ABIR Architects

56 The Meadway, Shoreham-by-Sea, BN43 5RP



Design and Access Statement

0655.DAS.001.A / March 2022

Date : March 2022 / Document ref. : 0655.DAS.001.A // Author : EI / Checked : GI
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1.00 Introduction

1.01 Executive Summary & Brief

The proposal is to replace the existing bungalow with a new two storey sustainable 2 bedroom home. The outlined brief is as follows:

Ground floor:
Kitchen, utility and larder to the rear; study; lounge opening onto kitchen/ dinner with 'pocket' sliding doors; wet-room with wheelchair access; entrance hall, external entrance cupboard. Ramped access is provided to the rear garden and accessible rear doors to account for the required rise in ground floor finish level as dictated by the FRA.

First floor:
Master bedroom with ensuite shower room, dressing room/space; 2nd bedroom with ensuite shower room.

The proposals give a 'nod' to the original train carriage construction.

Planning policy requires that new properties meet the Nationally Described Space Standards and these dictates that a 2 bedroom (4 person) two storey house should have a minimum internal floor area of 79m^2 (1,100 sqft).

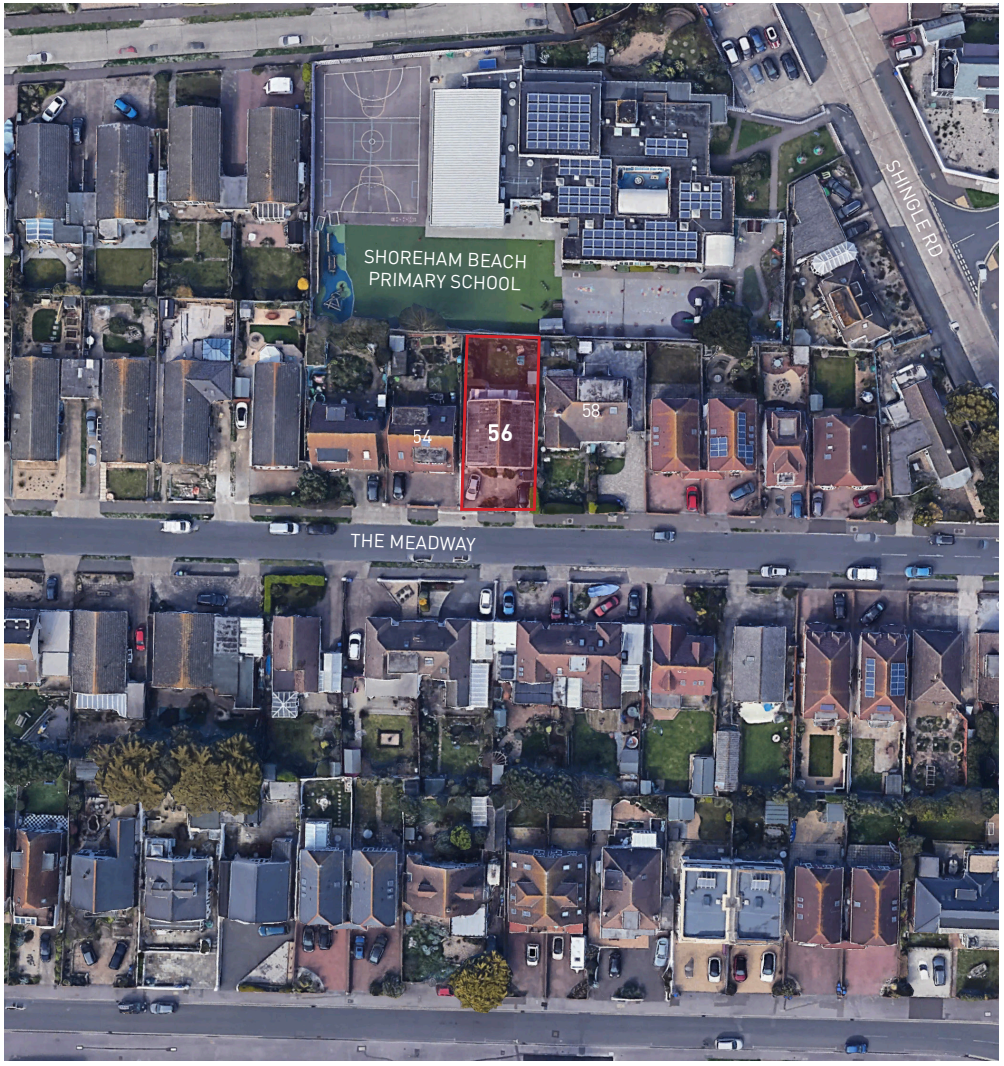
The proposed house has a gross internal floor area of 177m^2.

2.00 Site Analysis

2.01 Site Description & Overview

The site is located on the north side of The Meadway, Shoreham-by-Sea. The area is flanked by the South Downs National Park to the north and a large expanse of rare beach shingle habitat to the south, resulting in a dynamic and changeable environment. Shoreham Beach Primary is directly to the north.

