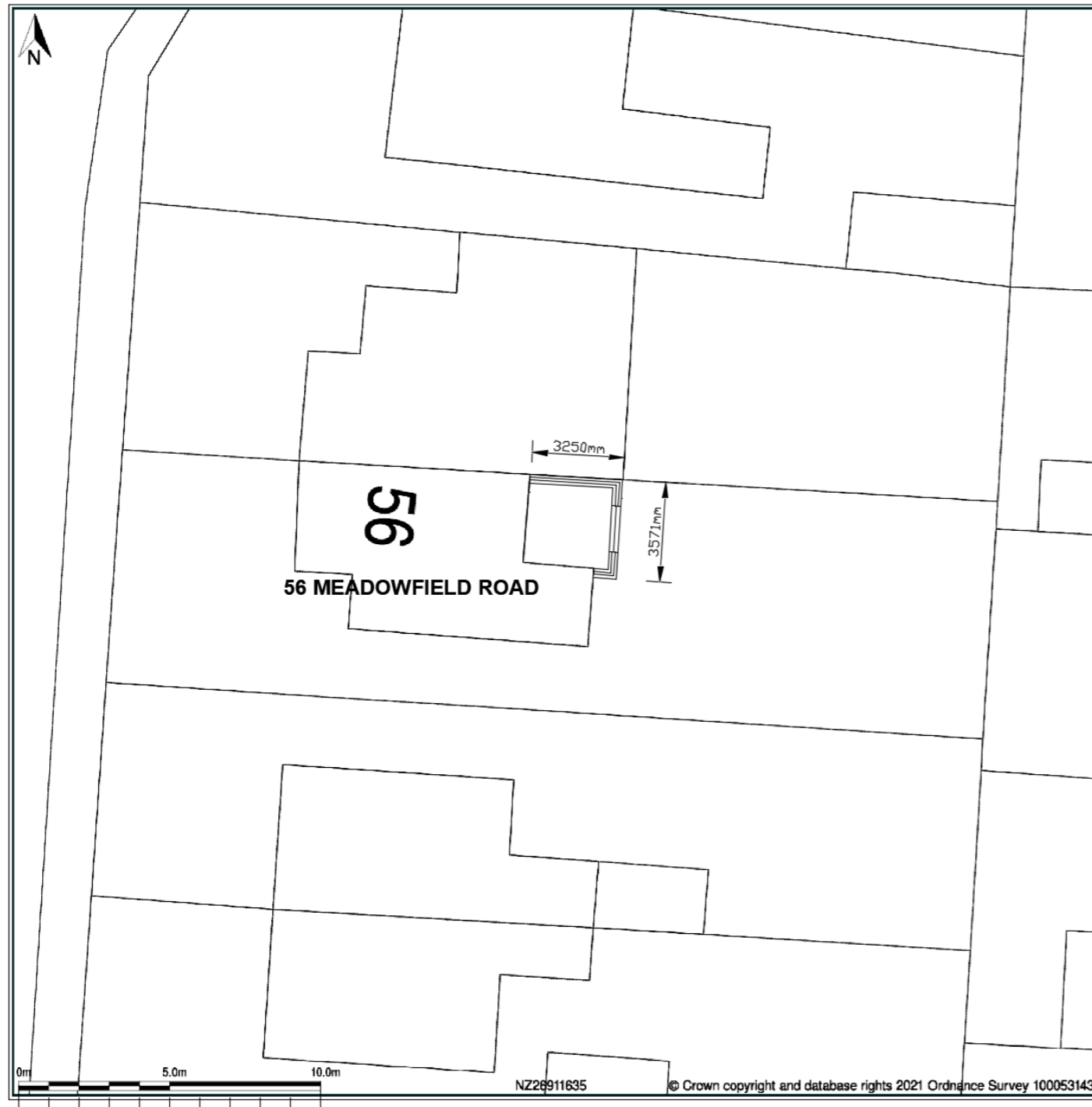
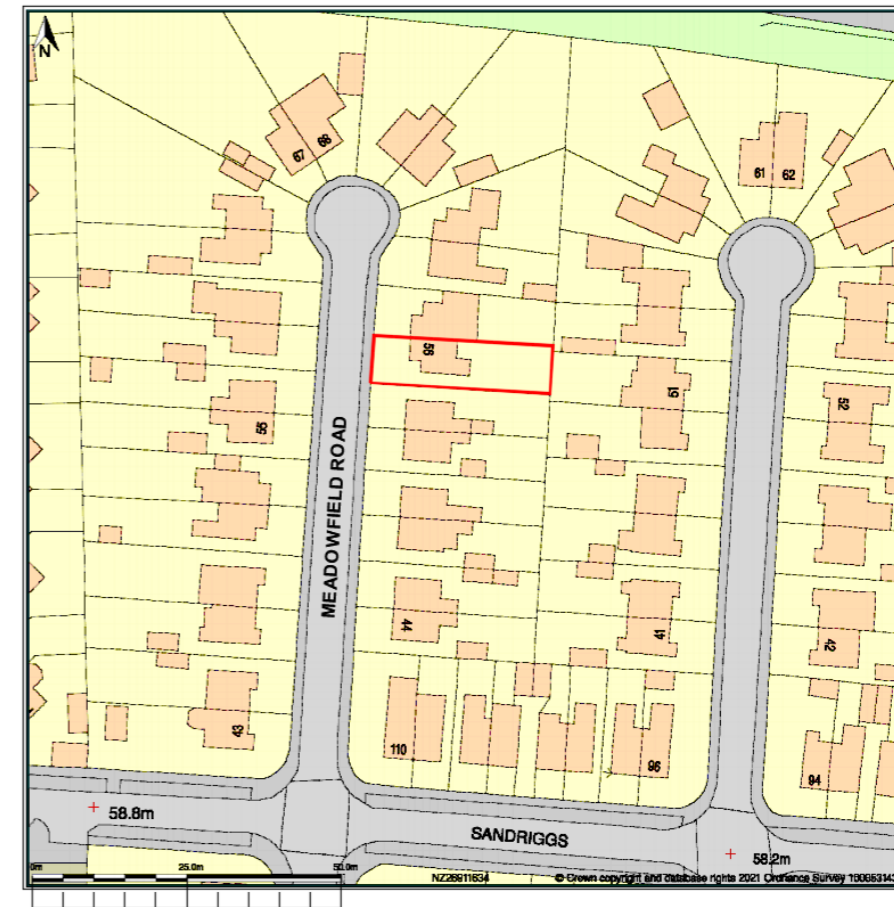


