

Norfolk Vanguard Offshore Wind Farm

Chapter 33

Onshore Cumulative Impacts

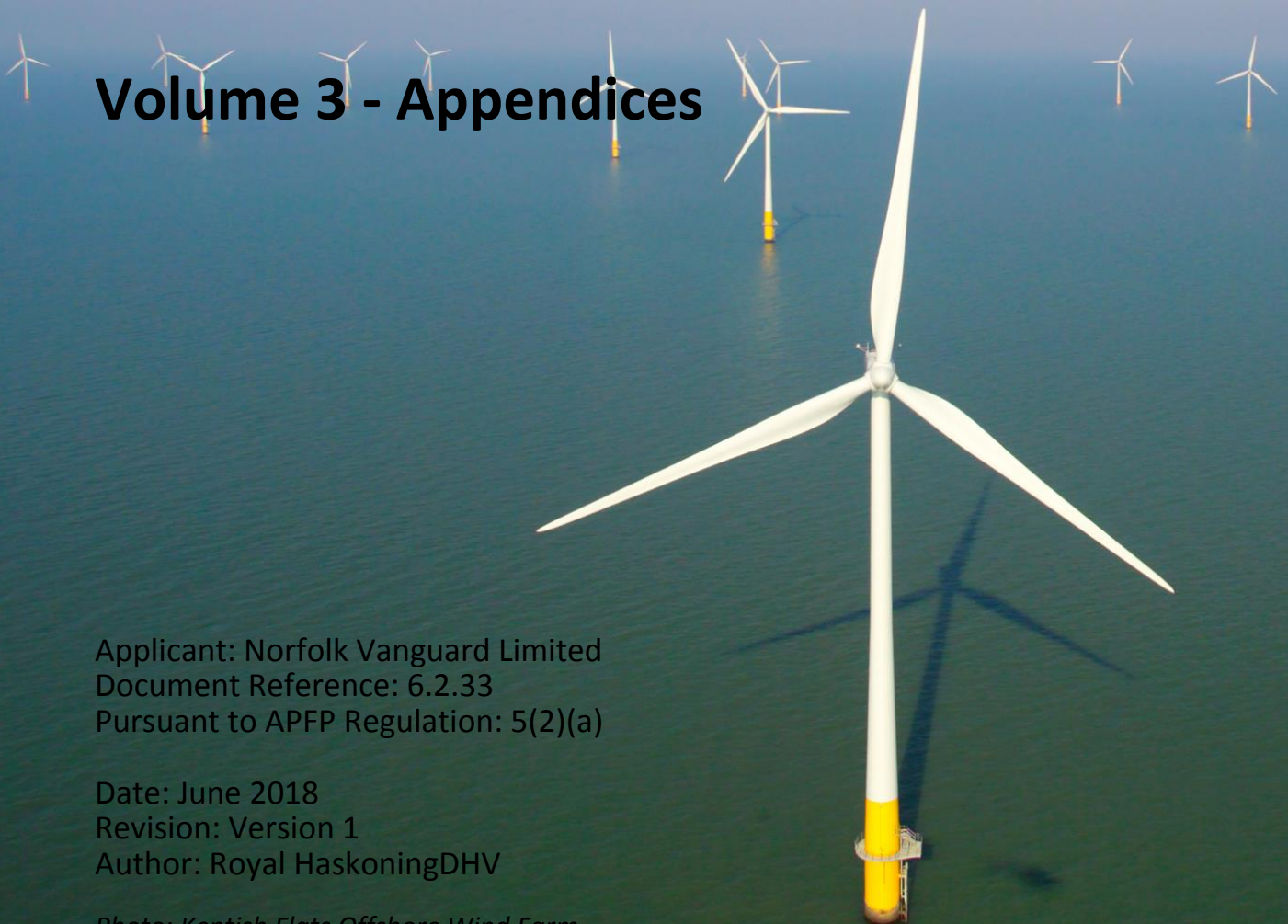
Environmental Statement

Volume 3 - Appendices

Applicant: Norfolk Vanguard Limited
Document Reference: 6.2.33
Pursuant to APFP Regulation: 5(2)(a)

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Photo: Kentish Flats Offshore Wind Farm



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Norfolk Vanguard Offshore Wind Farm

Appendix 33.1

Plans and Projects Considered in the CIA

Environmental Statement

Volume 3 - Appendices

Applicant: Norfolk Vanguard Limited
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Revision: Version 1
Author: Royal HaskoningDHV

Photo: Kentish Flats Offshore Wind Farm



Environmental Impact Assessment Environmental Statement

Document Reference: PB4476-005-0331

June 2018

For and on behalf of Norfolk Vanguard Limited

Approved by:

Signed:

Date: 8th June 2018

For and on behalf of Royal HaskoningDHV

Drafted by: Kerrie Craig

Approved by: Jon Allen

Signed:

Date: 6th June 2018



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33 PLANS AND PROJECTS CONSIDERED IN THE CIA

33.1 Introduction

1. Table 33.1 details the plans and projects which were considered in the CIA for each onshore chapter.

Table 33.1 Plans and Projects considered in the CIA

Status		Development period	¹ Distance from Norfolk Vanguard (km)	Project definition	Project data status	Included in CIA	Rationale
Chapter 19 Ground Conditions and Contamination							
National Infrastructure Planning							
Norfolk Boreas Offshore Wind Farm	Pre-Application	Expected construction 2026	0 – projects are co-located	Pre-application outline only	High	Yes	Overlapping proposed project boundaries may result in impacts of a direct and / or indirect nature on groundwater quality and resources during construction. The projects are located in the same bedrock Principal Aquifer.
Hornsea Project Three Offshore Wind Farm	Pre-Application	Expected construction date 2021	0 - cable intersects project	Full PEIR available: http://hornseaproject3.co.uk/Documents-library/PEIR-Documents	High	Yes	<ul style="list-style-type: none">• The onshore export cable route corridor will overlap the Norfolk Vanguard onshore corridor route around Reepham. The application is expected to be submitted to the Planning Inspectorate Q2 2018.• Overlapping proposed project

¹ Shortest distance between the considered project and Norfolk Vanguard – unless specified otherwise.

	Status	Development period	¹ Distance from Norfolk Vanguard (km)	Project definition	Project data status	Included in CIA	Rationale
							boundaries may result in impacts of a direct and / or indirect nature on groundwater quality and resources during construction. The projects are located in the same bedrock Principal Aquifer.
Dudgeon Offshore Wind Farm	Commissioned	Constructed	0	http://dudgeonoffshorewind.co.uk/	High	No	No cumulative effects on onshore geology and ground conditions are likely, as the Dudgeon project is completed, and therefore there is no potential for construction-phase cumulative impacts to occur.
A47 corridor improvement programme – North Tuddenham to Easton	Pre-application	Expected construction date 2021-23	2.5	https://infrastructure.planninginspectorate.gov.uk/projects/eastern/a47-north-tuddenham-to-easton/	Medium	No	Due to distance, nature and scale of the project no cumulative effects on onshore ground conditions and contamination are likely.
A47 corridor improvement programme – A47 Blofield to North Burlingham	Pre-application	Expected construction date 2021-22	25	https://infrastructure.planninginspectorate.gov.uk/projects/eastern/a47-blofield-to-north-burlingham/	Medium	No	Due to distance, nature and scale of the project no cumulative effects on onshore ground conditions and contamination are likely.
A47 corridor improvement programme – A47 / A11 Thickthorn	Pre-application	Expected construction date 2020-21	18	https://infrastructure.planninginspectorate.gov.uk/projects/eastern/a47a11-thickthorn-	Medium	No	Due to distance, nature and scale of the project no cumulative effects on onshore ground conditions and contamination are likely.

Status	Development period	¹ Distance from Norfolk Vanguard (km)	Project definition	Project data status	Included in CIA	Rationale	
			junction/				
Norwich Western Link	Pre-application	2022	2.8	https://www.norfolk.gov.uk/roads-and-transport/major-projects-and-improvement-plans/norwich/norwich-western-link/timeline	Medium	No	Due to distance, nature and scale of the project no cumulative effects on onshore ground conditions and contamination are likely.
Third River Crossing (Great Yarmouth)	Pre-application	Expected to start in 2020	28	https://www.norfolk.gov.uk/roads-and-transport/major-projects-and-improvement-plans/great-yarmouth/third-river-crossing	Medium	No	Due to distance, nature and scale of the project no cumulative effects on onshore ground conditions and contamination are likely.
King’s Lynn B Power Station amendments	Pre-application	Construction expected 2018-2021	28	https://www.kingslyn-nbccgt.co.uk/	Medium	No	Due to distance, nature and scale of the project no cumulative effects on onshore ground conditions and contamination are likely.
North Norfolk District Council							
PF/17/1951 Erection of 43 dwellings and new access with associated	Awaiting decision	Anticipated Q2 2018	0.7	Application available: https://idoxpa.north-norfolk.gov.uk/online-applications/applicati	High https://idoxpa.north-norfolk.g	No	Due to distance, nature and scale of the project no cumulative effects on onshore ground conditions and contamination are likely.