In a predominantly residential area, the area is mainly occupied by detached single and two storey properties with pitched roofs and dormer extensions. Over recent years a number of properties have been substantially refurbished and/or extended.



2.00 Site Analysis

2.02 Photographic Analysis



01 | View from the front to north (54 to the left of photo and 58 to the right of photo)



02 | View from the front to north (58 to the right)



03 | View from the front to north (54 to the left)



04 | Boundary condition at east of property from front



05 | Boundary condition at west of property from front



06 | Boundary condition at west of property from rear

2.00 Site Analysis

2.02 Photographic Analysis



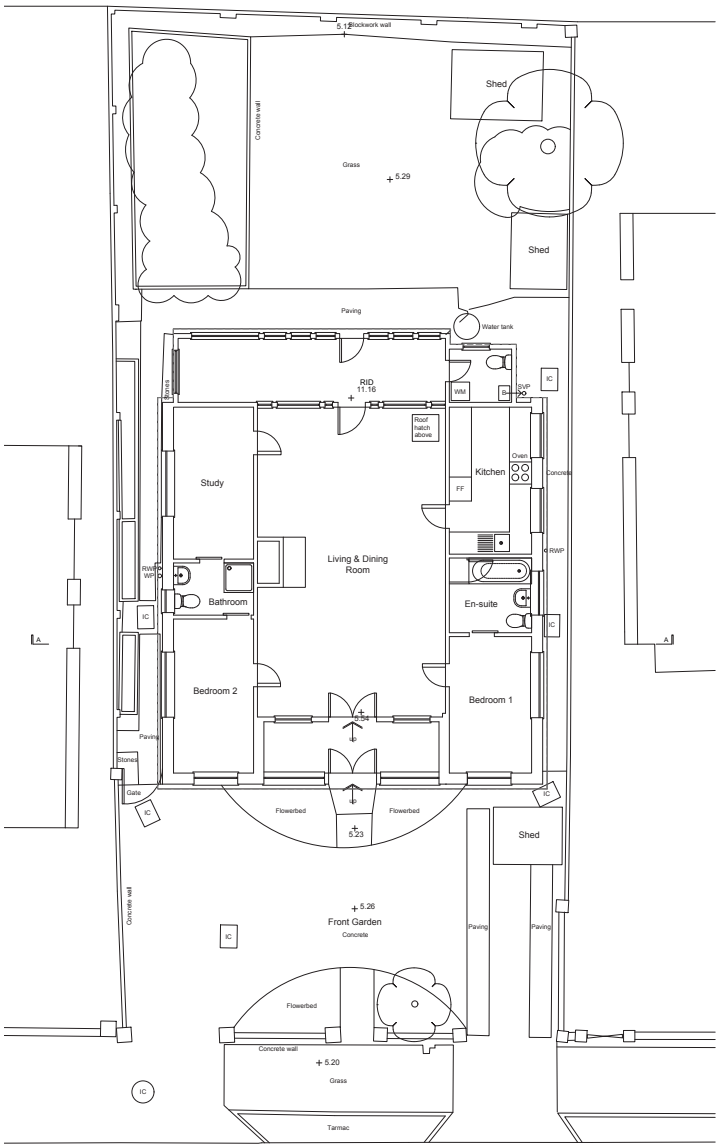
07 | View from rear garden looking south



