Thurrock Flexible Generation Plant

Environmental Statement Volume 4: Cumulative Effects Assessment
Chapter 19: Landscape and Visual Resources

Date: May 2020

Environmental Impact Assessment

Cumulative Effects Assessment

Volume 4

Chapter 19

Report Number: OXF10872

Version: Final

Date: May 2020

This report is also downloadable from the Thurrock Flexible Generation Plant website at:
http://www.thurrockpower.co.uk

Prepared by: Mark Wilson

Checked by: Peter Ireland

Thurrock Power Ltd

1st Floor

145 Kensington Church Street

London W8 7LP

1. Introduction and Approach

1.1 Purpose of this chapter

1.1.1 This chapter of the Environmental Statement (ES) provides an assessment of the ES Volume 3, Chapter 6: Landscape and Visual Resources effects of the proposed development in combination with other relevant future development projects that have been scoped into the cumulative assessment.

1.1.2 In particular, this LVIA cumulative effects assessment (CEA):

- identifies the potential impact interactions of the proposed development in combination with other relevant future development projects;
- identifies the receptors with the potential to be significantly affected by these potential impact interactions and characterises these receptors, including their sensitivity and any relevant environmental thresholds;
- evaluates the likely significant cumulative effects on these key receptors as a result of the proposed development in combination with other development projects;
- identifies any additional mitigation measures that are proposed to prevent, minimise, reduce or offset these significant cumulative effects; and
- taking into account any proposed mitigation measures, evaluates the significance of predicted residual cumulative effects.

1.2 Approach to cumulative assessment

1.2.1 Landscape and visual impacts assessment (LVIA) cumulative effects follow the approach set out in Section 3 of Volume 2, Chapter 4: EIA Methodology.

1.3 Study area

1.3.1 The site of the proposed development is divided into a number of Zones (Figure 1.5 of Volume 2, Chapter 2: Project Description). A study area of radius 10 km from the outer edges of the proposed development for the LVIA was adopted. This was based on the proposed Flexible Generation Plant development having stack heights of 40 m and the main generating station building height of 20 m. It was also based on experience of assessing this type of development and the industrial and dockside context in which the proposed development is located.

1.3.2 The same 10 km radius study area used in the Volume 3, Chapter 6: Landscape and Visual Resources has been adopted for the cumulative developments assessment as those developments have the potential to affect the same area as the proposed Flexible Generation Plant. In particular, the Nationally Significant Infrastructure Projects (NSIPs) which are likely to have the most significant impacts in combination with the proposed development, are located adjacent to the Flexible Generation Plant.

1.4 Screening of cumulative developments

1.4.1 The purpose of this section is to provide a short list of the potential cumulative developments which will be assessed in combination with the Flexible Generation Plant. Potential developments have been shortlisted where, there is potential for cumulative effects that require further assessment and there is enough information to do so, albeit this may be qualitative or relatively high level for some projects.

1.4.2 Table 2.1 of Volume 4, Chapter 18: Cumulative Effects Assessment Introduction and Screening identifies a short-list of potential cumulative developments that have been screened as potentially relevant to the CEA overall (i.e. for one or more topic areas). From this shortlist of cumulative development projects, Table 1.1 below identifies those projects that fall within the zone of influence for LVIA and have potential for cumulative effects that require assessment in this topic area.

1.4.3 Developments have been shortlisted in Table 1.1 where:

- the conclusions of the environmental assessments for those developments predicted significant effects on receptors within the zone of influence for the proposed Thurrock Flexible Generation Plant development; or
- where there is considered to be potential for effects that were not predicted to be significant for those individual developments but that may become significant in the cumulative scenario; or
- where environmental studies for those developments have not been published but there is sufficient information available about the development to both indicate the potential for cumulative effects and allow assessment.

1.4.4 Where sufficient information about a development to consider its potential for cumulative effects was not publicly available, the development has not been shortlisted.

Visual receptor groups

1.5.1 The visual receptors have been grouped up based on similar locations in relation the Flexible Generation Plant in order to make this assessment more concise. They have been divided into those north (N) and south (S) of the River Thames. Subsequently five locations in the north and four in the south have been grouped up based on

similar locations. For further details of which visual receptors are included in which of the areas, see Table 1.1.

Table 1.1: Shortlist of relevant cumulative developments.

ID	Development	Potential cumulative impacts (construction)	Potential cumulative impacts (operation and maintenance)	Potential cumulative impacts (decommissioning)	Receptor(s) and receptor groups affected
NSIPs					
042 TR030003	Tilbury2: A new port facility acting alongside the existing Port of Tilbury. This will involve the extension of existing jetty facilities and the dredging of berth pockets in the River Thames, and land works and facilities for: a "Roll-On / Roll-Off" (Ro-Ro) terminal for importing and exporting containers on road trailers; a facility for importing and processing bulk construction materials; and areas of external storage for a variety of goods such as imported cars. The project also involves the construction of road and rail links to the site from adjacent networks.	Landscape and visual impacts on the surrounding character and views of the Tilbury2 site in the form of construction traffic haul routes, construction plant, machinery including cranes and the emerging development. Potential landscape receptors affected: LCA 5; LCAs C5, D6 and D7. Potential visual receptor groups affected: Groups N1, N2, N3, N4, N5 S1, S2, S3 & S4.	Landscape and visual impacts on the surrounding character and views of the Tilbury2 development. Principally, this includes a RoRo terminal and Construction Materials and Aggregates Terminal (CMAT) to the north of the substation. Components of the development include new dockside storage and warehouses, aggregate storage and processing, new railhead link and road access, loading wharves for aggregates and sea going freight and cargo. Potential landscape receptors affected: LCA 5; LCAs C5, D6 and D7. Potential visual receptor groups affected: Groups N1, N2, N3, N4, N5, S1, S2, S3 & S4	Landscape and visual impacts on the surrounding character and views of the Tilbury2 site in the form of demolition / decommissioning traffic haul routes, demolition plant, machinery including cranes. Potential landscape receptors affected: LCA 5; LCAs C5, D6 and D7. Potential visual receptor groups affected: Groups N1, N2, N3, N5, S1, S2, S3 & S4.	**Landscape Receptors:** LCA C5: Tilbury Marshes, LCA D6: Chadwell Escarpment Urban fringe, LCA D7: West Tilbury Urban Fringe. **Visual Receptors:** **Viewpoint receptors north side of the River Thames near to waterfront** Group N1 (North shore waterfront): Thames Estuary/Two Forts Way (FP146). tourist attractions including Tilbury Fort, representative Viewpoints 12, to 16 (ES Volume 3, Chapter 6: Landscape and Visual Resources, Figures 3.15 to 3.17). Group N2 (Coastal Plain): Residential receptors on the east side of Tilbury, Access Land (including Walton and Parsonage Commons, commercial and industrial receptors which include *p*eople working *at* the sewage works, and National Grid's 400kV Tilbury Substation (Zone B), dynamic receptors using Fort Road and Cooper Shaw Road, representative Viewpoints 6, 8, 9 and 11 (ES Volume 3, Chapter 6: Landscape and Visual Resources, Figures 3.9, 3.11, 3.12 and 3.14). Group N3 (South facing Chadwell St Mary escarpment): community facility of St James' Church graveyard and representative Viewpoints 3, 4, 7 and10 (ES Volume 3, Chapter 6: Landscape and Visual Resources, Figures 3.6, 3.7, 3.10 and 3.13). **Viewpoint receptors north of the River Thames mid and far distance (>3km)** Group N5: Representative Viewpoints 1, 2, 5, 33 and 34 (ES Volume 3, Chapter 5: Landscape and Visual Resources, Figures 3.4, 3.5, 3.8, 3.28 and 3.29). **Viewpoint receptors south side of the River Thames near to (Gravesend waterfront)** Group S1: (South shore waterfront): Residential and commercial visual receptors Gravesend waterfront, public access and tourist attractions at Gravesend Gordon Recreation Ground and gardens, New Tavern Fort, Saxon Shore Way, commercial and industrial receptors at Milton, dynamic receptors vessels using River Thames, Representative Viewpoints 18, 19, 20, 21, 23 (ES Volume 3, Chapter 6: Landscape and Visual Resources, Figures 3..18 to 3.21). Group S2 (elevated locations Gravesend): Residential and public access receptors in Gravesend particularly Windmill Gardens and Windmill Hill, PRoW east of Gravesend, representative Viewpoints 22 and 28 (ES Volume3, Chapter 6: Landscape and Visual Resources, Figures 3.20 and 3.23) (near, elevated). **Viewpoint receptors south of the River Thames mid and far distance (>3km)** Group S3 (AONB): Dynamic road receptors Harts Hill north edge of the Kent Downs AONB Representative Viewpoint 29 (ES Volume 3, Chapter 6: Landscape and Visual Resources, Figure 3.24). Group S4 (south shore marshes): Tourist attractions including Cliffe Pools RSPB Reserve, Cliffe Fort and Shornmead Fort, Saxon Shore W*ay* and PRoW on Shorne and Higham Marshes, Representative Viewpoints 24, 25, 26, 27 (ES Volume 3, Chapter 6: Landscape and Visual Resources, Figures 3.21 to 3.23).
058 TR010032	The Lower Thames Crossing will be a new road crossing connecting Essex and Kent proposed by the Highway Agency. Located east of Gravesend and Tilbury, this new crossing will offer the improved journeys, new connections and network reliability, and economic benefits that only a new, alternative	Landscape and visual impacts on the surrounding character and views of the LTC site in the form of construction traffic haul routes, construction plant, machinery including cranes and the emerging road and tunnel development.	Landscape and visual impacts on the surrounding character and views of the LTC development. New structures include three lanes in both directions, cuttings and embankments, bridges, buildings tunnel entrances, viaducts, utilities	Landscape and visual impacts on the surrounding character and views of the LTC site in the form of demolition / decommissioning traffic haul routes, demolition plant, machinery including cranes. Potential landscape receptors affected: LCA 5; LCAs C5, D6 and D7. Potential visual receptor	**Landscape Receptors:** LCA C5: Tilbury Marshes, LCA D6: Chadwell Escarpment Urban fringe, LCA D7: West Tilbury Urban Fringe. **Visual Receptors:** **Viewpoint receptors north side of the River Thames near to waterfront** Group N1 (North shore waterfront): PRoW: Long distance PRoW, Thames Estuary/Two Forts Way (FP146). Tourist attractions including Tilbury Fort, Representative Viewpoints 12, to 16 (ES Volume 3, Chapter 6: Landscape and Visual Resources, Figures 3.15 to 3.17).

ID	Development	Potential cumulative impacts (construction)	Potential cumulative impacts (operation and maintenance)	Potential cumulative impacts (decommissioning)	Receptor(s) and receptor groups affected
	crossing, away from Dartford, can provide. Principally, this a new road link between the A2 and M25, crossing the A13 at Orsett before crossing under the River Thames east of Tilbury and Gravesend. A new link road will take traffic to the A2 near Shorne close to where the route becomes the M2.	Potential landscape receptors affected: LCA 5; LCAs C5, D6 and D7. Potential visual receptor groups affected: Groups N1, N2, N3, N4, N5, S1, S2, S3 & S4.	such as pylons. 4km of tunnels. Tunnel under the Thames starts at the Gravesend Road and emerges on the north side of the Thames at east of Zone A. Potential landscape receptors affected: LCA 5; LCAs C5, D6 and D7. Potential visual receptor groups affected: N1, N2, N3, N4, N%, S1, S2, S3 & S4.	groups affected: Groups N1, N2, N3, N4, N5, S1, S2, S3 & S4.	Group N2 (Coastal Plain): Residential receptors on the east side of Tilbury, Access Land (including Walton and Parsonage Commons, commercial and industrial receptors which include *p*eople working *at* the sewage works, and National Grid's 400kV Tilbury Substation (Zone B), dynamic receptors along Fort Road and Cooper Shaw Road, Representative Viewpoints 6, 8, 9 and 11 (ES Volume 3, Chapter 6: Landscape and Visual Resources, Figures 3.9, 3.11, 3.12 and 3.14). Group N3*:* (South facing Chadwell St Mary escarpment) Community facility of St James' Church g*rave*yard and Representative Viewpoints 3, 4, 7 and,10 (ES Volume 3, Chapter 6: Landscape and Visual Resources, Figures 3.6, 3.7, 3.10 and 3.13). **Viewpoint receptors north of the River Thames mid and far distance (>3km)** Group N4: Representative Viewpoints 17, 30, 31 and 32 (ES Volume 3, Chapter 5: Landscape and Visual Resources, Figures 3.18 and 3.25 to 3.27) (Coalhouse Fort area). Group N5: : Representative Viewpoints 1, 2, 5, 33 and, 34 (ES Volume 3, Chapter 5: Landscape and Visual Resources, Figures 3.4, 3.5, 3.8, 3.28 and 3.29) (to the west of East Tilbury). **Viewpoint receptors south side of the River Thames near *to* (Gravesend waterfront)** Group S1 (south shore waterfront): Residential and commercial visual receptors Gravesend waterfront, public access and tourist attractions at Gravesend Gordon Recreation Ground and gardens, New Tavern Fort, PRoW Saxon Shore W*ay*, commercial and industrial receptors at Milton, dynamic receptors vessels using River Thames, Representative Viewpoints 18, 19, 20, 21, 23 (ES Volume 3, Chapter 6: Landscape and Visual Resources, Figures 3..18 to 3.21). Group S2 (elevated locations Gravesend): Residential and public access receptors in Gravesend particularly Windmill Gardens and Windmill Hill, PRoW east of Gravesend Viewpoints 22 and 28 (ES Volume3, Chapter 6: Landscape and Visual Resources, Figures 3.20 and 3.23) (near elevated) **Viewpoint receptors south of the River Thames mid and far distance (>3km)** Group S3 (AONB): Dynamic road receptors Harts Hill north edge of the Kent Downs AONB Representative Viewpoint 29 (ES Volume 3, Chapter 6: Landscape and Visual Resources, Figure 3.24). Group S4 (south shore marshes): Tourist attractions including Cliffe Pools RSPB, Cliffe Fort and Shoremead Fort Saxon Shore W*ay* and PRoWs ona Shorne and Higham Marshes, Representative Viewpoints 24, 25, 26, 27 (ES Volume 3, Chapter 6: Landscape and Visual Resources, Figures 3.21 to 3.23).
East Tilbury Developments					
005 18/00664/CONDC	Redevelopment of an area of previously developed land towards the southern boundary of Thames Industrial Estate to provide 50 dwellings, together with an associated financial commitment towards the repair, upkeep and stewardship of surrounding former factory buildings (some of which are listed), improved access arrangements and the creation of an area of public open space along the site frontage. One Big Self Store Ltd Trafalgar House Thames Industrial Park Princess Margaret Road East Tilbury Essex.	Landscape and visual impacts on the surrounding character and views in the form of construction traffic haul routes, construction plant, machinery. Potential landscape receptors affected: LCA D7.	Landscape and visual impacts on the surrounding character and views of the new housing development. Potential landscape receptors affected: LCA D7; visual receptor groups affected: Group N5. (excluding VP1)	Landscape and visual impacts on the surrounding character and views of the LTC site in the form of demolition / decommissioning traffic haul routes, demolition plant, machinery. Potential landscape receptors affected: LCA D7	**Landscape Receptors:** LCA D7: West Tilbury Urban Fringe.

ID	Development	Potential cumulative impacts (construction)	Potential cumulative impacts (operation and maintenance)	Potential cumulative impacts (decommissioning)	Receptor(s) and receptor groups affected
011 16/01475/SCR	Request for Environmental Impact Assessment (EIA) Screening Opinion: Proposed development of up to 200 dwellings with associated access and open space Gothards Field Rear of The George And Dragon, East Tilbury Road, Linford, Essex	Landscape and visual impacts on the surrounding character and views in the form of construction traffic haul routes, construction plant, machinery. Potential landscape receptors affected: LCA D7; visual receptor groups affected: Group N5. (excluding VP1)	Landscape and visual impacts on the surrounding character and views of the new housing development. Potential landscape receptors affected: LCA D7; visual receptor groups affected: Group N5. (excluding VP1)	Landscape and visual impacts on the surrounding character and views of the LTC site in the form of demolition / decommissioning traffic haul routes, demolition plant, machinery. Potential landscape receptors affected: LCA D7; visual receptor groups affected: Group N5. (excluding VP1)	**Landscape Receptors:** LCA D7: West Tilbury Urban Fringe. **Visual Receptors:** **Viewpoint receptors north side of the River Thames near to waterfront** Group N5: Representative Viewpoints 1, 2, 5, 33 and, 34 (ES Volume 3, Chapter 5: Landscape and Visual Resources, Figures 3.4, 3.5, 3.8, 3.28 and 3.29) (to the west of East Tilbury).
012 16/01232/OUT	Application for outline planning permission with some matters (appearance, landscaping, layout and scale) reserved: Proposed development of up to 1,000 dwellings (Use Class C3), a new local road network including a vehicular / pedestrian railway crossing, a new single form entry primary school, local centre including provision for a maximum of 750 sq.m. Use Class A1 (shops) / Use Class A3 (food and drink) / Use Class D1 (non-residential institutions) floorspace, and new areas of open space, including formal recreation. Land for Development Muckingford Road, Linford, Essex	Landscape and visual impacts on the surrounding character and views in the form of construction traffic haul routes, construction plant, machinery. Potential landscape receptors affected: LCA D7; visual receptor groups affected: Group N5. (excluding VP1)	Landscape and visual impacts on the surrounding character and views of the new housing, school, retail and road development. Potential landscape receptors affected: LCA D7; visual receptor groups affected: Group N5. (excluding VP1)	Landscape and visual impacts on the surrounding character and views in the form of demolition / decommissioning traffic haul routes, demolition plant, machinery. Potential landscape receptors affected: LCA D7; visual receptor groups affected: Group N5. (excluding VP1)	**Landscape Receptors:** LCA D7: West Tilbury Urban Fringe. **Visual Receptors:** **Viewpoint receptors north side of the River Thames near to waterfront** Group N5: Representative Viewpoints 1, 2, 5, 33 and, 34 (ES Volume 3, Chapter 5: Landscape and Visual Resources, Figures 3.4, 3.5, 3.8, 3.28 and 3.29) (to the west of East Tilbury).
Chadwell St Mary Developments					
014 16/00412/OUT	Outline application for proposed residential redevelopment, with all matters reserved apart from principle and access (Indicative layout provided indicates up to 203 dwellings) Star Industrial Estate Linford Road Chadwell St Mary Essex	Landscape and visual impacts on the surrounding character and views in the form of construction traffic haul routes, construction plant, machinery. Potential landscape receptors affected: LCA D6.	Landscape and visual impacts on the surrounding character and views of the new housing development. Potential landscape receptors affected: LCA D6.	Landscape and visual impacts on the surrounding character and views in the form of demolition / decommissioning traffic haul routes, demolition plant, machinery. Potential landscape receptors affected: LCA D6.	**Landscape Receptors:** LCA D6: West Tilbury Urban Fringe
034 15/00379/OUT	Outline application (with all matters reserved for a subsequent application) for proposed residential redevelopment of land between 39 and 41 St John's Road consisting of up to 43 dwellings, landscaping and new access. Land Adjacent 39 And 41 And to The South Of St Johns Road Chadwell St Mary Essex	Landscape and visual impacts on the surrounding character and views in the form of construction traffic haul routes, construction plant, machinery. Potential landscape receptors affected: LCA D6.	Landscape and visual impacts on the surrounding character and views of the new housing development. Potential landscape receptors affected: LCA D6	Landscape and visual impacts on the surrounding character and views in the form of demolition / decommissioning traffic haul routes, demolition plant, machinery. Potential landscape receptors affected: LCA D6.	**Landscape Receptors:** LCA D6: West Tilbury Urban Fringe

ID	Development	Potential cumulative impacts (construction)	Potential cumulative impacts (operation and maintenance)	Potential cumulative impacts (decommissioning)	Receptor(s) and receptor groups affected
Tilbury Developments					
016 17/00977/FUL	Retention and completion of waste wood processing plant (Class B2/B8) & fire retained area bounded by concrete push walls, erection of buildings to form associated storage, reception/ administration, security, and staff welfare area; formation of impermeable surface to form a lorry parking/waiting area; weighbridge and staff parking area together with associated highways and drainage works Land Part of Marsh Farm Sewage Treatment Plant Fort Road Tilbury Essex	Landscape and visual impacts on the surrounding character and views in the form of construction traffic haul routes, construction plant, machinery. Potential landscape receptors affected: LCA C5; visual receptor groups affected: Group N1, N2, S1 and S2.	Landscape and visual impacts on the surrounding character and views of the industrial processing plant. Potential landscape receptors affected: LCA C5; visual receptor groups affected: Group N1, N2, S1 and S2.	Landscape and visual impacts on the surrounding character and views in the form of demolition / decommissioning traffic haul routes, demolition plant, machinery. Potential landscape receptors affected: LCA C5; visual receptor groups affected: Group N1, N2, S1 and S2.	**Landscape Receptors:** LCA C5: Tilbury Marshes **Visual Receptors:** **Viewpoint receptors north side of the River Thames near to waterfront** Group N1 (North shore waterfront): PRoW: Long distance PRoW, Thames Estuary/Two Forts Way (FP146). Tourist attractions including Tilbury Fort, Representative Viewpoints 12 to 16 (ES Volume 3, Chapter 6: Landscape and Visual Resources, Figures 3.15 to 3.17). Group N2 (Coastal Plain): Residential receptors on the east side of Tilbury, Access Land (including Walton and Parsonage Commons, commercial and industrial receptors which include *p*eople working *at* the sewage works, and National Grid's 400kV Tilbury Substation (Zone B), dynamic receptors along Fort Road and Cooper Shaw Road, Representative Viewpoints 6, 8, 9 and 11 (ES Volume 3, Chapter 6: Landscape and Visual Resources, Figures 3.9, 3.11, 3.12 and 3.14). **Viewpoint receptors south side of the River Thames near to (Gravesend waterfront)** Group S1 (south shore waterfront): Residential and commercial visual receptors Gravesend waterfront, public access and tourist attractions at Gravesend Gordon Recreation Ground and gardens, New Tavern Fort, Saxon Shore Way, commercial and industrial receptors at Milton, dynamic receptors vessels using River Thames, Representative Viewpoints 18, 19, 20, 21, 23 (ES Volume 3, Chapter 6: Landscape and Visual Resources, Figures 3..18 to 3.21). Group S2 (elevated locations Gravesend): Residential and public access receptors in Gravesend particularly Windmill Gardens and Windmill Hill, PRoW east of Gravesend Representative Viewpoints 22 and, 28 (ES Volume3, Chapter 6: Landscape and Visual Resources, Figures 3.20 and 3.23) (near elevated).
018 11/50361/TTGETL	An extension of time limit for implementation of planning permission ref 01.08.04/87C. To construct and operate a Biomass and Energy from waste fuelled generating station for a period of two years to 26 Aug 2014. Former Cargill Plant Tilbury Freeport Tilbury Essex	Landscape and visual impacts on the surrounding character and views in the form of construction traffic haul routes, construction plant, machinery. Potential landscape receptors affected: LCA C5.	Landscape and visual impacts on the surrounding character and views of the industrial processing plant. Potential landscape receptors affected: LCA C5.	Landscape and visual impacts on the surrounding character and views in the form of demolition / decommissioning traffic haul routes, demolition plant, machinery. Potential landscape receptors affected: LCA C5.	**Landscape Receptors:** LCA C5: Tilbury Marshes **Visual Receptors:** **Viewpoint receptors north side of the River Thames near to waterfront** Group N1 (North shore waterfront): PRoW: Long distance PRoW, Thames Estuary/ Two Forts Way (FP146). Tourist attractions including Tilbury Fort, Representative Viewpoints 12 to 16 (ES Volume 3, Chapter 6: Landscape and Visual Resources, Figures 3.15 to 3.17). Group N2 (Coastal Plain): Residential receptors on the east side of Tilbury, Access Land (including Walton and Parsonage Commons, commercial and industrial receptors which include *p*eople working *at* the sewage works, and National Grid's 400kV Tilbury Substation (Zone B), dynamic receptors along Fort Road and Cooper Shaw Road, Representative Viewpoints 6, 8, 9 and 11 (ES Volume 3, Chapter 6: Landscape and Visual Resources, Figures 3.9, 3.11, 3.12 and 3.14). **Viewpoint receptors south side of the River Thames near to (Gravesend waterfront)** Group S1 (south shore waterfront): Residential and commercial visual receptors Gravesend waterfront, public access and tourist attractions at Gravesend Gordon Recreation Ground and gardens, New Tavern Fort, Saxon Shore Way, commercial and industrial receptors at Milton, dynamic receptors vessels using River Thames, Representative Viewpoints 18, 19, 20, 21, 23 (ES Volume 3, Chapter 6: Landscape and Visual Resources, Figures 3..18 to 3.21).

