



Civil & Structural Specification/Scope of works

Project: Relining existing flat roof at Cork College of FET – Mallow Campus which includes the insulation of the same roof.

Client Details:

School Name	Cork College of FET – Mallow Campus
School Address	West End, Mallow, Co. Cork.
Eircode	P51 P732
Contact Name	Paul Murphy, Principal
Contact Number	022 43309
Contact E-mail	paul.murphy@corketb.ie

Our Ref: 25/7111

Date: 26th August 2026

Revision: 1

Prepared by: Tim Lenihan

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_Toc198134036



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Attachments:

- A. Photographs
- B. Specification of Insulation (Unilin)
- C. ISHA (Safe Works at Height/roofs)
- D. Drawing of pump house and relevant information
- E. Drawings
 - a. Existing roof layout 7111-01
 - b. Elevation drawing 7111-02
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 - d. Site Layout 7111-04



1. Introduction / Background

Mallow Campus is a well known and reputable education facility based in Mallow. It is under the umbrella of Cork Education Training Board (Cork ETB).

Over the years the flat roof serving the main block fronting onto the street has been persistently leaking. It has been agreed to reline same. This is indeed regrettable as the roof itself is not very old given the school was built in the 1950's or thereabouts. This roof has been relined approximately three times. Most recent works were carried out approximately twelve to twenty years ago.

It is hoped that the proposed works will perform better than previous works and will provide at least 25/30 years leak free roof.

2 Demolition Works/Enabling works

Existing roof is approximately 8.5m over ground level and access scaffolding will need to be erected to access the roof. The presumed location is shown on the attached drawings. This will need to be properly secured and tagged. It is clear that this scaffolding will need to be inaccessible out of work hours. Heras Fencing is therefore required around the scaffolding outside of work hours.

All safety signage to be erected along with welfare facilities for staff.

Main obstacle will be the removal of the water tank from the roof. This is a large water tank which would be typical of buildings of this age and nature. This tank will need to be drained and this draining process will need to be carried out by the plumber (Micheal Walsh Plumbing).

When the tank is drained this tank will need to be cut up on site and taken away using a teleporter and disposed of in a proper manner.

Pipes feeding to and from the tank will need to be removed. These are shown on photographs and drawings.

Stubs supporting the tank which are clearly attached to the hard deck of the building will also need to be removed below the roof line down to the hard deck.

In summary, no remnants of the tank will be left after works and the roof deck will be a very clean flat deck suited to proper placement of insulation.

Roof lining (single ply Trocal and bitumen layer) will also need to be removed from the Asphalt original lining (original lining to be left as is to protect accommodation below) . Invasive inspection was carried out and it would appear that there are three linings in place. One was the original Asphalt roof (to be left as is), second was a bitumen lining over the



Asphalt and third was a single ply PVC lining. In summary, top two will need to be removed and disposed of in a proper fashion.

Hard deck below is presumed to be a woodwool type surface which was typically used at the time of construction. Photographs were taken from the underside but exact makeup of the hard deck is not critical in this case. It is presumed that it is more than capable of taking the subjected loads which it has been carrying for the last 70 years or so.

Plumbing works relating to the replacement of the tank will be carried out by a separate contractor and is part of a separate contract. It is not part of this contract.

The pump house needed for water tank and the pumps will need to be erected and this is part of this contract. Location of this pump house is not certain. This will be discussed below.

During works it is clear cables will be strung along the roof which they presently are. These will need to be tied up or removed. Electrician to be contacted on site to ensure wires are disconnected during works.

3. New Roof

Roof firstly needs to be insulated and it is proposed to use 'slope to falls' insulation board. This is specified in attachment by Unilin. This will ensure that there will be no ponding on the roof and the roof will be compliant with Part L of the Building Regulations. This insulation will be properly attached to the hard deck below using proper fasteners etc.

Roof lining will then be applied. This again will be a single ply PVC membrane.

Gutters at the leading edge of the roof will need to be replaced and again this will need to be priced for.

It is noted that the roof is in two decks and the higher deck and the lower deck will need to be reroofed.

Flashing is also a major issue as flashing has broken down in certain parts of the existing roof. It is proposed that all the flashing should be done anew however, this may be discussed on site.

It is suggested that the use of the PIR insulation (slope-to-falls) will increase the height of the roof and the existing flashing will be defunct and not usable. It is recommended that tenderers include the complete re-flashing of the wall with the roof deck. Details of this are clearly shown on attached drawings.

Facia board detail is not certain in this instance. However, it is presumed that it will be possible to secure this to the hard deck in some manner. Gutter to carry the water will be attached to facia board.

Above work is to be quoted as a P.C. sum (provisional cost) of €86,000 + Vat @ 13.5% (€97,610)

Preferred supplier is Bauder Ltd.