08 | View of back garden to north



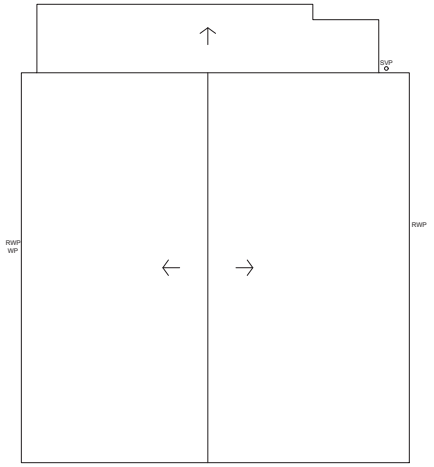
Loft space



Existing Site Plan

0 1 2 3 4 5 6 7 8 9 10

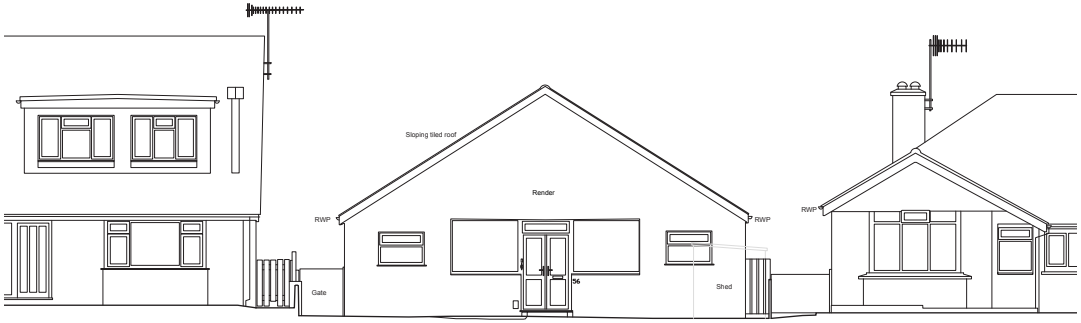
scale in meters



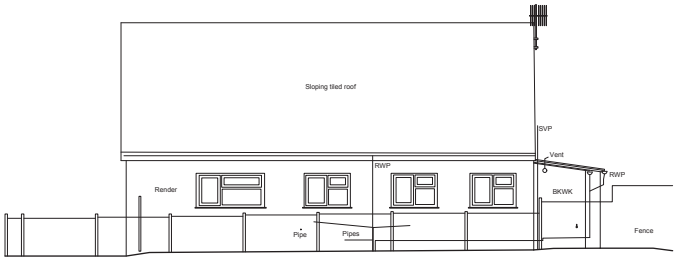
Existing Roof Plan

2.00 Site Analysis

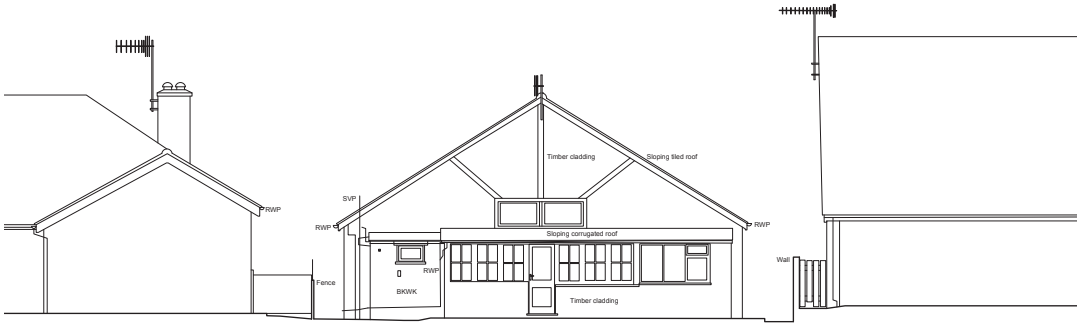
2.04 Existing Sections & Elevations



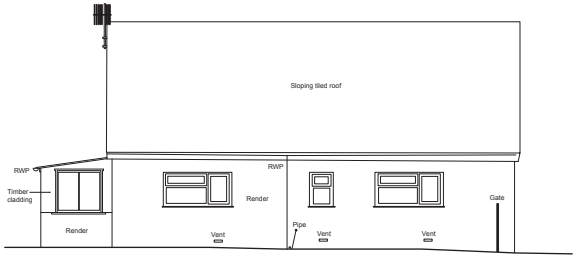
Front (South) Elevation



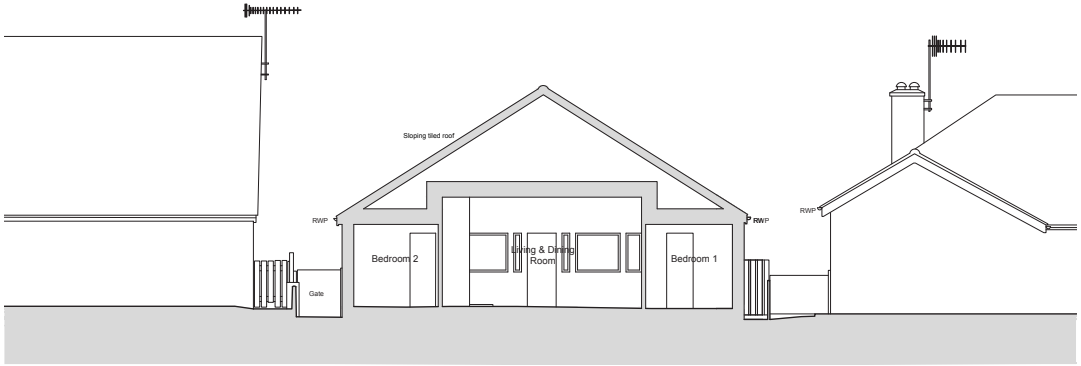
Side (East) Elevation



Rear (North) Elevation



Side (West) Elevation

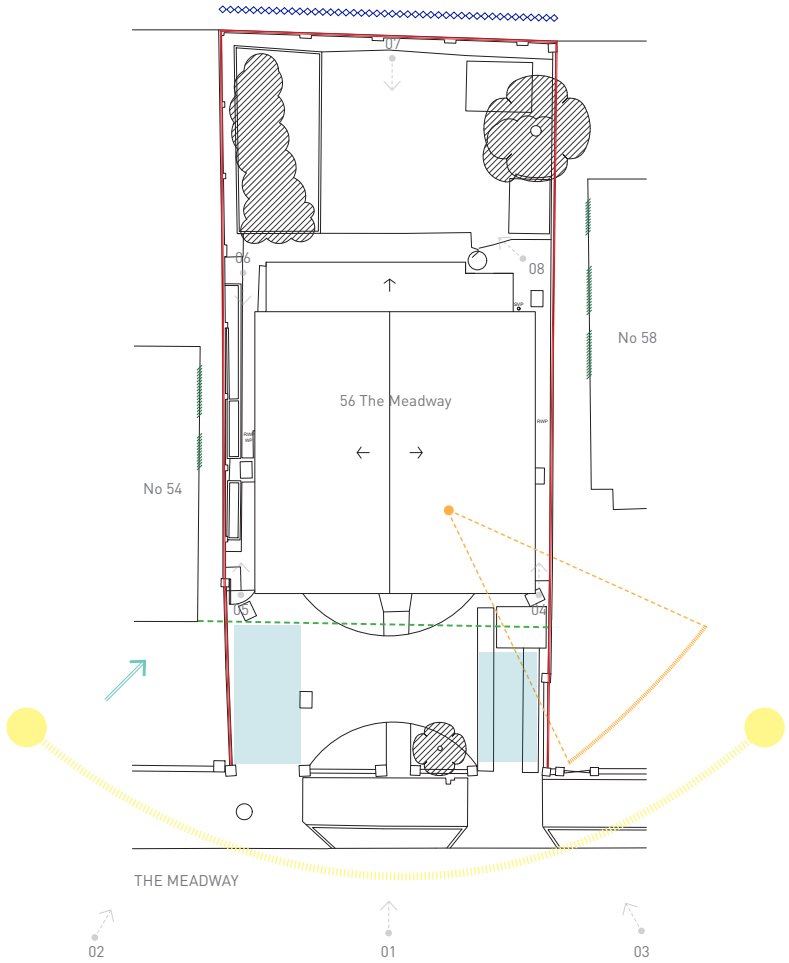


Section A-A



scale in meters

2.06 Constraints & Opportunities

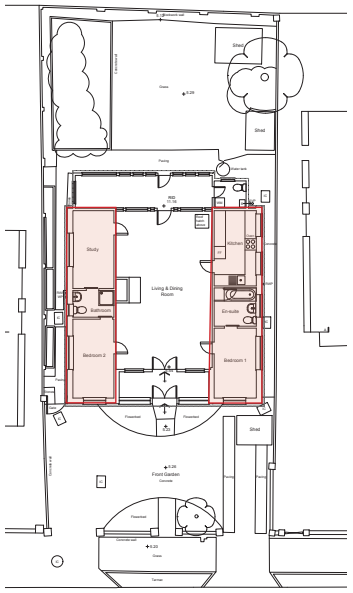


Key:

- Sun Path
- South West Wind and Driven Rain
- Desired Morning Sun
- Photographs
- Boundary with Neighbours
- Notional Building Line
- Maintain Parking Area
- Existing Flora
- Noise Pollution
- Position of Neighbouring Fenestration

2.07 Historical Context

The existing bungalow is formed from two passenger train carriages which are located close to and parallel with the east and west boundaries. The carriages have been subdivided to provide the cellular habitable spaces and the space