

Flood Risk Sequential Test Methodology

Thurrock Council

July 2026

1. Introduction

This Flood Risk Sequential Test Methodology has been prepared to support the emerging Thurrock Local Plan and demonstrate compliance with national planning policy relating to flood risk. The National Planning Policy Framework (NPPF) requires local planning authorities to apply a Sequential, risk-based approach to the location of new development, directing growth to areas with the lowest probability of flooding wherever possible. This approach seeks to reduce the impacts of flooding on people, property, infrastructure and the natural environment, while ensuring that future development remains resilient to the effects of climate change.

The purpose of this report is to explain the methodology used to undertake the Sequential Test for sites considered through the Local Plan site selection process and to identify those sites where the Exception Test is required. The assessment has considered flood risk from all relevant sources, including fluvial, tidal, surface water, groundwater and reservoir flooding, together with future climate change scenarios. Sites have been assessed and ranked according to their relative flood risk, enabling a transparent comparison of alternatives and ensuring that flood risk forms an integral part of the Council's evidence-based approach to site allocation.

The Sequential Test has been applied to sites identified through the Housing Land Availability Assessment (HLAA) and Economic Land Availability Assessment (ELAA), taking account of the Council's wider site assessment and refinement process and in conjunction with the Level 1 and Level 2 Strategic Flood Risk Assessment and their accompanying sites proformas. The resulting rankings provide a clear framework for identifying the most appropriate locations for development and for determining where additional justification through the Exception Test is necessary. This report therefore forms part of the evidence base supporting the Local Plan and demonstrates how flood risk considerations have informed the selection of proposed allocations.

2. Sequential Test in Plan Making

The flood risk Sequential Test is required in local plan preparation to ensure a risk-based approach to site allocation, directing development to areas with the lowest probability of flooding before considering higher-risk locations. It helps avoid placing people, property and infrastructure in areas vulnerable to flooding, supports sustainable development, takes account of future risks arising from climate change, and provides evidence that site allocations have been selected appropriately where lower-risk alternatives are not reasonably available. Where development in higher-risk areas is necessary, the Sequential Test also helps identify whether the Exception Test should be applied.

3. Exception Test in Plan Making

The flood risk Exception Test is a planning policy tool used where development is proposed in areas at higher risk of flooding and the Sequential Test alone cannot steer development to areas of lower risk. To pass the Exception Test, the local planning authority must demonstrate that the development provides wider sustainability benefits to the community that outweigh the flood risk, and that it will be safe for its lifetime without increasing flood risk elsewhere, while where possible reducing overall flood risk. The test is applied in accordance with the National Planning Policy Framework (NPPF) and accompanying Planning Practice Guidance and is often considered when allocating sites in Flood Zones 2 or 3 where development is necessary to meet identified housing, employment, or infrastructure needs.

4. Thurrock's Sequential Test Methodology

The Sequential Test considers the risk of flooding from all sources on each site individually. In most flood risk types this is calculated by the percentage of the site that is affected. However, with some risks, notably Groundwater, it is calculated whether the site is either "in" or "out" of a Groundwater overtopping / breach area rather than the overall amount of the site that is affected. These totals then become the score for the flood risk on each site and they are ranked in ascending order. The lowest ranking sites are at the lowest risk from flooding from that particular source and the highest ranking sites are at the highest risk of flooding from that source.

The ranks from each flood risk are added together to produce an overall flood risk score which is ranked again (rank of ranks) to give an overall flood risk rank, and this becomes the Sequential order.

Sites that are in Flood Zone 3 and Flood Zone 2* (*If being developed and the application involves a change of use to a more vulnerable use class i.e. Industrial to Care Facility) the Exception Test will have to be applied as described above.

5. The Thurrock Sequential Test

The Thurrock Sequential Test reviews all the sites from the Economic Land Availability Assessment (ELAA) for Employment, and Housing Land Availability Assessment (HLAA) for Housing. These sites were sifted in stages and the selection of sites presented to our consultants (AECOM) were those sites that had been through several stages of sifting. The SFRA assessed sites that were identified as being suitable and available for the particular purpose to which they were being considered. For employment this also included sites within existing employment areas which may

have scored poorly for suitability but could still come forward for development where they are within designated areas.

Since that sift of sites, there have been further sites that have not been carried forward in the site selection process and included as allocations in the plan. This further refinement of sites has been taken due to the outcome of further evidence which would not support their inclusion. The Sequential Test is one such piece of technical work which has informed the Council’s site selection process, as well as highlighting the sites that are required to pass the Exception Test.