4. Pump House

As stated, removed tank will need to be replaced by pumped water supply system. This will simply be in the form of two pumps in a pump house which will be supplied by water from the mains via a storage tank. Water will then be pumped back into the school system i.e. toilets and taps etc. Again, this is part of a separate contract. The likely contractor in this instance is Micheal Walsh Plumbing of Kanturk, Co. Cork 087 966 5248.

Exact location of the pump house is yet to be decided however, it is clear that it will be placed on a concrete surface. This concrete will need to be dug up and a proper ring beam put around the line of the wall to support the shed. Details of this are attached in the specification.

5. Summary

It is hoped that the above will enable any perspective contractor to price works. It is very clear that this is very dangerous work and safety will be paramount. The attached Preliminary Health and Safety Plan should alert persons to any danger.

It is very clear that the scaffolding is not required in this instance as it would simply not be practicable to erect scaffolding for fall protection. It is suggested that a horizontal fall protection system and lanyards should be adequate in this instance.

Wire rope should be anchored to the parapet wall which should be more than capable to taking the subjected loads. Again, this system will need to be commissioned and signed off by a reputable and competent person.

Signed:


Tim Lenihan
Chartered Engineer



View of Building Block to be worked on



View of building to the rear with temporary flat roof edge protection visible.



View of existing roof. Single Ply PVC



View of ponding & temporary flat roof edge protection



View of present roof lining



View of faulty flashing detail



View of underside of roof hard deck from inside



View of water tank to be removed with stubs clearly visible. Stubs and tank to be removed along with pipe work from tank.



To be removed in total



Insulation Close up of roof build up Asphalt Bitumen Single Ply TPO
(to remain)



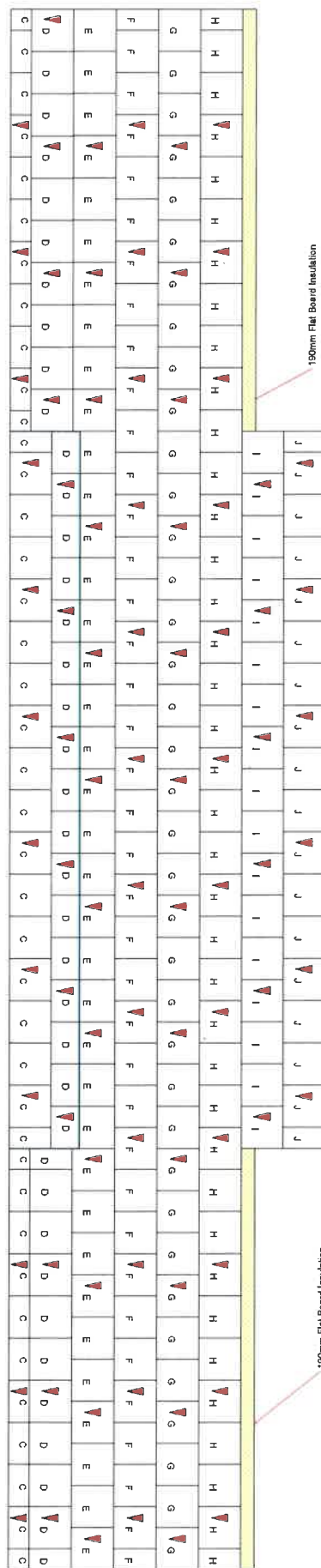
Second view of tank to be removed



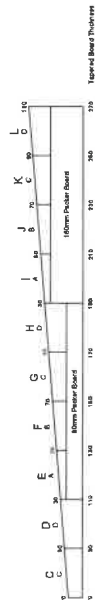
View of roof to be relined



Pipe work to be taken down and disposed of

[illegible]

Material: TRMG
Multi Layered Tapered Build Up Section - 1:60
(Not To Scale)



Tapered



Contact
tech.ui@unilin.com
046 906 6050
0371 2221055

	Gutter insulation
	Flat Insulation
	Mitre-boards
	Directional Arrows

TAPERED 1:60

Project Title

Project Title	TR260208
Drawing Revision	Mallow Campus Rev 02
Date	10/08/2026
Scale	Not to Scale



Safe Work at Height - Roofs

A Simple Guide for Clients

The guidance given in this document is intended as general advice based on present understandings of the Regulations, the 2005 Act and HSA's publications. While legal advice has been sought and taken into account in preparing the guide, the advice given should not be regarded as a legal interpretation of the Regulations or of the Act (No. 10 of 2005). Advice given here must be considered in the context of professional judgement being exercised by competent persons; it is not intended to provide the definitive approach in any situation. In all circumstances those best placed to decide on the appropriate action will be the parties undertaking the particular risk assessment and resulting control measures. Appropriate legal and insurance advice should be sought as necessary.

What is ISHA?

The Irish Safety at Height Association (ISHA) was formed by a number of companies, Skyway Safe Access Equipment, Brandon Agencies, Bruce Shaw Safety Management and Garland Safety Management with the aim of promoting safe work at height practices in Ireland.

