

**TORRIDON  
PRIMARY SCHOOL**

**Torridon Primary School**  
Design Feasibility Report



# Contents

- Introduction
- Site Information
- Consultation
- Options Appraisal
- Preferred Option
- Cost
- Summary and Next Steps
- Appendix One – Cost Plan
- Appendix Two – Base Drawings

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# Introduction

John Gilbert Architects was commissioned as part of there SKS Scotland team, to prepare a design feasibility study for the former Torridon Primary School by Torridon District Community Association (TDCA). This study was undertaken between November 2023 and March 2024. Our team consisted of SKS Scotland, John Gilbert Architects and Torrance Partnership.

The initial work is background on the place, building and services. This allows an assessment of risk and condition of the site and building, to be made.

We undertook a visit in November 2023 where we inspected the building, discussed strategies with the client team, consulted the community and drew a variety of options to inform the discussion. As a result of that work we could prepare number of potential options for the building.

Through December and January this was translated into a single preferred option which we have developed, prepared an outline specification and, with Torrance Partnership, prepared budget costs for the preferred option. Through the process we have worked closely with TDCA client team and SKS Scotland business planning team.

The preferred option is renovate the existing building to provide two dwellings and an enterprise / business unit. There would be a new, formalised car park and access to service the building plus the provision of a community park with potential for play space and biodiversity improvements. The research, consultation and discussions all support the demand for these spaces in Torridon village.

This report outlines the work undertaken, preferred proposals, associated budget costs and conclusions reached. This is the starting point of a redevelopment process. As the project moves forward, guidance on the next stages can be found in [Your Buildings, Your Future](#) document.

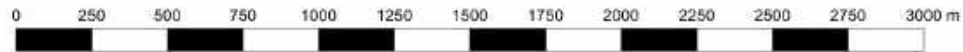








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# Site Overview

Torrison is a tiny village in Wester Ross, in the North West Highlands of Scotland. However, Torrison is also used to describe the mountains, glen, sea and loch of the surrounding area. The name is derived from Gaelic and means "Place of Transference". It is thought that "transference" refers to the layout of the geography in this area.

Torrison village is located on the east end of Loch Torrison in the North West Highlands. Torrison has a population of around 400 (2011 census) taking in the villages of Fasaig, Diabeig, Shieldaig, Kinlochewe, Inver Aligain and Wester Aligain. The A896 connects Torrison village to Kinlochewe, and Shieldaig. It is predominantly a single track road.

The site lies in the centre of the Fasaig (Torrison) settlement and has an elevated position with views west over Loch Torrison.



Aerial photo (from Google Maps 2023)



Overview of Loch Torrison (from Google Maps 2023)



Site Location Plan (OS Mapping)



# Site History and Summary of Engineering

The earliest records we can find of Torridon School start in 1884 from the 1885 OS one inch mapping and notes within *Ordnance Gazetteer of Scotland: A Survey of Scottish Topography, Statistical, Biographical and Historical*, edited by Francis H. Groome and originally published in parts by Thomas C. Jack, Grange Publishing Works, Edinburgh between 1882 and 1885.

The school has been in two distinct parts, the school master's house and a single classroom. At some point between 1903 and 1963 there was an addition at the front for toilets. In the 1990s the school was extended to the rear with additional classroom space plus the flat roofed entrance / store / office.

A management asbestos survey has been undertaken but given the age of the building and date of the potential alterations / extensions, a detailed / intrusive asbestos survey should be undertaken prior to any significant activity in the building (either use or building work).

No engineering studies have been undertaken on the school. At the next stage we suggest the following:

- desktop engineering study by suitably qualified engineer
- asbestos report (intrusive / demolition standard)
- rot report of the whole building

We have been informally informed of boundary issues to the north-west of the site. We have no expertise in this area and suggest that this is resolved by Highland Council prior to any asset transfer.

Historic images sourced from <https://www.rossandcromartyheritage.org/>

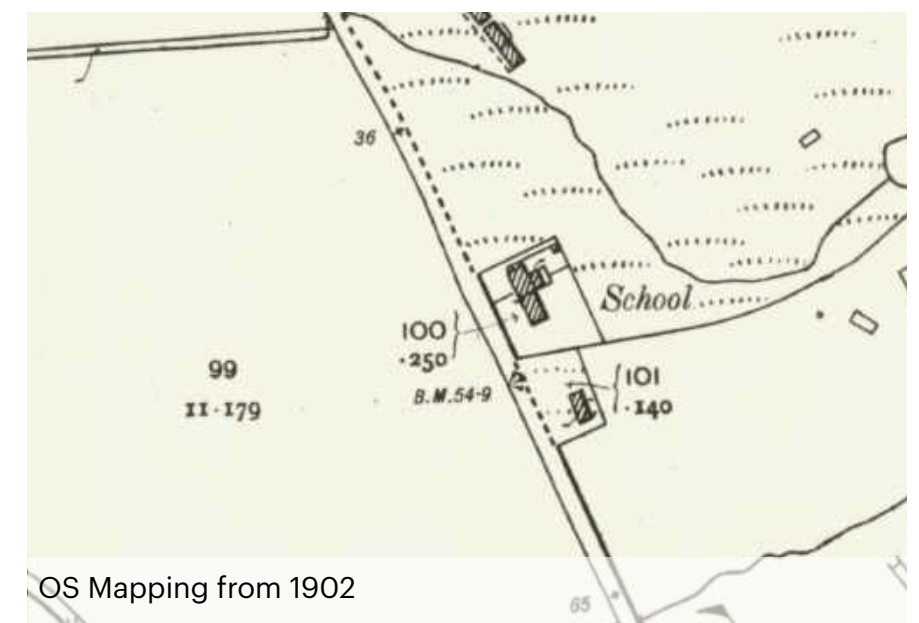
Issue	Notes	Project Risk
Existing Site Use	Former school and school house. Currently mothballed	
Adjoining Uses	Low density housing	Low
Site Exposure	Very severe for wind driven rain.	Medium
Topography	Slopes around 2 to 2.5m from north up to the south (by school house)	Medium
Wayleaves or no build zones	None noted. Unclear on exact legal boundaries to north-west of site.	Medium
Site Investigation	None undertaken to date	Medium
Watercourses	Watercourse to east and north	Low
Flood Risk	SEPA flood maps show no risk of river, coastal or surface water flooding	Low
SUDs Strategy	Soakaway or discharge into burn	Low
Potential for Contamination	No evidence of contamination on site and no reason to suspect high risk.	Medium
Asbestos risk	Management survey says no asbestos risk. Demolition survey required.	Medium
Radon Risk	Online Radon mapping shows less than 1% potential	Low
Coal & Mining Risk	Coal Authority mapping shows no mining issues in the area	Low
Noise	Quiet location, no noise issues noted	Low
Road Access	Road adjacent to west, access formed	Low
Refuse Collection	From road to western side	Low



Alistair Maclean – school photo 1936



OS Mapping 1885 to 1900. Potentially earliest mapping of the school.



OS Mapping from 1902





Buildings, land and access from south-east



Land and building from north



Buildings and cartilage from south-east



Interior of schoolroom



# Planning

	Notes	Project Risk
Adopted Development Plan	WestPlan adopted 2019. Community prepared Torridon and Kinlochewe Community Development Plan in 2023	
Local Plan designation	No designation or proposals within adopted plan	
Current use of the site	Former school and school house. School mothballed since 2012 and house unoccupied since 2021	
Previous planning applications	None on portal since 1998	Low
Conservation area or listed buildings?	No	Low
Pre-application submitted?	No	Low
Local / Major / National application	Local	Low
Trees or tree preservation order (TPO)	Trees on site are owned by Council, therefore protected as if they were TPO	Low
Ecology	Ecology survey and bat likely to be required for planning. Landscape immediately surrounding village of National Importance. Landscape beyond village and associated grazing/corfting of International Importance.	Medium

The school is an unused, existing building and the site has been in use for more than 100 years. Redevelopment of the site is unlikely to be contentious in strategic planning terms.

The adopted Highland Council Plan suggests that housing, community and tourism facility development sites are required within the village but does not specifically designate the school as a site.

The wider area is important from a landscape perspective and there are ecological / bat sensitivities around the building. Prior to a planning application this should be investigated

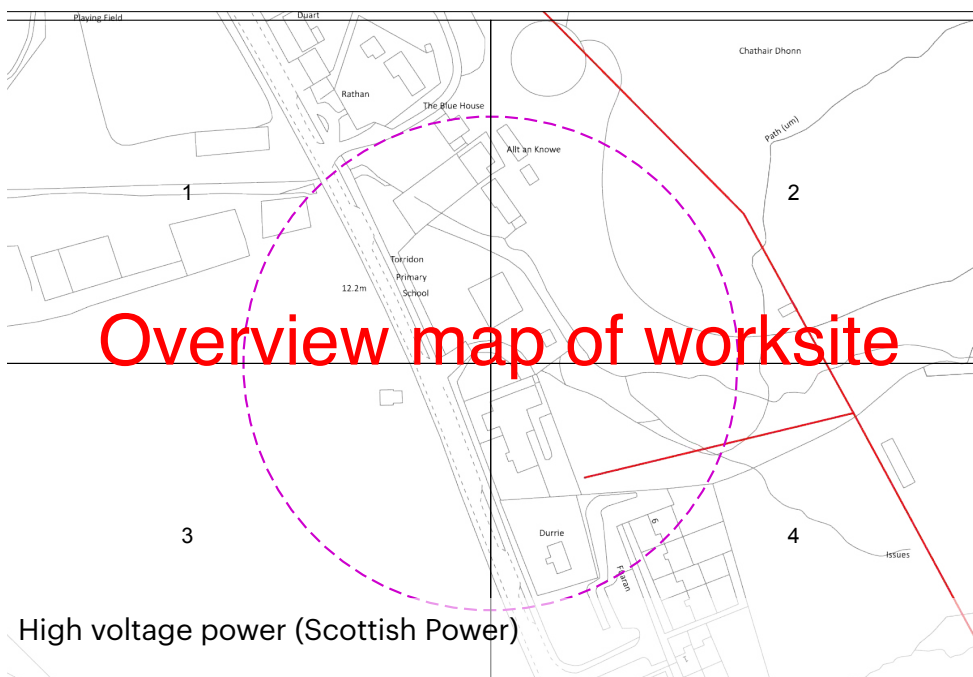
further to ensure any mitigation is taken into account.

# Utilities

Provider	Plans Checked?	Notes	Project Risk
Electricity	Yes	Electricity in building still connected (extreme caution required!). LV shown crossing rear ground and northeast corner of building, terminating in access track HV (11kV) shown outwith site boundary.	Low
Gas	No		
Foul Water	Yes	Mapping obtained, no PDE submitted.	Low
Fresh Water	Yes	Mapping obtained, no PDE submitted. Enters site at site corner boundary to north-east of building and crosses middle of north site landscape. MH noted in access track.	Low
Telecoms	Yes	Mapping obtained. Overhead cables noted on site.	Low
Fibre	Yes / No		High / Medium / Low
Wayleaves		None noted.	Low

Existing building with current electrical, water, sewerage and phone connections. These will need to be checked and potentially upgraded but low risk and low cost compared to other rural sites.







# Building Condition Report

The building was inspected on Thursday 16 November 2023 by Matt Bridgestock, accompanied by SKS and TDCA representatives. The weather was dry, calm and cold (around 0 degrees). There had been no rain in the previous 36 hours. The inspection was carried out during daylight hours.

External access was freely available. Internal access was limited to the school classroom, office and store. Access to the loft over the school classroom was gained via a ladder however there was only limited access to this area due to safety considerations.

## Building External

Externally the building generally appears structurally sound and in reasonable condition for its age.

The roof is slate, with metal flashings, timber fascias and cast iron gutters. There are three chimney stacks and what appears to be the remnants of a bell or ventilation cowl. There are ten PV panels on the western slope of the house element. There is a single roof window into the school class room and a roof light in the office space. There are ten separate pitches to the roof, all appear to be around 40 degrees although measurements were not taken. To the rear / east there is a small area of flat roof which is part of the 1990s extension. The roof pitches to the house have a flare.

The slating of the roof is mainly blue / grey (Ballachulish?) and the slate sizes decrease towards the ridge. There are patched repairs in purple / grey (Welsh?) to the south end of the main roof. We would expect that the slates can be retained and reused in any redevelopment.

The western eaves of the school toilet block have slates that are not oversailing the gutter, this is leading to potential water ingress. This needs to be protected with an additional line of slate or lead soaker.

The flashing and fascias all seem to be in moderate or poor condition, similarly, all of the water goods are corroded and

decaying. We would propose these are all replaced in any redevelopment.

The external walls are masonry and have render / Harling, painted white. All seem to be structurally sound. There is evidence of mortar repairs around the house potentially to deal with damp issues. Without an internal inspection it is difficult to ascertain if this has been successful.

The external windows are timber and mostly in moderate to poor condition as befits their exposure and age. All are intact and are keeping the weather out of the building. Replacement of all external windows should be included in any redevelopment.

There is a timber porch to the west face of the house, this is in poor condition and should be removed.

The condition of the external doors was difficult to assess without access, therefore, replacement of the doors, frames and ironmongery etc should all be included as a precaution in the redevelopment costs.

The current access is not level or to the standard required by either the building regulations or other guidance, therefore re-grading and laying of new paths should be factored into redevelopment proposals.

## Classrooms

Access was available to the classroom section of the building for a limited period. The classrooms were dry, and still contained considerable amounts of school stuff, which hampered the inspection to some extent.

The electricity was still on in this part of the building. Caution should be exercised by anyone taking access to this area in the future, until the electrical installation is checked by an electrician. It does demonstrate that services are available to the building.

The west part of the class rooms has a timber floor, the east part has a solid floor, this coincides with solum vents externally.

Access was taken to the loft via an aluminium ladder. The loft was dry and no major issues were observed. The east and west parts of the roof had two different truss arrangements which coincides with the east being a 1990s extension to the west part. Loft access was limited by school related paraphernalia and shelves. Some roof was also covered by a timber ceiling. No damp / wet areas were observed in the roof and no obvious signs of rot were observed. A further review should be undertaken once the school materials and shelving are removed.

The stub walls between the two classroom spaces appear to be non-structural. A check by an engineer may be needed to confirm but at this stage this offers the option of removing them and creating more space in these rooms.

The store room and office were also full with school paraphernalia but again appeared dry and structurally intact.

The flat roof above the lobby / office space was accessed and there was signs of water ingress and rot. It is clear this is an ongoing issue in this area and likely to indicate rot / decay in the flat roof structure.

## School House

We were not able to access the school house, in person, on our visit on 16 November 2023. We viewed some rooms through the windows and we had a discussion with the former resident.

On Thursday 30 November 2023, we were invited to attend a video survey of the school house conducted by Mat Webster accompanied Craig (site manager from Simpson Builders). Craig was equipped with a ladder and was able to access the loft. The team were permitted 20 minutes of access. JGA attended via video which was of reasonable quality throughout.



Key findings from the video inspection:

- There has been a water leak around the water tank in the loft. There is potentially some localised damage (including plasterboard ceiling has fallen down) but the leak has been stopped and there is no ongoing accelerated deterioration due to this.
- The roof is slated, with sarking. No felt between the slates and sarking. The sarking and timbers in the roof are reported as generally dry and reasonable condition.
- The joists run from the front wall to back wall with no obvious structural walls.
- The ceiling in the cottage area has been dropped by around 400mm. The lath and plaster ceiling remains in place with a newer plasterboard ceiling below. The reason for this is unknown but there seems to be some insulation in some parts of this space.
- The ceiling height in the school house is circa 2,570mm above finished floor level.
- The floor is timber throughout the school house.
- The house has been plasterboard lined throughout. Unclear if the lath and plaster has been retained behind or if it has been removed. We were unable to ascertain if the plasterboard was insulated.
- Within the school house surface mould was observed in a number of places but was consistent with a damp, unheated home left for empty for a period of years.
- The house and the school kitchens have higher ceilings, at approximately 2,900mm above finished floor level.
- The school toilet block is lined with timber panelling, this has surface mould but is consistent with lack of use of the building for 10+ years. Part of the floor here is timber and part is concrete.
- Electric and wifi seemed to still be working in this part of the building.

The school house seems to be heated by a wet heating system with radiators. We have assumed this is fed by the electric

clarifier in the roof space of the school building. There is a multi fuel stove which uses the central chimney.

We have assumed the hot water is also heated via the electric boiler in the roof space of the school building.

It is important to formally assess the existing ventilation system because this is such a critical aspect of managing future risks.

On this basis it is important that a ventilation strategy is

Existing ventilation shall be assessed as inadequate for any improved dwelling if any or more of the following are apparent:	
Evidence of condensation and mould in the dwelling	Extensive surface mould evident in some rooms
No ventilation system, or system is incomplete / not functional	Unable to confirm ventilation system is operational
No undercuts of min 10mm beneath all internal partition doors	Unable to confirm.
No provision of purge ventilation of each habitable room	Opening windows for each habitable room.

specified which is proportional to the risks identified and the improvements proposed. Note that in any retrofit where insulation is increased and airtightness improved the risk of excess moisture is increased.

Retrofit of this part of the building should include:

- We propose that the school house roof is stripped, timber and membrane replaced and the slate reused to reslate. As noted previously, new flashings, fascias, verges and rainwater goods will be required. The roof should be insulated internally, maintaining the ventilation to the loft space.
- Removing the floor and creating a new, insulated and waterproof concert slab is likely to be the optimal solution for this element.
- We propose they are insulated with an insulated render system and the drainage to the external base is resolved. More detailed assessment is needed here, once access is secured.

- Given the poor condition observed of the internal fabric, we are currently proposing that all internal doors, fittings and timber is replaced as part of the redevelopment.
- Chimneys provide a significant thermal bridge for the building. It is noted that one is on poor condition and two are in moderate condition. It may be that removing the chimneys and slating over the top may offer a more robust roof line and better thermal performance of the building
- All of the services in this part of the building should be replaced including electric, heating, hot water and fresh water.

It should be noted that the findings of the video inspection should be verified by inspections, investigations and reporting at the next stage of the project.

## Landscape

Externally the land mostly consists of rough grassland. There are a number of timber structures on the site, all show signs of decay and their removal should be considered to prevent increasing health and safety risks to the public.

The former play park area is formed with log retaining walls and infilled with material to form a level area. The timber retaining walls were clearly weeping water on my visit and there are considerable areas of decay. A structural engineer may be able to offer advice on ensuring the security of these walls but in the absence of this advice, I would strongly consider removing this feature to prevent increasing risk to the public.

The stone walls around the site seem to be in reasonable condition. A review by a stonemason during any redevelopment will help maintain the walls for the long term. The post and wire fencing should all be replaced, as required by the design proposals. The access track is informal and poor quality. This should be replaced, as required by the design proposals, with well drained and well constructed surfaces.

The metal gate at the front of the school is a lovely design and seems quite solid. Whilst it needs some renovation and repainting, this should be retained on the site.

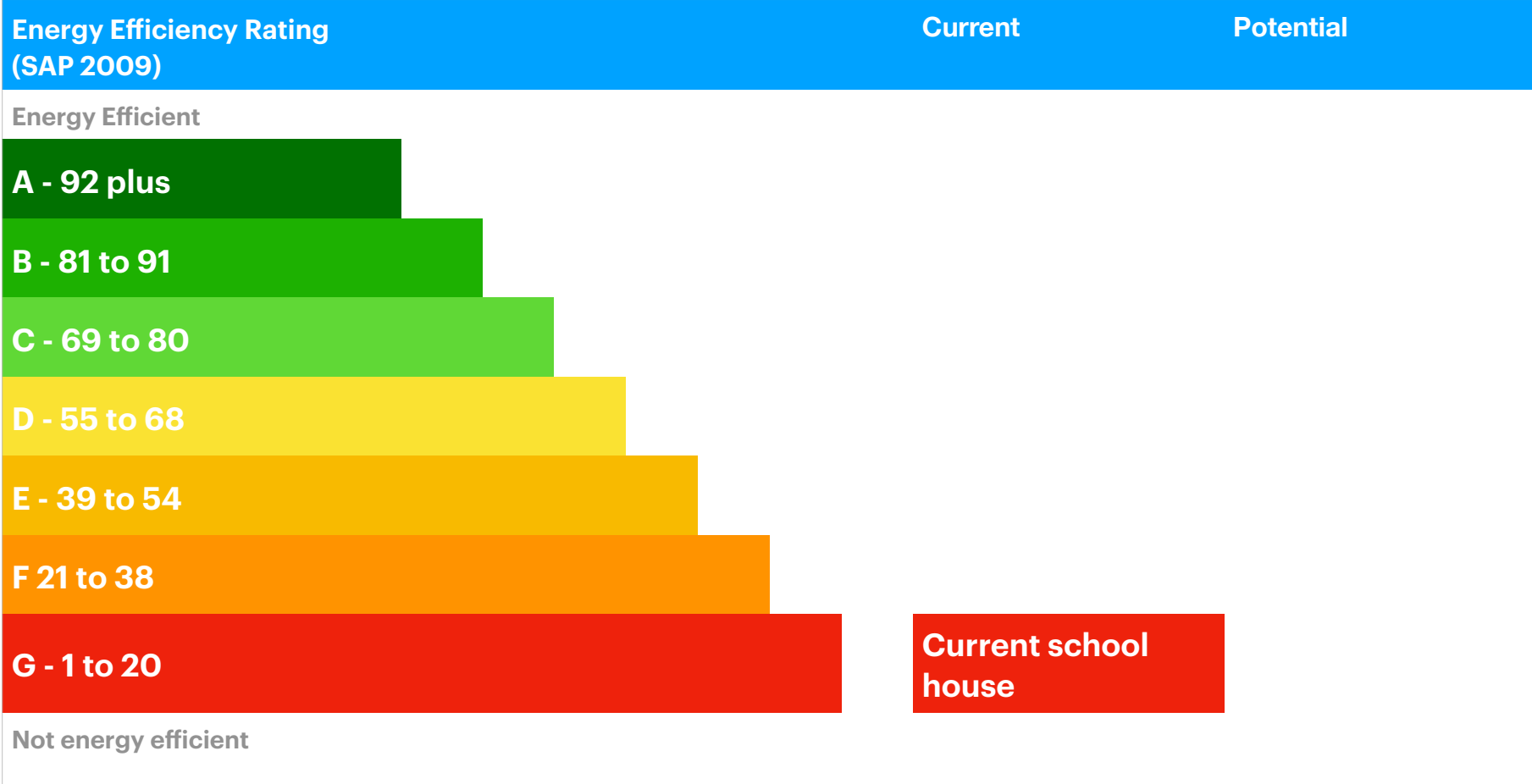


# Existing Energy Performance

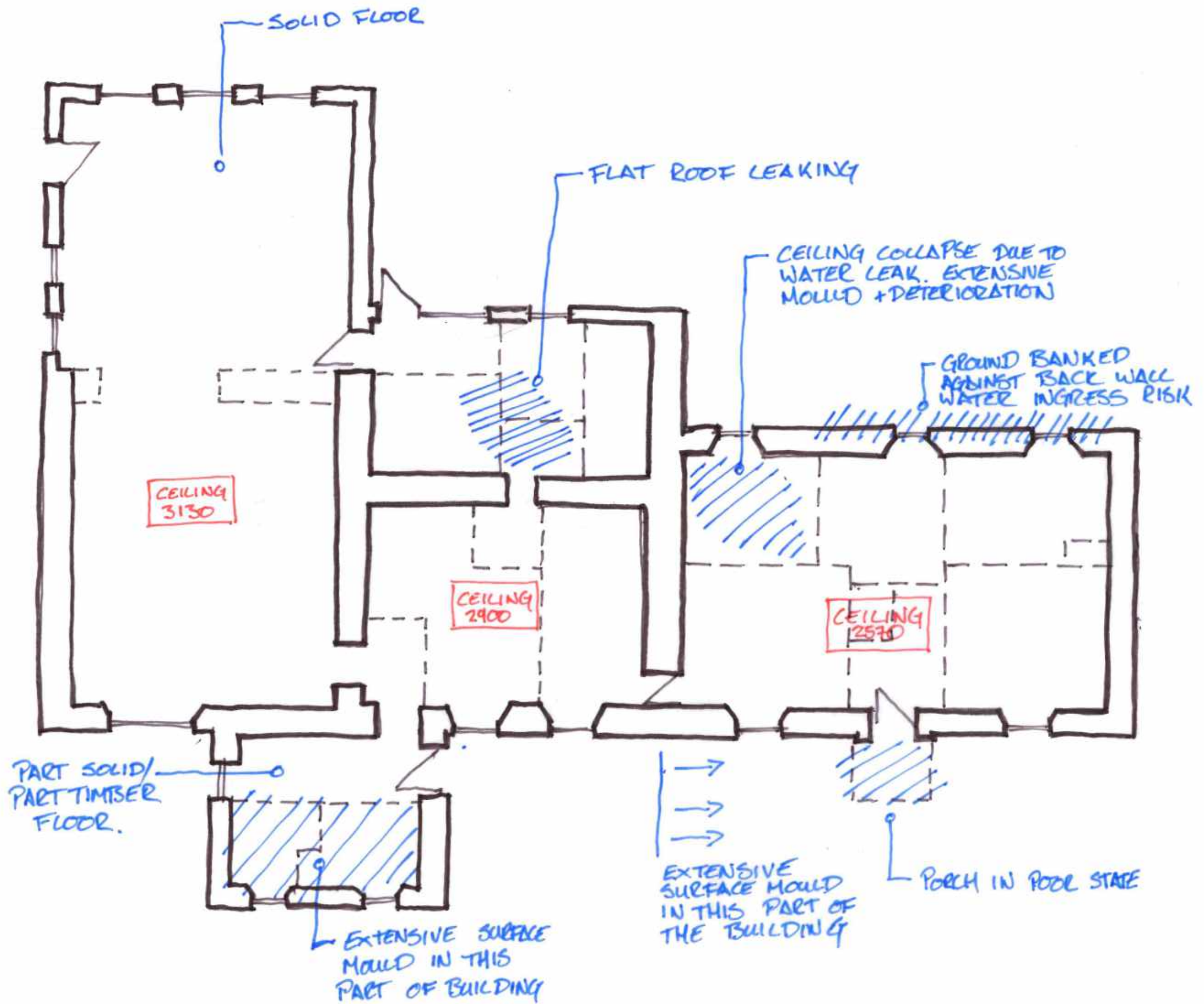
We have calculated the energy performance of the existing school house using information assumed above and SAP 2009.

Whilst the building has PV panels on the south facing roof, it is essentially uninsulated with poor fabric and appears to be heated by direct electric and a multi fuel stove.

The chart indicates the current energy performance.











