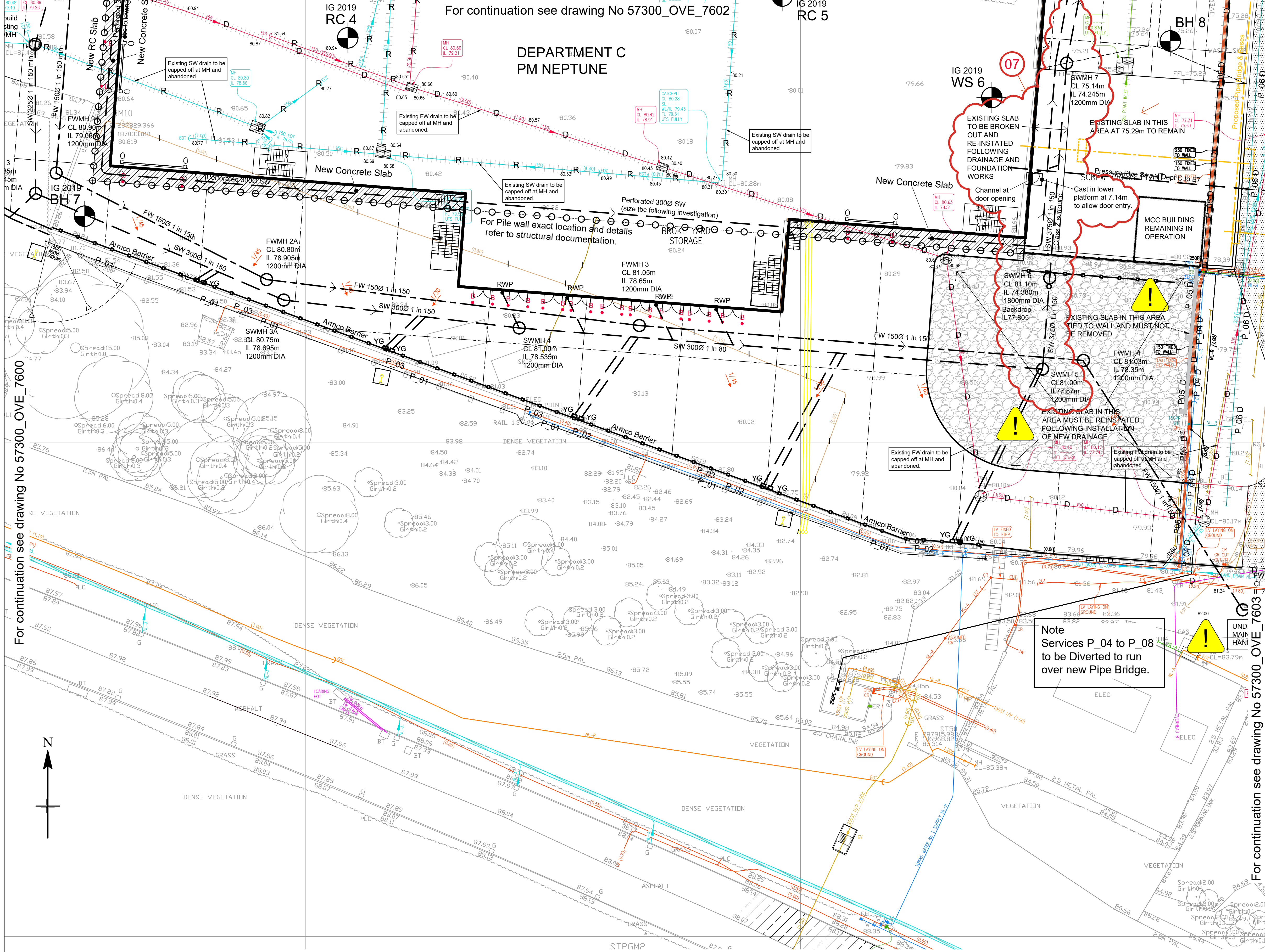
MILL SITE ±0.00m = 75.15 AOD (above ordnance datum)				
WEPA UK BRIDGEND				
CONTENT OF PLAN GENERAL/OVERVIEW				
ATTENUATION TANK DETAILS - NORTH				
PHASE FOR CONSTRUCTION				
PROJECT NO.	119003	SCALE	1:100 1:50	DRAWN PRF
PLAN NO.	57300_DET_7608	INDEX	02	CHECKED DPM
PLAN NO. EXT.				DATE 05.02.2020
BHM INGENIEURE - ENGINEERING & CONSULTING GMBH				
Runastraße 90, 6800 Feldkirch, Austria, Telefon +43 / 5522 / 46101				
Fax +43 / 5522 / 46104, office@bhm-ing.com, www.bhm-ing.com				
BHM INGENIEURE				