6. Gypsy and Traveller Sites

Sites that have been considered for Gypsy and Traveller provision were considered within the Thurrock Gypsy and Traveller Accommodation Assessment and Pitch Delivery Assessment 2026. This study excluded sites wholly within Flood Zones 2 and 3A and 3B from the assessment. The remaining sites were assessed for flood zones, critical drainage areas, ground water protection zones, and aquifers. The flood risk at these sites have therefore been considered separately as they are specialist accommodation sites that do not form part of the general housing and employment land requirement.

7. Flood Risk Sequential Test of Sites

The table below shows the Sequential ranking for the refined site selection:

Table 1 Sequential Test of sites

SFRA Site Number	HLAA / ELAA Reference	Site name	Site Size (Ha)	Flood Zone	Flood Zone Overall Rank	Combined Climate Change Rank	Flood Storage Area Rank	Proximity to Main River Rank	Proximity to Main River Calvert Rank	Proximity to Ordinary Water Course Rank	Proximity to Ordinary Watercourse Calvert Rank	Future Flood Zone Rank	Mardyke Fluvial Overall Rank	Stanford Fluvial Overall Rank	Surface Water Combined Rank	Ground Water Combined Rank	Reservoirs Combined Rank	Rivers and Seas Combined Rank	Score of Ranks	Overall Sequential Rank (RANK OF RANKS)	Site Included in Local Plan Y/N	Rank of Included Site
66	60918	Land north of Thurrock Garden Centre, South Ockendon	4.52	1	1	1	1	35	25	1	1	1	1	1	61	1	1	1	132	2	Y	1
118	61123	Land At 22 And To Rear Of 18 To 28 Fairview Avenue, Stanford Le Hope	0.30	1	1	1	1	21	65	21	25	1	1	1	72	1	1	1	213	6	Y	2
62	60911	Medebridge Road, South Ockendon	26.76	3B	5	6	1	1	95	1	1	6	3	1	32	1	2	58	213	7	Y	3
59	60888	Land at Wharf Road, Stanford-le-Hope	30.31	3B	16	15	1	56	16	1	7	11	1	1	86	1	1	1	214	8	Y	4
58	60883	Land to the west of North Road, South Ockendon	94.27	1	1	1	1	2	37	1	135	1	1	1	35	1	1	17	235	12	Y	5
104	61098	Land west of Anton Road (north), South Ockendon	0.21	1	1	1	1	102	34	73	26	1	1	1	1	1	1	1	245	13	Y	6
52	60853	Land at the Mardyke Valley Golf Club, South Road, South Ockendon	99.08	3B	11	13	1	20	24	1	109	8	5	1	54	1	7	1	256	16	Y	7
80	60972	Land at Kemps Farm, South Ockendon	35.13	1	1	1	1	120	38	1	5	1	1	1	92	1	1	1	265	17	Y	8
126	61147	Land Adjoining Tamarisk Road, South Ockendon	0.43	2	13	12	1	58	18	39	1	12	1	1	119	1	1	1	278	20	Y	9
49	60844	Land south of Aveley	57.09	3B	3	2	2	47	50	1	125	3	1	1	40	1	1	1	278	21	Y	10
119	61124	Whitwell Court, Fairview Chase, Stanford le Hope	0.15	3B	8	9	1	11	70	1	3	7	1	4	131	39	1	1	287	23	Y	11
50	60847	Land West of East Tilbury	76.40	3B	10	10	1	45	15	5	120	19	1	1	42	18	1	1	289	24	Y	12
116	61116	1 To 431 Odds, Broxburn Drive, South Ockendon	1.72	1	1	1	1	92	3	91	79	1	1	1	23	1	1	1	297	26	Y	13
48	60836	Land North of Stifford Clays Road, Grays	14.67	1	1	1	1	49	139	50	4	1	1	1	53	1	1	1	304	27	Y	14
71	60940	Land north of Stanford-le-Hope	225.29	3B	15	17	1	4	10	1	134	10	1	2	122	1	1	1	320	29	Y	15
145	T07a	Thames Ind. Park, East Tilbury	2.57	3A	6	5	1	85	82	63	23	31	1	1	31	7	1	1	338	33	Y	16
82	61008	Distribution Centre, West Road, South Ockendon	3.57	1	1	1	1	142	23	11	57	1	1	1	99	1	1	1	341	34	Y	17
63	60912	Butts Lane, Stanford-le-Hope	9.49	1	1	1	1	1	91	61	138	1	1	1	44	1	1	1	344	36	Y	18
105	61099	Land west of Anton Road (south), South Ockendon	0.30	1	1	1	1	108	35	59	113	1	1	1	25	1	1	1	349	38	Y	19
117	61117	Jack O Lantern, Daiglen Drive, South Ockendon	0.16	1	1	1	1	126	44	95	22	1	1	1	7	1	1	54	356	42	Y	20
12	60880	Land East of Ship Lane, Aveley	14.71	3B	26	31	1	60	124	1	21	20	1	1	66	1	8	1	362	44	Y	21
77	60956	Land East of Chadwell St Mary	111.43	1	1	1	1	116	83	31	82	1	1	1	28	1	1	1	349	39	Y	21

