PROPOSAL: 25th June 2024 – v2 - Aidan Woodrow

Ref: 0424 - 1) Land adj Surrey Close, Barnsley, S70 4NB

D1) One 111m² Energy Efficient Detached 4 Bedroom 1.5 Storey Dormer with Conservatory

DESIGN STATEMENT:

2) GROUNDS: Land adjacent (west) of Surrey Close at the end of the cul-de-sac.
Plot approx. 400m² (outlined in red)

Footprints:
External dwelling footprint dimensions: 7.106m x 10.106m (72m²)
Conservatory footprint dimensions: 3.65m x 3m (11m²)
Total ground footprint: 83m²
Hard Standing areas (HS1/2 & PS): 75m²

GARDEN: (G1/2) 242m²

Topography:
The site in question rises 2m spanning 35m from North to South
A gradient of (3.3°) 57mm rise each 1 metre therefore 855mm over 15m

To compensate for this drop levels have been created as follows:
Initially 1x 171mm step + 171mm rise through front door as standard (342mm)

1x 171mm step down between kitchen/hall and lounge/dining room (171mm)
2x 171mm steps down in to conservatory (0, -171mm)
4x 171mm steps down in to back garden (-342, -513, -684, -855mm)

Insignificant partial slope down spanning foundations from East to West:
Brick built up to the required level

Landscaping:
Neighbours: Brick walls, hedges, few trees, concrete post wooden fencing

Boundary:
North: (F1) 1.8m high fencing (with ability for hedgehogs to pass through)
(T1) Replacement tree
East: (F2) 1.8m fencing meeting rear of house
(W3) Depth: 1 brick length ways. Height: 90cm. Adjoining brick pillar
South: (W1/2) Walls: (See image below)
Depth: 1 brick length ways. Height: 90cm. Brick Pillars: 1.2m high
Style/Colour: Same as house bricks
(BH4) New bushes/hedgerow maintained up to 90cm wide & up to 1.5m tall
West: (BH1-3) New evergreen & maintained bushes/hedges 90cm wide & 1.5m-1.8m tall
(T2/3/4) New trees

Hard standing area: Material: Resin water permeable hard covering (See image below)
(HS1) 19m² For access (car charger), secondary parking and/or turning purposes only
(HS2) 21m² Pathway: 90cm wide

Parking: (PS) Material: Resin water permeable hard covering (See image below)
West of property: 35m² Parking for up to 2 vehicles at end of existing cul-de-sac
With double gates (optional)

Vehicle Access:
Via Surrey Close

3) DWELLING: (D1)

Neighbours:

Surrey Close: Dated brick construction with Gable roofs approx. 7.5m+ high
Highstone Avenue to the West: Dated brick construction with Hip roofs

Design Specifications:

Energy efficient low profile 1.5 Dormer to reduce impact on surrounding houses
Airtightness: Target of 1 ACH@50 Pa or less

Foundations: Step foundations to compensate for slope

Radon service to compare with your current home: https://www.ukradon.org/information/ukmaps

Radon is a naturally occurring gas emitted from the ground everywhere. Regardless of its concentration mitigation measures should be taken, especially those with improved air tightness, as it is easier and more effective to implement on new builds and impossible on most existing.

Minimum double layer membrane + optional sump.

Future-Proof Energy Efficiency Properties:

Insulated floor recommended

External Walls:

Ground floor: (353mm full perimeter total depth)

Material: Brickwork (103mm wide + 150mm Cavity + 100mm breeze blocks)
Style: Conventional common bricks. eg. Selbourne, Chesham etc.
External Colour: Red modern multi bricks similar to neighbours (See image below)

Future-Proof Energy Efficiency Properties: (Thermal Conductivity: W/m²K)

Cavity Insulation: 150mm U-Value 0.032 or lower (eg. EPS)
Ceiling Insulation: 200mm U-Value 0.044 or lower (eg. Glass Mineral Wool)

Upper floor: (200-250mm full perimeter total depth including insulation)

Material: Same as sloped pitched roof so it blends in (See image below)
Style/Colour: Same as pitched roof so it blends in (See image below)
Fascia, Soffit, Barge-board, Dry Verge Caps: Also anthracite grey or black to blend in

