

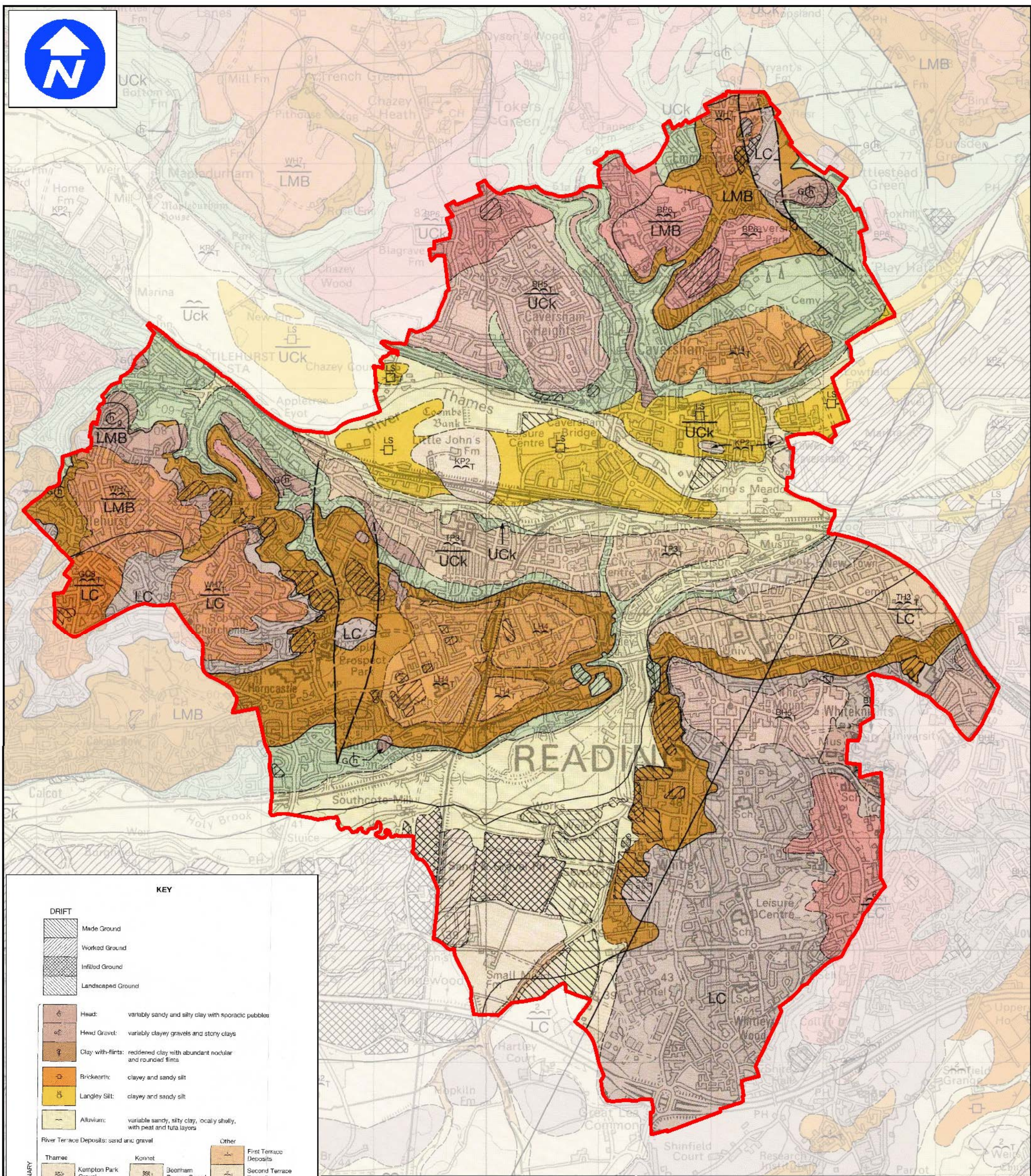
Appendix B – SFRA Maps – Geology

Map G1 - Geology Overview

Map G2 - Bedrock Groundwater Vulnerability

Map G3 - Aquifer Designation

Map G4 - Superficial Aquifer Designation



KEY

DRIFT

- Made Ground
- Worked Ground
- Infilled Ground
- Landscaped Ground

- Head: variably sandy and silty clay with sporadic pebbles
- Head Gravel: variably clayey gravels and stony clays
- Clay with flints: reddened clay with abundant nodular and rounded flints
- Brickearth: clayey and sandy silt
- Langley Silt: clayey and sandy silt
- Alluvium: variable sandy, silty clay, locally shelly, with peat and tufa layers