	Status	Development period	¹ Distance from Norfolk Vanguard (km)	Project definition	Project data status	Included in CIA	Rationale
landscaping, highways and external works, and amendments to substation)				onDetails.do?activeTab=summary&keyVal=_NNORF_DCAPR_92323	ov.uk/online-applications/files/A8C1C7C650E0F2DC5A24090A08D1AD9E/pdf/PF_17_1951-Site_Location_Plan-342482.pdf		
Bacton Gas Terminal Extension	Approved	Approved 20/09/2016. Expires 20/09/2019	3.0	Approved PDS available https://idoxpa.north-norfolk.gov.uk/online-applications/applicationDetails.do?activeTab=summary&keyVal=_NNORF_DCAPR_88689	Medium	No	Due to distance, nature and scale of the project no cumulative effects on onshore ground conditions and contamination are likely.
Bacton Gas Terminal Coastal Protection	Approved.	Approved 18/11/2016. Expires	2.5	Approved PDS available https://idoxpa.north-norfolk.gov.uk/online-applications/applicationDetails.do?activeTab=summary&keyVal=_NNORF_DCAPR_88689	Medium	No	No cumulative effects on onshore ground conditions and contamination are likely.

	Status	Development period	¹ Distance from Norfolk Vanguard (km)	Project definition	Project data status	Included in CIA	Rationale
		18/11/2019		norfolk.gov.uk/online - applications/applicationDetails.do?activeTab=summary&keyVal=_NNORF_DCAPR_88689			Foundations may be required but it is expected that any foundation design would meet any regulatory requirements regarding protection of surface waters and groundwater.
Bacton and Walcott Coastal Management Scheme	Approved.	Expected construction date 2018	1.0	Approved PDS available	Medium	No	No cumulative effects on onshore ground conditions and contamination are likely.
Breckland Council							
21-31 new dwellings in Necton (BLR/2017/0001/PIP)	Awaiting decision	Not known. Application submitted November 2017.	1.0	http://planning.breckland.gov.uk/OcellaWeb/showDocuments?reference=BLR/2017/0001/PIP&module=pl	Medium	No	Due to distance, nature and scale of the project no cumulative effects on onshore ground conditions and contamination are likely.
4-8 new dwellings in Necton (BLR/2017/0002/PIP)	Awaiting decision	Not known. Application submitted November 2017.	1.0	http://planning.breckland.gov.uk/OcellaWeb/showDocuments?reference=BLR/2017/0002/PIP&module=	Medium	No	Due to distance, nature and scale of the project no cumulative effects on onshore ground conditions and contamination are likely.
70 dwellings (3PL/2016/0298/D) (Phase 2 of 3PL/2012/0576/O)	Approved (21/09/16)	Not known. Application submitted March 2016.	6.4	http://planning.breckland.gov.uk/OcellaWeb/planningDetails?reference=3PL/2016/0298/D&from=planningSearch	Medium	No	Due to distance, nature and scale of the project no cumulative effects on onshore ground conditions and contamination are likely.
98 dwellings at	Awaiting	Not known.	6.4	http://planning.breckland.gov.uk/OcellaWeb/planningDetails?reference=3PL/2016/0298/D&from=planningSearch	Medium	No	Due to distance, nature and scale

Status	Development period	¹ Distance from Norfolk Vanguard (km)	Project definition	Project data status	Included in CIA	Rationale	
Swans Nest with access from Brandon Road (3PL/2017/1351/F) (Phase 3 of 3PL/2012/0576/O)	decision (due 30/03/2018)	Application submitted Jan 2016.		land.gov.uk/OcellaWeb/planningDetails?reference=3PL/2017/1351/F&from=planningSearch			of the project no cumulative effects on onshore ground conditions and contamination are likely.
175 dwellings with access at land to west of Watton Road, Swaffham (3PL/2016/0068/O) (Swans Nest Phase B)	Awaiting decision (due 13/10/2017)	Not known. Application submitted Jan 2016.	6.4	http://planning.breckland.gov.uk/OcellaWeb/planningDetails?reference=3PL/2016/0068/O	Medium	No	Due to distance, nature and scale of the project no cumulative effects on onshore ground conditions and contamination are likely.
Chapter 20 Water Resources and Flood Risk							
National Infrastructure Planning							
Norfolk Boreas Offshore Wind Farm	Pre-Application	Expected construction date 2026	0 – projects are co-located	Pre-application outline only	High	Yes	Impacts arising from the Norfolk Boreas cable pull and onshore project substation were not considered in the WCS of this project, and are therefore considered in the CIA. Overlapping proposed project boundaries may result in impacts of a direct and / or indirect nature during construction and operation.
Hornsea Project Three Offshore Wind Farm	Pre-Application	Expected construction date 2021	0 – cable intersects project	Full PEIR available: http://hornseaproject3.co.uk/Documents-	High	Yes	The cable corridor for the Hornsea Project 3 Offshore Wind Farm makes landfall at Weybourne with

Status	Development period	¹ Distance from Norfolk Vanguard (km)	Project definition	Project data status	Included in CIA	Rationale	
			library/PEIR-Documents			grid connection at Norwich Main. The Hornsea Project 3 cable corridor crosses the Norfolk Vanguard onshore cable route within the Blackwater Drain water body catchment. The Hornsea Project 3 Offshore Windfarm would also cross watercourses in the River Wensum and the River Bure catchments, both of which will also be crossed by the Norfolk Vanguard project. Overlapping proposed project boundaries may result in impacts of a direct and / or indirect nature during construction and operation.	
Dudgeon Offshore Wind Farm	Commissioned	Constructed	0	http://dudgeonoffshorewind.co.uk/	High	No	Construction and commissioning of the onshore project substation for the Dudgeon Offshore Wind Farm is complete and operation commenced in 2017. The project has therefore been considered as part of the existing baseline.
A47 corridor improvement programme – North Tuddenham to Easton	Pre-application	Expected construction date 2021-23	2.5	https://infrastructure.planninginspectorate.gov.uk/projects/eastern/a47-north-tuddenham-to-easton/	Medium	No	No cumulative effects on onshore water resources and flood risk are anticipated as a result of a lack of hydrological connectivity between the projects.

	Status	Development period	¹ Distance from Norfolk Vanguard (km)	Project definition	Project data status	Included in CIA	Rationale
A47 corridor improvement programme – A47 Blofield to North Burlingham	Pre-application	Expected construction date 2021-22	25	https://infrastructure.planninginspectorate.gov.uk/projects/eastern/a47-blofield-to-north-burlingham/	Medium	No	No cumulative effects on onshore water resources and flood risk are anticipated as a result of a lack of hydrological connectivity between the projects.
A47 corridor improvement programme – A47 / A11 Thickthorn	Pre-application	Expected construction date 2020-21	18	https://infrastructure.planninginspectorate.gov.uk/projects/eastern/a47a11-thickthorn-junction/	Medium	No	No cumulative effects on onshore water resources and flood risk are anticipated as a result of a lack of hydrological connectivity between the projects.
Norwich Western Link	Pre-application	2022	2.8	https://www.norfolk.gov.uk/roads-and-transport/major-projects-and-improvement-plans/norwich/norwich-western-link/timeline	Medium	No	No cumulative effects on onshore water resources and flood risk are anticipated as a result of a lack of hydrological connectivity between the projects.
Third River Crossing (Great Yarmouth)	Pre-application	Expected to start in 2020	28	https://www.norfolk.gov.uk/roads-and-transport/major-projects-and-improvement-plans/great-yarmouth/third-river-crossing	Medium	No	No cumulative effects on onshore water resources and flood risk are anticipated as a result of a lack of hydrological connectivity between the projects.
King's Lynn B Power	Pre-	Expected construction 2018	28	https://www.kingslyn nbccgt.co.uk/	Medium	No	No cumulative effects on onshore water resources and flood risk are

	Status	Development period	¹ Distance from Norfolk Vanguard (km)	Project definition	Project data status	Included in CIA	Rationale
Station amendments	application	- 2021					anticipated as a result of a lack of hydrological connectivity between the projects.
North Norfolk District Council							
PF/17/1951 Erection of 43 dwellings and new access with associated landscaping, highways and external works, and amendments to substation)	Awaiting decision	Anticipated Q2 2018	0.7	Application available: https://idoxpa.north-norfolk.gov.uk/online-applications/applicationDetails.do?activeTab=summary&keyVal=_NNORF_DCAPR_92323	High	No	No cumulative effects on onshore water resources and flood risk are anticipated as a result of a lack of hydrological connectivity between the projects.
Bacton Gas Terminal Extension	Approved	Approved 20/09/2016. Expires 20/09/2019.	3.0	Approved PDS available https://idoxpa.north-norfolk.gov.uk/online-applications/applicationDetails.do?activeTab=summary&keyVal=_NNORF_DCAPR_88689	Medium	No	The Bacton Gas Terminal Extension comprises new infrastructure within the exiting Bacton Gas Terminal, with no additional land take required. The project is located approximately 3km at its closest point from the boundary of the infrastructure, As such, no cumulative effects on onshore water resources and flood risk are anticipated as a result of a lack of hydrological connectivity between the projects.