between the two form an open plan living room. Simple timber roof trusses span between the two carriages and have a corrugated asbestos sheet roof covering . Externally the carriages have been protected from the elements with a skin of rendered blockwork. It is hoped that the carriages can be salvaged and renovated for reuse on a Sussex steam railway line.



Key:

- Railway carriages


RAILWAY CARRIAGES AS HOUSES.

A SEASIDE VILLAGE OF STRANGE RESIDENCES.

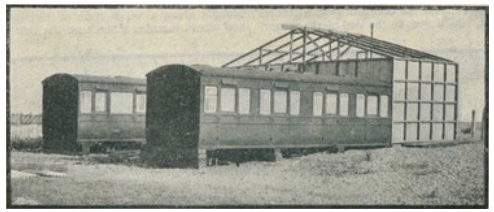
By H. L. Adam.

A TOWN of railway carriages—of carriages used as houses—may be seen on our Southern coast. It is situated on the beach at Shoreham, a few miles from Brighton.

About a score years ago some fishermen of Shoreham were in the habit of utilising two or three old railway carriages, which lay idle upon the beach, to keep their nets in. After a time one of their number took it into his head to make a residence of one of the carriages, and live there in true

THE INTERIOR OF AN ADAPTED CARRIAGE, SHOWING RAILWAY LAMP AND VENTILATORS.

(332)





2.00 Site Analysis

2.08 Existing 3D Views



Street view from front (South).



Street view looking towards North-East.