ID	Development	Potential cumulative impacts (construction)	Potential cumulative impacts (operation and maintenance)	Potential cumulative impacts (decommissioning)	Receptor(s) and receptor groups affected
					Group S2 (elevated locations Gravesend): Residential and public access receptors in Gravesend particularly Windmill Gardens and Windmill Hill, PRoW east of Gravesend Representative Viewpoints 22 and, 28 (ES Volume3, Chapter 6: Landscape and Visual Resources, Figures 3.20 and 3.23) (near elevated)
050 17/00349/SCR	EIA Screening Opinion - Application for a Certificate of Lawfulness of Proposed Use or Development: Proposed processing of biofuels and other suitable waste derived feedstocks into a manufactured clean gas product (Use Class B2). Land Part of Marsh Farm Sewage Treatment Plant Fort Road Tilbury Essex	Landscape and visual impacts on the surrounding character and views in the form of construction traffic haul routes, construction plant, machinery. Potential landscape receptors affected: LCA C5; visual receptor groups affected: Group N1, N2, S1 and S2.	Landscape and visual impacts on the surrounding character and views of the industrial processing plant. Potential landscape receptors affected: LCA C5; visual receptor groups affected: Group N1, N2, S1 and S2.	Landscape and visual impacts on the surrounding character and views in the form of demolition / decommissioning traffic haul routes, demolition plant, machinery. Potential landscape receptors affected: LCA C5; visual receptor groups affected: Group N1, N2, S1 and S2.	**Landscape Receptors:** LCA C5: Tilbury Marshes **Visual Receptors:** **Viewpoint receptors north side of the River Thames near to waterfront** Group N1 (North shore waterfront): PRoW: Long distance PRoW, Thames Estuary/Two Forts Way (FP146). Tourist attractions including Tilbury Fort, Representative Viewpoints 12, to 16 (ES Volume 3, Chapter 6: Landscape and Visual Resources, Figures 3.15 to 3.17). Group N2 (Coastal Plain): Residential receptors on the east side of Tilbury, Access Land (including Walton and Parsonage Commons, commercial and industrial receptors which include *p*eople working *at* the sewage works, and National Grid's 400kV Tilbury Substation (Zone B), dynamic receptors along Fort Road and Cooper Shaw Road, Representative Viewpoints 6, 8, 9 and 11 (ES Volume 3, Chapter 6: Landscape and Visual Resources, Figures 3.9, 3.11, 3.12 and 3.14). **Viewpoint receptors south side of the River Thames near *to* (Gravesend waterfront)** Group S1 (south shore waterfront): Residential and commercial visual receptors Gravesend waterfront, public access and tourist attractions at Gravesend Gordon Recreation Ground and gardens, New Tavern Fort, Saxon Shore Way, commercial and industrial receptors at Milton, dynamic receptors vessels using River Thames, Representative Viewpoints 18, 19, 20, 21, 23 (ES Volume 3, Chapter 6: Landscape and Visual Resources, Figures 3..18 to 3.21). Group S2 (elevated locations Gravesend): Residential and public access receptors in Gravesend particularly Windmill Gardens and Windmill Hill, PRoW east of Gravesend Representative Viewpoints 22 and, 28 (ES Volume3, Chapter 6: Landscape and Visual Resources, Figures 3.20 and 3.23) (near elevated).
079 19/01274/FUL	Proposed Short Term Operation Reserve (STOR) electricity generating station comprising 14 no. gas-fired generators with a capacity up to 21 MW with associated development at land adjacent to Tilbury Waste Water Treatment Works, Fort Road, Tilbury. Anglian Water Services Sewage Treatment Plant Fort Road Tilbury Essex	Landscape and visual impacts on the surrounding character and views in the form of construction traffic haul routes, construction plant, machinery. Potential landscape receptors affected: LCA C5	Landscape and visual impacts on the surrounding character and views of the industrial processing plant. Potential landscape receptors affected: LCA C5	Landscape and visual impacts on the surrounding character and views in the form of demolition / decommissioning traffic haul routes, demolition plant, machinery. Potential landscape receptors affected: LCA C5	**Landscape Receptors:** LCA C5: Tilbury Marshes **Visual Receptors:** **Viewpoint receptors north side of the River Thames near to waterfront** Group N1 (North shore waterfront): PRoW: Long distance PRoW, Thames Estuary/Two Forts Way (FP146). Tourist attractions including Tilbury Fort, Representative Viewpoints 12 to 16 (ES Volume 3, Chapter 6: Landscape and Visual Resources, Figures 3.15 to 3.17). Group N2 (Coastal Plain): Residential receptors on the east side of Tilbury, Access Land (including Walton and Parsonage Commons, commercial and industrial receptors which include *p*eople working *at* the sewage works, and National Grid's 400kV Tilbury Substation (Zone B), dynamic receptors along Fort Road and Cooper Shaw Road, Representative Viewpoints 6, 8, 9 and 11 (ES Volume 3, Chapter 6: Landscape and Visual Resources, Figures 3.9, 3.11, 3.12 and 3.14). **Viewpoint receptors south side of the River Thames near *to* (Gravesend waterfront)** Group S1 (south shore waterfront): Residential and commercial visual receptors Gravesend waterfront, public access and tourist attractions at Gravesend Gordon Recreation Ground and gardens, New Tavern Fort, Saxon Shore Way, commercial and industrial receptors at Milton, dynamic receptors vessels using River Thames, Representative Viewpoints 18, 19, 20, 21, 23 (ES Volume 3, Chapter 6: Landscape and Visual Resources, Figures 3..18 to 3.21).

ID	Development	Potential cumulative impacts (construction)	Potential cumulative impacts (operation and maintenance)	Potential cumulative impacts (decommissioning)	Receptor(s) and receptor groups affected
					Group S2 (elevated locations Gravesend): Residential and public access receptors in Gravesend particularly Windmill Gardens and Windmill Hill, PRoW east of Gravesend Representative Viewpoints 22 and, 28 (ES Volume3, Chapter 6: Landscape and Visual Resources, Figures 3.20 and 3.23) (near elevated).
081 12.04.09.04/266C	Tilbury Green Power Phase 2 S36C application. Biomass and energy from waste fuelled generation station at Tilbury Docks, Essex: variation application under section 36c of the electricity act 1989. Former Cargill Plant Tilbury Freeport Tilbury Essex.	Landscape and visual impacts on the surrounding character and views in the form of construction traffic haul routes, construction plant, machinery. Potential landscape receptors affected: LCA C5; visual receptor groups affected: Group N1, N2, S1 and S2.	Landscape and visual impacts on the surrounding character and views of the industrial processing plant. Potential landscape receptors affected: LCA C5; visual receptor groups affected: Group N1, N2, S1 and S2.	Landscape and visual impacts on the surrounding character and views in the form of demolition / decommissioning traffic haul routes, demolition plant, machinery. Potential landscape receptors affected: LCA C5; visual receptor groups affected: Group N1, N2, S1 and S2.	**Landscape Receptors:** LCA C5: Tilbury Marshes **Visual Receptors:** **Viewpoint receptors north side of the River Thames near to waterfront** Group N1 (North shore waterfront): PRoW: Long distance PRoW, Thames Estuary/Two Forts Way (FP146). Tourist attractions including Tilbury Fort, Representative Viewpoints 12, to 16 (ES Volume 3, Chapter 6: Landscape and Visual Resources, Figures 3.15 to 3.17). Group N2 (Coastal Plain): Residential receptors on the east side of Tilbury, Access Land (including Walton and Parsonage Commons, commercial and industrial receptors which include *p*eople working *at* the sewage works, and National Grid's 400kV Tilbury Substation (Zone B), *d*ynamic receptors along Fort Road and Cooper Shaw Road, Representative Viewpoints 6, 8, 9 and 11 (ES Volume 3, Chapter 6: Landscape and Visual Resources, Figures 3.9, 3.11, 3.12 and 3.14). **Viewpoint receptors south side of the River Thames near *to* (Gravesend waterfront)** Group S1 (south shore waterfront): Residential and commercial visual receptors Gravesend waterfront, public access and tourist attractions at Gravesend Gordon Recreation Ground and gardens, New Tavern Fort, Saxon Shore Way, commercial and industrial receptors at Milton, dynamic receptors vessels using River Thames, Representative Viewpoints 18, 19, 20, 21, 23 (ES Volume 3, Chapter 6: Landscape and Visual Resources, Figures 3..18 to 3.21). Group S2 (elevated locations Gravesend): Residential and public access receptors in Gravesend particularly Windmill Gardens and Windmill Hill, PRoW east of Gravesend Representative Viewpoints 22 and, 28 (ES Volume3, Chapter 6: Landscape and Visual Resources, Figures 3.20 and 3.23) (near elevated).
Gravesend Developments					
064 (policy ref CS04)	Canal Basin Regeneration Area: Gravesend Local Plan Core Strategy Policy CS04 for mixed-use development of around 650 dwellings and 4,650 sq m of B1a and B1c employment floorspace. Gordon Promenade East, Gravesend	Landscape and visual impacts on the surrounding character and views in the form of construction traffic haul routes, construction plant, machinery. Potential visual receptor groups affected: Group S1 and S2.	Landscape and visual impacts on the surrounding character and views of the new housing, school, retail and road development. Potential visual receptor groups affected: Group S1 and S2.	Landscape and visual impacts on the surrounding character and views in the form of demolition / decommissioning traffic haul routes, demolition plant, machinery. visual receptor groups affected: Group S1 and S2.	**Visual Receptors:** **Viewpoint receptors south side of the River Thames near *to* (Gravesend waterfront)** Group S2 (elevated locations Gravesend): Residential and public access receptors in Gravesend particularly Windmill Gardens and Windmill Hill, PRoW east of Gravesend Representative Viewpoints 22 and, 28 (ES Volume3, Chapter 6: Landscape and Visual Resources, Figures 3.20 and 3.23) (near elevated).

1.5 Identifying cumulative developments affecting each receptor

1.5.1 Table 1.2 to Table 1.4 summarise the cumulative developments that have the potential to cause cumulative effects at each identified receptor, the sensitivity of that receptor to cumulative impacts, and the starting position to the cumulative effects assessment, which is the predicted residual effect of Thurrock Flexible Generation Plant alone during construction, operation and decommissioning (as established in ES Volume 3, Chapter 6: Landscape and Visual Resources).

Table 1.2: Summary of cumulative developments affecting each receptor (construction).

Receptor affected	Sensitivity of receptor to cumulative effects	Standalone effect of Thurrock Flexible Generation Plant on receptor	Cumulative development(s) with the potential to affect this receptor
Landscape Receptors:			
LCA C5: Tilbury Marshes	Medium	Magnitude of impact: Moderate Significance of effect: **Moderate** (not significant)	NSIPs: 042 TR030003 Tilbury2 058 TR010032 LTC Magnitude of impact: Moderate (Tilbury2) Moderate to major (LTC)
LCA C5: Tilbury Marshes	Medium	Magnitude of impact: Moderate Significance of effect: **Moderate** (not significant)	Other relevant developments: Tilbury Developments: 016 17/00977/FUL 018 11/50361/TTGETL 050 17/00349/SCR 079 19/01274/FUL 081 12.04.09.04/266C Magnitude of impact: Minor to negligible
LCA D6: Chadwell Escarpment Urban Fringe	Medium	Magnitude of impact: Minor Significance of effect: **Minor** (not significant)	NSIPs: 058 TR010032 LTC only Magnitude of impact: Minor
LCA D6: Chadwell Escarpment Urban Fringe	Medium	Magnitude of impact: Minor Significance of effect: **Minor** (not significant)	Other relevant developments: Chadwell St Mary Developments: 014 16/00412/OUT 034 15/00379/OUT Magnitude of impact: Negligible to minor
LCA D7: West Tilbury Urban Fringe	Medium	Magnitude of impact: Minor Significance of effect: **Minor** (not significant)	NSIPs: 058 TR010032 LTC only Magnitude of impact: Minor
LCA D7: West Tilbury Urban Fringe	Medium	Magnitude of impact: Minor Significance of effect: **Minor** (not significant)	Other relevant developments: East Tilbury Developments: 005 18/00664/CONDC 011 16/01475/SCR 012 16/01232/OUT Magnitude of impact: Minor
Visual Receptors:			
N1: Public Access: Thames Estuary Path PRoW	High Users of Footpath 146, adjacent to the sewage works (Viewpoint 12) will have a medium sensitivity to the proposed development	Magnitude of impact: No change to minor and moderate (Viewpoint 15 for work on the causeway in Zone G only) Significance of effect: **Minor** (not significant) to **major** (Viewpoint 15 for work on the causeway in Zone G only – significant)	NSIPs: 042 TR030003 Tilbury2 058 TR010032 LTC Magnitude of impact: Moderate

Receptor affected	Sensitivity of receptor to cumulative effects	Standalone effect of Thurrock Flexible Generation Plant on receptor	Cumulative development(s) with the potential to affect this receptor
N1: Public Access: Thames Estuary Path PRoW	High Users of Footpath 146, adjacent to the sewage works (Viewpoint 12) will have a medium sensitivity to the proposed development	Magnitude of impact: No change to moderate (Viewpoints 15 and 16 for work on the causeway in Zone G only) Significance of effect: **Minor** (not significant) to **major** (Viewpoints 15 and 16 for work on the causeway in Zone G only – significant)	Other relevant developments: Tilbury Developments: 016 17/00977/FUL 050 17/00349/SCR Magnitude of impact: Minor
N1: Tourist attraction: Tilbury Fort	High Users of Footpath 146, adjacent to the sewage works (Viewpoint 12) will have a medium sensitivity to the proposed development	Magnitude of impact: No change to minor Significance of effect: **Minor** to **moderate** (not significant)	NSIPs: 058 TR010032 LTC Magnitude of impact: Minor
N1: Tourist attraction: Tilbury Fort	High Users of Footpath 146, adjacent to the sewage works (Viewpoint 12) will have a medium sensitivity to the proposed development	Magnitude of impact: No change to minor Significance of effect: **Minor** to **moderate** (not significant)	Other relevant developments: Tilbury Developments: 016 17/00977/FUL 050 17/00349/SCR Magnitude of impact: Negligible to no change
N1: Viewpoints: 12, 13 and 14	High Users of Footpath 146, adjacent to the sewage works (Viewpoint 12) will have a medium sensitivity to the proposed development	Magnitude of impact: No change to minor Significance of effect: **Minor** to **moderate** (not significant)	NSIPs: 058 TR010032 LTC Magnitude of impact: Minor
N1: Viewpoints: 12, 13 and 14	High Users of Footpath 146, adjacent to the sewage works (Viewpoint 12) will have a medium sensitivity to the proposed development	Magnitude of impact: No change to minor Significance of effect: **Minor** to **moderate** (not significant)	Other relevant developments: Tilbury Developments: 016 17/00977/FUL 050 17/00349/SCR Magnitude of impact: Negligible to no change
N1: Viewpoints 15 and 16	High	Magnitude of impact: Minor (Zone A) and moderate (for work on the causeway in Zone G) Significance of effect: **Moderate** (not significant) to **Major** (for work on the causeway in Zone G only – significant)	NSIPs: 042 TR030003 Tilbury2 058 TR010032 LTC Magnitude of impact: Moderate
N1: Viewpoints 15 and 16	High	Magnitude of impact Minor (Zone A) and moderate (for work on the causeway in Zone G) Significance of effect: **Moderate** (not significant) to **Major** (for work on the causeway in Zone G only – significant)	Other relevant developments: Tilbury Developments: 016 17/00977/FUL 050 17/00349/SCR Magnitude of impact: Negligible to no change
N2: Residential groups east side of Tilbury and Access Land at Walton and Parsonage Commons, as well as either side of Fort Road and Cooper Shaw Road	High	Magnitude of impact: No change to Minor Significance of effect: **Moderate** (not significant) to **major** (Parsonage Common Access Land) (significant)	NSIPs: 042 TR030003 Tilbury2 058 TR010032 LTC Magnitude of impact: Minor to moderate

Receptor affected	Sensitivity of receptor to cumulative effects	Standalone effect of Thurrock Flexible Generation Plant on receptor	Cumulative development(s) with the potential to affect this receptor
N2: Residential groups east side of Tilbury and Access Land at Walton and Parsonage Commons, as well as either side of Fort Road and Cooper Shaw Road	High	Magnitude of impact: Minor Significance of effect: **Moderate** (not significant) to **major** (Access Land) (significant)	Other relevant developments: Tilbury Developments: 016 17/00977/FUL 050 17/00349/SCR Magnitude of impact: Negligible to no change
N2: Dynamic receptors (rail, Fort Road and Cooper Shaw Road users)	Low to high (rail passengers travelling for pleasure)	Magnitude of impact: Minor to moderate Significance of effect: **Minor** to **moderate** (rail passengers) (not significant)	NSIPs: 042 TR030003 Tilbury2 058 TR010032 LTC Magnitude of impact: Moderate
N2: Dynamic receptors (rail, Fort Road and Cooper Shaw Road users)	Low to high (rail passengers travelling for pleasure)	Magnitude of impact: Minor to moderate Significance of effect: **Minor** to **moderate** (rail passengers) (not significant)	Other relevant developments: Tilbury Developments: 016 17/00977/FUL 050 17/00349/SCR Magnitude of impact: Negligible to no change
N2: Viewpoints 6, 8, 9 and 11	Low (road users) to high (pedestrians using Access Land)	Magnitude of impact: Minor to moderate Significance of effect: **Minor** (not significant) to **major** (users of Access Land - significant)	NSIPs: 042 TR030003 Tilbury2 058 TR010032 LTC Magnitude of impact: Moderate to major
N2: Viewpoints 6, 8, 9 and 11	Low (road users) to high (pedestrians using Access Land)	Magnitude of impact: Minor to moderate Significance of effect: **Minor** (not significant) to **major** (users of Access Land - significant)	Other relevant developments: Tilbury Developments: 016 17/00977/FUL 050 17/00349/SCR Magnitude of impact: Negligible to no change
N3: Community facility – St James' Church graveyard (Viewpoint 7)	High	Magnitude of impact: Moderate Significance of effect: **Moderate** (not significant)	NSIPs: 042 TR030003 Tilbury2 058 TR010032 LTC Magnitude of impact: Moderate
N3: Viewpoints 3, 4, 7 and 10	High	Magnitude of impact: Negligible to moderate Significance of effect: **minor** to **moderate** (not significant)	NSIPs: 042 TR030003 Tilbury2 058 TR010032 LTC Magnitude of impact: Negligible to moderate
N3: None of the receptors in this location will be significantly adversely affected by the construction phases of the other cumulative / non NSIP developments and are not considered further in this assessment. Only the NSIPs have the potential to have cumulative effects.			
N4: Tourist Attraction and Public Open Space (Coalhouse Fort)	High	Magnitude of impact: No change to negligible Significance of effect: **None** to **Minor** (not significant)	NSIPs: 042 TR030003 Tilbury2 058 TR010032 LTC Magnitude of impact: Minor
N4: Viewpoints 17, 30, 31 and 32	High	Magnitude of impact: No change to negligible Significance of effect: **None** to **minor** (not significant)	NSIPs: 042 TR030003 Tilbury2 058 TR010032 LTC Magnitude of impact: Minor
N4: None of the receptors in this location will be significantly adversely affected by the construction phases of the other cumulative / non NSIP developments and are not considered further in this assessment. Only the NSIPs have the potential to have cumulative effects on the receptors.			
N5: Residential receptors: (Dwellings on the west side of East Tilbury) and PRoWs footpath 67 and bridleways 58 and 63	High	Magnitude of impact: No change to minor Significance of effect: **None** to **moderate** (not significant)	NSIPs: 042 TR030003 Tilbury2 058 TR010032 LTC Magnitude of impact: Minor to negligible

Receptor affected	Sensitivity of receptor to cumulative effects	Standalone effect of Thurrock Flexible Generation Plant on receptor	Cumulative development(s) with the potential to affect this receptor
N5: Viewpoints 5, 33 and 34	High	Magnitude of Change: Negligible Significance of effect: **Minor** (not significant)	NSIPs: 042 TR030003 Tilbury2 058 TR010032 LTC Magnitude of impact: Minor
N5: None of the receptors in this location will be significantly adversely affected by the construction phases of the other cumulative / non NSIP developments and are not considered further in this assessment. Only the NSIPs have the potential to have cumulative effects on the receptors.			
S1: Residential (Gravesend waterfront); Saxon Shore Way, tourist attractions and recreation (Gordon Gardens, New Tavern Fort, Gravesend waterfront); marine-based dynamic receptors	Low (people working on marine-vessels) to high	Magnitude of impact: Negligible to minor Significance of effect: **Negligible** to **moderate** (not significant)	NSIPs: 042 TR030003 Tilbury2 058 TR010032 LTC Magnitude of impact: Moderate
S1: Residential (Gravesend waterfront); Saxon Shore Way, tourist attractions and recreation (Gordon Gardens, New Tavern Fort, Gravesend waterfront); marine-based dynamic receptors	Low (people working on marine vessels) to high	Magnitude of impact: Negligible to Minor Significance of effect: **Negligible** to **moderate** (not significant)	Other relevant developments: Tilbury Developments: 016 17/00977/FUL 050 17/00349/SCR Magnitude of impact: Negligible to minor
S1: Residential (Gravesend waterfront); Saxon Shore Way, tourist attractions and recreation (Gordon Gardens, New Tavern Fort, Gravesend waterfront); marine-based dynamic receptors	Low (people working on marine vessels) to high	Magnitude of impact: Negligible to Minor Significance of effect: **Negligible** to **moderate** (not significant)	Other relevant developments Gravesend Developments: 064 (policy ref CS04) Magnitude of impact: Negligible to minor
S1: Viewpoints 18, 19 to 21 and 23Viewpoint	Medium (people working at these locations) to high	Magnitude of impact: Negligible to minor Significance of effect: **Negligible** to **moderate** (not significant)	NSIPs: 042 TR030003 Tilbury2 058 TR010032 LTC Magnitude of impact: Moderate
S1: Viewpoint 20 and Viewpoint 21	High	Magnitude of impact: Minor Significance of effect: **Moderate** (not significant)	Other relevant developments: Tilbury Developments: 016 17/00977/FUL 050 17/00349/SCR Magnitude of impact: Negligible to minor
S2: Residents and public open space users (Windmill Hill, Windmill Gardens, Gravesend), PRoW east of Gravesend	High	Magnitude of impact: Negligible Significance of effect: (not significant)	NSIPs: 042 TR030003 Tilbury2 058 TR010032 LTC y Magnitude of impact: Minor to moderate
S2: Residents and public open space users (Windmill Hill, Windmill Gardens, Gravesend), PRoW east of Gravesend	High	Magnitude of impact: Negligible Significance of effect: **Minor** (not significant)	Other relevant developments: Tilbury Developments: 016 17/00977/FUL 050 17/00349/SCR Magnitude of impact: Minor
S2: Residents and public open space users (Windmill Hill, Windmill Gardens, Gravesend), PRoWs east of Gravesend	High	Magnitude of impact: Negligible Significance of effect: **Minor** (not significant)	Other relevant developments: Gravesend Developments: 064 (Policy reference CS04) Magnitude of impact: Negligible to minor
S2: Viewpoint 22 and Viewpoint 28	High	Magnitude of impact: Negligible Significance of effect: **Minor** (not significant)	NSIPs: 042 TR030003 Tilbury2 058 TR010032 LTC Magnitude of impact: Moderate to minor

Receptor affected	Sensitivity of receptor to cumulative effects	Standalone effect of Thurrock Flexible Generation Plant on receptor	Cumulative development(s) with the potential to affect this receptor
S2: Viewpoint 22 and Viewpoint 28	High	Magnitude of impact: Negligible Significance of effect: **Minor** (not significant)	Other relevant developments: Tilbury Developments: 016 17/00977/FUL 050 17/00349/SCR Magnitude of impact: Minor
S2: Viewpoint 22 and Viewpoint 28	High	Magnitude of impact: Negligible Significance of effect: **Minor** (not significant)	Other relevant developments: Gravesend Developments: 064 (Policy reference CS04) Magnitude of impact: Negligible
S3: Dynamic road receptors - Harts Hill, Kent Downs AONB	Medium (within the AONB)	Magnitude of impact: Negligible to no change Significance of effect: **None** to **Minor** (not significant)	NSIPs: 042 TR030003 Tilbury2 058 TR010032 LTC Magnitude of impact: Negligible to minor
S3: Viewpoint 29	Very High	Magnitude of impact: Negligible Significance of effect: **Moderate** (not significant)	NSIPs: 042 TR030003 Tilbury2 058 TR010032 LTC Magnitude of impact: Minor
S3: None of the receptors in this location will be significantly adversely affected by the construction phases of the other cumulative / non NSIP developments and are not considered further in this assessment. Only the NSIPs have the potential to have cumulative effects.			

Receptor affected	Sensitivity of receptor to cumulative effects	Standalone effect of Thurrock Flexible Generation Plant on receptor	Cumulative development(s) with the potential to affect this receptor
S4: Tourist attractions including Cliffe Pools RSPB reserve, Cliffe Fort and Shornmead Fort, Saxon Shore Way (long distance footpath) and PRoW across Shorne and Higham Marshes	High	Magnitude of impact: Negligible Significance of effect: **Minor** (not significant)	NSIPs: 042 TR030003 Tilbury2 058 TR010032 LTC Magnitude of impact: Minor
S4: Viewpoints 24 to 27	High	Magnitude of impact: Negligible Significance of effect: **Minor** (not significant)	NSIPs: 042 TR030003 Tilbury2 058 TR010032 LTC Magnitude of impact: Minor
S4: None of the receptors in this location will be significantly adversely affected by the construction phases of the other cumulative / non NSIP developments and are not considered further in this assessment. Only the NSIPs have the potential to have cumulative effects.			

