

The sub-directories of this directory contain geological models created during the Aquifer Brine project. Proprietary software is needed to access the files.

There are further detailed descriptions of the sites and modelling in Reports/brine\_production\_final\_report.pdf (Bunter, Forties, generic box) and in Reports/brine\_production\_sites\_and\_model\_assessment\_report.pdf (Bunter, Forties, Hamilton).

Model / site	Simulator software (needed to access the files)	Units - S.I. or Field (oil industry) units	Directory	Filename	Description
<b>Bunter</b>	Eclipse 300 simulator	SI	15MT	BUNTER-15M_E300.DATA	15 Mtonnes/year Bunter zone 4 base case.
				BUNTER-15M-PW-1_E300.DATA	15 Mtonnes/year Bunter zone 4 brine production case.
			D36	BUNTER_D36C_E300.DATA	5 Mtonnes/year Bunter closure 36 base case.
				BUNTER_D36C-PW_E300.DATA	5 Mtonnes/year Bunter closure 36 brine production case.
				BUNTER_D36C-PW-DELAY10_E300.DATA	5 Mtonnes/year Bunter closure 36, 10 year delayed brine production case.
				BUNTER_D36C-PW-POSTBP_E300.DATA	5 Mtonnes/year Bunter closure 36, post-injection brine production case.
			INCLUDES	17 .INC files	Used by the simulator software.
<b>Forties</b>	Eclipse 300 simulator	SI	15MT	FORTIES_15MT_E300.DATA	15 Mtonnes/year Forties base case.
				FORTIES_15MT-PLAT_E300.DATA	15 Mtonnes/year Forties base case for high permeability with horizontal wells.
				FORTIES_15MT-PLAT-PW-2_E300.DATA	15 Mtonnes/year Forties brine production case for high permeability with horizontal wells.
				FORTIES_15MT-PW_E300.DATA	15 Mtonnes/year Forties brine production case.

			FORTIES_36-15MT	FORTIES_36_15MT_E300.DATA	15 Mtonnes/year Forties base case for high permeability case, using permeability from modelling during the earlier Strategic UK CCS Storage Appraisal Project (also known as the Pale Blue Dot or PBD model).
				FORTIES_36_15MT-PW_E300.DATA	15 Mtonnes/year Forties brine production case for high permeability case, using permeability from modelling during the earlier Strategic UK CCS Storage Appraisal Project (also known as the Pale Blue Dot or PBD model).
			INCLUDES	14 .INC files and 2 .GRDECL files	Used by the simulator software.
Hamilton	Eclipse 300 simulator	Field	HAMILTON_REF_CASE	HAMILTON_REF_CASE.DATA and 8 .INC files and 14 .GRDECL files and 1 .ptd (xml) file	5 Mtonnes/year Hamilton base case from earlier Strategic UK CCS Storage Appraisal Project (also known as the Pale Blue Dot or PBD model).
			model00	BASE_SUM.INC	5 Mtonnes/year Hamilton brine production case without region-flow monitoring: summary.
				CASE00_SCH.INC	5 Mtonnes/year Hamilton brine production case without region-flow monitoring: schedule.
				HAMILTON_CASE00.DATA	5 Mtonnes/year Hamilton brine production case without region-flow monitoring.
			model0R	BASE_SUM.INC	5 Mtonnes/year Hamilton brine production case with region-flow monitoring: summary.
				CASE00_SCH.INC	5 Mtonnes/year Hamilton brine production case with region-flow monitoring: schedule.

				HAMILTON_CASE00.DATA	5 Mtonnes/year Hamilton brine production case with region-flow monitoring.
Generic box model	Eclipse 300 simulator	SI		5P-45m-162-dip10-up_E300.DATA	A generic box model used for sensitivity studies and determining the value of high grid resolution. Grid resolution: cell length and width = 45m, number of layers = 162. Producer up dip of injector.
				5P-135m-54_E300.DATA	A generic box model used for sensitivity studies and determining the value of high grid resolution. Grid resolution: cell length and width = 135m, number of layers = 54.
				5P-135m-54-dip10-down_E300.DATA	A generic box model used for sensitivity studies and determining the value of high grid resolution. Grid resolution: cell length and width = 135m, number of layers = 54. Producer down dip of injector.
Synthetic tilted aquifer model	CMOST and GEM	SI		CMOSTTEST.cmp	Used by the simulator software.
			CMOSTTEST.cmpd	Base_Min.dat, SA.cmm, SA.cms, SA-15L.cms, SA-15L_Imported.cmm	Sensitivity study model varying rock permeability.
				Base_Min-15deg.dat, OP.cmm, OP.cms	Optimization model with variables dip angle (0 – 15 degrees), well spacing.
				UA.cmm. UA.cms	Uncertainty analysis of relative permeability.
				1 further .cms files and 15 .inc files	Used by the simulator software.