MILL SITE $\pm 0.00\text{m} = 75.15$ AOD (above ordnance datum)			
WEPA UK BRIDGEND			
CONTENT OF PLAN GENERAL/OVERVIEW			
TYPICAL MAHOLE & DRAINAGE DETAILS			
PHASE FOR CONSTRUCTION			
PROJECT NO.	119003	SCALE 1:20 1:10	DRAWN PRF
PLAN NO.	57300_DET_7611	INDEX 04	CHECKED DPM
PLAN NO. EXT.		DATE 05.02.2020	
BHM INGENIEURE - ENGINEERING & CONSULTING GMBH Runastraße 90, 6800 Feldkirch, Austria, Telefon +43 / 5522 / 46101 Fax +43 / 5522 / 46104, office@bhm-ing.com, www.bhm-ing.com			





Services shown on this drawing have been surveyed by SubSight Surveys Ltd. using a combination of electromagnetic techniques and ground penetrating radar. The results are not infallible and trial excavations should be carried out to confirm service identification, positions and depths. The completeness of the underground services information is not guaranteed.



For continuation see drawing No 57300_OVE_7600

For continuation see drawing No 57300_OVE_7603

KEY FIRE COMPARTMENTS

FIRE MAIN COMPARTMENT

FIRE SUB COMPARTMENT

SMOKE COMPARTMENT

KEY MATERIALS

REINFORCED CONCRETE

BRICKWORK

PLASTERBOARD

EXISTING BUILDING

PRECAST CONCRETE ELEMENT

PRECAST CONCRETE ELEMENT

HEAT INSULATION RIGID

DEMOLITION

HEAT INSULATION SOFT

SANDWICH PANEL

GLASS

KEY ROOM

TFF = TOP FINISH FLOOR

TR5 = TOP ROUGH SLAB

A = AREA

P = PERIMETER

RH = ROOM HEIGHT

CH = CLEAR HEIGHT

TLP = TOP LEVEL PARAPETE

BL = BOTTOM LEVEL

TL = TOP LEVEL

BL = BOTTOM LEVEL

Notes

This drawing is to be read in conjunction with all relevant drawings and the specification.

Do not scale this drawing.

All dimensions are in millimetres.

All levels are in metres.

The contractor is responsible for the accuracy of the setting-out on site and the fabrication of materials prior to construction.

All work to be carried out in accordance with the building regulations and all relevant British Standards and codes of practice.

REFERENCE DOCUMENT

INDEX	DATE	DRAWN	CHECKED	MODIFICATION
09				
08				
07	16.09.20	PRF	DPM	Drainage amended as clouded.
06	28.08.20	PRF	SGR	Construction Issue. Updated to suit latest BHM layout.
05	30.04.20	PRF	DPM	Minor amendment to note and drainage.
04	14.04.20	PRF	DPM	Minor revisions as clouded.
03	27.03.20	PRF	DPM	Latest topographical survey added. Services amended.
02	09.03.20	PRF	DPM	Generally updated. Issued for Tender.
01	25.02.20	PRF	DPM	Drainage and Manhole references updated.

MILL SITE ±0.00m = 75.15 AOD (above ordnance datum)

WEPA UK BRIDGEND

CONTENT OF PLAN

GENERAL/OVERVIEW

DRAINAGE & DUCTS LAYOUT - SHEET 2

PHASE

FOR CONSTRUCTION

PROJECT NO.

119003

SCALE

1:200

DRAWN

PRF

DATE

30.01.2020

PLAN NO.

57300_OVE_7601

INDEX

07

CHECKED

DPM

SIZE

A1

PLAN NO. EXT.