SFRA Site Number	HLAA / ELAA Reference	Site name	Site Size (Ha)	Flood Zone	Flood Zone Overall Rank	Combined Climate Change Rank	Flood Storage Area Rank	Proximity to Main River Rank	Proximity to Main River Calvert Rank	Proximity to Ordinary Water Course Rank	Proximity to Ordinary Watercourse Calvert Rank	Future Flood Zone Rank	Mardyke Fluvial Overall Rank	Stanford Fluvial Overall Rank	Surface Water Combined Rank	Ground Water Combined Rank	Reservoirs Combined Rank	Rivers and Seas Combined Rank	Score of Ranks	Overall Sequential Rank (RANK OF RANKS)	Site Included in Local Plan Y/N	Rank of Included Site
114	61114	Former Culver Centre And Land To Rear of Daiglen Drive, South Ockendon, Essex	4.44	1	1	1	1	80	20	105	148	1	1	1	9	1	1	1	371	45	Y	22
35	61057	Titan Truck Park, Stoneness Road, West Thurrock	4.93	3B	52	40	1	6	33	2	9	52	1	1	116	42	1	16	372	46	Y	23
69	60937	Land to the east of Malvern Road, Grays	1.65	1	1	1	1	137	54	38	91	1	11	1	18	1	1	19	375	48	Y	24
79	60961	Land West of Park Lane, Aveley	2.84	1	1	1	1	78	138	44	30	1	1	1	67	1	1	15	380	50	Y	25
47	60835	Land East of A1012, Grays	7.35	1	1	1	2	1	133	66	130	1	1	1	48	1	1	1	388	52	Y	26
75	60948	East Thurrock Unit Football Club, Rookery Hill, Corringham	3.53	1	1	1	1	88	76	42	86	1	1	1	89	1	1	1	390	54	Y	27
137	61178	Tag Contract Services Ltd, Whitehall Works, Whitehall Lane, Grays	0.16	1	1	1	1	57	55	100	54	1	1	1	109	1	1	8	391	55	Y	28
113	61113	Land At Former Library And Public Hall, Purfleet Road, Aveley	0.24	1	1	1	1	122	103	83	76	1	1	1	1	1	1	1	394	56	Y	29
139	61190	11 River View, Chadwell St Mary	0.27	1	1	1	1	83	105	79	73	1	1	1	47	1	1	1	396	58	Y	30
90	61033	Land off Church Road, Corringham	0.59	1	1	1	1	115	92	85	48	1	1	1	59	1	1	1	408	61	Y	31
74	60944	Land off Rainbow Lane, Stanford-le-Hope	10.53	1	1	1	1	140	61	8	149	1	1	1	43	1	1	1	410	62	Y	32
84	61012	Land at St Johns Road, Chadwell St Mary	1.71	1	1	1	1	19	90	71	145	1	1	1	76	1	1	1	410	63	Y	33
146	T07b	Thames Ind. Park, East Tibury	0.32	1	1	1	1	89	100	76	105	24	1	1	10	1	1	1	412	64	Y	34
7	60862	Land at Goshem's Farm, East Tilbury	20.36	3B	20	20	1	66	101	34	1	23	1	1	103	23	1	18	413	66	Y	35
115	61115	Belhus Park Boxing Club, Darenth Lane, South Ockendon	0.15	1	1	1	1	113	51	103	139	1	1	1	1	1	1	1	416	68	Y	36
23	60981	Land South of A13 and North of A1306 Arterial Road, West Thurrock (Former Arena Essex Site)	54.82	3B	17	14	1	1	57	1	142	14	1	1	121	1	5	42	418	70	Y	37
91	61034	Land to the north of Thames Haven Road, Corringham	0.92	1	1	1	1	91	99	82	68	1	1	1	45	1	1	25	418	71	Y	38
68	60935	Land to the west of Romford Road, Aveley	14.51	1	1	1	1	110	146	7	137	1	1	1	11	1	1	1	420	72	Y	39
43	60821	Land south of School Lane, Orsett,	1.51	1	1	1	1	136	166	99	11	1	1	1	2	1	1	1	423	75	Y	40
83	61011	Land at Manor Road, Grays	0.63	3B	25	24	1	65	41	56	27	40	1	1	140	1	1	1	424	76	Y	41
54	60856	Land northeast of Corringham	101.77	3B	4	4	1	39	116	1	140	5	1	1	112	1	1	1	427	77	Y	42
148	T05c	South of Ocean Boulevard and East of Atlantic Avenue (LG1301), Stanford-le-Hope	30.67	3A	42	50	1	38	62	33	6	65	1	1	91	43	1	1	435	80	Y	43
64	60913	West Horndon	463.29	3B	31	34	1	51	4	1	128	22	13	1	141	1	10	1	439	82	Y	44