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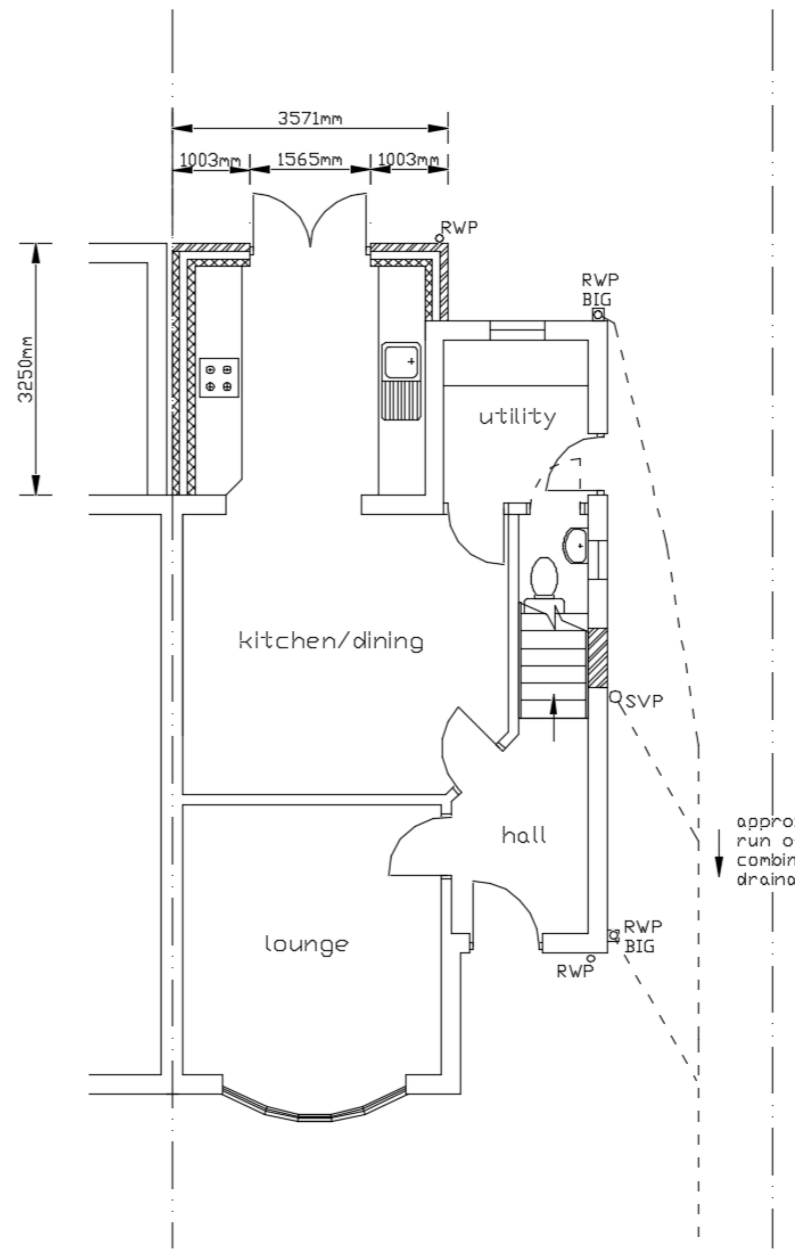
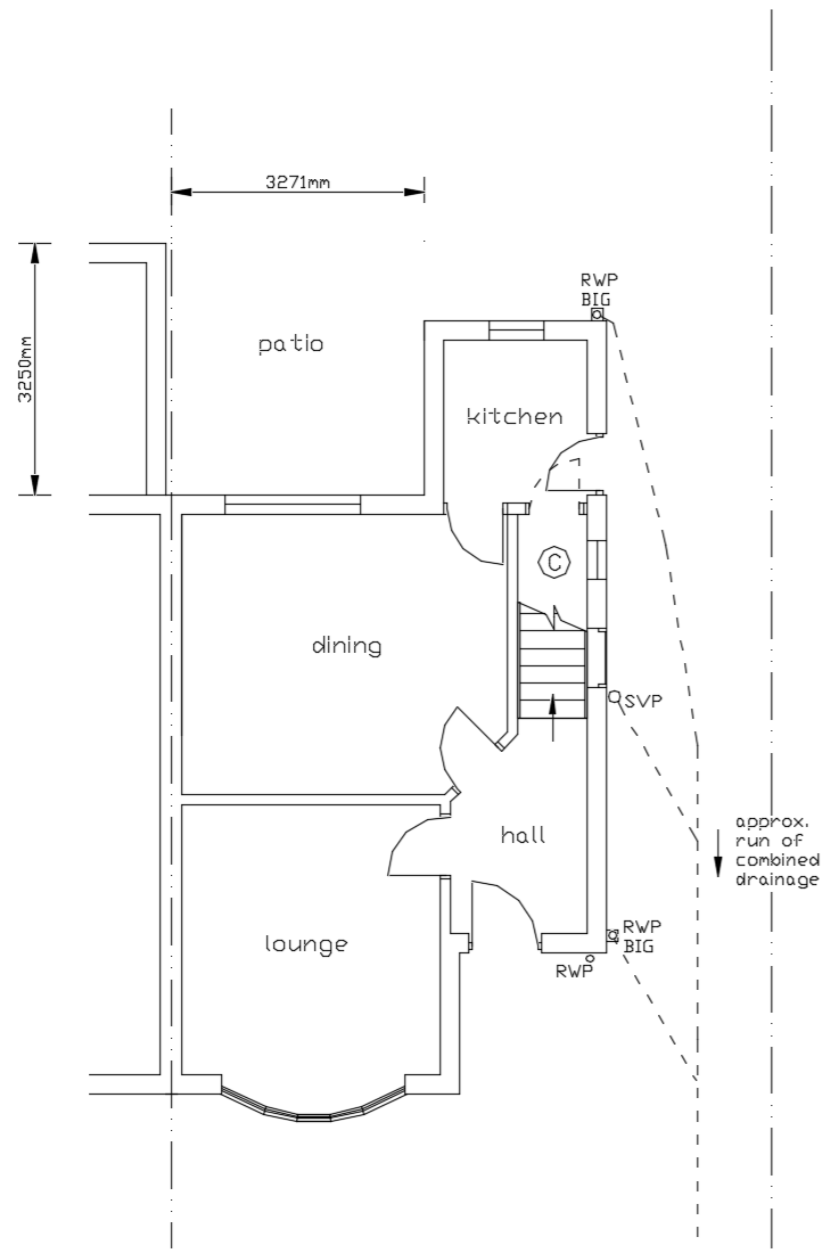
Proposed site plan  
Scale 1:200