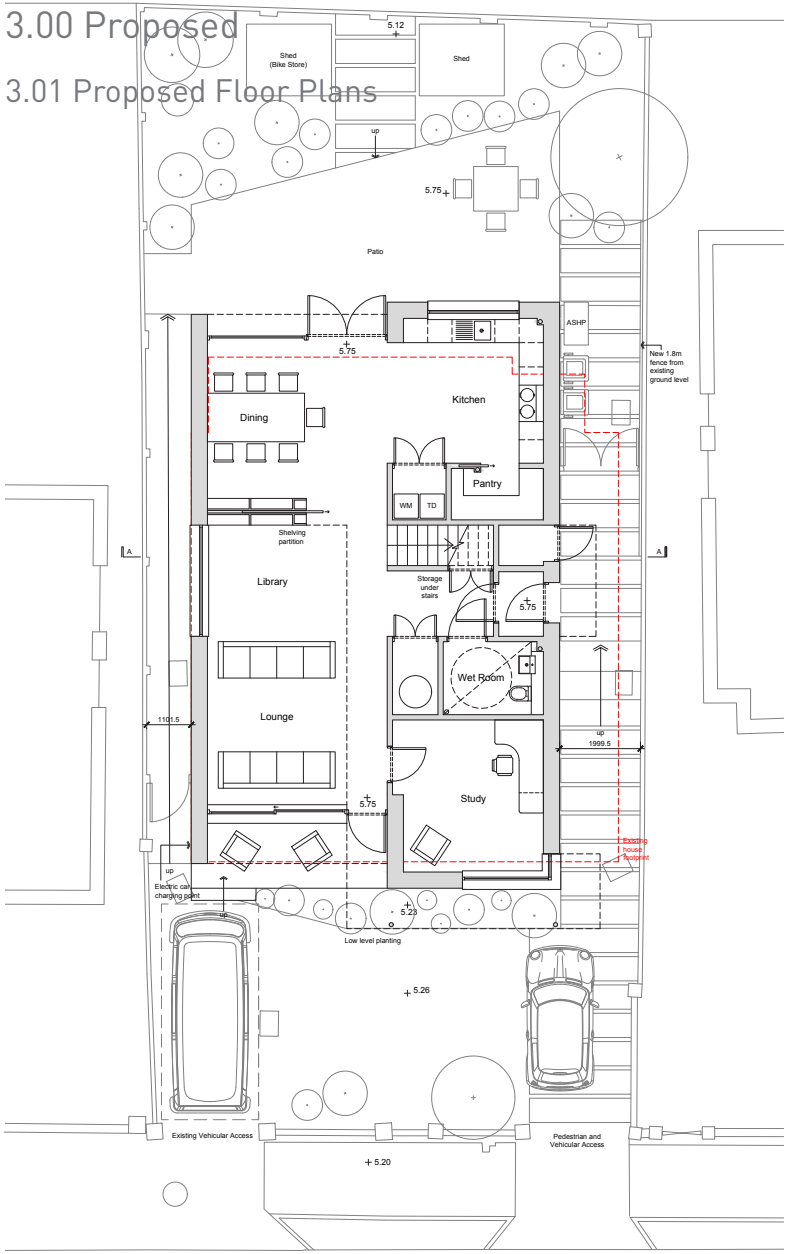
Street view looking towards North-West.



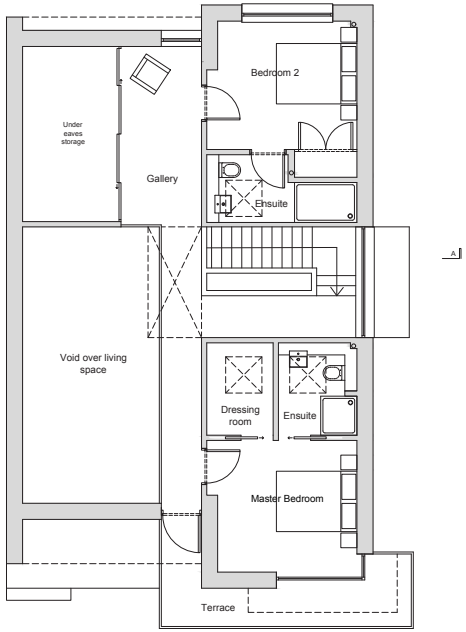
Rear view from North.

