



Cambridge
**Carbon
Footprint**



Victorian Terrace Getting Off Gas



Victorian Terrace - Getting Off Gas

Plan for Webinar

- Development of project with architect (10-15min)
- Q&A (5min)
- Details of project with hosts, builder and architect (25min)
- Q&A (rest of session)



Victorian Terrace - Getting Off Gas

Aims

- Get off gas
- Get attic bedroom
- Keep cool

Features

- Attic bedroom
- Internal and external insulation
- Passiv Haus standard windows and external doors
- Air source heat pump
- Mechanical ventilation (Aereco)
- Ceiling fans, external blinds, patio pergola



- [Walk through video](#)

- Getting planning permission
- Selecting contractors

Victorian Terrace – getting off gas Planning

**For Open Eco Homes virtual tour
Cambridge Carbon Footprint**

26 September 2020

**Margaret Reynolds, Architect
M Reynolds RIBA**

[mrriba2018@ gmail.com](mailto:mrriba2018@gmail.com)

<http://uk.linkedin.com/in/margaretreynoldsriba>

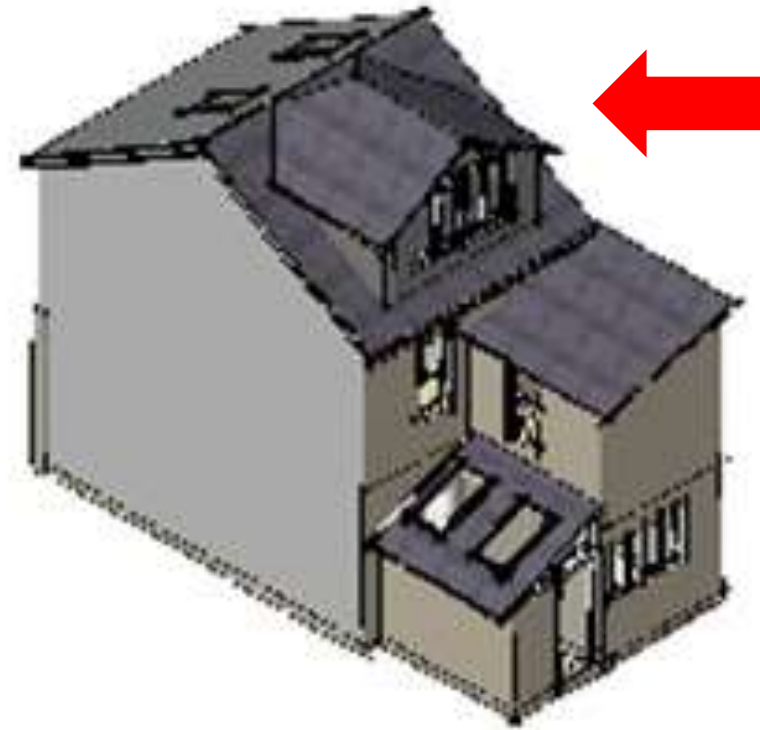
Existing ridge: 1.815 m



Rear gable with raised ridge



Existing



New rear loft gable

Planning Pre Apps 2015 & 2016

Conclusion

2015

Your proposal is unlikely to be supported by officers and I advise that you withhold applying for planning permission because I am concerned that the raising of the ridge and the full width box domer window would be detrimental to the character of the Conservation Area and the proposal would be contrary to policies 3/4, 3/7, 3/12, 3/14 and 4/11 of the Cambridge Local Plan 2006.

2016

The scale of the roof extension would consume almost the entire rear roofscape of the property giving the rear elevation a top heavy appearance, and would appear as an alien form within a terrace row of relatively unaltered roofscapes. The roof extension would also project above the main ridge increasing its dominance and appearance. I note that there is a property in Street which

Precedents: Single Loft Gables



Single gables nearby

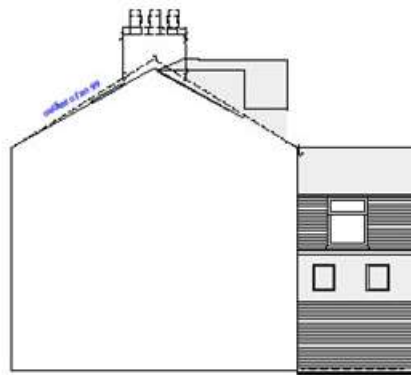
Planning Application - Policy

National Planning Framework - core land-use principles (CLG, Section 7, no 65, March 2012):

“Planning permission **should not be refused** for buildings and infrastructure that promote **high levels of sustainability** because of concerns about **incompatibility with an existing townscape**, if those concerns have been mitigated by good design...”