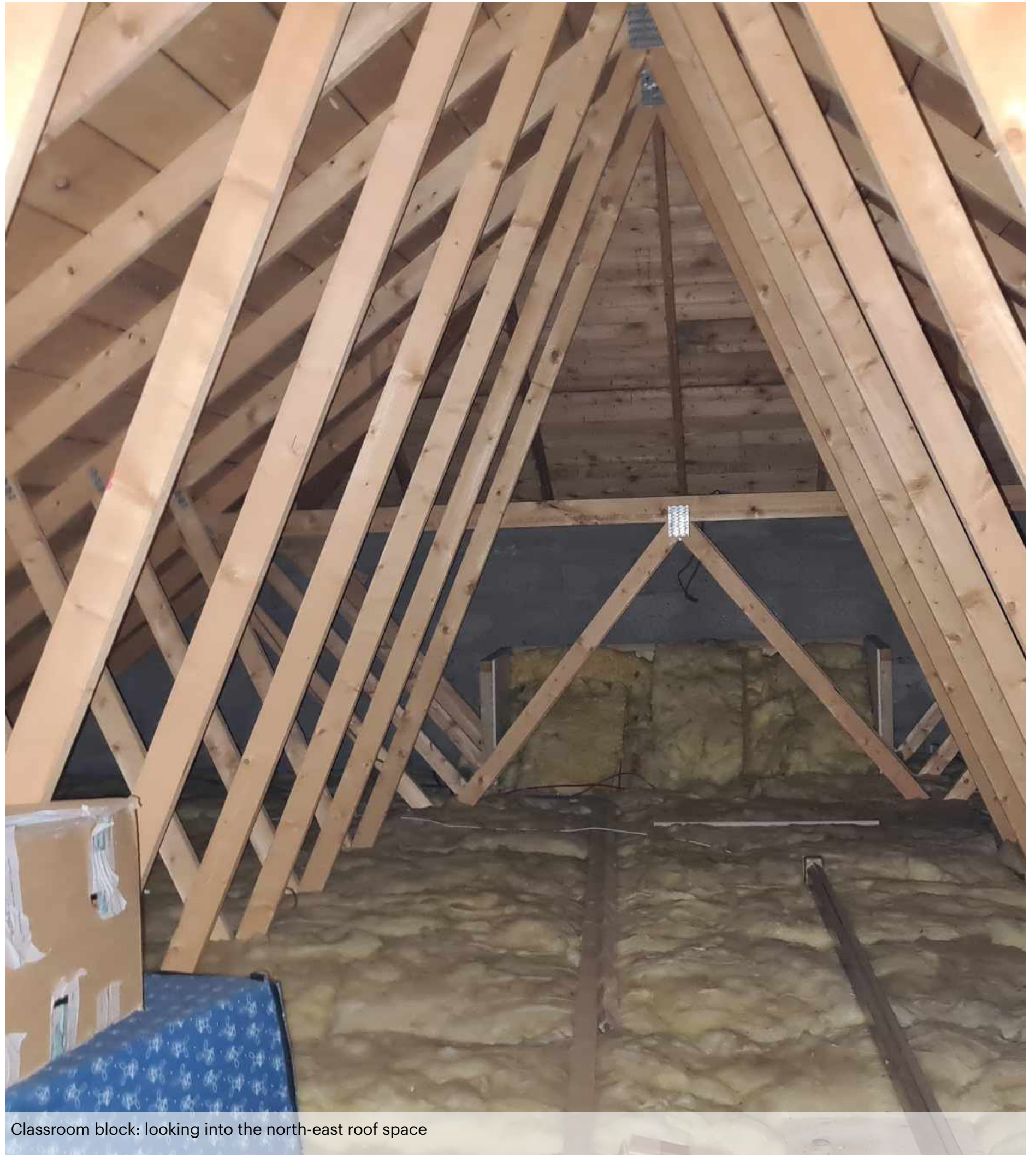
Classroom block: north-west



Classroom block: new extension, east elevation.



Classroom block: east elevations



Classroom block: looking into the north-east roof space





School house: west elevation



School house: south-west corner with patch repairs, gutters and chimney



School house: east elevation overview



School house: interior showing signs of mould and water ingress





Externals: view from north, looking to existing building



Externals: play area retaining wall and fencing is degrading



Externals: north end of site



Externals: gate and stone wall condition





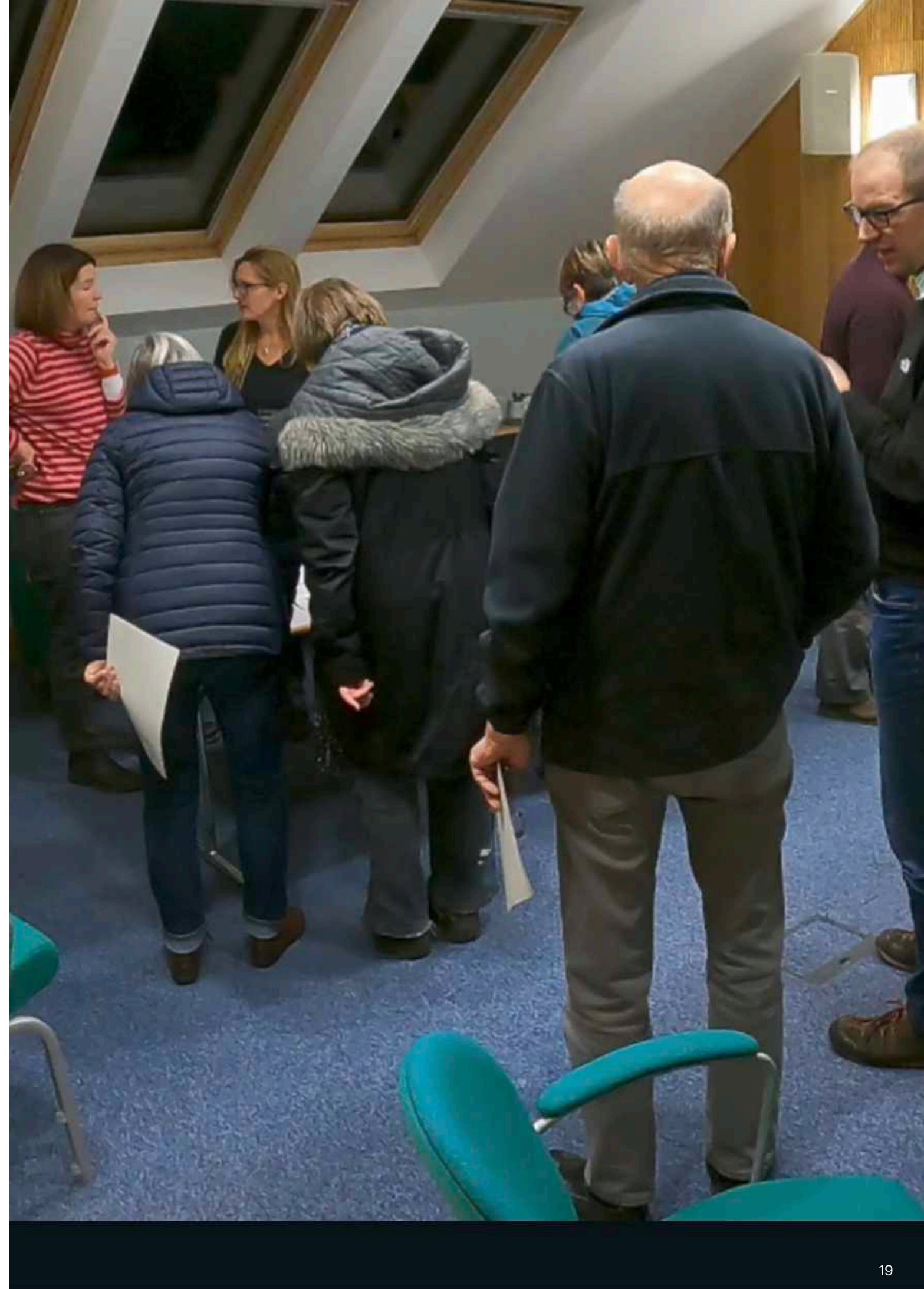


# Workshops

A community consultation event took place on Wednesday 15 November and Thursday 16 November 2023 at Torricon Community Halls and the post office. We consulted with around 40 people from the Torricon Community along with TDCA and local businesses and interests.

Our initial ideas were discussed in detail, options and design considered, sketch options produced and refined. We discarded a number of potential options and focused on housing, enterprise and community facilities. The outcome of the workshops was based as much on a delivery model for the development as the physical redevelopment proposals.

SKS report provides full feedback from the community engagement.

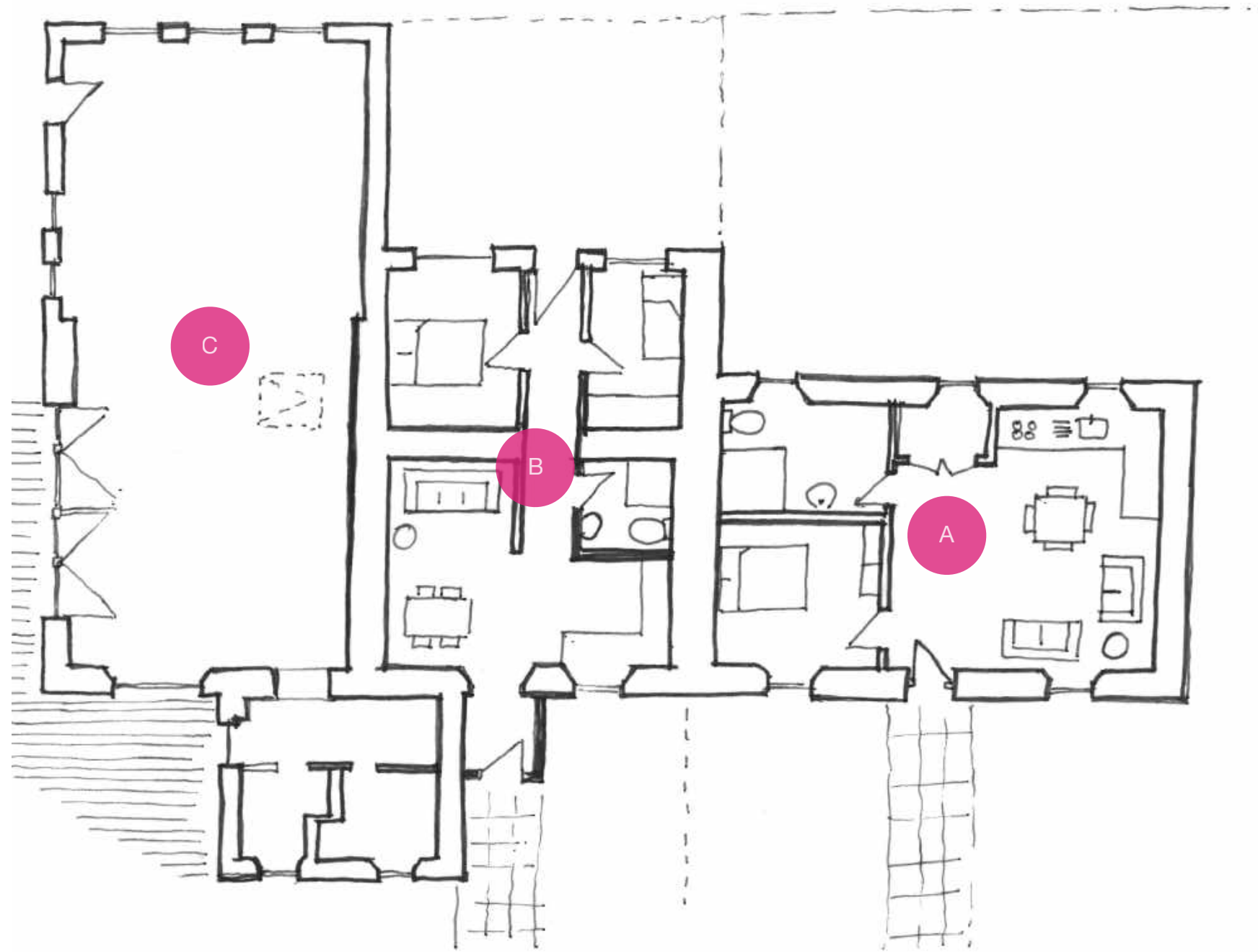








# Option 1 – Business & Two Dwellings



This option reconfigures the school house, kitchens and school office into two dwellings. This would include demolishing the former school office and extending slightly here to enable one of the dwellings to be a two bedroom property.

The business space has a number of possible uses to offer an income to the community and provide a community amenity. This space could accommodate:

- Bar / restaurant / craft distillery / micro brewery
- Bouldering hall / gym

The space can also be divided into two or more units if required. We have indicated indicative window openings to facilitate a new public approach, if this were desirable for businesses.

Site area (m <sup>2</sup> )	3,950
Existing Building GIFA (m <sup>2</sup> )	220
Proposed Building GIFA (m <sup>2</sup> )	228
Parking Provision (Proposed)	8 spaces (2x per dwelling plus 4x for enterprise)

Unit description	Unit type	Bedrooms	Number	GIFA m <sup>2</sup>
<b>Totals</b>			<b>2</b>	<b>228</b>
<b>A – School House</b>	One Bed	1	1	60.5
<b>B – School House</b>	Two Bed	2	1	61
<b>C – Enterprise Unit</b>	Non-domestic		1	106

## Build Standard

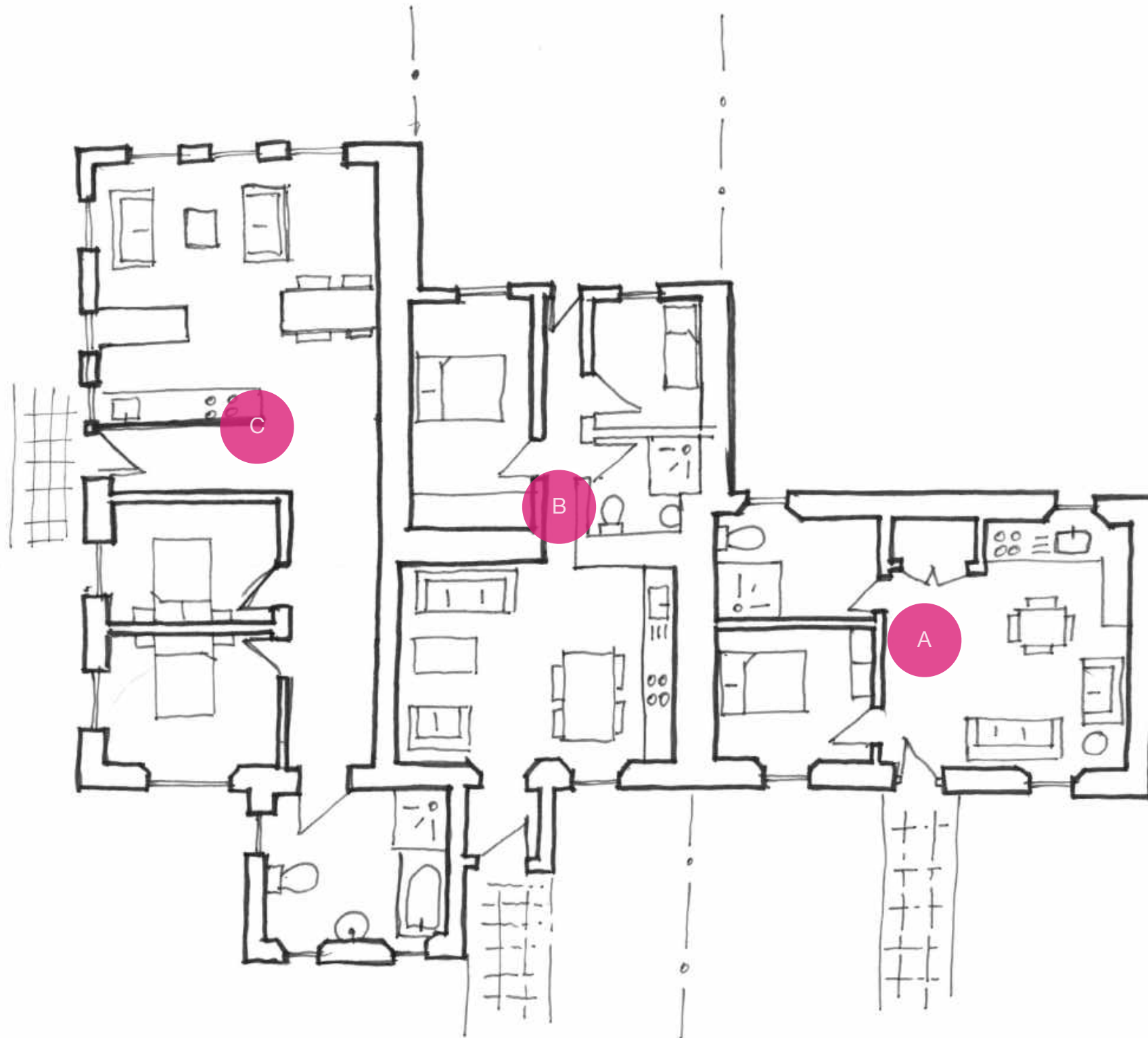
Building Regulations  
Housing for Varying Needs  
Secured by Design

## Build Strategy

Foundations – Existing no action  
Walls – Insulated Over-cladding  
Windows / Doors – new  
Roof – retain and repair



# Option 2 – Three Dwellings



This option reconfigures the school house, kitchens and school office into three dwellings. This would include demolishing the former school office and extending slightly here to enable one of the dwellings to be a two-bedroom property.

The classrooms are reconfigured into a two-bedroom dwelling specifically sized for wheelchair living. This could cater for a variety of housing needs in the area.

Site area (m <sup>2</sup> )	3,950
Existing Building GIFA (m <sup>2</sup> )	220
Proposed Building GIFA (m <sup>2</sup> )	228
Parking Provision (Proposed)	6 spaces (2x per dwelling)

Unit description	Unit type	Bedrooms	Number	GIFA m <sup>2</sup>
<b>Totals</b>			<b>3</b>	<b>228</b>
<b>A – School House</b>	One Bed		1	60.5
<b>B – School House</b>	Two Bed		1	61
<b>C – Classrooms</b>	Two Bed W/C		1	106

## Build Standard

Building Regulations  
Housing for Varying Needs  
Secured by Design

## Build Strategy

Foundations – Existing no action  
Walls – Insulated Over-cladding  
Windows / Doors – new  
Roof – retain and repair



# Option 3 – Four Dwellings



This option reconfigures the school house, kitchens and school office into two dwellings. This would include demolishing the former school office and extending slightly here to enable one of the dwellings to be a two bedroom property.

The classrooms are reconfigured into two one bed room dwellings. This provides the maximum number of dwellings possible within the footprint.

Site area (m <sup>2</sup> )	3,950
Existing Building GIFA (m <sup>2</sup> )	220
Proposed Building GIFA (m <sup>2</sup> )	228
Parking Provision (Proposed)	8 spaces (2x per dwelling)

Unit description	Unit type	Bedrooms	Number	GIFA m <sup>2</sup>
<b>Totals</b>			<b>3</b>	<b>228</b>
<b>A – School House</b>	One Bed		1	60.5
<b>B – School House</b>	Two Bed		1	61
<b>C – Classrooms</b>	Two Bed W/C		1	53
<b>D – Classrooms</b>	One Bed		1	53

### Build Standard

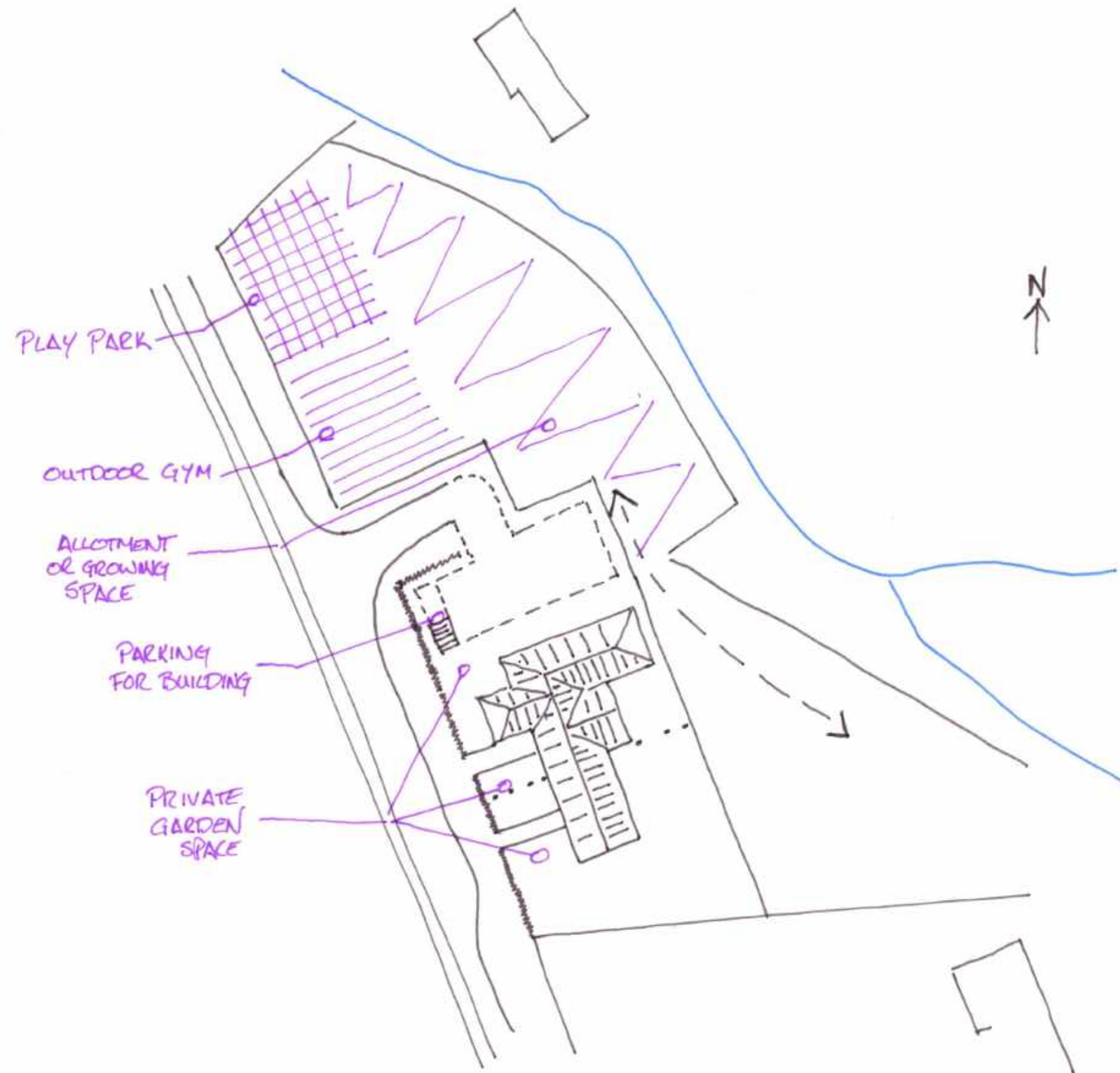
Building Regulations  
Housing for Varying Needs  
Secured by Design

### Build Strategy

Foundations – Existing no action  
Walls – Insulated over-cladding  
Windows / Doors – new  
Roof – retain and repair



# Landscape Options



The consultation event considered possible uses for the open space on the site and it was noted that the use of this for community benefit was important to almost all consultees. However the exact proposals for this space were not the main focus of the event. This plan would work with all of the building options and would see the following uses considered:

- Allotment or public growing space
- Children's play park and play equipment (accepting the possibility for heuristic play is met elsewhere in the village)
- Adult outdoor gym equipment
- Crazy golf course
- Path connections maintained to east

Site area (m <sup>2</sup> )	3,950
Existing Building GIFA (m <sup>2</sup> )	220
Proposed Building GIFA (m <sup>2</sup> )	228
Parking Provision (Proposed)	6 or 8 spaces



Preferred Option



# Design Brief

The project brief has been considered and refined during the project. The schedule to the right outlines the spaces required, their function and capacity. After the presentation of design options in December 2023, we held discussions and meeting via video with TDCA to confirm the preferred approach.

In addition to the area, we have considered the design standards required for the project. Again, these are outlined below.

The occupancy of the enterprise unit is governed by the Scottish Technical Standards (Building Regulations). We have used the category for that includes “Committee room, common room, conference room, dining room, meeting room, reading room, restaurant, staff room, waiting room” to calculate this provision. Based on this occupancy, the existing toilet provision should be sufficient for a new use but this will depend on the use proposed and the areas used.

This brief was confirmed through discussions and emails in January 2024 along with a workshop for the landscaping proposals in February 2024.

Name	Function / description	Intended Capacity	Target Area (m <sup>2</sup> )
Dwelling 1	A one bed, two person dwelling. Designed to be let on a affordable basis.	2	60
Dwelling 2	A two bed, three person dwelling. Designed to be let on a affordable basis.	3	61
Enterprise Unit	A large, self contained enterprise unit suitable for a range of uses including hospitality, office, community or tourism uses	97	106
Outdoor Play Park	Formal play, accessible play, informal play. Accessibility for variety of users to be carefully considered.		Approx 1,300m <sup>2</sup>
Parking	2x spaces per dwelling plus 4x spaces for the Enterprise unit, plus access from street.	8 Spaces	

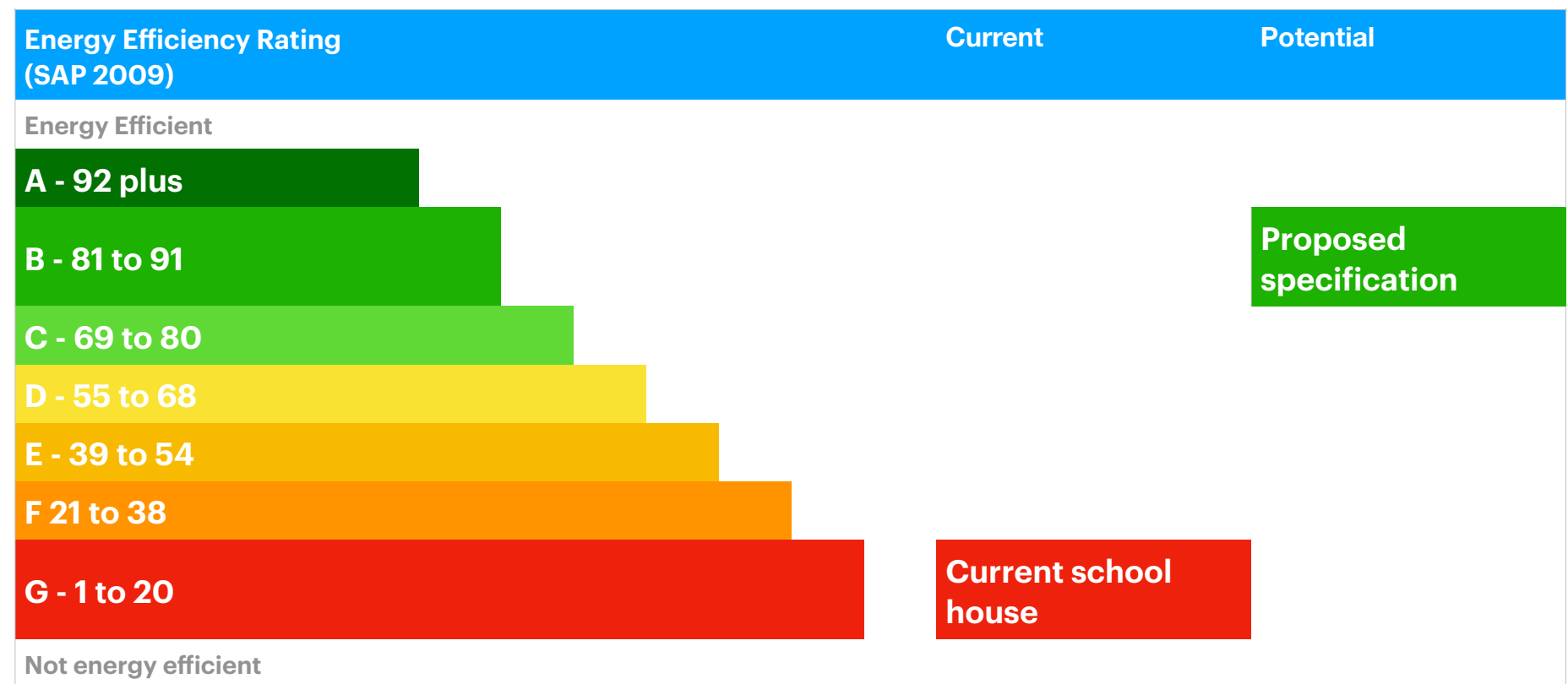
Standard	Notes	
Scottish Building Standards	Conversion regulations apply in this case	Required
Secured By Design	Required for RHG funding	Gold
Housing for Varying Needs	Required for RHG funding	Required
PAS:2035	Follow Principles and process	Required
EESSH 1 and 2 Criteria	Required for RHG funding	Required

## Proposed Energy Performance

Based on the outline specification on the following pages, the new dwellings will have a significantly improved energy performance, reflected in the chart to the right.

These retrofitted dwellings will have low energy use offering comfortable living with low energy bills.