Future-Proof Energy Efficiency Properties: (Thermal Conductivity: W/m²K)

Cavity Insulation: 150mm U-Value 0.032 or lower (eg. EPS)
Ceiling Insulation: 150mm U-Value 0.032 or lower (eg. EPS)

4) Internal Floor Space:

Ground floor: (A three level system)
Internal dimensions: 6.40m x 9.40m (60m²)

Tier 1: Lowest Geographically to the North
Conservatory: 3.65m x 3m (11m²)

Tier 2: Middle / Ceiling Height: 2.471m
Living Room (17.7m²)
Dining Room (12m²)

Tier 3: Highest floor elevation to the South / Ceiling Height: 2.3m
Kitchen with Utility area (13m²)
Hallway with under stairs storage (8m²)
Bathroom (Toilet, bath, shower, basin, storage) (6.8m²)
Second toilet with basin and towel rail (1.6m²)

First floor: Internal dimensions: (40m²)
Master Double Bedroom #1 (12.25m² Including Storage) Ceiling/Eaves height: 0.9-2.4m
Single Bedroom #2 (10.5m² Including Storage) Ceiling/Eaves height: 0.9-2.4m
Single Bedroom #3 (7.75m² + (1.5/2) 0.75m² eave storage) Ceiling height: 2.3-2.4m
Single Bedroom #4 (7.5m² + (1.5/2) 0.75m² eave storage) Ceiling height: 2.3-2.4m

Total Floor Space: 111m² (Including Conservatory)

WINDOWS:

Neighbours: Predominately conventional smooth white. Double glazed.

Future-Proof Energy Efficiency Properties: (Thermal Conductivity: W/m²K)

U-value: Approx. 0.7 or lower

Glazing:

Double/Triple Glazed Argon Filled

Pilkington K Glass™ S, low-emissivity soft coated or similar

Style: Optional. Standard, French. Etc

Frame: uPVC

Colour / Finish: Anthracite or White / Grained effect or Smooth (See image below)

North Side:

Downstairs: Living Room: 240x128, 0.8m elevated: Outer Two 75cm escape openings

Upstairs: Single Bedroom #3 & #4: 75x100, 1.1m elevated escape opening

East Side: None

South Side:

Downstairs Bathroom: 150x52, 1.56m elevated non-opening level 4/5 obscured glazing

Downstairs Kitchen/Utility: 150x104, 1.4m elevated escape opening

Upstairs: Double Bedroom #1 & Bedroom #2: 100x100, 1.1m elevated escape opening

Stairway: Roof Light: 80x100 (Non-opening)

West Side:

Downstairs:

Bathroom: 70x98, 1.1m elevated escape opening with level 4/5 obscured glazing

2nd Toilet: 70x98, 1.1m elevated escape opening with level 4/5 obscured glazing

Upstairs: None

DOORS:

Neighbours: Predominately conventional uPVC

Front Door #1:

Future-Proof Energy Efficiency Properties: (Thermal Conductivity: W/m²K)

Style design: Optional determined by ultimate builder.

Material: Insulated Composite GRP

Colour / Finish: Anthracite / Textured or Smooth (See image below)

Incorporated Glazing: Optional

Additional Side Glazing:

Frame: 75x208. Obscured toughen glass. Optional part of the door frame or separate

U-value: Approx. 0.7 or lower using Double or Triple Glazed Argon Filled Glazing

Back Garden Door #2: (Conservatory / House Door #2)

Future-Proof Energy Efficiency Properties: (Thermal Conductivity: W/m²K)

U-value: Approx. 1.2 (or lower) Argon Filled

Glass: Pilkington K Glass™ S, low-emissivity soft coated or similar

Style: French Doors have better thermal properties than Patio Doors

Material: uPVC

Colour / Finish: White / Smooth (See image below)

Garden Conservatory Door #3: (White uPVC construction)

Conservatory thermal properties do not need to meet the standard of the rest of the house.

ROOF: Note: A proportion should be covered with all black solar PV panels.

