



Design, Access and Planning Statement
New dwelling to the rear of 158 Meadowhead, Sheffield

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This Design, Access and Planning Statement has been prepared by Thread Architects in support of a detailed planning application for the erection of detached dwelling as an alternative to a previously approved application for a new dwelling between number 8 and number 16 Chancet Wood Road, on a plot of land formerly forming the rear garden of 158 Meadowhead, to provide a sustainable new single dwelling.

Context:

The site to the rear of 158 Meadowhead is the last of a number of dwellings with long gardens on this road that have divided the gardens to allow a new building plot to be formed, opening on to Chancet Wood Road.

The plot contains part of the former garden of 158 Meadowhead and includes an original coach house that is the full width of the plot, that forms a clear definition between the original dwelling and new building site.

The site has an existing planning approval for development, Application number 21/03775/FUL – Erection of a three-storey dwellinghouse, alterations/extension to outbuilding to form granny annex with single-storey link building to connect with dwellinghouse and provision of 2no. off street parking spaces.

This application included for a new 3 storey dwelling facing on to Chancet Wood Road, alongside a single storey link building that ran along the south-east boundary and formed an extension to the front of the Coach House.

The new owners purchased the site with the benefit of this planning approval. However, their intentions are to develop this site with a more modest dwelling that retains more of the original garden area and forms a sustainable, low carbon new dwelling that meets Passivhaus criteria and provides them with a lifetime home for their family to grow in to.



Site location overview

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Existing site:

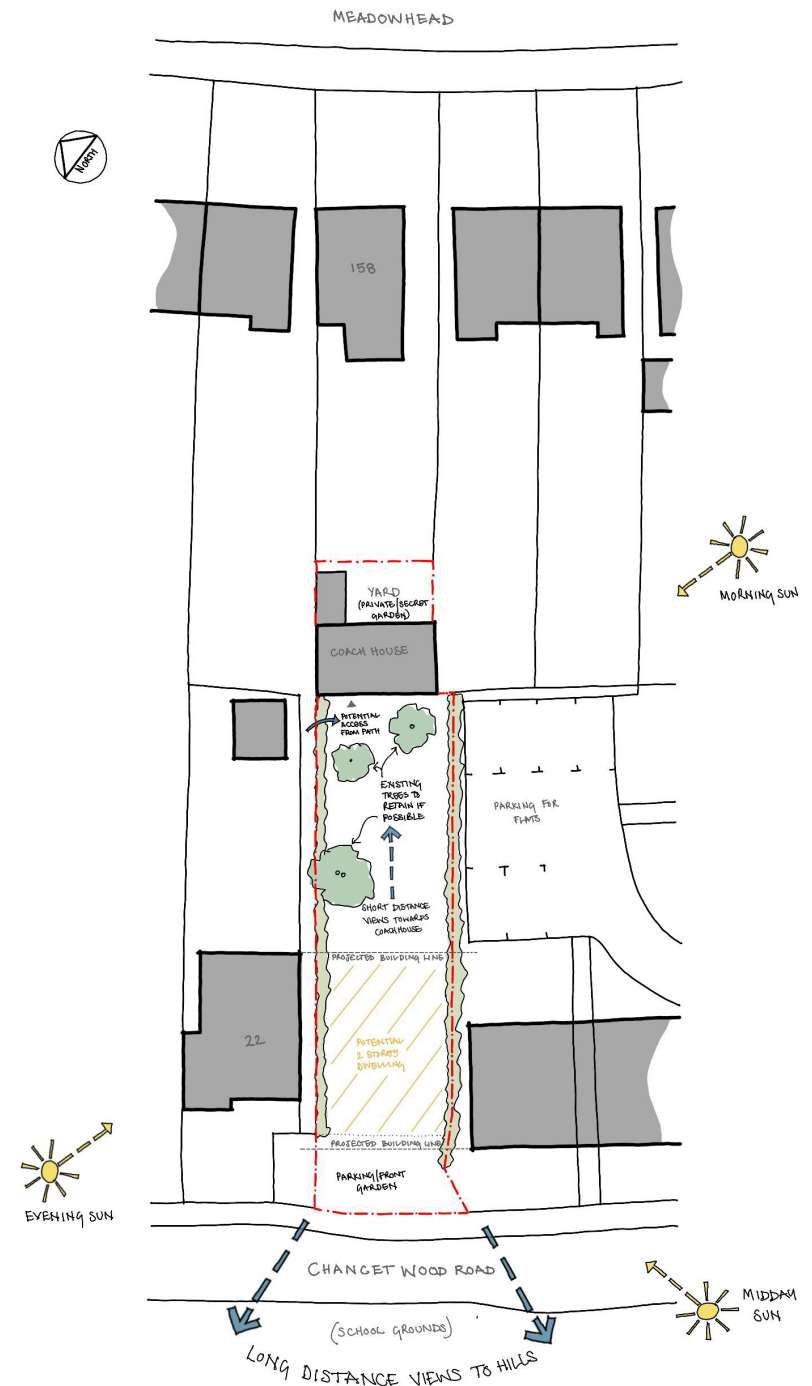
158 Meadowhead is one of a number of dwellings that face north-east onto the A61. Numbers 148–166 Meadowhead have small front garden and long back gardens that stretch back to the south-west onto Chancet Wood Road. All of the original long rear gardens have historically been divided to allow new homes to be constructed facing onto Chancet Wood Road to the rear, with the exception of 158 Meadowhead.