3.00 Proposed

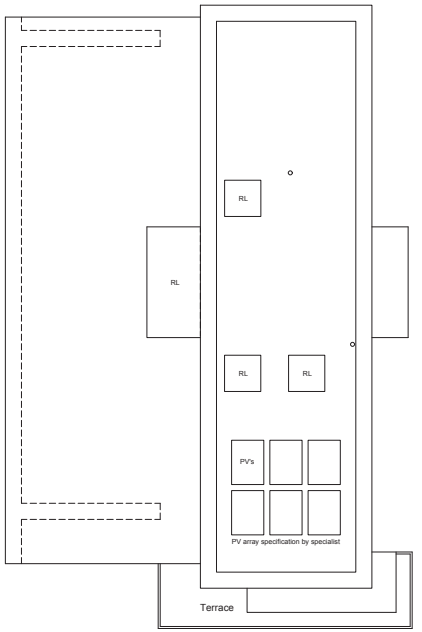
3.01 Proposed Floor Plans



Ground Floor Plan



First Floor Plan

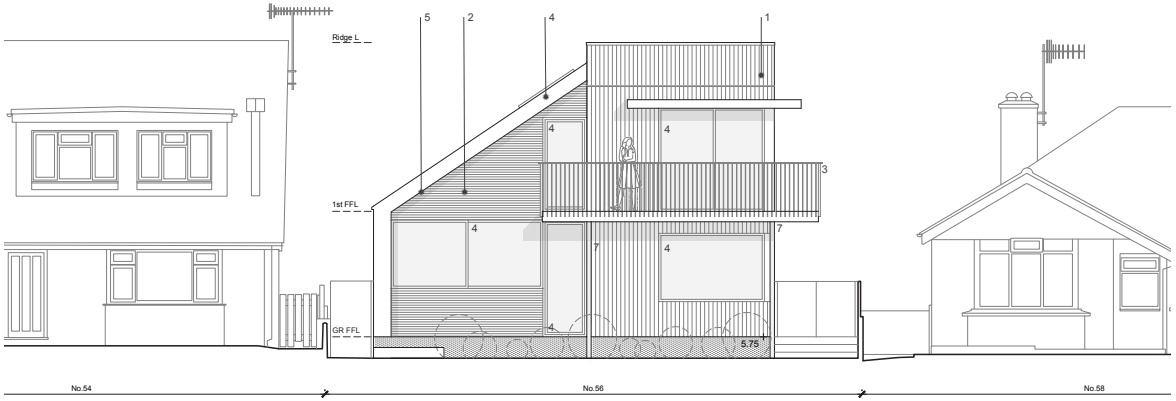


Roof Plan

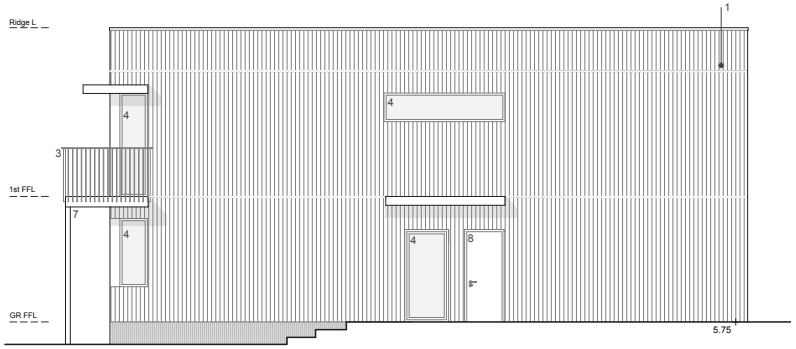
scale in meters

3.00 Proposed

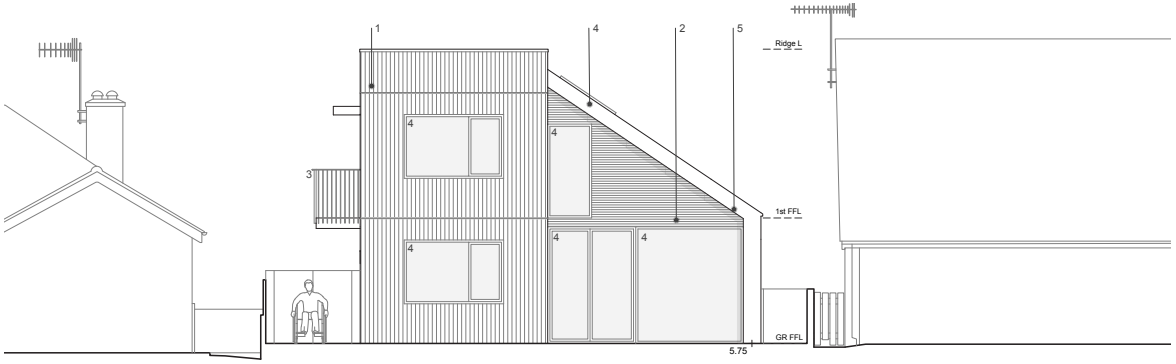
3.02 Proposed Elevations



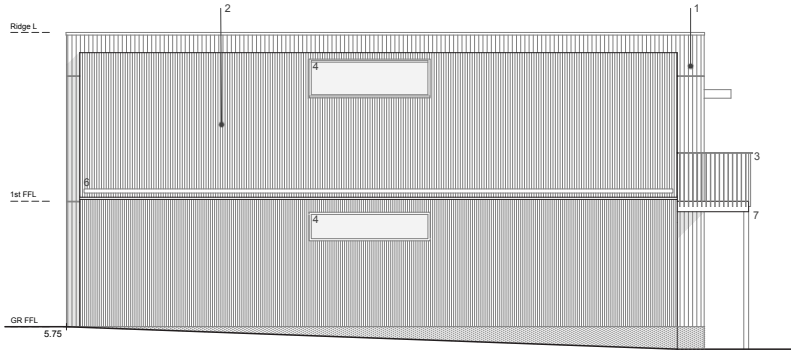
Front (South) Elevation



Side (East) Elevation



Rear (North) Elevation



Side (West) Elevation

KEY

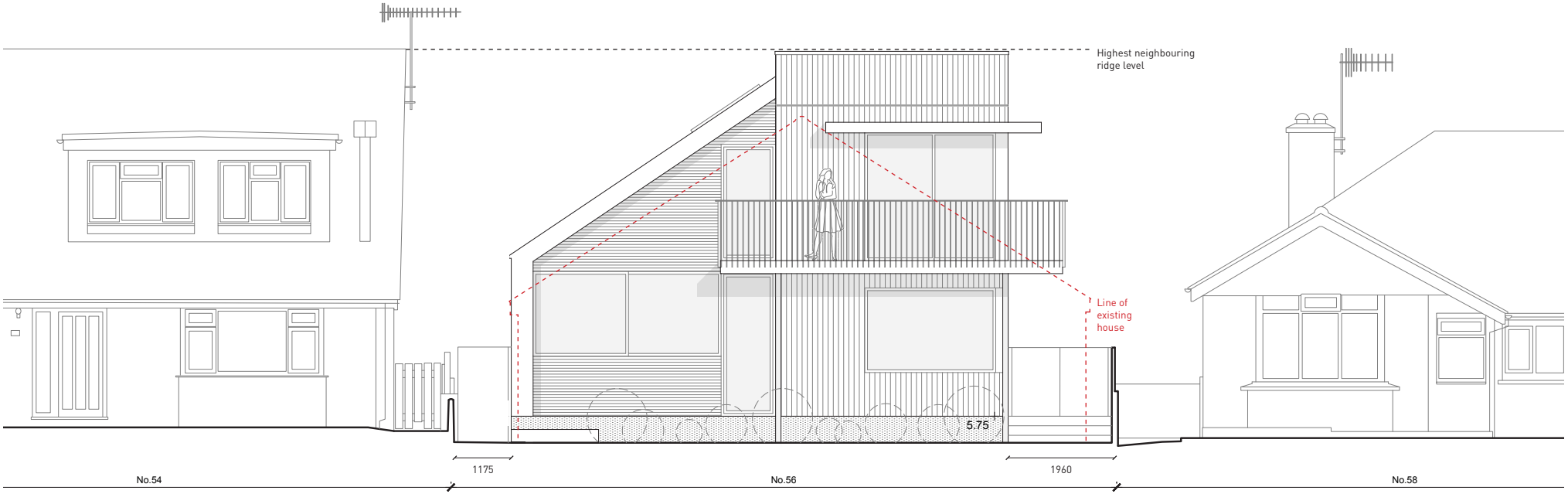
1. Vertical timber cladding
2. Black corrugated metal cladding
3. Power coated metal balustrade
4. Double glazed composite frame windows/doors/rooflights