Design Specifications:

Neighbours in vicinity: Slate and concrete. Mostly grey in colour. Flat and grooved.
North: 2.3° Dormer roof: Smooth 50 year life span one-piece EPDM rubber membrane.
South: Two separate pitched roof dormers

Material: Marley smooth thick/thin interlocking/separate concrete slate effect tiles.
Colour: Anthracite or slate/dark grey.
eg. https://www.marley.co.uk/roof-tiles/concrete-roof-tiles/edgemere

SOLAR:

PhotoVoltaic:

Neighbours: Present

Style: Integrated/roof top
Colour: 100% Black Monocrystalline with black backing

Location:

With a South, South East facing roof it is suitable and can support any of the following:
South side: 4 in landscape both below and above dormers @ 385w/h panels (3.08kW)
North side tilted facing South: Up to another 4 portrait @ 385w/h panels (1.54kW)
Total possible array capacity: 4.62kWh

Inverter: Future-Proof

Style: 3-phase of Single phase Hybrid inverter

Location: (Optional)

Outside: Under Kitchen window (Preferable) In the shade where possible
Inside: Kitchen Utility Area.

Battery System:

Minimum 7kWh. (And still operational in the event of a power cut)

UTILITIES: Future-Proof

100% Electric: (Gas network is available but not necessary in this day and age)
3-phase advisable for greater than 3.68kWh Solar PV array + Car Charging Port

Space/Central Heating: (Located: External: West Side & Internal Units)

Option #1: Multi-Split Air-to-Air Source Heat Pump with Air Conditioning
Option #2: Air-to-Water Heat Pump Central Heating System
Towel Rails (Electric element and/or Heat Pump Central Heating)
Option #3: Thermodynamic Panel(s) Central Heating System

Hot Water: (Located: External: West Side & Internal Units)

Option #1: Air-to-Water Heat Pump: Water tank located under stairs or Utility Area
Option #2: Thermodynamic Panel(s) located anywhere but preferably in the Sun
Option #3: Solar Vacuum Tubes located on the roof in the Sun

Car Charging Port: (Future-Proof: Optional)

Location: Front of house to the right side of the doorway under utility window

Phone/Internet Available Services:

Land line: BT Openreach FTTC (Fibre to the Cabinet) up to 80mb is available.
Cable: Virgin Media: Connection 14m away from pavement outside 15 Surrey Close
None existing on site to mitigate against. No obstructions.

Water Supply:

Yorkshire Water: Connection 14m away from pavement outside 15 Surrey Close
None existing on site to mitigate against. No obstructions.

Sewers:

None existing on site to mitigate against. No obstructions.

<u>Banned</u> appliances: Neither are safe to direct human health or indirectly to everything:

Approved wood burners, coal, oil or any other solid or liquid fuel. <u>No external emissions</u>

RELATIVE IMPACT:

Existing Dwellings:
New dwelling: South faces 17 & 15 Surrey Close with a upper floor window distances of 22m & 21m. The ground floor windows serve non-habitable bathroom and utility room windows and hallway only.

North: Upper floor bedroom 3 & 4 windows are a distance of 21m from 32 Highstone Avenue. However the dwelling faces away from both 32 & 34 at a considerable angle of 65°/90 degrees. Boundary distance of 10m shown towards Highstone Avenue and Surrey Close.

If this is still a serious planning issue (18m is the absolute minimum) windows could be replaced with skylights also shown as an option on the floor plans just the same as with a loft conversion which this is not too dissimilar from.

The dwelling distance from the East boundary fencing of 16 Surrey is 3m. A significant gap reducing any overbearing concerns they may have. There are no designated windows on the east side.

In order to lower the impact on existing houses on Highstone Avenue, not just 16 Surrey Close, to a minimum, the single new dwelling will be of a 1.5 dormer style sacrificing any loft space keeping the overall height as low as practically possible.

5a) Flood Risk:
The location is in the lowest flood zone 1, an area with a low probability of flooding.

