General considerations

The main ground hazards likely to affect substructure and ground bearing floors are chemicals, particularly sulfates, contaminated material above or in the ground. In such cases sulphate resisting cement to BSEN 197-1 should be used.

Suspended floor where the infill is more than 600mm

Shrinkable soil, expansive materials or other unstable soils may require suspended floor construction.

Sloping ground may require steps in the substructure and possibly different floor levels. Where more than 600mm of infill is required at any point in a self-contained area, the floor over the whole of that area must be suspended.

Are you satisfied that the formation level is virgin ground and not backfill?

Yes / No

Is a ground bearing slab suitable?

Yes / No

If no, suggest considering an alternative option

Ground bearing floor slabs

General

Is the proposed slab a minimum of 100mm thick

Yes / No

Note: Ground bearing concrete floor slabs should be at least 100mm thick, (including monolithic screeds when applicable).

Type of slab:

Unreinforced

Reinforced

If reinforced, is the reinforcement and bending schedule available on site?

Yes / No

If information is unavailable request its provision

Will the slab be cast in one operation?

Yes / No

Note: Unreinforced concrete cast in one operation should not be greater than 16m² and reinforced concrete cast in one operation should not be greater than 60m² and should always be as square in shape as possible. Where possible, construction joints that are provided the floor area should be divided in to equal bays.

If the slab is not going to be cast in one operation is the joint plan available on site?

Yes / No

If the slab is not going to be cast in one operation how are the construction joints going to be formed?

Does the dwelling contain loadbearing partitions?

Yes / No

Note: Loadbearing partitions should have proper foundations and should not be supported off ground bearing floors.

Continues on reverse
<table>
<thead>
<tr>
<th>Question</th>
<th>Yes / No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is radon gas present?</td>
<td></td>
</tr>
<tr>
<td>Are there sulfates present in the ground?</td>
<td></td>
</tr>
</tbody>
</table>

**Fill (ref NHBC Standards Clause 5.1.11)**

Before fill is placed, all topsoil containing roots and vegetation should be removed and a suitable even bearing provided.

Does the fill contain expansive materials or chemicals? Yes / No

**Fill should be placed and mechanically compacted in layers not exceeding 225mm deep to form a stable mass.**

Special consideration should be given to avoid settlement at junctions between the substructure wall and the ground bearing floor.

Fill should be blinded sufficiently to receive concrete (or dpm, if required) using the minimum thickness necessary to give a suitable surface.

Concrete blinding may be needed where voids in the fill could result in loss of fines from the blinding.

Where the ground floor is to be reinforced, the blinding should be firm and even to give good support for the reinforcement and to maintain the design cover, using reinforcement stools where necessary.

A dpm material should be used e.g. 1200 gauge (0.3mm) polythene sheet.

Care should be taken to ensure that all joints and junctions between damp-proofing membranes, wall dpcs or tanking in substructure walls are undamaged, especially while the concrete for the ground slab is being poured, as well as during the construction of formwork and striking of formwork at construction joints.

**Where is the membrane located?** Above the slab Below the slab

**Note:** When the membrane is located below the slab, a blinding layer of sand should be provided to fill voids in the hardcore and so minimise the risk of puncturing the membrane.

A minimum 225mm clear cavity below the dpc should be maintained.

**Are drainage/services entering through the slab?**

**Note:** Where services/drainage pass through a dpm ensure the dpm is properly installed around the pipe area and that all joints are sealed, and services should be sleeved where they pass through a structural element.

**Other considerations**

Existing underground services, installation and testing of underfloor services and ducts, and laying of thermal insulation.

Thermal insulation boards should be tightly butted together to maintain continuity and conform to building regulations at time of initial notice accepted.