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CLIENT: MR & MRS HAYER REPORT NO. P2023-137 FINAL 01 STRUCTURAL SURVEY REPORT

UNITS A, B, C & D: 314 SPRING LANE, LAMBLEY, NOTTINGHAMSHIRE, NG3 5RQ





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Revision	Status	Author	Date of issue
01	Final	M. Moran	3 rd February 2024



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1. Brief

- 1.1. This report has been written for the sole benefit of the parties named on the title page as the 'client'.
- 1.2. This report is protected under the Copyright Act 1911 and as such, shall not be issued, referenced, copied or extracted from by any persons, companies or any other legal entities, without prior written consent of Moran Structural Consultants.
- 1.3. We were instructed by Mr & Mrs Hayer to conduct a visual structural survey and desktop assessment of the buildings (Units A, B, C & D) with respect to converting to residential use. The purpose of the report is to review the buildings from a primary structural defect perspective and advise of the structural condition and the suitability for conversion to residential use.
- 1.4. We have not undertaken intrusive testing.
- 1.5. This report does not provide a schedule of remedial strengthening works.
- 1.6. We have not inspected parts of the buildings structure which were inaccessible and therefore unable to confirm any such part is free from defect.
- 1.7. We are not aware of any previous structural surveys, condition surveys or drainage surveys.
- 1.8. This report does not cover any defects that were or will be inherent within the property before or after the date of the inspection; and is purely an assessment based on a snapshot in time using our best judgment.



2. General

- 2.1. The reporting is based on an inspection by Michael Moran which took place 26th January 2024.
- 2.2. The weather at the time of the inspection was dry, 6°.
- 2.3. There are 4 subject buildings, Units A, B, C & D as shown on Reform Existing floor plans and elevations drawing 2314-S01-100 P01 (Appendix B).

3. Structural Observations

3.1. Unit A

- 3.1.1. This building is a load bearing timber structure formed with primary timber posts and primary timber roof beams [ref: photo 01]. The primary timber roof beams support timber purlins which in-turn carry corrugated cement roofing sheets which are likely to contain asbestos. The rear and side elevations are enclosed with vertically spanning corrugated cement sheets restrained by timber cladding rails and timber eaves beams [ref: photo 02].
- 3.1.2. We organised for two of the 9 primary timber post bases to be exposed to determine if foundations were present and to check the condition of the bottom of the timber posts. The primary timber posts are supported on concrete pad footings visible beneath the yard slab and asphalt surface finish [ref: photo's 03 & 04]. The base of the primary timber posts are in satisfactory condition and free from wet or dry rot. The ground floor is a concrete "yard" slab in fair condition.
- 3.1.3. The building is stabilised in each direction with vertical cross bracing.
- 3.1.4. The external load bearing timber frame walls are vertical and the timber posts and beams well framed together with bolts and steel cleats [ref: photo 05].
- 3.1.5. The ridge line and cladding appear straight and true with no signs of distress or roof slope sagging [ref: photo 06].

3.2. Unit B

- 3.2.1. This building is a small load bearing timber frame structure [ref: photo's 07, 08, 09 & 10].
- 3.2.2. The walls are load bearing studs lined with OSB sheathing internally [ref: photo 11]. The roof is supported with intermediate roof trusses which support timber purlins which in-turn carry corrugated cement roof sheets [ref: photo 12].
- 3.2.3. The ground floor is a concrete slab in good condition and the external load bearing timber walls are supported by a concrete edge thickening.



3.3. Unit C

- 3.3.1. This building is a single storey load bearing timber frame structure. The external walls are generally clad with horizontally spanning close board timber cladding with portions of cement board which we presume are repairs [ref: photo's 13 & 14].
- 3.3.2. The roof structure is formed with four regularly spaced timber king post trusses spanning between timber posts embedded within the external walls [ref: photo 15]. Timber purlins span between the timber trusses which in-turn support cut timber rafters. The roof finish is profiled metal sheeting.
- 3.3.3. The load bearing posts within the external walls are supported directly off the existing raft slab foundation [ref: photo's 16 & 17] and braced laterally with knee braces [ref: photo 18].
- 3.3.4. The ground floor slab is the concrete raft slab and therefore considered robust as a floor slab [ref: photo 19].