	Status	Development period	¹ Distance from Norfolk Vanguard (km)	Project definition	Project data status	Included in CIA	Rationale
Bacton Gas Terminal Coastal Protection	Approved	Approved 18/11/2016. Expires 18/11/2019.	2.5	Approved PDS available	Medium	No	No cumulative effects on onshore water resources and flood risk are anticipated as a result of a lack of hydrological connectivity between the projects.
Bacton and Walcott Coastal Management Scheme	Approved	Expected construction date 2018	1.0	Public information leaflets available: https://www.north-norfolk.gov.uk/media/3371/bacton-to-walcott-public-information-booklet-july-2017.pdf	Medium	No	No cumulative effects on onshore water resources and flood risk are anticipated as a result of a lack of hydrological connectivity between the projects.
Breckland Council							
21-31 new dwellings in Necton (BLR/2017/0001/PIP)	Awaiting decision	Application received 30/11/2017	1.0	http://planning.breckland.gov.uk/OcellaWeb/showDocuments?reference=BLR/2017/0001/PIP&module=pl	Medium	No	No cumulative effects on onshore water resources and flood risk are anticipated as a result of a lack of hydrological connectivity between the projects.
4-8 new dwellings in Necton (BLR/2017/0002/PIP)	Awaiting decision	Application received 30/11/2017	1.0	http://planning.breckland.gov.uk/OcellaWeb/showDocuments?reference=BLR/2017/0002/PIP&module=pl	Medium	No	No cumulative effects on onshore water resources and flood risk are anticipated as a result of a lack of hydrological connectivity between the projects.
70 dwellings (3PL/2016/0298/D) (Phase 2 of 3PL/2012/0576/O)	Approved (21/09/16)	Not known. Application submitted March 2016.	6.4	http://planning.breckland.gov.uk/OcellaWeb/planningDetails?reference=3PL/2016/0298/D&from=plannin	Medium	No	No cumulative effects on onshore water resources and flood risk are anticipated as a result of a lack of hydrological connectivity between the projects.

	Status	Development period	¹ Distance from Norfolk Vanguard (km)	Project definition	Project data status	Included in CIA	Rationale
				gSearch			
98 dwellings at Swans Nest with access from Brandon Road (3PL/2017/1351/F) (Phase 3 of 3PL/2012/0576/O)	Awaiting decision (due 30/03/2018)	Not known. Application submitted Jan 2016.	6.4	http://planning.breckland.gov.uk/OcellaWeb/planningDetails?reference=3PL/2017/1351/F&from=planningSearch	Medium	No	No cumulative effects on onshore water resources and flood risk are anticipated as a result of a lack of hydrological connectivity between the projects.
175 dwellings with access at land to west of Watton Road, Swaffham (3PL/2016/0068/O) (Swans Nest Phase B)	Awaiting decision (due 13/10/2017)	Not known. Application submitted Jan 2016.	6.4	http://planning.breckland.gov.uk/OcellaWeb/planningDetails?reference=3PL/2016/0068/O	Medium	No	No cumulative effects on onshore water resources and flood risk are anticipated as a result of a lack of hydrological connectivity between the projects.
Chapter 21 Land Use and Agriculture							
National Infrastructure Planning							
Norfolk Boreas Offshore Wind Farm	Pre-Application	Expected construction date 2026	0 – projects are co-located	Pre-application outline only	High	Yes	Overlapping proposed project boundaries may result in impacts of a direct and / or indirect nature during construction and operation.
Hornsea Project Three Offshore Wind Farm	Pre-Application	Expected construction date 2021	0 – cable intersects project	Full PEIR available: http://hornseaproject3.co.uk/Documents-library/PEIR-Documents	High	Yes	Overlapping proposed project boundaries at Reepham may result in impacts of a direct and / or indirect nature during construction and operation.

	Status	Development period	¹ Distance from Norfolk Vanguard (km)	Project definition	Project data status	Included in CIA	Rationale
Dudgeon Offshore Wind Farm	Commissioned	Constructed	0	http://dudgeonoffshorewind.co.uk/	High	No	Due to the completion of the project, there are no potential direct or indirect potential cumulative impacts during construction. For operational impacts, the Dudgeon Offshore Wind Farm is part of the baseline in the main assessment therefore no potential cumulative impacts are proposed.
A47 corridor improvement programme – North Tuddenham to Easton	Pre-application	Expected construction date 2021-23	2.5	https://infrastructure.planninginspectorate.gov.uk/projects/eastern/a47-north-tuddenham-to-easton/	Medium	No	No direct overlap and therefore no potential cumulative impacts on the same receptors.
A47 corridor improvement programme – A47 Blofield to North Burlingham	Pre-application	Expected construction date 2021-22	25	https://infrastructure.planninginspectorate.gov.uk/projects/eastern/a47-blofield-to-north-burlingham/	Medium	No	No direct overlap and therefore no potential cumulative impacts on the same receptors.
A47 corridor improvement programme – A47 / A11 Thickthorn	Pre-application	Expected construction date 2020-21	18	https://infrastructure.planninginspectorate.gov.uk/projects/eastern/a47a11-thickthorn-junction/	Medium	No	No direct overlap and therefore no potential cumulative impacts on the same receptors.
Norwich Western	Pre-	2022	2.8	https://www.norfolk.gov.uk/roads-and-	Medium	No	No direct overlap and therefore no potential cumulative impacts on

	Status	Development period	¹ Distance from Norfolk Vanguard (km)	Project definition	Project data status	Included in CIA	Rationale
Link	application			transport/major-projects-and-improvement-plans/norwich/norwich-western-link/timeline			the same receptors.
Third River Crossing (Great Yarmouth)	Pre-application	Expected to start in 2020	28	https://www.norfolk.gov.uk/roads-and-transport/major-projects-and-improvement-plans/great-yarmouth/third-river-crossing	Medium	No	No direct overlap and therefore no potential cumulative impacts on the same receptors.
King's Lynn B Power Station amendments	Pre-application	Expected construction 2018 - 2021	28	https://www.kingslyn nbccgt.co.uk/	Medium	No	No direct overlap and therefore no potential cumulative impacts on the same receptors.
North Norfolk District Council							
PF/17/1951 Erection of 43 dwellings and new access with associated landscaping, highways and external works, and amendments to	Awaiting decision	Anticipated Q2 2018	0.7	Application available: https://idoxpa.north-norfolk.gov.uk/online-applications/applicationDetails.do?activeTab=summary&keyVal=_NNORF_DCAPR_92323	High	No	No direct overlap and therefore no potential cumulative impacts on the same receptors.

	Status	Development period	¹ Distance from Norfolk Vanguard (km)	Project definition	Project data status	Included in CIA	Rationale
substation)							
Bacton Gas Terminal Extension	Approved	Approved 20/09/2016. Expires 20/09/2019	3.0	Approved PDS available https://idoxpa.north-norfolk.gov.uk/online-applications/applicationDetails.do?activeTab=summary&keyVal=_NNORF_DCAPR_88689	Medium	No	No direct overlap and therefore no potential cumulative impacts on the same receptors.
Bacton Gas Terminal Coastal Protection	Approved	Approved 18/11/2016. Expires 18/11/2019	2.5	Approved PDS available	Medium	No	No direct overlap and therefore no potential cumulative impacts on the same receptors.
Bacton and Walcott Coastal Management Scheme	Approved	Expected construction date 2018	1.0	Public information leaflets available: https://www.north-norfolk.gov.uk/media/3371/bacton-to-walcott-public-information-booklet-july-2017.pdf	Medium	No	Coastal protection scheme is restricted to the beach/intertidal area and therefore there are no direct or indirect cumulative impacts anticipated.
Breckland Council							
21-31 new dwellings in Necton (BLR/2017/0001/PIP)	Awaiting decision	Not known. Application submitted	1.0	http://planning.breckland.gov.uk/OcellaWeb/showDocuments?reference=BLR/2017/	Medium	No	No direct overlap and therefore no potential cumulative impacts on the same receptors.