The site to the rear of 158 Meadowhead contains an original Coach House that sits almost central between Chancet Wood Road and Meadowhead. The boundary line for the proposed new dwelling is formed by the edge of a small yard to the north-east of the Coach House. To the south-east the boundary is planted and divides the plot from a parking area for two 2-storey flat buildings. One of these buildings sits alongside the site with a gable end facing towards the site. Facing onto Chancet Wood Road there is a dropped kerb giving access to a gravel parking area. A metal fence separates the parking area from the garden area. To the north-west the plot faces towards the side elevation of number 16 Chancet Wood road, a two storey brick built dwelling, separated from the site by a path leading to the rear garden of 156 Meadowhead and with a mature hedge running along the boundary, back towards the side wall of the Coach House.

The two residential properties to either side of the site have side facing windows to ancillary spaces with obscured glazing. St Thomas of Canterbury School is sat below the site to the south-west across Chancet Wood Road.

The site is largely planted from the former garden use, with a greenhouse present on the site. There are a number of small trees across the site and a paved area outside of the Coach House. The site is largely level, however there are two steps down into the Coach House, that sits at a slightly lower level than a paved area to the south-west side.

The site benefits from an open view over Chancet Wood Road and towards the Peak District, due to the lower level of the school building opposite.



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View from front of Coach House towards south-west



View down length of site towards north-east



View from centre of site back towards Chancet Wood Road



View of Coach House from the centre of the site

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Proposed new dwelling

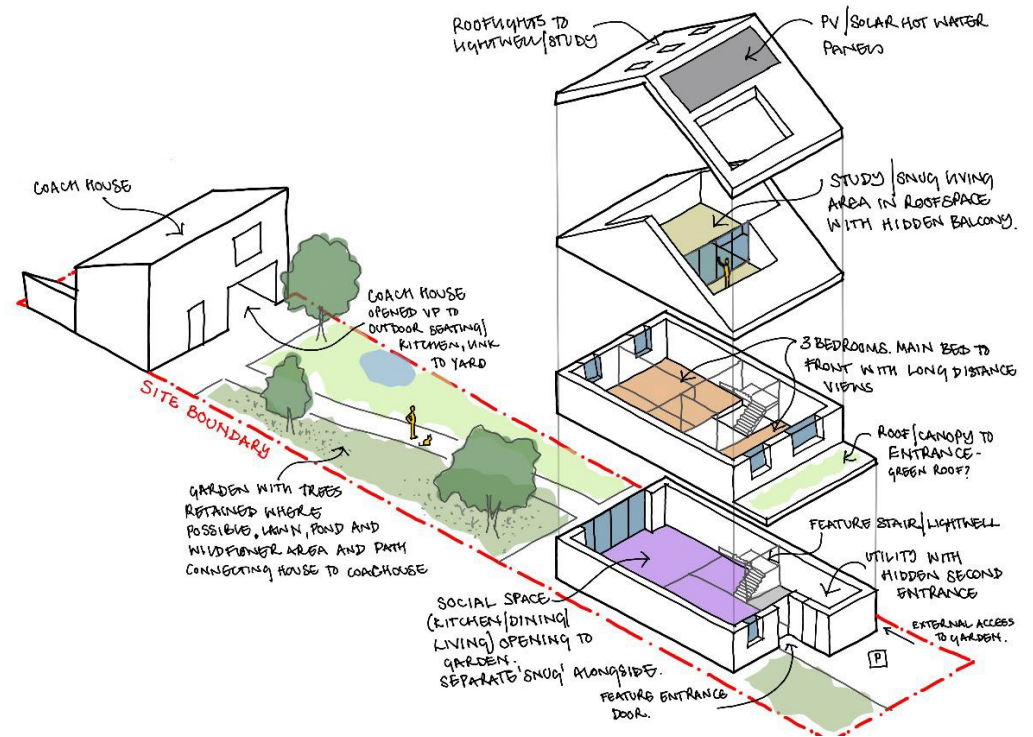
This application is a reconsideration of a previous planning approval for the construction of a new dwelling on the site, to provide a solution to the site that will enable a better performing and more sustainable development.