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73	60942	Land East of Heath Road, Chadwell St Mary	15.68	1	1	1	1	90	145	109	74	1	1	1	12	1	1	1	439	83	Y	45
151	T05j	South of Manor Way House, Corringham	1.48	3A	44	53	1	24	53	3	18	68	1	1	139	8	1	28	442	85	Y	46
152	T05g	West of Baltic Avenue (LG715), Stanford-le-Hope	11.34	3A	43	54	1	26	56	20	1	69	1	1	114	15	1	41	443	86	Y	47
136	61172	Car Parks Crown Road And Darnley Road, Grays	0.59	1	1	1	1	82	74	111	55	15	1	1	100	1	1	1	445	87	Y	48
4	60854	Land East of Tilbury2	75.84	3B	34	33	1	1	49	1	89	34	1	1	126	55	1	30	456	88	Y	49
112	61112	St Michaels Church Hall, Mill Road, Aveley, South Ockendon	0.19	1	1	1	1	134	118	98	42	1	1	1	58	1	1	1	459	89	Y	50
88	61030	Land at South Road/Buckles Lane, South Ockendon	1.33	1	1	1	1	127	26	58	116	1	1	1	124	1	1	1	460	90	Y	51
144	T14a	Eastern end of Manor Way Industrial Estate, Grays	0.72	3A	59	48	1	14	28	45	10	63	1	1	161	26	1	2	460	91	Y	52
122	61136	The Springhouse, Springhouse Road, Corringham	3.43	1	1	1	1	107	132	101	77	1	1	1	34	1	1	1	460	92	Y	53
41	60474	Car Park, Coronation Road, East Tilbury	0.19	3B	19	18	1	125	71	72	28	54	1	1	3	3	1	65	462	94	Y	54
44	60827	Land to the south of Hillcrest Road, Horndon on the Hill	1.55	1	1	1	1	129	111	96	36	1	1	1	90	1	1	1	471	97	Y	55
85	61022	Land at Linford Road and Turnpike Lane, Chadwell St Mary	3.84	1	1	1	1	74	112	107	124	1	1	1	57	1	1	1	483	101	Y	56
93	61059	Tilbury Football Club, Chadfields, Tilbury	4.25	3A	54	42	1	76	19	54	20	55	1	1	133	28	1	1	486	102	Y	57
72	60941	Land North of B149 Wood View and River View, Chadwell St Mary	3.45	1	1	1	1	1	78	92	131	1	1	1	148	1	1	31	489	103	Y	58
98	61084	Land adj. Brookmans Avenue & north of Long Lane, Grays	1.25	1	1	1	1	141	156	132	34	1	1	1	20	1	1	1	492	104	Y	59
153	T05k	Eastern Edge of London Gateway Logistics Park, Stanford-le-Hope	5.80	3A	60	55	1	22	72	24	45	70	1	1	85	11	1	55	503	106	Y	60
29	61010	Thurrock Shopping Park, West Thurrock	9.46	1	27	25	1	1	136	53	90	25	1	1	153	1	1	1	516	113	Y	61
92	61035	Land south of Thames Haven Road, Corringham	0.51	1	1	1	1	79	102	77	147	1	1	1	104	1	1	1	518	114	Y	62
150	T05d	North of Ocean Boulevard and East of Atlatic Avenue (LG784), Stanford-le-Hope	14.79	3A	50	52	1	68	45	57	65	67	1	1	88	31	1	1	528	117	Y	63
165	60893	Corringham Park Farm, Corringham	29.39	1	1	1	1	105	106	1	143	1	1	1	108	1	1	57	528	118	Y	64
125	61146	Garage Site, Lyndhurst Road, Corringham	0.22	1	1	1	1	123	115	84	50	1	1	1	163	1	1	1	544	125	Y	65
61	60910	Land at East Tilbury Road, Linford	4.85	3B	21	21	1	148	14	74	133	27	1	1	73	32	1	1	548	126	Y	66