5b) Sewer:
Surface water: Yorkshire Water discounted soak away as at present or combined sewer
Foul Sewage: Combined mains sewer (Highstone Avenue or Surrey Close)

5c) Coal Mining Area:
An intrusive site survey will be performed to analyse the stability of the ground once planning is granted and thus the exact location of the new dwelling is known for exploratory purposes. Quotations for such have been provided.

Since this is a second application for the same plot it has been previously approved by the Coal Authority that the SYMAS report supplied has adequately assessed the risk and thus an additional CMRA to the same effect is unnecessary at this time. Coupled with the fact I am aware and have acknowledged that the SYMAS survey states that An Intrusive Site Survey by way of drilling up to 30m deep bore holes is conditional and must be performed after granted permission and before any works can commence. So this should be included as a condition. Had the SYMAS survey shown no such risk possibilities a CMRA would then be required to check for the same possibility for the Coal Authority during consultation. Only An Intrusive Bore Hole survey will adequately assess ground conditions.

5d) Ecology: (Gain: Additions only)
Existing: *"Habitats on site are of low or negligible ecological importance." Bagshaw Ecology*
No trees, only scrubs (Neighbours property) / East/South: None. Surface: Low quality grass.

Proposed: Nesting Boxes: (5m+ from ground level)
North East: 3x Sparrow specific boxes
South West: 3x Swift specific boxes & 3x Bat specific boxes

T1: Replace removed tree with a new one 3m+ tall with perimeter growth room to spare.
ie: Silver Birch, Hornbeam, Sweet Gum, Dawn Redwood,
Dawyck Beech (Fagus sylvatica 'Dawyck'), Cypress Oak (Quercus robur 'Fastigiata Koster')

T2/3/4: Select from list above including: Apple tree, Cherry Blossom etc 2m+ tall.
T2/3: Must be maintained at a height no greater than 6m (Distance from house foundations)

Allow for the movement of hedgehogs etc along the full length of the West side boundary covered with bushes. These should be retained were present. Therefore the short proposed North side fencing (eg. A picket fence) needs to allow such animals through without issues.

BH1/2/3/4: New evergreen privet hedgerow bushes:
Portugal Laurel, Viburnum, Cherry Laurel, Red Robin and/or Boxwood Shrubs etc
https://www.barnsley.gov.uk/barnsley-maps/local-plan/

EDGEMERE INTERLOCKING SLATES

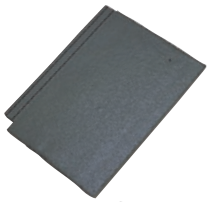
TILEFIX
marley.co.uk/tilefix

CAD
marley.co.uk/cad

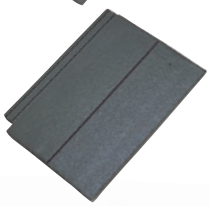
NBS specs
marley.co.uk/specrite

FIXING GUIDE
marley.co.uk/resources

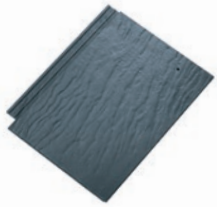
EDGEMERE†
Enhanced with a broken bond, provides not only a more slate-like appearance, but an affordable upgrade to standard interlocking tiles.



DUO EDGEMERE‡
The addition of a mock bond down the centre of the tile, creates the appearance of a small format slate.



RIVEN EDGEMERE†
A randomised texture applied to the surface, ensures an attractive and variegated appearance, providing a finish which even more closely resembles natural slate.



EDGEMERE FITTINGS
Available in all colours to match main slates.

COLOUR AVAILABILITY

SMOOTH GREY (S)
– Edgemere
– Duo Edgemere
– Riven Edgemere

OLD ENGLISH DARK RED (S)
– Edgemere
– Duo Edgemere

SMOOTH BROWN (S)
– Edgemere
– Duo Edgemere

ANTHRACITE (S)
– Edgemere
– Duo Edgemere
– Riven Edgemere

Key (S) Smooth finish

† Edgemere and Riven Edgemere should be laid broken bond. The required broken bond pattern is created by the introduction of half slates, to form verges in alternate courses.

‡ Duo Edgemere should be laid a quarter broken bond. The required broken bond pattern is created by the introduction of three quarter width slates, cut from standard slates on site to form verge slates in alternate courses.

