GERALDEVE

Flood risk assessment and Sustainable urban drainage report

On behalf of the Go Ahead Group plc

West Garage Site fronting Goldstone Street and Conway Street, 43 Conway Street, Hove, BN3 3LT

PGWD/J7920

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1 Executive Summary

1.1 Brighton & Hove Bus and Coach Company Limited (B&HBCC) is part of the Go-Ahead Group plc, one of the UK's leading public transport providers.

1.2 The proposed development is:

> The demolition of existing buildings and the development of a new bus garage, including a 4-storey office and engineering building, bus parking and boundary treatment.

1.3 The new building would replace and re provide the existing facilities in a modern fit for purpose building.

1.4 The site area is 4,213 sq m. The existing site is used as a bus garage, including offices engineering works and bus parking.

1.5 A sustainable drainage assessment was not required as part of the pre-application response but this document has been subsequently prepared.

1.6 In respect of flood risk matters, the site is located within flood zone 1 as confirmed from the online Environment Agency mapping resource. The proposed use is for offices. The development represents a very low flood risk and no mitigation is required. Also the proposed site is currently covered in buildings and the development would not increase the flood risk to any other site.

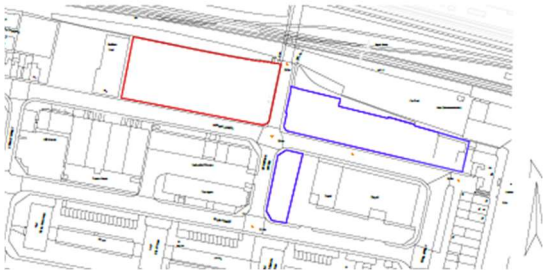
1.7 In respect of sustainable urban drainage systems, the proposed development is capable of accommodating a grey water system if this is considered necessary. In any event there would be no greater surface water run off than the existing situation.

1.8 There is an extensive network of existing sewers which are capable of accommodating the very modest outflows from the re provided facilities.

2 Flood risk

2.1 Brighton & Hove Bus and Coach Company Limited (B&HBCC) is part of the Go-Ahead Group, one of the UK's leading public transport providers

2.2 B&HBCC provide the public bus service for the area operating from their existing site, 43 Conway Street. The EA flood risk map show the site to be within flood zone 1 with a less than 1:1000 annual probability of flooding.



2.3 The proposed office accommodation is one of the less vulnerable uses (Table 2: Flood risk vulnerability classification Technical Guidance to the National Planning Policy Framework).

2.4 For such proposals Table 1: Flood zones of the Technical Guidance to the National Planning Policy Framework states:

> **"Flood risk assessment requirements**
>
> For development proposals on sites comprising one hectare or above the vulnerability to flooding from other sources as well as from river and sea flooding, and the potential to increase flood risk elsewhere through the addition of hard surfaces and the effect of the new development on surface water run-off, should be incorporated in a flood risk assessment. This need only be brief unless the factors above or other local considerations require particular attention."