Introduction

The purpose of this guide is to inform clients (i.e. building owners, facility managers, etc.) of the issues surrounding employees, suppliers or sub-contractors who will be working at height on buildings, with a particular focus on building roofs. The guide also aims to outline the legislative duties placed on clients and those in control of the workplace with regard to working at height. Separate guides will be made available for other working at height topics.



Why must we consider safety at height?

Since working at height is a dangerous activity there are moral and ethical reasons to do so. Over the past ten years a significant proportion of all construction related fatalities have been attributed to falls from height. Given the definition of construction is so broad this covers a vast array of activities being carried out by individuals at height in Ireland on a daily basis. Legislation is also in place that requires everyone involved in the design, construction and maintenance of a building to consider how falls from heights are prevented. The potential consequence of ignoring legislation and/or an operative getting injured, fatally or otherwise, is jail or a hefty fine and a loss of reputation as a minimum. Applicable legislation includes the Safety, Health and Welfare at Work Act 2005, Safety, Health and Welfare at Work (Construction) Regulations 2013 and the Safety, Health and Welfare at Work (General Applications) Regulations 2007. The Health and Safety Authority have also published a Code of Practice For Safety in Roof Works, which came into affect on the 1st of September 2011, which imposes requirements on duty holders

Where do I start?

The most basic requirement of Irish work at height legislation can be summarised in two words **"Risk Assessment"**. You must consider the risks to your employees, third parties on your building, or others working in an area under your control. Upon consideration of the risks you must determine appropriate control measures to be applied and implemented for works at height. You may need help and advice with this process and this is readily available through competent and adequately resourced safety professionals.

Surely, I can pass on my responsibilities?

No – this is a common misconception. Section 15 of the 2005 Act places onerous duties on those in control of the workplace including the access and egress to the workplace. If you are the person in control of the building or work being undertaken, then ultimately the primary responsibility is yours. You are not able to sub-contract your legislative duties. However, employees and other third parties have a role to play as well. Contractor's etc, must have their own insurance, carry out their own Risk Assessment and produce Method Statements for the work. They must provide appropriate training to their direct employees.

Can I simplify the Risk Assessment process?

Yes, there are some key steps that can be taken to ensure an appropriate and comprehensive risk assessment is undertaken and documented. The most fundamental question is to consider – “How often do I or someone under my control need to access my roof or work and what tasks are being undertaken once there?”

To answer the question you must first look at the type of roof you have and what is on it:

1. If you have a flat roof with lots of plant and equipment that needs maintenance regularly then you will need to have different maintenance people up there at different times throughout the year. Therefore a high frequency of access to the roof will be required with a varying degree of tools and spare parts required to be brought to the roof. Given the high frequency of access the possibility of an accident occurring is high, a risk assessment will likely determine that the installation of collective protection measures is required. This means system that protects all persons on the roof, not just an individual, which is in place without requiring user intervention to make it work. This type of system would include a high parapet or permanent guardrails around the edge of the roof.



2. On the opposite end of the scale if you have a curved barrel vault roof with no frequent access requirements (i.e. no plant, smoke vents or rooflights, etc. on it) and the gutters are easily accessed by a mobile elevated working platform (MEWP) from the perimeter of the building, then your risk assessment is likely to conclude that you should restrict access to the roof and adopt a suitable system to maintain the gutters from the safety of the basket of an MEWP. However, if the roof guarantee requires you to clean down the roof at regular intervals, then you may need a permanent safety system.



What do I do for a high frequently accessed roof?

Okay, you have established that you need to do something to improve your roof safety systems based on your initial Risk Assessment.

If you have a high frequently accessed roof with a high chance of a fall similar to item 1 above then the first thing you need to consider is initial access onto the roof. Access must be easily achievable: you cannot access a roof similar to this with a ladder, as operatives will need to carry tools and spare parts to the roof. You must have a stairs (internal or external) leading on to the roof.

The roof edge itself must be protected (i.e. 1100mm high parapet or free standing guardrail system). This is known as “collective protection” as it protects all on the roof area. No special training or equipment is required as the system works “passively”, meaning no measures are required to be taken by the individual to make the system operable. Should a passive collection measure be provided the chance of an accident are low.



What do I do for an infrequently accessed roof?

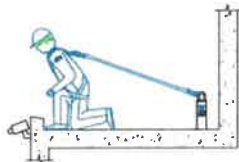
Why not go for collective protective in this case? Given the frequency of access is low, a full passive collective protection system may not be required and the risk assessment may determine that a fall prevention cable system be reasonably practicable. A cable system is a permanent fall prevention system whereby operatives tie off with their harnesses. This is known as "individual protection" and also as being "active" which means the system only covers the person attached to it and it requires users to manually engage the system. With this type of system the risks are much higher as there is so much more that can go wrong. You need to ensure that the equipment is certified and fit for purpose. You must also make sure the operatives are trained in harness systems; they have the right equipment and are competent in its use. Professional safety advice is a must when dealing with individual and active protection.



It also important that, where possible, the fall prevention system implemented is a restraint system rather than an arrest system. A restraint system will stop users from falling over a roof edge. An arrest system will allow a user to fall over the edge and will then stop their fall.