The previous planning application (21/03775/FUL) included for the development of a three storey dwelling on the site. The ground floor of the dwelling extended to the rear with a single storey living area and link building that connected the house to the Coach House as well as extending along the front of the coach house. This application was approved in 2021, however there were a number of objections from the immediate neighbours with regards to the scale of the development and appearance of the dwelling.

The new owners bought the plot with this planning approval in place, however having considered the proposals have concluded that the currently approved dwelling would not suit their needs and ambitions for a low energy, sustainable dwelling. They have therefore approached the site afresh and the proposal included in this application is for a single family home for the new owners.

The applicants brief for the new dwelling is visualised in the sketch adjacent. Their intent is to form a social living space on the ground floor with feature stair/lightwell connecting this to more private spaces above. The existing garden is to be retained where possible and developed to encourage biodiversity and wildlife. The existing coach house is to be retained and altered only to allow it to open up more to the garden space and proposed new dwelling.

The new dwelling is to be a high quality and highly insulated self-built home, designed in consideration of the unique qualities of the site and low energy passivhaus principles with the intent of building a certified Passivhaus.



Visual sketch of the applicants brief for their new dwelling

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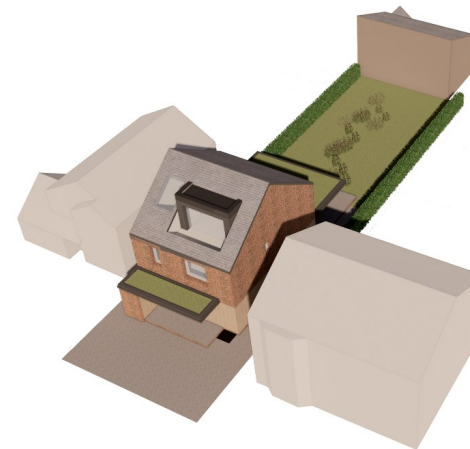
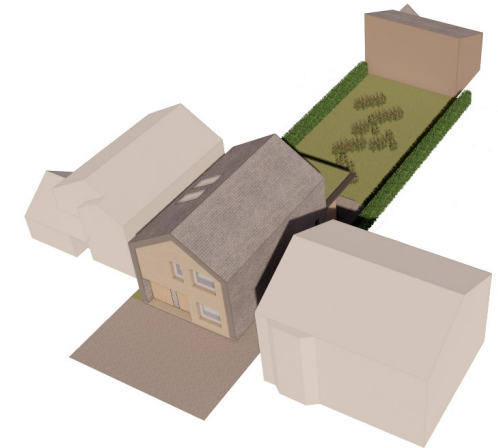
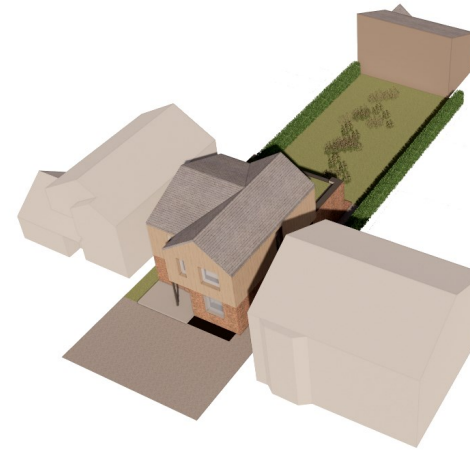
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Proposed new dwelling

A number of options were explored for the proposed new sustainable dwelling, each exploring similar principles to enable the new dwelling to sit comfortably on the site:

- Form and orientation to make best use of the available solar gain from the south.
- Built footprint kept within the stepped building line of the adjacent properties on Chancet Wood Road.
- Height of the proposed new dwelling considered alongside the stepped roof light of the adjacent properties on Chancet Wood Road.
- Consideration of how the dwelling sits alongside the Coach House in the rear garden of the new dwelling.
- Ensuring the frontage of the property addressed the streetscene elevation of Chancet Wood Road.
- Use of pitched roof forms to sit comfortably in the context of the surrounding dwellings.
- Use of materials that are sympathetic to the context of the existing surrounding dwellings.