Table 1.3: Summary of cumulative developments affecting each receptor (operation and maintenance)

Receptor affected	Sensitivity of receptor to cumulative effects	Standalone effect of Thurrock Flexible Generation Plant on receptor	Cumulative development(s) with the potential to affect this receptor
Landscape Receptors:			
LCA C5: Tilbury Marshes	Medium	Magnitude of impact: Moderate Significance of effect: **Moderate** (not significant)	NSIPs: 042 TR030003 Tilbury2 058 TR010032 LTC Magnitude of impact: Moderate (Tilbury2) Moderate to Major (LTC)
LCA C5: Tilbury Marshes	Medium	Magnitude of impact: Moderate Significance of effect: **Moderate** (not significant)	Other relevant developments: Tilbury Developments: 016 17/00977/FUL 018 11/50361/TTGETL 050 17/00349/SCR 079 19/01274/FUL 081 12.04.09.04/266C Magnitude of impact: Minor to Negligible
LCA D6: Chadwell Escarpment Urban Fringe	Medium	Magnitude of impact: Minor Significance of effect: **Minor** (not significant)	NSIPs: 042 TR030003 Tilbury2 058 TR010032 LTC Magnitude of impact: Minor
LCA D6: Chadwell Escarpment Urban Fringe	Medium	Magnitude of impact: Minor Significance of effect: **Minor** (not significant)	Other relevant developments: Chadwell St Mary Developments: 014 16/00412/OUT 034 15/00379/OUT Magnitude of impact: Negligible to Minor
LCA D7: West Tilbury Urban Fringe	Medium	Magnitude of impact: Minor Significance of effect: **Minor** (not significant)	NSIPs: 042 TR030003 Tilbury2 058 TR010032 LTC Magnitude of impact: Minor
LCA D7: West Tilbury Urban Fringe	Medium	Magnitude of impact: Minor Significance of effect: **Minor** (not significant)	Other relevant developments: East Tilbury Developments: 005 18/00664/CONDC 011 16/01475/SCR 012 16/01232/OUT Magnitude of impact: Minor
Visual Receptors:			
N1: Public Access: Thames Estuary Path PRoW	High Medium (PRoW footpath 146 – Viewpoint 12)	Magnitude of impact: Negligible to minor Significance of effect: **Negligible** to **Moderate** (not significant)	NSIPs: 042 TR030003 Tilbury2 058 TR010032 LTC Magnitude of impact: Moderate
N1: Public Access: Thames Estuary Path PRoW	High Medium (PRoW footpath 146 – Viewpoint 12)	Magnitude of impact: Negligible to minor Significance of effect: **Negligible** to **moderate** (not significant)	Other relevant developments: Tilbury Developments: 016 17/00977/FUL 050 17/00349/SCR Magnitude of impact: Negligible
N1: Tourist attraction: Tilbury Fort	High	Magnitude of impact: Minor Significance of effect: **Moderate** (not significant)	NSIPs: 042 TR030003 Tilbury2 058 TR010032 LTC Magnitude of impact: Minor

Receptor affected	Sensitivity of receptor to cumulative effects	Standalone effect of Thurrock Flexible Generation Plant on receptor	Cumulative development(s) with the potential to affect this receptor
N1: Tourist attraction: Tilbury Fort	High	Magnitude of impact: Minor Significance of effect: **Moderate** (not significant)	Other relevant developments: Tilbury Developments: 016 17/00977/FUL 050 17/00349/SCR Magnitude of impact: Negligible to no change
N1: Viewpoints: 12, 13 and 14	High Medium (PRoW footpath 146 – Viewpoint 12)	Magnitude of impact Negligible to Minor Significance of effect: **Minor** to **Moderate** (not significant)	NSIPs: 042 TR030003 Tilbury2 058 TR010032 LTC Magnitude of Change: Minor
N1: Viewpoints: 12, 13 and 14	High Medium (PRoW footpath 146 – Viewpoint 12)	Magnitude of impact: Negligible to minor Significance of effect: **Minor** to **Moderate** (not significant)	Other relevant developments: Tilbury Developments: 016 17/00977/FUL 050 17/00349/SCR Magnitude of impact: Negligible to no change
N1: Viewpoints 15 and 16	High	Magnitude of impact: Minor Significance of effect: **Moderate** (not significant)	NSIPs: 042 TR030003 Tilbury2 058 TR010032 LTC Magnitude of impact: Moderate
N1: Viewpoints 15 and 16	High	Magnitude of impact: Minor Significance of effect: **Moderate** (not significant)	Other relevant developments: Tilbury Developments: 016 17/00977/FUL 050 17/00349/SCR Magnitude of impact: Negligible to no change
N2: Residential groups east side of Tilbury and Access Land Walton and Parsonage Commons, as well as either side of Fort Road and Cooper Shaw Road	High	Magnitude of impact: No change to minor Significance of effect: **None** to **Moderate** (not significant)	NSIPs: 042 TR030003 Tilbury2 058 TR010032 LTC Magnitude of impact: Minor to Moderate
N2: Residential groups east side of Tilbury and Access Land Parsonage Commons, as well as either side of Fort Road and Cooper Shaw Road and the Exchange Common Land (Zone E)	High	Magnitude of impact: No change to minor Significance of effect: **None** to **moderate** (not significant)	Other relevant developments: Tilbury Developments: 016 17/00977/FUL 050 17/00349/SCR Magnitude of impact: Negligible to no change
N2: Commercial / industrial (Tilbury sewage and substation) and dynamic receptors (rail, Fort Road and Cooper Shaw Road users)	High (rail passengers travelling for pleasure) Low (people in motor vehicles)	Magnitude of impact: Minor to moderate Significance of effect: **Minor** to **moderate** (not significant)	NSIPs: 042 TR030003 Tilbury2 058 TR010032 LTC Magnitude of impact: Moderate
N2: Commercial / industrial (Tilbury sewage and substation) and dynamic receptors (rail, Fort Road and Cooper Shaw Road users)	High (rail passengers travelling for pleasure) Low (people in motor vehicles)	Magnitude of impact: Minor to moderate Significance of effect: **Minor** to **moderate** (not significant)	Other relevant developments: Tilbury Developments: 016 17/00977/FUL 050 17/00349/SCR Magnitude of impact: Negligible to no change
N2: Viewpoints 6, 8, 9 and 11	Low (road users) High (pedestrians VPs 6 and 9)	Magnitude of impact: Minor to Moderate Significance of effect: **Minor** to **moderate** (not significant)	NSIPs: 042 TR030003 Tilbury2 058 TR010032 LTC Magnitude of impact: Moderate to major

Receptor affected	Sensitivity of receptor to cumulative effects	Standalone effect of Thurrock Flexible Generation Plant on receptor	Cumulative development(s) with the potential to affect this receptor
N2: Viewpoints 6, 8, 9 and 11	Low (road users) High (pedestrians VPs 6 and 9)	Magnitude of impact: Minor to moderate Significance of effect: **Minor** to **moderate** (Not Significant)	Other relevant developments: Tilbury Developments: 016 17/00977/FUL 050 17/00349/SCR Magnitude of impact: Negligible to no change
N3: Community facility – St James' Church graveyard	High	Magnitude of impact: Moderate Significance of effect: **Moderate** (not significant)	NSIPs: 042 TR030003 Tilbury2 058 TR010032 LTC Magnitude of impact: Moderate
N3: Viewpoints 3,4,7 and 10	High	Magnitude of impact: Minor to moderate Significance of effect: **Minor** to **moderate** (not significant)	NSIPs: 042 TR030003 Tilbury2 058 TR010032 LTC Magnitude of Change Negligible to moderate
N3: None of the receptors in this location will be significantly adversely affected by the operation and maintenance phases of the other cumulative / non NSIP developments and are not considered further in this assessment. Only the NSIPs have the potential to have cumulative effects.			
N4: Tourist attraction and public open space (Coalhouse Fort)	High	Magnitude of impact: No change to negligible Significance of effect: **None** to **minor** (not significant)	NSIPs: 042 TR030003 Tilbury2 058 TR010032 LTC Magnitude of impact: Minor
N4: Viewpoints 17, 30, 31 and 32	High	Magnitude of impact: No change to Negligible Significance of effect: **None** to **minor** (not significant)	NSIPs: 042 TR030003 Tilbury2 058 TR010032 LTC Magnitude of impact: Minor
N4: None of the receptors in this location will be significantly adversely affected by the operation and maintenance phases of the other cumulative / non NSIP developments and are not considered further in this assessment. Only the NSIPs have the potential to have cumulative effects on the receptors.			
N5: Residential receptors: (Dwellings on the west side of East Tilbury) and PRoWs footpath 67 and bridleways 58 and 63	High	Magnitude of impact: No change to minor Significance of effect: **None** to **moderate** (not significant)	NSIPs: 042 TR030003 Tilbury2 058 TR010032 LTC Magnitude of impact: Minor to negligible
N5: Viewpoints 1, 2, 5, 33 and 34	High	Magnitude of impact: No change to Negligible Significance of effect: **None** to **minor** to (not significant)	NSIPs: 042 TR030003 Tilbury2 058 TR010032 LTC Magnitude of impact: Minor
N5: None of the receptors in this location will be significantly adversely affected by the operation and maintenance phases of the other cumulative / non NSIP developments and are not considered further in this assessment. Only the NSIPs have the potential to have cumulative effects on the receptors.			
S1: Residential (Gravesend waterfront); Saxon Shore Way, tourist attractions and recreation (Gordon Gardens, New Tavern Fort, Gravesend waterfront); marine-based dynamic receptors	Low (people working on marine vessels) to high	Magnitude of impact: Negligible to minor Significance of effect: **Negligible** to **moderate** (not significant)	NSIPs: 042 TR030003 Tilbury2 058 TR010032 LTC Magnitude of impact: Moderate
S1: Residential (Gravesend waterfront); Saxon Shore Way, tourist attractions and recreation (Gordon Gardens, New Tavern Fort, Gravesend waterfront); marine-based dynamic receptors	Low (people working on marine vessels) to high	Magnitude of impact: Negligible to Minor Significance of effect: **Negligible** to **moderate** (not significant)	Other relevant developments Tilbury Developments: 016 17/00977/FUL 050 17/00349/SCR Magnitude of impact: Negligible to no change

Receptor affected	Sensitivity of receptor to cumulative effects	Standalone effect of Thurrock Flexible Generation Plant on receptor	Cumulative development(s) with the potential to affect this receptor
S1: Residential (Gravesend waterfront); Saxon Shore Way, tourist attractions and recreation (Gordon Gardens, New Tavern Fort, Gravesend waterfront); marine-based dynamic receptors	Low (people working on marine vessels) to high	Magnitude of impact: Negligible to minor Significance of effect: **Negligible** to **Moderate** (not significant)	Other relevant developments: Gravesend Developments: 064 (Policy reference CS04) Magnitude of impact: Negligible to minor
S1: Viewpoints 18, 19, and 23	Medium (people working at these locations) to high	Magnitude of impact: Negligible to minor Significance of effect: **Minor** to **Moderate** (not significant)	NSIPs: 042 TR030003 Tilbury2 058 TR010032 LTC Magnitude of impact: Moderate
S1: Viewpoints 20, 21	High	Magnitude of impact: Minor Significance of effect: **Moderate** (not significant)	Other relevant developments: Gravesend Developments: 064 (Policy reference CS04) Magnitude of impact: Negligible to minor
S2: Residents and public open space users (Windmill Hill, Windmill Gardens, Gravesend), PRoW east of Gravesend	High	Magnitude of impact: Negligible Significance of effect: **Minor** (not significant)	NSIPs: 042 TR030003 Tilbury2 058 TR010032 LTC Magnitude of impact: Minor to moderate
S2: Residents and public open space users (Windmill Hill, Windmill Gardens, Gravesend), PRoW east of Gravesend	High	Magnitude of impact: Negligible Significance of effect: **Minor** (not significant)	Other relevant developments: Tilbury Developments: 016 17/00977/FUL 050 17/00349/SCR Magnitude of impact: Minor
S2: Residents and public open space users (Windmill Hill, Windmill Gardens, Gravesend), PRoW east of Gravesend	High	Magnitude of impact: Negligible Significance of effect: **Minor** (not significant)	Other relevant developments: Gravesend Developments: 064 (Policy reference CS04) Magnitude of impact: Minor to moderate
S2: Viewpoints 22 and 28	High	Magnitude of impact: Negligible Significance of effect: **Minor** (not significant)	Other relevant developments: Gravesend Developments: 064 (Policy reference CS04) Magnitude of impact: Negligible to minor
S2: Viewpoints 22 and 28	High	Magnitude of impact: Negligible Significance of effect: **Minor** (not significant)	NSIPs: 042 TR030003 Tilbury2 058 TR010032 LTC Magnitude of impact: Moderate
S2: Viewpoints 22 and 28	High	Magnitude of impact: Negligible Significance of effect: **Minor** (not significant)	Other relevant developments: Tilbury Developments: 016 17/00977/FUL 050 17/00349/SCR Magnitude of impact: Minor
S2: Viewpoints 22 and 28	High	Magnitude of impact: Negligible Significance of effect: **Minor** (not significant)	Other relevant developments: Gravesend Developments: 064 (Policy reference CS04) Magnitude of impact: Negligible
S3: Dynamic road receptors - Harts Hill Kent Downs AONB	Medium (within the AONB)	Magnitude of impact: No change to negligible Significance of effect: **None** to **minor** (not significant)	NSIPs: 042 TR030003 Tilbury2 058 TR010032 LTC Magnitude of impact: Negligible to minor

Receptor affected	Sensitivity of receptor to cumulative effects	Standalone effect of Thurrock Flexible Generation Plant on receptor	Cumulative development(s) with the potential to affect this receptor
S3: Viewpoint 29	Very High (within the AONB)	Magnitude of impact: Negligible Significance of effect: **Moderate** (not significant)	NSIPs: 042 TR030003 Tilbury2 058 TR010032 LTC Magnitude of impact: Minor
S3: None of the receptors in this location will be significantly adversely affected by the operation and maintenance phases of the other cumulative / non NSIP developments and are not considered further in this assessment. Only the NSIPs have the potential to have cumulative effects.			
S4: Tourist attractions including Cliffe Pools RSPB reserve, Cliffe Fort and Shornmead Fort, Saxon Shore Way and PRoWs on Shorne and Higham Marshes	High	Magnitude of impact: Negligible to minor Significance of effect: **Minor** to **moderate** (not significant)	NSIPs: 042 TR030003 Tilbury2 058 TR010032 LTC Magnitude of impact: Minor to negligible
S4: Viewpoints 24 to 27	High	Magnitude of impact: Negligible to minor Significance of effect: **Minor** to **moderate** (not significant)	NSIPs: 042 TR030003 Tilbury2 058 TR010032 LTC Magnitude of impact: Minor to negligible
S4: None of the receptors in this location will be significantly adversely affected by the operation and maintenance phases of the other cumulative / non NSIP developments and are not considered further in this assessment. Only the NSIPs have the potential to have cumulative effects.			

Table 1.4: Summary of cumulative developments affecting each receptor (decommissioning).

Receptor affected	Sensitivity of receptor to cumulative effects	Standalone effect of Thurrock Flexible Generation Plant on receptor	Cumulative development(s) with the potential to affect this receptor
Landscape Receptors:			
LCA C5: Tilbury Marshes	Medium	Magnitude of impact: Moderate Significance of effect: **Moderate** (not significant)	NSIPs: 042 TR030003 Tilbury2 Magnitude of impact: Moderate (Tilbury2)
LCA C5: Tilbury Marshes	Medium	Magnitude of impact: Moderate Significance of effect: **Moderate** (not significant)	Other relevant developments: Tilbury Developments: 016 17/00977/FUL 018 11/50361/TTGETL 050 17/00349/SCR 079 19/01274/FUL 081 12.04.09.04/266C Magnitude of impact: Minor to negligible
LCA D6: Chadwell Escarpment Urban Fringe	Medium	Magnitude of impact: Minor Significance of effect: **Minor** (not significant)	NSIPs: 042 TR030003 Tilbury2 Magnitude of impact: Minor
LCA D6: Chadwell Escarpment Urban Fringe	Medium	Magnitude of impact: Minor Significance of effect: **Minor** (not significant)	Other relevant developments: Chadwell St Mary Developments: 014 16/00412/OUT 034 15/00379/OUT Magnitude of impact: Negligible to minor
LCA D7: West Tilbury Urban Fringe	Medium	Magnitude of impact: Minor Significance of effect: **Minor** (not significant)	NSIPs: 042 TR030003 Tilbury2 Magnitude of impact: Minor
LCA D7: West Tilbury Urban Fringe	Medium	Magnitude of impact: Minor Significance of effect: **Minor** (not significant)	Other relevant developments: East Tilbury Developments: 005 18/00664/CONDC 011 16/01475/SCR 012 16/01232/OUT Magnitude of impact: Minor
Visual Receptors:			
N1: Public Access: Thames Estuary Path PRoW	High Medium (users of Footpath 146, adjacent to the sewage works, Viewpoint 12)	Magnitude of impact: No change to minor Significance of effect: **None** to **moderate** (not significant)	NSIPs: 042 TR030003 Tilbury2 Magnitude of impact: Minor to Moderate
N1: Public Access: Thames Estuary Path PRoW	High Medium (users of Footpath 146, adjacent to the sewage works, Viewpoint 12)	Magnitude of impact: No change to minor Significance of effect: **None** to **moderate** (not significant)	Other relevant developments: Tilbury Developments: 016 17/00977/FUL 050 17/00349/SCR Magnitude of impact: Negligible
N1: Tourist attraction: Tilbury Fort	High Medium (users of Footpath 146, adjacent to the sewage works, Viewpoint 12)	Magnitude of impact: No change to minor Significance of effect: **None** to **moderate** (not significant)	NSIPs: 042 TR030003 Tilbury2 Magnitude of impact: Minor

Receptor affected	Sensitivity of receptor to cumulative effects	Standalone effect of Thurrock Flexible Generation Plant on receptor	Cumulative development(s) with the potential to affect this receptor
N1: Tourist attraction: Tilbury Fort	High Medium (users of Footpath 146, adjacent to the sewage works, Viewpoint 12)	Magnitude of impact: No change to minor Significance of effect: **None** to **moderate** (not significant)	Other relevant developments: Tilbury Developments: 016 17/00977/FUL 050 17/00349/SCR Magnitude of impact: No change to negligible
N1: Viewpoints: 12, 13 and 14	High Medium (users of Footpath 146, adjacent to the sewage works, Viewpoint 12)	Magnitude of impact: No change to minor Significance of effect: **None** to **moderate** (not significant)	NSIPs: 042 TR030003 Tilbury2 Magnitude of impact: Minor to moderate
N1: Viewpoints: 12, 13 and 14	High Medium (users of Footpath 146, adjacent to the sewage works, Viewpoint 12)	Magnitude of impact: No change to minor Significance of effect: **None** to **moderate** (Not significant)	Other relevant developments: Tilbury Developments: 016 17/00977/FUL 050 17/00349/SCR Magnitude of impact: No change to negligible
N1: Viewpoints 15 and 16	High	Magnitude of impact: Negligible to minor Significance of effect: **Minor** to **moderate** (not significant)	NSIPs: 042 TR030003 Tilbury2 Magnitude of impact: Minor to moderate
N1: Viewpoints 15 and 16	High	Magnitude of impact: Negligible to minor Significance of effect: **Minor** to **moderate** (not significant)	Other relevant developments: Tilbury Developments: 016 17/00977/FUL 050 17/00349/SCR Magnitude of impact: No change to negligible
N2: Residential groups east side of Tilbury and Access Land Parsonage Commons, as well as either side of Fort Road and Cooper Shaw Road and Exchange Common Land (Zone E)	High	Magnitude of impact: No change to minor Significance of effect: **None** to **moderate** (not significant)	NSIPs: 042 TR030003 Tilbury2 Magnitude of impact: Minor to moderate
N2: Residential groups east side of Tilbury and Access Land Parsonage Commons, as well as either side of Fort Road and Cooper Shaw Road and Exchange Common Land (Zone E)	High	Magnitude of impact: No change to minor Significance of effect: **None** to **moderate** (not significant)	Other relevant developments: Tilbury Developments: 016 17/00977/FUL 050 17/00349/SCR Magnitude of impact: No change to negligible
N2: Commercial / industrial (Tilbury sewage and substation) and dynamic receptors (rail, Fort Road and Cooper Shaw Road users)	Low to high (rail passengers travelling for pleasure)	Magnitude of impact: Minor to moderate Significance of effect: **Minor** to **moderate (not significant)**	NSIPs: 042 TR030003 Tilbury2 Magnitude of impact: Moderate
N2: Commercial / industrial (Tilbury sewage and substation) and dynamic receptors (rail, Fort Road and Cooper Shaw Road users)	Low to high (rail passengers travelling for pleasure)	Magnitude of impact: Minor to moderate Significance of effect: **Minor** to **moderate (not significant)**	Other relevant developments: Tilbury Developments: 016 17/00977/FUL 050 17/00349/SCR Magnitude of impact: No change to negligible
N2: Viewpoints 6, 8, 9 and 11	Low (road users) to high (pedestrians using Access Land)	Magnitude of impact: Minor to moderate Significance of effect: **Minor** (not significant) to **major** (significant)	NSIPs: 042 TR030003 Tilbury2 Magnitude of impact: Moderate to major

Receptor affected	Sensitivity of receptor to cumulative effects	Standalone effect of Thurrock Flexible Generation Plant on receptor	Cumulative development(s) with the potential to affect this receptor
N2: Viewpoints 6, 8, 9 and 11	Low (road users) to high (pedestrians using Access Land)	Magnitude of impact: Minor to moderate Significance of effect: **Minor** (not significant) to **major** (significant)	Other relevant developments: Tilbury Developments: 016 17/00977/FUL 050 17/00349/SCR Magnitude of impact: No change to negligible
N3: Community facility – St James' Church graveyard	High	Magnitude of impact: Moderate Significance of effect: **Moderate** (not significant)	NSIPs: 042 TR030003 Tilbury2 Magnitude of impact: Moderate
N3: Viewpoints 3, 4, 7 and 10	High	Magnitude of impact: Negligible to moderate Significance of effect: **Minor** to **moderate** (not significant)	NSIPs: 042 TR030003 Tilbury2 Magnitude of impact: Negligible to moderate
N3: None of the receptors in this location will be significantly adversely affected by the decommissioning phases of the other cumulative / non NSIP developments and are not considered further in this assessment. Only the NSIPs have the potential to have cumulative effects.			
N4: Tourist attraction and public open space (Coalhouse Fort)	High	Magnitude of impact: No Change to negligible Significance of effect: **None** to **minor** (not significant)	NSIPs: 042 TR030003 Tilbury2 Magnitude of impact: Minor
N4: Viewpoints 17, 30, 31 and 32	High	Magnitude of impact: No change to negligible Significance of effect: **None** to **minor** (not significant)	NSIPs: 042 TR030003 Tilbury2 Magnitude of impact: Minor
N4: None of the receptors in this location will be significantly adversely affected by the decommissioning phases of the other cumulative / non NSIP developments and are not considered further in this assessment. Only the NSIPs have the potential to have cumulative effects on the receptors.			
N5: Residential receptors: (Dwellings on the west side of East Tilbury) and PRoWs footpath 67 and bridleways 58 and 63	High	Magnitude of impact: No change to minor Significance of effect: **None** to **moderate** (not significant)	NSIPs: 042 TR030003 Tilbury2 Magnitude of impact: Negligible to minor
N5: Viewpoints 5, 33 and 34	High	Magnitude of impact: No change to negligible Significance of effect: **Minor** (not significant)	NSIPs: 042 TR030003 Tilbury2 Magnitude of impact: Minor
N5: None of the receptors in this location will be significantly adversely affected by the decommissioning phases of the other cumulative / non NSIP developments and are not considered further in this assessment. Only the NSIPs have the potential to have cumulative effects on the receptors.			
S1: Residential (Gravesend waterfront); Saxon Shore Way, tourist attractions and recreation (Gordon Gardens, New Tavern Fort, Gravesend waterfront); marine-based dynamic receptors	Low (people working on marine vessels) to high	Magnitude of impact: Negligible to minor Significance of effect: **Negligible** to **moderate** (not significant)	NSIPs: 042 TR030003 Tilbury2 Magnitude of impact: Moderate
S1: Residential (Gravesend waterfront); Saxon Shore Way, tourist attractions and recreation (Gordon Gardens, New Tavern Fort, Gravesend waterfront); marine-based dynamic receptors	Low (people working on marine vessels) to high	Magnitude of impact: Negligible to Minor Significance of effect: **Negligible** to **moderate** (not significant)	Other relevant developments Tilbury Developments: 016 17/00977/FUL 050 17/00349/SCR Magnitude of impact: Negligible to no change
S1: Residential (Gravesend waterfront); Saxon Shore Way, tourist attractions and recreation (Gordon Gardens, New Tavern Fort, Gravesend water front); marine-based dynamic receptors	Low (people working on marine vessels) to high	Magnitude of impact: Negligible to minor Significance of effect: **Negligible** to **moderate** (not significant)	Other relevant developments: Gravesend Developments: 064 (Policy reference CS04) Magnitude of impact: Negligible to minor

Receptor affected	Sensitivity of receptor to cumulative effects	Standalone effect of Thurrock Flexible Generation Plant on receptor	Cumulative development(s) with the potential to affect this receptor
S1: Viewpoints 18, 19, 20, 21 and 23	Medium (people working at these locations) to high	Magnitude of impact: Negligible to minor Significance of effect: **Negligible** to **moderate** (not significant)	NSIPs: 042 TR030003 Tilbury2 Magnitude of impact: Minor to Moderate
S1: Viewpoints 20 and 21	High	Magnitude of impact: Minor Significance of effect: **Moderate** (not significant)	Other relevant developments: Gravesend Developments: 064 (Policy reference CS04) Magnitude of impact: Negligible to minor
S2: Residents and public open space users (Windmill Hill, Windmill Gardens, Gravesend), PRoW east of Gravesend	High	Magnitude of impact: Negligible Significance of effect: **Minor** (not significant)	NSIPs: 042 TR030003 Tilbury2 Magnitude of impact: Minor to moderate
S2: Residents and public open space users (Windmill Hill, Windmill Gardens, Gravesend), PRoW east of Gravesend	High	Magnitude of impact: Negligible Significance of effect: **Minor** (not significant)	Other relevant developments: Tilbury Developments: 016 17/00977/FUL 050 17/00349/SCR Magnitude of impact: Negligible
S2: Residents and public open space users (Windmill Hill, Windmill Gardens, Gravesend), PRoW east of Gravesend	High	Magnitude of impact: Negligible Significance of effect: **Minor** (not significant)	Other relevant developments: Gravesend Developments: 064 Policy reference CS04) Magnitude of impact: Negligible to minor
S2: Viewpoints 22 and 28	High	Magnitude of impact: Negligible Significance of effect: **Minor** (not significant)	NSIPs: 042 TR030003 Tilbury2 Magnitude of impact: Negligible to moderate
S2: Viewpoints 22 and 28	High	Magnitude of impact: Negligible Significance of effect: **Minor** (not significant)	Other relevant developments: Tilbury Developments: 016 17/00977/FUL 050 17/00349/SCR Magnitude of impact: Negligible to minor
S2: Viewpoints 22 and 28	High	Magnitude of impact: Negligible Significance of effect: **Minor** (not significant)	Other relevant developments: Gravesend Developments: 064 Policy reference CS04) Magnitude of impact: Negligible
S3: Dynamic road receptors - Harts Hill Kent Downs AONB	Medium (within the AONB)	Magnitude of impact: No change to negligible Significance of effect: **None** to **minor** (not significant)	NSIPs: 042 TR030003 Tilbury2 Magnitude of impact: Negligible to minor
S3: Viewpoint 29	Very High	Magnitude of impact: Negligible Significance of effect: **Moderate** (not significant)	NSIPs: 042 TR030003 Tilbury2 Magnitude of impact: Minor
S3: None of the receptors in this location will be significantly adversely affected by the decommissioning phases of the other cumulative / non NSIP developments and are not considered further in this assessment. Only the NSIPs have the potential to have cumulative effects.			

Receptor affected	Sensitivity of receptor to cumulative effects	Standalone effect of Thurrock Flexible Generation Plant on receptor	Cumulative development(s) with the potential to affect this receptor
S4: Tourist attractions including Cliffe Pools RSPB reserve, Cliffe Fort and Shornmead Fort, the Saxon Shore Way and PRoWs on Shorne and Higham Marshes	High	Magnitude of impact: Negligible Significance of effect: **Minor** (not significant)	NSIPs: 042 TR030003 Tilbury2 Magnitude of impact: Minor
S4: Viewpoints 24 to 27	High	Magnitude of impact: Negligible Significance of effect: **Minor** (not significant)	NSIPs: 042 TR030003 Tilbury2 Magnitude of impact: Minor
S4: None of the receptors in this location will be significantly adversely affected by the decommissioning phases of the other cumulative / non NSIP developments and are not considered further in this assessment. Only the NSIPs have the potential to have cumulative effects.			

2. Assessment of Cumulative Effects

2.1 Introduction

2.1.1 The sensitivity judgements stated in this section for each of the landscape and visual receptors is the same as stated in the main LVIA for the Thurrock FGP proposed development, Vol 3 Chapter 6.

2.1.2 The location of the representative viewpoints can be found in Figure 1.1 below.

2.1.3 The descriptions for the references given for each of the cumulative developments are provided in Section 1; Table 1.1. The locations for the individual cumulative developments can be found at Volume 4, Chapter 18: Cumulative Effects Assessment Introduction and Screening.

2.1.4 The magnitude of change for each of the receptors results from combining the Thurrock FGP and cumulative developments with the potential to affect the receptor (columns 3 and 4 in Table 1.2, Table 1.3 and Table 1.4).