5. Powder coated aluminium fascias
6. Hidden gutter detail
7. Metal support column



scale in meters

3.00 Proposed

3.03 Roof height/ massing comparison diagram



Roof height/ massing comparison diagram

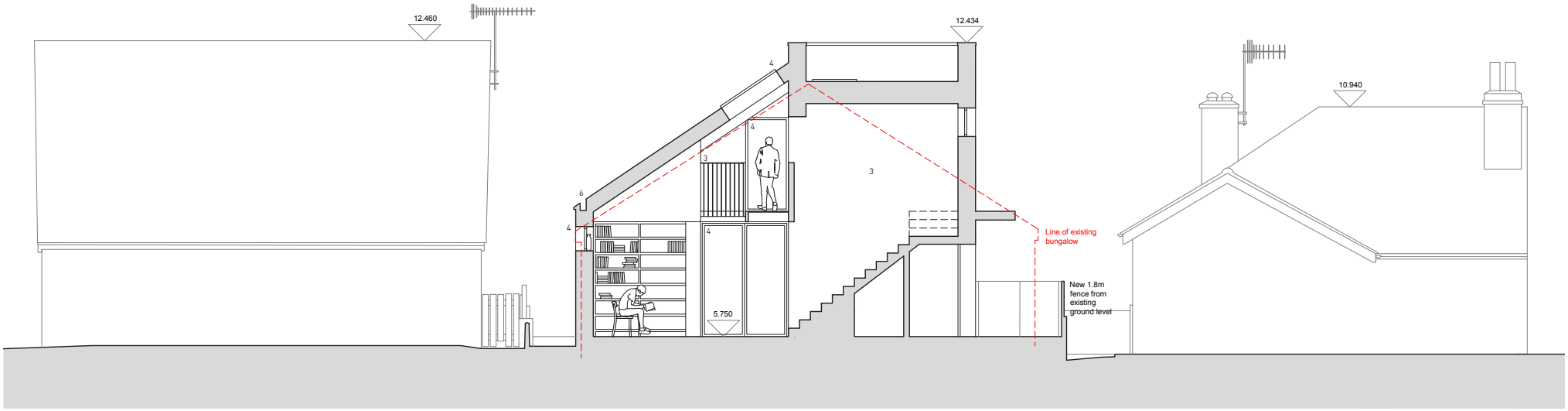


The site is currently occupied by a detached single storey property under a pitched roof. The new design proposes a two storey element with single storey lean-to.

The two storey massing has been relocated 1.96m west from the adjacent boundary to avoid impacting daylight into the neighbours (no. 58) rear bedroom. Whilst the one storey lean-to element allows a good level of daylight by design (no.54).