Analysis of these options led to the development of the dwelling as proposed in this application, as a two storey pitched roof dwelling with ridge line running parallel with Chancet Wood Road and a gable end projecting back from this towards the rear garden.



Initial options explored for the form and appearance of a new dwelling on the site.

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Proposed new dwelling

The footprint of the proposed new dwelling follows the stepped footprint of the buildings to either side. The front elevation sits back 1.15m from the front elevation of no. 8 Chancet Wood Road and 2.1m forward from the front elevation of no. 16 Chancet Wood Road. A pathway of 1.47m is retained to the south side of the house as a route to the rear garden alongside no. 8 Chancet Wood Road and an access path of min. 800mm is retained to the north for maintenance of the side elevation. This leaves a gap of 1.9m between the existing elevation of no. 16 Chancet Wood Road and the side gable of the proposed new dwelling. The rear elevation sits 1.43m back from the rear elevation of no. 16 Chancet Wood Road and 3.6m forward of the rear elevation of no. 8 Chancet Wood Road. This stepped footprint prevents any issues of overlooking or loss of light for the immediate neighbours.

The dwelling is two storey, with an open atrium hallway to the front alongside utility spaces and open plan living area on the ground floor. Above are 3 bedrooms, the main bedroom to the front benefiting from views to the south-west, and two bedrooms to the rear benefitting from views to the rear garden. A small study/snug space is accommodated in the loft space alongside a store for plant.

The form of the new dwelling is a simple rectangular footprint. The main ridge of the house runs parallel with Chancet Wood Road. To the rear a gable projects out over the two rear bedrooms and looks towards the back garden. The main ridge of the dwelling sits 250mm above the ridge line of the previously approved 3 storey house on this site. The previous design allowed for a full third storey with a fully glazed elevation to the street facing elevation on the third floor. The proposal within this application has a modest space within the roof void with rooflights to the front. Although the ridge line is proposed to be slightly taller, the eaves sit lower than the adjacent neighbours and the highest point on the proposed new dwelling is 3.3m further back from the highest point of the currently approved scheme. Therefore the overall impression from street level will remain as a two storey dwelling in the streetscene.



Overview model image from South.



Overview model image from North.

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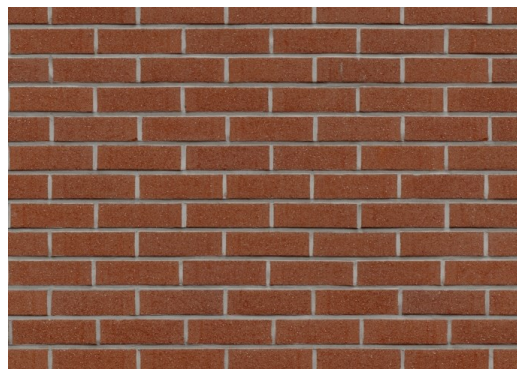
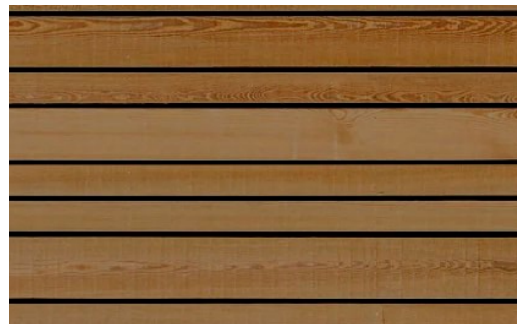
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Externally, the wide area of parking to the front of the property is divided into parking spaces for 2 cars, alongside a modest front garden that includes planting and a bin store alongside the boundary with Chancet Wood Road. To the rear, a timber canopy provides a sheltered space outside of the living area on the ground floor and the garden is proposed to be developed with wildflower planting, ponds and new trees to enhance the biodiversity of the site. The Coach House remains in place with a new door looking back towards the house for better access.

The materiality of the new dwelling takes reference from the Coach House and properties to either side in the use of red facing brick to elements of the ground floor and side elevations of the dwelling. Above and wrapping around the brickwork are areas of timber cladding in panels of horizontal and vertical cladding, to break up and add interest to the elevations. The position and format of the cladding has been carefully considered with more robust materials positioned in areas of high use or shaded elevations, and the timber cladding celebrated where visible within the design.

Above, the roof is proposed in slate to follow the precedent of the Coach House and provide a high quality finish to the dwelling. Gutters and downpipes would be in polyester powder coated aluminium.