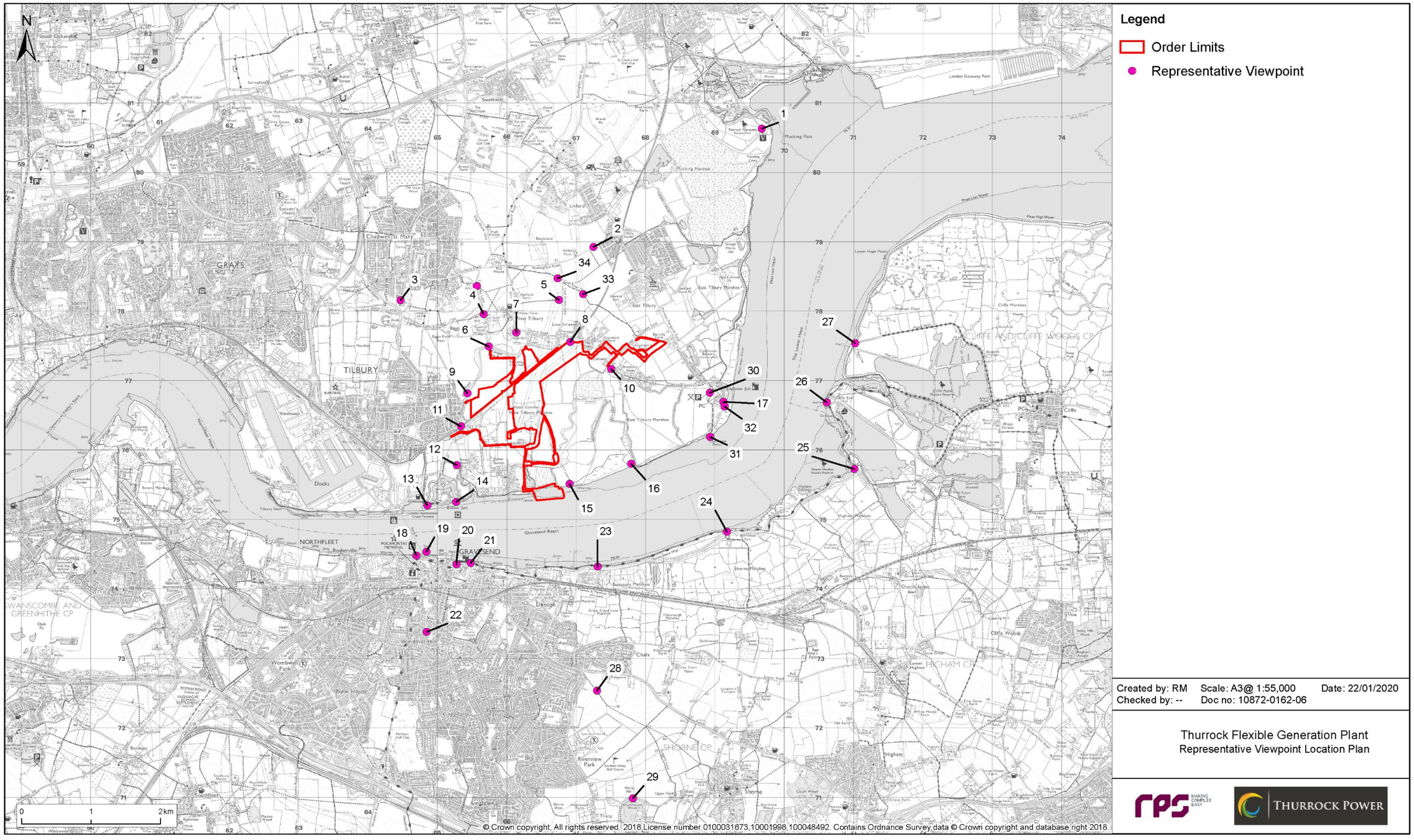

Figure 1.1: Representative Viewpoint Locations

2.2 Construction phase of Thurrock Flexible Generation Plant

Thurrock Landscape Character Areas

LCA C5: Tilbury Marshes

2.2.1 LCA C5: Tilbury Marshes, will be directly affected by the construction phases of the cumulative developments within Zones A, to G including most of Zone C. The sensitivity of the LCA to the proposed construction works is considered to be **medium.**

2.2.2 The following projects will have the potential for cumulative effects in combination with the proposed development. The RPS identification code is followed by the planning application reference:

- NSIPs:
  - 042 TR030003 Tilbury2
  - 058 TR010032 LTC
- Tilbury Developments:
  - 016 17/00977/FUL
  - 018 11/50361/TTGETL
  - 050 17/00349/SCR
  - 079 19/01274/FUL
  - 081 12.04.09.04/266C

NSIPs

2.2.3 The Tilbury2 and LTC NSIPs have the potential to have the following landscape impacts on this character area in the form of construction traffic haul routes, construction plant, machinery including cranes and the emerging development.

2.2.4 The construction of Tilbury2 is located directly to the west of Zone A and the causeway within Zone G. The landscape impacts on the surrounding character of the Tilbury2 site would be in the form of construction traffic haul routes, construction plant, machinery including cranes and the emerging new dock development.

2.2.5 The LTC is located to the east of Zone A and Zone G and crosses this LCA north to south. The entrance to the tunnel under the River Thames would be located to the east of Zone A. The construction phase would be in the form of traffic haul routes, construction plant, machinery including cranes and the emerging road development.

2.2.6 This landscape character area has historically been subject to large-scale industrial and dock development as Tilbury has expanded. The magnitude of impact of the construction works in this area is also considered to be **moderate** to **major**.

2.2.7 The LTC would introduce construction traffic and ground modelling into the landscape. The landscape has an industrial and industrial fringe character which is dynamic and changing. The significance of the temporary cumulative effect experienced by the LCA will be **moderate** to **major** adverse, which is significant.

Tilbury Developments

2.2.8 The Tilbury developments identified as having the potential for cumulative effects in combination with the proposed Thurrock Flexible Generation Plant during the construction phases are located to the west of Zone A of the proposed development and are associated within or on the edge of the built up area of Tilbury on brownfield and disused sites and on the western side of the LCA. The construction of these cumulative developments will involve construction traffic haul routes, construction plant, machinery including cranes and the respective emerging developments.

2.2.9 This part of the landscape character area has historically been subject to large-scale industrial land uses and dock development as Tilbury has expanded. The magnitude of impact of the construction works of these cumulative developments in this area is considered to be **negligible** to **minor**.

2.2.10 These developments would introduce development construction features into an already dynamic, changing and industrial landscape. The temporary, cumulative effect experienced by the LCA will be **negligible** to **minor** adverse, which are not significant.

LCA D6: Chadwell Escarpment Urban Fringe

2.2.11 LCA D6: Chadwell Escarpment Urban Fringe will be directly affected by the construction works proposed phase of the proposed development of Zone C (north-east part) and F1 and F2 (part). It is also indirectly affected by the construction works within the adjacent Tilbury Marshes LCA. The sensitivity of the LCA to the proposed construction works is considered to be **medium.**

2.2.12 The following projects will have the potential for cumulative effects in combination with the proposed development. The RPS identification code is followed by the planning application reference:

- NSIPs:
  - 042 TR030003 Tilbury2
  - 058 TR010032 LTC

- Chadwell St Mary Developments:
  - 014 16/00412/OUT
  - 034 15/00379/OUT

NSIPs

2.2.13 The Tilbury2 and LTC NSIPs have the potential to have the following landscape impacts on this character area in the form of construction traffic haul routes, construction plant, machinery including cranes and the emerging development. The potential effects of Tilbury2 would be indirect and, as noted above, unlikely to coincide with the Flexible Generation Plant construction. The effects from the construction of the LTC would be direct.

2.2.14 The LTC is located to the east of Zone A and crosses this character north to south, to the east of the village of West Tilbury. The construction phase would be in the form of traffic haul routes, construction plant, machinery including cranes and the emerging road development which is likely to have substantial cut and fill in this section including the formation of an embankment, where the land rises from Tilbury Marshes.

2.2.15 The magnitude of impact of the construction works in this area is considered to be **minor**. The LTC route would introduce construction traffic and ground modelling into the landscape. The landscape has an industrial and settlement fringe character. The temporary, cumulative effect experienced by the LCA will be **minor** adverse, which is not significant.

Chadwell St Mary Developments

2.2.16 These two cumulative developments are both potential housing developments for 203 (014) and 43 (034) dwellings at Chadwell St Mary. They have the potential to cause direct and indirect effects on the western part of the character. They are both located on the south-eastern edge of Chadwell St Mary. The construction phase would be in the form of traffic haul routes, construction plant, machinery and the emerging houses.

2.2.17 The magnitude of impact of the construction works in this character area is considered to be **negligible** to **minor**. The landscape here has an urban fringe character. The temporary, cumulative effect experienced by the LCA will be **negligible** to **minor** adverse, which is not significant.

LCA D7: West Tilbury Urban Fringe

2.2.18 LCA D7: West Tilbury Urban Fringe, will be directly affected by the construction works proposed for Zones D and I. The sensitivity of this LCA to the proposed construction works in these zones is **medium**.

2.2.19 The following projects will have the potential for cumulative effects in combination with the proposed development. The RPS identification code is followed by the planning application reference:

- NSIPs:
  - 042 TR030003 Tilbury2
  - 058 TR010032 LTC
- East Tilbury Developments:
  - 005 18/00664/CONDC
  - 011 16/01475/SCR
  - 012 16/01232/OUT

NSIPs

2.2.20 The Tilbury2 and LTC NSIPs have the potential to have the following landscape impacts on this character area in the form of construction traffic haul routes, construction plant, machinery including cranes and the emerging development. The potential effects of Tilbury2 would be indirect and unlikely to coincide with the Flexible Generation Plant construction. The effects from the construction of the LTC would be direct.

2.2.21 The LTC is located to the east of Zone A and the route crosses this character east of West Tilbury across farmland.

2.2.22 The magnitude of impact of the construction works in this area are considered to be **minor**. The LTC route would introduce construction traffic and ground modelling into the landscape. The landscape has a settlement fringe character and although farmland would be affected there are numerous pylons and overhead wires crossing the landscape north to south. The temporary, cumulative effect experienced by the LCA will be **minor** adverse, which is not significant.

East Tilbury Developments

2.2.23 The three cumulative developments are potential housing developments for 200 (Ref 011) and 1000 (Ref 012) dwellings west of East Tilbury. Development 005 is for 50 dwellings and is located on south side of East Tilbury on the character area boundary. Developments 011 and 012 have a greater potential than 005 to cause direct impacts on the character area. The construction phase would be in the form of traffic haul routes, construction plant, machinery and the emerging houses.

2.2.24 The magnitude of impact of the construction works in this character area is considered to be **minor**. The landscape here has an urban fringe character. The temporary,

cumulative effect experienced by the LCA will be **minor** adverse, which is not significant.

Visual Receptors

Group N1: North Thames shore waterfront:

2.2.25 This visual receptor group is located close to where Zone G meets the shoreline on the north side of the River Thames.

2.2.26 Public Access: Thames Estuary Path / Two Forts Way (Footpath 146) ; tourist attractions, e.g. visitors to Tilbury Fort are **high** sensitivity visual receptors. Walkers using a Section of Footpath 146, adjacent to the sewage works, are **medium** sensitivity receptors, due to the location and condition of the footpath at this point.

2.2.27 Representative Viewpoints: 13, 14 ,15 and 16 are all viewpoints that would be frequented by **high** sensitivity visual receptors on PRoW FP146. Users of the section of the footpath at Viewpoint 12 would be **medium** sensitivity receptors. The viewpoints are at varying distances from the proposed cumulative developments and within different visual settings. Viewpoint 12 is close and to the north of Tilbury Fort, Viewpoints 13 and 14 are close and to the south of Tilbury Fort, whilst Viewpoints 15 and 16 are to the south-east and east of Zones A and G.

2.2.28 The following projects will have the potential for cumulative effects in combination with the proposed development The RPS identification code is followed by the planning application reference:

- NSIPs:
  - 042 TR030003 Tilbury2
  - 058 TR010032 LTC
- Tilbury Developments:
  - 016 17/00977/FUL
  - 050 17/00349/SCR

NSIPs

2.2.29 The Tilbury2 and LTC NSIPs have the potential to have the following visual impacts on these visual receptors in the form of construction traffic haul routes, construction plant, machinery including cranes and the emerging development. The construction of Tilbury2 is unlikely to coincide with the Flexible Generation Plant. The construction of the approach road and tunnelled section of the LTC under the River Thames, is located on a raised reclaimed section of Tilbury Marshes just east of the Flexible Generation Plant. The LTC construction development would be dominant in the close views from the Thames Estuary Path between the former Tilbury B site to where the land at Tilbury Marshes has been raised and the magnitude of impact would be **moderate** diminishing to **minor** further east. Additionally, for Viewpoints 15 and 16 the construction impact of the LTC crossing would be **moderate** to **major**.

2.2.30 The significance of temporary, cumulative effect would be **moderate** to **major** adverse and significant for a short section approximately 2 km of the Thames Estuary Path. For representative Viewpoints 15 and 16 the temporary, cumulative effects would be **moderate** to **major** adverse and significant. Whereas, Viewpoints 13 and 14 would experience **minor** to **moderate** adverse temporary, cumulative effects, which are not significant. Overall, the temporary, cumulative effects of the construction phases of the three NSIP developments on Group N1: North Thames shore waterfront are significant.

Tilbury developments

2.2.31 Both developments are industrial-related processing facilities set within the context of existing industrial landscape. Development 016 is for the retention and completion of a waste wood processing plant and 050 is a screening stage application for a proposed processing of biofuels and other suitable waste facility, derived from feedstocks to provide a clean gas product (Use Class B2). The construction phases are likely to take the form of construction traffic haul routes, construction plant, machinery including cranes and the emerging development. The construction phases of these developments are likely to be visible but not prominent in views from the Thames Estuary Path on the stretch between Tilbury Fort to where the land at Tilbury Marshes has been raised. The magnitude of impact would be **minor** diminishing to **negligible** further east. Likewise, the impact would be **minor** within and from Tilbury Fort. The magnitude of impact would be **negligible** to **minor** for Viewpoints 13 and 14 as views would be partially obscured of the cumulative NSIP construction activities, by Tilbury Fort. However, for Viewpoints 15 and 16 the construction impact would be **negligible**.

2.2.32 The significance of the temporary, cumulative effect would be **minor** adverse (not significant) for a short section of the Thames Estuary Path directly south of these developments and **minor** from Tilbury Fort. Whilst for Viewpoints 15 and 16 the temporary, cumulative effect would be **minor** to **negligible** adverse (not significant). Whereas, Viewpoints 13 and 14 would experience a temporary **minor** cumulative effect (not significant). Therefore, the temporary, cumulative effect of the construction phases of the Tilbury developments, altogether, on these receptors/representative viewpoints is not significant.

Group N2: North side Thames coastal plain:

2.2.33 This visual receptor group is located on the north shore of the River Thames and within the coastal plain which is similar in extent to the Tilbury Marshes landscape character area but also includes the built-up area of Tilbury. Group N2 excludes receptors at Coalhouse Fort which are assessed separately..

2.2.34 The following visual receptors are relevant: Residential receptors - dwellings on the east and south east side of Tilbury; Access Land - Parsonage and Walton Commons as well as the areas of Access Land associated with Fort Road and Cooper Shaw Road; PRoW - footpaths south of Buckland and south of Zone A. All are **high** sensitivity receptors.

2.2.35 Visual commercial and industrial facility receptors at the Tilbury substation and sewage works and dynamic road receptors on Fort Road and Cooper Shaw Road, together with rail travellers on the rail line which runs from Tilbury north-eastwards across this area vary between having a **low** and **high** sensitivity.

2.2.36 Representative Viewpoints: 6, 8, 9 and 11 are all **low** sensitivity visual road user receptors and where relevant represent the views of **high** sensitivity pedestrian users of Access Land. The viewpoints are located at varying distances from the proposed cumulative developments and within different visual settings. Viewpoint 8 is close to the LTC whilst Viewpoints 9 and 11 are close to Tilbury2. Viewpoint 6 is a similar distance to both cumulative NSIPs.

2.2.37 The following projects will have the potential for cumulative effects in combination with the proposed development The RPS identification code is followed by the planning application reference:

- NSIPs:
  - 042 TR030003 Tilbury2
  - 058 TR010032 LTC
- Tilbury Developments:
  - 016 17/00977/FUL
  - 050 17/00349/SCR

NSIPs

2.2.38 The Tilbury2 and LTC NSIPs have the potential to have the following visual impacts on receptors in the form of construction traffic haul routes, construction plant, machinery including cranes and the emerging development. The construction of Tilbury2 is unlikely to coincide with the Flexible Generation Plant. The construction of the LTC under the River Thames and approach road, on the north side of the River Thames will be extensive and adjacent to Zones A, G and C of the proposed Flexible Generation Plant development. The LTC construction works would be dominant in close views experienced by receptors on Access Land at Parsonage Common, the areas of Access Land associated with Fort Road and Cooper Shaw Road and the PRoW to the east of the site of the former Tilbury B power station. The magnitude of impact would be **minor** to **moderate**. Likewise, the magnitude of impact would be **moderate** for visual receptors at Tilbury sewage works and the electricity substation. The magnitude of impact for dynamic receptors would be **moderate** to **minor** depending on proximity and level of intervening screening. The impact would be **moderate** to **major** for Viewpoints, 6, 8 and 9 for the LTC, as views of the construction would dominate from these locations..

2.2.39 The temporary, cumulative significance of effect would be **minor** to **major** adverse for residential groups on the eastern edge of Tilbury (not significant) and users of the Access Land at Walton and Parsonage Commons and the areas of Access Land associated with Fort Road and Cooper Shaw Road (significant). The commercial and industrial visual receptors at the sewage works and substation on the east side of Tilbury would experience a temporary **moderate** adverse cumulative effect, which is not significant. The effect on the relevant representative viewpoints would be **minor** to **major** (not significant to significant).

Tilbury developments

2.2.40 Both developments are for industrial related processing facilities set within the context of existing industrial use landscape. 016 is for the retention and completion of a waste wood processing plant and 050 is a screening stage application for a proposed facility for processing of biofuels and other suitable feedstocks into a manufactured clean gas product (Use Class B2). The construction phases are likely to take the form of construction traffic haul routes, construction plant, machinery including cranes and the emerging development. The construction phases of these developments are likely to vary from being barely perceptible to visible but not prominent in views. From residential receptor groups on the east side of Tilbury and Access Land views will be perceptible but set against the backdrop of a changing and industrial landscape the magnitude of impact will be **no change** to **negligible**. For commercial and industrial visual receptors at the sewage works and substation, as well as dynamic receptors on Fort Road, Cooper Shaw Road and using the railway, the impact will also be **no change** to **negligible**.

2.2.41 The representative Viewpoints 6, 8, 9 and 11 would all experience a magnitude of impact varying from **no change** to **negligible**.

2.2.42 The temporary, cumulative significance of effects would be **none** to **minor** adverse for residential groups on the eastern edge of Tilbury and users of the Access Land at Walton and Parsonage Commons as well as the areas of Access Land associated with Fort Road and Cooper Shaw Road, which are not significant. The commercial and industrial visual receptors at the sewage works and substation on the east side of Tilbury would experience temporary **none** to **negligible** adverse cumulative effects, which are not significant. The temporary, cumulative effects on representative viewpoints would be **none** to **minor** adverse and not significant.

Group N3: South facing Chadwell St Mary escarpment

2.2.43 This visual receptor group is located on the south facing escarpment of the Chadwell Escarpment Urban Fringe character area. There is potential for elevated views over the coastal plain from vantage points. However, there are few publicly accessible locations and the representative viewpoints are from specific and generally non-extensive areas or sections of PRoW.

2.2.44 The community facility of St James' Church graveyard together with specific locations along PRoW Footpaths 200 and 72 are the only receptor groups that have the potential to be adversely affected in this area. These are of **high** sensitivity.

2.2.45 Representative Viewpoints: 3, 4, 7 and 10 are all **high** sensitivity visual receptors. The viewpoints are at varying distances from the proposed cumulative developments and within different visual settings.

2.2.46 The following projects will have the potential for cumulative effects in combination with the proposed development The RPS identification code is followed by the planning application reference:

- NSIPs:
  - 042 TR030003 Tilbury2
  - 058 TR010032 LTC

2.2.47 None of the receptors in this location will be significantly adversely affected by the construction phases of the other cumulative developments and are not considered further in this assessment. Only the above NSIPs have the potential to have significant adverse cumulative effects.

NSIPs

2.2.48 The Tilbury2 and LTC NSIPs have the potential to have the following visual impacts on these visual receptors in the form of construction traffic haul routes, construction plant, machinery including cranes and the emerging development. The construction of Tilbury2 is unlikely to coincide with the Flexible Generation Plant. The construction of the LTC under the River Thames, on the north side of the River Thames will be extensive and adjacent to Zones A, G and C of the proposed Flexible Generation Plant development. The LTC construction development would be prominent in specific and not extensive near views diminishing to visible but not prominent in more distant views and those restricted in extent by intervening vegetation.

2.2.49 Views from St James' Church graveyard of the construction phases of both NSIPs but particularly the LTC are available from a small area and would be prominent and therefore the magnitude of impact would be **moderate.** Views from footpath 200 of the construction of the LTS is very restricted by thick intervening vegetation and landform, whilst from footpath 72 the views are distant, over 1.2 km away, and viewed from an industrial urban fringe setting. These factors limit the magnitude of the impact to **negligible** to **minor.**

2.2.50 From the representative viewpoints the magnitude of impact on the view would vary from **minor** for Viewpoints 3 and 4 due to the distance to the development, the industrial urban fringe setting and intervening landform and vegetation. The magnitude of the impact would be **moderate** for Viewpoints 7 and 10.

2.2.51 The temporary, cumulative significance of effect would be **minor** adverse (not significant) for footpaths 72 and 200 apart from a small section represented by Viewpoint 10 which would be **moderate** adverse (not significant). For Viewpoints 3 and 4 the effect would be **minor** adverse (not significant). However, for St James' Church graveyard and Viewpoint 7 the temporary, cumulative effect would be **major** adverse, which is significant.

Group N4: Coalhouse Fort area

2.2.52 This visual receptor group is located at Coalhouse Fort and its immediate surroundings including public open space extending to the disused radar station structure on the foreshore and the defensive moats. This group is comprised of **high** sensitivity visual receptors which includes people using the public open space, PRoW and Coalhouse Fort itself.

2.2.53 The representative Viewpoints 17, 30, 31 and 32 are all accessed by **high** sensitivity receptors.

2.2.54 The following projects will have the potential for cumulative effects in combination with the proposed development The RPS identification code is followed by the planning application reference:

- NSIPs:
  - 058 TR010032 LTC

2.2.55 None of the receptors in this location will be significantly adversely affected by the construction phases of the other cumulative developments and are not considered further in this assessment. Only the NSIPs have the potential to have significant adverse effects.

NSIPs

2.2.56 The LTC NSIP has the potential to have the following visual impacts on these visual receptors in the form of construction traffic haul routes, construction plant, machinery including cranes and the emerging development. The construction of the LTC under the River Thames and approach road, on the north side of the River Thames will be extensive and adjacent to Zones A, G and C of the proposed Flexible Generation Plant development. However, the LTC construction development would be partly visible to barely perceptible and not prominent from when viewed from within the public open space surrounding Coahouse Fort, or from the fort itself. Therefore, the magnitude of impact would not exceed **minor**.

2.2.57 Overall, the temporary, cumulative significance of effect on views would be **minor** to **moderate** adverse which are not significant.

Group N5: North of the Chadwell St Mary to east Tilbury escarpment ridge line

2.2.58 This visual receptor group is located north of the ridge of the Chadwell St Mary to East Tilbury escarpment, where the land gradually falls northward allowing views across the farmed landscape to the north and more restricted views south. The location of these receptors coincides with the West Tilbury Urban Fringe LCA. The following visual receptors are relevant and are of **high** sensitivity; Residential receptors: dwellings on the west side of Tilbury and PRoW footpaths 67 and bridleways 58 and 63. Although there are other receptor groups like dynamic road user receptors they are not considered to be of high sensitivity and because the magnitude of change is reduced because of distance, intervening landform and vegetation from the cumulative developments they are not considered further in this assessment.

2.2.59 The representative Viewpoints 5, 33 and 34 are **high** sensitivity receptors and have the potential to be adversely affected. The effects on Viewpoints 1 and 2 have been dismissed for further assessment as they are too distant, well screened from the cumulative developments.

- NSIPs:
  - 042 TR030003 Tilbury2
  - 058 TR010032 LTC

2.2.60 None of the receptors in this location will be significantly adversely affected by the construction phases of the other cumulative developments and are not considered further in this assessment. Only the NSIPs have the potential to have significant adverse effects.

NSIPs

2.2.61 The Tilbury2 and LTC NSIPs have the potential to have the following visual impacts on these visual receptors in the form of construction traffic haul routes, construction plant, machinery including cranes and the emerging development. The construction of Tilbury2 is unlikely to coincide with the Flexible Generation Plant. The construction of the LTC under the River Thames, on the north side of the River Thames will be fairly extensive and adjacent to Zones A, G and C of the proposed Flexible Generation Plant development and construction activities would extend into the West tilbury Urban Fringe. The NSIP LTC development would be visible but not prominent and Tilbury2 would be barely perceptible from the PRoWs in most views in this receptor group. The magnitude of impact would be **negligible** to **minor**. The representative Viewpoints 5, 33 and 34 represent the worse-case scenarios from the PRoW in this area and the magnitude of impact from these locations would also be **negligible** to **minor**.

2.2.62 Overall, the temporary, cumulative significance of effect would be **minor** to **moderate** adverse, as it would be for the N5 representative Viewpoints 5, 33 and 34, which are not significant.

Group S1: River Thames south shore and waterfront

2.2.63 This visual receptor group is located on the River Thames south shore and waterfront and have generally open views across the river to the north shore. The following visual receptor groups includes: Residents located along the Gravesend waterfront; public access and tourist attractions at Gravesend's Gordon Recreation Ground and Gardens; visitors to New Tavern Fort; and walkers using the Saxon Shore Way. These receptors are all deemed to have a **high** sensitivity to the proposed developments. Commercial receptors at Gravesend and industrial receptors at Milton and dynamic receptors onboard marine vessels are judged to be of **low** to **high** (passengers on marine vessels) sensitivity. Only the high sensitivity receptors have the potential to be significantly adversely affected by the cumulative developments, consequently the medium and low sensitivity visual receptors are not considered further in this assessment.

2.2.64 The following representative viewpoints have the potential to be adversely affected, they are Viewpoints 18, 19, 20, 21 and 23 which are on the Saxon Shore Way and Viewpoint 19 which is on the passenger wharf for the Thames ferry and consequently they are all of **high** sensitivity.

2.2.65 The following projects will have the potential for cumulative effects in combination with the proposed development The RPS identification code is followed by the planning application reference:

- NSIPs:
  - 042 TR030003 Tilbury2
  - 058 TR010032 LTC
- Tilbury Developments:
  - 016 17/00977/FUL
  - 050 17/00349/SCR
- Gravesend Developments:
  - 064 (Policy ref CS04)

NSIPs

2.2.66 The Tilbury2 and LTC NSIPs have the potential to have the following visual impacts on these visual receptors in the form of construction traffic haul routes, construction plant, machinery including cranes and the emerging development. The construction of Tilbury2 is unlikely to coincide with the Flexible Generation Plant. The entrance works to the north side of the LTC tunnel under the River Thames and approach road, will be next to a raised section of Tilbury Marshes. The NSIP's construction would be visible, but not prominent in views on the Gravesend waterfront. The magnitude of impact would be **moderate** from the Saxon Shore Way as well as the public access and tourist attractions along the Gravesend waterfront including the Gravesend Gordon Recreation Ground and Gardens and New Tavern Fort.

2.2.67 The magnitude of impact for Viewpoints 18, 19, 20, 21 and 23, will be **moderate** because of the proximity and open nature of views of the southern sections of both of the NSIP's construction phases.

2.2.68 Overall people using the Saxon Shore Way and Gravesend waterfront, public access and tourist attractions will experience temporary, cumulative **moderate** to **major** adverse effects, which are not significant to significant. People at the representative viewpoint locations in will experience temporary, cumulative **moderate** to **major** adverse effects, which are not significant to significant.

Tilbury Developments

2.2.69 Both cumulative developments are for industrial related processing facilities set within the context of existing industrial use landscape. Development 016 is for the retention and completion of a waste wood processing plant and 050 is a screening stage application for a facility processing biofuels and other suitable waste, derived from feedstocks, to produce a clean gas product (Use Class B2). The construction impacts are likely to take the form of construction traffic haul routes, construction plant machinery, including cranes, as well as the emerging developments. The construction phases of these projects will be visible, but not prominent or barely perceptible, in views across the river to the stretch of shoreline between Tilbury Fort and the ongoing land raising scheme on Tilbury Marshes. The magnitude of impact on available views from the Gravesend waterfront and the Saxon Shore Way would be **negligible** to **moderate**. The magnitude of impact would be **moderate** for Viewpoints 18, 19, and 23 would be **negligible** to **minor** for Viewpoints 20, 21 as views would be partially obscured by existing intervening features such as Tilbury Fort and the Tilbury2 (NSIP) construction activities / operational phase.

