**sao\_offset**[ cIdx ][ rx ][ ry ][ i ] indicates the offset value of i-th category of current coding treeblock at position rx and ry for the colour component cIdx.

The variable bitDepth is derived as follows.

* If cIdx is equal to 0, bitDepth is set equal to BitDepthY..
* Otherwise (cIdx is equal to1 or 2), bitDepth is set equal to BitDepthC.

It is a requirement of bitstream conformance that follows

If sao\_type\_idx[ cIdx ][ rx ][ ry ] is less than 5,

* the values of sao\_offset[ cIdx ][ rx ][ ry ][ i ] shall be in the range of 0 to ( 1<< ( Min( bitDepth, 10 ) – 5 ) ) – 1, inclusive..

Otherwise (sao\_type\_idx[ cIdx ][ rx ][ ry ] is equal to 5),

* the values of sao\_offset[ cIdx ][ rx ][ ry ][ i ] shall be in the range of – ( 1<< ( Min( bitDepth, 10 ) – 5 ) )  to ( 1<< ( Min( bitDepth, 10 ) – 5 ) ) – 1