BHM INGENIEURE - ENGINEERING & CONSULTING GMBH

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Fax +43 / 5522 / 46104, office@bhm-ing.com, www.bhm-ing.com

KEY TO AMENDMENTS TO EXISTING SERVICES

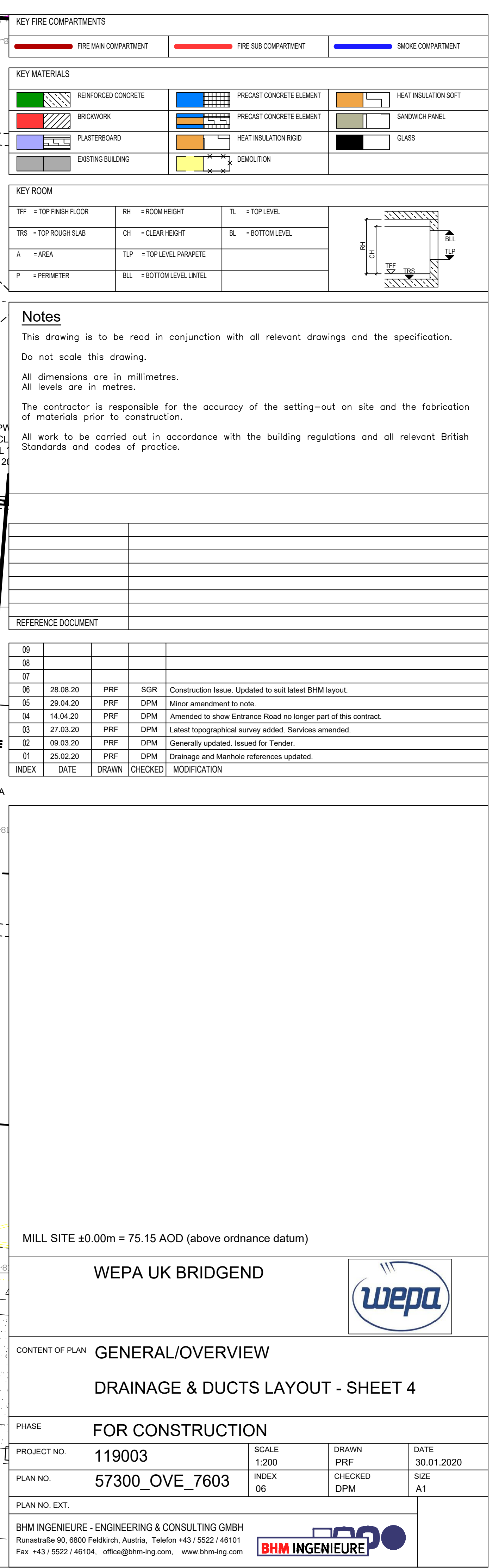
D denotes service to be Diverted

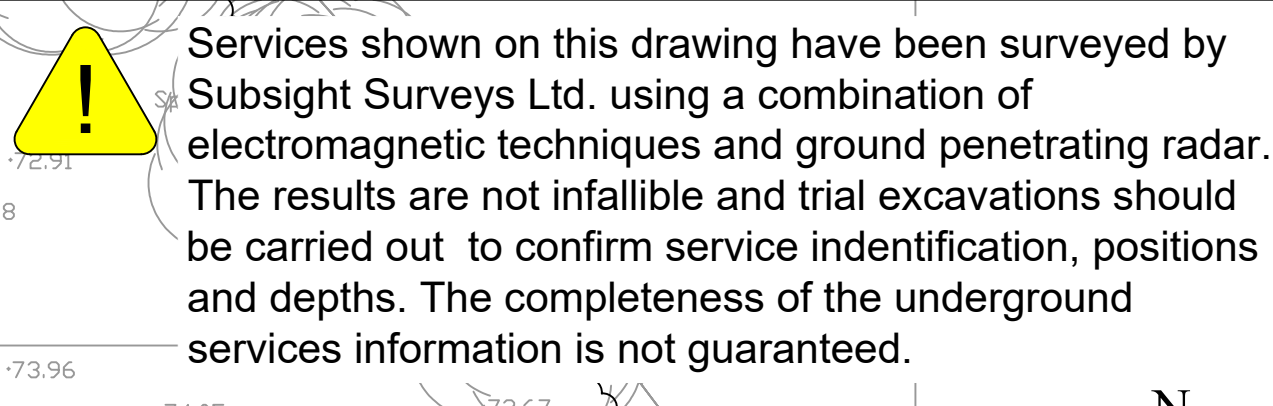
I denotes service to be Investigated

R denotes service to become Redundant

R2 denotes service to become Redundant

Services shown on this drawing have been surveyed by Sublight Surveys Ltd. using a combination of electromagnetic techniques and ground penetrating radar. The results are not infallible and trial excavations should be carried out to confirm service identification, positions and depths. The completeness of the underground services information is not guaranteed.