2.2.70 The temporary, cumulative significance of effect would be **minor** to **negligible** adverse (not significant) for a short section (approximately 0.5 km) of Gravesend waterfront and Saxon Shore Way visual receptors. Representative Viewpoints 20 and 21 would also experience a temporary **minor** adverse cumulative effect (not significant). The cumulative construction phases of thedevelopments will not have a significant effect.

Gravesend Developments

2.2.71 The construction of the Canal Basin Regeneration project will have impacts on the surrounding character and views. Receptors will have views of the construction of the new housing, school, retail and road development. The magnitude of impact will vary between **negligible** to **minor**.

2.2.72 The significance of the temporary, cumulative effect of the proposed development on the high sensitivity visual receptors would be **minor** to **moderate**, depending on the location of the receptor and the intervening buildings, which are not significant.

Group S2: Elevated locations at Gravesend

2.2.73 This visual receptor group is located at elevated locations within and on the fringes of Gravesend. These include residential and public access receptors in Gravesend, particularly Windmill Gardens and Windmill Hill, and the PRoW footpath east of Gravesend and south of Chalk which rises through farmland to the south- east. These receptors are all deemed to be of **high** sensitivity.

2.2.74 The following representative viewpoints have the potential to be adversely affected; Viewpoints 22 at Windmill Gardens and Viewpoint 28 from a PRoW located in an open field south of Chalk, which are elevated views over Gravesend and Chalk respectively. People at these locations will have a **high** sensitivity to the proposed developments.

2.2.75 The following projects will have the potential for cumulative effects in combination with the proposed development The RPS identification code is followed by the planning application reference:

- NSIPs:
  - 042 TR030003 Tilbury2
  - 058 TR010032 LTC
- Tilbury Developments:
  - 016 17/00977/FUL
  - 050 17/00349/SCR
- Gravesend Developments:
  - 064 (policy ref CS04)

NSIPs

2.2.76 The Tilbury2 and LTC NSIPs have the potential to have the following visual impacts on receptors in the form of construction traffic haul routes, construction plant, machinery including cranes and the emerging development. The construction of Tilbury2 is unlikely to coincide with the Flexible Generation Plant. The entrance works to the north side of the LTC tunnel under the River Thames and approach road, will be next to a raised/reclaimed section of Tilbury Marshes. More of the LTC construction development would be visible than receptor group S1, due to the raised locations of the views but also the views of the rest of the landscape on the north side of the Thames would be more extensive. The construction phase of the LTC would vary from visible but not prominent from theses elevated residential and public access visual receptors and the change would be **minor** to **moderate** depending on the elevation and the amount of intervening development and vegetation.

2.2.77 The magnitude of change for the Viewpoint 28 for the construction phase of the LTC, will be **moderate** because of the open exposed views from this location and **negligible** for Viewpoint 22 due to the long-distance views to the LTC.

2.2.78 Overall the residential and publicly accessible locations on the Footpath east of Gravesend and to the south of Chalk will experience temporary **minor** to **moderate** adverse cumulative effects which are not significant. Viewpoint 28 will also experience a temporary **moderate** adverse cumulative visual effect, which is not significant.

Tilbury Developments

2.2.79 Both cumulative developments are for industrial related processing facilities set within the context of existing industrial land uses. Development 016 is for the retention and completion of a waste wood processing plant and 050 is a screening stage application for a proposed facility for processing biofuels and other suitable waste, derived from feedstocks to produce clean gas product (Use Class B2). The construction phases are likely to take the form of construction traffic haul routes, construction plant, machinery including cranes and the emerging development. The construction phases of these developments are likely to be visible (but not prominent) to barely perceptible in elevated views from Gravesend across the Thames. The magnitude of impact from Gravesend-based visual receptors would be **minor** diminishing to **negligible** for views located at lower elevations and for those where the views are interrupted by intervening development and/or vegetation.

2.2.80 The magnitude of impact would be **negligible** for Viewpoints 22 and 28 as views would be partially obscured by existing intervening features such as Tilbury Fort and the Tilbury2 (NSIP) construction phase.

2.2.81 The significance of the temporary, cumulative effects would be **minor** to **moderate** adverse (not significant).. Visual receptors at representative Viewpoints 22 and 28 would also experience a temporary **minor** or **moderate** adverse cumulative effect (not significant). The construction phases of these developments will not have a significant effect on these visual receptors.

Gravesend Development

2.2.82 This development is for a residential redevelopment of a former waterside industrial use area in east Gravesend known as Gordon Promenade East. The construction phase is likely to take the form of construction traffic, construction plant, machinery including cranes and the emerging development. The construction phase of this development is likely to be visible (but not prominent) to barely perceptible in elevated views from Gravesend across the Thames. The magnitude of impact experienced by Gravesend-based visual receptors would **negligible**. The magnitude of impact would also be **negligible** for receptors at Viewpoints 22 and 28. Views would be obscured by existing intervening existing buildings, although higher structures such as cranes would be visible.

2.2.83 The temporary, cumulative significance of effect would be **minor** adverse (not significant). People at representative Viewpoints 22 and 28 would also experience a

temporary **minor** adverse cumulative effect and therefore not significant. The construction phase of this development would not have a significant cumulative effect.

Group S3: Northern edge Kent Downs AONB

2.2.84 This visual receptor group is located on the northern edge and north facing slopes of the national landscape designation of the Kent Downs. These are dynamic visual receptors, which have intermittent and infrequent views through from the minor road running through Brummelhill Wood. These dynamic visual receptors are deemed to be of a **medium** sensitivity.

2.2.85 Representative Viewpoint 29 is on the minor road which runs along the northern boundary of the Kent Downs AONB with elevated views over the River Thames coastal plain landscape. A pedestrian at this location would have a**high** sensitivity to the proposed cumulative developments.

2.2.86 The following projects will have the potential for cumulative effects in combination with the proposed development The RPS identification code is followed by the planning application reference:

- NSIPs:
  - 042 TR030003 Tilbury2
  - 058 TR010032 LTC

2.2.87 None of the receptors in this location will be significantly adversely affected by the construction phases of the other cumulative developments and are not considered further in this assessment. Only the NSIPs have the potential to have significant adverse effects.

2.2.88 The Tilbury2 and LTC NSIPs have the potential to have the following visual impacts on these visual receptors in the form of construction traffic haul routes, construction plant, machinery including cranes and the emerging development. The construction of Tilbury2 is unlikely to coincide with the Flexible Generation Plant. The entrance works and approach road construction on the north side of the LTC tunnel under the River Thames, will be next to a raised reclaimed section of Tilbury Marshes. However, the southern entrance of the LTC would be the closest part of the project to the AONB and Viewpoint 29. The transient views of the LTC construction would vary from barely perceptible for most of receptor views to occasionally visible (but not prominent) from this rural road therefore the magnitude of impact would be **negligible** to **minor** depending on the amount of intervening roadside vegetation. The magnitude of impact would be **minor** for Viewpoint 29 as views would be long distance (>6km) and the change set in the context of a predominantly dynamic industrial landscape.

2.2.89 The temporary, cumulative significance of effect would be **minor** adverse (not significant) for the people in vehicles. For pedestrians at representative Viewpoint 29 there would be a **minor** effect and therefore not significant. Receptors viewing the construction phases of these developments would not experience a significant impact.

Group S4: South side Thames coastal plain

2.2.90 This visual receptor group is located on the south side of the Thames on marshes and reclaimed marshland and includes the following visual receptor groups greater than 2.5 km from the proposed Flexible Generation Plant: Tourist attractions including Cliffe Pools RSPB reserve, Cliffe Fort and Shornmead Fort are located in this area. The Saxon Shore Way and footpaths on Shorne and Higham Marshes form part of the PRoW network. People visiting or using these attractions/PRoW are all judged to be **high** sensitivity visual receptors.

2.2.91 People at Representative Viewpoints: 24, 25, 26 and 27 are all **high** sensitivity visual receptors. The viewpoints are at varying distances from the proposed cumulative developments and within similar estuary side settings with a predominantly low-lying and flat marsh or drained marsh, farmed hinterland.

2.2.92 The following projects will have the potential for cumulative effects in combination with the proposed development The RPS identification code is followed by the planning application reference:

- NSIPs:
  - 042 TR030003 Tilbury2
  - 058 TR010032 LTC

2.2.93 None of the receptors in this location will be significantly adversely affected by the construction phases of the other cumulative developments and are not considered further in this assessment. Only the NSIPs have the potential to have significant adverse effects.

2.2.94 The Tilbury2 and LTC NSIPs have the potential to have the following visual impacts on these visual receptors in the form of construction traffic haul routes, construction plant, machinery including cranes and the emerging development. The construction of Tilbury2 is unlikely to coincide with the Flexible Generation Plant. The entrance works and approach road construction on the north side of the LTC tunnel under the River Thames, will be next to a raised reclaimed section of Tilbury Marshes. The construction work on the southern entrance to the LTC tunnel will be closer to these visual receptors, but will not be seen in the same view as the Tilbury2 and Thurrock Flexible Generation Plant works as they are situated behind or to the side of the viewer. The views of the NSIPs, particularly the LTC construction would vary from barely

perceptible to visible (but not prominent) for the closer visual receptors such as Shornmead Fort and the Saxon Shore Way to the north of Shorne Marshes. Therefore, the magnitude of impact is judged to be **minor**.

2.2.95 The magnitude of impact for Viewpoints 24, 25, 26 and 27, will be **minor**.

2.2.96 Overall, the temporary, cumulative significance of effect experienced by visual receptors in this area and at the location of the representative viewpoints would be no greater than **moderate**, which is not significant.

2.3 Operation and maintenance phase of Thurrock Flexible Generation Plant

Thurrock Landscape Character Areas

LCA C5: Tilbury Marshes

2.3.1 LCA C5: Tilbury Marshes, will be directly affected by the operation and maintenance phases of the cumulative developments. It is a large-scale landscape with extensive open and exposed land dominated by the sky. The sensitivity of the LCA to the proposed operation and maintenance works is considered to be **medium.**

2.3.2 The following projects will have the potential for cumulative effects in combination with the proposed development. The RPS identification code is followed by the planning application reference:

- NSIPs:
  - 042 TR030003 Tilbury2
  - 058 TR010032 LTC
- Tilbury Developments:
  - 016 17/00977/FUL
  - 018 11/50361/TTGETL
  - 050 17/00349/SCR
  - 079 19/01274/FUL
  - 081 12.04.09.04/266C

NSIPs

2.3.3 The Tilbury2 and LTC NSIPs have the potential to have the following landscape impacts on the Tilbury Marshes LCA in the form of new dockside development buildings, loading wharf, lifting gear, road access and container storage. Tilbury2 will extend over the former Tilbury B power station site northwards to the railway line. The LTC NSIP development will consist of a new road, tunnel under the River Thames and road infrastructure on the north side of the River Thames. The Tilbury Marshes LCA, will be directly affected by the Tilbury2 and LTC NSIPs have the potential to have visual and perceptual impacts on the landscape.

2.3.4 This landscape character area has historically been subject to large scale industrial and dockland development as Tilbury has expanded. The magnitude of impact of both NSIPs in this area is also considered to be **moderate** to **major**.

2.3.5 The Tilbury2 NSIP will be on a brownfield site which was part of the recently demolished Tilbury B power station site. The LTC would introduce a new road, tunnel junctions and road bridges into the Tilbury Marshes farmland landscape. However, the landscape has an industrial and industrial fringe character which is dynamic. The significance of effect on the LCA will be **moderate** to **major** adverse, which are not significant to significant effects.

Tilbury Developments

2.3.6 The Tilbury developments identified as having the potential for cumulative effects in combination with the proposed Thurrock Flexible Generation Plant are located to the west of Zone A of the proposed development and are associated within or on the edge of the built up area of Tilbury on brownfield and disused sites and on the western side of the LCA. The developments will repurpose predominantly brownfield sites with a mixture of industrial processing and energy generation facilities, together with associated storage and access.

2.3.7 This part of the landscape character area has historically been subject to large scale industrial and dock development as Tilbury has expanded. The magnitude of impact of the construction works of these cumulative developments in this area is considered to be **minor** to **negligible.**

2.3.8 These developments would add similar function, style and massing into an already dynamic and industrial landscape. The effect experienced the LCA will be **negligible** to **minor** which is not significant.

LCA D6: Chadwell Escarpment Urban Fringe

2.3.9 The sensitivity of the LCA to the proposed cumulative developments is considered to be **medium.** The fairly unspoilt rural character in the east of the character area is the most sensitive part of this LCA to change from developments.

2.3.10 The following projects will have the potential for cumulative effects in combination with the proposed development. The RPS identification code is followed by the planning application reference:

- NSIPs:
  - 042 TR030003 Tilbury2
  - 058 TR010032 LTC
- Chadwell St Mary Developments:
  - 014 16/00412/OUT
  - 034 15/00379/OUT

NSIPs

2.3.11 Tilbury2 and LTC NSIPs have the potential to have the following landscape direct impacts on this character area. The LTC NSIP development will consist of a new road, tunnel under the River Thames and road infrastructure on the north side of the River Thames. The LTC NSIP would have the potential to have direct effects of a new major approach road to the tunnel and indirect effects in the form of visual and traffic and noise intrusion from the LTC development on the landscape character. The potential effects of Tilbury2 would be indirect and direct from LTC.

2.3.12 The magnitude of impact of the LTC major development is also considered to be **minor**. The LTC route would introduce a new major road, traffic and new landform into a landscape which has an industrial and settlement fringe character. The effect experienced by the LCA will be **minor** adverse, which is not significant.

Chadwell St Mary Developments

2.3.13 The two cumulative developments are both potential housing developments for 203 and 43 dwellings respectively at Chadwell St Mary. They have the potential to cause direct and indirect effects on the western part of the character. They are both located on the south eastern edge of Chadwell St Mary. The direct effects on the landscape would be a new road and associated landform.

2.3.14 The magnitude of Impact of the development in this character area is considered to be **negligible** to **minor**. The landscape here has an urban fringe character. The effect experienced by the LCA will be **negligible** to **minor** adverse, which is not significant.

LCA D7: West Tilbury Urban Fringe

2.3.15 This character area is a fairly open landscape with limited tree cover, visual intrusion of existing developments including pylons and industrial use areas gives the landscape an urban fringe character. The sensitivity of this LCA to the proposed construction works in these zones is **medium**.

- NSIPs:
  - 042 TR030003 Tilbury2
  - 058 TR010032 LTC
- East Tilbury Developments:
  - 005 18/00664/CONDC
  - 011 16/01475/SCR
  - 012 16/01232/OUT

NSIPs

2.3.16 The LTC NSIPs has the potential to have the following landscape impacts on this character area. The development will consist of a new road, tunnel under the River Thames and road infrastructure on the north side of the River Thames. The LTC NSIP would have the potential to have direct effects of a new major approach road to the tunnel and indirect effects in the form of visual and traffic and noise intrusion on the landscape character. The potential effects of Tilbury2 would be indirect and unlikely to coincide with the Flexible Generation Plant construction.

2.3.17 The magnitude of impact due to the direct effects of the LTC development on this character area are considered to be **minor**. The landscape has a settlement fringe character and although farmland would be affected there are numerous pylons and overhead wires crossing the landscape south to north. The effect experienced by the LCA will be **minor** adverse, which is not significant.

East Tilbury Developments

2.3.18 The three cumulative developments are potential housing developments for 200 (Ref 011) and 1000 (Ref 012) dwellings west of East Tilbury. In addition, development 005 is for 50 dwellings and is located on south side of East Tilbury on the character area boundary. Developments 011 and 012 have a greater potential than 005 to cause direct impacts on the character area. The developments would take the form of settlement edge housing and access roads.

2.3.19 The magnitude of Impact of the construction works in this character area is considered to be **minor**. The landscape here has an urban fringe character. The effect experienced by the LCA will be **minor** adverse, which is not significant.

Visual Receptors

Group N1: North Thames shore waterfront

2.3.20 This visual receptor group is located close to where Zone G meets the shoreline on the north side of the River Thames.

2.3.21 Public Access: Thames Estuary Path / Two Forts Way (Footpath146); and Tourist Attractions: visitor receptors to Tilbury Fort in group N1 are **high** sensitivity visual receptors.

2.3.22 Representative Viewpoints: 13, 14 ,15 and 16 are all **high** sensitivity visual receptors on PRoW FP146. The viewpoints are at varying distances from the proposed cumulative developments and within different visual settings. Viewpoints 13 and 14 are close to Tilbury Fort whilst 15 and 16 are to the south east and east of Zones A and G.

2.3.23 The following projects will have the potential for cumulative effects in combination with the proposed development The RPS identification code is followed by the planning application reference:

- NSIPs:
  - 042 TR030003 Tilbury2
  - 058 TR010032 LTC
- Tilbury Developments:
  - 016 17/00977/FUL
  - 050 17/00349/SCR

NSIPs

2.3.24 The LTC NSIP has the potential to have the following visual impacts on the N1 group of visual receptors in the form of new dockside development buildings, loading wharf, lifting gear, road access and container storage. Tilbury2 will extend over the former Tilbury B power station site northwards to the railway line. It will be adjacent to the section of the Thames Estuary path from Tilbury Fort to the former Tilbury B power station site. The LTC NSIP development will consist of a new road, tunnel under the River Thames and road infrastructure on the north side of the River Thames. The approach road and tunnelled section of the LTC under the River Thames, will be over a raised reclaimed section of Tilbury Marshes. The NSIP developments would be significant to dominant in the close views from the Thames Estuary Path between Tilbury Fort to stretch adjacent to where the land at Tilbury Marshes has been raised and the magnitude of change would be **moderate** diminishing to **minor** further east. Likewise, the impact would be **minor** within and from Tilbury Fort.

2.3.25 The change would be **minor** for Viewpoints 12, 13 and 14 as views would be partially obscured of the cumulative NSIP developments, by Tilbury Fort. However, the impact of change for Viewpoints 15 and 16 particularly the LTC road and related infrastructure and the new wharf at Tilbury2 would be **moderate**.

2.3.26 The significance of effect would be **moderate** to **major** and significant for a short section (approximately 2km) of the Thames Estuary path where the developments coincide with the shoreline and **minor** to **moderate** from Tilbury Fort diminishing westwards. For representative Viewpoints 15 and 16 the impact would be **moderate** to **major** and significant. Whereas Viewpoints 13 and 14 would experience a **minor** to **moderate** effect and not significant. Overall the operation and maintenance phases of these developments are significant for a few specific receptors.

Tilbury developments

2.3.27 Both developments are for industrial related processing facilities set within the context of existing industrial use landscape. Development 016 is for the retention and completion of a waste wood processing plant and 050 is a screening stage application for a proposed processing of biofuels and other suitable waste facility, derived from feedstocks into a manufactured clean gas product (Use Class B2). The operation and maintenance phases are likely to take the form of industrial use buildings and associated infrastructure. The developments are likely to be visible but not prominent in views from the Thames Estuary Path on the stretch between Tilbury Fort to where the land at Tilbury Marshes has been raised. The magnitude of change would be **minor** diminishing to **negligible** further east. Likewise, the impact would be **minor** within and from Tilbury Fort.

2.3.28 The change would be **negligible** to **no change** for Viewpoints 12, 13 and 14 as views would be partially obscured of the cumulative NSIP developments, by Tilbury Fort. For Viewpoints 15 and 16 the effect of these developments would be **negligible to none.**

2.3.29 The significance of effect would be **minor** and not significant for a short section of the Thames Estuary path directly south of these developments and **minor** from Tilbury Fort. Whilst for representative Viewpoints 15 and 16 the impact would be **minor** to **negligible** and not significant. Whereas Viewpoints 13 and 14 would experience a **minor** effect and not significant. Therefore, the operation and maintenance phases of these developments are not a significant impact.

Group N2: North side Thames coastal plain

2.3.30 This visual receptor group is located on the north shore of the River Thames and within the coastal plain which is similar in extent to the Tilbury Marshes landscape character area but also includes the built-up area of Tilbury. Coalhouse Fort is dealt with as a separate visual receptor group.

2.3.31 The following visual receptors are relevant; Residential receptors: Dwellings on the east and south east side of Tilbury. Access Land: Parsonage and Walton Commons. PRoW: footpaths south of Buckland and south of Zone A are all **high** sensitivity receptors.

2.3.32 Visual commercial and industrial facility receptors at the Tilbury substation and sewage works and dynamic road receptors along Fort Road and Cooper Shaw Road together with rail passengers on the rail line which runs from Tilbury north eastwards across this area are **medium** sensitivity visual receptors.

2.3.33 Representative Viewpoints: 6, 8, 9 and 11 are **low** sensitivity road user visual receptors and Viewpoints 6 and 9 are also **high** sensitivity pedestrian visual receptors. Although from fieldwork it appears that there are very few pedestrians using the areas where Viewpoints 6 and 9 are located. The viewpoints are at varying distances from the proposed cumulative developments and within different visual settings. Viewpoint 8 is close to the LTC whilst 9 and 11 are close to Tilbury2. Viewpoint 6 is a similar distance to both cumulative NSIPs.

2.3.34 The following projects will have the potential for cumulative effects in combination with the proposed development The RPS identification code is followed by the planningapplication reference:

- NSIPs:
    - 042 TR030003 Tilbury2
    - 058 TR010032 LTC
- Tilbury Developments:
    - 016 17/00977/FUL
    - 050 17/00349/SCR

NSIPs

2.3.35 Tilbury2 NSIP has the potential to have the following visual impacts on the N2 group of visual receptors in the form of new dockside development buildings, loading wharf, lifting gear, road access and container storage. Tilbury2 will extend over the former Tilbury B power station site northwards to the railway line. The LTC NSIP development will consist of a new road, tunnel under the River Thames and road infrastructure on the north side of the River Thames. This will be fairly extensive and adjacent to Zones A, G and C of the proposed Flexible Generation Plant development. The NSIP developments would be significant to dominant in the close views experienced from visual receptors on Access Land at Parsonage and Walton Commons, and the PRoW east of the former Tilbury B power station site and therefore the magnitude of change would be **minor** to **moderate**. Likewise, the change would be **moderate** for visual receptors at Tilbury sewage works and the electricity substation. The magnitude of change for the dynamic receptor group would be **moderate**.

2.3.36 The change would be **moderate** for Viewpoints 6, 8, 9 and11 for Tilbury2. and **moderate** for Viewpoint 11and for the LTC as views of the NSIPs would be dominant from these locations. However, for Viewpoints 6, 8 and 9, particularly the LTC the change would be **major**.

2.3.37 The overall significance of effect would be **minor** to **moderate** rising to **moderate** to **major** for residential groups on the eastern edge of Tilbury and users of the Access Land at Walton and Parsonage Commons and pedestrian visual receptors from Viewpoints 6 and 9 which is significant. The commercial and industrial visual receptors at the sewage works and substation on the east side of Tilbury would experience a **moderate**, not significant, visual effect. The effect on representative viewpoints would be **minor** to **moderate** and not significant.

Tilbury developments

2.3.38 Both developments are for industrial related processing facilities set within the context of existing industrial land uses. 016 is for the retention and completion of a waste wood processing plant and 050 is a screening stage application for a proposed processing of biofuels and other suitable waste facility, derived from feedstocks into a manufactured clean gas product (Use Class B2). The developments will repurpose predominantly brownfield sites with a mixture of industrial processing and energy generation facilities, together with associated storage and access. The developments are likely to vary from being barely perceptible to visible but not prominent in views. From residential receptor groups on the east side of Tilbury, Access Land views will be perceptible but set against the backdrop of a changing and industrial landscape the magnitude of change would be **negligible** to **no change**. For commercial / industrial visual receptors at the sewage works and sub-station and also dynamic transport route receptors; Fort Road, Cooper Shaw Road and the railway the change would be **negligible to no change.**

2.3.39 The representative Viewpoints 6, 8, 9 and 11 would all experience a change varying from **negligible** to **no change.**

2.3.40 The significance of effect would be **minor** to **negligible** for residential groups on the eastern edge of Tilbury and users of the Access Land at Walton and Parsonage Commons, which is significant. The commercial and industrial visual receptors at the sewage works and substation on the east side of Tilbury would experience a **moderate**, not significant, visual effect. The effect on representative viewpoints would be **minor** to **moderate** and not significant.

Group N3: South facing Chadwell St Mary escarpment

2.3.41 This visual receptor group is located on the south facing escarpment of the Chadwell Escarpment Urban Fringe character area. There is potential for elevated views over the coastal plain below vantage points. There are few publicly accessible locations here and the representative viewpoints are from specific and generally non extensive areas.

2.3.42 The community facility of St James' Church graveyard together with specific locations along PRoW Footpaths 200 and 72 are the only receptor groups that has the potential to be adversely affected in this area. These are of **high** sensitivity.

2.3.43 Representative Viewpoints: 3, 4, 7 and 10 are all **high** sensitivity visual receptors. The viewpoints are at varying distances from the proposed cumulative developments and within different visual settings.

2.3.44 The following projects will have the potential for cumulative effects in combination with the proposed development The RPS identification code is followed by the planning application reference:

- NSIPs:
  - 042 TR030003 Tilbury2
  - 058 TR010032 LTC

2.3.45 None of the receptors in this location will be significantly adversely affected by the other cumulative development and are not considered further in this assessment. Only the NSIPs have the potential to have significant adverse effects on the N3 visual receptor group.

NSIPs

2.3.46 The Tilbury2 NSIP has the potential to have the following visual impacts on the N3 group of visual receptors in the form of new dockside development buildings, loading wharf, lifting gear, road access and container storage. Tilbury2 will extend over the former Tilbury B power station site northwards to the railway line. The LTC NSIP development will consist of a new road, tunnel under the River Thames and road infrastructure on the north side of the River Thames. The LTC development would be fairly extensive and adjacent to Zones A, G and C of the proposed Flexible Generation Plant development. The NSIPs would be prominent in specific locations in near views diminishing to visible but not prominent in more distant views in eastern locations and at locations restricted in extent by intervening vegetation.

2.3.47 Views from St James' Church graveyard of the both NSIPs but particularly the LTC are available from a small area and would be prominent and therefore the change would be **moderate.** Views from footpath 200 of the NSIPs are very restricted by thick intervening vegetation and landform, whilst from footpath 72 the views are distant, over 1.2km away and viewed from an industrial urban fringe setting. These factors limit the magnitude of the change to **moderate**.

2.3.48 From the representative viewpoints the change to the view would vary from **negligible** for Viewpoints 3 and 4 because of the distance to the development, the industrial urban fringe setting and intervening landform and vegetation, to **moderate** for Viewpoints 7 and 10.

2.3.49 Overall, the significance of effect would be **negligible** for footpaths 72 and 200 apart from a small stretch represented by Viewpoint 10 which would be **moderate** to **major**. For Viewpoints 3 and 4 the effect would also be **negligible** and not significant. However, for St James' Church graveyard and Viewpoint 7 the effect would be **moderate** to **major** and significant.