SFRA Site Number	HLAA / ELAA Reference	Site name	Site Size (Ha)	Flood Zone	Flood Zone Overall Rank	Combined Climate Change Rank	Flood Storage Area Rank	Proximity to Main River Rank	Proximity to Main River Calvert Rank	Proximity to Ordinary Water Course Rank	Proximity to Ordinary Watercourse Calvert Rank	Future Flood Zone Rank	Mardyke Fluvial Overall Rank	Stanford Fluvial Overall Rank	Surface Water Combined Rank	Ground Water Combined Rank	Reservoirs Combined Rank	Rivers and Seas Combined Rank	Score of Ranks	Overall Sequential Rank (RANK OF RANKS)	Site Included in Local Plan Y/N	Rank of Included Site
155	T05i	Between Baltic Avenue and Ocean Boulevard, Stanford-le-Hope	3.51	3A	46	57	1	67	87	78	52	72	1	1	79	5	1	1	548	127	Y	67
15	60900	Land at Hillside	1.09	1	1	1	1	135	141	126	29	1	1	1	111	1	1	1	551	129	Y	68
57	60882	Land Adjacent and To The Rear Of The George And Dragon, East Tilbury	9.53	3B	30	28	1	100	8	70	144	37	1	1	83	37	1	11	552	130	Y	69
39	60444	Sub Station, Palmers Avenue, Grays	0.47	1	1	1	1	44	96	123	83	1	1	1	158	1	1	66	578	133	Y	70
156	T05l	South East Corner of London Gateway Logistics Park, Stanford-le-Hope	1.48	3A	61	58	1	25	109	26	12	73	1	1	155	22	1	34	579	135	Y	71
154	T05h	West of Ocean Boulevard (LG576), Stanford-le-Hope	8.43	3A	51	56	1	53	75	67	126	71	1	1	64	9	1	4	580	136	Y	72
141	61202	Gas Valve Compound, Drake Road, Chafford Hundred, Grays	1.16	1	1	1	1	101	98	112	153	1	1	1	115	1	1	1	588	139	Y	73
142	61209	Development Land East Of Caspian Way And North And South Of London Road, Purfleet-on-Thames	62.24	3B	35	36	1	48	52	35	104	32	1	1	143	51	3	48	590	142	Y	74
22	60976	Land at Great Garlands Farm, Stanford-le-Hope	23.34	3B	75	75	1	16	64	1	103	48	8	1	160	17	1	22	592	143	Y	75
26	60989	Land off Burnley Road, West Thurrock	10.73	3B	71	68	1	152	47	4	13	42	1	1	78	52	1	62	593	144	Y	76
25	60988	Tongue Land, London Gateway	8.21	3B	70	69	1	28	93	75	51	49	1	1	107	44	1	9	599	146	Y	77
24	60984	Thames Enterprise Park, Stanford-le-Hope	312.27	3B	72	70	1	72	73	1	69	41	1	1	81	56	1	68	607	149	Y	78
135	61171	Grays Shopping Centre, High Street, Grays	2.06	2	7	7	1	93	84	113	107	29	6	1	162	4	1	1	616	151	Y	79
123	61139	Police Station , Gordon Road, Corringham	0.25	1	1	1	1	121	113	114	115	1	1	1	144	1	1	1	616	152	Y	80
147	T05b	South of Ocean Boulevard and West of Atlantic Avenue (LG873), Stanford-le-Hope	24.84	3A	41	49	1	40	63	37	146	64	1	1	123	40	1	14	621	154	Y	81
149	T05a	East of UPS	8.68	3A	49	51	1	59	48	51	150	66	1	1	125	33	1	1	637	157	Y	82
106	61100	Blackshot Estate, Land south of Laird Avenue (Bevan & Morrison House), Grays	1.85	1	1	1	1	145	144	131	108	1	1	1	127	1	1	1	664	160	Y	83
108	61104	Garage site east of Vigerons Way, Chadwell St Mary	0.24	1	1	1	1	114	129	117	121	1	1	1	128	1	1	1	618	153	Y	84
163	T33a	North of Magnet Road	0.61	1	1	1	1	132	120	115	123	1	1	1	129	1	1	46	673	161	Y	84
40	60459	Rippleside Metalworks, Thames Road, Grays	0.75	3B	45	41	1	94	60	64	111	53	1	1	130	34	1	47	683	162	Y	85