The specification meets the EESSH2 standard outlined above. With an Air Source heat pump the proposals meet the Government’s ‘Heat in Building’ strategy to help decarbonise our buildings.





# Retrofit Principles

## Energy Efficiency Standard for Social Housing (EESH)

The Energy Efficiency Standard for Social Housing (EESH) was introduced by the Scottish Government to improve the energy efficiency of social housing in Scotland and to help reduce energy consumption, fuel poverty and the emission of greenhouse gases.

When the EESH was introduced in March 2014 it set a first milestone for social landlords to meet for social rented homes by 31 December 2020. A second milestone (EESH2) was confirmed in June 2019, for social rented houses to meet by December 2032.

### The EESH milestones

The first EESH milestone set a target of EPC C or D to be met by 31 December 2020, dependent on dwelling type and fuel type.

The second milestone (EESH2) for social rented houses to meet by December 2032, and were as follows:

- "all social housing meets, or can be treated as meeting, EPC Band B (Energy Efficiency rating), or is as energy efficient as practically possible, by the end of December 2032 and within the limits of cost, technology and necessary consent.
- no social housing below EPC Band D should be re-let from December 2025

We are applying these targets to the housing aspect of these proposals.

## PAS 2035 and Retrofit Rationale

PAS 2035 is a relatively recent (introduced in 2019) standard for retrofit which was introduced in response to widespread dismay at the poor quality of much retrofit work around the UK. The PAS does not set energy efficiency targets, but does refocus the effort on adopting an approach which is more concerned with quality, an awareness of the effects of works on the whole property and a focus on fabric rather than technology.

This report is in line with PAS2035 principles, the aim of these proposals is to reduce the heating demand of the building and improve comfort whilst also managing air quality, and ensuring that none of the measures proposed negatively affect the maintenance or long-term performance of the building.

Our retrofit strategy is based on a 'Whole House Retrofit' (WHR) and 'Fabric First' approach, which can be summarised as follows:

- The Whole House Retrofit approach usually involves a wider range of measures than, for example, simple window replacement or cavity wall insulation installation. It means considering the building (and occupants) as an interactive system, and our aim is to understand the long term consequences of all measures proposed.
- The 'Fabric First' approach is one where we focus first on the building fabric rather than concentrating on building services and renewables etc. The main advantage of this approach is that while both fabric improvements and renewable can both reduce carbon emissions, fabric improvements simultaneously reduce fuel bills and improve comfort, whereas that is not a given when you swap fossil fuels for renewables. The second advantage is that fabric improvements generally outlast services installations many times over, so costs tend to be spread over far more years of benefit.

While the main driver for most retrofits is energy efficiency, it is also an opportunity to address any maintenance issues.

Maintenance can sometimes be overlooked in favour of 'more interesting' energy efficiency improvements, but there is a risk that energy efficiency improvements can be undermined by maintenance problems if not addressed at the same time. In line with a PAS 2035 approach therefore, we will highlight maintenance measures that are needed as part of this work.

Too often, the retrofit industry follows a 'technology hierarchy' in which low carbon technologies come first, fabric improvements come second and maintenance comes third, if it features at all. This has led to many expensive, ineffective and in some cases very damaging retrofits across the UK. PAS 2035 - and this report - upends this hierarchy and looks towards maintenance first, fabric improvements second and low carbon technologies last. Each property is unique, but in general this will lead to more economical, effective and problem-free solutions.

The approach we are advocating in our specification is in line with PAS 2035.



# Torridon Old School Outline Specification

## 1. STANDARDS TO BE ACHIEVED

- 1.1. Secured by Design Standard (aim for Gold)
- 1.2. Housing for Varying Needs
- 1.3. Manufacturer's written recommendations must be adhered to for all installations on site.
- 1.4. PAS 2035 and 2030 Standards will be adopted as best practice guidance only
- 1.5. All materials and works are to comply with the current version of the Building Standards Technical Handbook and all subsequent amendments.
- 1.6. Energy Efficiency Standard for Social Housing 1 and 2 (ESSH 1 and 2) Performance standard

## 2. Surveys/ Tests

- 2.1. Pre-installation Building Inspection Requirements: to meet the requirements specified in PAS 2030:2019, the designated competent person assigned by the installer shall confirm that a full and detailed pre-design building survey has been undertaken by a competent person (see B4-I3 of the PAS), prior to the retrofit design being undertaken. As a minimum the pre-installation building inspection shall investigate and assess if the EWI installation work will result in non-compliance with the Building Regulations, e.g. in relation to workmanship, materials, structural stability, fire safety; provide resistance to moisture. Where possible, any areas of non-compliance shall be rectified by selection of another solution/ detail, which shall be documented in the pre-installation building inspection and all contract documentation amended accordingly i.e. specification, drawings, method statement.
- 2.2. Borescope inspection to be conducted prior the commencement of the retrofit works, the cavity and wall ties conditions (school room, north side). Borescope inspection to be conducted by installer. Structural Engineer to confirm borescope methodology and comment on the conditions of the cavity and wall ties. Confirm the suitability of the proposed insulation filling. Where applicable, extract the existing CWI.

- 2.3. The pre-installation building inspection shall include confirmation that the condition of the substrate is suitable for the works to commence and where all or any of the substrate does not fulfil the requirements for installation, preparation of proposals for adaptations to be made or additional preparation undertaken that will be necessary in order that works can commence.
- 2.4. Structural Survey to be conducted by a Structural Engineer.
- 2.5. Pull -out tests for EWI. Survey of structural substrate to be conducted before starting EWI work as per manufacturer's specification. Responsibility: Client / Contracts Administrator / Registered Contractor. Objective: To confirm suitability of new masonry substrate for application of specified external wall insulation system and to coincide with recommendations and allowable system tolerances as stated in specification clauses & BS 8000-3:2001.
- 2.6. A schedule of repairs and/ or additional works, services necessary to render the substrate suitable to receive the system.
- 2.7. Structural Engineer to provide evidence of adequacy of the following elements in support of the building warrants application: existing roof condition generally and structural design to allow the installation of proposed EWI system.
- 2.8. U-value calculations conducted by product manufacturer
- 2.9. Thermal bridging calculations conducted by key details - currently 0.15 assumed for SAP.
- 2.10. Thermography to be conducted by an independent qualified technician
- 2.11. Airtightness Test to be conducted by an independent qualified technician - currently 5 ACH/h assumed for SAP
- 2.12. Energy consumption monitoring to be conducted by an independent technician

## 3. DEMOLITION

### 3.1. Existing Services

- 3.1.1. Locate, identify, and protect all existing service connections to the site.

### 3.2. Existing Structures

- 3.2.1. Roof: Existing structure to be inspected, assessed and remediated as per Structural Engineer's recommendations.
- 3.2.2. Roof: Review existing roof and eaves ventilation to ensure clear ventilation path.
- 3.2.3. Roof: As part of eaves and verge works, take off existing gutters and downpipes and renew with deep flow PPC aluminium versions. Review existing rainwater goods, ensure all gutters fall continuously to outlet.
- 3.2.4. Loft: The loft space will need to be cleared in advance of the loft insulation installation.
- 3.2.5. External Walls: All internal dry linings to be stripped off/ removed.
- 3.2.6. External Walls: Existing render to be inspected before application of EWI.
- 3.2.7. External Walls: Energy meter boxes, satellite dishes, lighting fittings and any other existing features fixed to the walls should be removed to allow a continuous layer of EWI insulation and to avoid a large cold bridge.
- 3.2.8. Internal Works: Strip out and replace the plumbing and wiring.

## 4. SUBSTRUCTURE

### 4.1. Foundations

- 4.1.1. Clear topsoil from area around building and store for later re-instatement. Grade site to suit new levels and redistribute as far as possible within site boundaries, removing excess spoil from site.
- 4.1.2. 150mm wide Gravel drainage to be laid around perimeter of building.



#### 4.2. **Ground floor**

- 4.2.1. Replace floor in School house only. Floor is likely to be in poor condition and appears to require replacement. This should be investigated more thoroughly at the next stage before detailed design takes place. U value to be upgraded to at least 0.25 W/m<sup>2</sup>K.
- 4.2.2. Remove floor and structure. All services beneath floor to be removed.
- 4.2.3. Lay and compact sand blinding, lay DPM
- 4.2.4. Lay 150mm structural insulation such as Ravatherm or Kingspan Greenguard or similar, including edge insulation.
- 4.2.5. Lay 100mm structural concrete slab with associated reinforcement, with powerfloat finish

#### 4.3. **Drainage**

- 4.3.1. Existing drainage lines need checked. CCTV survey as required. Cost risk item until completed.
- 4.3.2. All drainage should use Fireclay or PVCu pipes.
- 4.3.3. All houses to have water butt in rear garden, minimum 200L.

### 5. **SUPERSTRUCTURE**

- 5.1.1. The Installer shall ensure that the methods used for the installation of the building envelope products or systems are as recommended by the system supplier and in accordance with the relevant retrofit design and incorporated in the installation method statement. Design and installation as per designers details, which minimise thermal bridging.
- 5.1.2. Acoustic testing required in accordance with building standards.

#### 5.2. **External Walls**

- 5.2.1. Proposed u-value for External walls better than 0.3 W/m<sup>2</sup>K. Party wall insulated to better than 0.2 W/m<sup>2</sup>K.
- 5.2.2. External Wall Insulation System to be Wetherby Systems or similar with 140mm Stone Wool 4S Silicone EWI system. Supply and install EWI Insulated timber frame system with silicone render finish to all exposed wall areas in accordance with Manufacturer's specification. Considered notice to be given to specification for system ventilation and fire break. Silicone render finishing.

- 5.2.3. Survey to existing walls and pre-treatments as specified by Wetherby Systems.
- 5.2.4. Manufacturer: Wetherby Building Systems Ltd.
- 5.2.5. Insulation type: WBS Stone Wool Insulation Boards
- 5.2.6. Dimensions: 1200 x 600, thickness 140mm.
- 5.2.7. Fixings must be thermal bridge-free or reduced
- 5.2.8. Insulation Fixing & Fixing Pattern: see Wetherby Systems' specification.
- 5.2.9. Fire Fixing: as per Wetherby Systems spec.
- 5.2.10. Beads/ trims/ profiles/ rails / as per Wetherby Systems spec.
- 5.2.11. Minimum Compressive Strength: 120 KN/m<sup>2</sup>.
- 5.2.12. Thermal Conductivity: 0.036 Wm<sup>2</sup>/K
- 5.2.13. Performance in Relation to Fire: Class A1 (BS EN 13501-1:2002). Non-combustible.
- 5.2.14. Environmental: CFC / HCFC Free, Zero ODP, GWP Less Than 5.  
U-value calculations and interstitial condensation conducted by EWI system manufacturer/ supplier.
- 5.2.15. Movement Joint Ref: WBS MJ6 Movement Joint as per Weatherby's specification.
- 5.2.16. Beads/Trim/Profiles/ Accessories: as per Wetherby Systems specification.

#### 5.3. **EWI Preparatory works**

- 5.3.1. As per PAS 2030, 2035 and Manufacturer's specification.
- 5.3.2. Remove existing soil and rainwater downpipes and fixings, install extended fixings for new pipework
- 5.3.3. Extend sleeves for air vents, connect to existing waste pipes with extended drains and fully seal before installing EWI
- 5.3.4. Remove existing cabling as far as possible. Note new satellite / aerial system to be installed in roof. All cabling which must remain to be installed within conduit and fixed neatly to wall before installation of EWI, which must be routed at rear to accommodate conduits.
- 5.3.5. Pullout tests as per Building Control and Wetherby Systems requirements. Undertaken and approved by the engineer before any EWI is installed. These should be taken from a wide sample of areas to avoid giving unrepresentative results.

#### 5.3.6. **EWI Samples**

- 5.3.7. Procedure: Submit samples/ examples of designated items for approval. Keep approved samples on site for the duration of the contract for inspection/ comparison purposes.
- 5.3.8. Designated items: Textured sample of Wetherby 4S Silicone Finish.
- 5.3.9. Once samples of coatings have been approved, do not change type or proportion of constituent materials unless agreed.
- 5.3.10. **EWI System Installation**
- 5.3.11. It is important that there are no gaps 'behind' the insulation boards.
- 5.3.12. Installer: The system must be installed by an Wetherby Systems registered contractor only.
- 5.3.13. Application of Stone Wool Insulation Boards and 4S SILICONE application as per Manufacturers' recommendations.

- 5.3.14. All rendering should be in accordance with the relevant recommendations of BS 13914-1: 2005, Design, Preparation & Application of External Rendering & Internal Plastering, BS 8000 : Part 10 : 1995, Code of Practice for Plastering and Rendering, Wetherby Systems' printed instructions and relevant BBA Certificate. All Wetherby Systems paints and decorative finishes must be applied to dry backgrounds and not during inclement weather conditions, strictly in accordance with Wetherby Systems instructions and the relevant clauses in BS 6150 : 2006, Code of Practice for painting of buildings, and BS 8000 : Part 12 : 1989, workmanship on building sites, Code of Practice for decorative wall coverings and painting.

- 5.3.15. Application of the system renders, finishes and paints must not be carried out in inclement weather conditions as described in BS 13914-1: 2005, Design, Preparation & Application of External Rendering & Internal Plastering & BS 6150 : 2006, Code of Practice for painting of buildings respectively.

#### 5.4. **Roof**

- 5.4.1. Remove roof slates and set aside for reuse. Assume 20% replacement required with reclaimed indigenous British slates or colour matched new slates. Diminishing coursing to be retained.



- 5.4.2. Replace all roof flashings and lead work. Ridges and valleys with code 8 lead to LSTA standard details. Hips and verges with code 6 lead to LSTA Standard details.
- 5.4.3. Roof U value to be max 0.12W/m2K
- 5.4.4. Create safe access and conditions to all areas of loft
- 5.4.5. Remove water tank and redundant soil pipes.
- 5.4.6. Where damaged, remove all existing insulation
- 5.4.7. Remove all existing services
- 5.4.8. Ensure all holes / cracks in existing plaster are filled
- 5.4.9. Install mineral wool insulation, lambda value 0.034 W/m2K to a depth of 350 to 400mm. First layer between existing joists, second layer cross-ways to minimise risk of contiguous air gaps - it is important to ensure that there are NO gaps at all between insulation and between insulation and adjoining joists / walls etc.
- 5.4.10. Ensure insulation is tight up against rafter roll
- 5.4.11. Install breather membrane loosely over insulation to prevent 'wind-washing' which reduces efficiency of insulation and reduces risks from migrating fibres.
- 5.4.12. Area for service access to be agreed. Assume 6 sq.m for now. In this area, install and brace 45x175 timbers cross-ways over existing joists, infill with insulation and again crossways above to be flush with adjacent insulation. Install deck over using 150x25mm boards with 5mm gaps between (not plywood etc - this can increase condensation risk), install 50x50mm edge batten and allow for 900mm handrail and balustrade all around
- 5.4.13. Attic hatch to be Wellhöfer Passive House Attic Hatch WS4D from Green building Store, or equivalent and approved. 600mmx 1200mmx 250mm hatch for suitable ceiling height.

## 5.5. Windows & Doors

- 5.5.1. Replace all existing windows with Nordan or similar. Whole Unit U value to be 1.0 W/m2K.
- 5.5.2. Airtightness sealing of windows and doors to be included.
- 5.5.3. Windows throughout to have:
  - a whole window U value of  $\leq$  1.0 W/m2K maximum

- Glazing g-value =  $\leq$  0.63 W/m2K or less
- Air permeability Class 4 (600Pa), in accordance with BS EN 12207
- Water tightness Class 9A (600 Pa), in accordance with BS EN 12208
- Wind loading Class CE 2400 (2400Pa), in accordance with BS EN 12210
- Exposure Category: 2400 in accordance with BS 6375-1
- Secured by Design certificate

- 5.5.4. Escape windows to be in accordance with clause 2.9.4 of the Technical Handbook, to be confirmed on-site prior commencement of works

### 5.5.5. External Doors

- 5.5.6. External doors to be Nordan or similar - a whole component U value of  $\leq$  max 1.2 W/m2K or better (lower)
- 5.5.7. Air permeability Class 4 (600Pa), in accordance with BS EN 12207
- 5.5.8. Water tightness Class 5A (200 Pa), in accordance with BS EN 12208
- 5.5.9. Wind loading Class C3 (1200Pa), in accordance with BS EN 12210
- 5.5.10. Exposure Category: 1200 in accordance with BS 6375-1
- 5.5.11. Externally exposed entrance doors. Door sets to be high performance door in pre-hung door set in redwood frame thermally insulated door with integral seals, supplied with threshold. Rated to Severe exposure.
- 5.5.12. Doors to be secured by design approved.
- 5.5.13. Ironmongery to above to include at front doors: Chain, spyhole and doorbell. All external doors to have 3 point locking system all to SBD security requirements. Three hinges per door.
- 5.5.14. Doors to comply with PAS24 guidance and BS5950 to satisfy Secured by Design
- 5.5.15. Factory finished high performance door with 3 point locking system; three hinges per door; letterbox, ironmongery as client's standard requirements
- 5.5.16. Structural Engineer to confirm acceptability of proposed new windows and door fixings.

## 5.5.17. Window Installation

- 5.5.18. Remove and replace all existing windows.
- 5.5.19. New windows fitted with Compriband/ Iso chemie isoblock sealing.
- 5.5.20. Window frames to be air sealed externally (before installation of EWI) and internally using recommended tape from Pro Clima or similar
- 5.5.21. All areas in window reveals or adjacent to be repaired and made good where window installation has caused damage. Match existing decoration where possible.
- 5.5.22. Maintenance requirements as per Manufacturers' specification.

## 5.6. Air-tightness

- 5.6.1. Air permeability of 3 m<sup>3</sup>/(h.m<sup>2</sup>)@50Pa or better required.
- 5.6.2. Depending on initial result, internal airtightness membrane (behind new dry lining) or gypsum plaster large coat to all external walls may be required. Sealing to windows and junctions required.
- 5.6.3. Airtightness membrane may be required across ceiling, above plasterboard. With appropriate fixing and tapping.

## 6. Internals

### 6.1. Internal Walls & Partitions

- 6.1.1. New non-structural stud partitions to be 95x45mm timber studs at 600mm centres fully danged and with one layer of 15mm Gyproc Wallboard on both faces; Ames tape finish. An additional layer of 12.5mm Gyproc MR is to be incorporated on the inner face of bathroom partitions, with staggered joints. 2 rows of dwangs to be incorporated between studs, one to accept ends of plasterboard sheets and one at mid- position of plasterboard sheets. Where partitions run in the same direction as joists but do not sit directly over the joists, 100mm x 50mm dwangs to be inserted between adjacent joists at 600mm centres to provide support; where partitions run at right angles to joists, double top runners to be used. Taped and filled board joints.
- 6.1.2. Skirtings 100 x 15mm bull-nose, painted red pine or MDF.



- 6.1.3. 25mm Knauf earthwool acoustic roll friction fitted between studs and supported at head with a timber batten. All gaps around perimeter of insulation and all penetrations sealed with acoustic sealant. To achieve 45dB airborne sound insulation and be verified by sound tests.
- 6.1.4. Allow for 18mm plywood sheathing on walls adjacent to WC's, showers and baths for future grab handle fittings; at stair spine wall for handrail; and 2mx2m in living room for mounting TV
- 6.2. **Party Walls**
- 6.2.1. 12.5mm British Gypsum plasterboard wall lining on 50x50mm sw straps to form service zone; Two layers of staggered British Gypsum Soundblock plasterboard installed to face of timber studs to achieve medium resistance fire duration. Nominal mass to be no lower than 22kg/m<sup>3</sup> to achieve acoustic separation fixed to 89x38mm timber frame. 60mm mineral wool insulation with density between 10-60kg/m<sup>3</sup> to be installed between timber frame with no gaps. Outer face (centre of wall) of timber stud wall to be lined with 9mm OSB sheathing. Wall build up is repeated to internal face of adjacent building. Space between 9mm OSB sheathing to be fully filled with mineral wool insulation. Width between faces of Soundblock plasterboard to be 300mm.
- 6.3. **Internal doors**
- 6.3.1. Internal pass doors to be solid core with veneer and hardwood lippings. Satin anodised aluminium lever furniture. Euro type rounded plate lift off hinge sets. All doors provided as door sets with frame ready for fixing.
- 6.3.2. Bolt through door handle sets, ironmongery, supplied by George Boyd.
- 6.3.3. Generally 926x1981mm doorsets throughout, lightweight solid core doors supplied by Jeld-Wen, Premdor or equivalent
- 6.3.4. Door sets to give a minimum clear unobstructed opening width from door face in 90 degrees open position to adjoining stop of 800mm. Door stops to be provided to all doors.
- 6.3.5. Doors to have minimum finished undercut of 20mm (to be confirmed by ventilation designer) above floor finishes to allow transient ventilation between rooms, including accounting for final floor finishes to be fitted by inhabitants.
- 6.4. **Wall Finishes**
- 6.4.1. Internal wall finishes in plasterboard with all joints filled and ames taped.
- 6.4.2. Bathroom walls to be lined with water resistant laminate: full height at back of showers and baths, 300mm high splash back at wash hand basin. High pressure laminate surface, bonded to high quality 9mm 7 layer WBP Plywood core with a balancer laminate on the reverse. The plywood core material to be PEFC certified. Product to have at least 15 year guarantee.
- 6.4.3. Kitchen wall between worktop and underside of wall unit to be lined with glazed ceramic tiles 150mm square, 3 rows, full length of worktop and behind cooker space down to floor.
- 6.5. **Floor Finish**
- 6.5.1. Kitchen and bathroom floors with 4-12mm ply base over 22mm MR chipboard sub-base, dependant on floor finish.
- 6.5.2. Non-slip Linoleum finished floor surface to bathrooms, utility, and kitchen, supplied by Forbo, Marmoleum or equivalent.
- 6.6. **Ceiling Finish**
- 6.6.1. Internal ceiling finishes in 12mm Gyproc Wallboard with minimum density of 10kg/m<sup>2</sup> and all joints filled and ames taped.
- 6.7. **Decoration**
- 6.7.1. Woodwork to be cleaned down and sanded, then given three coats primer, undercoat, gloss. Internal exposed timber to be painted.
- 6.7.2. Ceilings and walls generally: two coats matt emulsion to all rooms.
- 6.7.3. Bathrooms - 1 coat primer, 2 coats eggshell
- 6.7.4. Paint to be Dulux Trade Ecosure low-VOC range
- 6.8. **Fittings**
- 6.8.1. Fitted wardrobes to have hanging stainless steel rail and soft wood shelf, all as detailed.
- 6.8.2. All storage spaces to have SW shelf, light and associated switch.
- 6.8.3. Side hung flush cupboard doors, paint grade to match walls, stainless steel D handles and ball catch top and bottom
- 6.8.4. Utility space to have worktop fitted internally to match kitchen, supplied by Howden's or equal and approved.
- 6.9. **Kitchen fitments**
- 6.9.1. New kitchen fitments and worktop to use low formaldehyde chipboard. They should also be repairable. Metal D handles. Kitchens to be supplied by Howden's or equal and approved, for example Burford White. Include oven and hob. Exclude other white goods.
- 6.9.2. Other fitments to include stainless steel sink and draining board, mixer tap.
7. **Services**
- 7.1. **Services Check**
- 7.1.1. Prior to construction, check and report on water quality and pressure from water mains.
- 7.2. **Sanitary Appliances**
- 7.2.1. New sanitary fittings to be white as follows:
- Low flush ceramic cistern and pan
  - Large wash hand basin and pedestal
  - Sanitary fittings to be accessible, supplied by Bath Store or equivalent
  - Armitage Shanks, or equivalent, taps and fitments throughout
  - Electric shower by Triton or equivalent
  - 900 x 900mm shower tray, panel and door Kubo by Ideal Standard
- 7.2.2. Flow rates as follows:
- WCs of average flush volume not more than 4.5L
  - Wash hand basin taps with a flow rate not more than 6L per minute
  - Shower heads with a flow rate not more than 8L per minute
- 7.2.3. All junctions between shower/whb and walls to be sealed with silicone mastic.
- 7.2.4. **Plumbing Installation**
- 7.2.5. 15mm copper hot & cold water supply pipes with compression fittings (or plastic system) All hot and cold water pipes to be insulated with preformed foam insulate to thickness of pipe diameter and taped at all joints and all valves insulated.



- 7.2.6. Bath, hot water taps to be fitted with anti-scald valves. Showers to have thermostatic valves set to maximum temperature of 48oC.
- 7.2.7. All tails to appliances to have isolating valves immediately before connection.
- 7.2.8. Incoming cold water supply to have lockshield valve, accessible from inside the dwelling.
- 7.2.9. 110mm diameter Soil Vent Pipe to have 50mm thick Techtube insulation (Thermal conductivity: 0.033W/mK) applied to full length of pipe including within full slab depth and within loft insulation.
- 7.3. **Water Installation**
- 7.3.1. All hot and cold water services to be in accordance with the Water Board Bye-Laws
- 7.3.2. Connection to local water supply (assume pipe at boundary.)
- 7.3.3. All cold pipework to be lagged below ground floor, in external wall ducts, in close duct and in loft spaces. Rising main pipe and main branches to sinks to be lagged throughout. Lagging to be Armaflex, thickness no less than pipe diameter
- 7.3.4. Pipes to be located away from external walls.
- 7.4. **Space Heating & Hot Water**
- 7.4.1. Each dwelling to have space heating to be provided by Mitsubishi Ecodan Monobloc 4kW Air Source heat pump (QUHZ-W40VA) or equal and approved and 150l thermal store. (EHPT20Q-VM2EA). System to provide space heating via wall mounted radiators to ensure that a temperature of 21C can be maintained in the main living area and 18C elsewhere. System to be designed, installed and commissioned by suitable specialist sub-contractor.
- 7.4.2. 150litre cylinder volume with 1.63 loss factor, heat transfer area of 2, cylinder is in heated space, water is separately timed, primary pipework is insulated, cylinder stat is present.
- 7.4.3. Radiator in all apartments. Heated hot water towel rails in bathrooms. As indicated on drawings. Radiators to be sized to provide 2kW total and to be tall and thin in elevation.
- 7.4.4. Enterprise unit to have Quantum type direct electric heating units and point of use electrical hot water points.
- 7.5. **Ventilation Installation**
- 7.5.1. Each dwelling to have MVHR unit, Zehnder Comfoair CA 200 model with >90% efficiency with frost protection and rigid-flexible ductwork. Black steel powder coated supply and extract valves. Sound attenuators, inc. exhaust attenuation. ISO pipe Intake and Exhaust ducts. MVHR system achieve minimum ventilation rates, in accordance with Scottish Technical Standards Section 3, Requirements of CIBSE Guide B2: 2001, Ventilation and air conditioning. System to be designed, installed and commissioned by suitable specialist sub-contractor.
- 7.5.2. **Ventilation Design and Installation:**
- 7.5.3. The ventilation system is to be dimensioned, installed and commissioned by specialist installer
- 7.5.4. It is critical that the MVHR installation is co-ordinated with other services. MVHR ductwork should be installed prior to the internal electrical and drainage first fix. Prior to installation of the MVHR system, the contractor is responsible for:
- 7.5.5. Any coring and boxing required for installation of ductwork
- 7.5.6. Provision of structure suitable for installation of MVHR unit
- 7.5.7. Provision of double socket (240V 13A) at the location of the MVHR unit
- 7.5.8. Install a pair of bell wire from MVHR unit to all wet rooms (inc. back box)
- 7.5.9. Form suitable openings through external walls for ductwork and airtightness sealing of penetrations. Care is to be taken to ensure that the continuity of loose fill insulation is maintained when forming external wall penetrations.
- 7.6. **Electrical Installation**
- 7.6.1. All electrical work to be in accordance with current edition of I.E.E. Regulations and Recommendations of Scottish Power. To be designed, constructed, installed and tested in accordance with BS 7671:2008, as amended submitted only by a person or company having membership to S.E.L.E.C.T. or N.I.C.E.I.C. or similar electrical schemes recognised by the Scottish Building Standards to comply with Safety 4.5.0.
- 7.6.2. All lights to be supplied with low energy fittings
- 7.6.3. Fully contained TV / Satellite system to be fitted between loft space and living room / bedrooms with appropriate sockets.
- 7.6.4. Bulkhead lights to be installed to light rear of building, with additional front external porch light fitted with PIR
- 7.6.5. Resource monitors installed that display electrical use, supplied by Green Energy Options or equivalent
- 7.6.6. External lighting requirements under review, assume 2 fittings (1 front and rear) per house
- 7.7. **Communication Installation**
- 7.7.1. New telecom ducting and point to be provided. All wiring must be concealed.
- 7.7.2. Electrical socket to be provided adjacent to main door for future use of burglar alarm system.
- 7.8. **Special Installations**
- 7.8.1. Smoke alarm to be installed in ground floor to be self-contained type to BS 5446:Part 1, Kitemark certified as manufactured by Dicon International Ltd., 650MC with mains supply and with capacitor back-up. Minimum 300mm from any light fitting and wall face and 3000mm maximum from any bedroom door.
- 7.8.2. Heat Detector to be installed in Kitchen as manufactured by Aico Ltd., HA154 Operation connected to mains with rechargeable battery back-up.
- 7.8.3. Door bell
- 7.8.4. Install 13 amp fused spur, suitable for intruder alarm, located within 2m of main door.
- 7.8.5. Carbon monoxide and dioxide detectors to be installed in accordance with Scottish Technical Handbook Building Regulations.
- 7.8.6. Sprinkler installation to meet section 2.15 of Scottish Technical Standards. The dwellings are designated social housing. A sprinkler system to be installed in accordance with BS 9251: 2014.
8. **Site Works around Building**
- 8.1. **Landscape**
- 8.1.1. New hard and soft landscaping works, all as site layout and details.
- 8.1.2. Parking to be formed from tarmac with associated sub base, concrete kerning and line marking.