	Status	Development period	¹ Distance from Norfolk Vanguard (km)	Project definition	Project data status	Included in CIA	Rationale
		November 2017.		0001/PIP&module=pl			
4-8 new dwellings in Necton (BLR/2017/0002/PIP)	Awaiting decision	Not known. Application submitted November 2017.	1.0	http://planning.breckland.gov.uk/OcellaWeb/showDocuments?reference=BLR/2017/0002/PIP&module=pl	Medium	No	No direct overlap and therefore no potential cumulative impacts on the same receptors.
70 dwellings (3PL/2016/0298/D) (Phase 2 of 3PL/2012/0576/O)	Approved (21/09/16)	Not known. Application submitted March 2016.	6.4	http://planning.breckland.gov.uk/OcellaWeb/planningDetails?reference=3PL/2016/0298/D&from=planningSearch	Medium	No	No direct overlap and therefore no potential cumulative impacts on the same receptors.
98 dwellings at Swans Nest with access from Brandon Road (3PL/2017/1351/F) (Phase 3 of 3PL/2012/0576/O)	Awaiting decision (due 30/03/2018)	Not known. Application submitted Jan 2016.	6.4	http://planning.breckland.gov.uk/OcellaWeb/planningDetails?reference=3PL/2017/1351/F&from=planningSearch	Medium	No	No direct overlap and therefore no potential cumulative impacts on the same receptors.
175 dwellings with access at land to west of Watton Road, Swaffham (3PL/2016/0068/O) (Swans Nest Phase B)	Awaiting decision (due 13/10/2017)	Not known. Application submitted Jan 2016.	6.4	http://planning.breckland.gov.uk/OcellaWeb/planningDetails?reference=3PL/2016/0068/O	Medium	No	No direct overlap and therefore no potential cumulative impacts on the same receptors.
Chapter 22 Onshore Ecology							

Status		Development period	¹ Distance from Norfolk Vanguard (km)	Project definition	Project data status	Included in CIA	Rationale
National Infrastructure Planning							
Norfolk Boreas Offshore Wind Farm	Pre-Application	Expected construction 2026	0 – projects are co-located	Pre-application outline only	High	Yes	Overlapping proposed project boundaries may result in impacts of a direct and / or indirect nature during construction and operation.
Hornsea Project Three Offshore Wind Farm	Pre-Application	Expected construction date 2021	0 - cable intersects project	Full PEIR available: http://hornseaproject3.co.uk/Documents-library/PEIR-Documents	High	Yes	Overlapping proposed project boundaries at Salle Park may result in impacts of a direct and / or indirect nature during construction and operation.
Dudgeon Offshore Wind Farm	Commissioned	Constructed	0	http://dudgeonoffshorewind.co.uk/	High	Yes	Overlapping proposed project boundaries at Necton may result in impacts of a direct and / or indirect nature during operation arising from noise, lighting and visual disturbance.
A47 corridor improvement programme – North Tuddenham to Easton	Pre-application	Expected construction date 2021-23	2.5	https://infrastructure.planninginspectorate.gov.uk/projects/eastern/a47-north-tuddenham-to-easton/	Medium	No	Development is located 2.5km from the project boundary and is therefore outwith the study area(s) identified for onshore ecology. No cumulative impacts are anticipated.
A47 corridor improvement programme – A47 Blofield to North Burlingham	Pre-application	Expected construction date 2021-22	25	https://infrastructure.planninginspectorate.gov.uk/projects/eastern/a47-blofield-to-north-burlingham/	Medium	No	Development is located 25km from the project boundary and is therefore outwith the study area (s) identified for onshore ecology. No cumulative impacts are anticipated.

	Status	Development period	¹ Distance from Norfolk Vanguard (km)	Project definition	Project data status	Included in CIA	Rationale
A47 corridor improvement programme – A47 / A11 Thickthorn	Pre-application	Expected construction date 2020-21	18	https://infrastructure.planninginspectorate.gov.uk/projects/eastern/a47a11-thickthorn-junction/	Medium	No	Development is located 18km from the project boundary and is therefore outwith the study area(s) identified for onshore ecology. No cumulative impacts are anticipated.
Norwich Western Link	Pre-application	Expected construction date 2019-22	2.8	https://www.norfolk.gov.uk/roads-and-transport/major-projects-and-improvement-plans/norwich/norwich-western-link/timeline	Medium	No	Development is located 2.8km from the project boundary and is therefore outwith the study area(s) identified for onshore ecology. No cumulative impacts are anticipated.
Third River Crossing (Great Yarmouth)	Pre-application	Expected construction date 2020-23	28	https://www.norfolk.gov.uk/roads-and-transport/major-projects-and-improvement-plans/great-yarmouth/third-river-crossing	Medium	No	Development is located 18km from the project boundary and is therefore outwith the study area(s) identified for onshore ecology. No cumulative impacts are anticipated.
King's Lynn B Power Station amendments	Awaiting decision	Expected construction date 2018-21	28	https://www.kingslyn.nbccgt.co.uk/	High	No	Development is located 18km from the project boundary and is therefore outwith the study area(s) identified for onshore ecology. No cumulative impacts are anticipated.
North Norfolk District Council							

	Status	Development period	¹ Distance from Norfolk Vanguard (km)	Project definition	Project data status	Included in CIA	Rationale
PF/17/1951 Erection of 43 dwellings and new access with associated landscaping, highways and external works, and amendments to substation)	Awaiting decision	Anticipated Q2 2018	0.7	Application available: https://idoxpa.north-norfolk.gov.uk/online-applications/applicationDetails.do?activeTab=summary&keyVal=_NNORF_DCAPR_92323	High	No	The housing development is proposed on scrubland in an urban setting, therefore no cumulative impacts are anticipated.
Bacton Gas Terminal Extension	Approved	Approved 20/09/2016. Expires 20/09/2019	3.0	Approved PDS available https://idoxpa.north-norfolk.gov.uk/online-applications/applicationDetails.do?activeTab=summary&keyVal=_NNORF_DCAPR_88689	Medium	No	Terminal extension is located 3km from the onshore project area boundary and is therefore outwith the study area(s) identified for onshore ecology. No cumulative impacts are anticipated.
Bacton Gas Terminal Coastal Protection	Approved	Approved 18/11/2016. Expires 18/11/2019	2.5	Approved PDS available	Medium	Yes	Coastal protection scheme may result in changes to coastal habitats at the landfall site
Bacton and Walcott Coastal Management	Approved	Expected construction date	1.0	Public information leaflets available: https://www.north-	Medium	Yes	Coastal protection scheme may result in changes to coastal habitats at the landfall site.

	Status	Development period	¹ Distance from Norfolk Vanguard (km)	Project definition	Project data status	Included in CIA	Rationale
Scheme		2018		norfolk.gov.uk/media/3371/bacton-to-walcott-public-information-booklet-july-2017.pdf			
Breckland Council							
21-31 new dwellings in Necton (BLR/2017/0001/PIP)	Awaiting decision	Not known. Application submitted November 2017.	1.0	http://planning.breckland.gov.uk/OcellaWeb/showDocuments?reference=BLR/2017/0001/PIP&module=pl	Medium	No	Development is located 3km from the project boundary and is located within an existing urban environment. It is also outwith the study area(s) identified for onshore ecology. No cumulative impacts are anticipated.
4-8 new dwellings in Necton (BLR/2017/0002/PIP)	Awaiting decision	Not known. Application submitted November 2017.	1.0	http://planning.breckland.gov.uk/OcellaWeb/showDocuments?reference=BLR/2017/0002/PIP&module=pl	Medium	No	Development is located 3km from the project boundary and is located within an existing urban environment. It is also outwith the study area(s) identified for onshore ecology. No cumulative impacts are anticipated.
70 dwellings (3PL/2016/0298/D) (Phase 2 of 3PL/2012/0576/O)	Approved (21/09/16)	Not known. Application submitted March 2016.	6.4	http://planning.breckland.gov.uk/OcellaWeb/planningDetails?reference=3PL/2016/0298/D&from=planningSearch	Medium	No	Development is located 6.4km from the project boundary and is therefore outwith the study area(s) identified for onshore ecology. No cumulative impacts are anticipated.
98 dwellings at Swans Nest with	Awaiting decision (due	Not known. Application	6.4	http://planning.breckland.gov.uk/OcellaWeb/planningDetails?r	Medium	No	Development is located 6.4km from the project boundary and is therefore outwith the study area(s)