Group N4: Coalhouse Fort area

2.3.50 This visual receptor group is located at Coalhouse Fort and its immediate surroundings including public open space extending to the disused radar station structure on the foreshore and the defensive moats. This group is comprised of **high** sensitivity visual receptors which include, public open space and public rights of way and tourist attraction.

2.3.51 The representative Viewpoints 17, 30, 31 and 32 are all **high** sensitivity receptors.

2.3.52 The following projects will have the potential for cumulative effects in combination with the proposed development The RPS identification code is followed by the planning application reference:

- NSIPs:
  - 058 TR010032 LTC

2.3.53 None of the receptors in this location will be significantly adversely affected by the other cumulative development and are not considered further in this assessment. Only the LTC has the potential to have significant adverse effects on the N4 visual receptor group.

NSIPs

2.3.54 The LTC NSIP development will consist of a new road, tunnel under the River Thames and road infrastructure on the north side of the River Thames. The LTC development would be fairly extensive and adjacent to Zones A, G and C of the proposed Flexible Generation Plant development. The NSIP development would be visible to barely

perceptible particularly the LTC but not prominent from any visual receptor sites. Therefore, the magnitude of change would **minor** at worse.

2.3.55 Overall, the significance of effect would be **minor** to **moderate** from N4 group visual receptors and not significant.

Group N5: North of the Chadwell St Mary to east Tilbury escarpment ridge line

2.3.56 This visual receptor group is located north of the ridge of the Chadwell St Mary to East Tilbury escarpment, where the land gradually falls northwards across farmland landscape. The following visual receptors are relevant and are of **high** sensitivity; Residential receptors: dwellings on the west side of Tilbury and PRoW footpaths 67 and bridleways 58 and 63. Although there are other receptor groups like dynamic road user receptors they are considered to be of medium sensitivity or less and because the magnitude of change is reduced because of distance, intervening landform and vegetation from the cumulative developments they are not considered further in this assessment.

2.3.57 The representative Viewpoints 5, 33 and 34 are **high** sensitivity receptors and have the potential to be adversely affected. The effects on Viewpoints 1 and 2 have been dismissed for further assessment as they are too distant, well screened from the cumulative developments.

- NSIPs:
    - 042 TR030003 Tilbury2
    - 058 TR010032 LTC

2.3.58 None of the receptors in this location will be significantly adversely affected by the other cumulative development and are not considered further in this assessment. Only the NSIPs have the potential to have significant adverse effects on the N5 visual receptor group.

NSIPs

2.3.59 The Tilbury2 and LTC NSIPs have the potential to have the following visual impacts on the N5 group of visual receptors in the form of new dockside development buildings, loading wharf, lifting gear, road access and container storage. Tilbury2 will extend over the former Tilbury B power station site northwards to the railway line. The LTC NSIP development will consist of a new road, tunnel under the River Thames and road infrastructure on the north side of the River Thames. The LTC development would be fairly extensive and the approach road would extend into this area. The NSIP LTC development would be visible but not prominent and Tilbury2 would be barely perceptible from the PRoWs in most views in this receptor group. The change would be **minor** to **negligible** at worse. The representative Viewpoints 1, 2, 5, 33 and 34 represent the worse-case scenarios from the PRoW in this area and the magnitude of change is **minor**.

2.3.60 Overall, the significance of effect would be **minor or moderate** at worse for the N5 group of visual receptors at the representative Viewpoints 5, 33 and 34 and not significant.

Group S1: River Thames south shore and waterfront

2.3.61 This visual receptor group is located on the River Thames south shore and waterfront and have generally open views across the river to the north shore. The following visual receptor groups include: residential visual receptors Gravesend waterfront, public access and tourist attractions at Gravesend Gordon Recreation Ground and gardens, New Tavern Fort, PRoW: Saxon Shore Way long distance footpath. These receptors are all deemed to be of **high** sensitivity. Visual commercial receptors at Gravesend and industrial receptors at Milton and dynamic receptors vessels using River Thames are judged to be of **medium** to **low** sensitivity. Only the high sensitivity receptors have the potential to be significantly adversely affected by the cumulative developments, consequently the medium and low sensitivity visual receptors are not considered further in this assessment.

2.3.62 The following representative viewpoints have the potential to be adversely affected, they are Viewpoints 18, 19, 20, 21 and 23 which are on the Saxon Shore Way and Viewpoint 19 which is on the passenger wharf for the Thames ferry and consequently, they are all of **medium** to **high** sensitivity.

2.3.63 The following projects will have the potential for cumulative effects in combination with the proposed development The RPS identification code is followed by the planning application reference:

- NSIPs:
    - 042 TR030003 Tilbury2
    - 058 TR010032 LTC
- Tilbury Developments:
    - 016 17/00977/FUL
    - 050 17/00349/SCR
- Gravesend Developments:
    - 064 (policy ref CS04)

NSIPs

2.3.64 The Tilbury2 and LTC NSIPs have the potential to have the following visual impacts on the S1 group of visual receptors in the form of new dockside development buildings, loading wharf, lifting gear, road access and container storage. Tilbury2 will extend over the former Tilbury B power station site northwards to the railway line. The LTC NSIP development will consist of a new road, tunnel under the River Thames and road infrastructure on the north side of the River Thames. The NSIP developments would be mostly visible but not prominent to barely perceptible, particularly associated with the LTC development from viewpoints on the north side of Gravesend. Whilst the Tilbury2 wharf development would be visible, given the existing industrial context of the northern shore of the Thames in this location, overall the magnitude of change would be **negligible** to **minor**, occasionally **moderate**, from locations the Saxon Shore Way and public access and tourist attractions viewpoints associated with Gravesend waterfront including the Gravesend Gordon Recreation Ground and gardens and New Tavern Fort.

2.3.65 The magnitude of change for the Viewpoints 18, 19, 20, 21 and 23, would be **moderate** because of the open exposed views of the southern sides of both NSIP developments.

2.3.66 Overall the Saxon Shore Way and Gravesend waterfront, public access and tourist attractions visual receptors will experience **moderate** to **minor** and not significant to **moderate** to **major** and significant effects. All the viewpoints in this receptor group will experience a **moderate** to **major** visual effect, which is significant.

Tilbury Developments

2.3.67 Both developments are for industrial related processing facilities set within the context of an existing industrial use landscape. 016 is for the retention and completion of a waste wood processing plant and 050 is a screening stage application for a proposed processing of biofuels and other suitable waste facility, derived from feedstocks into a manufactured clean gas product (Use Class B2). The developments will repurpose predominantly brownfield sites with a mixture of industrial processing and energy generation facilities, together with associated storage and access. These developments are likely to be visible but not prominent to barely perceptible in views over the stretch of shoreline between Tilbury Fort to where the land at Tilbury Marshes has been raised. The magnitude of change from Gravesend waterfront and the Saxon Shore Way visual receptors would be **negligible** diminishing to **no change** to views further east.

2.3.68 The magnitude of change would be **negligible** to **no change** for Viewpoints 18, 19, 20, 21 and 23 as views would be partially obscured by existing intervening features such as Tilbury Fort and the Tilbury2 (NSIP) development.

2.3.69 The significance of effect would be **minor** to **negligible** and not significant for a short section of Gravesend waterfront and Saxon Shore Way visual receptors. Whilst for representative Viewpoints 18, 19, and 23 would also experience a **minor** to **no** effects and therefore not significant. The operational and maintenance phases of these developments would not have a significant effect.

Gravesend Developments

2.3.70 The Canal Basin Regeneration will have impacts on the surrounding character and views. Receptors will have views of the new housing, school, retail and road development. The magnitude of impact will vary between **negligible** and **minor**.

2.3.71 The significance of effect of the proposed development on the high sensitivity visual receptors would be **minor** to **moderate**, depending on the location of the receptor and the intervening buildings, which are not significant.

Group S2: Elevated locations at Gravesend

2.3.72 This visual receptor group is located at elevated locations within and on the fringes of Gravesend. These include residential and public access receptors in Gravesend, particularly Windmill Gardens and Windmill Hill, and the PRoW footpath east of Gravesend and south of Chalk which rises through farmland to the south east. These receptors are all deemed to be of **high** sensitivity.

2.3.73 The following representative viewpoints have the potential to be adversely affected; Viewpoint 22 at Windmill Gardens, Gravesend and Viewpoint 28, aPRoW crossing arable farmland, to the south of Chalk, which have elevated views from Gravesend and across Chalk respectively. These receptors are of **high** sensitivity.

2.3.74 The following projects will have the potential for cumulative effects in combination with the proposed development The RPS identification code is followed by the planning application reference:

- NSIPs:
  - 042 TR030003 Tilbury2
  - 058 TR010032 LTC
- Tilbury Developments:
  - 016 17/00977/FUL
  - 050 17/00349/SCR
- Gravesend Developments:
  - 064 (policy ref CS04)

NSIPs

2.3.75 The Tilbury2 and LTC NSIPs have the potential to have the following visual impacts on the S2 group of visual receptors in the form of new dockside development buildings, loading wharf, lifting gear, road access and container storage. Tilbury2 will extend over the former Tilbury B power station site, northwards to the railway line. The LTC NSIP development will consist of a new road, tunnel under the River Thames and road infrastructure on the north side of the River Thames. More of the NSIP developments would be visible than for receptor group S1, due to the raised locations of the S2 receptor group views but also the views of the rest of the landscape on the north side of the Thames would be more extensive. The developments would vary from prominent to visible but not prominent from the elevated residential and public access visual receptors and the change would be **minor** to **moderate** depending on the elevation and the amount of intervening development and vegetation.

2.3.76 The magnitude of change for the Viewpoints 22 and 28, will be **moderate** because of the open exposed views from these locations of both NSIP construction phases. The Tilbury2 construction phase is likely to affect Viewpoint 22 the most whilst the LTC will affect Viewpoint 28 more.

2.3.77 Overall the residential and public access visual receptors of Windmill Gardens and Windmill Hill, and the PRoW footpath east of Gravesend and south of Chalk will experience **minor** to **moderate** and not significant to **moderate** to **major** and significant effects. Both viewpoints in this receptor group will experience a **moderate** to **major** visual effect, which is significant.

Tilbury Developments

2.3.78 Both cumulative developments are for industrial related processing facilities set within the context of existing industrial use landscape. Development 016 is for the retention and completion of a waste wood processing plant and 050 is a screening stage application for a proposed processing of biofuels and other suitable waste facility, derived from feedstocks into a manufactured clean gas product (Use Class B2). The developments will repurpose predominantly brownfield sites with a mixture of industrial processing and energy generation facilities, together with associated storage and access. The developments are likely to be visible but not prominent to barely perceptible in elevated views from Gravesend across the Thames. The magnitude of change from Gravesend visual receptors would be **minor** for lower views and those where the views are interrupted by intervening development and / or vegetation.

2.3.79 The magnitude of change would be **minor** for Viewpoints 22 and 28 as views would be partially obscured by existing intervening features such as Tilbury Fort and the Tilbury2 (NSIP) development.

2.3.80 The significance of effect would be **minor** to **moderate** and not significant at worse for visual receptors. Whilst for representative Viewpoints 22 and 28 would also experience a **minor** to **moderate** effect and therefore not significant. The construction phases of these developments are not a significant effect.

Gravesend Developments

2.3.81 Development 064 is for a residential redevelopment of a former waterside industrial use area in east Gravesend known as Gordon Promenade East. The development is likely to be medium rise at worse and in character with the surrounding townscape. The development is likely to be visible but not prominent to barely perceptible in elevated views from Gravesend across the Thames. The magnitude of change from Gravesend visual receptors would be generally **negligible** to **minor**.

2.3.82 The magnitude of change would be **negligible** for Viewpoints 22 and 28. Views would be obscured and filtered by existing intervening existing buildings.

2.3.83 The significance of effect would be **minor** and not significant for at worse for visual receptors. Whilst for representative Viewpoints 22 and 28 would also experience a **minor** effect and therefore not significant. This development would not have a significant effect.

Group S3: Northern edge Kent Downs AONB

2.3.84 This visual receptor group is located on the northern edge and north facing slopes of the national AONB landscape designation of the Kent Downs. These are dynamic road visual receptors, which have intermittent infrequent views from the minor road running through Brummelhill Wood. These visual receptors are deemed to be of **medium** sensitivity.

2.3.85 Representative Viewpoint 29 is on the minor road which runs parallel with the northern boundary of the Kent Downs AONB with elevated views over the River Thames coastal plain landscape. This receptor is judged to be of **very high** sensitivity.

2.3.86 The following projects will have the potential for cumulative effects in combination with the proposed development The RPS identification code is followed by the planning application reference:

- NSIPs:
  - 042 TR030003 Tilbury2
  - 058 TR010032 LTC

2.3.87 None of the receptors in this location will be significantly adversely affected by the other cumulative development and are not considered further in this assessment. Only the

NSIPs have the potential to have significant adverse effects on the S3 visual receptor group.

2.3.88 The Tilbury2 and LTC NSIPs have the potential to have the following visual impacts on the S3 group of visual receptors in the form of new dockside development buildings, loading wharf, lifting gear, road access and container storage. Tilbury2 will extend over the former Tilbury B power station site, northwards to the railway line. The LTC NSIP development will consist of a new road, tunnel under the River Thames and road infrastructure on the north side of the River Thames. The views of the NSIP developments would vary from barely perceptible for most receptor views from this rural road therefore the change would be **negligible** to **minor** depending on the amount of intervening roadside vegetation.

2.3.89 The magnitude of change would be **minor** for Viewpoint 29 as views would be long distance and the change set in the context of a predominantly dynamic industrial landscape.

2.3.90 The significance of effect would be **minor** to **moderate** and not significant at worse for the rural road visual receptors. Similarly, for representative Viewpoint 29 there would be a **minor** to **moderate** effect and therefore not significant. These developments would not have a significant impact.

Group S4: South side Thames coastal plain

2.3.91 This visual receptor group is located on the south side of the Thames on marshes and reclaimed marshland and includes the following visual receptor groups greater than 2.5km from the proposed Flexible Generation Plant: Tourist attractions including Cliffe Pools RSPB, Cliffe Fort and Shornmead Fort, PRoW Saxon Shore Way and across Shorne and Higham marshes. These are all judged to be **high** sensitivity visual receptors.

2.3.92 Representative Viewpoints: 24, 25, 26 and 27 are all **high** sensitivity visual receptors on the River Thames southern shoreline. The viewpoints are at varying distances from the proposed cumulative developments and within similar estuary side settings with a predominantly low lying and flat marsh or drained marshland farmland hinterland.

2.3.93 The following projects will have the potential for cumulative effects in combination with the proposed development The RPS identification code is followed by the planning application reference:

- NSIPs:
  - 042 TR030003 Tilbury2
  - 058 TR010032 LTC

2.3.94 None of the receptors in this location will be significantly adversely affected by the other cumulative development and are not considered further in this assessment. Only the NSIPs have the potential to have significant adverse effects on the S4 visual receptor group.

2.3.95 The Tilbury2 and LTC NSIPs have the potential to have the following visual impacts on the S4 group of visual receptors in the form of new dockside development buildings, loading wharf, lifting gear, road access and container storage. Tilbury2 will extend over the former Tilbury B power station site, northwards to the railway line. The LTC NSIP development will consist of a new road, tunnel under the River Thames and road infrastructure on the north side of the River Thames. The views of the NSIP, particularly the LTC development would vary from barely perceptible to small for the closer visual receptors such as at Shornmead Fort and the Saxon Shore Way to the north of Shorne marshes. Therefore, the change is judged to be **minor**.

2.3.96 The magnitude of change for the Viewpoints 24, 25, 26 and 27, will be **minor** to **negligible** because of the increasing distance from the cumulative developments – particularly the LTC from west to east. The views are open and exposed over the River Thames. The magnitude of change would vary between **minor** Viewpoint 24 and 25 and **negligible** for Viewpoints 26 and 27.

2.3.97 Overall the significance of effect would be no greater than **minor** to **moderate** for the western most receptor groups at Shornmead Fort, and Saxon Shore Way and for Viewpoints 24 and 25, which is not significant.

Further mitigation or enhancement

2.3.98 As part of the proposals there will be landscape planting, thickening of the boundary planting between the exchange common land (Zone E) and the railway line. Hedge planting along the access track off Cooper Shaw Road is also proposed. Ecological mitigation in the form of habitat creation, some of which will be tree and shrub planting in Zone F which will help to soften views of the operational phases of the Flexible Generation Plant and LTC particularly for visual receptors in N2 and N3 particularly high sensitivity visual receptors using the Access Land at Parsonage Common and the new Exchange Common land and also residential receptors on the west side of Tilbury. Medium sensitivity visual receptors using Fort Road and Cooper Shaw Road will also benefit from these landscape and ecology proposals.

Residual effects

2.3.99 In time as the planting matures the significance of effect will be reduced for the visual receptors mentioned above. In some locations such as receptors in the open access common land the effect would be reduced below significant levels

2.4 Decommissioning phase of Thurrock Flexible Generation Plant

2.4.1 The LTC NSIP is unlikely to be decommissioned and therefore is not considered in this part of the assessment.

Thurrock Landscape Character Areas

LCA C5: Tilbury Marshes

2.4.2 LCA C5: Tilbury Marshes, will be directly affected by the decommissioning phase of the cumulative developments. It is a large-scale landscape with extensive open and exposed land dominated by the sky. The sensitivity of the LCA to the proposed operation and maintenance works is considered to be **medium.**

2.4.3 The following projects will have the potential for cumulative effects in combination with the proposed development The RPS identification code is followed by the planning application reference:

- NSIPs:
    - 042 TR030003 Tilbury2
- Tilbury Developments:
    - 016 17/00977/FUL
    - 018 11/50361/TTGETL
    - 050 17/00349/SCR
    - 079 19/01274/FUL
    - 081 12.04.09.04/266C

NSIPs

2.4.4 The decommissioning and demolition of Tilbury2 NSIP would have the potential to have the following landscape impacts on the Tilbury Marshes LCA in the form of demolition and removal of dockside development buildings, loading wharf, lifting gear, road access and container storage. The LTC NSIP is unlikely to be decommissioned and is not considered in this part of the assessment. The Tilbury Marshes LCA, will be directly affected by the Tilbury2.

2.4.5 This landscape character area has historically been subject to large scale industrial and dock development as Tilbury has expanded. The magnitude of impact of the NSIP in this area is also considered to be **moderate**.

2.4.6 The effect experienced by the LCA will be **moderate** adverse, which is not significant.

Tilbury Developments

2.4.7 The Tilbury developments identified as having the potential for cumulative effects in combination with the proposed Thurrock Flexible Generation Plant are located to the west of Zone A and associated within or on the edge of the built up area of Tilbury on brownfield and disused sites and on the western side of the LCA. The decommssioning of these developments will involve the demolition and removal of a mixture of industrial processing and energy generation facilities, together with associated storage and access.

2.4.8 This part of the landscape character area has historically been subject to dynamic change to large scale industrial and dock development as Tilbury has expanded. The magnitude of Impact of the decommissioning works of these cumulative developments in this area is considered to be **minor** to **negligible.**

2.4.9 The effect experienced the LCA will be **negligible** to **minor** which is not significant.

LCA D6: Chadwell Escarpment Urban Fringe

2.4.10 The sensitivity of the LCA to the proposed cumulative developments is considered to be **medium.** The fairly unspoilt rural character in the east of the character area is the most sensitive part of this LCA to change from developments.

2.4.11 The following projects will have the potential for cumulative effects in combination with the proposed development. The RPS identification code is followed by the planning application reference:

- NSIPs:
    - 042 TR030003 Tilbury2
- Chadwell St Mary Developments:
    - 014 16/00412/OUT
    - 034 15/00379/OUT

NSIPs

2.4.12 The decommissioning and demolition of Tilbury2 would have the potential to have the following landscape impacts on the character area in the form of demolition and removal of dockside development buildings, loading wharf, lifting gear, road access and container storage. The potential effects of Tilbury2 would be indirect.

2.4.13 The magnitude of impact of decommissioning Tilbury2 is considered to be **minor**. The overall significance of effect experienced by the LCA will be **minor** adverse, which is not significant.

Chadwell St Mary Developments

2.4.14 The two cumulative developments are both potential housing developments for 203 and 43 dwellings respectively at Chadwell St Mary. They have the potential to cause direct and indirect effects on the western part of the character. They are both located on the south eastern edge of Chadwell St Mary. The direct effects on the landscape would be demolition and removal of housing.

2.4.15 The magnitude of impact of decommissioning the development in this character area is considered to be **negligible** to **minor**. The overall significance of effect experienced by the LCA will be **negligible** to **minor** adverse, which is not significant.

LCA D7: West Tilbury Urban Fringe

2.4.16 This character area is a fairly open landscape with limited tree cover, visual intrusion of existing developments including pylons and industrial use areas gives the landscape an urban fringe character. The sensitivity of this LCA to the proposed construction works in these zones is **medium**.

2.4.17 The following projects will have the potential for cumulative effects in combination with the proposed development. The RPS identification code is followed by the planning application reference:

- NSIPs:
  - 042 TR030003 Tilbury2
- East Tilbury Developments:
  - 005 18/00664/CONDC
  - 011 16/01475/SCR
  - 012 16/01232/OUT

NSIPs

2.4.18 The decommissioning and demolition of Tilbury2 would have the potential to have the following landscape impacts on the character area in the form of demolition and removal of dockside development buildings, loading wharf, lifting gear, road access and container storage. The potential effects of Tilbury2 would be indirect.

2.4.19 Tilbury2 is in the main, visually separated from this character area.

2.4.20 The magnitude of impact of decommissioning Tilbury2 is considered to be **minor**. The overall significance of effect experienced by the LCA will be **minor** adverse, which is not significant.

East Tilbury Developments

2.4.21 The three cumulative developments are potential housing developments for 200 (Ref 011) and 1000 (Ref 012) dwellings west of East Tilbury. Development 005 is for 50 dwellings and is located on south side of East Tilbury on the character area boundary. The decommissioning of developments 011 and 012 have a greater potential than 005 to cause direct impacts on the character area. The direct effects on the landscape would be demolition and removal of housing.

2.4.22 The magnitude of impact of the decommissioning works in this character area is considered to be **minor**. The landscape here has an urban fringe character. The overall significance of effect experienced by the LCA will be **minor** adverse, which is not significant.

Visual Receptors

Group N1: North Thames shore waterfront

2.4.23 This visual receptor group is located close to where Zone G meets the shoreline on the north side of the River Thames.

2.4.24 Public Access: Thames Estuary Path / Two Forts Way (Footpath146); Tourist Attractions: visitor receptors to Tilbury Fort are both **high** sensitivity visual receptors (**Medium** for users of Footpath 146, adjacent to the sewage works, Viewpoint 12).

2.4.25 Representative Viewpoints: 13, 14 ,15 and 16 are all **high** sensitivity visual receptors on PRoW FP146. The viewpoints are at varying distances from the proposed cumulative developments and within different visual settings. Viewpoints 13 and 14 and close to Tilbury Fort whilst 15 and 16 are to the south east and east of Zones A and G.

2.4.26 The following projects will have the potential for cumulative effects in combination with the proposed development The RPS identification code is followed by the planning application reference:

- NSIPs:
  - 042 TR030003 Tilbury2
- Tilbury Developments:
  - 016 17/00977/FUL
  - 050 17/00349/SCR

NSIPs

2.4.27 The decommissioning and demolition of Tilbury2 would have the potential to have the following visual impacts on the Group N1 in the form of demolition and removal of dockside development buildings, loading wharf, lifting gear, road access and container storage. The decommissioning of the NSIP development would be significant to dominant in the close views from the Thames Estuary Path east of Tilbury Fort for a stretch approximately 1km long where the Tilbury 2 development adjoins the shoreline. The magnitude of change would be **moderate** for this stretch diminishing to **minor** further east. Likewise, the magnitude of change would be **minor** within and from Tilbury Fort.

2.4.28 The change would be **minor** to **moderate** for Viewpoints 12, 13 and 14 as views would be partially obscured of the cumulative NSIP development, by Tilbury Fort. The impact of change for Viewpoints 15 and 16 particularly the decommissioning the new wharf at Tilbury2 would also be **minor** to **moderate**.

2.4.29 Overall, the significance of effect would be **moderate** to **major** and significant for a short, approximately 1km section of the Thames Estuary path where the decommissioning operation of the developments meet the shoreline and **minor** to **moderate** from Tilbury Fort. Whilst for representative Viewpoints 15 and 16 the impact would be **moderate** to **major** and significant. Whereas Viewpoints 13 and 14 would experience a **minor** to **moderate** effect and not significant. Overall the decommissioning phase of Tilbury2 is significant for a few specific receptors.

Tilbury developments

2.4.30 Both developments are for industrial related processing facilities set within the context of existing industrial use landscape. Development 016 is for the retention and completion of a waste wood processing plant and 050 is a screening stage application for a proposed processing of biofuels and other suitable waste facility, derived from feedstocks into a manufactured clean gas product (Use Class B2). The decommissioning of these developments will involve the demolition and removal of a mixture of industrial processing and energy generation facilities, together with associated storage and access. The magnitude of change would be **negligible** further east. The impact would be **no change to negligible** within and from Tilbury Fort.

2.4.31 The change would be **no change** to **negligible** for Viewpoints 12, 13 and 14 as views would be partially obscured of the cumulative NSIP developments, by Tilbury Fort. For Viewpoints 15 and 16 the effect of the decommissioning developments would also be **no change** to **negligible.**

2.4.32 Overall, the significance of effect would be **minor** and not significant for a short approximately 1km long section of the Thames Estuary path directly south of these developments where the Tilbury 2 development adjoins the shoreline. It would be **minor** from Tilbury Fort. Whilst for representative Viewpoints 15 and 16 the impact would be **minor** to **negligible** and not significant. Whereas, Viewpoints 13 and 14 would experience a **minor** effect and not significant. Therefore, the decommissioning phase of these developments are not a significant impact.

Group N2: North side Thames coastal plain

2.4.33 This visual receptor group is located on the north shore of the River Thames and within the coastal plain which is similar in extent to the Tilbury Marshes landscape character area but also includes the built-up area of Tilbury. Coalhouse Fort is dealt with as a separate visual receptor.

2.4.34 The following visual receptors are relevant; Residential receptors: Dwellings on the east and south east side of Tilbury. Access Land: Parsonage and Walton Commons. PRoW: footpaths south of Buckland and south of Zone A are all **high** sensitivity receptors.

2.4.35 Visual commercial and industrial facility receptors at the Tilbury substation and sewage works and dynamic road receptors along Fort Road and Cooper Shaw Road together with rail passengers on the rail line which runs from Tilbury north eastwards across this area are **medium** sensitivity visual receptors.

2.4.36 Representative Viewpoints: 6, 8, 9 and 11 are all **low** sensitivity visual road user receptors and Viewpoints 6 and 9 are also **high** sensitivity pedestrian visual receptors. Although from fieldwork it appears that there are very few pedestrians using the areas where Viewpoints 6 and 9 are located The viewpoints are at varying distances from the proposed cumulative developments and within different visual settings. Viewpoint 8 is close to the LTC whilst 9 and 11 are close to Tilbury2. Viewpoint 6 is a similar distance to both cumulative NSIPs.