- 8.1.3. Soft landscaping to comprise seeding to front gardens and rear gardens.
- 8.1.4. External paths to be min 1200mm wide. Front paths, leading to houses formed with Marshalls Argent Drivesett Priora. Patio and paths to rear of house constructed from paving slabs. From Marshall's Utility range.
- 8.1.5. Bin stores to be formed from timber fencing and paving slabs on suitable foundations.
- 8.1.6. Treated timber fencing 1200/1800mm high to form external boundary. Posts set in concrete foundations.
- 8.1.7. Light and PIR to be fitted to front elevation, isolating switch internally, to be positioned to light the entrance.
- 8.1.8. Light and PIR to be fitted to rear elevation, isolating switch internally, to be positioned to light the garden.
- 8.1.9. Postbox, supplied by Sterling fixed to side of each house door.
- 8.1.10. 40m compact rotary clothes dryer and associated all-weather cover, supplied by Brabantia.
- 8.1.11. Existing stone boundary walls to be reviewed by stone mason. Allowance to be made for limited maintenance work.
- 8.2. **Site Drainage**
- 8.2.1. All drainage works must be to the entire satisfaction of the local authority.
- 8.2.2. Underground drainage, French drains and soakaways to be constructed to Engineers details.
- 8.2.3. Underground drainage to be fireclay / PVCu, bedded in pea gravel base with concrete benching.
- 8.2.4. Surface Water drainage to include perimeter gravel soakaway to building.
- 8.2.5. Gutters at rear to feed into minimum 200L rainwater butt for gardening use.
- 8.2.6. Allowance to be made for SUDS / attenuation of surface water run-off prior to discharge.

## 9. **Works to Play Park**

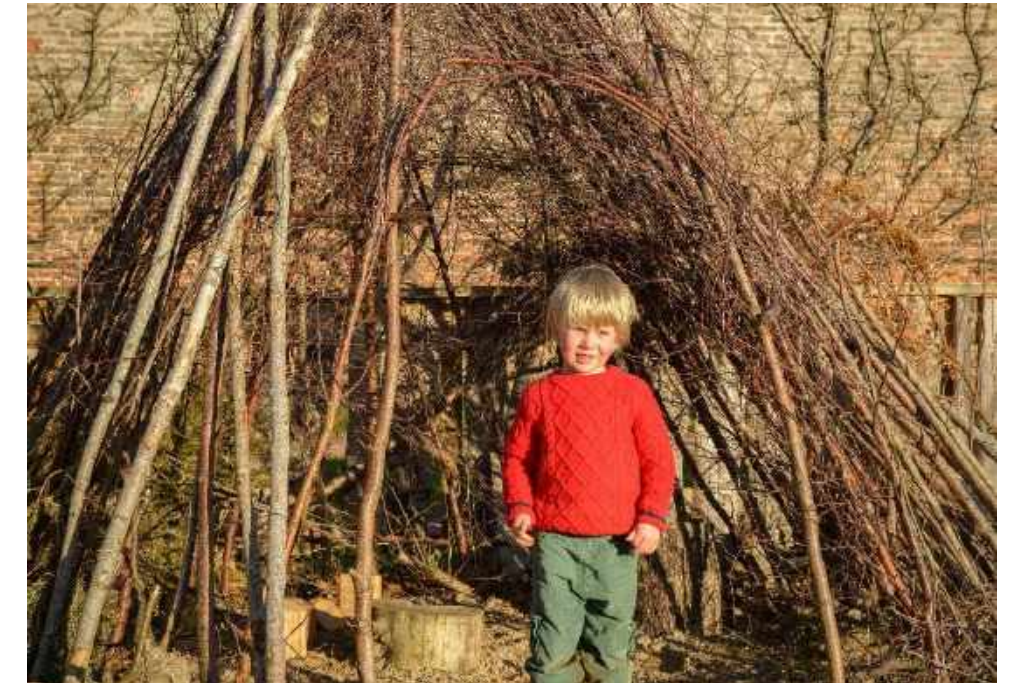
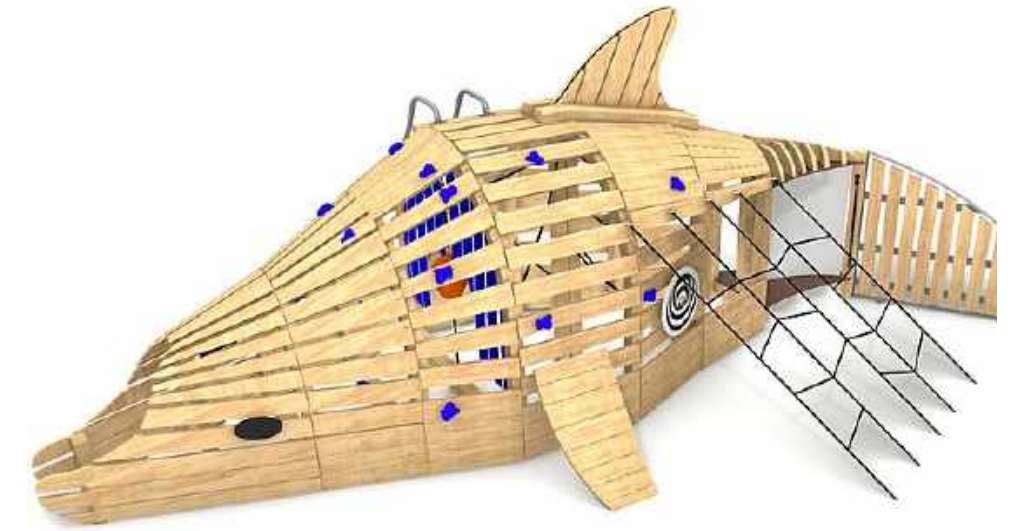
- 9.1. Allowance of £100,000 allowed for at this stage for play park including
  - Removing existing walls and equipment
  - re-grading site to suit activities
  - 3x play equipment including accessible swing
  - suitable accessible surfacing
  - accessible paths
  - deer fencing and boundary landscaping
 Landscape design to be progressed in tandem with community.



# Play Park Character

It has been agreed that the detailed design of the play park will progress in future design stages. The images on this page show the aspirations for the park and the type of equipment, spaces and landscaping envisaged. A small amount of formal play (fully accessible along with informal and natural play spaces are envisaged. We agreed there should be further investigation of use of pieces such as the climbing boulder to extend the user age range and offer a wider range of use throughout the year.

Photos from various sources including work by ERZ Studio, Glasgow and Garve Playpark.



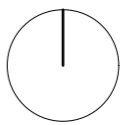





	Scale Bar			
Notes / Key				
Health & Safety Notes				
RevID	Description	Date	Drawn	Checked
Project Status <b>Feasibility</b>				
Do not scale from this drawing. All existing dimensions to be checked on site prior to commencement of works or manufacturing of components. Any discrepancies to be brought to the attention of the architect - if in doubt, ask.				
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		125 Candleriggs, Glasgow, G1 1NP Tel: 0141 551 8383 Web: www.johngilbert.co.uk		
Client <b>Torridon District Community Association</b>				
Project Name <b>Torridon Primary School</b>				
Drawing Title <b>Location Plan</b>				
Drawn By <b>HT</b>	Scale at A3 <b>1:500</b>	Project No. <b>04683</b>	Drawing Number_Rev <b>[LP]01_</b>	





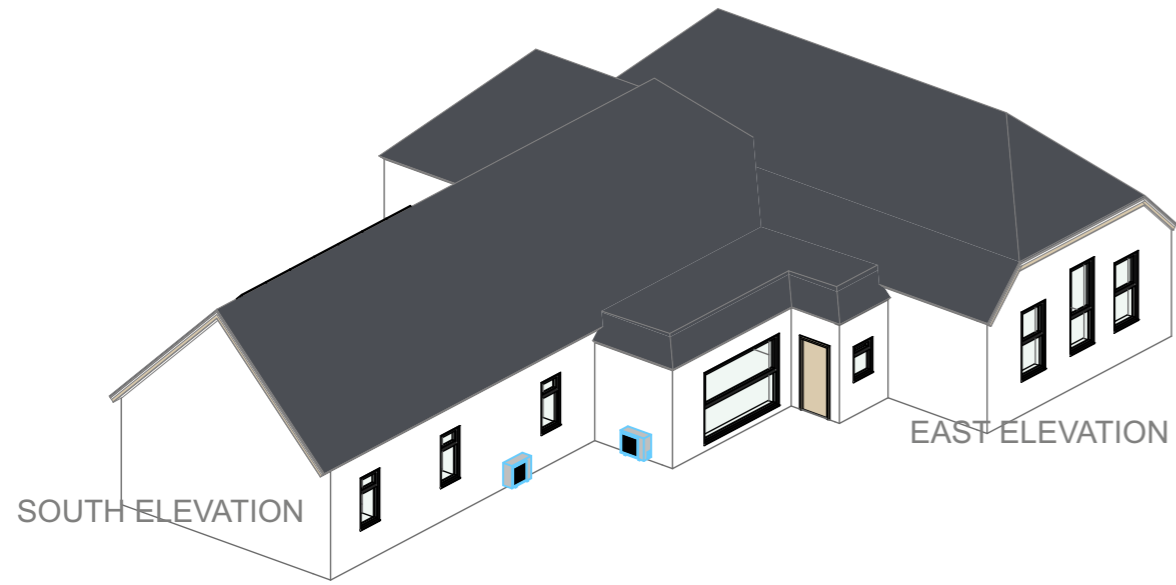
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Notes / Key				
Health & Safety Notes				
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Project Status <b>Feasibility</b>				
<p>Do not scale from this drawing. All existing dimensions to be checked on site prior to commencement of works or manufacturing of components. Any discrepancies to be brought to the attention of the architect - if in doubt, ask.</p> <p>This drawing is the copyright of John Gilbert Architects Ltd. No copying or distribution of this drawing or any part thereof is permitted without prior written permission.</p>				
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Client <b>Torridon District Community Association</b>				
Project Name <b>Torridon Primary School</b>				
Drawing Title <b>Existing Site Plan</b>				
Drawn By HT	Scale at A3 1:500	Project No. 04683	Drawing Number_Rev [SP]01_	





Scale Bar				
Notes / Key				
Health & Safety Notes				
RevID	Description	Date	Drawn	Checked
Project Status <b>Feasibility</b>				
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Client <b>Torridon District Community Association</b>				
Project Name <b>Torridon Primary School</b>				
Drawing Title <b>Proposed Site Plan</b>				
Drawn By	Scale at A3 1:500	Project No. 04683	Drawing Number_Rev [SP]02_	





**External wall**

insulated render system

**Windows**

New timber framed and double glazed

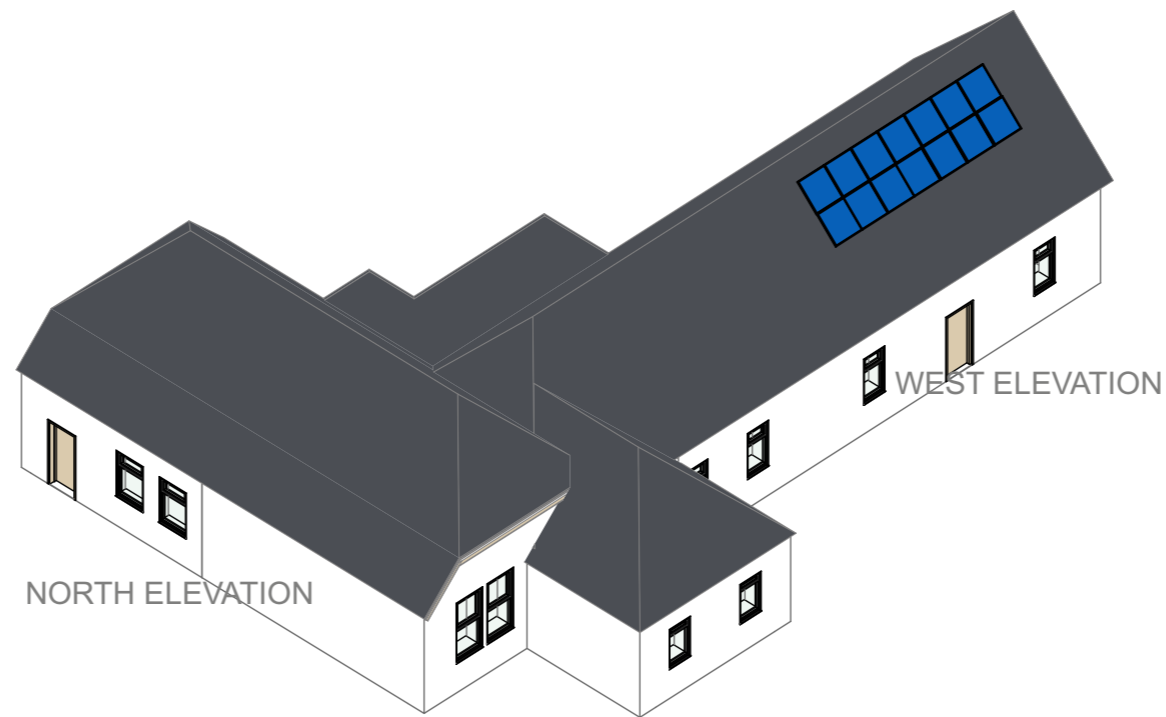
**Roof**

remove slates, remediate and insulate roof.  
Re-slate and reinstall PVs

**External**

Perimeter drainage around building and  
new rainwater goods

Refer to outline spec for full detail



Notes / Key

Health & Safety Notes

RevID	Description	Date	Drawn	Checked

Project Status  
**Feasibility**

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Client  
**Torrison District Community Association**

Project Name  
**Torrison Primary School**

Drawing Title  
**3D views of elevations**

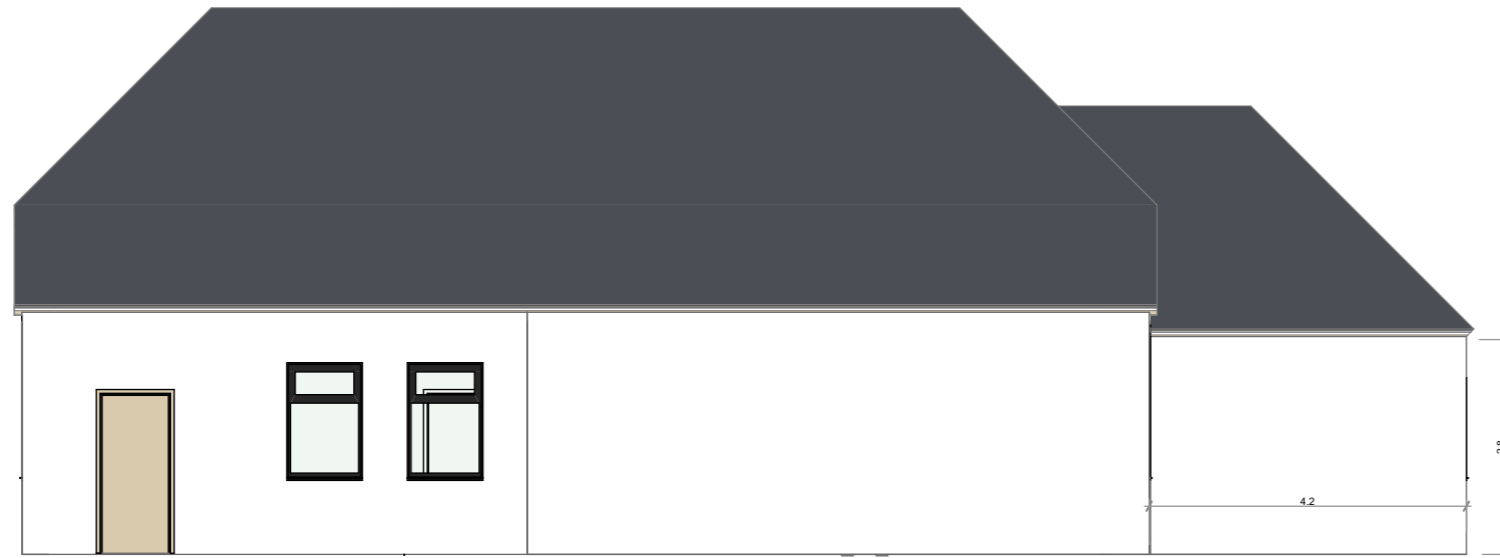
Drawn By	Scale at A3 1:200	Project No. 04683	Drawing Number_Rev [EE]07_
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Assumed  
WT1: 1.5m x  
0.8m

Assumed  
WT2: 1.3m x  
0.8m

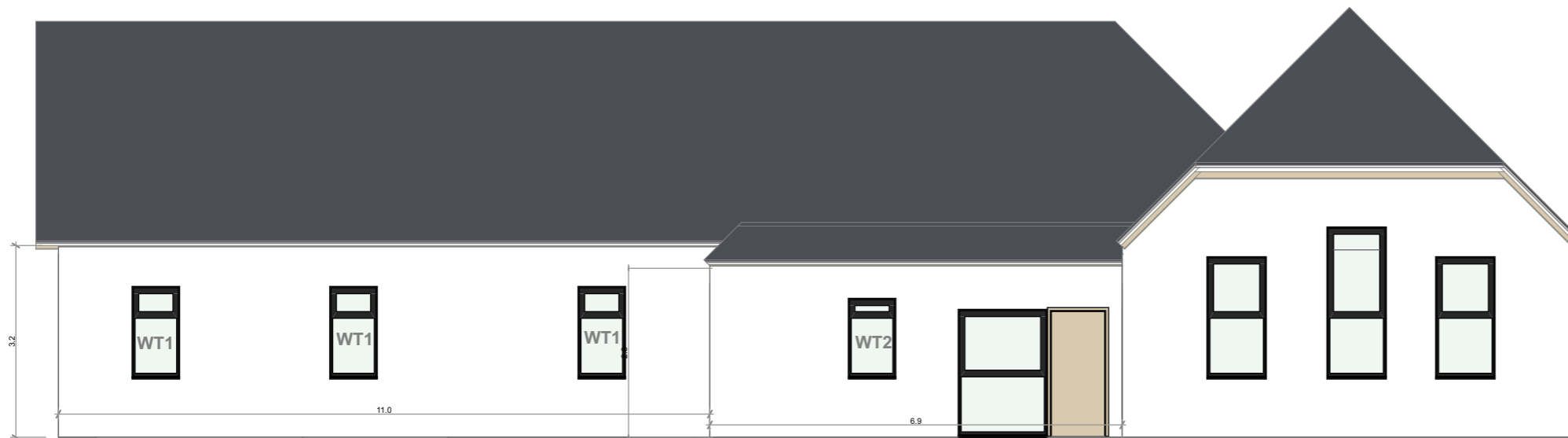
Assumed  
WT3: 1m x  
0.8m



3D-02

North

1:100



3D-03

East

1:100

Notes / Key

Health & Safety Notes

RevID	Description	Date	Drawn	Checked
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Project Status  
**Feasibility**

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**Torrison District Community Association**

Project Name  
**Torrison Primary School**

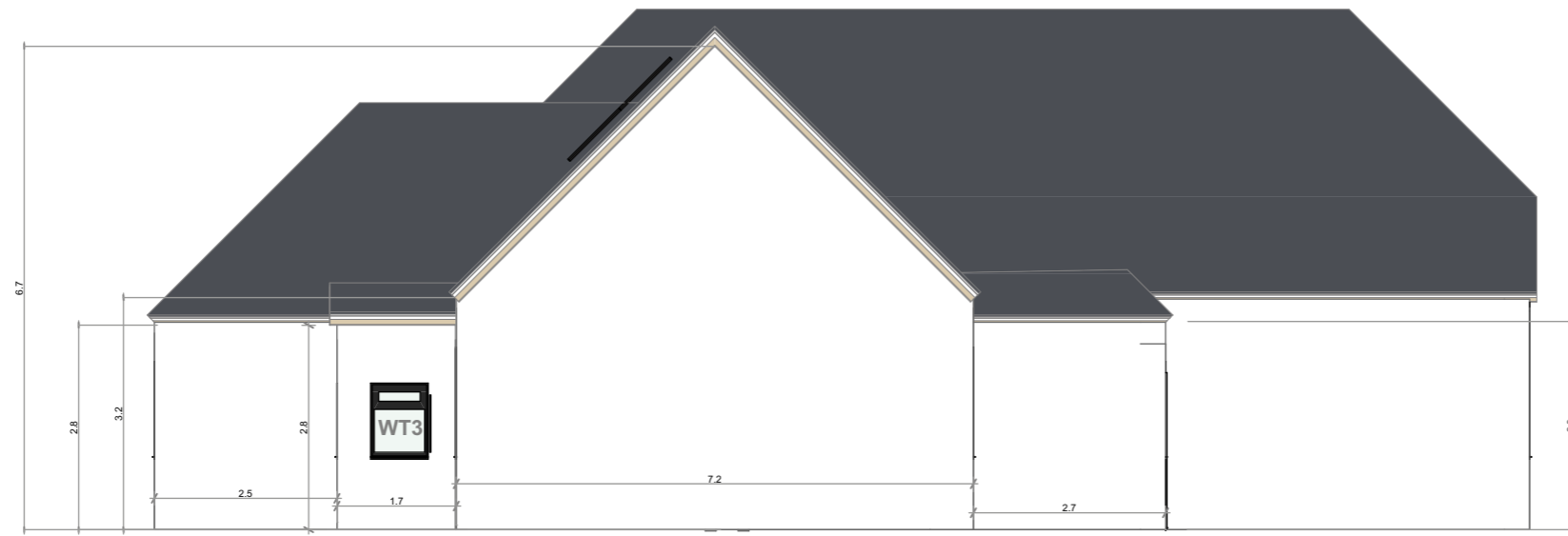
Drawing Title  
**North and East Elevation - existing**

Drawn By	Scale at A3 1:100	Project No. 04683	Drawing Number_Rev [EE]03_
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Assumed  
WT1: 1.5m x  
0.8m

Assumed  
WT2: 1.3m x  
0.8m

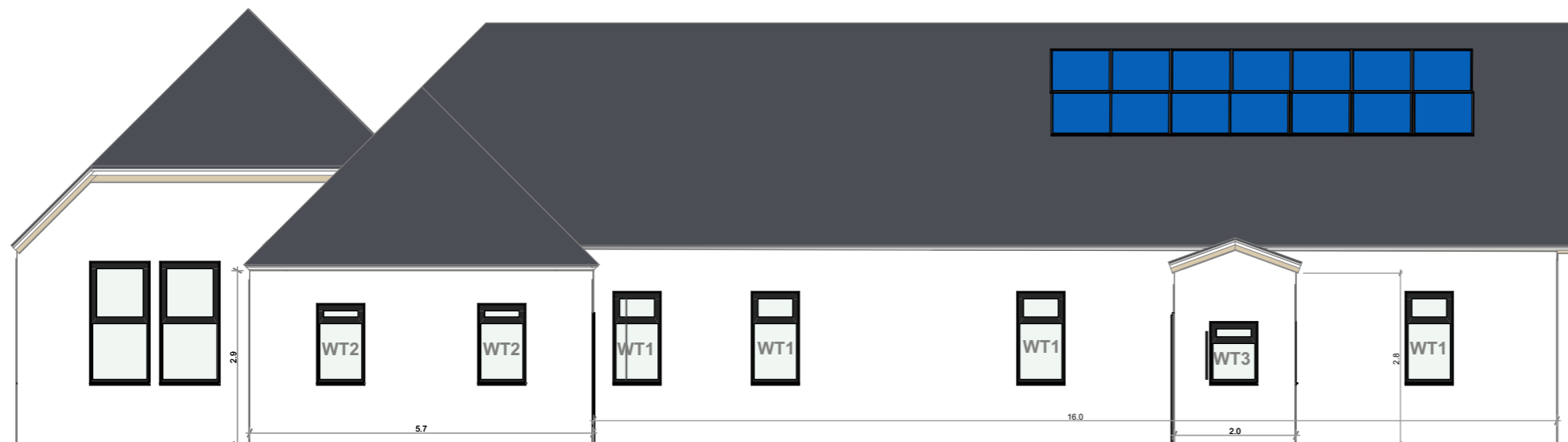
Assumed  
WT3: 1m x  
0.8m



3D-04

South

1:100



3D-01

West

1:100

Notes / Key

Health & Safety Notes

RevID	Description	Date	Drawn	Checked

Project Status  
**Feasibility**

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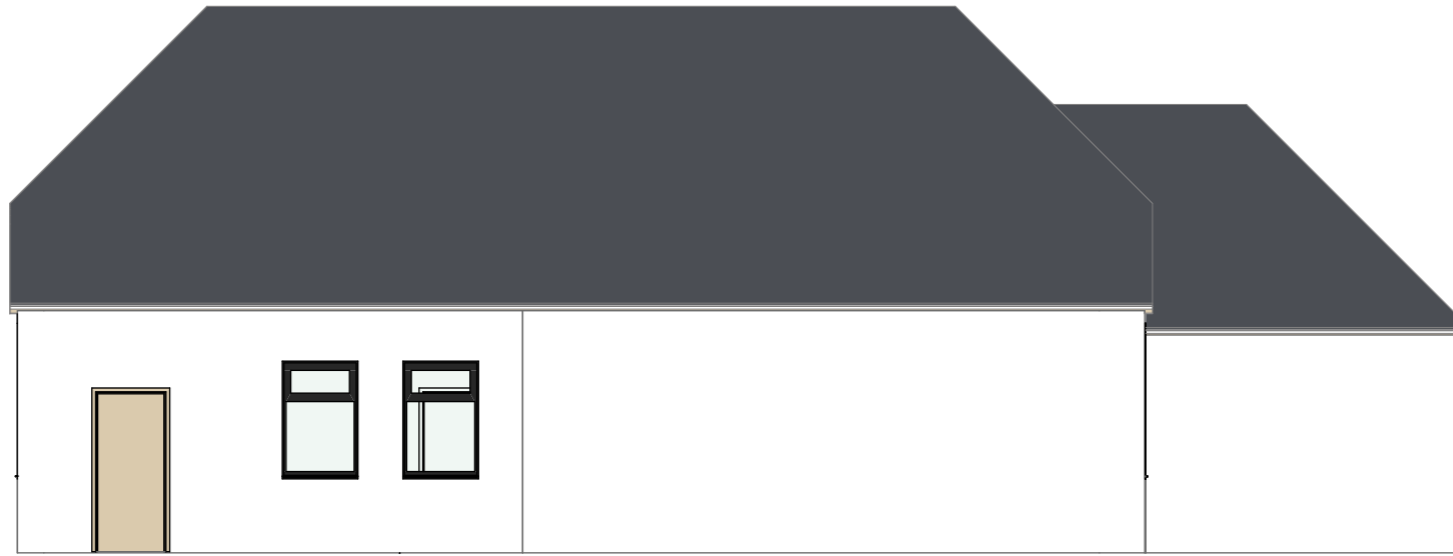
Client  
**Torrison District Community Association**