	Status	Development period	¹ Distance from Norfolk Vanguard (km)	Project definition	Project data status	Included in CIA	Rationale
access from Brandon Road (3PL/2017/1351/F) (Phase 3 of 3PL/2012/0576/O)	30/03/2018)	submitted Jan 2016.		reference=3PL/2017/1351/F&from=planningSearch			identified for onshore ecology. No cumulative impacts are anticipated.
175 dwellings with access at land to west of Watton Road, Swaffham (3PL/2016/0068/O) (Swans Nest Phase B)	Awaiting decision (due 13/10/2017)	Not known. Application submitted Jan 2016.	6.4	http://planning.breckland.gov.uk/OcellaWeb/planningDetails?reference=3PL/2016/0068/O	Medium	No	Development is located 6.4km from the project boundary and is therefore outwith the study area(s) identified for onshore ecology.. No cumulative impacts are anticipated.
Chapter 23 Onshore Ornithology							
National Infrastructure Planning							
Norfolk Boreas Offshore Wind Farm	Pre-Application	Expected construction 2026.	0	Pre-application outline only	High	Yes	Overlapping proposed project boundaries may result in impacts of a direct and / or indirect nature during construction and operation
Hornsea Project Three Offshore Wind Farm	Pre-Application	Expected construction date 2021	0 – cable intersects project.	Full PEIR available: http://www.dongenergy.co.uk/en/Pages/PEIR-Documents.aspx	High	Yes	Overlapping proposed project boundaries at Salle Park may result in impacts of a direct and / or indirect nature during construction and operation
Dudgeon Offshore Wind Farm	Commissioned	Constructed	0	http://dudgeonoffshorewind.co.uk/	High	Yes	Overlapping proposed project boundaries at Necton may result in impacts of a direct and / or indirect nature during operation

	Status	Development period	¹ Distance from Norfolk Vanguard (km)	Project definition	Project data status	Included in CIA	Rationale
A47 corridor improvement programme – North Tuddenham to Easton	Pre-application	Expected construction date 2021-23	2.5	https://infrastructure.planninginspectorate.gov.uk/projects/eastern/a47-north-tuddenham-to-easton/	Medium	No	Development is located 2.5km from the project boundary and is therefore within the internationally designated site study area, but is more than 5km from the internationally designated sites considered in this chapter. No cumulative impacts are anticipated.
A47 corridor improvement programme – A47 Blofield to North Burlingham	Pre-application	Expected construction date 2021-22	25	https://infrastructure.planninginspectorate.gov.uk/projects/eastern/a47-blofield-to-north-burlingham/	Medium	No	Development is located 25km from the project boundary and is therefore outwith the study area for onshore ornithology. No cumulative impacts are anticipated.
A47 corridor improvement programme – A47 / A11 Thickthorn	Pre-application	Expected construction date 2020-21	18	https://infrastructure.planninginspectorate.gov.uk/projects/eastern/a47a11-thickthorn-junction/	Medium	No	Development is located 18km from the project boundary and is therefore outwith the study area for onshore ornithology. No cumulative impacts are anticipated.
Norwich Western Link	Pre-application	Expected construction date 2019-22	2.8	https://www.norfolk.gov.uk/roads-and-transport/major-projects-and-improvement-plans/norwich/norwich-western-link/timeline	Medium	No	Development is located 2.8km from the project boundary and is therefore within the internationally designated site study area, but is more than 5km from the internationally designated sites considered in this chapter. No cumulative impacts are

Status	Development period	¹ Distance from Norfolk Vanguard (km)	Project definition	Project data status	Included in CIA	Rationale	
						anticipated.	
Third River Crossing (Great Yarmouth)	Pre-application	Expected construction date 2020-23	28	https://www.norfolk.gov.uk/roads-and-transport/major-projects-and-improvement-plans/great-yarmouth/third-river-crossing	Medium	No	Development is located 18km from the project boundary and is therefore outwith the study area(s) identified for onshore ornithology. No cumulative impacts are anticipated.
King’s Lynn B Power Station amendments	Awaiting decision	Expected construction date 2018-21	28	https://www.kingslyn.nbccgt.co.uk/	High	No	Development is located 18km from the project boundary and is therefore outwith the study area(s) identified for onshore ornithology. No cumulative impacts are anticipated.
North Norfolk District Council							
PF/17/1951 Erection of 43 dwellings and new access with associated landscaping, highways and external works	Awaiting decision	Anticipated Q2 2018	0.7	Application available: https://idoxpa.north-norfolk.gov.uk/online-applications/applicationDetails.do?activeTab=summary&keyVal=_NNORF_DCAPR_92323	High	No	Development is located 0.7km from the project boundary and is therefore within the internationally designated site and designated sites study areas, but is more than 5km from the internationally designated sites and 2km from the nationally designated sites considered in this chapter. No cumulative impacts are anticipated.
Bacton Gas Terminal	Approved	Approved	3.0	Approved PDS available	Medium	No	Terminal extension is located 3km from the project boundary and is

	Status	Development period	¹ Distance from Norfolk Vanguard (km)	Project definition	Project data status	Included in CIA	Rationale
Extension		20/09/2016. Expires 20/09/2019		https://idoxpa.north-norfolk.gov.uk/online-applications/applicationDetails.do?activeTab=summary&keyVal=_NNORF_DCAPR_88689			therefore within the internationally designated site study area. The project is located within an existing industrial site, and as such no cumulative impacts are anticipated.
Bacton Gas Terminal Coastal Protection	Approved	Approved 18/11/2016. Expires 18/11/2019	2.5	Approved PDS available	Medium	Yes	Coastal protection scheme may result in changes to coastal habitats at the landfall site.
Bacton and Walcott Coastal Management Scheme	Approved	Expected construction date 2018	1.0	Public information leaflets available: https://www.north-norfolk.gov.uk/media/3371/bacton-to-walcott-public-information-booklet-july-2017.pdf	Medium	Yes	Coastal protection scheme may result in changes to coastal habitats at the landfall site.
Breckland Council							
21-31 new dwellings in Necton (BLR/2017/0001/PIP)	Awaiting decision	Not known. Application submitted November 2017.	1.0	http://planning.breckland.gov.uk/OcellaWeb/showDocuments?reference=BLR/2017/0001/PIP&module=pl	Medium	No	Development is located 3km from the project boundary and is therefore within the internationally designated site study area, but is more than 5km from the internationally designated sites considered in this chapter. No

	Status	Development period	¹ Distance from Norfolk Vanguard (km)	Project definition	Project data status	Included in CIA	Rationale
							cumulative impacts are anticipated.
4-8 new dwellings in Necton (BLR/2017/0002/PIP)	Awaiting decision	Not known. Application submitted November 2017.	1.0	http://planning.breckland.gov.uk/OcellaWeb/showDocuments?reference=BLR/2017/0002/PIP&module=pl	Medium	No	Development is located 3km from the from the project boundary and is therefore within the internationally designated site study area, but is more than 5km from the internationally designated sites considered in this chapter. No cumulative impacts are anticipated.
70 dwellings (3PL/2016/0298/D) (Phase 2 of 3PL/2012/0576/O)	Approved (21/09/16)	Not known. Application submitted March 2016.	6.4	http://planning.breckland.gov.uk/OcellaWeb/planningDetails?reference=3PL/2016/0298/D&from=planningSearch	Medium	No	Development is located 6.4km from the project boundary, and is therefore outwith the study area for onshore ornithology. No cumulative impacts are anticipated.
98 dwellings at Swans Nest with access from Brandon Road (3PL/2017/1351/F) (Phase 3 of 3PL/2012/0576/O)	Awaiting decision (due 30/03/2018)	Not known. Application submitted Jan 2016.	6.4	http://planning.breckland.gov.uk/OcellaWeb/planningDetails?reference=3PL/2017/1351/F&from=planningSearch	Medium	No	Development is located 6.4km from the project boundary and is therefore outwith the study area for onshore ornithology. No cumulative impacts are anticipated.
175 dwellings with access at land to west of Watton	Awaiting decision (due	Not known. Application submitted Jan	6.4	http://planning.breckland.gov.uk/OcellaWeb/planningDetails?reference=3PL/2016/0	Medium	No	Development is located 6.4km from the project boundary and is located on agricultural land. No cumulative impacts are

	Status	Development period	¹ Distance from Norfolk Vanguard (km)	Project definition	Project data status	Included in CIA	Rationale
Road, Swaffham (3PL/2016/0068/O) (Swans Nest Phase B)	13/10/2017)	2016.		068/O			anticipated.
Chapter 24 Traffic and Transport							
National Infrastructure Planning							
Norfolk Boreas Offshore Wind Farm	Pre-Application	Expected construction date 2026	0 – projects are co-located	Pre-application outline only	High	Yes	Overlapping proposed project boundaries may result in impacts of a direct and / or indirect nature during construction.
Hornsea Project Three Offshore Wind Farm	Pre-Application	Expected construction date 2021	0 – cable intersects project	Full PEIR available: http://hornseaproject3.co.uk/Documents-library/PEIR-Documents	High	Yes	Overlapping proposed project boundaries may result in impacts of a direct and / or indirect nature during construction.
Dudgeon Offshore Wind Farm	Commissioned	Constructed	0	http://dudgeonoffshorewind.co.uk/	High	No	Construction complete, minimal operational traffic demand.
A47/A12 Junction enhancements to the following junctions and roundabouts: Vauxhall, Gapton Hall, Harfreys, Bridge Road and James Paget Hospital.	Pre-application	Starts 2019/2020 with projected finish year of 2022	26.7km	https://infrastructure.planninginspectorate.gov.uk/projects/eastern/a47-north-tuddenham-to-easton/	Medium	Yes	Insufficient information in the public domain with regards to final scheme proposal. However, Norfolk Vanguard Limited have liaised with Highways England to establish a suitable 'reference case' for highway capacity assessments, therefore it is taken forward into the CIA
A47 corridor	Pre-	Expected	25	https://infrastructure	Medium	Yes	

