|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Variable** | **Variable influence on process** | | | **Process influence on variables** | | |
| **Influence present? (Yes/No Description)** | **Time period/Climate domain** | **Handling of influence (How/If not - Why)** | **Influence present? (Yes/No Description)** | **Time period/Climate domain** | **Handling of influence (How/If not - Why)** |
| Temperature in bedrock | Yes | Excavation/operation | — | Yes | Excavation/operation | — |
| Temperate | Temperate |
| Periglacial | Temperature from model calculations of heat transport (Section 2.1). | Periglacial | Included in permafrost models. |
| Glacial | Glacial |
| Groundwater flow | Yes | Excavation/operation | — | Yes | Excavation/operation | — |
| Temperate | Temperate |
| Periglacial | Included in 2D permafrost model. | Periglacial | Included in 2D permafrost model. See also Section 3.1 Groundwater flow. |
| Glacial | Glacial |
| Groundwater pressure | Yes | Excavation/operation | — | Yes | Excavation/operation | — |
| Temperate | Temperate |
| Periglacial | Included in permafrost models. | Periglacial | Included in permafrost models. |
| Glacial | Glacial |
| Gas phase flow | Yes | Excavation/operation | — | Yes | Excavation/operation | — |
| Temperate | Temperate |
| Periglacial | Neglected; little significance. | Periglacial | See Section 3.2 Gas flow/dissolution. |
| Glacial | Glacial |
| Repository geometry | No | Excavation/operation | — | No | Excavation/operation | — |
| Temperate | Temperate |
| Periglacial | Periglacial |
| Glacial | Glacial |
| Fracture geometry | Yes | Excavation/operation | — | Yes | Excavation/operation | — |
| Temperate | Temperate |
| Periglacial | Continuum porous medium models adopted. Detailed fracture geometry neglected; low-porosity rocks. | Periglacial | Neglected; little significance. |
| Glacial | Glacial |
| Rock stresses | No | Excavation/operation | — | No | Excavation/operation | — |
| Temperate | Temperate |
| Periglacial | Periglacial |
| Glacial | Glacial |
| Matrix minerals | No | Excavation/operation | — | No | Excavation/operation | — |
| Temperate | Temperate |
| Periglacial | Periglacial |
| Glacial | Glacial |
| Fracture minerals | Yes | Excavation/operation | — | No | Excavation/operation | — |
| Temperate | Temperate |
| Periglacial | Neglected; little significance compared with other influences. | Periglacial |
| Glacial | Glacial |
| Groundwater composition | Yes | Excavation/operation | — | Yes | Excavation/operation | — |
| Temperate | Temperate |
| Periglacial | Use of site-specific groundwater salinities in modelling studies. | Periglacial | Included in 2D permafrost modelling. See also Sections 5.12 and 3.2. |
| Glacial | Glacial |
| Gas composition | Yes | Excavation/operation | — | Yes | Excavation/operation | — |
| Temperate | Temperate |
| Periglacial | Neglected; little significance. | Periglacial | Neglected; little significance. |
| Glacial | Glacial |
| Structural and stray materials | No | Excavation/operation | — | Yes | Excavation/operation | — |
| Temperate | Temperate |
| Periglacial | Periglacial | Neglected; assumptions made regarding grout properties in different applications, see Section 5.8. |
| Glacial | Glacial |
| Saturation | Yes | Excavation/operation | — | Yes | Excavation/operation | — |
| Temperate | Temperate |
| Periglacial | Neglected; saturated conditions in the bedrock is assumed. | Periglacial | Neglected; saturated conditions in the bedrock is assumed. |
| Glacial | Glacial |