Fall Arrest System



Fall Restraint System

Should an arrest system be employed, then an emergency plan must be in place to rescue the person from their arrested position on the building elevation. Following a fall and arrest a person can die in as little as 20 minutes so it is vital that a plan to rescue the person can be achieved in a shorter period than this. Careful thought and consideration must be given to this emergency plan to ensure it is achievable at all possible fall locations such as inner courtyards or elevations with restricted fire tender or MEWP access.

What if I have an existing roof with no protection?

The safest thing to do is to consider passive collective protection like free standing guardrail systems unless you can show by risk assessment that a lower system will suffice.

What if I am still not sure what is best?

You should engage a competent and adequately resourced professional safety company or consultant to ensure you provide the most appropriate system available to prevent operatives from falling from height. You should ensure that designs prepared for you are by a competent professional. The design should include drawings and specifications backed up with the company's Professional Indemnity insurance.

Remember, if you end up in court the judge will ask whether you carried out a risk assessment and whether you provided "reasonable" protection to operatives working at height. You need the assurance of being able to answer yes to both questions.

Do I have any other duties?

The installation of a new fall protection system constitutes "Construction Work" as defined in the Safety, Health and Welfare at Work (Construction) Regulations 2013. You may therefore be required to appoint a competent and adequately resourced project supervisor for the design process (PSDP) and project supervisor for the construction stage (PSCS) for these works.

In fact, the work that is being undertaken on the roof itself, such as roof repairs, plant maintenance or cleaning may require the appointment of project supervisors, PSDP and PSCS. A client assessment of requirements checklist is available from the Construction Safety Partnership (CSP) to determine if and when the appointments need to be made. This very useful tool can be used to determine the requirements for works being undertaken and also serves as documented evidence of checks being undertaken. This checklist is available here:

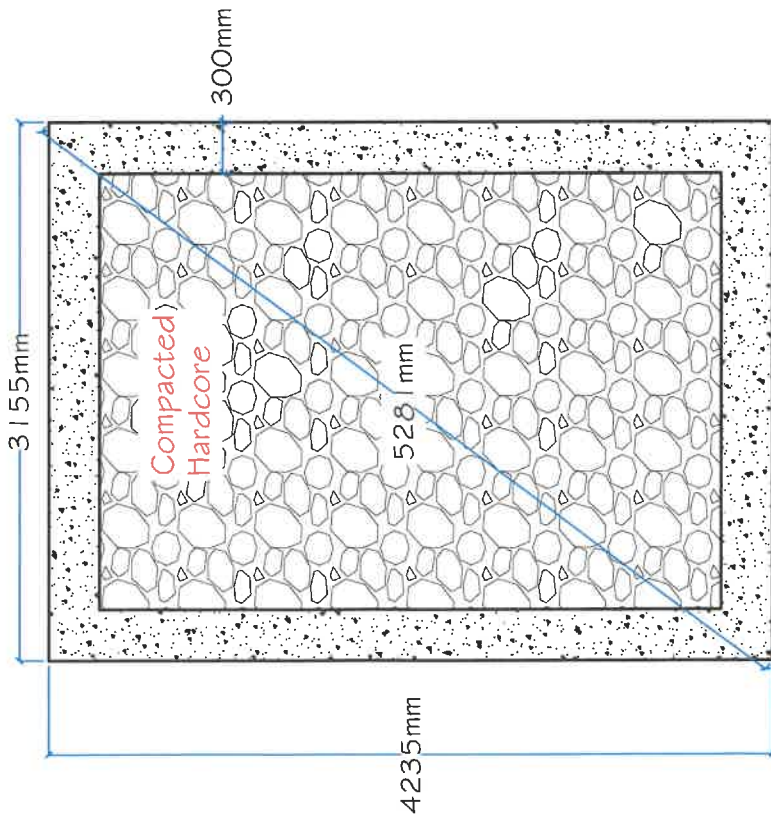
http://www.constructionpartnership.ie/ClientAssessment_001.pdf





01	10/06/26	Issued to client for comment	OS	TL
 T.G. LENIHAN & CO CONSULTING ENGINEERS Kanturk, Co Cork				
JOB LOCATION West End Annabella, Mallow, Co. Cork			CLIENT Paul Murphy C/O Cork of College of FET - Mallow Campus	
TITLE Floor Plan and Elevations of Steel Shed				
SCALE		SCALE 1:100(A4)		
SURVEYED BY		-		
DATE				
DRAWN BY		OS		
DATE		10/06/26		
CHECKED BY		TL		
DRAWING NO		TGL-7111-09		REV NO. 01
REV	DATE	DESCRIPTION	BY	APP