2.5 The site is significantly less than 1 hectare and therefore no further assessment is required.

3 Sustainable urban drainage report

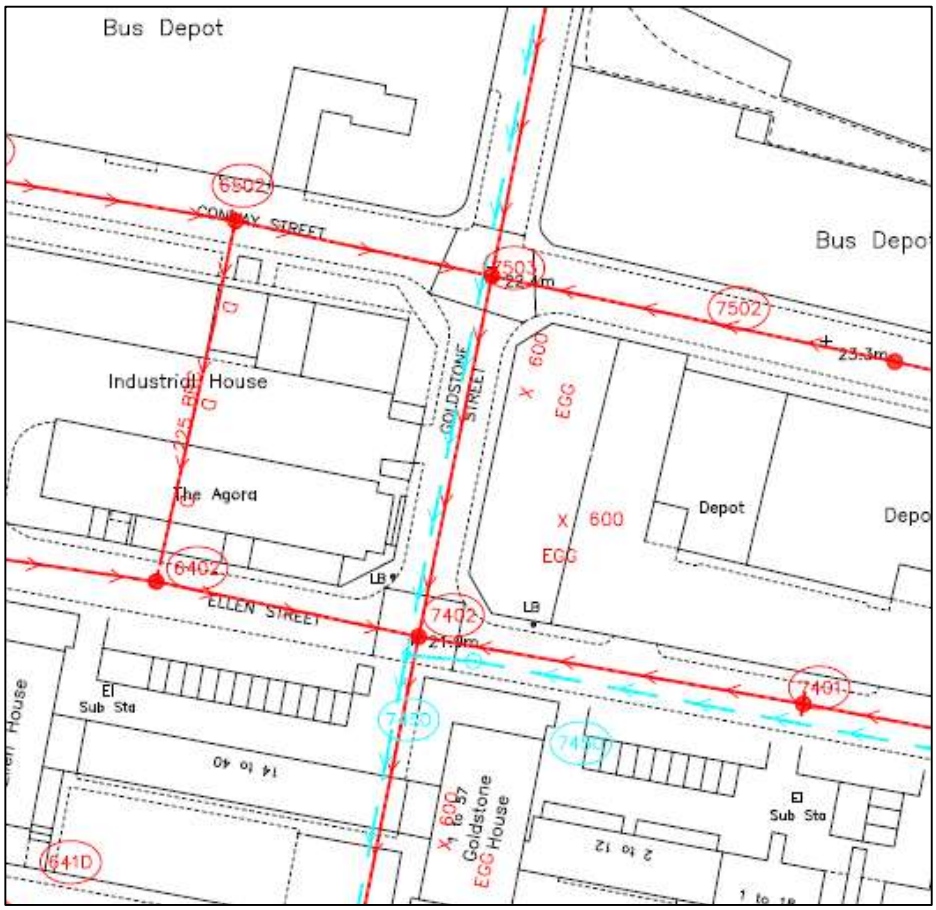
Background

3.1 The description of the Site and its surroundings is set out in the Design and Access statement which accompanies the planning application.

3.2 The site is 4,213 sq.m. and is covered by buildings.

3.3 In respect of ground conditions; the site is free from contamination. The site has been occupied by the existing building since the 1930's.

3.4 The following shows the record of the sewer drainage system in the immediate area:



3.5 The site is located over bedrock of the Tarrant Chalk Member with superficial Head deposits of clay, silt and gravel. Residential housing was once on the site and therefor there may be a depth of made ground. This can be confirmed through intrusive site investigations. The site lies within an outer zone of ground water Source Protection Zone (SPZ2) relating to the Goldstone works.

3.6 The site proposals include new perimeter planting.

Planning policy

3.7 Policy DA6 raises the need for development to connect to the water distribution and sewerage system off-site at the nearest point of adequate capacity. It highlights the need to address surface water flooding risks and incorporate appropriate surface water drainage measures (see also CP11). It also states groundwater sources should be protected from pollution to the satisfaction of the Environment Agency. These matters can be considered in detail via the imposition of suitable conditions to ensure these matters are suitably resolved prior to commencement.

Assessment

3.8 The existing offices are connected to the surrounding sewer network.. A CCTV survey of the condition of the network will be required to confirm the description and condition of the existing network. The existing network flows to a 1200mm sewer at the corner of Ellen Street and Ethel Street.

3.9 The new development replaces the existing garage on the same site. Therefore no material increase in sewerage capacity is required.

3.10 The underlying ground conditions indicate that infiltration rates are likely to be poor given the presence of clays. Nevertheless the opportunity will be taken of the proposed public realm planting on the boundary to improve surface water drainage above that now on site which is zero.

3.11 The proposal will increase the permeable surface area of the site thereby reducing the potential water runoff from that currently from the site. Detailed calculations will be provided once the detailed scheme has been designed.

4 Conclusion

4.1 This report sets out the approach to sustainable drainage for the development. As part of this going forward the following would be completed:

- A CCTV survey of the existing drainage arrangement prior to detailed drainage design to establish the existing infrastructure.
- The provision of details and location of any proposed drainage infrastructure and final peak rate surface water runoff post development, subject to the future detailed design of the building;.

- Appropriate calculations to demonstrate that the proposed sustainable drainage will be able to cope with both winter and summer storms for a full range of events and storm durations.

- We would also demonstrate the surface water drainage system is designed so that flooding does not occur on any part of the site for a 1 in 30 year rainfall event, and so that flooding does not occur during a 1 in 100 (+30% allowance for climate change) year event in any part of a proposed buildings susceptible to water.