Location plan  
Scale 1:1250

- Notes
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  2. Any discrepancies reported to client before any work put in hand.
  3. This drawing must be read in conjunction with relevant consultants and specialist drawings.

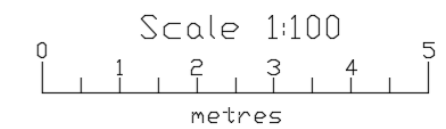
NAME	Mr R Bainbridge
ADDRESS	56 Meadowfield Road Darlington, DL3 0DT
TITLE	Kitchen/dining room rear extension
SCALE/REF	1:200, 1:1250 Drg. 1 of 4 April 2021



Provide hot and cold water to WC wash hand basin.  
 WC connection to existing soil vent pipe.  
 Remove external timber door and make good with brickwork to match existing.

Existing ground floor plan

Proposed ground floor plan



Drawings by  
**ROSCAMP**  
**CONSTRUCTION**  
 Andrew Roscamp  
 01325 481468  
 07802 435157

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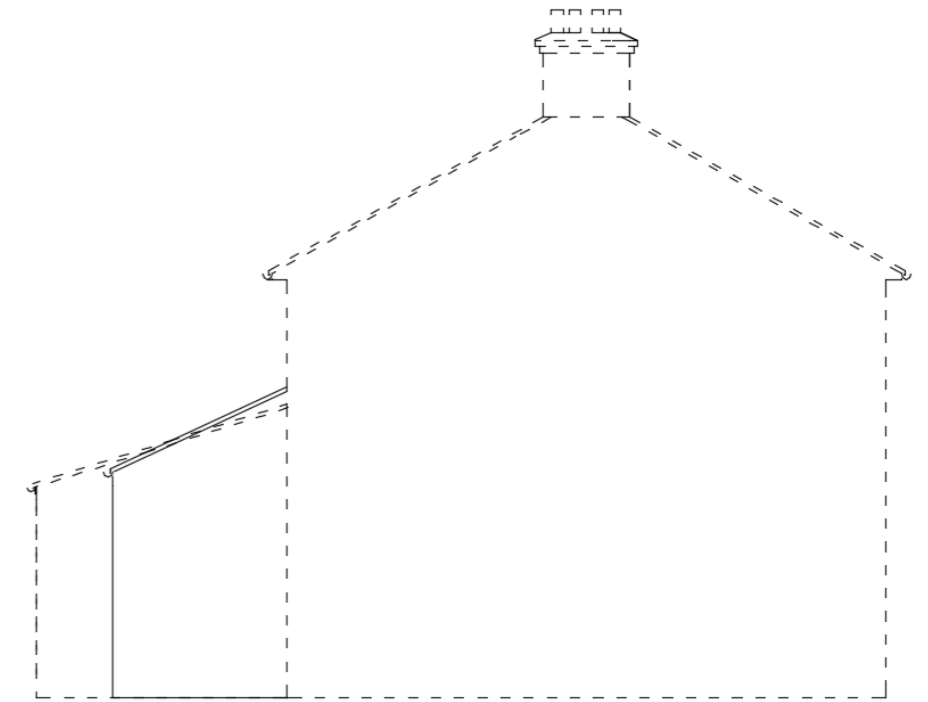
NAME	Mr R Bainbridge
ADDRESS	56 Meadowfield Road Darlington, DL3 0DT
TITLE	Kitchen/dining room rear extension
SCALE/REF	1:100 Drg. 2 of 4 April 2021