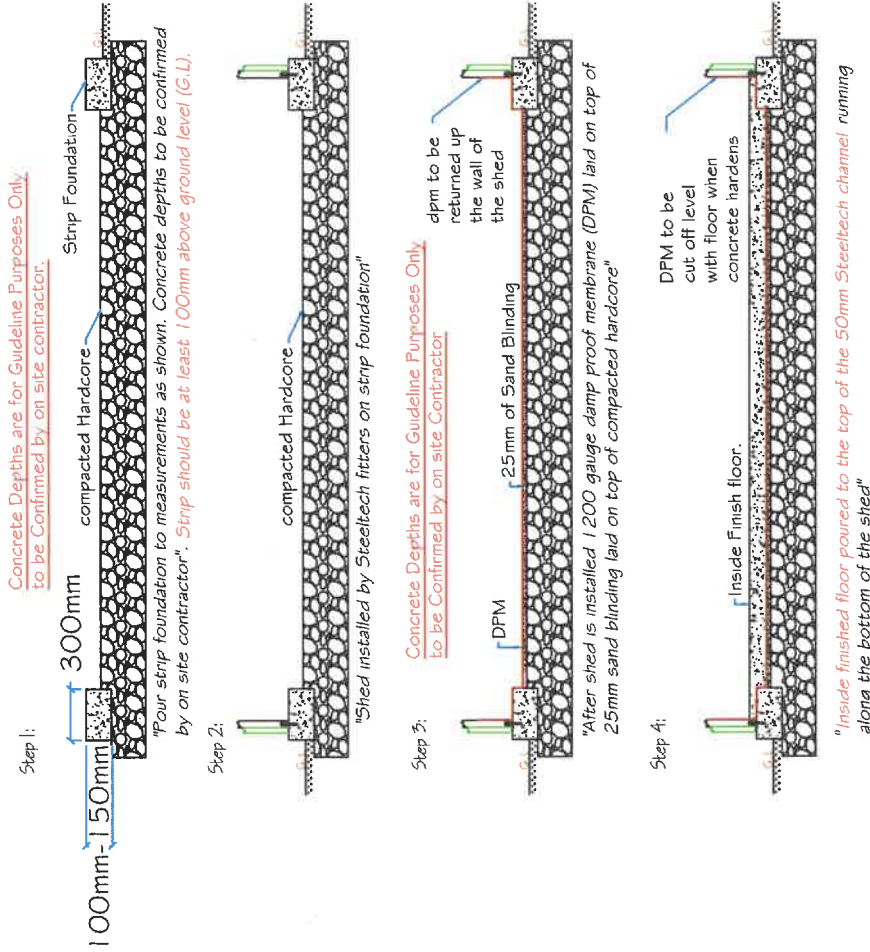
Strip Foundation for 4m x 3m Unit



CONCRETE STRIP AND FLOOR CONSTRUCTION:

FORMWORK FOR STRIP FOUNDATION TO BE FORMED ON COMPACTED HARDWARE MINIMUM DEPTH 100-150MM. 30N (NEWTON) CONCRETE STRENGTH TO BE USED. STRIP FOUNDATION TO BE 100MM ABOVE GROUND LEVEL. AFTER SHED IS INSTALLED INTERNAL CONC FLOOR SLAB (USE 30N CONCRETE ALSO) TO BE POURED ON 1200 GAUGE DAMP PROOF MEMBRANE LAPPED AND SEALED LAID ON 25MM WELL COMPACTED SAND BLINDING LAYER LAID ON WELL COMPACTED GRADE 804 HARDWARE FILL ON WELL GRADED GROUND.

Sequence of Events



Note:

Base dimensions are the minimum required for the shed. Concrete depths are to be confirmed by on site engineer in the interest of clarity we have not done a foundation design. It is the Client/Contractors responsibility to ensure the base is designed and constructed in accordance to the current building regulations.

Project Title:- Strip Foundation for 4m x 3m Unit	Client:-	Drawn By:- Richie Meares	Scale:- N.T.S
Drawing Status:- Construction Stage	Drawing Title:- Concrete base dimensions	Issue Date:- 05-12-2019	Version:- 2
Copyright this drawing is protected by copyright and must not be reproduced in any form without the prior written consent of Steeltech sheds			
Galway Rd, Tuam, Co. Galway Tel: 093 42662 www.steeltechsheds.ie tuam@steeltechsheds.ie			

From: Mary Cummins <marycummins@steeltechsheds.ie>
Sent: Monday 8 June 2026 10:38
To: info@lenihanengineers.com; tim@lenihanengineers.com
Subject: Re: Shed details
Attachments: TG lenihan Engineers Quotation_0001.jpg; Strip Foundation for 4m x 3m unit Version 2.pdf

Hi Tim

Please see the attached quotation

It also includes a pedestrian door in case someone loses the roller door key or breaks it , there would be an alternative

Let me know if this is ok with you

If there are any issues please contact me at 0861838821

Also attaching the base details

This unit has a 2.3 ms eave height, so there should be ample height clearance for the water tank
. also comes with ventilation vents

40mm composite panel

20 year guarantee.

Price is inclusive of delivery and fitting, including VAT, once the foundation is completed to our specifications.