3.4. Unit D

- 3.4.1. This building is a single storey load bearing timber frame structure. The front portion of the building is clad with horizontally spanning close board timber [ref: photo 20].
- 3.4.2. The rear portion of the building is clad with cement boards [ref: photo 21].
- 3.4.3. Internally, the walls are formed with load bearing timber studs and primary timber posts and roof beams. Purlins span between external walls and internal roof beams which in-turn support corrugated cement roof sheets [ref: photo 22].
- 3.4.4. The ground floor is a concrete raft slab [ref: photo 23].

4. Suitability for Conversion

We consider the existing buildings are suitable to convert to residential use, subject to the following provisions which apply to all four units (A, B, C & D):

- 4.1. An insulated floor with a damp proof course will be required. This is normally achieved by overlaying the existing concrete slab with a damp proof membrane, insulation and screed. This provides the necessary thermal and damp properties as well as providing a 150mm step up to finished floor level.
- 4.2. Similarly, the walls and roof will need to be insulated in accordance with an approved Architects detail.
- 4.3. The corrugated cement roof sheeting and wall cladding is likely to contain asbestos and will therefore need to be replaced with modern finishes such as insulated composite panels. The corrugated cement sheets will need to be disposed of by a licensed asbestos contractor.



5. Conclusions

We recommend the buildings are suitable for conversion to residential use, subject to the following:

- Reform Architects are involved at Stage 02 Detailed Design.
- Moran Structural Consultants (or another Chartered Structural Engineer) is involved at Stage 02 - Detailed Design.



APPENDIX A

The Institution of **StructuralEngineers**



CONSULTING CIVIL & STRUCTURAL ENGINEERS



Photograph No. 1

Client: Mr & Mrs Hayer Job No. : P2024-137 Appendix A - Photographs	Project: 314 Spring Lane, Lambley, Notts, NG3 5RQ	Taken by: Michael Moran Date: 26 th January 2024
Commentary		



CONSULTING CIVIL & STRUCTURAL ENGINEERS

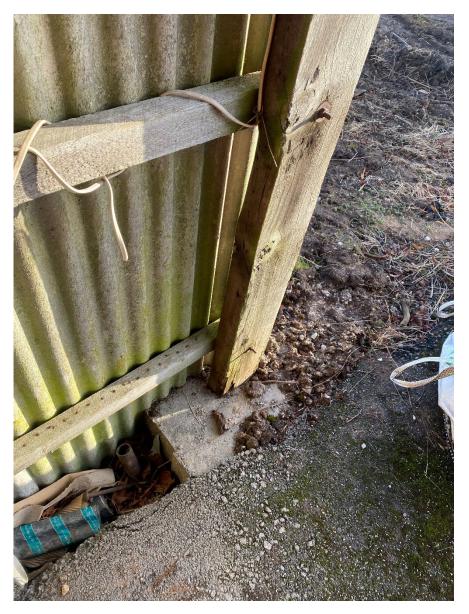


Photograph No. 2

Client: Mr & Mrs Hayer	Project:	Taken by: Michael Moran
Job No. : P2024-137 Appendix A - Photographs	314 Spring Lane, Lambley, Notts, NG3 5RQ	Date: 26 th January 2024