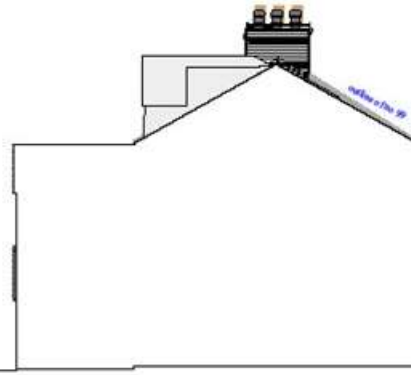
Cambridge Local Plan 2006 policy 3/1

“fully supports these proposals with regard to **reducing energy use,**” and “**reducing** the need to **travel by car,** and reducing the need for ‘new build’ by retaining and **reusing existing buildings.**”



3 Opt 1B W (side elevation)
Scale: 1:100

Slate roof to new rear dormer extension
Code 5 lead to new feature dormer cheeks and bargeboards
Slates to new mansard roof; lead cheeks
West window white to Passiv Haus standard, cill stone existing reused



4 Opt 1B E (side elevation)
Scale: 1:100

M REYNOLDS RIBA
59 OXFORD ROAD, CAMBRIDGE CB4 3PH

Option 1B N Elevation
Scale: 1:100



Slate roof to new rear dormer extension
Code 5 lead to new feature dormer cheeks and bargeboards
Slates to new mansard roof
South windows all white to Passiv Haus standard, cills stone existing reused or recon stone.
Obscured glass to bottom half of loft window
Front plate to ventilation transfer unit: stainless steel or painted to match masonry TBC

Some conclusions

1 - The Council does not necessarily stand by Pre-Apps, either positive or negative.

2 - Do not limit your investigations to the refusals – study the approvals.

<https://applications.greatercambridgeplanning.org/online-applications/>

3 - Make your case by citing the current planning policy documents and positive precedents.

4 – Make a case beyond your design for benefits like sustainability, social issues, city centre quality.