Existing Side Elevation



Existing Rear Elevation



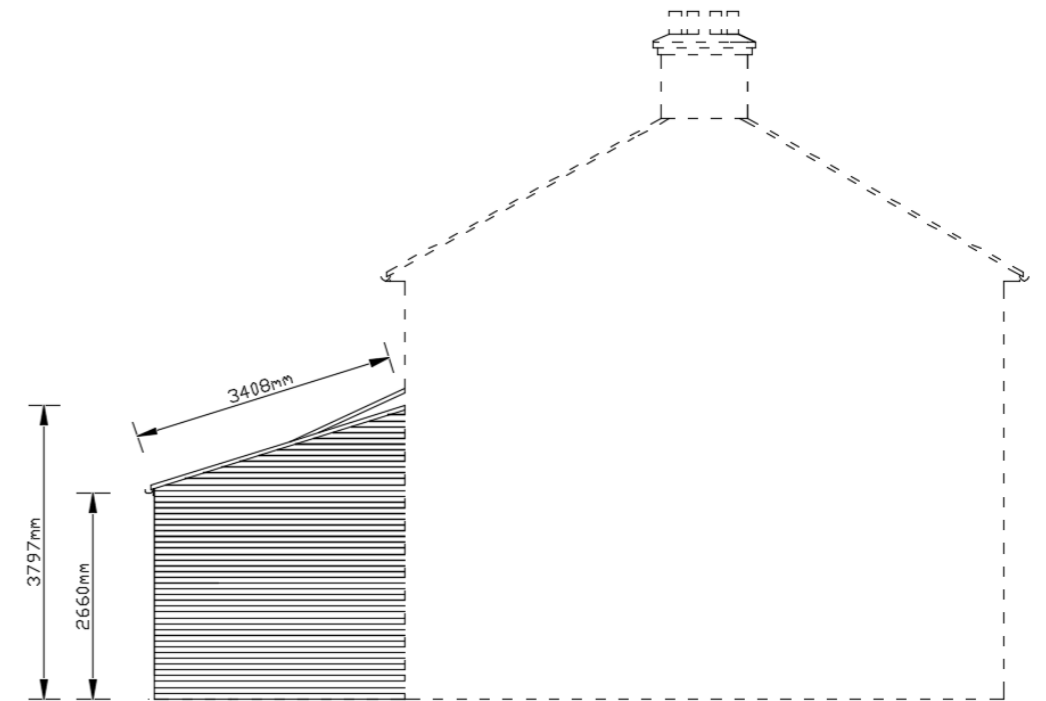
Existing Side Elevation



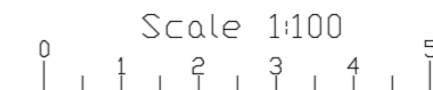
Proposed Side Elevation



Proposed Rear Elevation



Proposed Side Elevation



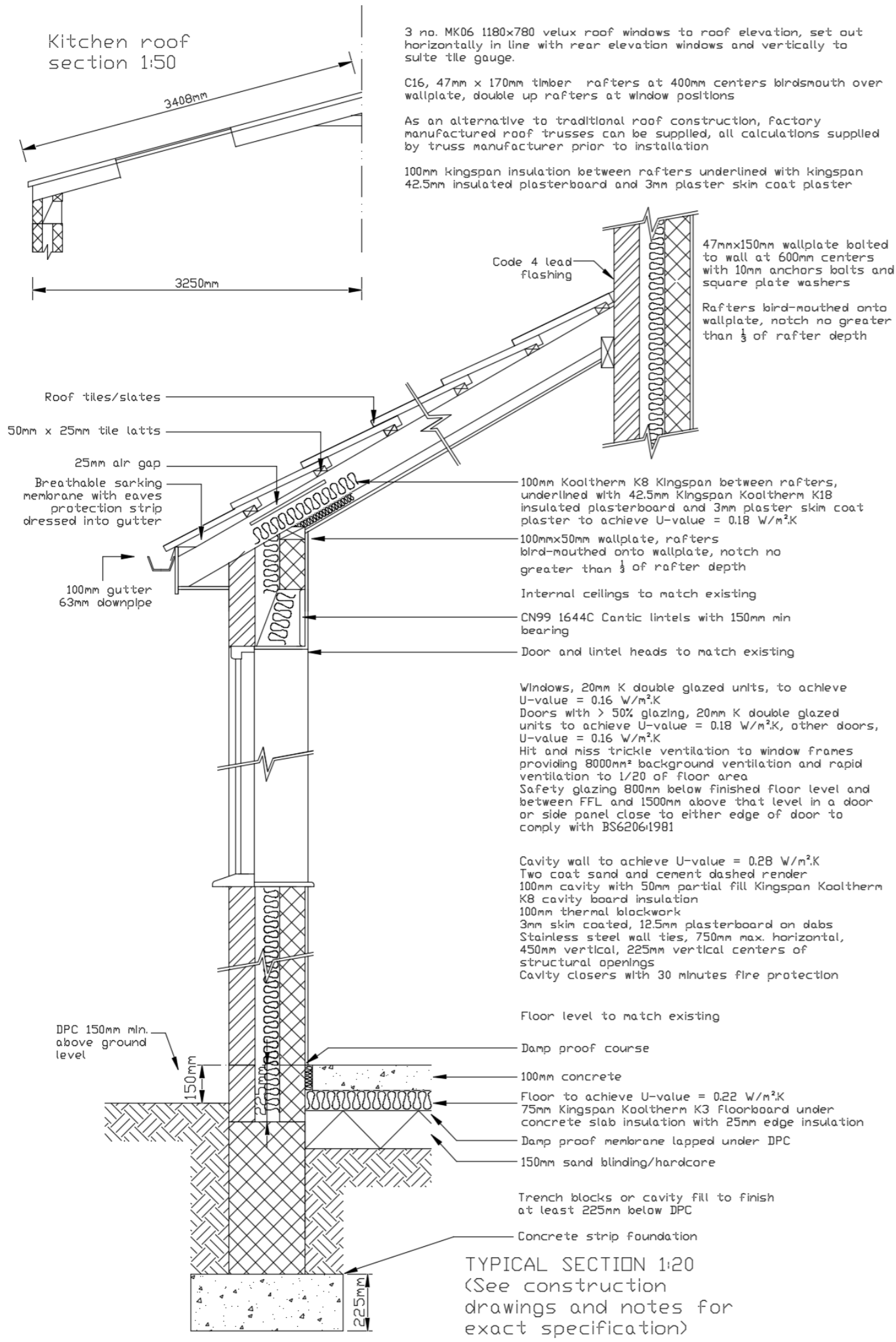
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TITLE	Kitchen/dining room rear extension
SCALE/REF	1:100 Drg. 3 of 4 April 2021

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Kitchen roof section 1:50



3 no. MK06 1180x780 velux roof windows to roof elevation, set out horizontally in line with rear elevation windows and vertically to suite tile gauge.