CONSULTING CIVIL & STRUCTURAL ENGINEERS



Photograph No. 3

Client: Mr & Mrs Hayer	Project:	Taken by: Michael Moran
Job No. : P2024-137 Appendix A - Photographs	314 Spring Lane, Lambley, Notts, NG3 5RQ	Date: 26 th January 2024
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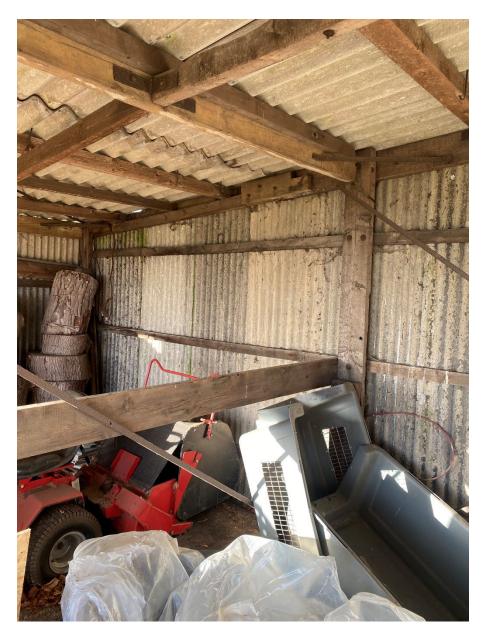


Photograph No. 4

Client: Mr & Mrs Hayer	Project:	Taken by: Michael Moran
Job No. : P2024-137 Appendix A - Photographs	314 Spring Lane, Lambley, Notts, NG3 5RQ	Date: 26 th January 2024



CONSULTING CIVIL & STRUCTURAL ENGINEERS



Photograph No. 5

Job No. : P2024-137 Appendix A - Photographs Notts, NG3 5RQ Date: 26 th January 2024	Client: Mr & Mrs Hayer	Project: 314 Spring Lane, Lambley,	Taken by: Michael Moran
			Date: 26 th January 2024



CONSULTING CIVIL & STRUCTURAL ENGINEERS



Photograph No. 6

Client: Mr & Mrs Hayer	Project:	Taken by: Michael Moran
Job No. : P2024-137 Appendix A - Photographs	314 Spring Lane, Lambley, Notts, NG3 5RQ	Date: 26 th January 2024



CONSULTING CIVIL & STRUCTURAL ENGINEERS



Photograph No. 7

Client: Mr & Mrs Hayer	Project:	Taken by: Michael Moran
Job No. : P2024-137 Appendix A - Photographs	314 Spring Lane, Lambley, Notts, NG3 5RQ	Date: 26 th January 2024



CONSULTING CIVIL & STRUCTURAL ENGINEERS



Photograph No. 8

Client: Mr & Mrs Hayer	Project:	Taken by: Michael Moran
Job No. : P2024-137 Appendix A - Photographs	314 Spring Lane, Lambley, Notts, NG3 5RQ	Date: 26 th January 2024



CONSULTING CIVIL & STRUCTURAL ENGINEERS



Photograph No. 9

Client: Mr & Mrs Hayer	Project:	Taken by: Michael Moran
Job No. : P2024-137 Appendix A - Photographs	314 Spring Lane, Lambley, Notts, NG3 5RQ	Date: 26 th January 2024



CONSULTING CIVIL & STRUCTURAL ENGINEERS



Photograph No. 10

Client: Mr & Mrs Hayer	Project:	Taken by: Michael Moran
Job No. : P2024-137 Appendix A - Photographs	314 Spring Lane, Lambley, Notts, NG3 5RQ	Date: 26 th January 2024



CONSULTING CIVIL & STRUCTURAL ENGINEERS



Photograph No. 11

Client: Mr & Mrs Hayer	Project:	Taken by: Michael Moran
Job No. : P2024-137 Appendix A - Photographs	314 Spring Lane, Lambley, Notts, NG3 5RQ	Date: 26 th January 2024



CONSULTING CIVIL & STRUCTURAL ENGINEERS



Photograph No. 12

Client: Mr & Mrs Hayer	Project:	Taken by: Michael Moran
Job No. : P2024-137 Appendix A - Photographs	314 Spring Lane, Lambley, Notts, NG3 5RQ	Date: 26 th January 2024



CONSULTING CIVIL & STRUCTURAL ENGINEERS



Photograph No. 13

Client: Mr & Mrs Hayer	Project:	Taken by: Michael Moran
Job No. : P2024-137 Appendix A - Photographs	314 Spring Lane, Lambley, Notts, NG3 5RQ	Date: 26 th January 2024