River Terrace Deposits: sand and gravel

- | Thames | Kennet | Other |
|----------------------------|------------------------------|-----------------------------|
| 105: Kington Park Gravel | 99: Beonham Grange Gravel | 1: First Terrace Deposits |
| 121: Taplow Gravel | 101: Thatcham Gravel | 2: Second Terrace Deposits |
| 125: Lynch Hill Gravel | | 3: Third Terrace Deposits |
| 20: Boyn Hill Gravel | | 4: Fourth Terrace Deposits |
| 26: Black Park Gravel | 21: Slingshot Gravel | 5: Fifth Terrace Deposits |
| 27: Winter Hill Gravel | 22: Beonham Grange Gravel | 6: Sixth Terrace Deposits |
| 28: Gerrard's Cross Gravel | 23: Bucklebury Common Gravel | 7: Seventh Terrace Deposits |
| 29: Beeconsfield Gravel | | 8: Eighth Terrace Deposits |
| 30: Westland Green Gravel | | |

100: River Terrace Deposits, first and second terrace, undifferentiated

Drift deposits listed above are not necessarily shown in order of superposition

For Solid geology see Generalized Vertical Section

The relationships of the principal Quaternary deposits are shown in a schematic cross-section below

- Geological boundary, Drift
- Geological boundary, Solid
- Fault at rockhead, crossmark on downthrow side
- Borehole
- Symbol indicates Quaternary deposit at surface and the Solid formation at rockhead; other Quaternary deposits may intervene

- | Formation | Age | Description |
|-----------|----------|---|
| CaS | 20 m | Sand, fine-grained locally glauconitic |
| W | 20 m | Sand and clay, highly glauconitic |
| BgB | 20-25 m | Sand, fine to medium grained with silt and clay laminae |
| LC | 50-100 m | Clay, variably silty, with beds of sand and silt and first pebble coarse, variably glauconitic and shelly |
| Har | 45 m | Sand and clay, glauconitic and shelly |
| RB | 19-27 m | Clay, colour mottled with sand beds |
| UPN | 1-6 m | Sand and clay, highly glauconitic with flint nodules at base |
| Uck | 90-130 m | Chalk, white, nodular and soft with flint seams |



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Geology - Overview
British Geological Survey (BGS) Geology Map