Status	Development period	¹ Distance from Norfolk Vanguard (km)	Project definition	Project data status	Included in CIA	Rationale	
improvement programme – A47 Blofield to North Burlingham	application	construction date 2021-22		.planninginspectorate.gov.uk/projects/eastern/a47-blofield-to-north-burlingham/			
A47 corridor improvement programme – A47 / A11 Thickthorn	Pre-application	Expected construction date 2020-21	18	https://infrastructure.planninginspectorate.gov.uk/projects/eastern/a47a11-thickthorn-junction/	Medium	Yes	
Norwich Western Link	Pre-application	2022	2.8	https://www.norfolk.gov.uk/roads-and-transport/major-projects-and-improvement-plans/norwich/norwich-western-link/timeline	Medium	No	If consent is granted, Norfolk Vanguard Limited and its contractors would engage stakeholders to try and establish opportunities to co-ordinate activities and avoid peak traffic impacts. This commitment is contained in the OTMP (document reference 8.8)
Third River Crossing (Great Yarmouth)	Pre-application	Expected to start in 2020	28	https://www.norfolk.gov.uk/roads-and-transport/major-projects-and-improvement-plans/great-yarmouth/third-river-crossing	Medium	No	
King’s Lynn B Power Station amendments	Pre-application	Construction expected 2018-2021	28	https://www.kingslyn-nbccgt.co.uk/	Medium	No	The King’s Lynn B Power Station site is located west of the project’s traffic study area.

Status	Development period	¹ Distance from Norfolk Vanguard (km)	Project definition	Project data status	Included in CIA	Rationale	
						<p>The traffic and transport study area has been carefully screened by assigning traffic demand to the network and determining the scope and scale of the project’s potential traffic impact.</p> <p>Traffic impacts outside of the traffic and transport study area are deemed to be ‘insignificant’ it therefore follows that there would not be a significant cumulative impact associated with King’s Lynn B Power Station.</p>	
North Norfolk District Council							
PF/17/1951 Erection of 43 dwellings and new access with associated landscaping, highways and external works	Awaiting decision	Anticipated Q2 2018	0.7	https://idoxpa.north-norfolk.gov.uk/online-applications/applicationDetails.do?activeTab=summary&keyVal=_NNORF_DCAPR_92323	High	Yes	Sub-regional growth in housing as adopted by the region’s Local Plans has been captured within TEMPro future year growth factors for 2022. Therefore, the cumulative effect of housing projects is inherent in the traffic and transport impact assessments.

	Status	Development period	¹ Distance from Norfolk Vanguard (km)	Project definition	Project data status	Included in CIA	Rationale
Bacton Gas Terminal Extension	Approved	Approved 20/09/2016. Expires 20/09/2019	3.0	Approved PDS available https://idoxpa.north-norfolk.gov.uk/online-applications/applicationDetails.do?activeTab=summary&keyVal=_NNORF_DCAPR_88689	Medium	No	Project would not result in an increase in traffic movements, therefore not taken forward into CIA.
Bacton Gas Terminal Coastal Protection	Approved	Approved 18/11/2016. Expires 18/11/2019	2.5	Approved PDS available	Medium	No	Project would not result in an increase in traffic movements.
Bacton and Walcott Coastal Management Scheme	Approved	Expected construction date 2018	1.0	Public information leaflets available: https://www.north-norfolk.gov.uk/media/3371/bacton-to-walcott-public-information-booklet-july-2017.pdf	Medium	No	Project would not result in an increase in traffic movements.
Breckland Council							
21-31 new dwellings in Necton (BLR/2017/0001/PIP)	Awaiting decision	Not known. Application submitted November 2017.	1.0	http://planning.breckland.gov.uk/OcellaWeb/showDocuments?reference=BLR/2017/0001/PIP&module=pl	Medium	Yes	Sub-regional growth in housing as adopted by the region's Local Plans has been captured within TEMPro future year growth factors for 2022. Therefore, the cumulative

	Status	Development period	¹ Distance from Norfolk Vanguard (km)	Project definition	Project data status	Included in CIA	Rationale
4-8 new dwellings in Necton (BLR/2017/0002/PIP)	Awaiting decision	Not known. Application submitted November 2017.	1.0	http://planning.breckland.gov.uk/OcellaWeb/showDocuments?reference=BLR/2017/0002/PIP&module=pl	Medium	Yes	effect of housing projects is inherent in the traffic and transport impact assessments
70 dwellings (3PL/2016/0298/D) (Phase 2 of 3PL/2012/0576/O)	Approved (21/09/16)	Not known. Application submitted March 2016.	6.4	http://planning.breckland.gov.uk/OcellaWeb/planningDetails?reference=3PL/2016/0298/D&from=planningSearch	Medium	Yes	
98 dwellings at Swans Nest with access from Brandon Road (3PL/2017/1351/F) (Phase 3 of 3PL/2012/0576/O)	Awaiting decision (due 30/03/2018)	Not known. Application submitted Jan 2016.	6.4	http://planning.breckland.gov.uk/OcellaWeb/planningDetails?reference=3PL/2017/1351/F&from=planningSearch	Medium	Yes	
175 dwellings with access at land to west of Watton Road, Swaffham (3PL/2016/0068/O) (Swans Nest Phase B)	Awaiting decision (due 13/10/2017)	Not known. Application submitted Jan 2016.	6.4	http://planning.breckland.gov.uk/OcellaWeb/planningDetails?reference=3PL/2016/0068/O	Medium	Yes	
Chapter 25 Noise and Vibration							
National Infrastructure Planning							

	Status	Development period	¹ Distance from Norfolk Vanguard (km)	Project definition	Project data status	Included in CIA	Rationale
Norfolk Boreas Offshore Wind Farm	Pre-Application	Expected construction date 2026	0 – projects are co-located	Pre-application outline only	High	Yes	Overlapping proposed project boundaries may result in impacts of a direct and / or indirect nature during construction and operation. However, due to the strategic nature of developing the projects together, cumulative impacts are minimised. Refer to paragraph 240 in Chapter 25 Noise and Vibration.
Hornsea Project Three Offshore Wind Farm	Pre-Application	Expected construction date 2021	0 – cable intersects project	Scoping Report: https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010080/EN010080-000065-Scoping%20Report.pdf PEIR: http://www.dongenergy.co.uk/en/Pages/PEIR-Documents.aspx .	High	Yes	Overlapping proposed project boundaries may result in impacts of a direct and / or indirect nature during construction where geographical footprints overlap and due to noise emissions from construction traffic
Dudgeon Offshore Wind Farm	Commissioned	Constructed	0	http://dudgeonoffshorewind.co.uk/	High	Yes	Overlapping proposed project boundaries may result in impacts of a direct and / or indirect nature during operation.