2.4.37 The following projects will have the potential for cumulative effects in combination with the proposed development The RPS identification code is followed by the planningapplication reference:

- NSIPs:
  - 042 TR030003 Tilbury2
- Tilbury Developments:
  - 016 17/00977/FUL
  - 050 17/00349/SCR

NSIPs

2.4.38 The decommissioning and demolition of Tilbury2 would have the potential to have the following visual impacts on the Group N2 in the form of demolition and removal of dockside development buildings, loading wharf, lifting gear, road access and container storage. The decommissioning of the NSIP development would be significant to dominant in the close views experienced from visual receptors on Access Land at Parsonage and Walton Commons, and the PRoW east of the former Tilbury B power station site and therefore the magnitude of change would be **minor** to **moderate**. Likewise, the change would be **moderate** for visual receptors at Tilbury sewage works and the electricity substation. The magnitude of change for the dynamic receptor group would be **moderate** depending on proximity and level of intervening screening.

2.4.39 The change would be **moderate** to **major** for Viewpoints 6, 8, 9 & 11 for Tilbury2 as views of the NSIP decommissioning would be dominant from these locations.

2.4.40 The significance of effect would be **minor** to **moderate** rising to **moderate** to **major** for residential groups on the eastern edge of Tilbury, pedestrian visual receptors from Viewpoints 6 and 9 and users of the Access Land at Walton and Parsonage Commons, which is significant. The commercial and industrial visual receptors at the sewage works and substation on the east side of Tilbury would experience a **moderate**, not significant, visual effect. The effect on representative viewpoints would be **minor** to **moderate** and not significant.

Tilbury developments

2.4.41 Both developments are for industrial related processing facilities set within the context of existing industrial use landscape. Development 016 is for the retention and completion of a waste wood processing plant and 050 is a screening stage application for a proposed processing of biofuels and other suitable waste facility, derived from feedstocks into a manufactured clean gas product (Use Class B2). The decommissioning of these developments will involve the demolition and removal of a mixture of industrial processing and energy generation facilities, together with associated storage and access. The demolition and removal phases are likely to vary from being barely perceptible to visible but not prominent in views. From residential receptor groups on the east side of Tilbury, Access Land views will be perceptible but set against the backdrop of a changing and industrial landscape the magnitude of change will be **no change** to **negligible**. For commercial / industrial visual receptors at the sewage works and sub-station and also dynamic transport route receptors; Fort Road, Cooper Shaw Road and the railway the change will be **negligible to no change.**

2.4.42 The representative Viewpoints 6, 8, 9 and 11 would all experience a change varying from **negligible** to **no change.**

2.4.43 The significance of effect would be **minor to negligible** for residential groups on the eastern edge of Tilbury, pedestrian visual receptors from Viewpoints 6 and 9 and users of the Access Land at Walton and Parsonage Commons, which is not significant. The commercial and industrial visual receptors at the sewage works and substation on the east side of Tilbury would experience a **moderate** significance of effect, and not significant. The effect on representative viewpoints would be **minor** to **moderate** and not significant.

Group N3: South facing Chadwell St Mary escarpment

2.4.44 This visual receptor group is located on the south facing escarpment of the Chadwell Escarpment Urban Fringe character area. There is potential for elevated views over the coastal plain below vantage points. There are few publicly accessible locations here and the representative viewpoints are from specific and generally non extensive areas.

2.4.45 The community facility of St James' Church graveyard together with specific locations along PRoW Footpaths 200 and 72 are the only receptor groups that has the potential to be adversely affected in this area. These are of **high** sensitivity.

2.4.46 Representative Viewpoints: 3, 4, 7 and 10 are all **high** sensitivity visual receptors. The Viewpoints are at varying distances from the proposed cumulative developments and within different visual settings.

2.4.47 The following projects will have the potential for cumulative effects in combination with the proposed development The RPS identification code is followed by the planning application reference:

- NSIPs:
  - 042 TR030003 Tilbury2

2.4.48 None of the receptors in this location will be significantly adversely affected by the decommissioning of the other cumulative developments and are not considered further in this assessment. Only the NSIP has the potential to have significant adverse effects on the N3 visual receptor group.

NSIPs

2.4.49 The decommissioning and demolition of Tilbury2 would have the potential to have the following visual impacts on the Group N3 in the form of demolition and removal of dockside development buildings, loading wharf, lifting gear, road access and container storage. The decommissioning of the NSIP would be prominent in specific locations in near views diminishing to visible but not prominent in more distant views in eastern locations and at locations restricted in extent by intervening vegetation.

2.4.50 Views from St James' Church graveyard of the NSIP are available from a small area and would be prominent and therefore the change would be **moderate.** Views from footpath 200 of the NSIPs are very restricted by thick intervening vegetation and landform, whilst from footpath 72 the views are distant, over 1.2km away and viewed from an industrial urban fringe setting. These factors limit the magnitude of the change to **minor.**

2.4.51 From the representative viewpoints the change to the view would vary from **minor** for Viewpoints 3 and 4 because of the distance to the demolition and removal of the development, the industrial urban fringe setting and intervening landform and vegetation. However, the change would be **negligible** to **moderate** for Viewpoints 7 and 10.

2.4.52 The significance of effect would be **negligible** for footpaths 72 and 200 apart from a small stretch represented by Viewpoint 10 which would be **moderate**. For viewpoints 3 and 4 the effect would also be **negligible** and not significant. However, for St James' Church graveyard and Viewpoint 7 the effect would be **moderate** and not significant.

Group N4: Coalhouse Fort area

2.4.53 This visual receptor group is located at Coalhouse Fort and its immediate surroundings including public open space extending to the disused radar station structure on the foreshore and the defensive moats. This group is comprised of **high** sensitivity visual receptors which include, public open space and public rights of way and tourist attraction.

2.4.54 The representative Viewpoints 17, 30, 31 and 32 are all **high** sensitivity receptors.

2.4.55 The following projects will have the potential for cumulative effects in combination with the proposed development The RPS identification code is followed by the planning application reference:

- NSIPs:
  - 042 TR030003 Tilbury2

2.4.56 The visual receptors at and around Coalhouse Fort will have views of the taller plant involved in the decommissioning of Tilbury2. The temporary magnitude of impact will be **minor** at most. This will have a **moderate** significance of effect, which is not significant.

2.4.57 None of the receptors in this location will be significantly adversely affected by the decommissioning of the other cumulative developments.

Group N5: North of the Chadwell St Mary to east Tilbury escarpment ridge line

2.4.58 This visual receptor group is located north of the ridge of the Chadwell St Mary to East Tilbury escarpment, where the land gradually falls northwards across farmland landscape. The following visual receptors are relevant and are of **high** sensitivity; Residential receptors: dwellings on the west side of Tilbury and PRoW footpaths 67 and bridleways 58 and 63. Although there are other receptor groups like dynamic road user receptors they are considered to be of medium sensitivity or less and because the magnitude of change is reduced because of distance, intervening landform and vegetation from the cumulative developments they are not considered further in this assessment.

2.4.59 The representative Viewpoints 5, 33 and 34 are **high** sensitivity receptors and have the potential to be adversely affected. The effects on Viewpoints 1 and 2 have been dismissed for further assessment as they are too distant, well screened from the cumulative developments.

2.4.60 The following projects will have the potential for cumulative effects in combination with the proposed development The RPS identification code is followed by the planning application reference:

- NSIPs:
  - 042 TR030003 Tilbury2

2.4.61 None of the receptors in this location will be significantly adversely affected by the decommissioning of the other cumulative developments and are not considered further in this assessment. Only the NSIP has the potential to have significant adverse effects on the N5 visual receptor group.

NSIPs

2.4.62 The decommissioning and demolition of Tilbury2 would have the potential to have the following landscape impacts on Group N5 in the form of demolition and removal of dockside development buildings, loading wharf, lifting gear, road access and container storage. Tilbury2 decommissioning would be barely perceptible from the PRoWs in most views in this receptor group. The change would be **minor to negligible** at worse. The representative Viewpoints 5, 33 and 34 represent the worse-case scenarios from the PRoW in this area and the magnitude of change is **minor**.

2.4.63 Overall, the significance of effect would be **minor** to **moderate** at worse for the N5 group of visual receptors at the representative Viewpoints 5, 33 and 34 and not significant.

Group S1: River Thames south shore and waterfront

2.4.64 This visual receptor group is located on the River Thames south shore and waterfront and have generally open views across the river to the north shore. The following visual receptor groups include: residential visual receptors Gravesend waterfront, public access and tourist attractions at Gravesend Gordon Recreation Ground and gardens, New Tavern Fort, PRoW: Saxon Shore Way. These receptors are all deemed to be of **high** sensitivity. Visual commercial receptors at Gravesend and industrial receptors at Milton and dynamic receptors vessels using River Thames are judged to be of **medium** to **low** sensitivity. Only the high sensitivity receptors have the potential to be significantly adversely affected by the cumulative developments, consequently the medium and low sensitivity visual receptors are not considered further in this assessment.

2.4.65 The following representative viewpoints have the potential to be adversely affected, they are Viewpoints 18, 19, 20, 21 and 23 which are on the Saxon Shore Way and Viewpoint 19 which is on the passenger wharf for the Thames ferry and consequently, they are all of **high** sensitivity.

2.4.66 The following projects will have the potential for cumulative effects in combination with the proposed development The RPS identification code is followed by the planning application reference:

- NSIPs:
  - 042 TR030003 Tilbury2
- Tilbury Developments:
  - 016 17/00977/FUL
  - 050 17/00349/SCR
- Gravesend Developments:
  - 064 (policy ref CS04)

NSIPs

2.4.67 The decommissioning and demolition of Tilbury2 NSIP would have the potential to have the following visual impacts on Group S1 in the form of demolition and removal of dockside development buildings, loading wharf, lifting gear, road access and container storage. The decommissioning of the Tilbury2 wharf would be visible, given the existing dynamic industrial context of the northern shore of the Thames in this location, overall the magnitude of change would be **minor** to**moderate** from locations the Saxon Shore Way and public access and tourist attractions viewpoints associated with Gravesend waterfront including the Gravesend Gordon Recreation Ground and gardens and New Tavern Fort.

2.4.68 The magnitude of change for the Viewpoints 18, 19, 20, 21 and 23, will be **moderate** because of the open exposed views of the southern sides of the NSIP development.

2.4.69 Overall the Saxon Shore Way and Gravesend waterfront, public access and tourist attractions visual receptors will experience **moderate** to **minor** significance of effect and not significant to **moderate** to **major** effects which are significant. All the viewpoints in this receptor group will experience a **moderate** to **major** visual effect, which is significant.

Tilbury Developments

2.4.70 Both developments are for industrial related processing facilities set within the context of existing industrial use landscape. Development 016 is for the retention and completion of a waste wood processing plant and 050 is a screening stage application for a proposed processing of biofuels and other suitable waste facility, derived from feedstocks into a manufactured clean gas product (Use Class B2). The decommissioning of these developments will involve the demolition and removal of a mixture of industrial processing and energy generation facilities, together with associated storage and access. The decommissioning of these developments are likely to be visible but not prominent to barely perceptible in views over the stretch of shoreline between Tilbury Fort to where the land at Tilbury Marshes has been raised. The magnitude of change from Gravesend waterfront and the Saxon Shore Way visual receptors would be **negligible** to **minor**.

2.4.71 The magnitude of change would be **negligible** to **minor** for Viewpoints, 20 and 21 as views would be partially obscured by existing intervening features such as Tilbury Fort and the Tilbury2 (NSIP) development.

2.4.72 The significance of effect would be **minor** to **moderate** and not significant for a short section of Gravesend waterfront and Saxon Shore Way visual receptors. Whilst for representative Viewpoints 18, 19, 20, 21 and 23 would also experience a **minor** to **no** effects and therefore not significant. The decommissioning phases of these developments would not have a significant impact.

Gravesend Development

2.4.73 This development is for a residential redevelopment of a former waterside industrial use area in east Gravesend known as Gordon Promenade East. The demolition and removal is likely to be visible but not prominent to barely perceptible in elevated views

from Gravesend across the Thames. The magnitude of change from Gravesend visual receptors would be generally, **negligible to minor**.

2.4.74 The temporary significance of effect would be **minor** to **moderate** and not significant for visual receptors.

2.4.75

Group S2: Elevated locations at Gravesend

2.4.76 This visual receptor group is located at elevated locations within and on the fringes of Gravesend. These include residential and public access receptors in Gravesend, particularly Windmill Gardens and Windmill Hill, and the PRoW footpath east of Gravesend and south of Chalk which rises through farmland to the south east. These receptors are all deemed to be of **high** sensitivity.

2.4.77 The following representative viewpoints have the potential to be adversely affected; Viewpoints 22 at Windmill Gardens, Gravesend and Viewpoint 28 on a PRoW crossing an arable field footpath to the south of Chalk, which have elevated views form Gravesend and across Chalk respectively. These receptors are of **high** sensitivity.

2.4.78 The following projects will have the potential for cumulative effects in combination with the proposed development The RPS identification code is followed by the planning application reference:

- NSIPs:
  - 042 TR030003 Tilbury2
- Tilbury Developments:
  - 016 17/00977/FUL
  - 050 17/00349/SCR
- Gravesend Developments:
  - 064 (policy ref CS04)

NSIPs

2.4.79 The decommissioning and demolition of Tilbury2 would have the potential to have the following visual impacts on Group S2 in the form of demolition and removal of dockside development buildings, loading wharf, lifting gear, road access and container storage. More of the NSIP decommissioning would be visible than for receptor group S1, due to the raised locations of the S2 receptor group views but also the views of the rest of the landscape on the north side of the Thames would be more extensive. The decommissioning of this development would vary from prominent to visible but not prominent from the elevated residential and public access visual receptors and the change would be **minor** to **moderate** depending on the elevation and the amount of intervening development and vegetation.

2.4.80 The magnitude of change for the Viewpoint 22, will be **moderate** because of the elevated views from of the Tilbury 2 NSIP decommissioning phase. Viewpoint 28 is sufficiently far from the Tilbury 2 to have a **negligible** magnitude of change and not considered further.

2.4.81 Overall the residential and public access visual receptors of Windmill Gardens and Windmill Hill will experience a temporary **minor** to **moderate** effect, which are not significant.

Tilbury Developments

2.4.82 Both developments are for industrial related processing facilities set within the context of existing industrial use landscape. Development 016 is for the retention and completion of a waste wood processing plant and 050 is a screening stage application for a proposed processing of biofuels and other suitable waste facility, derived from feedstocks into a manufactured clean gas product (Use Class B2). The decommissioning of these developments will involve the demolition and removal of a mixture of industrial processing and energy generation facilities, together with associated storage and access. The decommissioning of these developments is likely to be visible but not prominent to barely perceptible in elevated views from Gravesend across the Thames. The magnitude of change from Gravesend visual receptors would be **negligible** due to distance and intervening development and / or vegetation.

2.4.83 The magnitude of change would be **minor** for Viewpoints 22 and 28 as views would be partially obscured by existing intervening features such as Tilbury Fort.

2.4.84 Overall, the significance of effect would be **minor** to **moderate** and not significant at worse for visual receptors. Whilst representative Viewpoint 22 would also experience a **minor** to **moderate** effect and therefore not significant. The decommissioning phases of these developments do not have a significant effect.

Gravesend Development

2.4.85 This development is for a residential redevelopment of a former waterside industrial use area in east Gravesend known as Gordon Promenade East. The demolition and removal is likely to be visible but not prominent to barely perceptible in elevated views from Gravesend across the Thames. The magnitude of change from Gravesend visual receptors would be generally, **negligible** to **minor**.

2.4.86 The magnitude of change would be **negligible** for Viewpoints 22 and 28. Views would be obscured and filtered by existing intervening existing buildings.

2.4.87 The significance of effect would be **minor** and not significant for at worse for visual receptors. Whilst for representative Viewpoints 22 and 28 would also experience a **minor** effect and therefore not significant. The decommissioning phases of this development would not have a significant effect.

Group S3: Northern edge Kent Downs AONB

2.4.88 This visual receptor group is located on the northern edge and north facing slopes of the national AONB landscape designation of the Kent Downs. These are dynamic road visual receptors, which have intermittent infrequent views from the minor road running through Brummelhill Wood. These visual receptors are deemed to be of **medium** sensitivity.

2.4.89 Representative Viewpoint 29 is on the minor road which runs parallel with the northern boundary of the Kent Downs AONB with elevated views over the River Thames coastal plain landscape. This receptor is judged to be of **high** sensitivity.

2.4.90 The following projects will have the potential for cumulative effects in combination with the proposed development The RPS identification code is followed by the planning application reference:

- NSIPs:
  - 042 TR030003 Tilbury2

2.4.91 None of the receptors in this location will be significantly adversely affected by the decommissioning of the other cumulative developments and are not considered further in this assessment. Only the Tilbury2 NSIP has the potential to have significant adverse effects on the S3 visual receptor group.

NSIPs

2.4.92 The decommissioning and demolition of Tilbury2 would have the potential to have the following visual impacts on Group S3 in the form of demolition and removal of dockside development buildings, loading wharf, lifting gear, road access and container storage. The views of the NSIP decommissioning would vary from barely perceptible for most receptor views from this rural road therefore the change would be **negligible** to **minor** depending on the amount of intervening roadside vegetation.

2.4.93 The magnitude of change would be **minor** for Viewpoint 29 as views would be long distance and the change set in the context of a predominantly dynamic industrial landscape.

2.4.94 Overall, the significance of effect would be **minor** to **moderate** and not significant at worse for the rural road visual receptors. Similarly, for representative Viewpoint 29 there would be a **minor** to **moderate** effect and therefore not significant. The decommissioning phase would not have a significant impact.

Group S4: South side Thames coastal plain

2.4.95 This visual receptor group is located on the south side of the Thames on marshes and reclaimed marshland and includes the following visual receptor groups greater than 2.5km from the proposed Flexible Generation Plant: Tourist attractions including Cliffe Pools RSPB, Cliffe Fort and Shornmead Fort, PRoW Saxon Shore Way and across Shorne and Higham marshes. These are all judged to be **high** sensitivity visual receptors.

2.4.96 Representative Viewpoints: 24, 25, 26 and 27 are all **high** sensitivity visual receptors on the River Thames southern shoreline. The viewpoints are at varying distances from the proposed cumulative developments and within similar estuary side settings with a predominantly low lying and flat marsh or drained marshland farmland hinterland.

2.4.97 The following projects will have the potential for cumulative effects in combination with the proposed development The RPS identification code is followed by the planning application reference:

- NSIPs:
  - 042 TR030003 Tilbury2

2.4.98 None of the receptors in this location will be significantly adversely affected by the decommissioning of the other cumulative developments and are not considered further in this assessment. Only the Tilbury2 NSIP has the potential to have significant adverse effects on the S4 visual receptor group.

NSIPs

2.4.99 The decommissioning and demolition of Tilbury2 would have the potential to have the following visual impacts on the Group S4 in the form of demolition and removal of dockside development buildings, loading wharf, lifting gear, road access and container storage. The views of the decommissioning of the NSIP, would vary from barely perceptible to visible but not prominent for the closer visual receptors such as at Shornmead Fort and the Saxon Shore Way to the north of Shorne marshes. Therefore, the change is judged to be **minor**.

2.4.100 The magnitude of change for the Viewpoints 24, 25, 26 and 27, will be minor to negligible because of the increasing distance from the cumulative development –. The

views are open and exposed over the River Thames. The magnitude of change would be **minor**.

2.4.101 Overall the significance of effect would be no greater than **minor** for the western most receptor groups at Shornmead Fort, and Saxon Shore Way and for Viewpoints 24 and 25, which is not significant.

2.5 Summary of potential effects from cumulative developments

2.5.1 The landscape receptor that is predicted to experience significant cumulative effects is the host landscape character area, Tilbury Marshes LCA: C5. The large scale NSIP projects are likely to contribute most to the potential source of effects in combination with the Flexible Generation Plant. However, this character area has had a history of large scale industrial uses which impart an urban / industrial fringe character on the this LCA. This is particularly the case in the western parts of the character area where the proposed NSIPs are located and less so further east towards Coalhouse Fort which has more rural qualities. Therefore, although overall the character area is judged to be of medium sensitivity to these forms of development, the western side is judged less sensitive than the eastern side.

2.5.2 The visual receptors that are predicted to experience significant cumulative effects are confined to those closest to the large scale NSIP projects and the Flexible Generation Plant proposed development that are also judged to be of high sensitivity. The other shortlisted schemes are likely not to have significant effects on the visual receptors either in combination or sequentially.

2.5.3 The visual receptor groups have been grouped up in to those north and south of the Thames. Subsequently, five locations in the north and four in the south have been grouped up based on similar locations. This has been done to make the assessment more concise.

2.5.4 The visual receptors that are predicted to experience significant cumulative effects from the NSIP projects in group N1 include users of the PRoW Thames Estuary Path, the section between Tilbury Fort and the point where the LTC tunnel emerges on the north shore of the Thames. Representative Viewpoints 15 and 16 are within this stretch of the path. The Flexible Generation Plant in combination with these NSIPs in views from these visual receptors is likely to only slightly increase the likely significance of effect from the representative viewpoints. Additionally, there will sequential views from short stretches of the Thames Estuary Path where views of the proposed development that are not obscured by the NSIPs but seen side by side in transient views of users of the path.

2.5.5 The visual receptors that are predicted to experience significant cumulative effects from the NSIP projects in group N2 include users of open Access Land at Parsonage and Walton Common and residential receptors on the eastern edge of Tilbury. There are no representative viewpoints that are of high sensitivity that are likely to be significantly affected. The Flexible Generation Plant in combination with these NSIPs in receptor views from the open access is likely to only slightly increase the significance of effect from the representative viewpoints. The proposed development will be seen in front of the NSIP developments and in combination but there will be sequential views where the developments are seen side by side in the view as people move though the common land.

2.5.6 The visual receptors that are predicted to experience significant cumulative effects from the NSIP projects in group N3, which typically have elevated views over the developments, include users of the PRoW FP200, for very short sections that have uninterrupted views of the proposed development and NSIPs, but due to intervening landform and vegetation these are uncommon. The view from St James' Church graveyard has more elevated and open views of the developments than other publicly accessible locations in this receptor group. Representative Viewpoint 7 is within the church graveyard and Viewpoint 10, on PRoW FP200. The Flexible Generation Plant in combination with the NSIPs in views from these visual receptors is likely to only slightly increase the likely significance of effect from these representative viewpoints. From the church graveyard and Viewpoint 7 the Flexible Generation Plant will be seen in combination with both NSIPs. However, the LTC will be seen in the foreground with the Flexible Generation Plant and Tilbury2 developments behind.

2.5.7 It is predicted that there will be no likely significant cumulative impacts on receptor groups N4 and N5.

2.5.8 The visual receptors that are predicted to experience significant cumulative effects from the NSIP projects in group S1 include users of the Saxon Shore Way, from Gravesend waterfront to the Shorne Marshes, public access and tourist attractions at Gravesend Gordon Recreation Ground and Gardens and New Tavern Fort. Representative Viewpoints 18, 19, 20, 21 and 23 are within this stretch of waterfront. The Flexible Generation Plant in combination with these NSIPs in views from these visual receptors is likely to only slightly increase the likely significance of effect from the representative viewpoints. Views of the Flexible Generation plant will be obscured by the Tilbury2 development along the Gravesend waterfront stretch and it will have very little affect in increasing the level of significance. Travelling eastwards visual receptors will see first the Flexible Generation Plant and then the LTC in sequence. However, the significance of effect of the Flexible Generation Plant is likely not to increase the significance of effect of the visual impact of the LTC.

2.5.9 The visual receptors that are predicted to experience significant cumulative effects from the NSIP projects in group S2, which typically have elevated views some of which extend over the developments on the north side of the Thames, include Windmill Hill and some upper floor north facing views from residencies off this public open space. Representative Viewpoints 22 and 28 are also likely to experience significant visual effects from the NSIPs. From Windmill Hill the Flexible Generation Plant will be seen beyond the Tilbury2 development and the latter is likely to obscure and limit the extent of what visual receptors can see of the Flexible Generation Plant. Therefore, the significance of effect is unlikely to be increased by more than a negligible amount. The LTC will be seen still further in the distance. From Viewpoint 28 the Flexible Generation Plant will be seen next to the LTC but again is unlikely to increase the visual significance of effect as the Flexible Generation Plant will be seen in the context of other dockside and industrial uses, albeit at the edge of Tilbury.

2.5.10 It is predicted that there will be no likely significant cumulative impacts on receptor groups S3 and S4.

2.5.11 Accurate details for all the cumulative developments are not available. Judgements have had to be made on location and dimensions based in written information and publicly available images. The cumulative development visualisations are wirelines of the NSIPs and a selection of viewpoints can be found in section 3 Figures 1.2 to 1.11.

Cumulative developments in a 'maximum development' scenario

2.5.12 Two Nationally Significant Infrastructure Project (NSIP) developments are proposed on land adjacent to and in some cases overlapping with the Thurrock Flexible Generation Plant application boundary. The Tilbury2 port expansion adjacent to the west is under construction and Lower Thames Crossing (LTC) motorway to the east and north is at the pre-application consultation stage, having published a Preliminary Environmental Information Report (PEIR) in 2018.

2.5.13 As part of this ES, cumulative wirelines from the representative viewpoints have been generated (Figures 1.2 to 1.11 in this chapter).

2.5.14 The visualisations of Tilbury2 have been modelled using publicly available information and dimensions. The visualisations of the LTC are based on area extents and do not include cuttings or embankments or storage and stock piling areas that are likely during construction. The development extent is based on publicly available information from Highways England.

2.5.15 Outline planning permission has been granted for several residential and mixed-use developments expanding Linford and East Tilbury in the direction of Thurrock Flexible Generation Plant and a number of other relevant cumulative developments in the surrounding area have been shortlisted for assessment in Table 1.1.

2.5.16 Should the LTC and other smaller developments proceed, Thurrock Flexible Generation Plant's main development site would be closely surrounded by the temporary or permanent works areas Tilbury2 and the LTC, and other smaller developments.

2.6 Cumulative Effects on Landscape Resources and Receptors

2.6.1 GLVIA3 refers to Scottish Natural Heritage when defining cumulative landscape effects as "*effects that can impact on either the physical fabric or character of the landscape, or any special values attached to it*" (SNH, 2012).

Designated Landscapes

2.6.2 In the 'maximum development' scenario set out above, the indirect, incremental, cumulative effects of Thurrock Flexible Generation Plant on designated landscape resources would be minor. None of the projects are within a designated landscape. Although the larger NSIP projects on the Thurrock side of the Thames Estuary will be identifiable from the Kent Downs AONB, due to the scale and distance of the built structures and extent they will not break the skyline when viewed from the AONB. The LTC by contrast also directly impacts north Kent and may well affect the special qualities of the Kent Downs AONB. In contrast to the other NSIPs, Thurrock Flexible Generation Plant will be barely visible, situated further away from the river, closer to the higher land to the north.

2.6.3 The negligible incremental cumulative impact of the Thurrock Flexible Generation Plant development on the high sensitivity landscape receptor will have minor effects, which will not affect the special qualities of the AONB or compromise the reasons for its designation. It should be noted that the LTC has the potential to have significant effects, on the AONB on its own, but that the other NSIPs would not incrementally tip this from a non-significant effect to a significant one.