Date: 12/12/2016

Scale: NTS

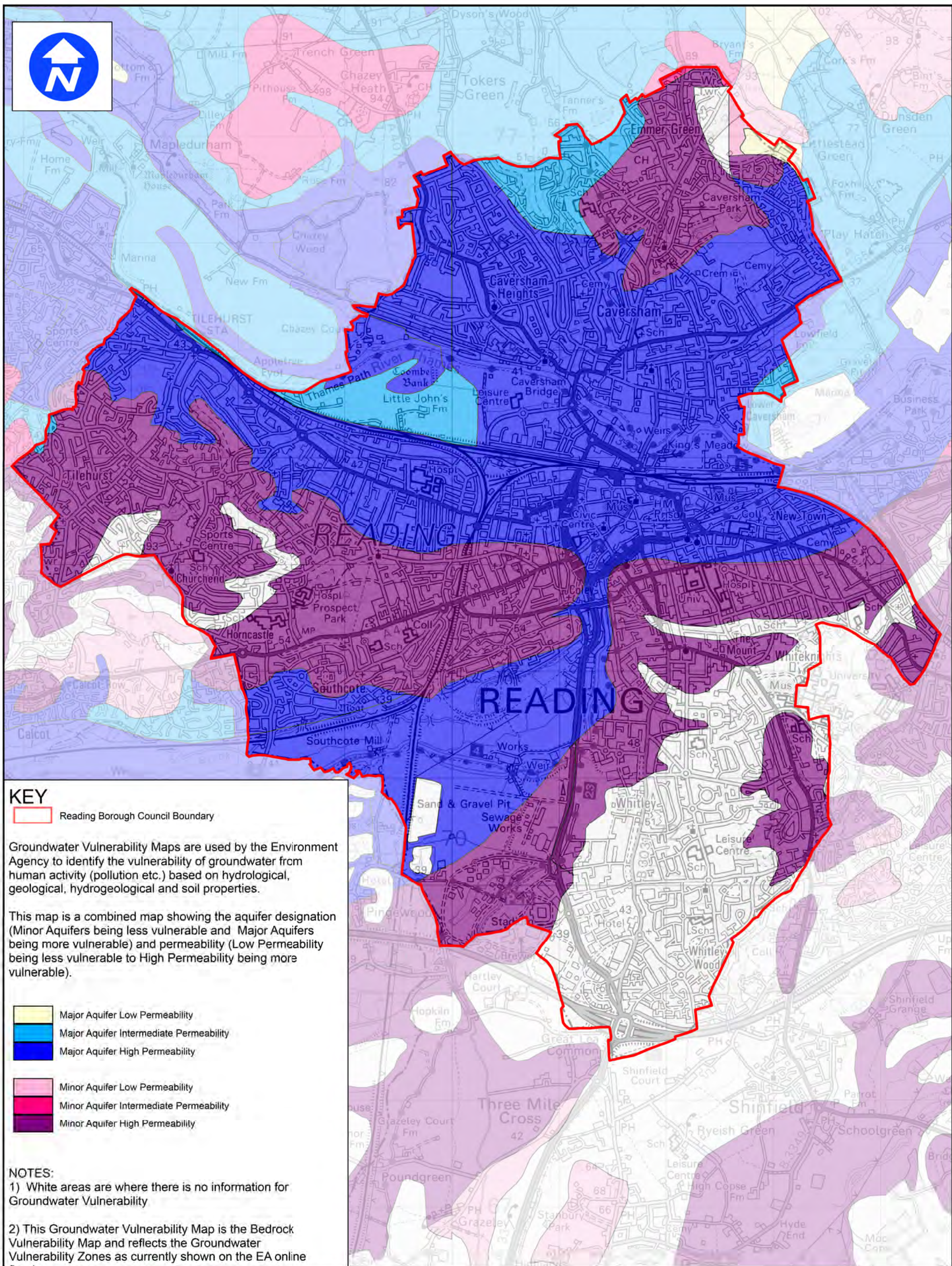
Drawn By: SB Checked By: RF

Rev: -

Figure Number

Map G1

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KEY

 Reading Borough Council Boundary

Groundwater Vulnerability Maps are used by the Environment Agency to identify the vulnerability of groundwater from human activity (pollution etc.) based on hydrological, geological, hydrogeological and soil properties.

This map is a combined map showing the aquifer designation (Minor Aquifers being less vulnerable and Major Aquifers being more vulnerable) and permeability (Low Permeability being less vulnerable to High Permeability being more vulnerable).

-  Major Aquifer Low Permeability
-  Major Aquifer Intermediate Permeability
-  Major Aquifer High Permeability
-  Minor Aquifer Low Permeability
-  Minor Aquifer Intermediate Permeability
-  Minor Aquifer High Permeability

NOTES:

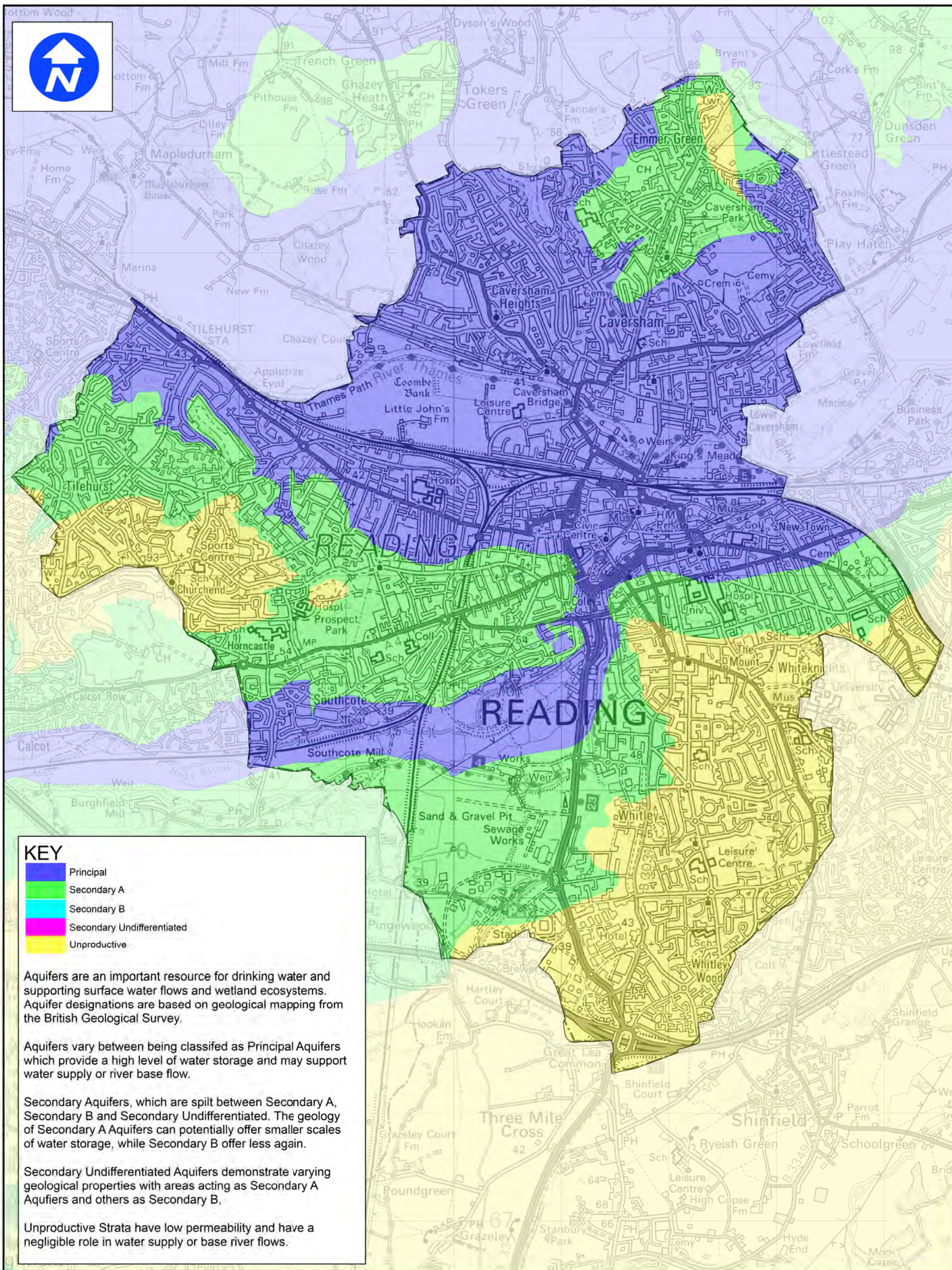
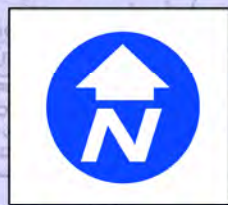
- 1) White areas are where there is no information for Groundwater Vulnerability
- 2) This Groundwater Vulnerability Map is the Bedrock Vulnerability Map and reflects the Groundwater Vulnerability Zones as currently shown on the EA online



RBC SFRA

Bedrock Groundwater Vulnerability Map

Date: 04/04/2016
Scale: NTS
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Rev: -
Figure Number Map G2



KEY

- Principal
- Secondary A
- Secondary B
- Secondary Undifferentiated
- Unproductive

Aquifers are an important resource for drinking water and supporting surface water flows and wetland ecosystems. Aquifer designations are based on geological mapping from the British Geological Survey.

Aquifers vary between being classified as Principal Aquifers which provide a high level of water storage and may support water supply or river base flow.

Secondary Aquifers, which are split between Secondary A, Secondary B and Secondary Undifferentiated. The geology of Secondary A Aquifers can potentially offer smaller scales of water storage, while Secondary B offer less again.

Secondary Undifferentiated Aquifers demonstrate varying geological properties with areas acting as Secondary A Aquifers and others as Secondary B.

Unproductive Strata have low permeability and have a negligible role in water supply or base river flows.



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RBC SFRA Aquifer Designation Map

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Figure Number

Map G3



KEY

- Principal
- Secondary A
- Secondary B
- Secondary (Undifferentiated)
- Unproductive

Aquifers are an important resource for drinking water and supporting surface water flows and wetland ecosystems. Aquifer designations are based on geological mapping from the British Geological Survey.

Aquifers vary between being classified as Principal Aquifers which provide a high level of water storage and may support water supply or river base flow.

Secondary Aquifers, which are split between Secondary A, Secondary B and Secondary Undifferentiated. The geology of Secondary A Aquifers can potentially offer smaller scales of water storage, while Secondary B offer less again.

Secondary Undifferentiated Aquifers demonstrate varying geological properties with areas acting as Secondary A Aquifers and others as Secondary B.

Unproductive Strata have low permeability and have a negligible role in water supply or base river flows.



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Superficial Aquifer Designation

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Figure Number

Map G4

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