3.00 Proposed

3.04 Proposed Section



Proposed Section A-A

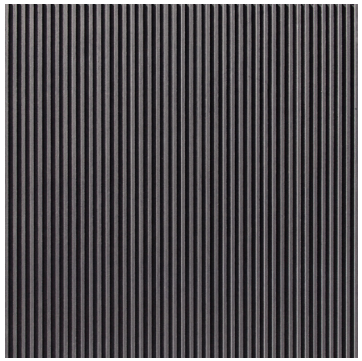


scale in meters

3.05 Material Considerations



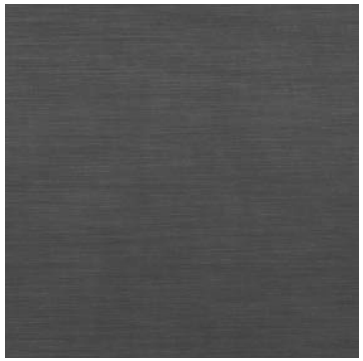
01
Vertical timber cladding with 8mm shadow gaps to external walls.



02
Black corrugated metal to roof and walls.



03
Plywood internal finish.



04
Dark grey aluminium window frames and balustrades.



05
Light mirco topping finish on ground floor.

3.00 Proposed

3.06 Use

The site is currently occupied by a detached single storey property under a pitched roof. No change of use is proposed.

3.07 Layout

The dwelling is designed over two floors with a single storey pitched lean-to. The living spaces, utility and bedroom are located at ground floor connecting to the garden at the rear.

Provision for 'future proofing' the property has been made with a ground floor wet room and ramped access to the rear garden and accessible rear doors to account for the required rise in ground floor finish level as dictated by the FRA.

Two ensuite bedrooms connected via an open gallery corridor are situated at first floor level. The master bedroom and connecting balcony is located towards the front of the property and will benefit from morning light.

3.08 Amount

The application proposes a single family dwelling, providing bedrooms, living and amenity spaces. The gross internal floor area of the proposal is c.177m^2.

3.09 Crime Prevention

The proposed window and door-sets will be in full compliance with Part Q of the building regulations and in accordance with PAS 24 standards.

3.10 Scale

The proposal carefully considers the mass of the proposed dwelling on the site and seeks to respect the existing adjacent dwellings.

The position of the dwelling on site has been relocated south by 0.65m from existing. This position does not cross the notational building line.

Consideration of the new massing regarding the daylight to neighbouring window positions is reflected in the new dwelling location on site.

The maximum roof height does not exceed the neighbouring property to the west.

3.11 Access

Ramped access is provided to the rear garden and accessible rear doors to account for the required rise in ground floor finish level as dictated by the FRA.

3.12 Drainage

The proposal will connect into existing public foul drainage systems located within the site boundary that currently serves the existing property. Surface water will be discharged into existing soakaways.

3.13 Flood risk

The site is flanked by the River Adur to the north and the English Channel to the south. The risk of flooding from rivers, the sea or surface water is low in all cases. However, the finished ground floor level is required to be raised to 5.75m above ordnance data. Please see flood risk report accompanying this application produced by Ambiental.

3.14 Sustainability and Waste Management

As a new development of contemporary design and construction, the proposed building has the potential to exceed stringent energy consumption and thermal performance regulations.

Passive environmental design principals such as high levels of insulation and low air permeability through the structure together with MVHR systems and high performance windows/doors will reduce the heating demand and improve the building performance.

Photovoltaic roof panels (mounted on the roof over the 1st floor) will provide electricity for hot water and space heating.

All lighting will be low energy LED.

Cement free concrete will be specified for foundations, reducing the carbon footprint of the construction.

Other environmental measures proposed are: Air source heat pump, Battery storage, Electric car changing facility.

During construction of the proposal, storage and co-ordination of materials will be planned to reduce damage and offcuts. Any remaining disposable material will be sorted for re-use and recycling and waste will be collected and disposed of by a responsible contractor. Domestic waste collection will remain as existing.

3.00 Proposed

3.15 Appearance - Proposed 3D Views



Street view from South (existing tree omitted for clarity).



Street view looking North-East (existing tree omitted for clarity).

For the external cladding a combination of 3 materials is proposed:

1 | Vertical timber cladding: Proposed for new ground and first floor walls on 2 storey massing.
2 | Black corrugated metal: Proposed for new lean-to roof and walls.
3 | Dark grey aluminium: Proposed for new balustrade detail and roof fascia.

All windows and doors specified as high performance composite power coated aluminium and timber.



Rear view from North.

Conclusion

The design proposal offers a simple pallet of materials externally, being of untreated timber and corrugated sheet material and a simple pallet of birch ply wall finishes and polished concrete (micro-topping) floors internally.

These are appropriate, enhance the concept and respect the context and architectural language that also gives a nod to the existing railway carriages and construction, in form, materials and construction methods.

Environmental and sustainability considerations include solar shading, thermal mass, high levels of thermal insulation, high performance windows/ doors, photovoltaic thermal panels, mechanical ventilation with heat recovery, air-sourced heat pump and an electric car charger.