Windows and doors are carefully positioned to allow daylight into the internal spaces and benefit from solar gain for passive heating of the dwelling. Overheating is also managed with the positioning of an external canopy across the rear elevation and sheltering the entrance door and glazing and carefully considered opening windows for purge ventilation on hot days. The windows and doors will be high performing triple glazed timber framed units with aluminium cladding externally for longevity and quality.



Above: Model development section view of proposed new dwelling.

Below: Proposed material palette of brick, timber and slate roof.

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Sustainability

The applicants are committed to ensuring the new home is as sustainable and economical in use as possible. The house is therefore to be highly insulated and airtight ensuring no heat is lost through the fabric. To support this a mechanical heat recovery ventilation system will provide ventilation throughout the property. These measures, along with the efficient plan, compact form and carefully positioned openings are currently demonstrating a heating load standard meeting the criteria for a certified Passivhaus, an ambition that the applicants are keen to progress into construction.

Additionally to this, the applicants are considering the addition of renewable technology and the provision of an air source heat pump and photovoltaic panels to the south-east and/or south-west facing roof planes.


Access

The proposed new dwelling provides level access to the entire ground floor of the property. A ground floor WC provides access to sanitary facilities and the layout of the dwelling future-proofs and allows adaptability of use as the family grows.

Overall, the proposed new dwelling for the site to the rear of 158 Meadowhead presents a re-consideration of the site to form a long term home for the new owners and applicants. The dwelling proposed is smaller in footprint to the previously approved dwelling. The form and appearance that has been driven by the clients ambition to create a sustainable home for the future and presents a design that is more in keeping with its neighbours and wider context. The design is a high quality, sustainable new home that reacts and responds positively to its unique site.

10.3 EN
PHPP

Passive House-Verification



Building: New house on land to rear of 158 Meadowhead
 Street: Chancel Wood Road
 Postcode/City: S8 7TY Sheffield
 Province/Country: S. Yorkshire GB-United Kingdom/ Britain
 Building type: 1-Freestanding single family house
 Climate data set: GB0012a-Waddington, Altitude corrected
 Climate zone: 3: Cool-temperate Altitude of location: 170 m

Home owner / Client: Catriona and Pete Kemp
 Street: 3 The Crescent
 Postcode/City: LS28 9AB Leeds
 Province/Country: GB-United Kingdom/ Britain

Mechanical engineer: TBC
 Street:
 Postcode/City:
 Province/Country:

Certification: TBC
 Street:
 Postcode/City:
 Province/Country:

Architecture: Thread Architects Ltd		Street: 1 Brown Street		Postcode/City: S1 2BS Sheffield		Province/Country: S. Yorkshire GB-United Kingdom/ Britain	
Energy consultancy: TBC		Street:		Postcode/City:		Province/Country:	
Year of construction:	2024	Interior temperature winter [°C]:	20.0	Interior temp. summer [°C]:	25.0		
No. of dwelling units:	1	Internal heat gains (IHG) winter [W/m²]:	2.4	IHG summer [W/m²]:	2.4		
No. of occupants:	2.9	Specific heat capacity [Wh/K per m² TFA]:	132	Mechanical cooling:			

Specific building characteristics with reference to the treated floor area				Alternative criteria		Fulfilled?²
Criteria	Value	Limit	Criteria	Alternative criteria		
Space heating	Treated floor area m²	150.1	≤	15	-	Yes
	Heating demand kWh/(m²a)	17	≤	-	10	
	Heating load W/m²	10	≤	-	-	
Space cooling	Cooling & dehum. demand kWh/(m²a)	-	≤	-	-	-
	Frequency of overheating (> 25 °C) %	0	≤	10	-	Yes
	Frequency of excessively high humidity (> 12 g/kg) %	0	≤	20	-	Yes
Airtightness	Pressurisation test result n ₅₀ 1/h	0.6	≤	0.6	-	Yes
Non-renewable Primary Energy (PE)	PE demand kWh/(m²a)	44	≤	85	-	Yes
Primary Energy Renewable (PER)	PER demand kWh/(m²a)	37	≤	-	-	-
	Generation of renewable energy kWh/(m²a) (in relation to projected building)	0	≥	-	-	-

I confirm that the values given here have been determined following the PHPP methodology and based on the characteristic values of the building. The PHPP calculations are attached to this verification.

Passive house Classic? **Yes**

Task: 1-Design First name: Surname: Signature:
 Certificate-ID Issued on: City:

Extract from the Passivhaus Planning Package (PHPP) calculation showing the proposed dwelling is meeting Passivhaus criteria for certification.

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Artists impression of new dwelling on Chancet Wood Road