5 – Do not despair – planners sometimes allow changes

Victorian Terrace – getting off gas Planning

For Open Eco Homes virtual tour

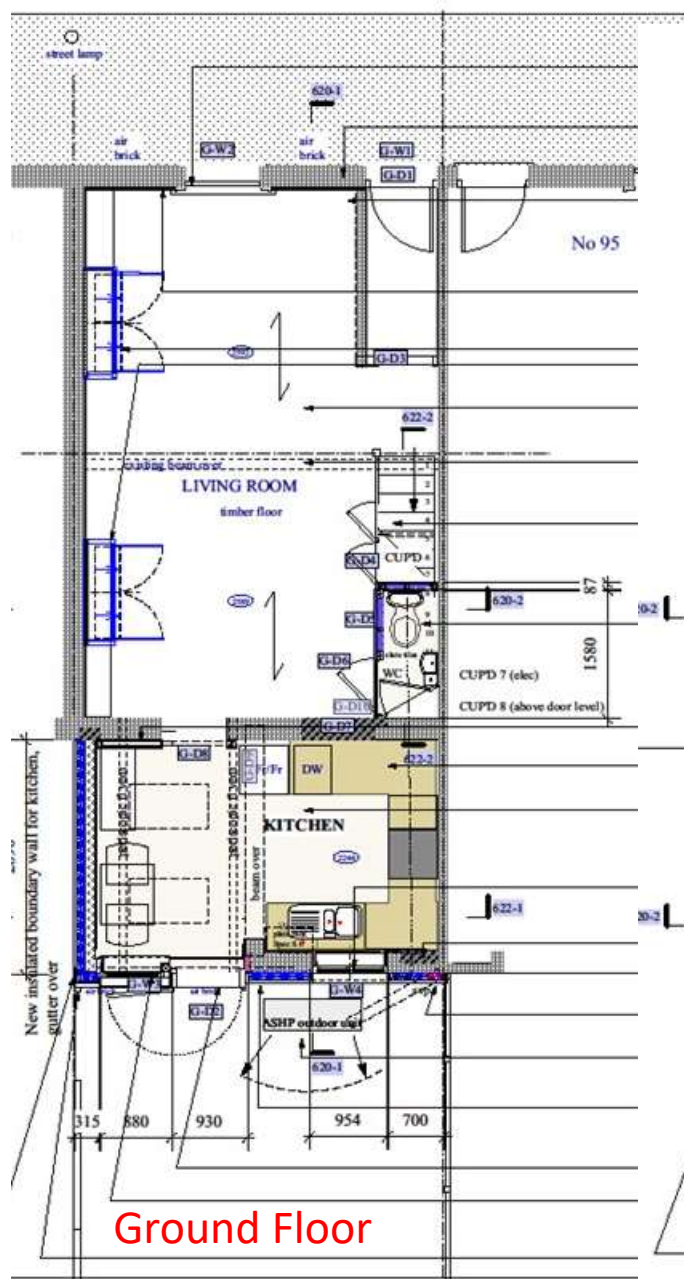
26 September 2020

Margaret Reynolds, Architect

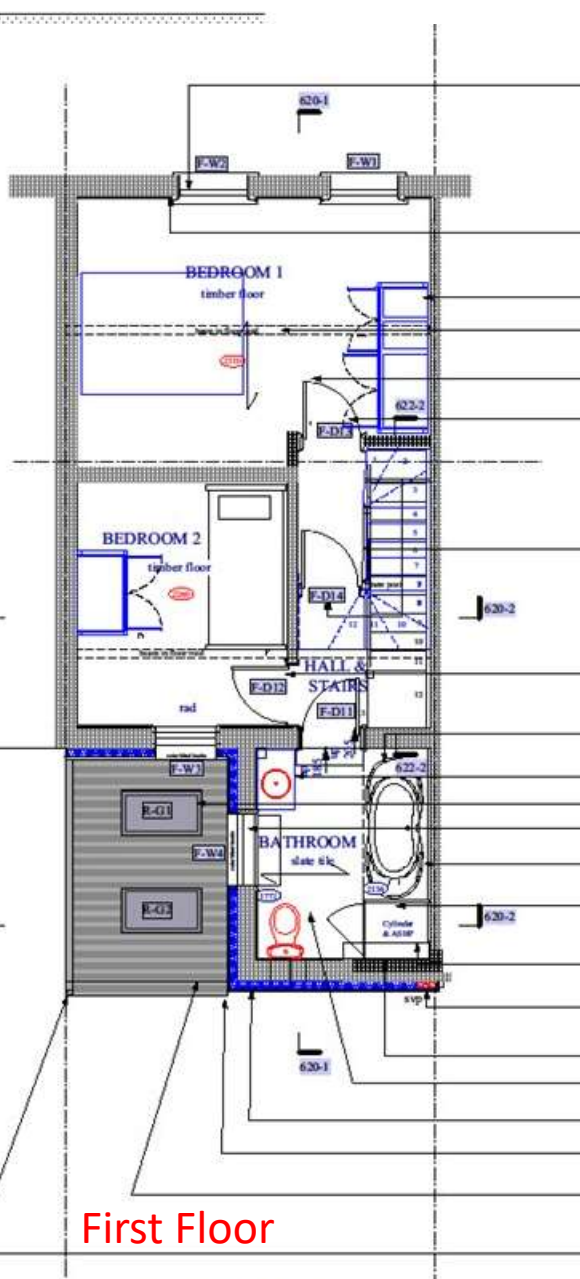
M Reynolds RIBA

mrriba2018@gmail.com

<http://uk.linkedin.com/in/margaretreynoldsriba>

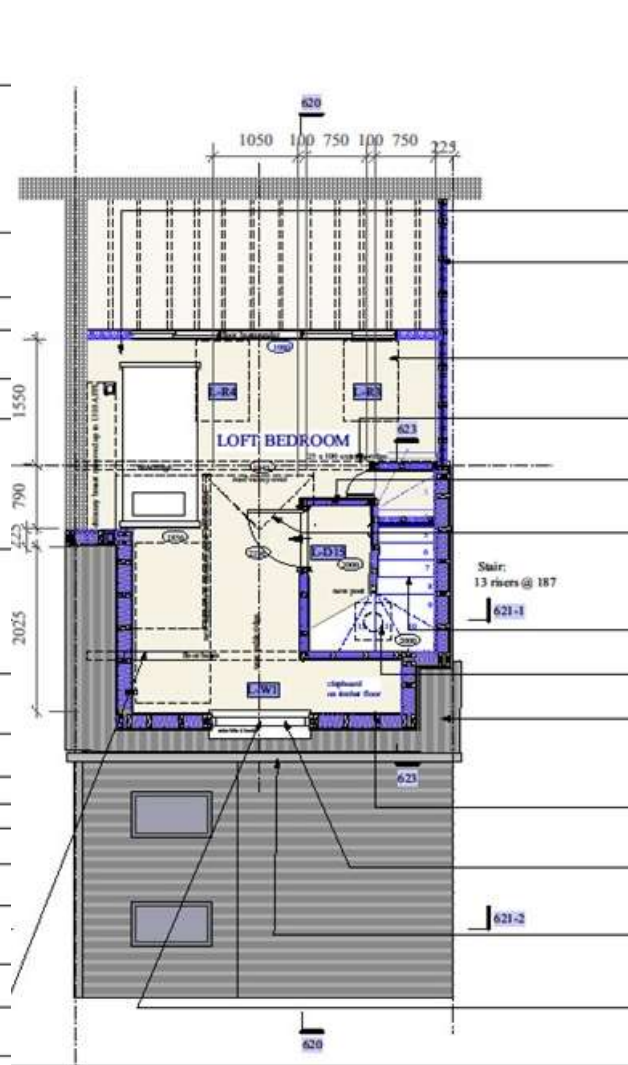


Ground Floor



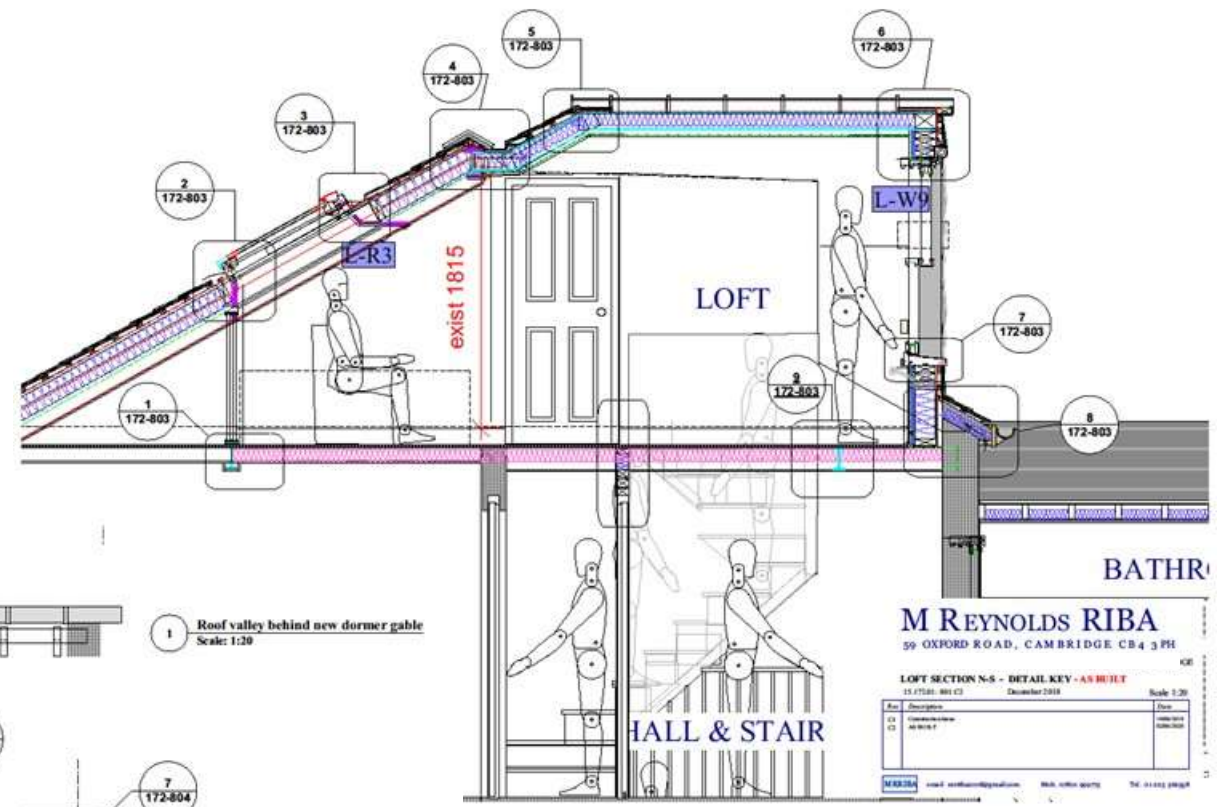
First Floor

1 Opt 1B 1st Fl plan
Scale: 1:50



Loft Floor

3 Loft Floor plan proposed
Scale: 1:50



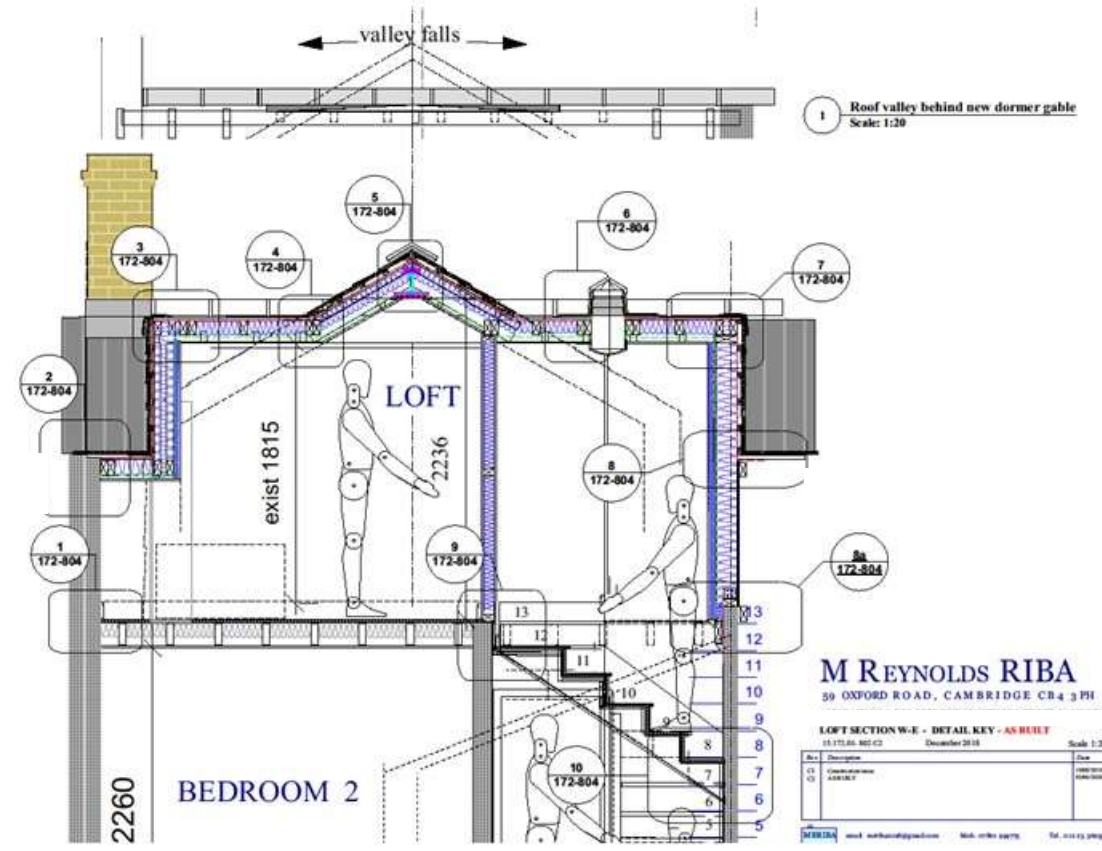