I am more than happy to discuss the base details with whoever is handling it

Kind regards

Mary

On Thu, Jun 4, 2026 at 3:06 PM <info@lenihanengineers.com> wrote:

Dear Mary Cummins,

I hope this message finds you well.

I am currently working on a project and I am interested in purchasing a metal shed with the following specifications:

Size: 3m x 4m

One door (standard single access door)

Additionally, I would appreciate it if you could confirm the internal height of the shed. This is an important requirement for my project, as I need to install a 250-litre water tank and a pump inside the shed, so sufficient vertical clearance is necessary.

I would also be grateful if you could advise on the required base/foundation for this shed, including the recommended dimensions and height. This is important for proper installation and stability.

If possible, please also let me know:



Cork (Bishopstown) Office
Barclay Road
Bishopstown, Co. Cork
T12 CY85



(021) 486 7000



bishopstown@steeltechsheds.ie



www.steeltechsheds.ie

Sales Quotation

No. SQ-005271

Account No: TGL001

Quotation Date: 08 June 2026

Reference: Bishopstown

Manager: Mary Cummins

Remarks:

All amounts are in € as on 08 June 2026

TG Lenihan and Co
O'Brien St
Kanturk
Cork
P51FK19

Phone:

Mobile:

Email: tim@lenihanengineers.com

Item Code	Description	Quantity	Unit	Price/unit	Sale Price
1 4MX002	4m x 3m Rex Goosewing Composite	1.000	Each	6 930.00	6 930.00
	2.3m Eave height				
	Horizontal goosewing exterior walls with liner sheet internally (rex panel).				
	Cladded steel exterior roof with liner sheet internally (KS1000 RW)				
	40mm composite panel insulated.				
	2 no 229mm x 152mm hit & miss vents.				
	1 no. twin skin clearlight				
	1 no. hinged 900mm x 2035mm full panel pvc door.				
	Add 2 1 manual roller door				
	Gutter and downpipes both sides				

Total Excl VAT: 6,105.73

VAT: Amount 824.27

Sales Total Incl VAT 6,930.00

Terms and conditions

This quotation is provided on the basis of our interpretation of your requirements. It may be subject to change if found to contain information that is inaccurate, incomplete or that does not reflect your requirements.
Quotation valid until end of month unless otherwise agreed.

If you wish to contact me regarding any aspect of this quotation my contact details are as follows:

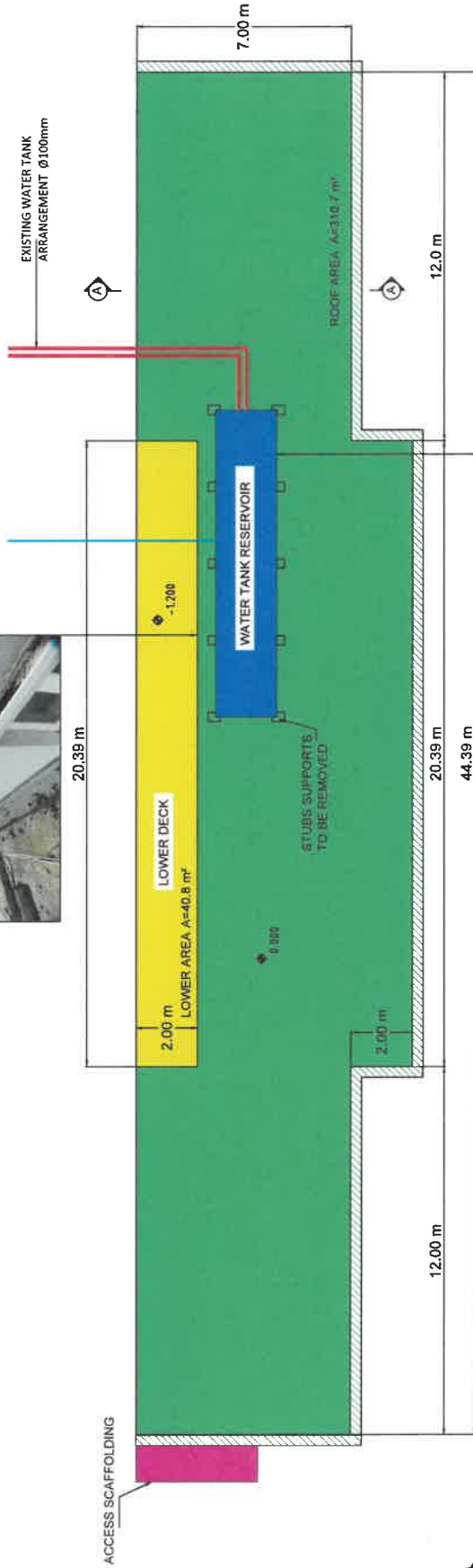
Mary Cummins

Sales Representative

Landline: 021 486 7000

Mobile: 085 1009176

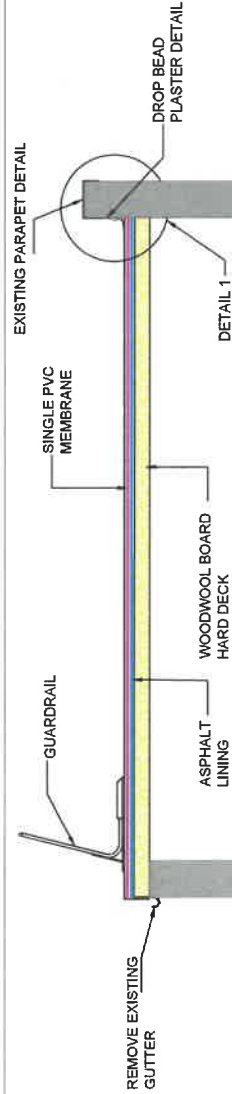
Email: marycummins@steeltechsheds.ie



Existing Plan View of Roof Building

Scale 1:150

TOTAL ROOF AREA A=351.5 m²



Existing Section A-A Roof Building

Scale 1:150

Notes:

- All dimensions in millimetres

REV	DATE	DESCRIPTION	BY
01	11/06/26	Issued for Tender	TL

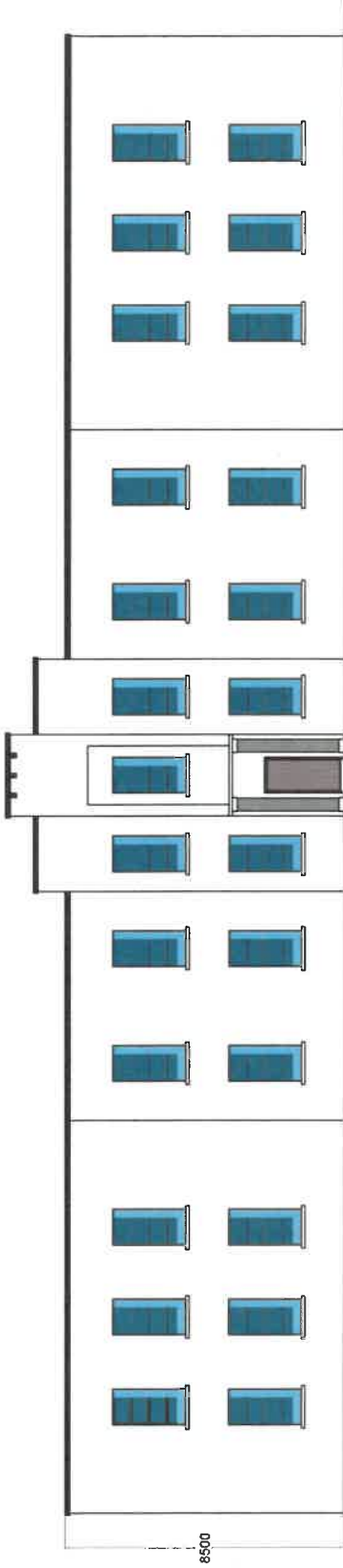
T.G. LENIHAN & CO
CONSULTING ENGINEERS
Kanturk, Co Cork

JOB LOCATION
West End Annabella,
Mallow, Co. Cork

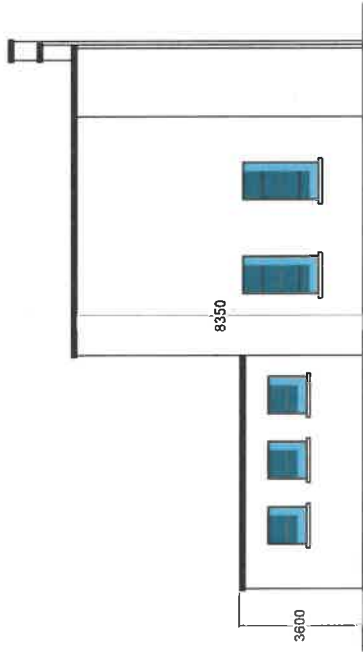
CLIENT
Paul Murphy
C/O Cork of College of FET -
Mallow Campus

TITLE
Existing Plan View of
Roof Building and
Roof Section

SCALE	SCALE 1:150 (A3)
SURVEYED BY	-
DATE	-
DRAWN BY	OS
DATE	11/06/26
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DRAWING No	7111-01
REV. NO.	01