Project Name  
**Torrison Primary School**

Drawing Title  
**South and West Elevation - existing**

Drawn By	Scale at A3 1:100	Project No. 04683	Drawing Number_Rev [EE]04_
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NORTH ELEVATION



EAST ELEVATION

Notes / Key

Health & Safety Notes

RevID	Description	Date	Drawn	Checked

Project Status  
**Feasibility**

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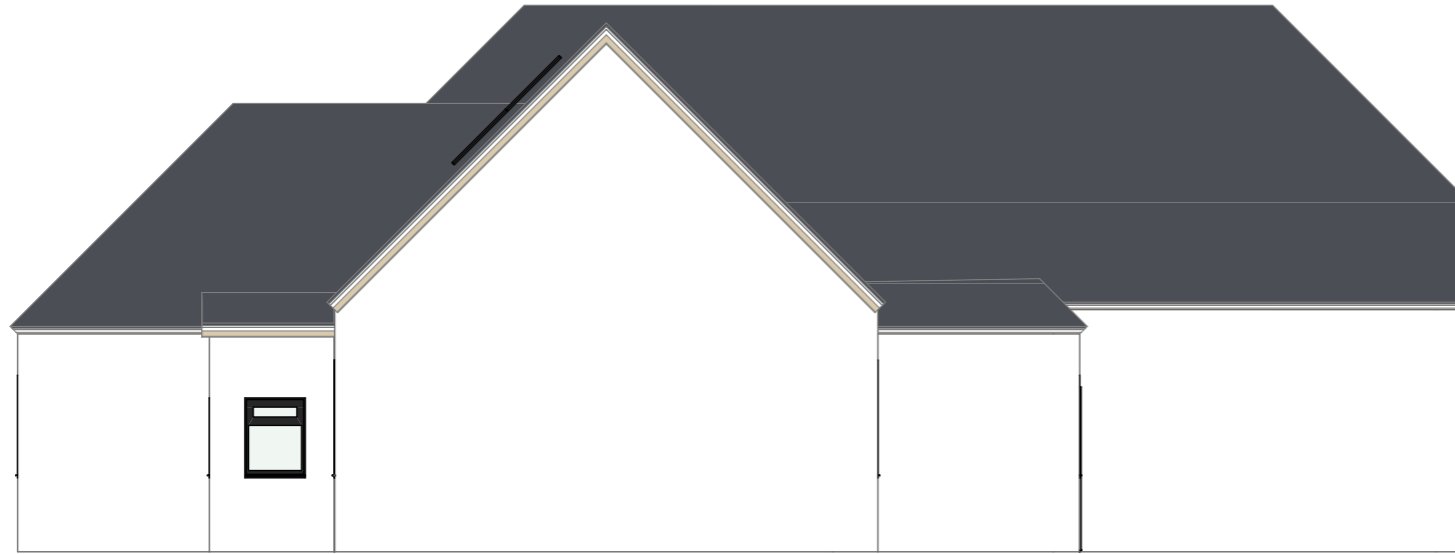
	125 Candleriggs, Glasgow, G1 1NP
	Tel: 0141 551 8383 Web: www.johngilbert.co.uk

Client  
**Torrison District Community Association**

Project Name  
**Torrison Primary School**

Drawing Title  
**Proposed North and East elevations**

Drawn By	Scale at A3 1:100	Project No. 04683	Drawing Number_Rev [EE]05_
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SOUTH ELEVATION



WEST ELEVATION

Notes / Key

Health & Safety Notes

RevID	Description	Date	Drawn	Checked
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Project Status  
**Feasibility**

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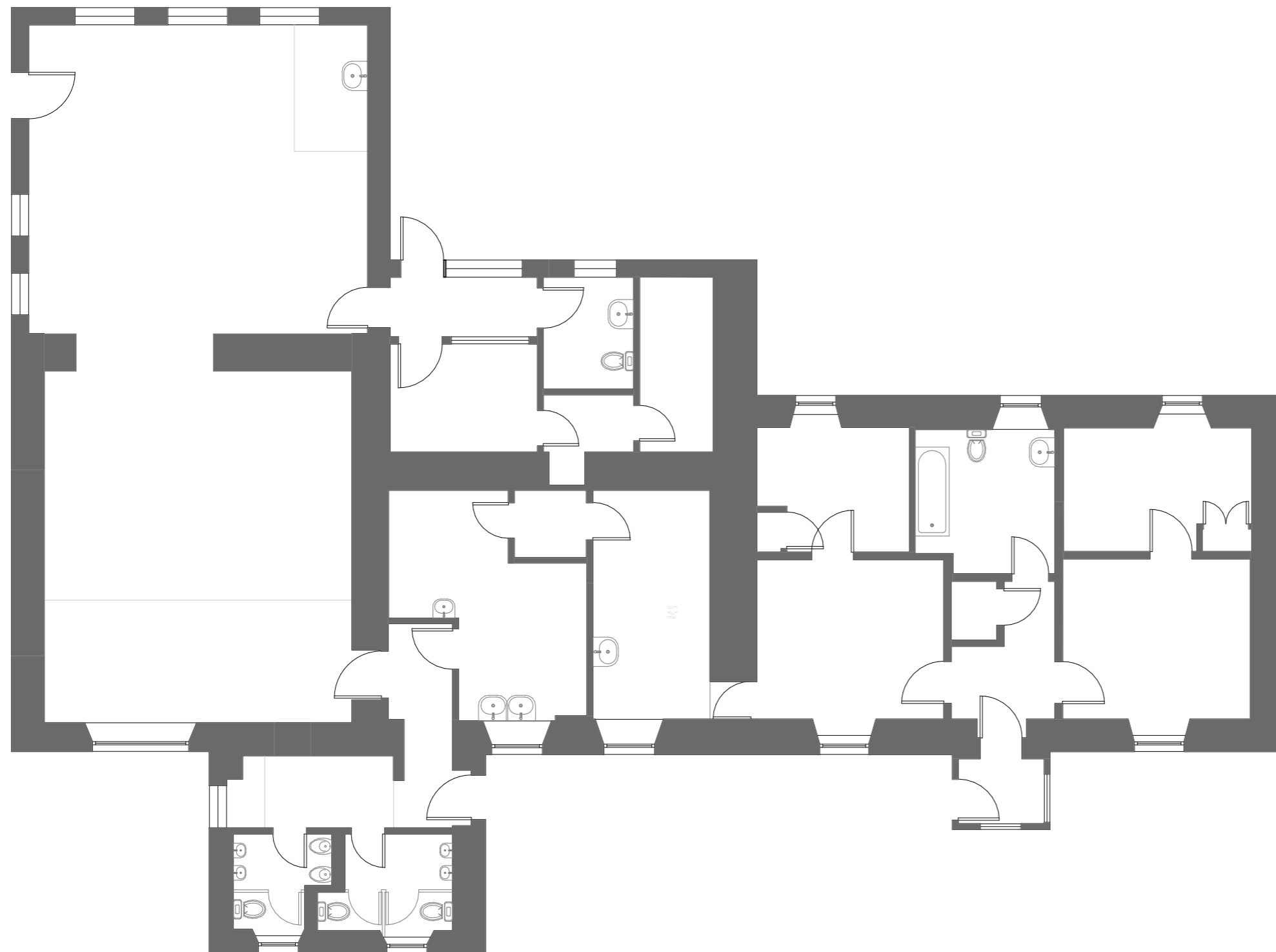
Client  
**Torrison District Community Association**

Project Name  
**Torrison Primary School**

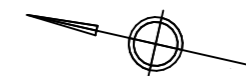
Drawing Title  
**Proposed South and West elevations**

Drawn By	Scale at A3 1:100	Project No. 04683	Drawing Number_Rev [EE]06_
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Notes / Key



0m 1m 2m 3m 4m 5m

GEA = 300m<sup>2</sup>  
 GIA = 252m<sup>2</sup>  
 NIA = 179m<sup>2</sup>

Health & Safety Notes

RevID	Description	Date	Drawn	Checked
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Project Status  
**Feasibility**

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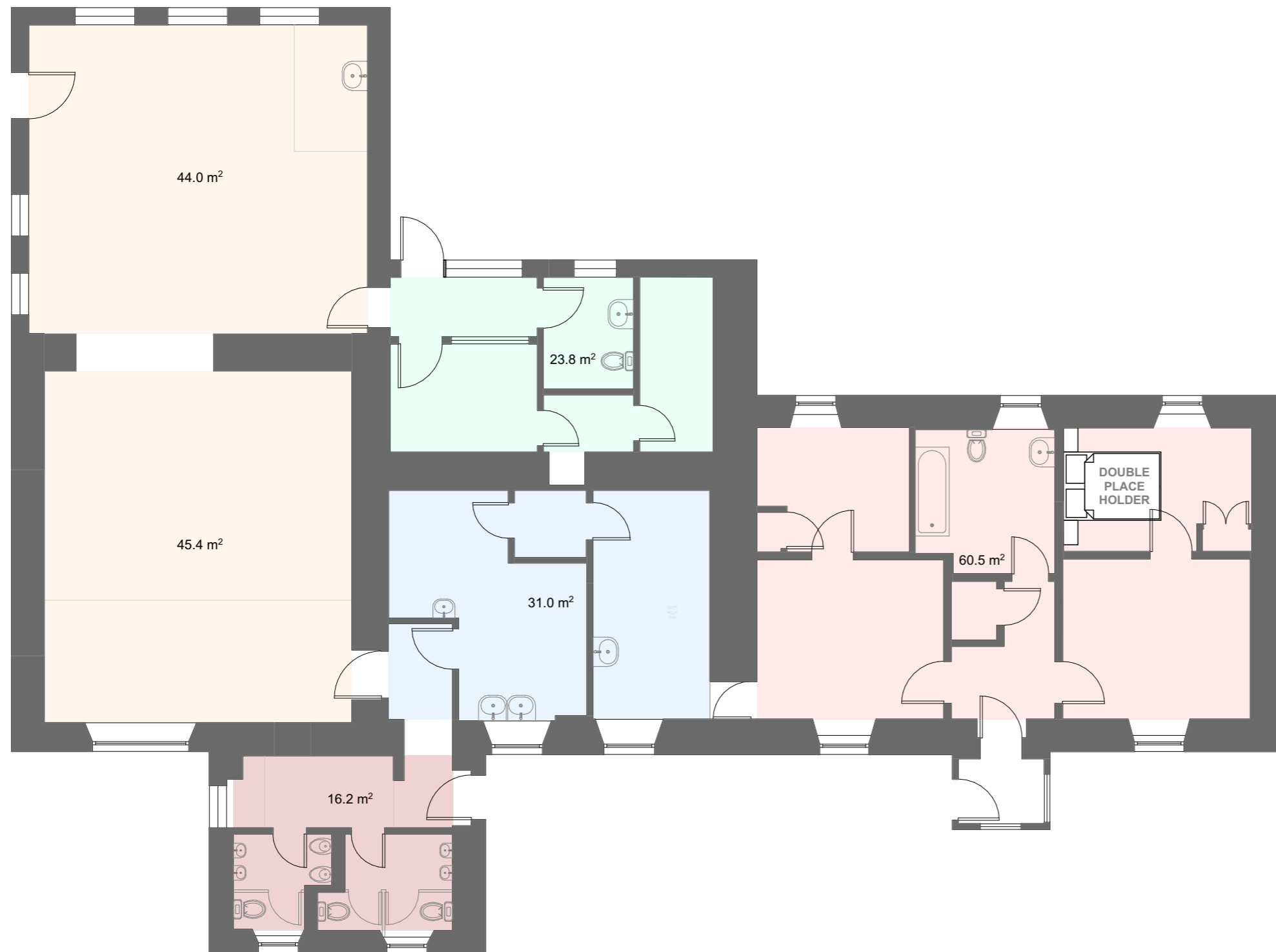
125 Candleriggs, Glasgow, G1 1NP  
 Tel: 0141 551 8383  
 Web: www.johngilbert.co.uk

Client  
**Torrison District Community Association**

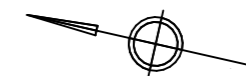
Project Name  
**Torrison Primary School**

Drawing Title  
**Existing Ground Floor Plan**

Drawn By HT	Scale at A3 1:200,	Project No. 04683	Drawing Number_Rev [PP]02_
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Notes / Key



0m 1m 2m 3m 4m 5m

GEA = 300m<sup>2</sup>  
 GIA = 252m<sup>2</sup>  
 NIA = 179m<sup>2</sup>

Health & Safety Notes

RevID	Description	Date	Drawn	Checked

Project Status  
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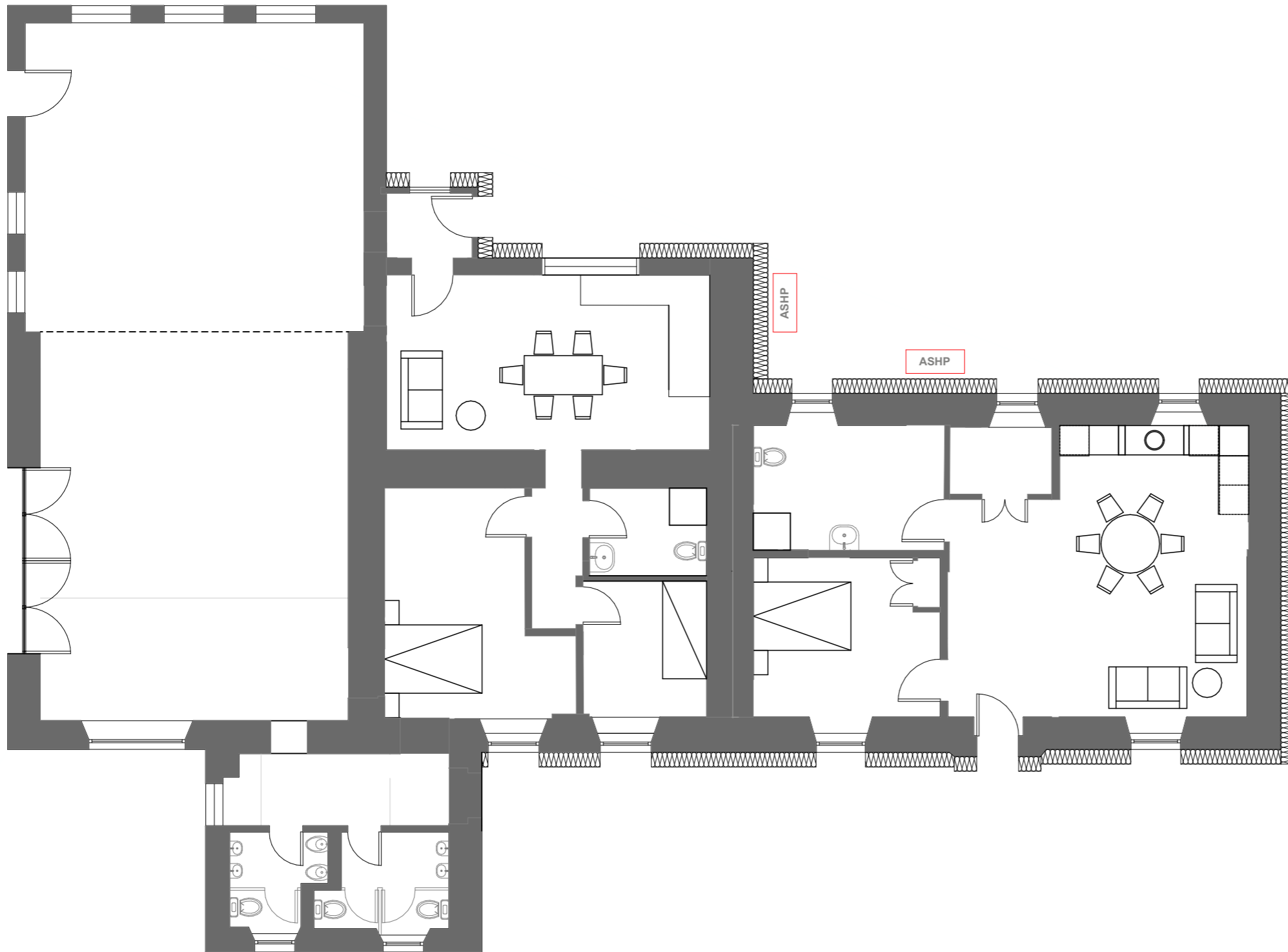
Client  
**Torrison District Community Association**

Project Name  
**Torrison Primary School**

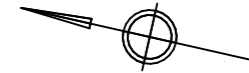
Drawing Title  
**Existing Ground Floor Plan\_WITH AREAS**

Drawn By HT	Scale at A3 1:100,	Project No. 04683	Drawing Number_Rev [PP]01_
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Notes / Key



0m 1m 2m 3m 4m 5m

GEA = 300m<sup>2</sup>  
 GIA = 257m<sup>2</sup>  
 NIA = 179m<sup>2</sup>

Health & Safety Notes

RevID	Description	Date	Drawn	Checked
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Project Status  
**Feasibility**

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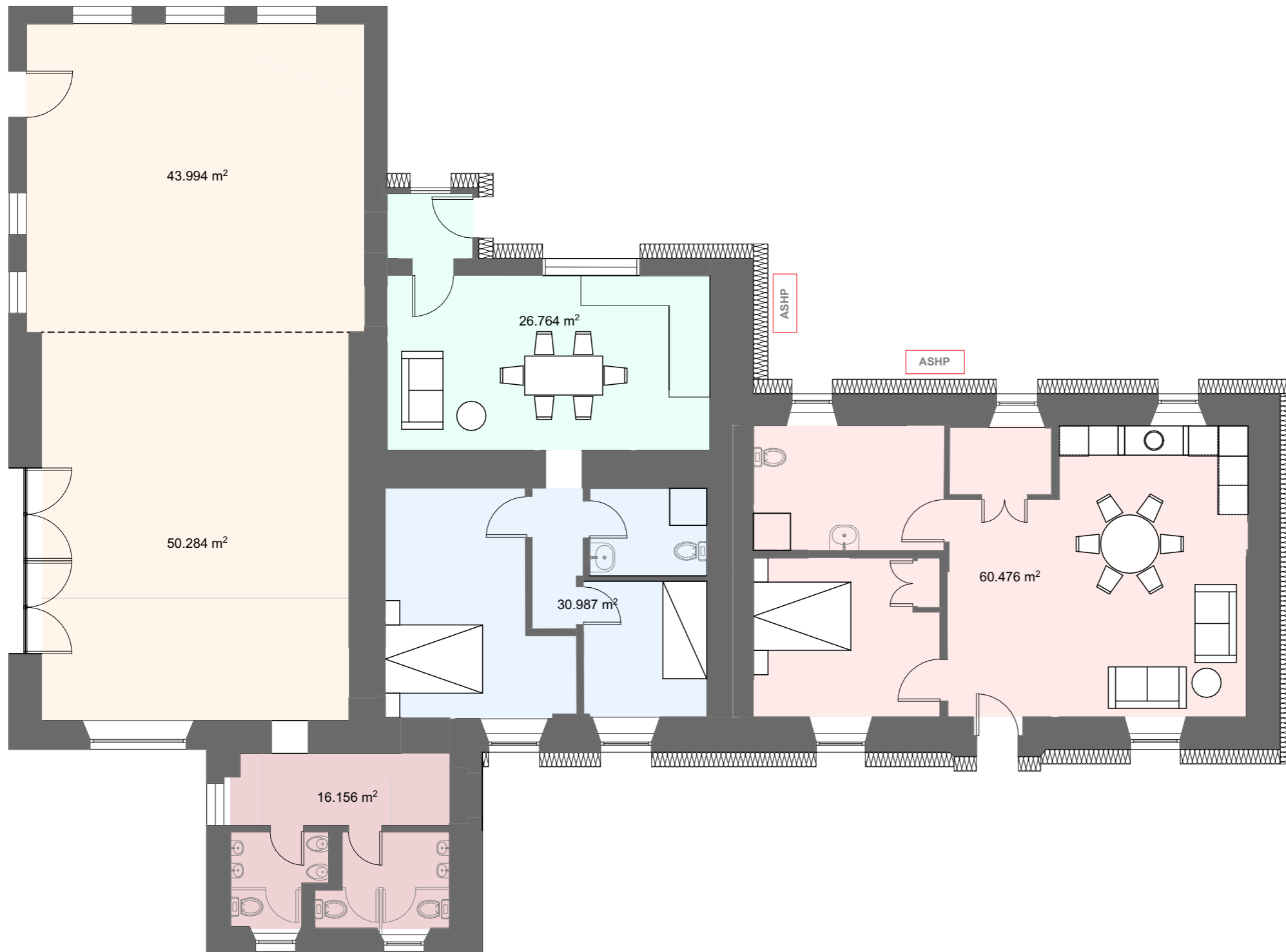
125 Candleriggs, Glasgow, G1 1NP  
 Tel: 0141 551 8383  
 Web: www.johngilbert.co.uk

Client  
**Torrison District Community Association**

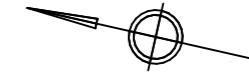
Project Name  
**Torrison Primary School**

Drawing Title  
**Proposed Ground Floor**

Drawn By HT	Scale at A3 1:200,	Project No. 04683	Drawing Number_Rev [PP]XX_
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Notes / Key



0m 1m 2m 3m 4m 5m

GEA = 300m<sup>2</sup>  
 GIA = 257m<sup>2</sup>  
 NIA = 179m<sup>2</sup>

Health & Safety Notes

RevID	Description	Date	Drawn	Checked

Project Status  
**Feasibility**

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Client  
**Torridon District Community Association**

Project Name  
**Torridon Primary School**

Drawing Title  
**Proposed Ground Floor\_WITH AREAS**

Drawn By HT	Scale at A3 1:200,	Project No. 04683	Drawing Number_Rev [PP]XX_
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## Cost Plan – Work in Progress

# Budget Works Cost

We have commissioned Torrance Partnership to provide a cost plan based on the preferred option and outline specification within this report. A summary of that is on the right and more detail is contained within Appendix one.

It should be noted that these figures relate to the building works and exclude:

- Professional Fees
- Legal Fees (including legal and/or lease/agreements costs)
- local authority fees (such as planning and building warrant applications)
- site investigations such as a topographical survey or digging trial pits
- professional fees, usually expressed as a percentage of the building works cost, including VAT, plus travel and expenses
- contingency funds are included but you need to take advice on the suitability of this allowance.
- project management and staffing costs
- fixtures, fittings and furnishings
- VAT. For renovations we strongly advise you to obtain independent VAT advice for your project.

In preparing the cost the QS has used the base date of 27 March 2024, inflation between now and starting on site is likely to increase these figures.

Refer to notes in Appendix One for further clarifications and assumptions included.

Item	Total Cost/m <sup>2</sup>	Allocation Enerprise	Allocation Residential	Total Cost
	255m <sup>2</sup>	123m <sup>2</sup>	133m <sup>2</sup>	
Substructure	£72	£8,875	£9,597	<b>£18,400</b>
Superstructure	£1,009	£124,061	£134,147	<b>£257,200</b>
Internal finishes	£216	£26,529	£28,686	<b>£55,000</b>
Fittings and equipment	£44	£5,451	£5,894	<b>£11,300</b>
Services	£434	£53,348	£57,685	<b>£110,600</b>
New build extension	£29		£7,500	<b>£7,500</b>
Existing building works	£178	£21,851	£23,627	<b>£45,300</b>
External works inc car park and gardens	£618			<b>£157,475</b>
Play park (allowance)	£392			<b>£100,000</b>
Prelims (18%)	£538	£66,227	£71,611	<b>£137,300</b>
Contractor overhead & profit	£247	£30,391	£32,862	<b>£63,005</b>
Risk / Contingencies (5%)	£192	£23,635	£25,557	<b>£49,000</b>
<b>Budget Works Cost</b>	<b>£3,969</b>			<b>£1,012,080</b>

## Comment from John Gilbert Architects.

This is a significant sum for the project but reflects the amount of work required for the building conversion, recent construction inflation and the rural nature of the project. As part of the next phase of works, we would consider if there were areas suitable for value engineering / cost reduction. For example:

- more detail on rot risks and roof condition to bring work required down
- consideration of alternative specifications for external wall render systems
- reduce spec of car parking area to reduce cost
- drainage design to confirm extent of external drainage required

More detailed design will assist in confirming significant uncertainties at this stage, however the impact of these changes may not significantly change the overall magnitude of the cost.



## Summary and Next Steps

# Next Steps: Indicative Programme

Based on the work to date, we suggest the following indicative programme for the next stages of work.

RIBA Stage	Action		M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12	M13	M14
3	Appoint design team	6 weeks	█	█												
3	Surveys and investigations	10 weeks	█	█	█	█										
3	Develop planning proposals	8 weeks			█	█										
3	Planning submission						█									
3	Planning approval period	16 weeks					█	█	█	█						
4a	Develop technical design	6 weeks						█	█	█						
4a	Develop engineering design	6 weeks							█	█						
4a	Building warrant submission									█						
4a	Building warrant approval	8 weeks								█	█	█				
4b	Prepare tender / construction package inc drawings and specifications	6 weeks									█	█	█			
4b	Billing period	6 weeks										█	█	█		
4b	Tender period	8 weeks												█	█	█
4b	Tender reporting	2 weeks														█
5	Potential Site start or mobilisation.															█

This table is indicative but outlines the steps required to achieve statutory consents, sufficient design detail and compliant tender process.



# Next Steps: Statutory & Legal

To move the project forward, there are a number of areas that need to be addressed from a statutory and legal perspective.

## Consents and Surveys

The tables on the right show our recommendations for the consents required for this project and the surveys required to enable those consents to be granted. This should be led by the design team for the next stage but we are happy to explain these further, if required.

## Professional Team

To move forward, you will need a professional team to advise and guide you. We would be delighted to continue to work with you to develop this project. However you should check with potential funders now, if they have any requirements for tendering and appointing a design team you need to ensure you follow their guidance for this.

You will need to learn to work with a team over a long period of time and trust them to advise you on a lot of complicated matters. Choosing one team and working with them through the whole project will generally produce a better result and be the cheapest option, although you must be prepared to change if you are unhappy with the service provided. Trust and a good relationship with professionals will help you to negotiate fees and deal easily with any issues which may arise.

We advise that the design team consists of the following members:

- Lead consultant and Architect
- Quantity Surveyor
- Structural Engineer
- Landscape Architect
- Principal Designer (Health & Safety)

We can provide further advice and budget cost for this on request.

## Health & Safety (CDM)

This is now a major issue in the construction industry. Health and safety is governed by the Construction, Design and Management Regulations (CDM). Throughout construction industry literature you will see references to CDM – read it as “health and safety”.

The Construction Design and Management regulations were updated in 2015 (CDM2015). Under these regulations, the client has a number of legally binding duties and failure to undertake these duties can result in criminal convictions.

CDM 2015 applies to all building and construction work and includes new build, demolition, refurbishment, extensions, conversions, repair and maintenance. It applies to all sizes of project, equally.

Complying with CDM 2015 will help ensure that no-one is harmed during the work, and that your building is safe to use and maintain while giving you good value. Effective planning will also help ensure that your work is well managed with fewer unexpected costs and problems.