CONSULTING CIVIL & STRUCTURAL ENGINEERS

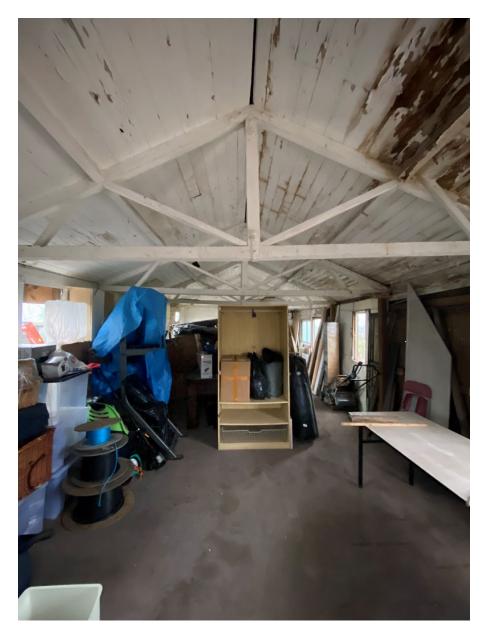


Photograph No. 14

Client: Mr & Mrs Hayer	Project:	Taken by: Michael Moran
Job No. : P2024-137 Appendix A - Photographs	314 Spring Lane, Lambley, Notts, NG3 5RQ	Date: 26 th January 2024



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Photograph No. 15

pring Lane, Lambley, Notts, NG3 5RQ	Date: 26 th January 2024



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Photograph No. 16

Client: Mr & Mrs Hayer	Project:	Taken by: Michael Moran
Job No. : P2024-137 Appendix A - Photographs	314 Spring Lane, Lambley, Notts, NG3 5RQ	Date: 26 th January 2024



CONSULTING CIVIL & STRUCTURAL ENGINEERS



Photograph No. 17

Client: Mr & Mrs Hayer	Project:	Taken by: Michael Moran
Job No. : P2024-137 Appendix A - Photographs	314 Spring Lane, Lambley, Notts, NG3 5RQ	Date: 26 th January 2024



CONSULTING CIVIL & STRUCTURAL ENGINEERS



Photograph No. 18

Client: Mr & Mrs Hayer	Project:	Taken by: Michael Moran
Job No. : P2024-137 Appendix A - Photographs	314 Spring Lane, Lambley, Notts, NG3 5RQ	Date: 26 th January 2024



CONSULTING CIVIL & STRUCTURAL ENGINEERS



Photograph No. 19

Client: Mr & Mrs Hayer	Project:	Taken by: Michael Moran
Job No. : P2024-137 Appendix A - Photographs	314 Spring Lane, Lambley, Notts, NG3 5RQ	Date: 26 th January 2024



CONSULTING CIVIL & STRUCTURAL ENGINEERS



Photograph No. 20

Client: Mr & Mrs Hayer	Project:	Taken by: Michael Moran
Job No. : P2024-137 Appendix A - Photographs	314 Spring Lane, Lambley, Notts, NG3 5RQ	Date: 26 th January 2024



CONSULTING CIVIL & STRUCTURAL ENGINEERS



Photograph No. 21

Client: Mr & Mrs Hayer	Project:	Taken by: Michael Moran
Job No. : P2024-137 Appendix A - Photographs	314 Spring Lane, Lambley, Notts, NG3 5RQ	Date: 26 th January 2024
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CONSULTING CIVIL & STRUCTURAL ENGINEERS



Photograph No. 22

Client: Mr & Mrs Hayer	Project:	Taken by: Michael Moran
Job No. : P2024-137 Appendix A - Photographs	314 Spring Lane, Lambley, Notts, NG3 5RQ	Date: 26 th January 2024



CONSULTING CIVIL & STRUCTURAL ENGINEERS



Photograph No. 23

Client: Mr & Mrs Hayer	Project: 314 Spring Lane, Lambley, Notts, NG3 5RQ	Taken by: Michael Moran
Job No. : P2024-137 Appendix A - Photographs		Date: 26 th January 2024



APPENDIX B