Existing Front (South) Elevation
Scale 1:100



Existing Side (West) Elevation
Scale 1:100

Notes:
• All dimensions in millimetres

SCALE	SCALE 1:150 (A3)
SURVEYED BY	-
DATE	-
DRAWN BY	OS
DATE	11/06/26
CHECKED BY	TL
DRAWING No	7111-02
REV/NO.	01

TITLE
Existing Elevations
Indicative

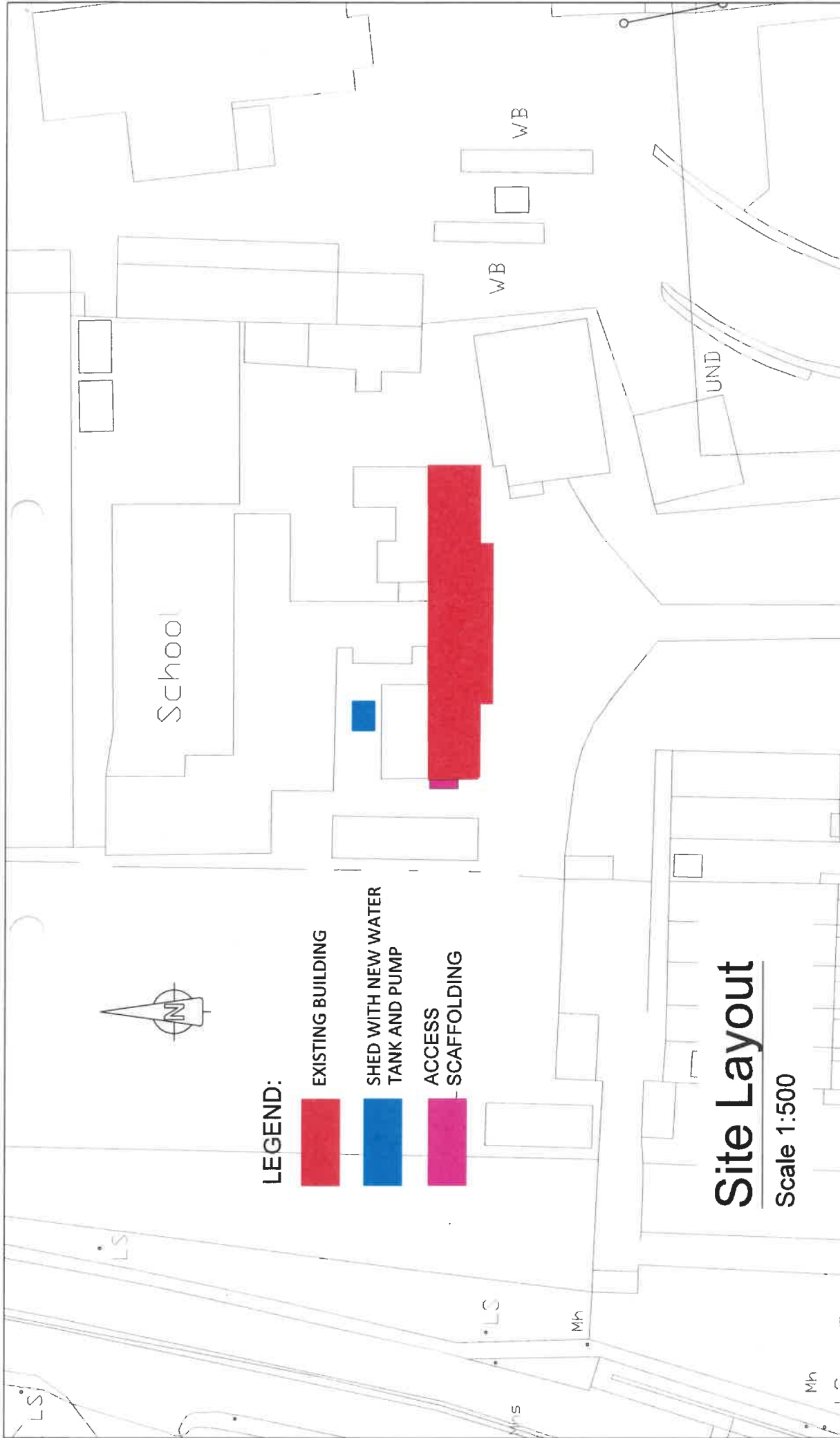
JOB LOCATION
West End Annabella,
Mallow, Co. Cork

CLIENT
Paul Murphy
C/O Cork of College of FET -
Mallow Campus



01	11/06/26	Issued for Tender	OS	TL
REV	DATE	DESCRIPTION	BY	APP

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LEGEND:

EXISTING BUILDING

SHED WITH NEW WATER
TANK AND PUMP

ACCESS
SCAFFOLDING

Site Layout

Scale 1:500

Notes:

- All dimensions in millimetres

Drawings: The drawings are for the information of the client and are not to be used for any other purpose. The drawings are the property of the company and are not to be used for any other purpose. The drawings are the property of the company and are not to be used for any other purpose.

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OS	TL			

T.G. LENIHAN & CO
CONSULTING ENGINEERS
Kanturk, Co Cork

JOB LOCATION
West End Annabella,
Mallow, Co. Cork

CLIENT
Paul Murphy
C/O Cork of College of FET -
Mallow Campus

TITLE
Proposed Site Layout
Scale 1:500

SCALE	SCALE 1:500 (A3)
SURVEYED BY	-
DATE	-
DRAWN BY	OS
DATE	11/06/26
CHECKED BY	TL
DRAWING No	7111-04
REV. NO.	01