	Status	Development period	¹ Distance from Norfolk Vanguard (km)	Project definition	Project data status	Included in CIA	Rationale
A47 corridor improvement programme – North Tuddenham to Easton	Pre-application	Expected construction date 2021-23	2.5	https://infrastructure.planninginspectorate.gov.uk/projects/eastern/a47-north-tuddenham-to-easton/	Medium	No	It is likely that this development will implement site-specific measures to mitigate noise associated with construction works which would be implemented as part of a CoCP for the Highways England programme. It is therefore not anticipated that any cumulative effects associated with the construction phase will be significant.
A47 corridor improvement programme – A47 Blofield to North Burlingham	Pre-application	Expected construction date 2021-22	25	https://infrastructure.planninginspectorate.gov.uk/projects/eastern/a47-blofield-to-north-burlingham/	Medium	No	
A47 corridor improvement programme – A47 / A11 Thickthorn	Pre-application	Expected construction date 2020-21	18	https://infrastructure.planninginspectorate.gov.uk/projects/eastern/a47a11-thickthorn-junction/	Medium	No	
Norwich Western Link	Pre-application	2022	2.8	https://www.norfolk.gov.uk/roads-and-transport/major-projects-and-improvement-plans/norwich/norwich-western-link/timeline	Medium	No	Potential cumulative impacts could occur related to potentially overlapping construction traffic and its associated noise and vibration implications. Noting the lack of information available at this stage, it is not possible to provide a meaningful assessment of cumulative impacts. It is therefore proposed that, if approved, through the

Status	Development period	¹ Distance from Norfolk Vanguard (km)	Project definition	Project data status	Included in CIA	Rationale	
						development of the TMP, Norfolk Vanguard Limited and its Contractors would engage stakeholders to try and establish opportunities to co-ordinate activities and avoid peak traffic impacts.	
Third River Crossing (Great Yarmouth)	Pre-application	Expected to start in 2020	28	https://www.norfolk.gov.uk/roads-and-transport/major-projects-and-improvement-plans/great-yarmouth/third-river-crossing	Medium	No	Given the large separation distances between the projects it is considered that significant cumulative impacts are not likely to arise.
King’s Lynn B Power Station amendments	Pre-application	Construction expected 2018-2021	28	https://www.kingslyn-nbccgt.co.uk/	Medium	No	Given the large separation distances between the projects it is considered that significant cumulative impacts are not likely to arise.
North Norfolk District Council							
PF/17/1951 Erection of 43 dwellings and new access with associated landscaping, highways and	Awaiting decision	Anticipated Q2 2018	0.7	Application available: https://idoxpa.north-norfolk.gov.uk/online-applications/applicationDetails.do?activeTab=summary&keyVal=_NNORF_DCAPR_92	High	No	It is likely that this development will implement site-specific measures to mitigate noise associated with construction works which would be implemented as part of a CoCP for the housing development. It is therefore not anticipated that any cumulative

Status	Development period	¹ Distance from Norfolk Vanguard (km)	Project definition	Project data status	Included in CIA	Rationale	
external works, and amendments to substation)			323			effects associated with the construction phase will be significant.	
Bacton Gas Terminal Extension	Approved	Approved 20/09/2016. Expires 20/09/2019	3.0	Approved Project Design Statement (PDS) available https://idoxpa.north-norfolk.gov.uk/online-applications/applicationDetails.do?activeTab=summary&keyVal=_NNORF_DCAPR_88689	Medium	No	It is likely that this development will implement site-specific measures to mitigate noise associated with construction works which would be implemented as part of their own project CoCP. It is therefore not anticipated that any cumulative effects associated with the construction phase will be significant.
Bacton Gas Terminal Coastal Protection	Approved	Approved 18/11/2016. Expires 18/11/2019	2.5	Approved PDS available	Medium	No	It is likely that this development will implement site-specific measures to mitigate noise associated with construction works which would be implemented as part of their own project CoCP. It is therefore not anticipated that any cumulative effects associated with the construction phase will be significant.
Bacton and Walcott Coastal Management Scheme	Approved	Expected construction date 2018	1.0	Public information leaflets available: https://www.north-norfolk.gov.uk/media	Medium	No	It is likely that this development will implement site-specific measures to mitigate noise associated with construction works

Status	Development period	¹ Distance from Norfolk Vanguard (km)	Project definition	Project data status	Included in CIA	Rationale	
			/3371/bacton-to-walcott-public-information-booklet-july-2017.pdf			which would be implemented as part of their own project CoCP. It is therefore not anticipated that any cumulative effects associated with the construction phase will be significant.	
Breckland Council							
21-31 new dwellings in Necton (BLR/2017/0001/PIP)	Awaiting decision	Not known. Application submitted November 2017.	1.0	http://planning.breckland.gov.uk/OcellaWeb/showDocuments?reference=BLR/2017/0001/PIP&module=pl	Medium	No	Area of land identified in Necton, on the Old Diner site to be included in the Brownfield register. Assessment of impacts from NV and NB undertaken at receptor SSR11 (with a similar soundscape due to proximity to A47).
4-8 new dwellings in Necton (BLR/2017/0002/PIP)	Awaiting decision	Not known. Application submitted November 2017.	1.0	http://planning.breckland.gov.uk/OcellaWeb/showDocuments?reference=BLR/2017/0002/PIP&module=pl	Medium	No	Given the large separation distances between this development and sensitive receptors it is considered that significant cumulative impacts are not likely to arise. Assessment of impacts from NV and NB undertaken at receptor SSR1 (closer to site than the proposed development detailed here).
70 dwellings (3PL/2016/0298/D)	Approved (21/09/16)	Not known. Application	6.4	http://planning.breckland.gov.uk/OcellaWeb/planningDetails?r	Medium	No	Given the large separation distances between this development and sensitive

	Status	Development period	¹ Distance from Norfolk Vanguard (km)	Project definition	Project data status	Included in CIA	Rationale
(Phase 2 of 3PL/2012/0576/O)		submitted March 2016.		reference=3PL/2016/0298/D&from=planningSearch			receptors it is considered that significant cumulative impacts are not likely to arise.
98 dwellings at Swans Nest with access from Brandon Road (3PL/2017/1351/F) (Phase 3 of 3PL/2012/0576/O)	Awaiting decision (due 30/03/2018)	Not known. Application submitted Jan 2016.	6.4	http://planning.breckland.gov.uk/OcellaWeb/planningDetails?reference=3PL/2017/1351/F&from=planningSearch	Medium	No	Given the large separation distances between this development and sensitive receptors it is considered that significant cumulative impacts are not likely to arise.
175 dwellings with access at land to west of Watton Road, Swaffham (3PL/2016/0068/O) (Swans Nest Phase B)	Awaiting decision (due 13/10/2017)	Not known. Application submitted Jan 2016.	6.4	http://planning.breckland.gov.uk/OcellaWeb/planningDetails?reference=3PL/2016/0068/O	Medium	No	Given the large separation distances between this development and sensitive receptors it is considered that significant cumulative impacts are not likely to arise.
26 Air Quality							
National Infrastructure Planning							
Norfolk Boreas Offshore Wind Farm	Pre-Application	Expected construction date 2026	0 – projects are co-located	Pre-application outline only	High	No	Air quality impacts associated with the landfall HDD works and installation of ducting for Norfolk Boreas have been considered in the Norfolk Vanguard assessment and therefore do not constitute a cumulative impact pathway. The onshore project substation,

Status	Development period	¹ Distance from Norfolk Vanguard (km)	Project definition	Project data status	Included in CIA	Rationale	
						extension to the Necton National Grid substation and cable pulling phase for Norfolk Boreas would not overlap temporally with the project and therefore a cumulative road traffic emissions impact would not be experienced.	
Hornsea Project Three Offshore Wind Farm	Pre-Application	Expected construction date 2021	0 – cable intersects project	Full PEIR available: http://hornseaproject3.co.uk/Documents-library/PEIR-Documents	High	Yes	There is potential for the construction phases of Norfolk Vanguard and Hornsea Project Three to overlap. This project has therefore been considered in the air quality CIA.
Dudgeon Offshore Wind Farm	Commissioned	Constructed	0	http://dudgeonoffshorewind.co.uk/	High	No	The Dudgeon Offshore Windfarm has been constructed. Operational phase traffic movements associated with the Dudgeon Offshore Windfarm are very minimal, and therefore it is not considered that there would be a significant cumulative impact associated with concurrent operational phase for Dudgeon OWF and construction phase traffic movements for Norfolk Vanguard. Significant air quality impacts are therefore not anticipated, and this project has not been considered in the air quality CIA.

	Status	Development period	¹ Distance from Norfolk Vanguard (km)	Project definition	Project data status	Included in CIA	Rationale
A47 corridor improvement programme – North Tuddenham to Easton	Pre-application	Expected construction date 2021-23	2.5	https://infrastructure.planninginspectorate.gov.uk/projects/eastern/a47-north-tuddenham-to-easton/	Medium	No	It is anticipated that the construction works associated with the A47 improvements will be completed prior to commencement of the Norfolk Vanguard construction phase. Cumulative impacts associated with traffic emissions are therefore not anticipated and this project has not been included in the air quality CIA.
A47 corridor improvement programme – A47 Blofield to North Burlingham	Pre-application	Expected construction date 2021-22	25	https://infrastructure.planninginspectorate.gov.uk/projects/eastern/a47-blofield-to-north-burlingham/	Medium	No	
A47 corridor improvement programme – A47 / A11 Thickthorn	Pre-application	Expected construction date 2020-21	18	https://infrastructure.planninginspectorate.gov.uk/projects/eastern/a47a11-thickthorn-junction/	Medium	No	
Norwich Western Link	Pre-application	2022	2.8	https://www.norfolk.gov.uk/roads-and-transport/major-projects-and-improvement-plans/norwich/norwich-western-	Medium	No	As the project is at the pre-application stage, there is insufficient information within the public domain to enable an air quality CIA for traffic emissions to be carried out. This project was therefore not taken forward into