C16, 47mm x 170mm timber rafters at 400mm centers birdsmouth over wallplate, double up rafters at window positions

As an alternative to traditional roof construction, factory manufactured roof trusses can be supplied, all calculations supplied by truss manufacturer prior to installation

100mm kingspan insulation between rafters underlined with kingspan 42.5mm insulated plasterboard and 3mm plaster skim coat plaster

47mmx150mm wallplate bolted to wall at 600mm centers with 10mm anchors bolts and square plate washers

Rafters bird-nouthed onto wallplate, notch no greater than 1/3 of rafter depth

Code 4 lead flashing

Roof tiles/slates

50mm x 25mm tile latts

25mm air gap

Breathable sarking membrane with eaves protection strip dressed into gutter

100mm gutter 63mm downpipe

100mm Kooltherm K8 Kingspan between rafters, underlined with 42.5mm Kingspan Kooltherm K18 insulated plasterboard and 3mm plaster skim coat plaster to achieve U-value = 0.18 W/m<sup>2</sup>K

100mmx50mm wallplate, rafters bird-nouthed onto wallplate, notch no greater than 1/3 of rafter depth

Internal ceilings to match existing

CN99 1644C Cantic lintels with 150mm min bearing

Door and lintel heads to match existing

Windows, 20mm K double glazed units, to achieve U-value = 0.16 W/m<sup>2</sup>K

Doors with > 50% glazing, 20mm K double glazed units to achieve U-value = 0.18 W/m<sup>2</sup>K, other doors, U-value = 0.16 W/m<sup>2</sup>K

Hit and miss trickle ventilation to window frames providing 8000mm<sup>2</sup> background ventilation and rapid ventilation to 1/20 of floor area

Safety glazing 800mm below finished floor level and between FFL and 1500mm above that level in a door or side panel close to either edge of door to comply with BS6206:1981

Cavity wall to achieve U-value = 0.28 W/m<sup>2</sup>K

Two coat sand and cement dashed render

100mm cavity with 50mm partial fill Kingspan Kooltherm K8 cavity board insulation

100mm thermal blockwork

3mm skim coated, 12.5mm plasterboard on dabs

Stainless steel wall ties, 750mm max. horizontal, 450mm vertical, 225mm vertical centers of structural openings

Cavity closers with 30 minutes fire protection

DPC 150mm min. above ground level

Floor level to match existing

Damp proof course

100mm concrete

Floor to achieve U-value = 0.22 W/m<sup>2</sup>K

75mm Kingspan Kooltherm K3 Floorboard under concrete slab insulation with 25mm edge insulation

Damp proof membrane lapped under DPC

150mm sand blinding/hardcore

Trench blocks or cavity fill to finish at least 225mm below DPC

Concrete strip foundation

TYPICAL SECTION 1:20  
(See construction drawings and notes for exact specification)

CONSTRUCTION NOTES

**Foundations:**  
Excavate to a depth of 900mm from ground level, 600mm wide or to Building Control requirements, 1:2:4 mix concrete foundation, 600mm wide, 225mm deep. Trees on adjoining property boundary, depth of foundation may alter if building near to trees, see enclosed building regulation guidance notes for building close to trees.

**Floor:**  
Grd floor 100mm concrete steel float finish, 75mm kingspan floor insulation, 25mm floor edge insulation, 1200g DPM lapped under DPC, hardcore/sand blinding to make up levels.

**Walls:**  
13mm two coat sand and cement dashed render to match existing, 100mm medium dense block, 100mm cavity with 50mm kingspan insulation, 50mm clear cavity, 100mm thermolite block, thermabate or equivalent cavity closers at reveals, 12.5mm plasterboard and skim on dabs.  
DPC 150mm min. above ground level.  
Stainless steel wall ties 750mm horizontal, 450mm vertical staggered, 225mm vertical centers of structural openings.  
Catic or equivalent lintels over all openings.  
New brickwork/blockwork tied to existing with propriety wall connectors.  
Provide where applicable continuous cavity where new building joins existing  
Timber stud walls 50mm x 75/100mm studs, with 75/100mm insulation min. density 10kg/m<sup>3</sup> between studs, finished with 12.5 mm plasterboard and skim.  
12.5mm plasterboard and skim to all new ceilings.