There are three main duty holders:

- The client ensures that the construction project is set up so that it is carried out from start to finish in a way that adequately controls the risks to the health and safety of those who may be affected.
- The principal designer manages health and safety in the pre-construction phase of a project. The role extends to the construction phase through the principal designer’s duties to liaise with the principal contractor and ongoing design work. In most cases this role is expected to be the lead designer (such as the architect) but could be undertaken by another professional who has control of the design, or the client themselves (if they have experience).
- The principal contractor manages the construction phase of a project. This involves liaising with the client and principal designer throughout the project, including during the pre-construction phase

You **must** appoint a principal designer for the next stage and you should take their advice on the requirements for the project. We are happy to explain these further, if required.

Statutory Consents	Required for project?
Planning consent	Yes
Listed building / conservation area consent	No
Demolition consent	Yes
Building warrant	Yes
Road construction consent	No
Scottish Water technical approval	Yes
Health & Safety Executive F10 notice	Yes
Tree work consent	Potentially required

Surveys Required	Who to arrange	Stage
Topographical survey	Design Team	Pre-Planning
Measured building survey	Design Team	Pre-Planning
Desk site Investigation	Design Team	Pre-Planning
Ecological & bat survey	Design Team	Pre-Planning
Services / utilities review	Design Team	Pre-Planning
Rot survey	Client / Owner	Pre-acquisition
Asbestos survey (demolition)	Client / Owner	Pre-acquisition







Torrison District Community Association

Conversion of former Torrison Primary School to 2 No. Houses and Business Unit

## FEASIBILITY CONSTRUCTION COST ESTIMATE

1.0

23.032

27 March 2024

*Prepared by*  
Torrance Partnership LLP  
1st Floor  
Larkfield  
23 Southside Road  
Inverness  
IV2 3BG  
E&OE



**EXECUTIVE SUMMARY**



23.032

**Conversion of former Torridon Primary School to 2 No. Houses and Business Unit**  
**Torridon District Community Association**

27/03/2024 1.0

**Project/Scope**

This development proposal broadly comprises the following:

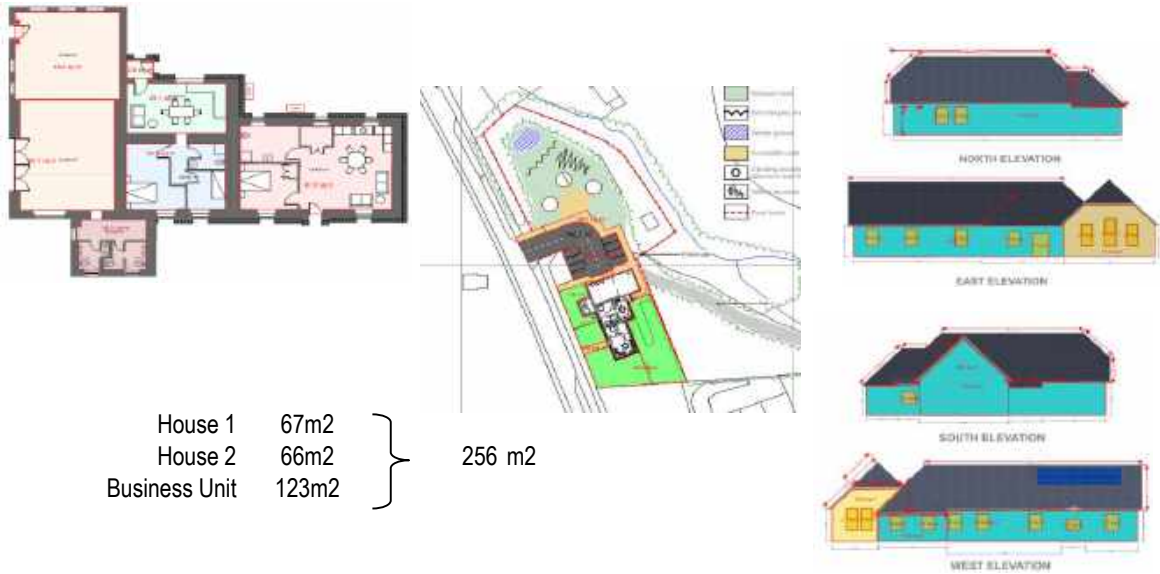
- Stripping out of existing interiors
- Relining internal face of external walls
- External Wall Insulation to Residential Units
- Stripping and reslating roofs with allowance for sarking repairs
- Fitting out house internals to form layouts indicated on Architects Drawings
- Replacement windows/doors throughout
- New Plumbing, Electrics and Heating throughout residential units only
- Redecoration to all areas
- Provisional Allowances for External Works
- Provisional Allowance for Play Park Works

**Cost Overview**

This Feasibility Estimate incorporates the above elements and we note our anticipated cost below:

<b>Estimated Feasibility Construction Cost</b>	<b>£</b>	<b>1,012,081.00 (excluding VAT)</b>
--	----------	-------------------------------------

*There is a considerable amount of design development to be undertaken which will require diligent cost tracking to ensure that this initial feasibility cost budgets are adhered to. As such we would suggest that these costs be treated as indicative only.*



Revision	Status	Date	Issue Reason	Author	Reviewed	Approved
0	Sketch Drawings	27/03/2024	Client Review	JBS	MJS	Mark Stevenson



## **BASIS OF INFORMATION, ASSUMPTIONS AND EXCLUSIONS**



23.032

**Conversion of former Torridon Primary School to 2 No. Houses and Business Unit  
Torridon District Community Association**

27/03/2024

1.0

### **Basis of Information**

Concept Proposal by John Gilbert Architects Ltd.

Prepared E&OE

### **Assumptions**

Construction works to be competitively tendered on full Bills of Quantities

Costs based on 2nd Quarter 2024.

Assumes new concrete Ground Floor with insulation to Old Schoolhouse only; existing floors remaining elsewhere

Provisional Allowance of £100,000 for Play Park Area

Assumes existing sewers are suitable for connecting into and no allowance for additional drainage

Assumes existing utilities services are available and no allowance required for network enhancement

Provisional Allowance of £10,000 for SUDS Drainage

Assumes no improvement work required within the Enterprise Unit which remains as an existing shell

Assumes no improvement work required within the Toilet Area of the Enterprise Unit which remains as existing

Provisional Allowance of £7,500 for Utilities Connection Charges

### **Exclusions**

The Client is advised to ensure that it makes additional finance available to cover these works which may represent an additional cost to the project (where required):

Professional Fees

Legal Fees (including legal and/or lease/agreements costs)

Bank Fees & Charges (where necessary)

Out of hours working and overtime

Excludes costs associated with Planning/Consents or Building Standards

Excludes any Planning Gain

Client/Tenant Fit-out or other specialist installations

Utility and SSE network reinforcement/upgrade costs are excluded

No allowance for excavation, disposal or treatment of contaminated material.

No allowance for removal of any asbestos that may be discovered.

Client's direct costs including all loose Furniture, Fittings and Equipment associated with the new building and use.

No diversion of existing services above or below ground

VAT is excluded

Capital Allowances are excluded

Client Contingency is excluded

### **Notes**

An allowance of 18% for the Contractors Management of the Project, in relation to 'Preliminaries', People and Equipment costs and Direct/Sub-Contract fee has been included. 7% O H & P has been included

An allowance of 5% for Risk has been included.

# FEASIBILITY CONSTRUCTION COST ESTIMATE



**CLIENT:** Torricon District Community Association

**PROJECT:** Conversion of former Torricon Primary School to 2 No. Houses and Business Unit

**JOB NO:** 23.032

**REVISION NO:** 1.0

**DATE:** 27 March 2024

**GIFA:** 255 m2

Cost Centre	GROUP ELEMENT Sub-element	ELEMENT COST	COST/m2 OF GIFA	TOTAL COST OF ELEMENT (TARGET COST)
			£ 3,976.74	
<b>BUILDING WORKS</b>				
<b>1 1.0</b>	<b>SUBSTRUCTURE</b>			
1.0	Downtakings Etc	£ -	£ -	
1 1.1	Foundations	£ -	£ -	
1.2	Basement excavations	£ -	£ -	
1.3	Basement retaining walls	£ -	£ -	
1.4	Ground floor construction	£ 13,400.00	£ 13,400.00	
1.5	Underfloor Drainage	£ 5,000.00	£ 19.65	
			<b>TOTAL</b>	<b>£ 18,400.00</b>
<b>2.0</b>	<b>SUPERSTRUCTURE</b>			
2.1	Existing Steel Frame	£ -	£ -	
2.2	Upper floors	£ -	£ -	
2.3	Roof	£ 90,800.00	£ 356.78	
2.4	Stairs and ramps	£ -	£ -	
2.5	External walls	£ 69,100.00	£ 271.51	
2.6	Windows and external doors	£ 41,100.00	£ 161.49	
2.7	Internal walls & partitions	£ 50,200.00	£ 197.25	
2.8	Internal doors	£ 6,000.00	£ 23.58	
			<b>TOTAL</b>	<b>£ 257,200.00</b>
<b>3.0</b>	<b>INTERNAL FINISHES</b>			
3.0	Downtakings Etc	£ -	£ -	
3.1	Wall finishes	£ 8,600.00	£ 33.79	
3.2	Floor finishes	£ 7,800.00	£ 30.65	
3.3	Ceiling finishes	£ 13,100.00	£ 51.47	
3.4	Decoration	£ 25,500.00	£ 100.20	
			<b>TOTAL</b>	<b>£ 55,000.00</b>
<b>4.0</b>	<b>FITTINGS, FURNISHING AND EQUIPMENT</b>			
4.1	General fittings, furnishings and equipment	£ 11,300.00	£ 44.40	
4.2	Special fittings, furnishings and equipment	£ -	£ -	
4.3	Internal planting	£ -	£ -	
4.3	Bird and vermin control	£ -	£ -	
			<b>TOTAL</b>	<b>£ 11,300.00</b>



<b>5.0</b>	<b>SERVICES</b>			
5.1	Sanitary appliances	£ 6,000.00	£ 23.58	
5.2	Services equipment	£ -	£ -	
5.3	Disposal installations	£ 3,900.00	£ 15.32	
5.4	Water installation	£ 13,800.00	£ 54.22	
5.5	Heat source	£ -	£ -	
5.6	Space Heating and air conditioning	£ 33,200.00	£ 130.45	
5.7	Ventilation systems	£ 4,600.00	£ 18.07	
5.8	Electrical installation	£ 22,900.00	£ 89.98	
5.9	Gas and other fuel installations	£ -	£ -	
5.10	Lift and conveyor installation	£ -	£ -	
5.11	Fire and lightning protection	£ 5,900.00	£ 23.18	
5.12	Communication, security and control systems	£ 3,900.00	£ 15.32	
5.13	Specialist installations	£ 9,800.00	£ 38.51	
5.14	Builders' work in connection with services	£ 3,300.00	£ 12.97	
5.15	Testing and commissioning of services	£ 3,300.00	£ 12.97	
<b>TOTAL</b>				<b>£ 110,600.00</b>
<b>6.0</b>	<b>COMPLETE BUILDINGS AND BUILDING UNITS</b>			
6.1	New Build Extensions	£ 7,500.00	£ 29.47	
<b>TOTAL</b>				<b>£ 7,500.00</b>
<b>7.0</b>	<b>WORK TO EXISTING BUILDINGS</b>			
7.1	Minor demolition works and alterations works	£ 45,300.00	£ 178.00	
7.2	Repairs to existing services	£ -	£ -	
7.3	Damp-proof courses / fungus and beetle eradication	£ -	£ -	
7.4	Facade retention	£ -	£ -	
7.5	Cleaning existing surfaces	£ -	£ -	
7.6	Renovation works	£ -	£ -	
<b>TOTAL</b>				<b>£ 45,300.00</b>
<b>8.0</b>	<b>EXTERNAL WORKS</b>			
8.1	Site preparation works	£ 5,000.00	£ 19.65	
8.2	Roads, paths and pavings	£ 82,400.00	£ 323.77	
8.3	Soft Landscaping	£ 14,700.00	£ 57.76	
8.4	New Access Routes	£ -	£ -	
8.5	Site / street furniture and equipment / Sundries	£ 14,900.00	£ 58.55	
8.6	External drainage	£ 31,975.00	£ 125.64	
8.7	External services	£ 8,500.00	£ 33.40	
8.8	Works to Play Park	£ 100,000.00	£ 392.93	
<b>TOTAL</b>				<b>£ 257,475.00</b>
<b>9.0</b>	<b>FACILITATING WORKS</b>			
9.1	Toxic / hazardous material removal	£ -		
9.2	Major demolitions works	£ -		
9.3	Specialist groundworks	£ -		
9.4	Temporary diversion works	£ -		
9.5	Extraordinary site investigation works	£ -		
<b>TOTAL</b>				<b>£ -</b>
<b>SUB-TOTAL: BUILDING WORKS</b>				<b>£ 762,775.00</b>

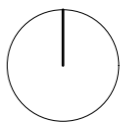
<b>10.0</b>	<b>MAIN CONTRACTOR'S PRELIMINARIES</b>			
10.1	Employer's requirements	£	-	
10.2	Main Contractor's cost items	18.0%		£ 137,300.00
<b>TOTAL</b>				<b>£ 137,300.00</b>
<b>SUB-TOTAL: BUILDING WORKS (including Main Contractor's preliminaries)</b>				<b>£ 900,075.00</b>
<b>11.0</b>	<b>MAIN CONTRACTOR'S OVERHEADS AND PROFIT</b>			
11.1	Main Contractor's overheads	3.5%		£ 31,503.00
11.2	Main Contractor's profit	3.5%		£ 31,503.00
<b>TOTAL</b>				<b>£ 63,006.00</b>
<b>TOTAL: BUILDING WORKS ESTIMATE (A)</b>				<b>£ 963,081.00</b>
<b>12.0</b>	<b>PROJECT / DESIGN TEAM FEES</b>			
12.1	Consultants' fees			£ -
12.2	Main Contractor's pre-construction fees			£ -
12.3	Main Contractor's design fees			£ -
<b>TOTAL: PROJECT/DESIGN TEAM FEES (B)</b>				<b>£ -</b>
<b>BASE COST ESTIMATE (C) [C = A + B]</b>				<b>£ 963,081.00</b>
<b>13.0</b>	<b>OTHER DEVELOPMENT / PROJECT COSTS</b>			
13.1	Other Development / Project Costs			£ -
<b>TOTAL: OTHER DEVELOPMENT/PROJECT COSTS ESTIMATE (D)</b>				<b>£ -</b>
<b>BASE COST ESTIMATE (E) [E = C + D]</b>				<b>£ 963,081.00</b>
<b>14.0</b>	<b>RISKS</b>			
14.1	Design development risks			£ -
14.2	Construction risks			£ -
14.3	Employer change risks			£ -
14.4	Employer other risks			£ -
<b>TOTAL: RISK ALLOWANCE ESTIMATE (F)</b>		<b>5.0%</b>		<b>£ 49,000.00</b>
<b>COST LIMIT (excluding inflation) (G) [G = E + F]</b>				<b>£ 1,012,081.00</b>
<b>15.0</b>	<b>INFLATION</b>			
15.1	Tender inflation	0%		
15.2	Construction inflation	0%		
<b>TOTAL: INFLATION ALLOWANCE (H)</b>				<b>£ -</b>
<b>COST LIMIT (excluding VAT assessment) (I) [I = G + H]</b>				<b>£ 1,012,081.00</b>
<b>16.0</b>	<b>VAT ASSESSMENT</b>			<i>excluded</i>

**Note:** Value Added Tax (VAT) in relation to buildings is a complex area. Therefore, it is recommended that specialist advice is sought on VAT matters to ensure that the correct rates are applied to the various aspects of a building project.



## Appendix Two – Base Drawings





Scale Bar

Notes / Key

Health & Safety Notes

RevID	Description	Date	Drawn	Checked

Project Status  
**Feasibility**

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Tel: 0141 551 8383  
Web: www.johngilbert.co.uk

Client  
**Torridon District Community Association**

Project Name  
**Torridon Primary School**

Drawing Title  
**Location Plan**


Drawn By HT	Scale at A3 1:500	Project No. 04683	Drawing Number_Rev [LP]01_
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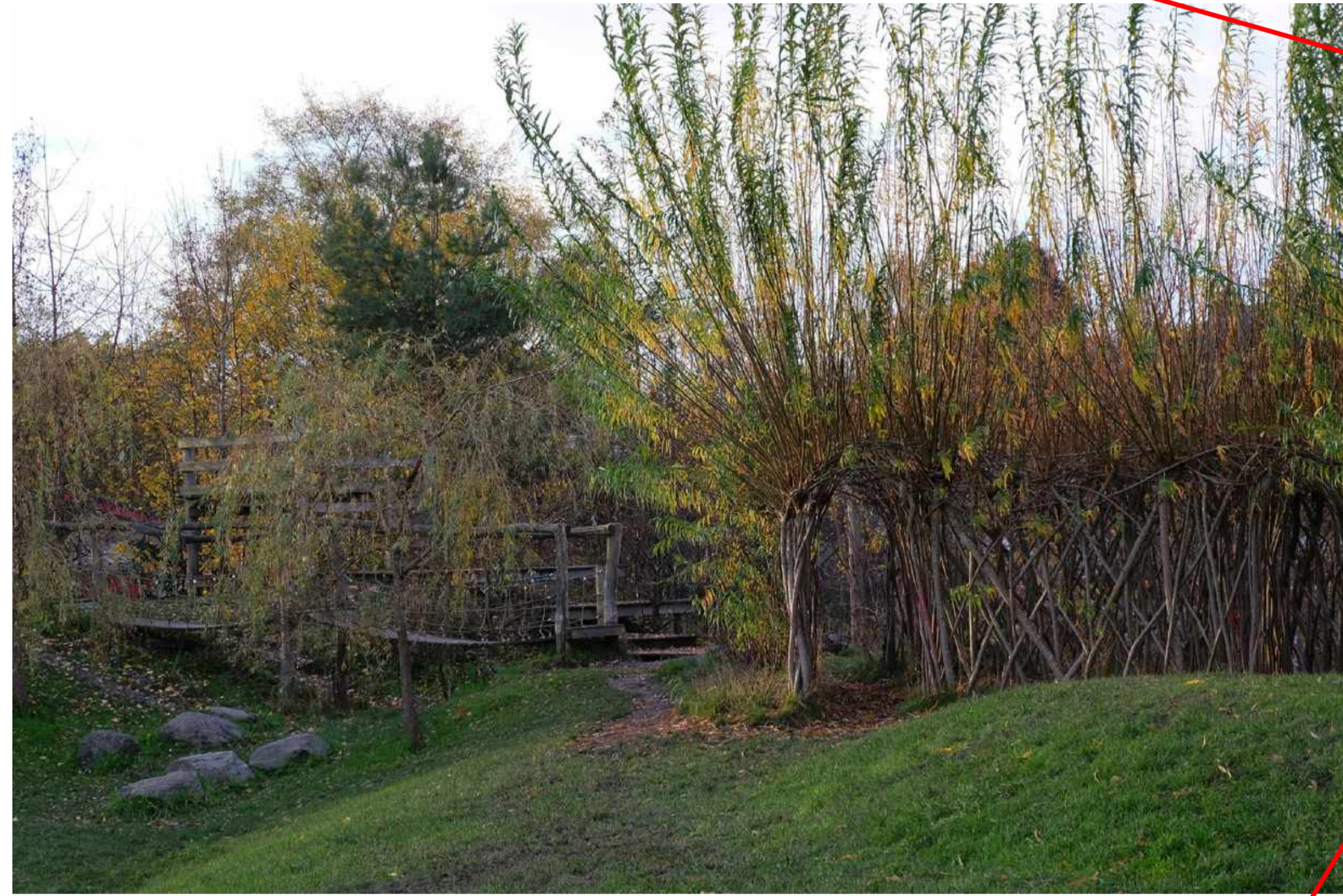


	Scale Bar			
Notes / Key				
Health & Safety Notes				
RevID	Description	Date	Drawn	Checked
Project Status <b>Feasibility</b>				
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<div style="display: inline-block; background-color: black; color: white; padding: 5px; font-weight: bold; font-size: 1.2em;">John Gilbert</div> <div style="display: inline-block; border: 1px solid black; padding: 5px; font-weight: bold; font-size: 1.2em;">ARCHITECTS</div>		125 Candleriggs, Glasgow, G1 1NP Tel: 0141 551 8383 Web: www.johngilbert.co.uk		
Client <b>Torridon District Community Association</b>				
Project Name <b>Torridon Primary School</b>				
Drawing Title <b>Existing Site Plan</b>				
Drawn By <b>HT</b>	Scale at A3 <b>1:500</b>	Project No. <b>04683</b>	Drawing Number_Rev <b>[SP]01_</b>	

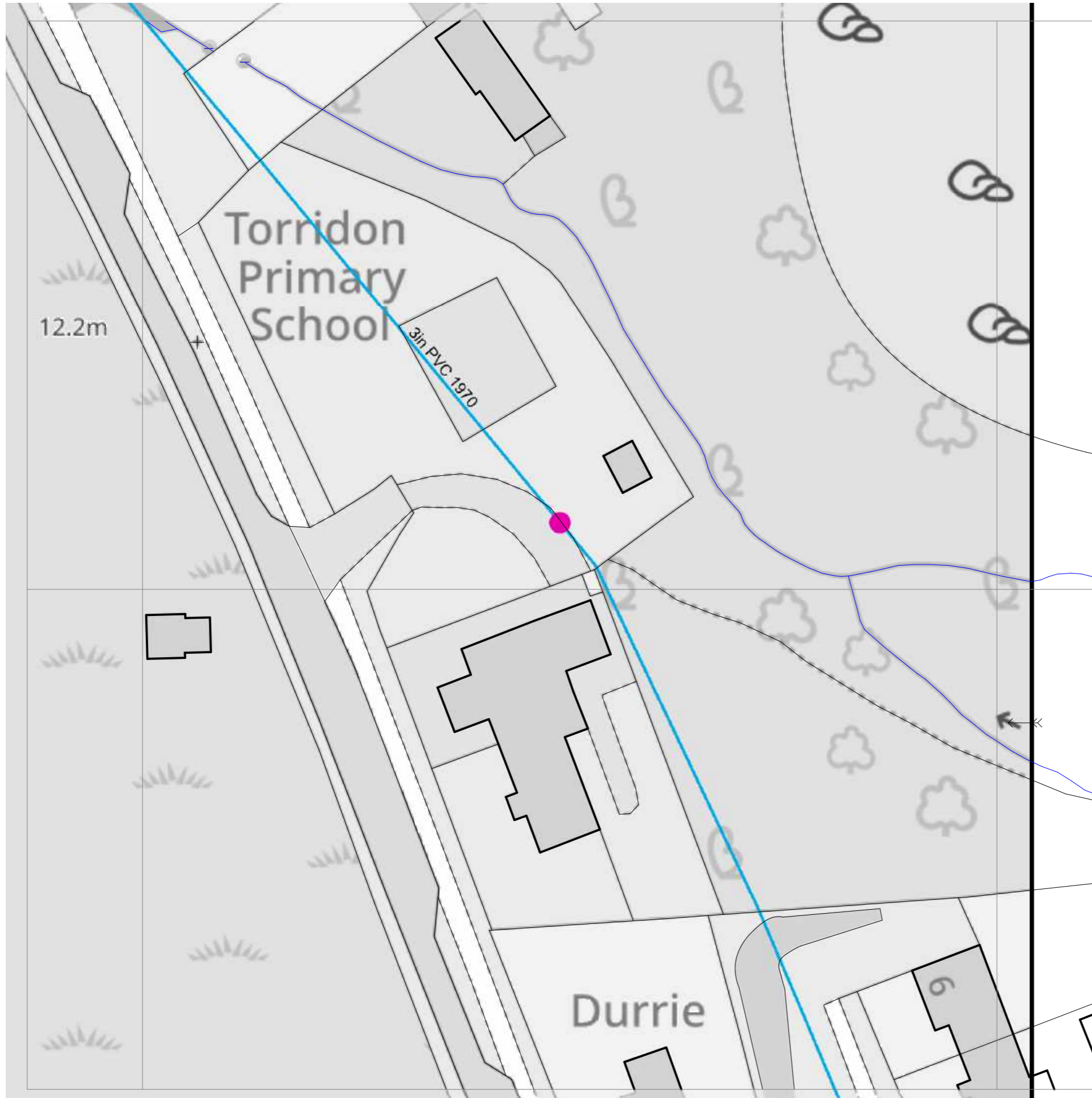


Scale Bar				
Notes / Key				
Health & Safety Notes				
RevID	Description	Date	Drawn	Checked
Project Status <b>Feasibility</b>				
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Client <b>Torridon District Community Association</b>				
Project Name <b>Torridon Primary School</b>				
Drawing Title <b>Proposed Site Plan</b>				
Drawn By	Scale at A3 1:500	Project No. 04683	Drawing Number_Rev [SP]02_	









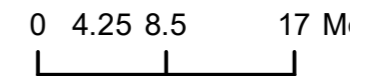
Torridon Primary School - Fresh Water

Notes / Key



The Bridge  
6 Buchanan Gate  
Stepps  
Glasgow  
G33 6FB

Tel No: 08000 778 778



Health & Safety Notes

RevID	Description	Date	Drawn	Checked
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Project Status  
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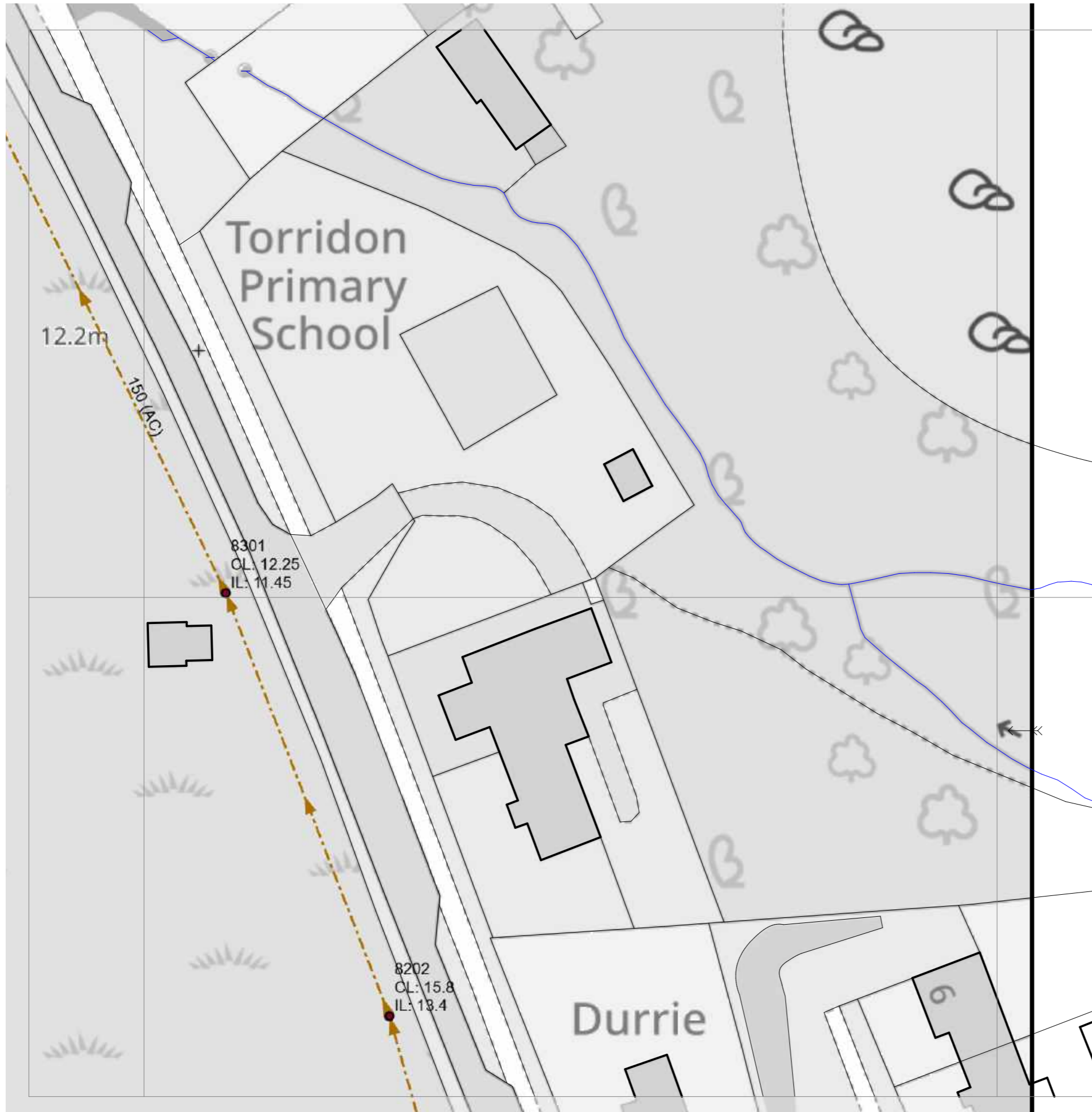
Client  
**Torridon District Community Association**