M REYNOLDS RIBA
 59 OXFORD ROAD, CAMBRIDGE CB4 3PH

LOFT SECTION N-S - DETAIL KEY - AS BUILT

Rev	Description	Date
01	Issue for construction	December 2018
02	As built	

Scale: 1:20

MRRIBA and@mrribadigital.com Mob: 01223 549775 Tel: 01223 316047



M REYNOLDS RIBA
 59 OXFORD ROAD, CAMBRIDGE CB4 3PH

LOFT SECTION W-E - DETAIL KEY - AS BUILT

Rev	Description	Date
01	Issue for construction	December 2018
02	As built	

Scale: 1:20

MRRIBA and@mrribadigital.com Mob: 01223 549775 Tel: 01223 316047

Attic and use of space



Sprinkler and fire doors



Insulation



Air tightness testing

“The most important leakage path identified was behind the insulated plasterboard on the party wall”

Before:

Air changes per hour at 50 Pa : 9.8 /h

Mid -renovation:

Air changes per hour at 50 Pa : 12.1 /h

After:

Air changes per hour at 50 Pa : 7.83 /h



Windows and doors





Ventilation

Heat pump





Cooling



External blinds

Builder's view

Tim Acheson, [Green Hat Construction](#)



Living in the
house

Q&A

More Online Tours & Talks

openecohomes.org/autumnseason



Please write feedback in Chat: - What did you enjoy?
- Suggestions for improvement?

Donations welcome: cambridgecarbonfootprint.org/donate