



Review of Proposed Ground and Lower Ground Floor Extension

at

**52 Delancey Street
Camden
London NW1 7RY**

for

Ms N and Mr O Gershfield

Sage Job Reference: J102/1341

Sage Design Services Ltd

Garden Studio

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Herts. WD7 8EG

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Document History

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| L Goodman | 7 th March 2016 | Draft | Ms Gershfield and Mr Gershfield |
| L Goodman | 15 th December 2016 | Issue 1.0 | Ms Gershfield and Mr Gershfield |
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1.1 Introduction - At the request of Ms Gershfield and Mr Gershfield, we set out below the engineering basis for the structural design to the proposed ground and lower ground floor extension. This report, we understand, is to be used as part of the planning application. Please read this report in conjunction with the architectural layouts, Design and Access Statement dated January 2106 produced by others. Drawings and sketches showing the structural arrangement proposed are included in Appendix A of this report. Photographs of the existing rear elevations, are included in Appendix B of this report. Camden Council require a written statement to confirm the following in terms of the structural design of the proposed works:

- Details of the expected impact that the proposed development will have on the special interest of the listed building or structure and its setting (and adjacent listed buildings)
- An outline of the steps taken to avoid or minimise any adverse impacts on the significance of the building
- An explanation of the sources considered and the expertise consulted in the formulation of the associated application
- A structural engineering report providing details of how any retained building elements will be supported

1.2 Proposed Works - The proposed building works as set out on the Architects drawings include:

- Create a new entrance doorway at GF to access the lower ground flat in order to maintain the existing entrance openings
- Retain the ground floor external rear, brick façade internally and extended the window opening
- Extend the closet wing and extension slightly to allow for the rear façade to be retained
- Omit the glazed roof extension and replaced with light weight roof with roof lights
- Increased the size of the GF front room to maintain the original size of the space as far as practicable
- Maintained the original kitchen location at ground floor
- Lower ground floor generally as previous proposal with the front room maintained as existing

1.3 Party wall agreements – A party wall agreement will be required with both neighbours, using a suitably qualified Surveyor.

1.4 General - This report is for the personal use of the fee-paying client only and is not assignable. As such Sage Design offer no liability to any third parties for any opinions or facts stated within this report.

1.5 Approvals – We understand that our clients have, or are seeking Local Authority planning approval. Building regulations approval will also be required for this project and CDM (Construction Design and Management) regulations and requirements, will apply to this project.

2.0 Technical Appraisal of the likely effect the stability of the existing sub-soils resulting from the proposed lower ground floor extension and garden retaining walls

2.1 Site Investigation – A full and detailed site investigation will be undertaken in due course, to establish the actual soil and sub-soil conditions. This information will enable the foundation extension and retaining walls to be designed, both for the party wall agreement and the construction design.

2.2 Ground Water - It is not anticipated groundwater infiltration is a significant risk within this small works project.

Because of the relatively shallow depth of excavation, the risk of breaching an established aquifer is negligible. Should, in the unlikely event, local perched water be encountered, this would have to be removed.

2.3 Geological Boundaries – Again because of the small localised, relatively shallow area of excavation, it is not anticipated that a geological boundary will be encountered.

2.4 Flooding – We do not believe the property to be in a local flood risk area, therefore the small amount of excavation will not provide any additional risk associated with a potential flood risk.

2.5 Flooding from Sewers – The property we understand is not recorded at risk of flooding due to overloading of public sewers.

2.6 Construction Techniques

Proposed lower ground floor habitable building extension – The impact of this work to the existing structure of number 52 and adjoining buildings will be minimal, as number 52 and both of the neighbouring houses, have existing lower ground floor habitable space or light wells areas to the level proposed.

Where necessary, local underpinning/foundation strengthening will be undertaken by traditional mass/reinforced concrete methods, using sequential installation to minimise the movement risk to superstructure masonry. Clearly this will form part of the party wall agreement.

Proposed extended light wells and lower ground floor access – With these structures, a small amount of excavation into the garden of number 52 will be required.

Adjoining owners gardens will be supported onto new reinforced concrete retaining walls, installed in a sequential manner, to minimise risk of soil movement. Again this work will form part of the party wall agreement.