**Roof:**  
15° minimum pitch, Redland Regent tiles at 100mm headlap, through coloured (smooth), colour to match existing, 50mm x 25mm battens on breathable roof tile underlay with eaves protection strip dressed into gutter. Factory manufactured roof trusses, all calculations supplied to Building Control by truss manufacturer prior to installation, 100mm x 50mm wallplate with 30mm x 5mm anchor straps at not more than 2m centers, 30mm x 5mm straps as lateral support to gable wall at not more than 2m centers.  
Code 4 lead to valleys and flashings.

**Windows and Doors:**  
UPVC doors and windows with hit and miss trickle ventilation to window frames providing 8000mm<sup>2</sup> background ventilation, 20mm double glazed units, K glass-glazing. Internal doors and frames to match existing.

**Ventilation:**  
Roof, breathable roof tile underlay. Rapid ventilation window openings to be 1/20th min. of floor area. Provide mechanical ventilation where applicable to kitchen 30 litres/second adjacent to hob, 60 l/s elsewhere, 15l/s to WC/bathrooms, 30l/s to utility rooms.

**Drainage:**  
Soil drainage to existing drainage system. Terminate rainwater goods to existing rainwater system, soakaway not within 5m of building or rainwater harvesting system. New UPVC drainage pipework to trapped gullies and inspection chambers on 100mm gravel bed and backfill to a fall of 1:60. SVP's to finish 900mm above nearest opening. Provide concrete lintels over drainage passing under new building to give 50mm space all around the pipe, fill void with compressible sealant and mask both sides with rigid sheet material.

**Other:**  
Provide cavity trays or silicone wash to existing brickwork above new roof line, where new extension joins existing building  
Provide 2 no. low energy light fitting.  
Extend existing central heating system to accommodate new building, provide thermostatic control valves to all new radiators.  
Confirm all electric installation required to meet the requirements of Part P (Electrical safety) must be designed, installed by a person competent to do so. Prior to completion an appropriate BS 7671 electrical installation certificate is to be issued for the work by a person competent to do so.

Drawings by  
**ROSCAMP**  
CONSTRUCTION  
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In extreme cases a completely different type of foundation may be necessary, such as a raft, or pile and beam solution. These types of foundations must be designed by a Structural Engineer and details submitted to the local authority.

Trees adjacent to a building are often the cause of structural problems such as cracking and sometimes movement. Trees are a specialist subject and your architect should be in a position to advise you before making a Building Regulation submission. Should you elect to carry out the work under the Building Notice procedure then I would advise you to seek the advice of a Structural Engineer prior to starting work.

• **Planting New Trees Close to Buildings**

Consider the future consequences when deciding to plant a tree near your property. It is inadvisable to plant a tree closer to the property than the eventual mature height of tree (eg. a conifer hedge can grow approximately 450mm a year and could reach 18 metres in height).

• **Further Advice**

Before felling any trees you must first check that the trees are not subject to a Tree Preservation Order, or sited in a Conservation Area. For advice before felling any trees, please contact the Planning Section of the authority on (01325) 388619.

• **Please Note**

For any informal advice on the depth of foundations close to trees, the Building Control Section would be pleased to assist you. Please ring (01325) 370820 and ask for a Building Control Surveyor.

**TRANSLATION INFORMATION**

If English is not your first language and you would like more information about this document, or if you require information in large print or braille or on tape, please contact (01325) 370820.

اگر آپ کو یہ سہولتیں چاہیں تو براہ کرم اس معلوماتی دستاویز کے ساتھ کسی دوسری زبان میں درکار معلومات کے لیے درخواستیں (01325) 370820 پر فون کر کے ارسال فرماتے ہیں۔

ਜੇ ਇਹ ਪਰਚਾ ਤੁਹਾਨੂੰ ਅੰਗਰੇਜ਼ੀ ਤੋਂ ਬਿਨਾਂ ਕਿਸੇ ਹੋਰ ਭਾਸ਼ਾ ਵਿੱਚ ਚਾਹੀਦਾ ਹੈ, ਤਾਂ ਕਿਰਪਾ ਕਰਕੇ ਸਾਨੂੰ ਨੱਬਰ (01325) 370820 'ਤੇ ਫੋਨ ਕਰੋ ਅਤੇ ਰੈਫਰੈਂਸ (ਹਵਾਲਾ) ਨੱਬਰ ਦੱਸੋ।