Non-designated Landscapes

2.6.4 The development proposals for the Thurrock/Essex area that lies within NCA 81: Greater Thames Estuary are an intensification of the industrial character of this part of the River Thames. The incremental impact of the Thurrock Flexible Generation Plant development on this medium sensitivity receptor will be small and will not increase the effects upon this LCA significantly.

2.6.5 Two other NSIP projects are located with LCA C5: Tilbury Marshes and together these projects will have a significant effect on the LCA. The direct, incremental impact of the Thurrock Flexible Generation Plant development in this character area would not change the effect to a significant one.

2.6.6 The direct, incremental, cumulative, impact of the installation of the gas pipeline and connection point on LCA D7: West Tilbury Urban Fringe will be negligible on this medium sensitivity receptor. The cumulative effect of the Thurrock Flexible Generation Plant development in this LCA would be negligible will not increase the effects on this LCA significantly.

2.7 Cumulative Effects on Visual Resources and Receptors

2.7.1 GLVIA3 also quotes Scottish Natural Heritage in defining cumulative visual effects, as effects that can be caused by combined visibility, which "*occurs where the observer is able to see two or more developments from one viewpoint*" and/or sequential effects "*which occur when the observer has to move to another viewpoint to see different developments*" (SNH, 2012).

2.7.2 In the 'maximum development' scenario set out above, the direct, cumulative effects of Tilbury2 on visual resources and receptors are shown in Viewpoint 7 Figure 1.2, Viewpoint 8 Figure 1.3, Viewpoint 11 Figure 1.4, Viewpoint 12 Figure 1.5, Viewpoint 15 Figure 1.6, Viewpoint 19 Figure 1.7, Viewpoint 22 Figure 1.8,.Viewpoint 24 Figure 1.9 and Viewpoint 26 Figure, 1.10,

2.7.3 In some views and for some groups of receptors, the Tilbury2 NSIP would screen or partly screen the Thurrock Flexible Generation Plant development (Viewpoint 11 Figure 1.4, Viewpoint 19 Figure 1.7 and Viewpoint 22 Figure 1.8). From these viewpoints the impacts of the Thurrock Flexible Generation Plant development will not increase the significance of effects on visual receptors.

2.7.4 In some views, usually due to distance but sometimes due to intervening infrastructure, the cumulative views of both NSIPs will not be significant. Indeed, the incremental, cumulative effects of Thurrock Flexible Generation Plant on visual receptors from most viewpoints would not change the effect to a significant one (Viewpoint 8, Figure 1.3, Viewpoint 12, Figure 1.5, Viewpoint 24, Figure 1.9, Viewpoint 26, Figure 1.10) and Viewpoint 28, Figure 1.11.

2.7.5 From certain points on the Chadwell St. Mary – West Tilbury – East Tilbury ridgeline, Tilbury2, and Thurrock Flexible Generation Plant will be seen with little overlap/screening of the projects. The taller elements of both proposed developments are visible above the skyline.

Cumulative Night Time Landscape Effects

2.7.6 This section includes an assessment of the potential cumulative night-time landscape effects of the proposed development in association with the NSIPs; the Tilbury2 and LTC developments if they are all operational. These two NSIP projects are located partly within LCA C5: Tilbury Marshes and together they will have a significant adverse effect on the LCA. The Thurrock Flexible Generation Plant development in this character would be in addition to the 2 other NSIPs.

2.7.7 The direct, incremental, cumulative, impact of the installation of the gas pipeline and connection point on LCA D7: West Tilbury Urban Fringe will be negligible on this medium sensitivity receptor. The cumulative effect of the Thurrock Flexible Generation Plant development in this LCA would be **negligible** adverse but will not increase the effects on this LCA significantly.

Cumulative Night Time Visual Effects

2.7.8 This section includes an assessment of the potential cumulative night-time visual effects of the proposed development in association with the NSIPs; the Tilbury2 and LTC developments if they are all operational.

2.7.9 In the 'maximum development' scenario set out above, the light sources from Tilbury2 will appear in front of the Flexible Generation Plant in the following visual resources: at Viewpoint 11 Figure 1.4,. Viewpoint 19 Figure 1.7 and Viewpoint 22 Figure 1.8. In conjunction the effect of both schemes would not increase the level of effect to significant.

2.7.10 There is no permanent external lighting proposed for the Thurrock Flexible Generation Plant. However, when maintenance work is being undertaken there would be an intensification of light sources experienced at Viewpoint 7, Figure 1.2 and Access Land users either side of Gun Hill lane, Cooper Shaw Road and Fort Road, as well as those using the larger area of Parsonage Common when compared to the Flexible Generation Plant light sources on their own. However, although the temporary effect would be significant there would be very few receptors using/traversing these areas at night that involving the view. Consequently, the impacts will not be considered further in this assessment

2.7.11 A combination of intervening vegetation, existing development, and landform seen in relation to the cumulative schemes and in the context of existing lighting at night time will not raise the significance of effect form the night time level of effect for the other representative viewpoints.

Cumulative Decommissioning Effects

2.7.12 It is assumed that the LTC and the housing developments will not be decommissioned and that they are permanent developments.

Short Listed Projects - Nationally Significant Infrastructure Projects (NSIPs)

CP 042 Ref: TRO30003 – Site of Tilbury B Power Station, East Tilbury

CP 058 TR010032 LTC - Lower Thames Crossing

2.7.13 Tilbury2 is a new port facility alongside the existing Port of Tilbury. This will involve the extension of existing jetty facilities and the dredging of berth pockets in the River Thames, and land works and facilities for: a 'Roll-On-Roll-Off' (Ro-Ro) terminal for importing and exporting containers on road trailers; a facility for importing and processing bulk construction materials; and areas of external storage for a variety of goods such as imported cars. The project also involves the construction of road and rail links to the site from adjacent networks.

2.7.14 The Lower Thames Crossing (LTC) will be a new road crossing connecting Essex and Kent proposed by the Highways England. Principally, this a new road link between the A2 and M25, crossing the A13 at Orsett before crossing under the River Thames east of Tilbury and Gravesend. A new link road will take traffic to the A2 near the village of Shorne, close to the M2.

2.7.15 The landscape and visual receptors which are most likely to be most adversely affected by the NSIPs in combination with the FGP are assessed below. They have been selected from the assessment process in section 2. Those receptors which are judged to be potentially significantly adversely affected by the NSIP developments are assessed below.

2.8 Potentially Significant Cumulative Landscape Effects

LCA C5 Tilbury Marshes

2.8.1 The construction phases of the Tilbury2 and LTC projects are largely situated within LCA C5: Tilbury Marshes, as is Thurrock Flexible Generation Plant.

2.8.2 It is considered that Tilbury2 will be operational before the construction of Thurrock Flexible Generation Plant commences. The construction of Tilbury 2 started construction in February 2020 and is currently due to be operational by the end of 2020 for the aggregates terminal part of the project. Therefore, no cumulative construction impacts on either landscape or visual resources and receptors are anticipated.

2.8.3 The construction phase of the LTC is likely to commence after Thurrock FGP (as its application has not been submitted) but it is considered that it could overlap with the construction phase of the Thurrock FGP. The effect of the construction phase of the LTC on its own is expected to have a temporary **moderate** to **major** significance of effect on LCA5: Tilbury Marshes. The significance of effect of the construction phase of the Flexible Generation Plant on its own is predicted to be **moderate** adverse. Paragraphs 2.2.1 to 2.2.7 set out the reasons why the effect of the construction of both the Flexible Generation Plant and the LTC on the landscape in combination is not likely to increase the level from **moderate** to **major** adverse.

2.8.4 The Tilbury 2 and LTC developments are situated within LCA C5: Tilbury Marshes, as is Thurrock Flexible Generation Plant. The Thurrock Flexible Generation Plant development is separated from the proposed Tilbury2 jetty and silo by Tilbury Substation. The silo and container storage area are to be located on areas of brownfield land. The three processing buildings and piles of aggregates are proposed for areas that are rough grassland with some scrub. The cumulative impact will be to reduce the areas of open grassland within the LCA. However, given the baseline character of this part of the LCA, the cumulative effect of Tilbury2 and the Flexible Generation Plant projects will not have a significant effect on this LCA.

2.8.5 The approach road and tunnel entrance of the LTC will result in the loss of agricultural land, change to the landform over a large area. The effect of the operational phase of the LTC on its own is expected to have a **moderate** to **major** significant effect on LCA C5: Tilbury Marshes The effect experienced by the LCA from the Flexible Generation Plant, alone will be moderate adverse, which is not significant. The effect of both these developments in combination is not likely to increase the level of effect from **moderate** to **major** adverse.

2.8.6 The cumulative effects of the timings of the potential decommissioning phases of Tilbury2, LTC and Flexible Generation Plant are unlikely to coincide with one another. Therefore, the likely effects are not likely to be increased to a significant level.

2.9 Potentially Significant Cumulative Visual Effects

Visual receptor group N1

2.9.1 Views from representative Viewpoints 15 and 16 on the Thames Estuary Path long distance route / Footpath 146 of the Tilbury2 operational phase and the LTC construction and operational phases are judged be **moderate** to **major** and would significantly affect these receptor views, when considered on their own. Likewise, a short section of the Thames Estuary Path between Viewpoint 16 to directly south of and between the Tilbury 2 and LTC sites, would be affected to a **moderate** to **major**

level, particularly by the new wharf at Tilbury2. The effect on these views of the Flexible Generation Plant construction and operational phases is judged to be **moderate.** The effect of the Flexible Generation Plant in combination with either the LTC or Tilbury2 development in combination is not likely to increase the level of effect from **moderate** to **major** adverse.

2.9.2 The cumulative effects of the timings of the potential decommissioning phases of Tilbury 2, and Flexible Generation Plant are unlikely to coincide with one another. However, if they do coincide the significance of effect would be **moderate** to **major** and significant for a short, approximately 1km section of the Thames Estuary path including Representative Viewpoints 15 and 16 (Chapter 6 Landscape and Visual Resources, Figure 3.17) where the decommissioning operation of the developments meet the shoreline. The likely cumulative effects are not likely to increase the level of effect from **moderate** to **major** adverse.

2.9.3 The visual effect on other representative viewpoints in this receptor group are not likely to be increased to a significant level when the Flexible Generation Plant is assessed in combination with either Tilbury2 or the LTC at the construction, operational or decommissioning phases.

Visual receptor group N2

2.9.4 The visual receptors judged to be significantly adversely affected by the Tilbury2 and/or the LTC in this group, are residential groups on the east side of Tilbury and those using Access Land Walton and Parsonage Commons (in the construction phase) and Parsonage Common and the Exchange Common Land (Zone E) during the operational and decommissioning phases. The visual effect of the Tilbury 2 operational phase and the LTC construction and operational phases on these receptors are judged to be **moderate** increasing to **moderate** to **major** for some more vulnerable locations within these areas. However, on its own, the effect on views from the Access Land and for residential receptors on the east side of Tilbury is judged to be **moderate** at worse. From specific Viewpoints 6 and 9 pedestrian receptors would experience a **major** adverse effect at worse, for the Flexible Generation Plant construction and operational phases. However there appears to be very few pedestrians using these areas. The effect of the Flexible Generation Plant in combination with either the LTC or Tilbury2 development in combination is not likely to increase the level of effect from **moderate** to **major** adverse.

2.9.5 The cumulative effects of the timings of the potential decommissioning phases of Tilbury2, LTC and Flexible Generation Plant are unlikely to coincide with one another. Therefore, the likely effects are not likely to be increased to a significant level.

2.9.6 The visual effect on other representative viewpoints in this receptor group are not likely to be increased to a significant level when the Flexible Generation Plant is assessed in combination with either Tilbury2 or the LTC at the construction, operational or decommissioning phases.

Visual receptor group N3

2.9.7 The visual receptors judged to be significantly adversely affected by the Tilbury2 and/or the LTC in this group, are the community facility of St James' Church graveyard and Viewpoints 7 and 10. The visual effect of the Tilbury2 operational phase and the LTC construction and operational phases on these receptors are judged to be **moderate or major** and would significantly affect these receptor views. The effect on these receptor views of the Flexible Generation Plant construction and operational phases is judged to be **moderate.** The effect of the Flexible Generation Plant in combination with either the LTC or Tilbury 2 development is not likely to increase the level of effect from **moderate** to **major** adverse.

2.9.8 The cumulative effects of the timings of the potential decommissioning phases of Tilbury2, LTC and Flexible Generation Plant are unlikely to coincide with one another. Therefore, the likely effects are not likely to be increased to a significant level.

2.9.9 The visual effect on other representative viewpoints in this receptor group are not likely to be increased to a significant level when the Flexible Generation Plant is assessed in combination with either Tilbury2 or the LTC at the construction, operational or decommissioning phases.

Visual receptor group N4

2.9.10 There are no visual receptors judged to be significantly adversely affected by the Tilbury2 and/or the LTC in this group. There are no visual receptors judged to be significantly adversely affected by the Flexible Generation Plant. The cumulative effects of the Flexible Generation Plant in combination with either of the NSIP developments is not likely to be increased to a significant level at the construction, operational or decommissioning stages.

Visual receptor group N5

2.9.11 There are no visual receptors judged to be significantly adversely affected by the Tilbury2 and/or the LTC in this group. There are no visual receptors judged to be significantly adversely affected by the Flexible Generation Plant. The cumulative effects of the Flexible Generation Plant in combination with either of the NSIP developments is not likely to be increased to a significant level at the construction, operational or decommissioning stages.

Visual receptor group S1

2.9.12 The visual receptors judged to be significantly adversely affected by the Tilbury2 and/or the LTC in this group, are residential (Gravesend waterfront); PRoW (Saxon Shore Way) tourist attractions & recreation (Gordon Gardens, New Tavern Fort, Gravesend water front); dynamic users (boat passengers on Thames) and Viewpoints 18, 19, 20, 21 (Tilbury2) and 23 (LTC). The visual effect of the Tilbury 2 operational phase and the LTC construction and operational phases on these receptors are judged to be **moderate** to **major** and would significantly affect these receptor views. There are no visual receptors judged to be significantly adversely affected by the Flexible Generation Plant construction and operational phases. The effect of the Flexible Generation Plant in combination with either the LTC or Tilbury2 development is not likely to increase the level of effect from **moderate** to **major** adverse.

2.9.13 The cumulative effects of the timings of the potential decommissioning phases of Tilbury2, LTC and Flexible Generation Plant are unlikely to coincide with one another. Therefore, the likely effects are not likely to be increased to a significant level.

2.9.14 The visual effect on other representative viewpoints in this receptor group are not likely to be increased to a significant level when the Flexible Generation Plant is assessed in combination with either Tilbury2 or the LTC at the construction, operational or decommissioning phases.

Visual receptor group S2

2.9.15 The visual receptors judged to be significantly adversely affected by the Tilbury2 and/or the LTC in this group are residents and Public open Space users (Windmill Hill, Windmill Gardens, Gravesend), PRoW east of Gravesend (LTC only) and Viewpoints 22 and 28 (LTC only). The visual effect of the Tilbury2 operational phase and the LTC construction and operational phases on these receptors are judged to be **moderate** to **major** and would significantly affect these receptor views. None of these visual receptors are judged to be significantly adversely affected by the Flexible Generation Plant construction and operational phases. The effect of the Flexible Generation Plant in combination with either the LTC or Tilbury2 development is not likely to increase the level of effect from **moderate** to **major** adverse.

2.9.16 The cumulative effects of the timings of the potential decommissioning phases of Tilbury2, LTC and Flexible Generation Plant are unlikely to coincide with one another. Therefore, the likely effects are not likely to be increased to a significant level.

Visual receptor group S3

2.9.17 There are no visual receptors judged to be significantly adversely affected by the Tilbury2 and/or the LTC in this group. There are no visual receptors judged to be significantly adversely affected by the Flexible Generation Plant. The cumulative effects of the Flexible Generation Plant in combination with either of the NSIP developments is not likely to be increased to a significant level at the construction, operational or decommissioning stages.

2.9.18 Neither NSIP project is within the Kent Downs AONB designated landscape, where visual receptor group S3 is located. The LTC project will be identifiable from the Kent Downs AONB, due to the scale of project. It will impact on the landscape in north Kent, to the north of the Kent Downs AONB and will be clearly visible from parts of the AONB (Viewpoint 29, Figure 3.22) and will pass very close to, if not on the alignment of Viewpoint 28, Figure 3.21. The LTC might affect the special qualities of the AONB, as a result of the north Kent section of the proposed transport infrastructure. The Thurrock Flexible Generation Plant does not intensify the effects on the AONB caused by the construction or operational phases of the LTC.

Visual receptor group S4

2.9.19 There are no visual receptors judged to be significantly adversely affected by the Tilbury2 and/or the LTC in this group. There are no visual receptors judged to be significantly adversely affected by the Flexible Generation Plant. The cumulative effects of the Flexible Generation Plant in combination with either of the NSIP developments is not likely to be increased to a significant level at the construction, operational or decommissioning stages.

Other short listed potential cumulative projects

2.9.20 This section provides a short summary description of the short-listed projects that have the potential to have cumulative impacts in combination with the Flexible Generation Plant development.

2.9.21 None of these developments on their own have the potential to have significant adverse effects on the landscape or visual receptors assessed for the Flexible Generation Plant development at the construction, operational or decommissioning phases.

CP 005 Application Ref: 18/00664/COND – One Big Self Store Ltd Trafalgar House Thames Industrial Park, Princess Margaret Road, East Tilbury, Essex

2.9.22 Redevelopment of an area of previously developed land towards the southern boundary of Thames Industrial Estate to provide 50 dwellings, improved access arrangements and the creation of an area of public open space.

2.9.23 Neither project is within, or adjacent to, a designated landscape. The residential development is located within LCA D7: West Tilbury Urban Fringe, the same character area as the gas connection point of the Thurrock Flexible Generation Plant development. The cumulative impact will be negligible during the construction,

operational and decommissioning phases of the Thurrock Flexible Generation Plant and the effects would not be significant.

2.9.24 Should the construction phases of the two projects overlap, cumulative visual impacts would be negligible. No cumulative visual impacts would be experienced during the decommissioning phase and the effects would not be significant.

CP 011 Application Ref: 16/01475/SCR Proposed development of up to 200 dwellings with associated access and open space Gothards Field Rear of The George And Dragon, East Tilbury Road, Linford, Essex

2.9.25 Screening opinion for proposed development of up to 200 dwellings with associated access and open space.

2.9.26 Neither project is within, or adjacent to, a designated landscape. This residential development is located within LCA D7: West Tilbury Urban Fringe. the cumulative impact will be negligible during both the construction, operational and decommissioning phases of the Thurrock Flexible Generation Plant and the effects of no significance.

2.9.27 Similarly, the cumulative visual impacts for the closest receptor group N5, will be negligible during the construction phase (should the construction phases of the two projects overlap) and operational phase and no change during the decommissioning phase. The effects would not be significant.

CP 012 Application Ref: 16/01232/OUT – Land for Development, Muckingford Road, Linford, Essex

2.9.28 Application for outline planning permission for a proposed development of up to 1,000 dwellings, a new local road network, a new single form entry primary school, local centre including provision for shops and new areas of open space, including formal recreation.

2.9.29 Neither project is within, or adjacent to, a designated landscape. This residential development with school and shops/local centre is located within two LCAs, LCA D5: Linford/Buckingham Hill Urban Fringe and LCA D7: West Tilbury Urban Fringe. It shares the latter with the Thurrock Flexible Generation Plant gas connection point. However, the cumulative impact will be negligible during both the construction, operational and decommissioning phases of the Thurrock Flexible Generation Plant and the effects of no significance.

2.9.30 Similarly, the cumulative visual impacts will be negligible for the closest receptor group N5, during the construction phase (should the construction phases of the two projects overlap) and operational phase and no change during the decommissioning phase. The effects would not be significant.

CP 016 Application Ref: 17/00977/FUL – Land Part of Marsh Farm Sewage Treatment Plant, Fort Road, Tilbury, Essex

2.9.31 Retention and completion of waste wood processing plant and fire retained area bounded by concrete push walls, erection of buildings to form associated storage, reception/administration, security, and staff welfare area; formation of impermeable surface to form a lorry parking/waiting area; weighbridge and staff parking area together with associated highways and drainage works.

2.9.32 Neither project is within, or adjacent to, a designated landscape. The cumulative impact of the two projects would not affect the special qualities of the Kent Downs AONB.

2.9.33 The waste wood processing plant project is situated within LCA C5: Tilbury Marshes, as is Thurrock Flexible Generation Plant. It is anticipated that the remaining construction works at the waste wood processing plant, at Marsh Farm, will be completed before the construction of Thurrock Flexible Generation Plant commences, therefore there would be no cumulative construction effects. The cumulative impacts on landscape character are considered to be small, as the waste wood processing plant is already part of the baseline to some degree. The effects on the landscape character of the LCA are not considered to be significant.

2.9.34 The processing plant is not seen in the same view as the Thurrock Flexible Generation Plant facility in elevated views from the north. In the views from the north-east (visual receptor group N1 and N2), situated in the flat landscape the two schemes would only be seen, either by turning the head, or with the processing plant forming an indistinct, distant element behind the Thurrock Flexible Generation Plant facility. The cumulative impacts of the two schemes would be negligible to small and not significant.

2.9.35 Similarly, in elevated views from the north-west, (visual receptor group N3 - e.g. Viewpoint 3, Figure 5.44) the processing plant would be barely noticeable against the backdrop of the surrounding woodland and infrastructure. The cumulative impacts would be small to negligible and the effects not significant.

2.9.36 The closest elevated location from which the two schemes might be visible is Fort Road Bridge (Viewpoint 11, Figure 5.49). However, the viewer would have to turn their head to glimpse both projects. The impact from this location is considered to be small and the cumulative visual effect not significant.

CP 025 Application Ref: 16/00186/DMI – National Power PLC, Tilbury Power Station, Fort Road, Tilbury, Essex

2.9.37 Demolition of Tilbury B power station and all associated buildings and structures (including remaining structures from Tilbury A power station). The jetty will not be demolished.

2.9.38 This project is considered as having been completed for the purpose of this assessment and the land following demolition forms part of the future baseline.

CP 079 Application Ref: 19/01274/FUL Short Term Operations Reserve (STOR), Fort Road, Tilbury, Essex

2.9.39 The site is on the former Anglian Water Services Sewage treatment Plant site and lies to the north west of the proposed Thurrock Flexible Generation Plant facility. The application is awaiting a decision as of 7th October 2019. The development comprises 14 no. gas-fired generators with a capacity up to 21 MW.

2.9.40 The STOR site is located in the same character area, Tilbury Marshes LCA C5, as the proposed development. The cumulative impacts of the proposed STOR on landscape character are considered to be small, as the site is an area of scrub land adjacent to a number of industrial uses such as sewage works and wood processing facility which already form part of the baseline. It is a relatively small area of land contained by these industrial uses. It is also separated from Tilbury Fort by a sewage works to the south west. The effects on the landscape character of the LCA are not considered to be significant.

2.9.41 The STOR facility occupies some 0.4ha and has 7.4m high stacks. Existing scrub and adjoining industrial uses effectively screen this development from sensitive visual receptors. The STOR would be screened effectively by existing vegetation to the north west and from sensitive visual residential receptors on the eastern side of Tilbury and to the north of the STOR at Viewpoints 9 and 11 (part of receptor group N2). From the south at Viewpoints 12 and 14 (part of receptor group N1) the STOR will be seen in front of the proposed Thurrock Flexible Generation Plant, and in the visual context of the existing sewage works. The cumulative impacts of the two schemes would be small and not significant.

2.9.42 Neither project is within, or adjacent to, a designated landscape. The cumulative impact of the two projects would not affect the special qualities of the Kent Downs AONB.

CP 081 Application Ref: 12.04.09.04/266C; Tilbury Green Power Phase 2 S36C application. Former Cargill Plant Tilbury Freeport Tilbury Essex

2.9.43 The variation application is for a Biomass and energy from waste fuelled generation station at Tilbury Docks, Essex: variation application under section 36c of the electricity act 1989. The site is located between Grays and Tilbury Docks and is situated within LCA C5: Tilbury Marshes, as is Thurrock Flexible Generation Plant. The site formerly comprised factory buildings, plant, warehousing and car parking areas operated by Cargill for the production of sweeteners from cereals. Production ceased in 2005 and the site remained unused thereafter. It is anticipated that the construction works for the Tilbury Green Power (TGP) Station Ph 2, will be completed before the construction of Thurrock Flexible Generation Plant commences, therefore there would be no cumulative construction effects. The cumulative impacts of the operational phase of both developments on landscape character are considered to be small, as the sites are separated from each other by Tilbury Docks and reusing existing brownfield sites. The effects on the landscape character of the LCA are not considered to be significant

2.9.44 The TGP is not seen in the same view as the Thurrock Flexible Generation Plant facility and separated by Tilbury docks. The cumulative landscape impacts of the two schemes would be negligible to small and not significant.

3. References

Landscape Institute and Institute of Environmental Management and Assessment (2013) Guidelines for Landscape and Visual Impact Assessment: Third Edition. London, Routledge

Scottish Natural Heritage (2012) Assessing the cumulative impact of onshore wind energy development. Inverness, Scottish Natural Heritage

Figures 1.2 to 1.11: Representative Viewpoints and Wirelines of the Thurrock FGP and NSIP developments (Summer and Winter)

Ref: 10872-0179-005

RPS MAKING COMPLEX EASY | THURROCK POWER

Date of Photo: 12/09/2019
Lens Type: 50mm

Distance to site: 0.65km
OS reference: 565967, 177449

Direction to site: South
Viewpoint height: 25.68m AOD

Horizontal field of view: Approx. 75°
Viewing distance: 300mm @ A3

Thurrock FGP Facility
Tilbury2
Lower Thames Crossing Route

Stacks in pairs

Viewpoint 7
Figure 1.2

Existing view

Approximate location of Causeway for barge deliveries during construction

Proposed wireline view

Date of Photo: 07/09/2018 'Former Tilbury B building removed' Lens Type: 50mm	Distance to site: 3.23km OS reference: 569169, 174825	Direction to site: West North West Viewpoint height: 5.25m AOD	Horizontal field of view: Approx. 75° Viewing distance: 300mm @ A3	Thurrock FGP Facility Tilbury2	**Stacks in pairs** **Viewpoint 24** **Figure 1.9**

Ref: 10872-0179-005

Existing view

Proposed wireline view

Ref: 10872-0179-005

rps MAKING COMPLEX EASY · THURROCK POWER	Photo Date: 05/09/2018 'Former Tilbury B building removed' Lens Type: 50mm	Distance to site: 4.18km OS reference: 570611, 176687	Direction to site: West Viewpoint height: 6.1m AOD	Horizontal field of view: Approx. 75⁰ Viewing distance: 300mm @ A3	Thurrock FGP Facility Tilbury2	**Stacks in pairs**	**Viewpoint 26** **Figure 1.10**

Existing view

Proposed wireline view

Ref: 10872-0179-005

RPS MAKING COMPLEX EASY · THURROCK POWER	Date of Photo: 12/09/2019 Lens Type: 50mm	Distance to site: 0.65km OS reference: 567301, 172538	Direction to site: North Viewpoint height: 41.50m AOD	Horizontal field of view: Approx. 75° Viewing distance: 300mm @ A3	Thurrock FGP Facility Tilbury2 Lower Thames Crossing Route Alignment	**Stacks in pairs**	**Viewpoint 28** **Figure 1.11**