Internal alterations – Our sketch sheets 01 and 02 indicate the location of proposed structural steelwork, necessary to support existing structure over. Typically we will specify structural steel box/picture frames to provide both vertical load capacity and cross building stability.

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| <p style="writing-mode: vertical-rl; transform: rotate(180deg);">2.0 Technical Appraisal</p> | <p>2.7 Contracting Works – With this type of project, involving temporary earth and building support, together with complex excavation works. A suitably experienced contractor, closely supervising his work force is a key requirement.</p> <p>In addition close collaboration between the designer and contractor will be required to ensure that safe/robust/secure temporary propping is deployed to adequately restrain to earth forces and loadings from buildings over.</p> <p>2.8 Anticipated Ground Movement – The process of underpinning a wall will often lead to some settlement movement of the wall.</p> <p>The degree of settlement is conditional on the soil types, the competency of the contractor, control of dry-packing, the adequacy of the temporary works, depth of underpin, presence of ground water etc.</p> <p>With this project, the depth of any likely underpinning is small, we have no ground water concerns currently and we will be forming the base of any new underpinning and garden retaining walls, within the same ground make up as the existing foundations are currently situated in.</p> <p>We can conclude therefore, that as long as the competency/experience of the contractor is assured and that the temporary propping is carried out in a safe methodical manner, ground settlements will be minimal.</p> |
| <p style="writing-mode: vertical-rl; transform: rotate(180deg);">3.0 Conclusions</p> | <p>3.0 Conclusion</p> <p>The proposed ground and lower ground floor rear extension is relatively small scale and should have little adverse effect on the existing foundation bearing sub soils. Alterations to the existing building will be carried out by experienced contractors to a design produced by a Chartered Structural Engineer.</p> <p>Where necessary, local underpinning/foundation strengthening will be undertaken by traditional mass/reinforced concrete methods, using sequential installation to minimise the movement risk to superstructure masonry.</p> <p>Adjoining owners gardens will be supported onto new reinforced concrete retaining walls, installed in a sequential manner, to minimise risk of soil movement.</p> <p>We can conclude therefore that as long as the competency/experience of the contractor is assured and that the temporary propping is carried out in a safe methodical manner, ground settlements will be minimal and the effect on the property and neighbouring structures will be nominal</p> <p>End of structural review</p> <p>L P Goodman – Chartered Structural Engineer for Sage Design Ltd</p> |

Appendix A

Outline Structural Design Sketches

NOTES:

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PROPOSED REINFORCED CONCRETE WALL TO SUPPORT GARDEN & BOUNDARY.