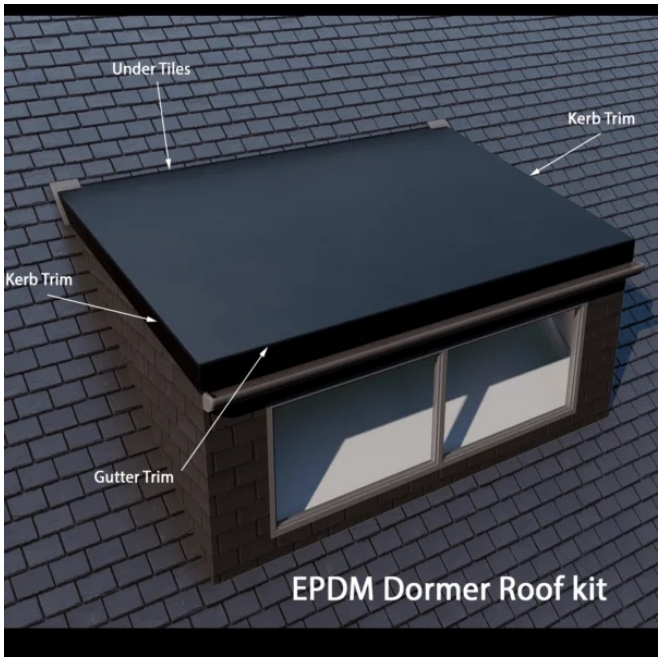
TECHNICAL DATA

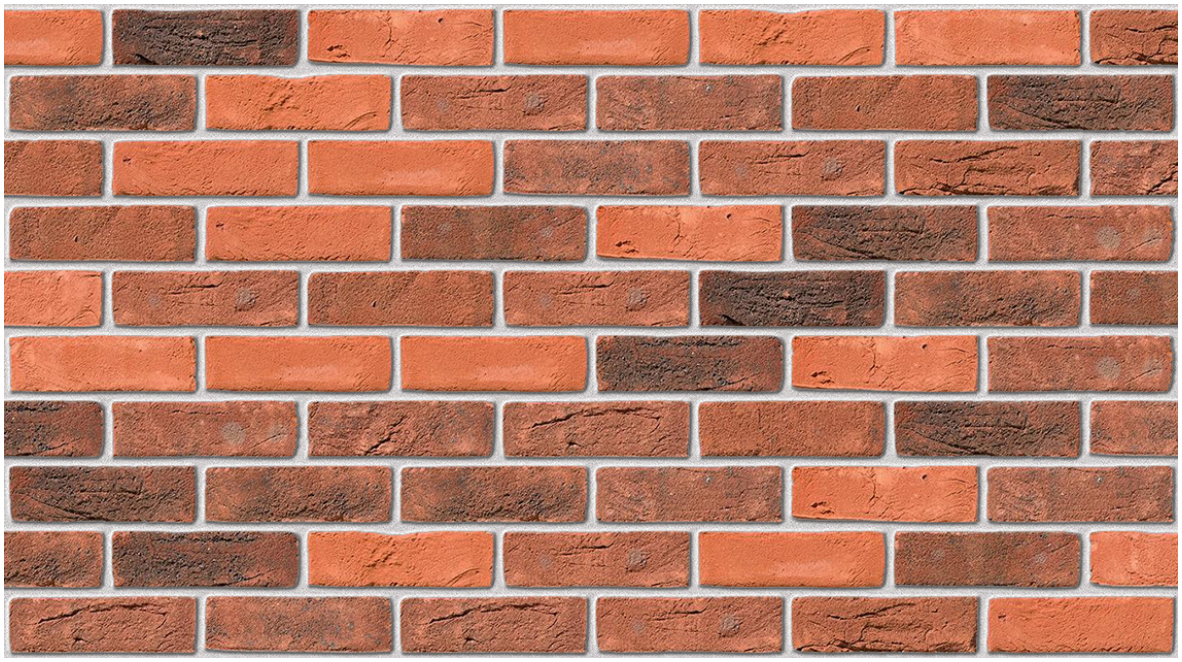
Size	420mm x 330mm	
Minimum pitch*	22.5° (75mm lap)	17.5° (100mm lap)
Maximum pitch	90°	
Minimum lap	75mm (22.5° and above)	100mm (below 22.5°)
Maximum gauge	345mm	
Tile thickness	18mm (nominal)	
Cover width	298mm (nominal)	
Hanging length	395mm (nominal)	
Covering capacity (net)	9.7 slates/m² at 75mm lap	10.5 slates/m² at 100mm lap
Weight of slating (approx.)	44 kg/m² (0.43 kN/m²) at 75mm lap	47.5 kg/m² (0.47 kN/m²) at 100mm lap
Battens required (net) lap	2.9 lin.m/m² at 75mm lap	3.1 lin.m/m² at 100mm
Batten size recommended (fixed to BS 5534)	38 x 25mm for rafters/supports not exceeding 450mm centres 50 x 25mm for rafters/supports not exceeding 600mm centres	
Fixings	Slate nails (45 x 3.35mm)	
Fixing clips	Eaves, verge and tile clips	
Authority	BS EN 490	