Project Name  
**Torridon Primary School**

Drawing Title  
**SW Fresh Water**

Drawn By HT	Scale at A3 1:500,	Project No. 04683	Drawing Number_Rev [SP]04_
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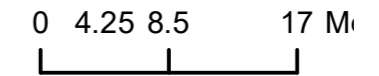
Torridon Primary School - Waste Water

Notes / Key



The Bridge  
6 Buchanan Gate  
Stepps  
Glasgow  
G33 6FB

Tel No: 08000 778 778



Health & Safety Notes

RevID	Description	Date	Drawn	Checked
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Project Status  
**Feasibility**

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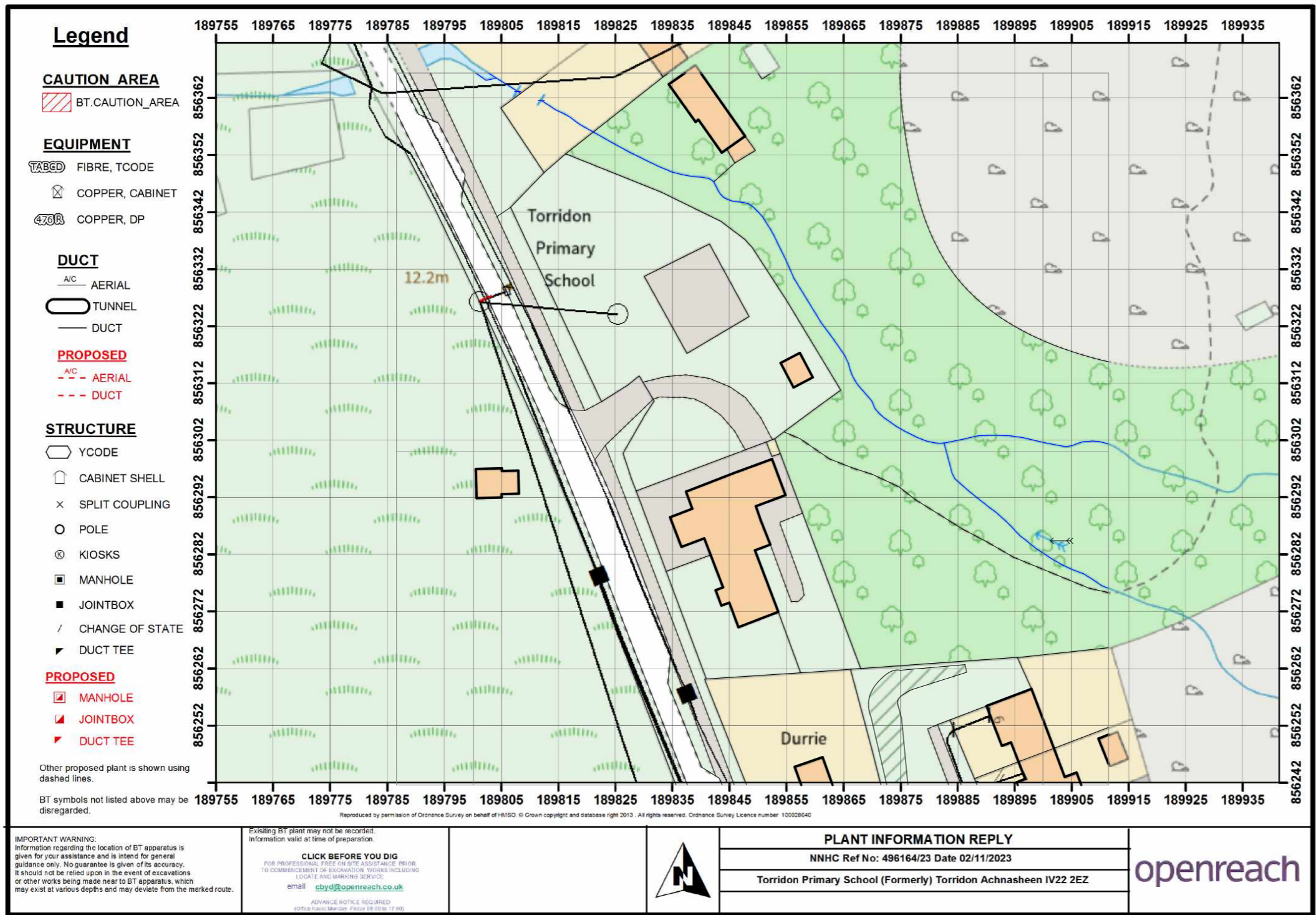
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Tel: 0141 551 8383  
Web: www.johngilbert.co.uk

Client  
**Torridon District Community Association**

Project Name  
**Torridon Primary School**

Drawing Title  
**SW Waste Water**

Drawn By HT	Scale at A3 1:500,	Project No. 04683	Drawing Number_Rev [SP]05_
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Notes / Key

Health & Safety Notes

RevID	Description	Date	Drawn	Checked

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**ARCHITECTS**

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Web: www.johngilbert.co.uk

Client  
**Torridon District Community Association**

Project Name  
**Torridon Primary School**

Drawing Title  
**BT Openreach**

Drawn By HT	Scale at A3 1:828.06	Project No. 04683	Drawing Number_Rev [SP]06_
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**NOT TO SCALE**

**IMPORTANT WARNING:**  
Information regarding the location of BT apparatus is given for your assistance and is intended for general guidance only. No guarantee is given of its accuracy. It should not be relied upon in the event of excavations or other works being made near to BT apparatus, which may exist at various depths and may deviate from the marked route.

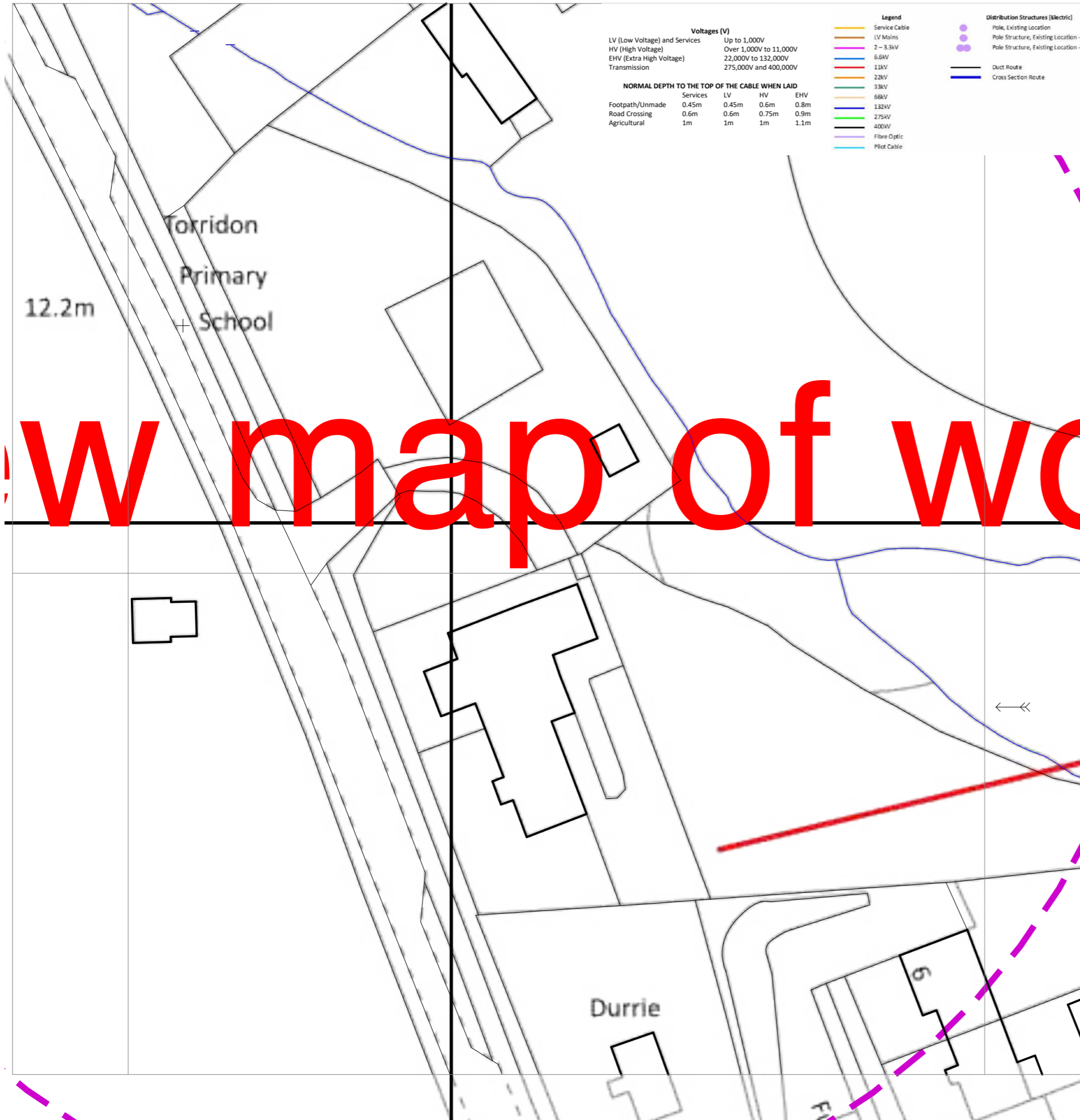
Existing BT plant may not be recorded.  
Information valid at time of preparation.  
**CLICK BEFORE YOU DIG**  
FOR PROFESSIONAL FREE ON SITE ASSISTANCE PRIOR TO COMMENCEMENT OF EXCAVATION WORKS INCLUDING LOCATE AND MARKING SERVICE.  
email [cbyd@openreach.co.uk](mailto:cbyd@openreach.co.uk)  
ADVANCE NOTICE REQUIRED  
office hours Monday - Friday 09:00 to 17:00



**PLANT INFORMATION REPLY**  
NNHC Ref No: 496164/23 Date 02/11/2023  
Torridon Primary School (Formerly) Torridon Achnasheen IV22 2EZ

**openreach**





Notes / Key

Health & Safety Notes

RevID	Description	Date	Drawn	Checked

Project Status  
**Feasibility**

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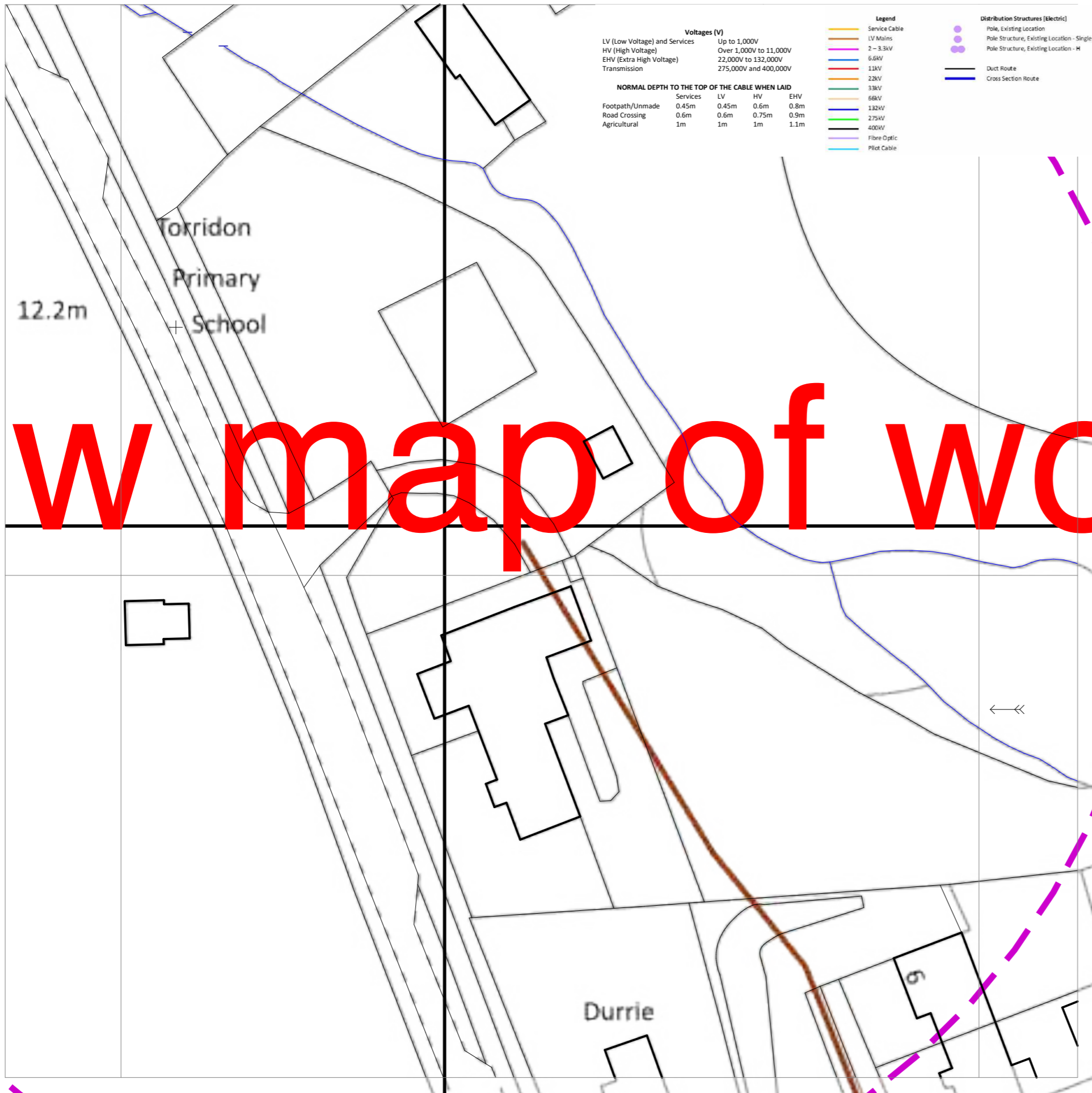
**John Gilbert ARCHITECTS** 125 Candleriggs, Glasgow, G1 1NP  
Tel: 0141 551 8383  
Web: www.johngilbert.co.uk

Client  
**Torridon District Community Association**

Project Name  
**Torridon Primary School**

Drawing Title  
**SSE Electricity High Voltage (11kV)**

Drawn By HT	Scale at A3 1:500,	Project No. 04683	Drawing Number_Rev [SP]07_
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Notes / Key



Health & Safety Notes

RevID	Description	Date	Drawn	Checked

Project Status  
**Feasibility**

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**John Gilbert**  
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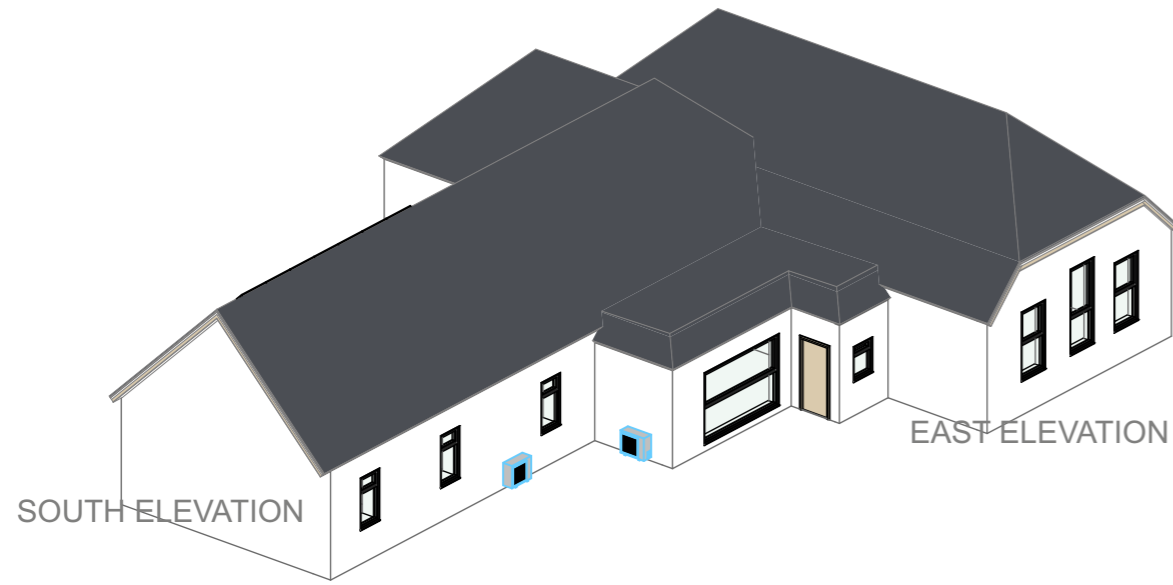
Client  
**Torridon District Community Association**

Project Name  
**Torridon Primary School**

Drawing Title  
**SSE Electricity Low Voltage Mains**

Drawn By HT	Scale at A3 1:500,	Project No. 04683	Drawing Number_Rev [SP]08_
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**External wall**

insulated render system

**Windows**

New timber framed and double glazed

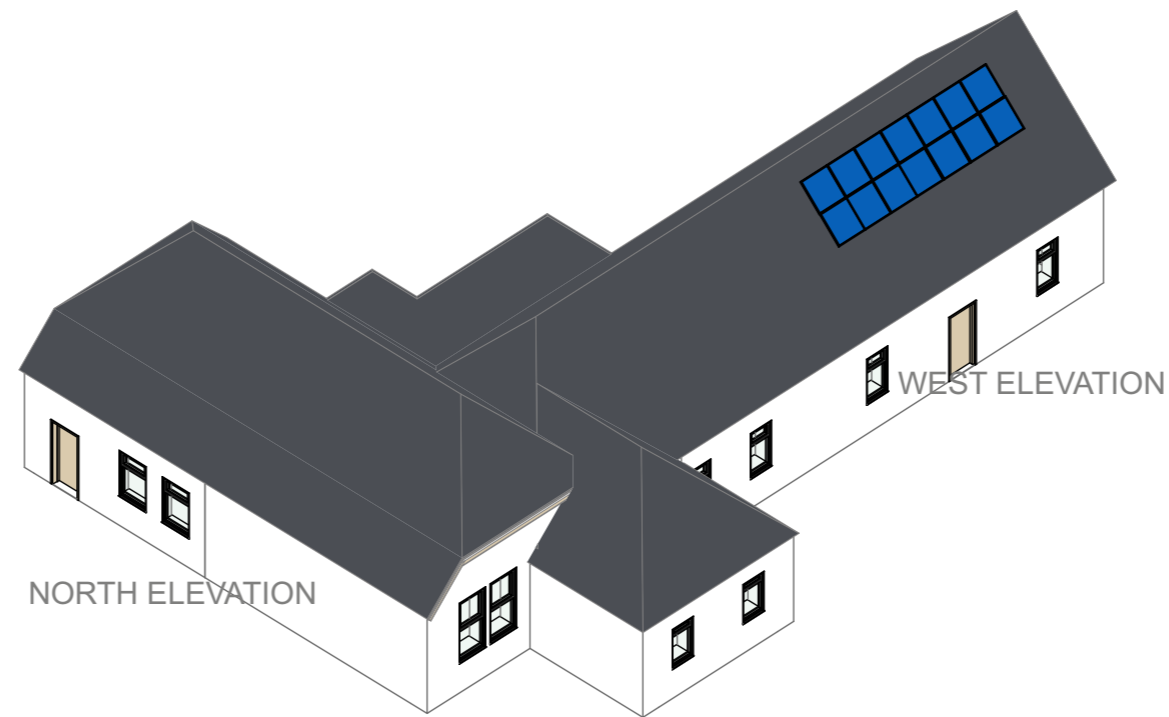
**Roof**

remove slates, remediate and insulate roof.  
Re-slate and reinstall PVs

**External**

Perimeter drainage around building and  
new rainwater goods

Refer to outline spec for full detail



Notes / Key

Health & Safety Notes

RevID	Description	Date	Drawn	Checked

Project Status  
**Feasibility**

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**ARCHITECTS**

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Client  
**Torrison District Community Association**

Project Name  
**Torrison Primary School**

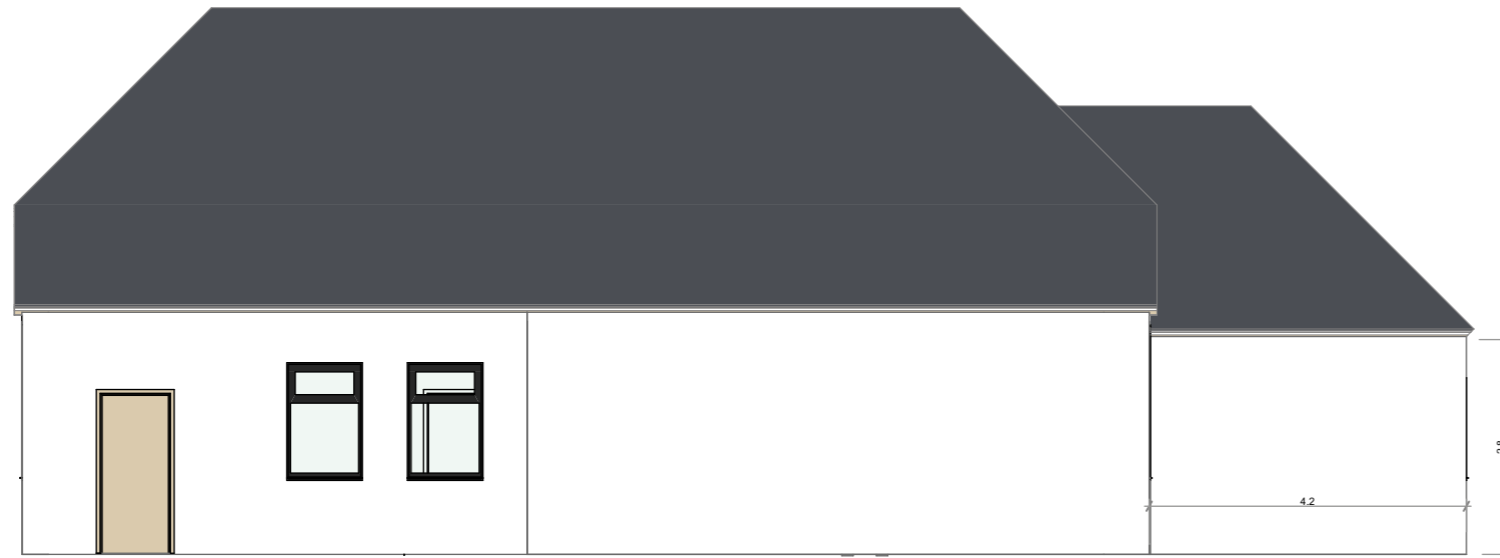
Drawing Title  
**3D views of elevations**

Drawn By	Scale at A3 1:200	Project No. 04683	Drawing Number_Rev [EE]07_
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Assumed  
WT1: 1.5m x  
0.8m

Assumed  
WT2: 1.3m x  
0.8m

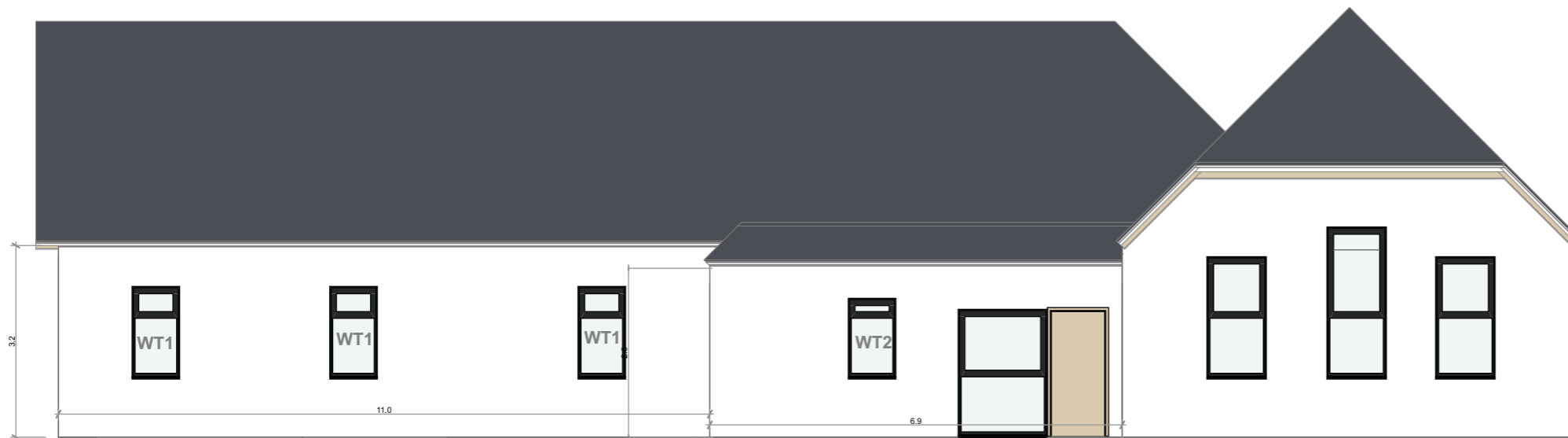
Assumed  
WT3: 1m x  
0.8m



3D-02

North

1:100



3D-03

East

1:100

Notes / Key

Health & Safety Notes

RevID	Description	Date	Drawn	Checked
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Project Status  
**Feasibility**

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**ARCHITECTS**

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Web: www.johngilbert.co.uk

Client  
**Torrison District Community Association**

Project Name  
**Torrison Primary School**

Drawing Title  
**North and East Elevation - existing**

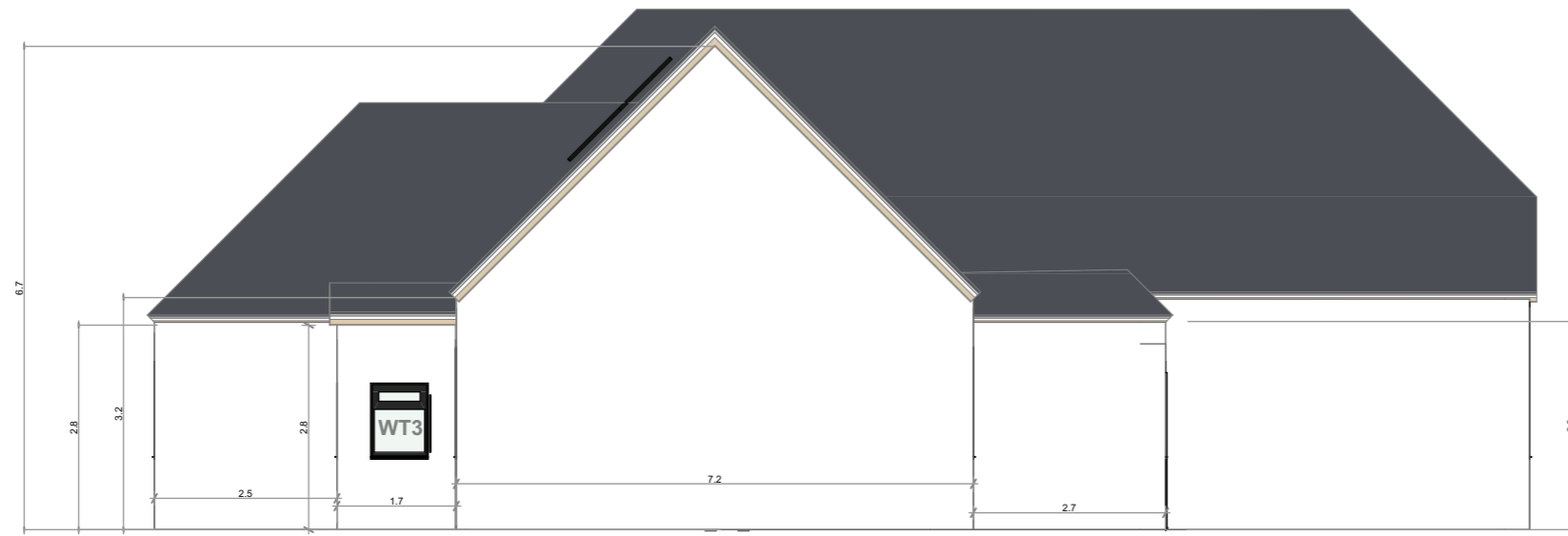
Drawn By	Scale at A3 1:100	Project No. 04683	Drawing Number_Rev [EE]03_
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Assumed  
WT1: 1.5m x  
0.8m