The Local Plan has applied the flood risk Sequential Test to sites in accordance with national policy and guidance to steer development towards areas at the lowest probability of flooding. Through the site selection process, all reasonable alternative sites were assessed, taking account of flood risk information from the Strategic Flood Risk Assessment (SFRA) and the Environment Agency's Flood Map for Planning. The assessment reports which sites are within areas of lower flood risk that capable of meeting the identified development needs of the Plan. Consequently, the allocations falling within Flood Zone 1 and 2 represent the most appropriate and sustainable options when considered against the Plan's economic, social and environmental objectives and are therefore sequentially preferable. Where development is proposed in areas of higher flood risk, site-specific flood risk assessments and appropriate mitigation measures will be required to ensure development remains safe for its lifetime without increasing flood risk elsewhere, thereby satisfying the requirements of the Sequential Test and supporting the delivery of a sound and deliverable Local Plan. Those sites allocated in Flood Zone 3a and 3b (also Flood Zone 2 where applicable) must therefore be referred to the Exception Test.

8. Flood Risk Exceptions Test of Sites

Section 7 sets out the sequential order of the sites in terms of overall flood risk from each source. There are 92 Sites in Flood Zone 1, 2 Sites in Flood Zone 2 and 25 Sites in Flood Zone 3A and 41 Sites in Flood Zone 3B. However, once the overall ranking is considered, it affects the order of the Fluvial Ranking. 66 Sites are therefore required to pass the Exception Test. The following sites are situated within Flood Zone 3 and will be subject to passing the Exception Test where they must demonstrate the development provides wider sustainability benefits to the community that outweigh the flood risk, and that it will be safe for its lifetime without increasing flood risk elsewhere, while where possible reducing overall flood risk. In addition, the planning application must detail a Sequential approach to developing the site (i.e. directing the built forms of the development to the part of the site that has the lowest risk of flooding from any source). These sites are detailed below.

Table 2 Exception Test of sites

SFRA Site Number	HLAA / ELAA Reference	Site name	Site Size (Ha)	Flood Zone
145	T07a	Thames Ind. Park, East Tilbury	2.57	3A
148	T05c	South of Ocean Boulevard and East of Atlantic Avenue (LG1301), Stanford-le-Hope	30.67	3A
151	T05j	South of Manor Way House, Corringham	1.48	3A
152	T05g	West of Baltic Avenue (LG715), Stanford-le-Hope	11.34	3A
144	T14a	Eastern end of Manor Way Industrial Estate, Grays	0.72	3A
93	61059	Tilbury Football Club, Chadfields, Tilbury	4.25	3A
153	T05k	Eastern Edge of London Gateway Logistics Park, Stanford-le-Hope	5.80	3A
150	T05d	North of Ocean Boulevard and East of Atlantic Avenue (LG784), Stanford-le-Hope	14.79	3A
155	T05i	Between Baltic Avenue and Ocean Boulevard, Stanford-le-Hope	3.51	3A
156	T05l	South East Corner of London Gateway Logistics Park, Stanford-le-Hope	1.48	3A
154	T05h	West of Ocean Boulevard (LG576), Stanford-le-Hope	8.43	3A
147	T05b	South of Ocean Boulevard and West of Atlantic Avenue (LG873), Stanford-le-Hope	24.84	3A
149	T05a	East of UPS	8.68	3A
62	60911	Medebridge Road, South Ockendon (Land south east of South Ockendon)	26.76	3B
59	60888	Land at Wharf Road, Stanford-le-Hope	30.31	3B
52	60853	Land at the Mardyke Valley Golf Club, South Road, South Ockendon	99.08	3B
49	60844	Land south of Aveley	57.09	3B
119	61124	Whitwell Court, Fairview Chase, Stanford le Hope	0.15	3B
50	60847	Land West of East Tilbury	76.40	3B
71	60940	Land north of Stanford-le-Hope	225.29	3B
12	60880	Land East of Ship Lane, Aveley	14.71	3B

SFRA Site Number	HLAA / ELAA Reference	Site name	Site Size (Ha)	Flood Zone
35	61057	Titan Truck Park, Stoneness Road, West Thurrock	4.93	3B
7	60862	Land at Goshem's Farm, East Tilbury	20.36	3B
23	60981	Land South of A13 and North of A1306 Arterial Road, West Thurrock (Former Arena Essex Site)	54.82	3B
83	61011	Land at Manor Road, Grays	0.63	3B
54	60856	Land northeast of Corringham	101.77	3B
64	60913	West Horndon	463.29	3B
4	60854	Land East of Tilbury2	75.84	3B
41	60474	Car Park, Coronation Road, East Tilbury	0.19	3B
61	60910	Land at East Tilbury Road, Linford	4.85	3B
57	60882	Land Adjacent and To The Rear Of The George And Dragon, East Tilbury	9.53	3B
142	61209	Development Land East Of Caspian Way And North And South Of London Road, Purfleet-on-Thames	62.24	3B
22	60976	Land at Great Garlands Farm, Stanford-le-Hope	23.34	3B
26	60989	Land off Burnley Road, West Thurrock	10.73	3B
25	60988	Tongue Land, London Gateway	8.21	3B
24	60984	Thames Enterprise Park, Stanford-le-Hope	312.27	3B
40	60459	Rippleside Metalworks, Thames Road, Grays	0.75	3B

A certain number will already have been discounted during the sift process, but those that have been included in the Local Plan will have to demonstrate that they meet the requirements of the Exception Test as detailed above.