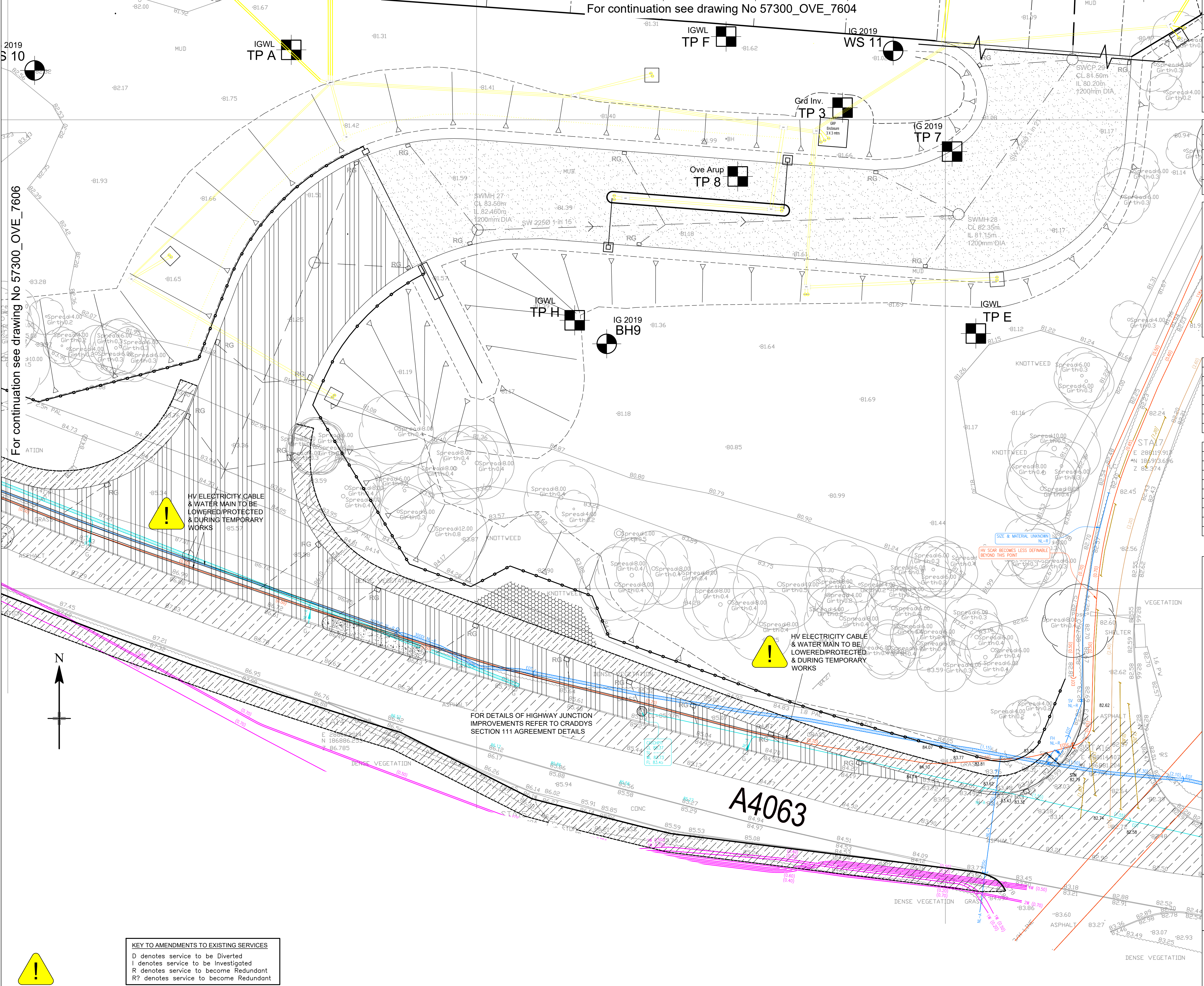
KEY ROOM			
TFF = TOP FINISH FLOOR	RH = ROOM HEIGHT	TL = TOP LEVEL	
TRS = TOP ROUGH SLAB	CH = CLEAR HEIGHT	BL = BOTTOM LEVEL	
A = AREA	TLP = TOP LEVEL PARAPETE		
P = PERIMETER	BL = BOTTOM LEVEL LINTEL		

REFERENCE DOCUMENT

INDEX	DATE	DRAWN	CHECKED	MODIFICATION
09				
08				
07				
06	28.08.20	PRF	SGR	Construction Issue. Updated to suit latest BHM layout.
05	30.04.20	PRF	DPM	Minor amendment to drainage.
04	08.04.20	PRF	SGR	Minor revisions as clouded.
03	27.03.20	PRF	DPM	Latest topographical survey added. Department A Pulp Storage drainage amended.
02	09.03.20	PRF	DPM	Generally updated. Issued for Tender.
01	25.02.20	PRF	DPM	Drainage and Manhole references updated.