* The minimum recommended pitch and lap may be influenced by special circumstances, please contact the Technical Advisory Service.

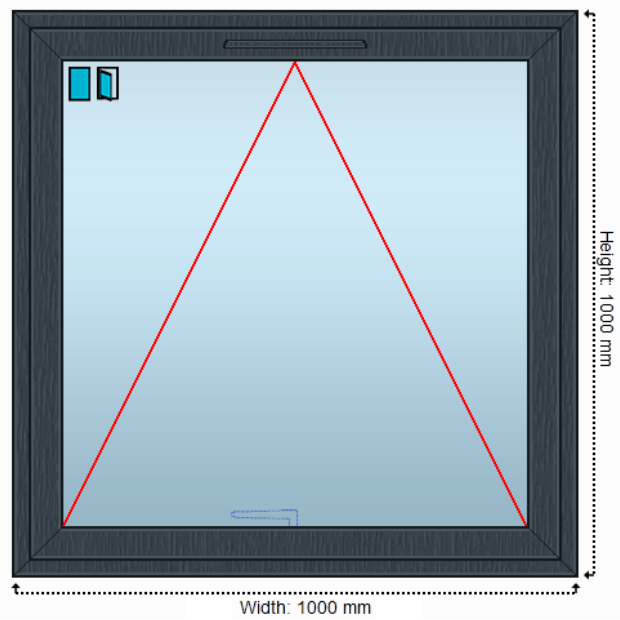
SUSTAINABILITY

Green guide rating	A+ (Element refs: 812410007, 812410018, 812410049)
BES 6001	Excellent
Embodied carbon	Low carbon footprint of 10.67 CO_2e/m²

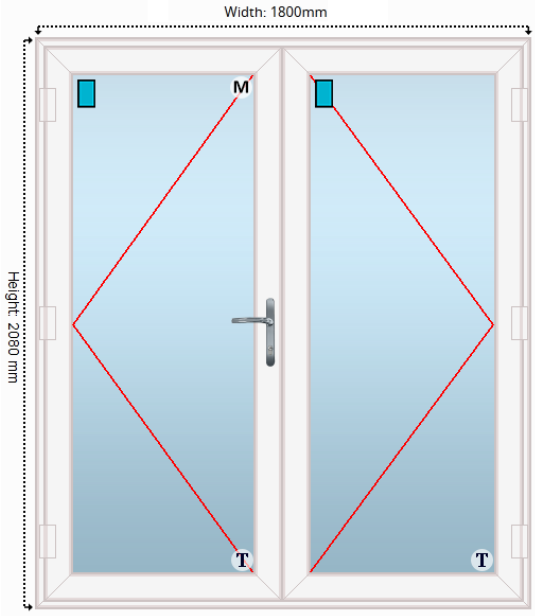

Under Tiles
Kerb Trim
Kerb Trim
Gutter Trim
EPDM Dormer Roof kit



Front Door.png



Anthracite Dormer Windows.png



Rear French Doors.png