



CARBON ACCOUNTING

The content of this document is draft and relates to material [or data] which is still in the course of completion in travel to Gate 2 and should not be relied upon at this early stage of development. We continue to develop our thinking and our approach to the issues raised in the document in preparation for Gate 2.

Table 4-15 – Baseline carbon accounting Hemel Hempstead

Sites (Treatment plants)	Element	Construction stage embodied GHG emissions (LCA module A1-A3) tCO ₂ e	Operational stage embodied GHG emissions (LCA Modules B1- B4) tCO ₂ e	Operational stage energy related GHG emissions (LCA module B6) emissions tCO ₂ e	Total lifetime GHG emissions tCO ₂ e	% of total GHG emissions
Hemel Hempstead	Earth Works	968			968	0.1%
	Stainless Steel (pumps & screens)	61,915	62,023	-	123,938	9.8%
	Iron Pipes	1,847	1,861	-	3,708	0.3%
	Steel Reinforcing bar (within concrete)	3,064	3,068	-	6,132	0.5%
	0% GGBS Concrete (Total)	1,624	1,794	-	3,418	0.3%
	Asphalt	208	344	-	551	<0.01%
	Aggregate (Crushed Rock subbase)	22	60	-	82	<0.01%
	Copper	24,149	120,821	-	144,970	11.5%



Sites (Treatment plants)	Element	Construction stage embodied GHG emissions (LCA module A1-A3) tCO ₂ e	Operational stage embodied GHG emissions (LCA Modules B1- B4) tCO ₂ e	Operational stage energy related GHG emissions (LCA module B6) emissions tCO ₂ e	Total lifetime GHG emissions tCO ₂ e	% of total GHG emissions
	Electricity	-	-	125,820	125,820	10.0%
	Treatment Chemicals	-	854,737		854,737	67.6%
	Total	93,796	1,044,707	125,820	1,264,323	



Table 4-16 – Revised carbon accounting Hemel Hempstead

Sites (Treatment plants)	Element	Construction stage embodied GHG emissions (LCA module A1-A3) tCO ₂ e	Operational stage embodied GHG emissions (LCA Modules B1- B4) tCO ₂ e	Operational stage energy related GHG emissions (LCA module B6) emissions tCO ₂ e	Total lifetime GHG emissions tCO ₂ e	% of total GHG emissions
Hemel Hempstead	Earth Works	968			968	0.1%
	Stainless Steel (pumps, screens & fencing)	61,915	62,023	-	123,938	9.8%
	Rising Main (HDPE Plastic pipes)	1,036	1,920	-	2,956	0.23%
	Steel Reinforcing bar (within concrete)	3,064	3,068	-	6,132	0.5%
	Concrete (Pre-cast-20% GGBS)	1,376	1,470	-	2,846	0.2%
	Concrete (In-Situ- 20% GGBS)	14	15	-	29	<0.01%
	Asphalt (low temp)	186	207	-	393	<0.01%
	Aggregate (Crushed Rock subbase)	22	60	-	82	<0.01%
	Copper	24,149	120,821	-	144,970	11.4%
	Electricity	-	-	125,820	125,820	9.9%
	Treatment Chemicals	-	854,737		854,737	67.5%
	Total	92,729	1,044,321	125,820	1,262,870	