The following sites have passed the Exception Test as they meet the requirements of balancing the presumption in favour of sustainable development and can robustly mitigate the risk of flooding from all sources for the lifetime of the development and not contribute to the worsening of flooding of any source on or off site and demonstrate. Through their planning applications these sites must also demonstrate a sequential approach to developing the site / site layout (i.e. directing the most vulnerable parts / uses of the building to the area of the site that is at least risk of flooding: These sites are:

- 1) **SS02 / 61209 - Purfleet on Thames Regeneration, NS36 / 61124 - Whitwell Court, Fairview Chase, Stanford le Hope, NS06 / 61011 - Land at Manor Road, Grays (subject to S106), SS08 / 60856 - Land northeast of Corringham, NS23 / 60882 - Land Adjacent and To The Rear Of The George And Dragon, East Tilbury**

These sites have been granted planning permission and some will also have commenced work. These sites will have been subject to a project level Strategic Flood Risk Assessment at the planning application stage and/or provided evidence to ensure that the risk of

flooding from all sources can be successfully mitigated throughout the lifetime of the development.

- 2) **SS05 / 60847 - Land East of Chadwell St Mary, NS21 / 61059 - Tilbury Football Club, Chadfields, Tilbury, NS38 / 60888 - Land at Wharf Road, Stanford-le-Hope, SS11 / 60844 - Land south of Aveley, SS13 / 60911 - Medebridge Road, South Ockendon (Land south east of South Ockendon), SS13 / 60853 - Land at the Mardyke Valley Golf Club, South Road, South Ockendon, SS18 / 60940 - Land north of Stanford-le-Hope, SS17 / 60913 - West Horndon, NS22 / 60474 - Car Park, Coronation Road, East Tilbury, NS24 / 60910 - Land at East Tilbury Road, Linford, NS11 / 60459 - Rippleside Metalworks, Thames Road, Grays.**

These sites have been allocated to deliver new residential dwellings through the plan period and to contribute to the Council's objectively assessed housing requirement and that the sustainability benefits their delivery will bring to the Borough outweigh the overall flood risk. However, planning applications for development on these sites will need to provide project level Flood Risk Assessment that demonstrate that the proposals can effectively:

- a) Mitigate the risk of flooding from all sources for the lifetime of the development.

- b) Not contribute to the worsening of flood risk on or off site
- c) Integrate SuDS and rainwater management to ensure surface run off rates are no higher (and ideally better than the pre-development greenfield state)
- d) Demonstrate a sequential approach to site layout - in order to ensure that more vulnerable uses within the development are located in the lowest risk parts of the site.
- e) The site-specific Flood Risk Assessment should be proportionate to the anticipated degree of flood risk and must demonstrate how flood risk will be managed and mitigated to ensure the development is safe from flooding and the impacts of climate change for its lifetime. This must include appropriate flood-resistant design and construction, incorporation of Sustainable Drainage Systems (SuDS), safe management of residual risk, and appropriate emergency planning.

3) SS03 / 60981 - Land South of A13 and North of A1306 Arterial Road, West Thurrock (Former Arena Essex Site), NS33 / T07a - Thames Ind. Park, East Tilbury, NS20 / T14a - Eastern end of Manor Way Industrial Estate, Grays, NS17 / 60880 - Land East of Ship Lane, Aveley, NS19 / 61057 - Titan Truck Park, Stoneness Road, West Thurrock, NS18 / 60989 - Land off Burnley Road, West Thurrock, SS10 / 60984 - Thames Enterprise Park, Stanford-le-Hope

Site has been allocated for use for a Data Centre and / or Use Class B8 Storage, Use Classes E (g) (iii) or B2. These are classified as “Less Vulnerable Development” as per [Annex 3 of the NPPF](#) – Flood Risk Vulnerability Classification. Although development on these sites is considered “less vulnerable” a full project level Flood Risk Assessment is still required to assess the level of flood risk on site and to ensure that development will mitigate the risk of flooding from all sources on and off site for the lifetime of the development. Sites will also need to demonstrate a sequential approach to site layout to ensure that development is steered towards the part of the site which is at the least risk of flooding.

