

## Heathfield Sand Pit - Summary of Key Elements

<b>Location:</b>	Situated adjacent to the west carriageway of the A386, about 1 Km N of Kingsteignton, Devon.
<b>Operated by:</b>	Hanson Aggregates, a subsidiary company of Hanson plc.
<b>O.S. Grid Ref:</b>	SX 870 763 (quarry office)
<b>O.S. Map No:</b>	1:25 000 Explorer Sheet 110, Torquay Dawlish, Newton Abbot 1:50 000 Landranger Sheet 191 Okehampton and North Dartmoor and 1:50 000 Landranger Sheet 192 Exeter and Sidmouth
<b>BGS Map No:</b>	1:50 000 Sheet 339, Newton Abbot.
<b>Status:</b>	Is wholly within an Area of Great Landscape Value (AGLV). Is partly in a Country Wildlife Site (CWS).
<b>General Geology:</b>	Aller Gravel of early Tertiary (probably Eocene) age about 50 million years old resting unconformably on mid Cretaceous Upper Greensand about 100 million years old. Both formations outcrop along the eastern edge of the Bovey Basin and dip generally westwards about 5 <sup>0</sup> to 8 <sup>0</sup> beneath the Tertiary Bovey Formation.
<b>Geodiversity Highlights:</b>	<ul style="list-style-type: none"> <li>• <a href="#">Aller Gravel</a> up to 8m of greyish-brown, silty gravel, sand and silt.</li> <li>• <a href="#">Gravel</a> contains mainly well-rounded to sub-rounded fine to coarse <a href="#">flint clasts</a> derived from the Chalk with minor quartz and igneous rock.</li> <li>• <a href="#">Sedimentary features</a> characteristic of origin in a fast, sediment-laden river.</li> <li>• Aller Gravel <a href="#">unconformable contact</a> on the Upper Greensand.</li> <li>• <a href="#">Upper Greensand</a> is bedded, yellow, brown and green, silty, fine to coarse gravelly sand with green glauconite and some <a href="#">iron/manganese cementation</a></li> <li>• The mineral <a href="#">glauconite</a> is characteristic of marine sedimentation.</li> <li>• Upper Greensand rests unconformably on Ugbrooke Sandstone Formation of late Carboniferous age.</li> </ul>
<b>Geodiversity Context:</b>	<ul style="list-style-type: none"> <li>• Outcrops of the Upper Greensand in this area represent the most westerly Cretaceous deposits in England</li> <li>• The Upper Greensand was deposited at the western edge of a widespread sea formed by a significant rise in sea levels.</li> <li>• The Aller Gravel was formed by a fast flowing, braided river system with abundant channels.</li> <li>• Approximately 50 million years separate the two deposits creating an unconformable contact.</li> </ul>

**Loc 06 View of Heathfield Sand Pit & Current Quarrying Operations*****Grid Ref SX 86622 75963******Photo HE06b******Facing SE***

General view of the current working area. Note the dark green colouration of the glauconitic Upper Greensand (adjacent to the red excavator in the mid ground). Note also in situ Aller Gravels (top left foreground beneath tree screen) that are Tertiary in age resting on the Upper Greensand that is Cretaceous in age.

**Loc 04 Section Through the Aller Gravel and Upper Greensand Contact*****Grid Ref SX 86851 76203******Photo HE04******Facing ESE***

Section through the Aller Gravel and Upper Greensand contact. (Running from top left to bottom right) Note the general increase in finer material towards the base of the Aller Gravels which were formed by sheet flooding during the early Tertiary. Note also that the bedding is picked out by dipping beds of cobbles in a sandy matrix at the base of the gravels.

**Loc 04 Detail of Channel Structure within Aller Gravels*****Grid Ref SX 86851 76203    Photo HE04e Facing ESE***

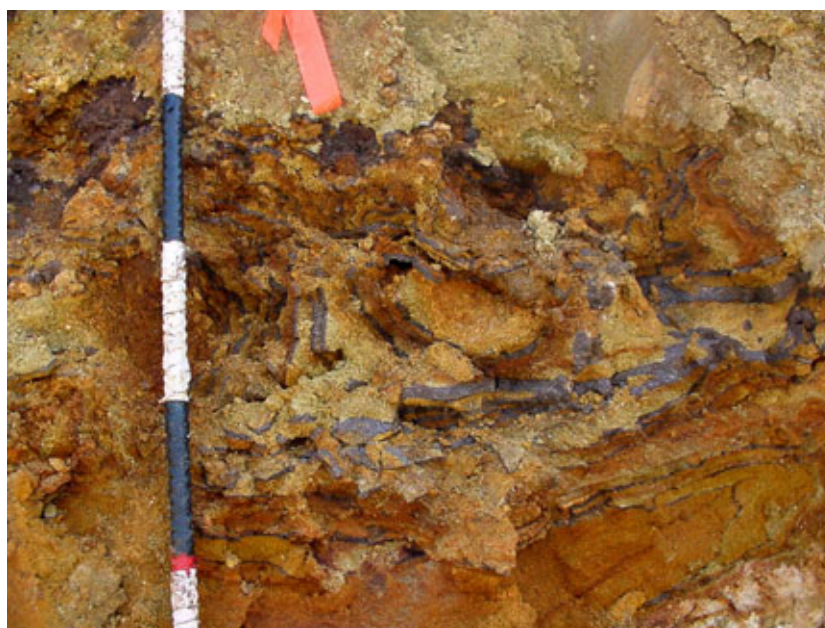
Detail of channel type structure filled with fine silty sand within the Aller Gravels. The slight alignment of gravelly material at the base and sides may indicate that the structure has been modified by periglacial action.

**Loc 04 Detail of Aller Gravels and Upper Greensand Contact*****Grid Ref SX 86851 76203                      Photo HE04f                      Facing ESE***

Detail of the contact between the Aller Gravels resting on the Upper Greensand (by the pencil). Note the poorly sorted nature and range in clast sizes of the Aller Gravels that were formed by high energy sheet flooding. The coarse clasts mainly comprise flints derived from the Chalk Formation

**Loc 06 Detail View Showing the Lower Beds of the Upper Greensand****Grid Ref SX 86622 75963****Photo HE06f****Facing SE**

Detail view of the current working area. Note the undulating thin dark beds in the top face and the three pale coloured planar beds in the lower bench dipping to the southwest, where it dips beneath the Bovey Formation. Note the overall greenish colour that is imparted by the mineral glauconite. The Glauconite readily weathers and imparts a brown colour to the deposit seen in photo *HE06b*.

**Loc 07 Detail of Iron Cemented Concretion in Upper Greensand****Grid Ref SX 86677 75824****Photo HE07e****Facing SE**

Detail of concentric manganese and iron cemented concretion within the Upper Greensand. Formed by the precipitation of iron rich water in the deposit