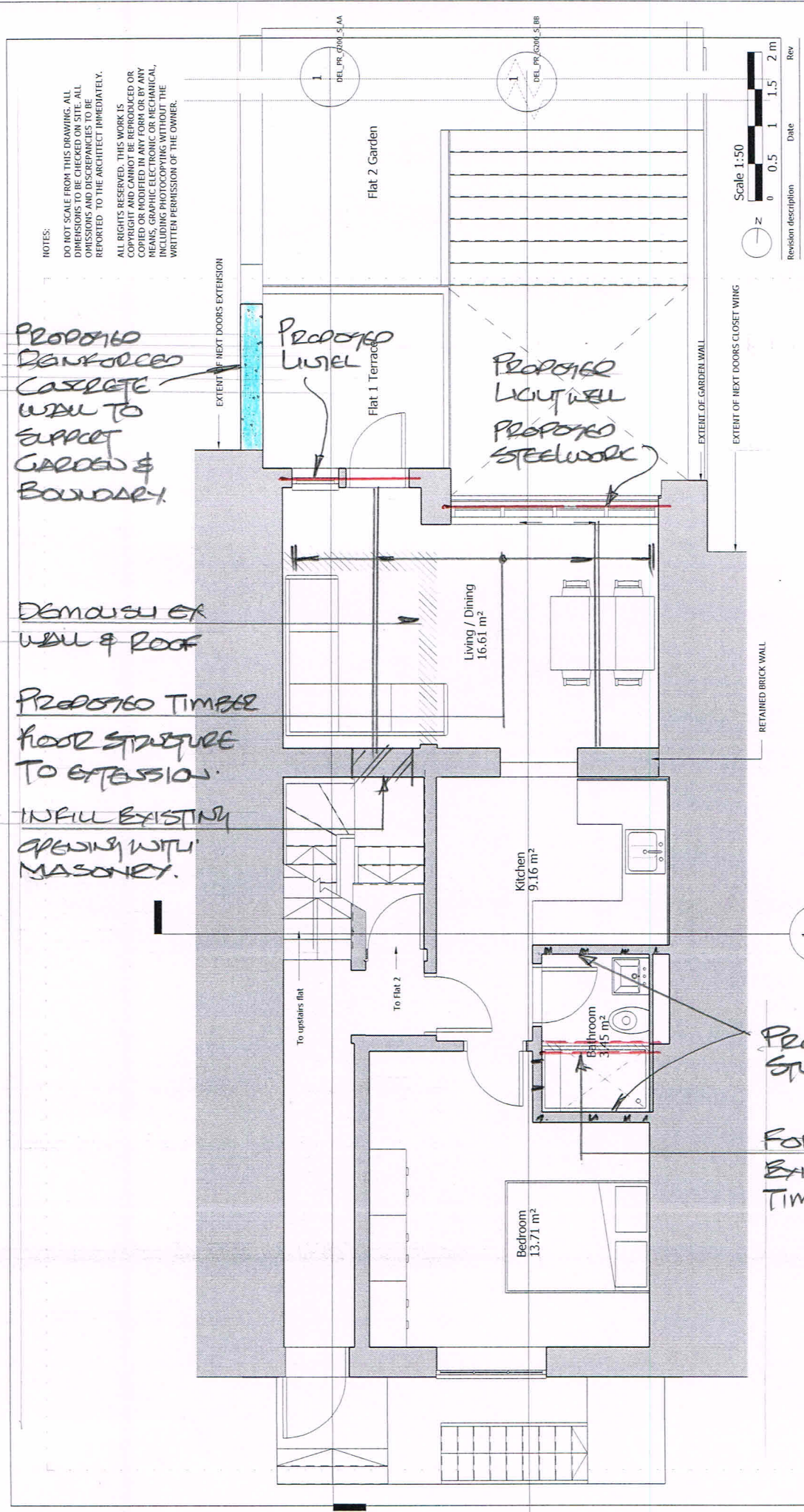
DEMOLISH EX WALL & ROOF


PROPOSED TIMBER FLOOR STRUCTURE TO EXTENSION.

INFILL EXISTING OPENING WITH MASONRY.

PROPOSED TIMBER STUD WALL

FORM OPENING IN EXISTING 100 TIMBER STUD WALL.



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| <div>  <p>design • safety • training</p> <p>Sage Design Services Limited Garden Studio 29 Park Road Radlett Herts WD7 8EG T. 01923 289 777 M. 07956 476 179</p> </div> | CLIENT: | Ms N Gershfield |
| | ADDRESS: | 52 Delancy Street Camden London NW1 7RY |
| | SUBJECT: | Proposed Extension Ground Floor Plan |
| | JOB N°: | J102/1341 |
| | SHEET | SK01 |
| | DATE: | Dec 16 |
| | ENGINEER: | LPG |
| | APPROVED: | LPG |
| | CLIENT REF: | |

NOTES:

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PROPOSED REINFORCED CONCRETE WALL AT LOWER G.F.

EXISTING PARTY WALLS AT LOWER G.F.

PROPOSED STRUCTURAL STEEL BOX FRAMES TO SUPPORT CONSTRUCTION WORK.

DEMOLISH EXISTING NON LOAD BEARING PARTITION.

PROPOSED INSULATED CONCRETE GROUND BEARING SLAB.