For continuation see drawing No 57300_OVE_7603

For continuation see drawing No 57300_OVE_7605



For continuation see drawing No 57300_OVE_7606

2019
S 10

For continuation see drawing No 57300_OVE_7604

KEY FIRE COMPARTMENTS

FIRE MAIN COMPARTMENT

FIRE SUB COMPARTMENT

SMOKE COMPARTMENT

KEY MATERIALS

REINFORCED CONCRETE

BRICKWORK

PLASTERBOARD

EXISTING BUILDING

PRECAST CONCRETE ELEMENT

PRECAST CONCRETE ELEMENT

HEAT INSULATION RIGID

DEMOLITION

HEAT INSULATION SOFT

SANDWICH PANEL

GLASS

KEY ROOM

TFF = TOP FINISH FLOOR

TRF = TOP ROUGH FLOOR

A = AREA

P = PERIMETER

RH = ROOM HEIGHT

CH = CLEAR HEIGHT

TLP = TOP LEVEL PARAPETE

BLL = BOTTOM LEVEL LINTEL

TL = TOP LEVEL

BL = BOTTOM LEVEL

Diagram showing room layout with TFF, TRF, A, P, RH, CH, TLP, and BLL labels.

Notes

This drawing is to be read in conjunction with all relevant drawings and the specification.

Do not scale this drawing.

All dimensions are in millimetres.
All levels are in metres.

The contractor is responsible for the accuracy of the setting-out on site and the fabrication of materials prior to construction.

All work to be carried out in accordance with the building regulations and all relevant British Standards and codes of practice.

REFERENCE DOCUMENT				
09				
08				
07				
06				
05	28.08.20	PRF	SGR	Construction Issue. Updated to suit latest BHM layout.
04	14.04.20	PRF	DPM	Amended to show Entrance Road no longer part of this contract.
03	27.03.20	PRF	DPM	Latest topographical survey added.
02	09.03.20	PRF	DPM	Generally updated. Issued for Tender.
01	25.02.20	PRF	DPM	Drainage and Manhole references updated.
INDEX	DATE	DRAWN	CHECKED	MODIFICATION

MILL SITE ±0.00m = 75.15 AOD (above ordnance datum)

WEPA UK BRIDGEND

CONTENT OF PLAN

GENERAL/OVERVIEW

DRAINAGE & DUCTS LAYOUT - SHEET 6

PHASE

FOR CONSTRUCTION

PROJECT NO.

119003

SCALE

1:200

DRAWN

PRF

DATE

30.01.2020

PLAN NO.

57300_OVE_7605

INDEX

05

CHECKED

DPM

SIZE

A1

PLAN NO. EXT.