Assumed  
WT2: 1.3m x  
0.8m

Assumed  
WT3: 1m x  
0.8m



3D-04

South

1:100



3D-01

West

1:100

Notes / Key

Health & Safety Notes

RevID	Description	Date	Drawn	Checked
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Project Status  
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**John Gilbert**  
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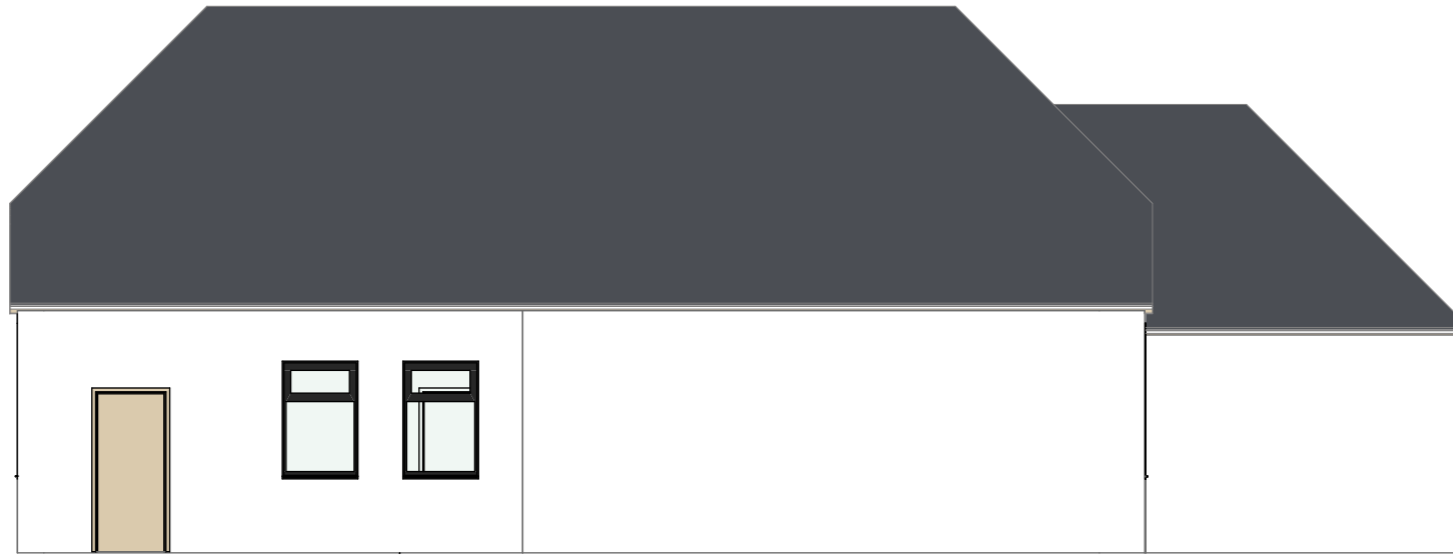
125 Candleriggs, Glasgow, G1 1NP  
Tel: 0141 551 8383  
Web: www.johngilbert.co.uk

Client  
**Torrison District Community Association**

Project Name  
**Torrison Primary School**

Drawing Title  
**South and West Elevation - existing**

Drawn By	Scale at A3 1:100	Project No. 04683	Drawing Number_Rev [EE]04_
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NORTH ELEVATION



EAST ELEVATION

Notes / Key

Health & Safety Notes

RevID	Description	Date	Drawn	Checked

Project Status  
**Feasibility**

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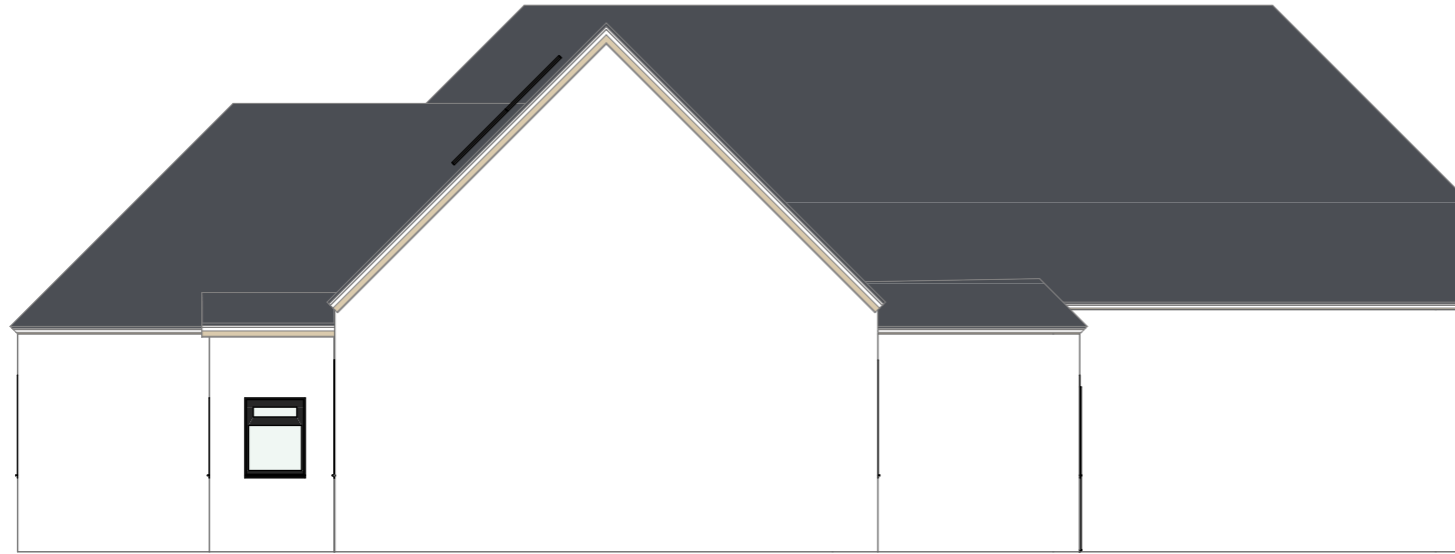
Client  
**Torrison District Community Association**

Project Name  
**Torrison Primary School**

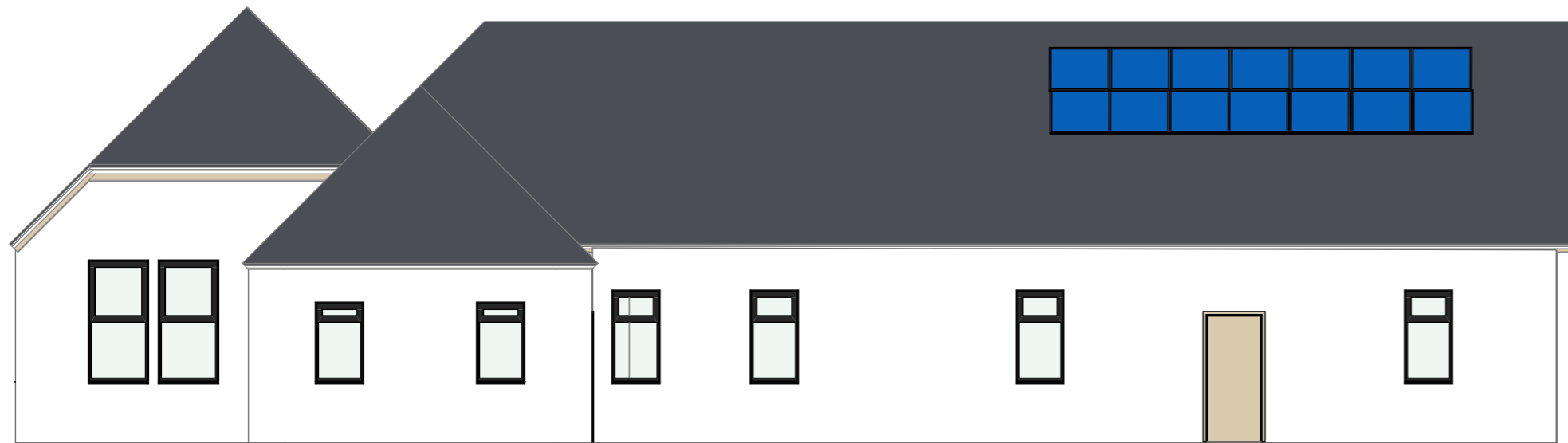
Drawing Title  
**Proposed North and East elevations**

Drawn By	Scale at A3 1:100	Project No. 04683	Drawing Number_Rev [EE]05_
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SOUTH ELEVATION



WEST ELEVATION

Notes / Key

Health & Safety Notes

RevID	Description	Date	Drawn	Checked
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Project Status  
**Feasibility**

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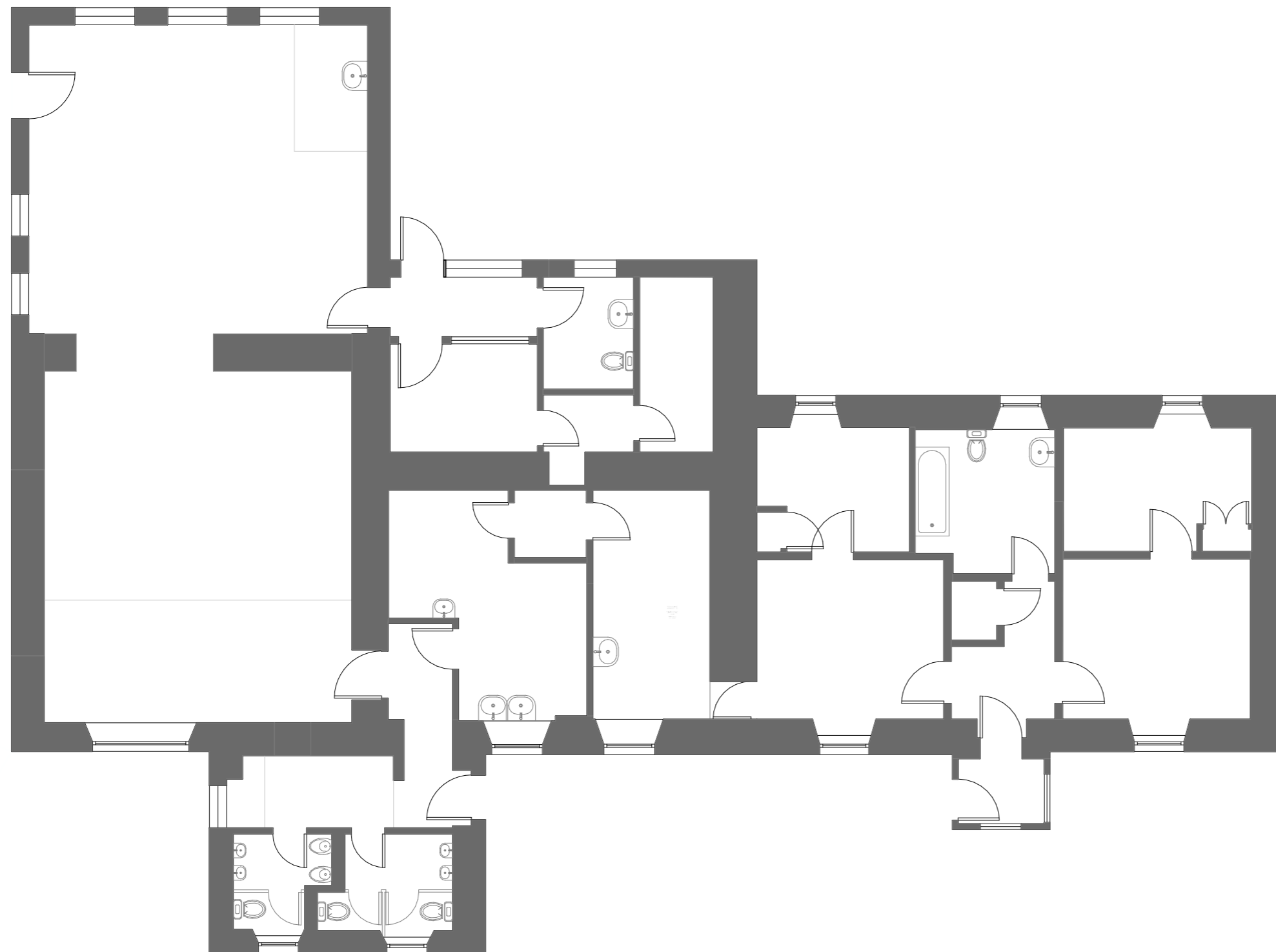
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Tel: 0141 551 8383  
Web: www.johngilbert.co.uk

Client  
**Torrison District Community Association**

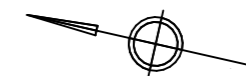
Project Name  
**Torrison Primary School**

Drawing Title  
**Proposed South and West elevations**

Drawn By	Scale at A3 1:100	Project No. 04683	Drawing Number_Rev [EE]06_
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Notes / Key



0m 1m 2m 3m 4m 5m

GEA = 300m<sup>2</sup>  
 GIA = 252m<sup>2</sup>  
 NIA = 179m<sup>2</sup>

Health & Safety Notes

RevID	Description	Date	Drawn	Checked

Project Status  
**Feasibility**

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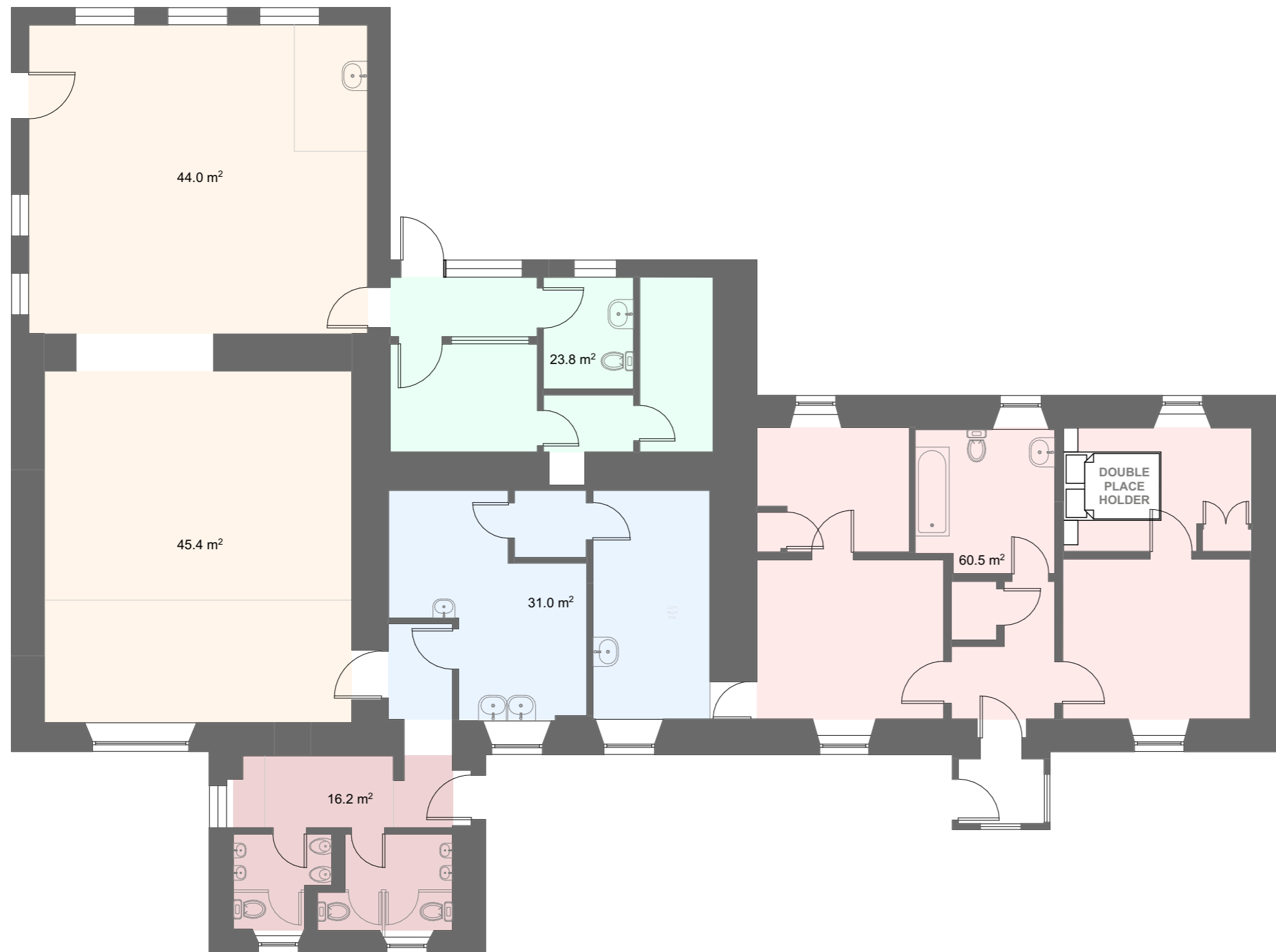
Client  
**Torrison District Community Association**

Project Name  
**Torrison Primary School**

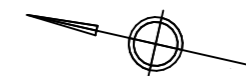
Drawing Title  
**Existing Ground Floor Plan**

Drawn By HT	Scale at A3 1:200,	Project No. 04683	Drawing Number_Rev [PP]02_
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Notes / Key



0m 1m 2m 3m 4m 5m

GEA = 300m<sup>2</sup>  
 GIA = 252m<sup>2</sup>  
 NIA = 179m<sup>2</sup>

Health & Safety Notes

RevID	Description	Date	Drawn	Checked

Project Status  
**Feasibility**

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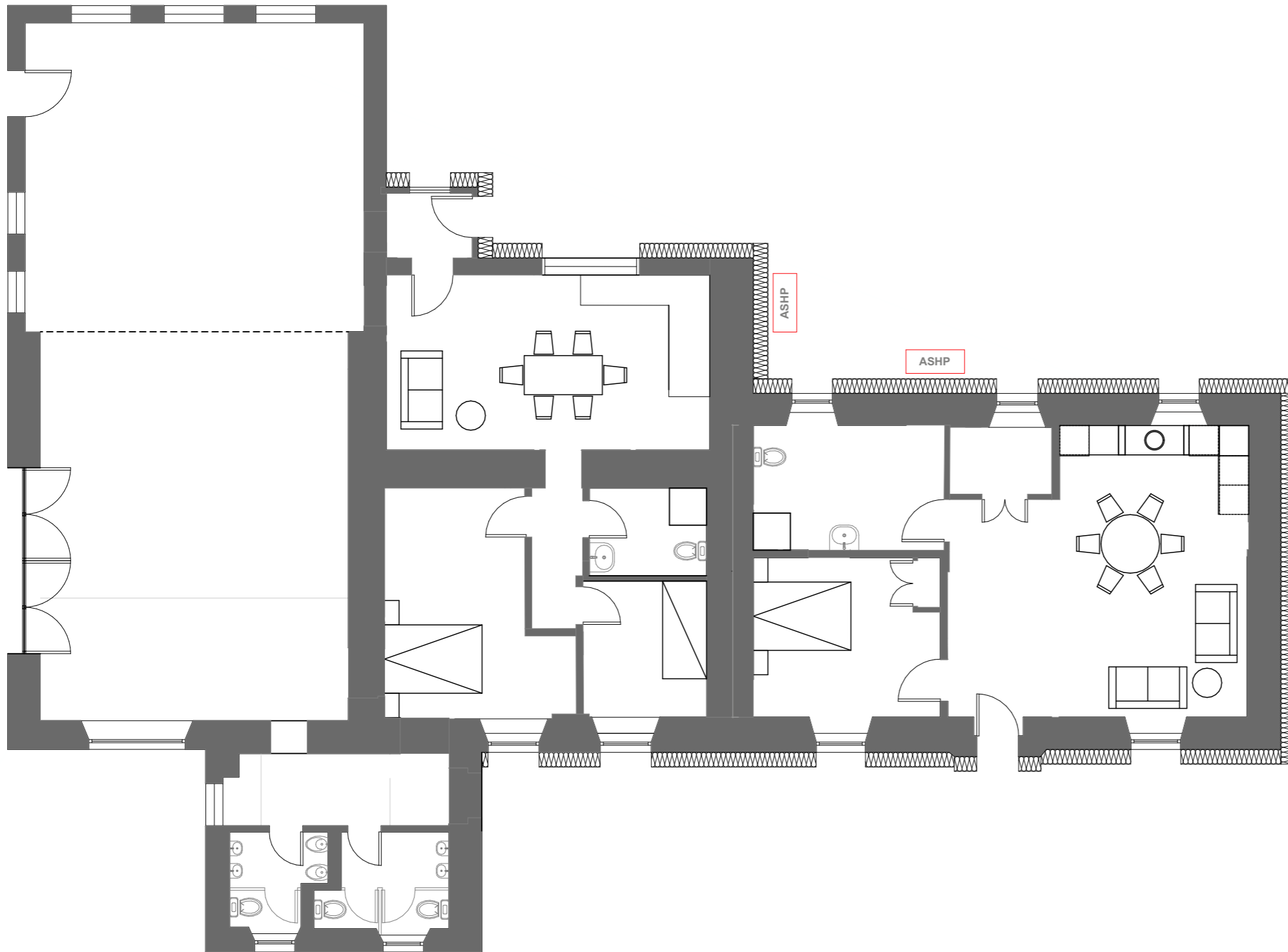
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 Web: www.johngilbert.co.uk

Client  
**Torridon District Community Association**

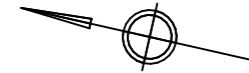
Project Name  
**Torridon Primary School**

Drawing Title  
**Existing Ground Floor Plan\_WITH AREAS**

Drawn By HT	Scale at A3 1:100,	Project No. 04683	Drawing Number_Rev [PP]01_
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Notes / Key



0m 1m 2m 3m 4m 5m

GEA = 300m<sup>2</sup>  
 GIA = 257m<sup>2</sup>  
 NIA = 179m<sup>2</sup>

Health & Safety Notes

RevID	Description	Date	Drawn	Checked

Project Status  
**Feasibility**

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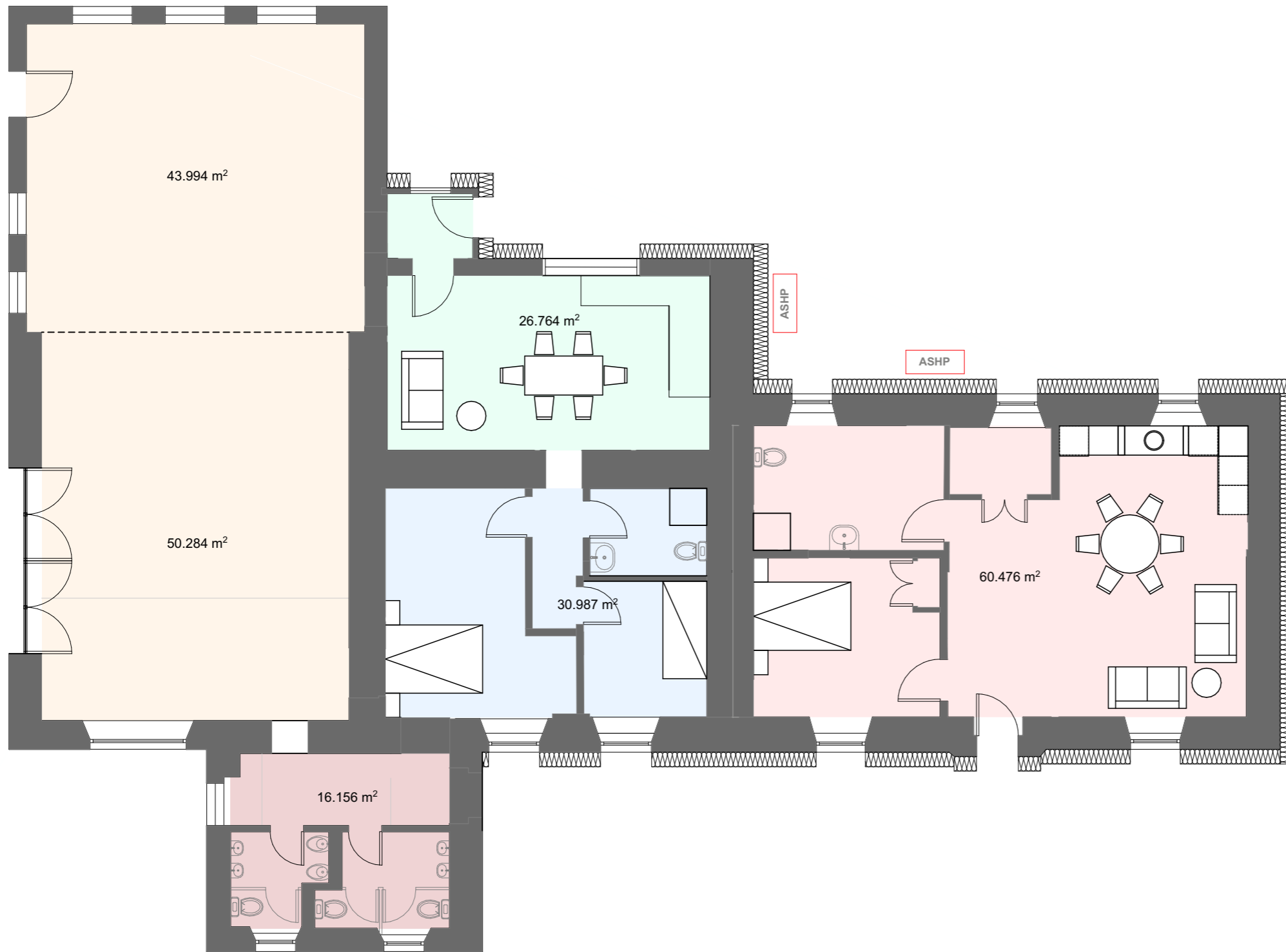
Client  
**Torrison District Community Association**

Project Name  
**Torrison Primary School**

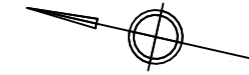
Drawing Title  
**Proposed Ground Floor**

Drawn By HT	Scale at A3 1:200,	Project No. 04683	Drawing Number_Rev [PP]XX_
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Notes / Key



0m 1m 2m 3m 4m 5m

GEA = 300m<sup>2</sup>  
 GIA = 257m<sup>2</sup>  
 NIA = 179m<sup>2</sup>

Health & Safety Notes

RevID	Description	Date	Drawn	Checked
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Project Status  
**Feasibility**

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Client  
**Torridon District Community Association**

Project Name  
**Torridon Primary School**

Drawing Title  
**Proposed Ground Floor\_WITH AREAS**

Drawn By HT	Scale at A3 1:200,	Project No. 04683	Drawing Number_Rev [PP]XX_
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