4) SS09 / 60976 - Land at Great Garlands Farm, Stanford-le-Hope, SS09 / 60988 - Tongue Land, London Gateway, SS09 / T05a - East of UPS, SS09 / T05b - South of Ocean Boulevard and West of Atlantic Avenue (LG873), Stanford-le-Hope, SS09 / T05c - South of Ocean Boulevard and East of Atlantic Avenue (LG1301), Stanford-le-Hope, SS09 / T05d - North of Ocean Boulevard and East of Atlantic Avenue (LG784), Stanford-le-Hope, SS09 / T05g West of Baltic Avenue (LG715), Stanford-le-Hope, SS09 / T05h West of Ocean Boulevard (LG576), Stanford-le-Hope, SS09 / T05i Between Baltic Avenue and Ocean Boulevard, Stanford-le-Hope, SS09 / T05j - South of Manor Way House, Corringham, SS09 / T05k - Eastern Edge of London Gateway Logistics Park, Stanford-le-Hope, SS09 / T05l - South East Corner of London Gateway Logistics Park, Stanford-le-Hope, SS09 / 60862 - Land at Goshem's Farm, East Tilbury, SS07 / 60854 Land East of

Tilbury2, 60976 - Land at Great Garlands Farm, Stanford-le-Hope, NS18 / 60989 Land off Burnley Road, West Thurrock

The majority of these sites forms part of the London Gateway Development which is a major deep sea container port and integrated logistics park located on the River Thames and other port based water compatible uses which are essential to the continued economic success of the Borough as a major sea transport hub. It also includes land associated with Tilbury3 which is for port expansion of the existing Port of Tilbury. As such, it can be considered that they pass the Exception Test as they are classified as “Water Compatible Development” as per [Annex 3 of the NPPF](#) – Flood Risk Vulnerability Classification. However, they will still be required to satisfy the requirements of the Exception Test through their respective planning applications.

5) NS50 / 60981 - The former Prince of Wales Public House South Ockendon

The Former Prince of Wales Public House in South Ockendon is excluded from the Sequential and Exception Test as the site area is less than 1ha in area. Full details are available on planning application ref: 26/00014/TBC

6) NS32 Land South of South Essex College, Thurrock Campus Grays

The Land South of South Essex College, Thurrock Campus in Grays has not been assessed as the site has been allocated to safeguard it for future development as Post 16 Special Educational Needs (SEND) schooling provision. The site will be subject to a full project level Strategic Flood Risk Assessment as part of any planning application that comes forwards.

9. Conclusion

Flood risk has been a key consideration through Thurrock’s Local Plan site selection process. Using a comprehensive methodology that considers flooding from multiple sources, each site has been assessed and ranked according to its relative level of flood risk. This approach ensures that development is directed, wherever possible, towards areas at the lowest probability of flooding, consistent with the requirements of national planning policy and guidance.

The assessment confirms that the majority of sites considered are located within Flood Zone 1, with a smaller number situated within Flood Zones 2, 3a and 3b. Whilst the Sequential Test has identified lower-risk sites as the preferred locations for development, it also recognises that some allocations required to meet Thurrock’s housing, employment and strategic growth needs are located within areas of higher flood risk. In these circumstances, the Exception Test provides the

mechanism to demonstrate that the wider sustainability benefits of development outweigh flood risk and that development can be made safe for its lifetime without increasing flood risk elsewhere.

Overall, the results of the Sequential Test, together with the wider site assessment process, provide robust evidence that the Council has applied a sequential and proportionate approach to site allocation and it can be considered that sites that are not subject to the Exception Test for the reason given above have passed the Sequential test. The methodology and findings support the soundness of the Local Plan by balancing the need for sustainable growth with the requirement to manage and minimise flood risk. Sites identified as requiring the Exception Test will be subject to further assessment, including site-specific flood risk considerations and mitigation measures, before development can proceed.

10. Further Evidence Base

The Council will produce a detailed topic paper to further justify site selection and explain the risk posed by flooding in the borough. This document is also supported by the a Level 1 Strategic Flood Risk Assessment (SFRA) which provides a strategic overview of all sources of flood risk across the plan area to inform the application of the Sequential Test and the allocation of development sites, and a Level 2 SFRA which offers a more detailed assessment of flood risk for specific sites, including the nature and extent of flooding, the application of the Exception Test where required, and the identification of site-specific mitigation measures to ensure development can be made safe for its lifetime without increasing flood risk elsewhere.