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18 SEA WAY, ELMER SANDS, BOGNOR REGIS, PO22 6JY
PROPOSED DORMER EXTENSION AND DETACHED GARAGE
SURFACE WATER DRAINAGE REPORT

INTRODUCTION

This report has been produced on behalf of the building owners Mr and Mrs Pryor in response to Condition 4 of Planning Approval M/71/20/HH.

The report concerns the surface water drainage arrangements for the existing building and proposed works.

The Report has been produced in accordance with the 'Supplementary Requirements for Surface Water Drainage Proposals' prepared by Arun District Council. SuDS Selection and Document H of the Building Regulations require that the disposal of surface water run-off must be considered in an order of preference:

- Discharge in to the ground by infiltration
- Controlled discharge to a surface water body
- Controlled discharge to a surface water sewer

SITE

The site is located on the west side of Sea Way overlooking a triangular shaped open space. To the rear of the site is an Internal Drainage Board watercourse running approximately north to south.

The area of the site is approximately 300 square metres and the footprint of the existing building is 84 square metres. The built area will increase to 110 square metres including the detached garage.

The existing building is a chalet style dwelling, recently refurbished and extended and is flanked to the north and south by similar sized dwellings. Car parking is presently provided in the north east corner of the site comprising a gravel drive.

Existing surface water drainage from the building is understood to be connected to common drainage in the case of the original building and to a soakaway in the front (east) garden in the case of the recent extension to the east side of the dwelling. However, the location of the proposed detached garage will render the existing soakaway unusable and necessitate an alternative solution to surface water drainage for the east extension and the detached garage.

TOPOGRAPHY

The ground level is generally flat, the nearest OS datum level being recorded as 2.4m.

GROUND CONDITIONS

Excavations were carried out on site during late 2019 to determine ground conditions and to carry out percolation tests in the eastern part of the site. Ground conditions in this part of the site were found to comprise up to 600mm of made ground, brown clay at 1.00 m depth on brown sand and gravel to a depth of 1.50m and stiff brown silty clay below. Water was present in these excavations to a level approximately 200mm below ground level.

FLOOD MAPPING

The whole site lies in Flood Zone 3 and is shown to be at risk of ground water flooding based on current mapping, as confirmed by the drainage engineer's comments associated with the planning approval.

SURFACE WATER DRAINAGE

There is insufficient land to accommodate soakaways in compliance with the requirements of the Building Regulations and the Building Inspector and the ground conditions preclude a ground infiltration solution.

It is therefore proposed to direct surface water flows from the south facing part of the existing building and the proposed detached garage to the water course adjacent to the western site boundary, as shown on the attached supplementary drawings.

The surface water drainage will be designed in accordance with the requirements of Building Regulations Part H3. Storm rainfall intensity is assessed by reference to BS6367 at 75mm/hr which translates to 0.018 litres/second. The roof surface area to be drained in total is 68 square metres and the surface water drainage pipework installation provides some storage capacity (100mm dia x 20m length) to produce a surface water flow of 1.09 litres/second at the outfall in storm conditions. Surface water drainage pipework is to comprise 100mm pvcu pipework laid at 1:100 fall on 150mm granular bedding and surround or concrete where necessary due to traffic conditions.

The outfall is to be provided with a 'one way' flap valve and to be constructed in accordance with the requirements of the Environment Agency and the ADC drainage engineers.

All paved areas in the development including car parking and vehicular access will be constructed in pervious materials such that no further load is added to the surface water drainage system.

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