BHM INGENIEUR - ENGINEERING & CONSULTING GMBH

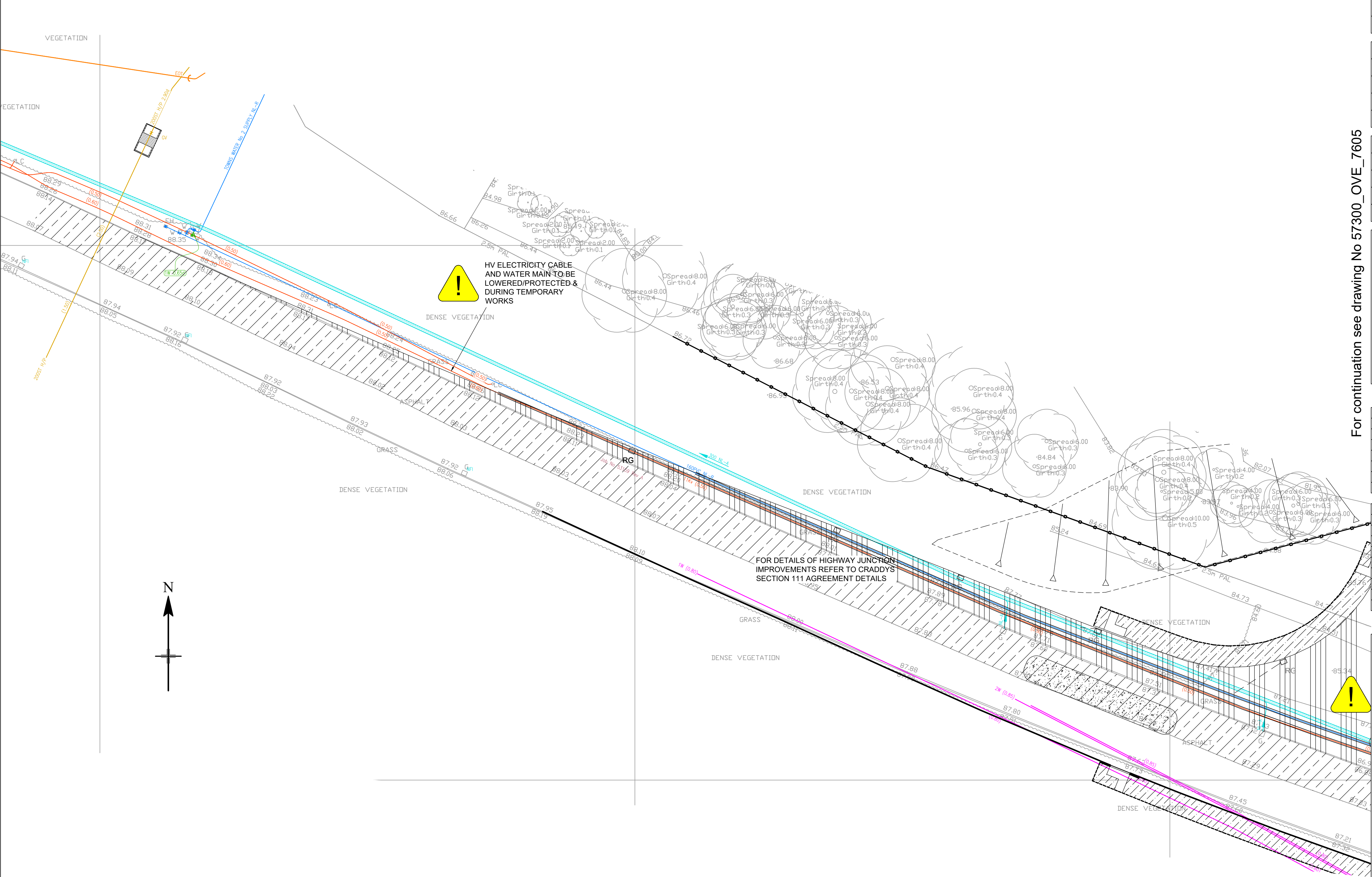
Runstraße 90, 6800 Feldkirch, Austria, Telefon +43 / 5522 / 46101













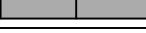
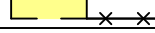
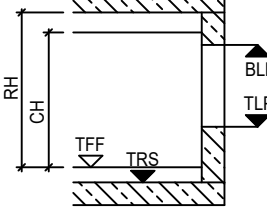
Fax +43 / 5522 / 46104, office@bhm-ing.com, www.bhm-ing.com

KEY TO AMENDMENTS TO EXISTING SERVICES

D denotes service to be Diverted
I denotes service to be Investigated
R denotes service to become Redundant
R? denotes service to become Redundant

Services shown on this drawing have been surveyed by Substight Surveys Ltd. using a combination of electromagnetic techniques and ground penetrating radar. The results are not infallible and trial excavations should be carried out to confirm service identification, positions and depths. The completeness of the underground services information is not guaranteed.



KEY FIRE COMPARTMENTS			
 FIRE MAIN COMPARTMENT		 FIRE SUB COMPARTMENT	
		 SMOKE COMPARTMENT	
KEY MATERIALS			
 REINFORCED CONCRETE	 PRECAST CONCRETE ELEMENT	 HEAT INSULATION SOFT	
 BRICKWORK	 PRECAST CONCRETE ELEMENT	 SANDWICH PANEL	
 PLASTERBOARD	 HEAT INSULATION RIGID	 GLASS	
 EXISTING BUILDING	 DEMOLITION		
KEY ROOM			
TFF = TOP FINISH FLOOR	RH = ROOM HEIGHT	TL = TOP LEVEL	
TRS = TOP ROUGH SLAB	CH = CLEAR HEIGHT	BL = BOTTOM LEVEL	
A = AREA	TLP = TOP LEVEL PARAPETE		
P = PERIMETER	BLI = BOTTOM LEVEL LINTEL		

Notes

This drawing is to be read in conjunction with all relevant drawings and the specification.