Kitchen
10.39 m²

PROPOSED STRUCTURAL STEEL BOX FRAME TO SUPPORT CONSTRUCTION ABOVE

Stair
5.11 m²

Bathroom
4.72 m²

Bedroom
19.14 m²

PROPOSED PATIO SLAB

PROPOSED INSULATED CONCRETE SLAB PROPOSED PADS



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|-------------|-----------|
| JOB N°: | J102/1341 |
| SHEET | SK02 |
| DATE: | Dec 16 |
| ENGINEER: | LPG |
| APPROVED: | LPG |
| CLIENT REF: | |

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PROPOSED TIMBER STUD PARTITION

MAINTAIN EXISTING CENTRAL LOAD BEARING 215 BRICK WALL.

MAINTAIN EXISTING CHIMNEY.

MAINTAIN EXISTING FRONT ELEVATION LIGHTWELL.

Appendix B

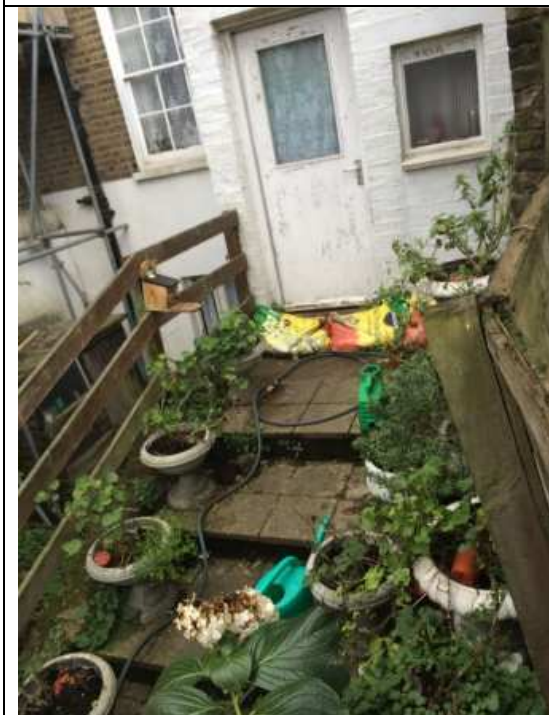
Photographs



Photograph 01 – General rear elevation



Photograph 02 – Existing lower ground floor to neighbour (right hand side looking from rear elevation)



Photograph 03 – Existing lower ground floor to neighbour (left hand side looking from rear elevation)



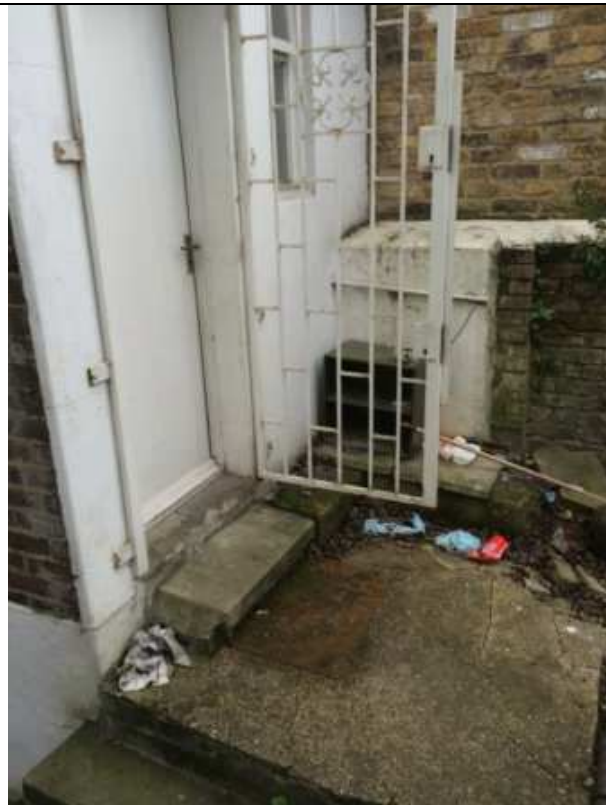
Photograph 04 – General rear elevation



Photograph 05 – General rear elevation



Photograph 06 – Existing ground floor extension to neighbour (right hand side looking from rear elevation)



Photograph 07 – Existing ground floor extension to neighbour (right hand side looking from rear elevation)



Photograph 08 –existing lower ground to number 52



Photograph 08 – Existing Drainage to number 52



Photograph 09 – Existing ground floor extension to neighbour (left hand side looking from rear elevation)