यदि आप यह प्रकाशन अंग्रेजी के अलावा अन्य भाषा में चाहते हैं तो कृपया संदर्भ नम्बर (एफएस नम्बर) बताकर निम्नलिखित (01325) 370820 पर संपर्क करें।

如果你需要其它语言的版本, 請與以下電話聯絡並報出參考號碼: (01325) 370820

यदि आपका इच्छित भाषा अन्य भाषा है, तो कृपया संदर्भ नम्बर (एफएस नम्बर) बताकर निम्नलिखित (01325) 370820 पर संपर्क करें।

إذا رغبت الحصول على هذه النشرة بلغة أخرى غير اللغة الإنجليزية نرجو الاتصال بنا على رقم الهاتف التالي (01325) 370820 مع ذكر رقم الإشارة.

Telephone (01325) 370820  
Fax (01325) 370829  
E-mail  
buildingcontrolenquiries@darlington.gov.uk



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# Foundations Close to Trees

Building Regulation Guidance Note



## FOUNDATIONS CLOSE TO TREES

These notes are to assist the house owner when considering carrying out building work near trees.

• **Trees Adjacent to Dwellings**

When considering extending your property it is important to look around the area on which you want to build and check that no obstructions exist. These could take the form of underground drains, overhead cables, existing structures and trees.

Whilst the builder and architect can overcome most difficulties, building near trees can sometimes cause particular problems.

• **Trees**

Trees themselves are pleasant to look at and enhance any garden, however, tree roots can present hidden problems to the future extension. In simple terms depending on various factors the closer a tree is to a new building the deeper the foundations must be taken down. The minimum depth for any foundation is 900mm, however this depth could be greatly increased, depending on how close the tree is to the new extension.

The basis of design is to ensure that the foundations are taken down to such a depth, that they will not be affected by tree roots. The trees themselves do not necessarily have to be large varieties, such as Oak or Beech, even small trees, such as Plum or Apple, could have an effect on foundations.

• **The Solution**

In the Darlington area the majority of soils are of medium shrinkable clay. The table gives

some common trees and the minimum depth required to the foundations, dependant upon the distance the foundations are from the trees.

SPECIES	DISTANCE FROM BUILDING												
	1m	2m	4m	6m	8m	10m	12m	14m	16m	18m	20m	22m	24m
Oak	2.70	2.60	2.45	2.30	2.15	1.95	1.80	1.65	1.45	1.30	1.10	0.95	0.90
Poplar	2.70	2.60	2.50	2.40	2.25	2.15	2.00	1.90	1.70	1.60	1.45	1.30	1.20
Willow	2.70	2.55	2.50	2.40	1.95	1.85	1.55	1.40	1.20	0.95			
Hawthorn	2.55	2.40	2.10	1.75	1.45	1.00							
Leylandii	2.60	2.40	2.00	1.75	1.20	0.90							
Cedar	1.65	1.50	1.20	0.90									
Fr	1.65	1.50	1.20	0.90									
Pine	1.65	1.50	1.20	0.90									
Spruce	1.65	1.50	1.20	0.90									
Chestnut	1.75	1.65	1.50	1.40	1.30	1.15	1.00						
Ash	1.75	1.65	1.50	1.40	1.30	1.15	1.00						
Lime	1.75	1.65	1.50	1.40	1.30	1.15	1.00						
Sycamore	1.75	1.65	1.50	1.40	1.30	1.15	1.00						
Pear	1.65	1.60	1.30	1.05									
Cherry	1.75	1.65	1.50	1.30	1.15	1.00							
Alder	1.75	1.65	1.50	1.30	1.15	1.00							
Maple	1.75	1.65	1.50	1.30	1.15	1.00							
Beech	1.75	1.65	1.50	1.30	1.15	1.00							
Plum	1.65	1.50	1.20	0.90									
Laurel	1.65	1.50	1.20	0.90									
Apple	1.65	1.50	1.20	0.90									
Laburnum	1.15	1.05	0.90										
Birch	1.20	1.10	0.95										
Holly	1.20	1.10	0.95										
Magnolia	1.15	1.00											
Mulberry	1.15	1.00											

Foundation Depth in Metres

Also should you have an existing tree in your garden, having it felled will not mean that the foundations will not be affected. Heave in clay soil can take place when it takes up moisture and swells, after the felling or removal of trees and hedgerows. It can also occur beneath a building if roots are severed by foundations. To avoid adverse effects of heave, the design of the foundations and substructure should take this into account. The sketches show typical construction details for trench fill foundations together with precautions to prevent heave damage.