Do not scale this drawing.

All dimensions are in millimetres.
All levels are in metres.

The contractor is responsible for the accuracy of the setting-out on site and the fabrication of materials prior to construction.

All work to be carried out in accordance with the building regulations and all relevant British Standards and codes of practice.

REFERENCE DOCUMENT					
09					
08					
07					
06					
05	28.08.20	PRF	SGR	Construction Issue.	
04	14.04.20	PRF	DPM	Amended to show Entrance Road no longer part of this contract.	
03	27.03.20	PRF	DPM	Latest topographical survey added.	
02	09.03.20	PRF	DPM	Generally updated. Issued for Tender.	
01	25.02.20	PRF	DPM	Drainage and Manhole references updated.	
INDEX	DATE	DRAWN	CHECKED	MODIFICATION	

KEY TO AMENDMENTS TO EXISTING SERVICES

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MILL SITE $\pm 0.00m$ = 75.15 AOD (above ordnance datum)

WEPA UK BRIDGEND

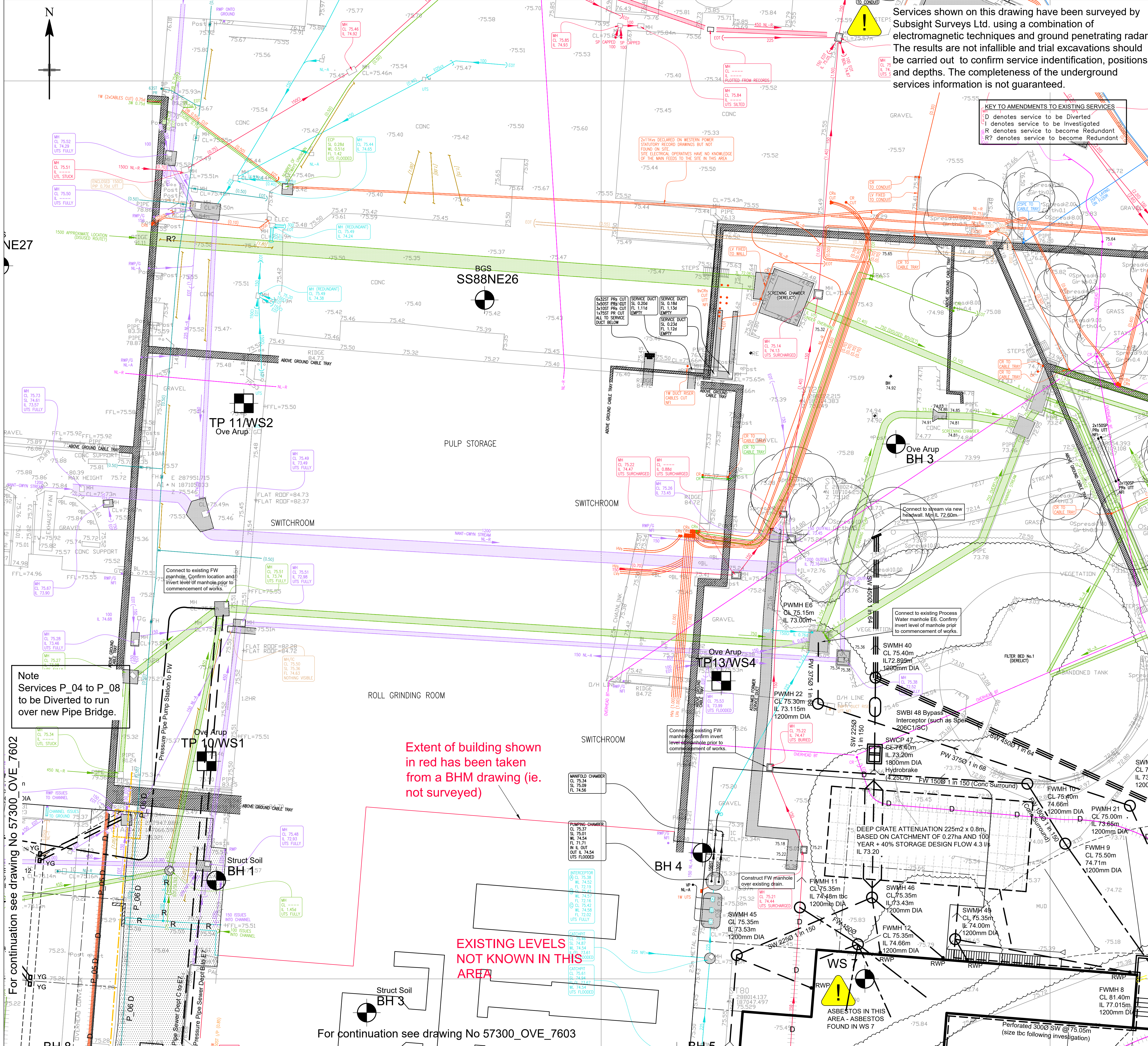
CONTENT OF PLAN GENERAL/OVERVIEW

DRAINAGE & DUCTS LAYOUT - SHEET 7

PHASE FOR CONSTRUCTION

PROJECT NO.	119003	SCALE	1:200	DRAWN	PRF	DATE	30.01.2020
PLAN NO.	57300_OVE_7606	INDEX	05	CHECKED	DPM	SIZE	A1

PLAN NO. EXT.	
BHM INGENIEURE - ENGINEERING & CONSULTING GMBH Runastraße 90, 6800 Feldkirch, Austria, Telefon +43 / 5522 / 46101 Fax +43 / 5522 / 46104, office@bhm-ing.com, www.bhm-ing.com	



KEY FIRE COMPARTMENTS

FIRE MAIN COMPARTMENT

FIRE SUB COMPARTMENT

SMOKE COMPARTMENT

KEY MATERIALS

REINFORCED CONCRETE

BRICKWORK

PLASTERBOARD

EXISTING BUILDING

PRECAST CONCRETE ELEMENT

PRECAST CONCRETE ELEMENT

HEAT INSULATION RIGID

DEMOLITION

HEAT INSULATION SOFT

SANDWICH PANEL

GLASS

KEY ROOM

TFF = TOP FINISH FLOOR

TR5 = TOP ROUGH SLAB

A = AREA

P = PERIMETER

RH = ROOM HEIGHT

CH = CLEAR HEIGHT

TLP = TOP LEVEL PARAPETE

BL = BOTTOM LEVEL

TL = TOP LEVEL

BL = BOTTOM LEVEL

Notes

This drawing is to be read in conjunction with all relevant drawings and the specification.

Do not scale this drawing.

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All levels are in metres.

The contractor is responsible for the accuracy of the setting-out on site and the fabrication of materials prior to construction.

All work to be carried out in accordance with the building regulations and all relevant British Standards and codes of practice.

REFERENCE DOCUMENT				
09				
08				
07				
06	28.08.20	PRF	SGR	Construction Issue. Updated to suit latest BHM layout.
05	30.04.20	PRF	DPM	Note amended + minor amendment to drainage.
04	08.04.20	PRF	SGR	Department T removed.
03	27.03.20	PRF	DPM	Latest topographical survey added. Services amended.
02	09.03.20	PRF	DPM	Generally updated. Issued for Tender.
01	25.02.20	PRF	DPM	Drainage and Manhole references updated.
INDEX	DATE	DRAWN	CHECKED	MODIFICATION

REFERENCE DOCUMENT				
09				
08				
07				
06	28.08.20	PRF	SGR	Construction Issue. Updated to suit latest BHM layout.
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03	27.03.20	PRF	DPM	Latest topographical survey added. Services amended.
02	09.03.20	PRF	DPM	Generally updated. Issued for Tender.
01	25.02.20	PRF	DPM	Drainage and Manhole references updated.
INDEX	DATE	DRAWN	CHECKED	MODIFICATION

WIPA UK BRIDGEND

GENERAL/OVERVIEW

DRAINAGE & DUCTS LAYOUT - SHEET 8

FOR CONSTRUCTION

PROJECT NO. 119003

PLAN NO. 57300_OVE_7607

PLAN NO. EXT.

SCALE 1:200

INDEX 06

DRAWN PRF

CHECKED DPM

DATE 30.01.2020

SIZE A1

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