	Status	Development period	¹ Distance from Norfolk Vanguard (km)	Project definition	Project data status	Included in CIA	Rationale
				link/timeline			the air quality CIA.
Third River Crossing, Great Yarmouth	Pre-application	Expected to start in 2020	28	https://www.norfolk.gov.uk/roads-and-transport/major-projects-and-improvement-plans/great-yarmouth/third-river-crossing	Medium	No	As the project is at the pre-application stage, there is insufficient information within the public domain to enable an air quality CIA for traffic emissions to be carried out. This project was therefore not taken forward into the air quality CIA.
King's Lynn B Power Station amendments	Pre-application	Construction expected 2018-2021	28	https://www.kingslyn-nbccgt.co.uk/	Medium	No	As the project is at the pre-application stage, there is insufficient information within the public domain to enable an air quality CIA for traffic emissions to be carried out. This project was therefore not taken forward into the air quality CIA.
North Norfolk District Council							
PF/17/1951 Erection of 43 dwellings and new access with associated landscaping, highways and external works, and amendments to	Awaiting decision	Anticipated Q2 2018	0.7	Application available: https://idoxpa.north-norfolk.gov.uk/online-applications/applicationDetails.do?activeTab=summary&keyVal=_NNORF_DCAPR_92323	High	No	Traffic movements associated with future residential developments within the study area were included in the future baseline traffic growth predictions. The cumulative impact of this development with the Norfolk Vanguard project has therefore been considered in the air quality assessment and not taken forward within the CIA for this chapter

	Status	Development period	¹ Distance from Norfolk Vanguard (km)	Project definition	Project data status	Included in CIA	Rationale
substation)							
Bacton Gas Terminal Extension	Approved	Approved 20/09/2016. Expires 20/09/2019	3.0	Approved PDS available https://idoxpa.north-norfolk.gov.uk/online-applications/applicationDetails.do?activeTab=summary&keyVal=_NNORF_DCAPR_88689	Medium	No	There is no additional traffic generated by the Bacton Gas Terminal Extension. Therefore, there is no potential for a cumulative road traffic emissions impact to occur and is not taken forward within the CIA for this chapter
Bacton Gas Terminal Coastal Protection	Approved	Approved 18/11/2016. Expires 18/11/2019	2.5	Approved PDS available	Medium	No	It is unlikely that the proposed project would lead to significant increases in traffic during the construction phase and therefore there would be no potential for cumulative impact. There would be no potential for cumulative impacts during the operational phase of the coastal protection scheme and is not taken forward within the CIA for this chapter.
Bacton and Walcott Coastal Management Scheme	Approved	Expected construction date 2018	1.0	Public information leaflets available: https://www.north-norfolk.gov.uk/media/3371/bacton-to-walcott-public-information-booklet-	Medium	No	It is unlikely that the proposed project would lead to significant increases in traffic during the construction phase and therefore there would be no potential for cumulative impact. There would be no potential for cumulative impacts

	Status	Development period	¹ Distance from Norfolk Vanguard (km)	Project definition	Project data status	Included in CIA	Rationale
				july-2017.pdf			during the operational phase of the coastal protection scheme and is not taken forward within the CIA for this chapter
Breckland Council							
21-31 new dwellings in Necton (BLR/2017/0001/PIP)	Awaiting decision	Not known. Application submitted November 2017.	1.0	http://planning.breckland.gov.uk/OcellaWeb/showDocuments?reference=BLR/2017/0001/PIP&module=pl	Medium	No	Traffic movements associated with future residential developments within the study area were included in the future baseline traffic growth predictions. The cumulative impact of this development with the Norfolk Vanguard project has therefore been considered in the air quality assessment and not taken forward within the CIA for this chapter
4-8 new dwellings in Necton (BLR/2017/0002/PIP)	Awaiting decision	Not known. Application submitted November 2017.	1.0	http://planning.breckland.gov.uk/OcellaWeb/showDocuments?reference=BLR/2017/0002/PIP&module=pl	Medium	No	Traffic movements associated with future residential developments within the study area were included in the future baseline traffic growth predictions. The cumulative impact of this development with the Norfolk Vanguard project has therefore been considered in the air quality assessment and not taken forward within the CIA for this chapter
70 dwellings	Approved	Not known.	6.4	http://planning.breckland.gov.uk/OcellaW	Medium	No	Traffic movements associated with future residential developments

	Status	Development period	¹ Distance from Norfolk Vanguard (km)	Project definition	Project data status	Included in CIA	Rationale
(3PL/2016/0298/D) (Phase 2 of 3PL/2012/0576/O)	(21/09/16)	Application submitted March 2016.		eb/planningDetails?reference=3PL/2016/0298/D&from=planningSearch			within the study area were included in the future baseline traffic growth predictions. The cumulative impact of this development with the Norfolk Vanguard project has therefore been considered in the air quality assessment and not taken forward within the CIA for this chapter
98 dwellings at Swans Nest with access from Brandon Road (3PL/2017/1351/F) (Phase 3 of 3PL/2012/0576/O)	Awaiting decision (due 30/03/2018)	Not known. Application submitted Jan 2016.	6.4	http://planning.breckland.gov.uk/OcellaWeb/planningDetails?reference=3PL/2017/1351/F&from=planningSearch	Medium	No	Traffic movements associated with future residential developments within the study area were included in the future baseline traffic growth predictions. The cumulative impact of this development with the Norfolk Vanguard project has therefore been considered in the air quality assessment and not taken forward within the CIA for this chapter
175 dwellings with access at land to west of Watton Road, Swaffham (3PL/2016/0068/O) (Swans Nest Phase B)	Awaiting decision (due 13/10/2017)	Not known. Application submitted Jan 2016.	6.4	http://planning.breckland.gov.uk/OcellaWeb/planningDetails?reference=3PL/2016/0068/O	Medium	No	Traffic movements associated with future residential developments within the study area were included in the future baseline traffic growth predictions. The cumulative impact of this development with the Norfolk Vanguard project has therefore been considered in the air quality

Status	Development period	¹ Distance from Norfolk Vanguard (km)	Project definition	Project data status	Included in CIA	Rationale	
						assessment and not taken forward within the CIA for this chapter	
Chapter 27 Human Health							
National Infrastructure Planning							
Norfolk Boreas Offshore Wind Farm	Pre-application	Expected construction date 2026	0 – projects are co-located	Pre-application outline only	High	Yes	Overlapping proposed project boundaries may result in impacts of a direct and / or indirect nature during construction and operation.
Hornsea Project Three Offshore Wind Farm	Pre-application	Expected construction date 2021	0 – cable intersects project	Full PEIR available: http://hornseaproject3.co.uk/Documents-library/PEIR-Documents	High	Yes	Overlapping proposed project boundaries at Reepham may result in impacts of a direct and / or indirect nature during construction and operation. There is also the potential for cumulative traffic impacts during construction.
Dudgeon Offshore Wind Farm	Commissioned	Constructed	0	http://dudgeonoffshorewind.co.uk/	High	Yes	The Dudgeon onshore cable route is to the north of Norfolk Vanguard, connecting to the grid at Necton, on the same site as the connection for Norfolk Vanguard. Community comments received during consultation express frustration due to impacts from this project. Therefore, the cumulative impact will probably be felt more through a negative perception relating to communities.
A47 corridor	Pre-	Expect 2021 to	2.5 at closest point	Current timescales estimate that the	Medium	No	Works due to be completed before the project programme is due to

	Status	Development period	¹ Distance from Norfolk Vanguard (km)	Project definition	Project data status	Included in CIA	Rationale
improvement programme	application	2022	up to 23 at furthest	DCO will be submitted in Summer 2018			begin.
Norwich Western Link	Pre-application	2022	2.8	https://www.norfolk.gov.uk/roads-and-transport/major-projects-and-improvement-plans/norwich/norwich-western-link/timeline	Medium	No	<p>With regards to the potential for cumulative impacts associated with the potential overlap of construction traffic, noting the lack of information available at this stage, it is not possible to provide a meaningful assessment of cumulative impacts.</p> <p>It is therefore proposed that, if approved, through the development of the CTMP, Norfolk Vanguard Limited and its Contractors would engage stakeholders to try and establish opportunities to co-ordinate activities and avoid peak traffic impacts.</p>
Third River Crossing (Great Yarmouth)	Pre-application	Expected to start in 2020	28	https://www.norfolk.gov.uk/roads-and-transport/major-projects-and-improvement-plans/great-yarmouth/third-river-crossing	Medium	No	Analysis does show that the port of Great Yarmouth is a strategic port for the offshore wind industry in the East of England and industrial areas have been designated for development. Therefore, there may be some cumulative effect due

Status	Development period	¹ Distance from Norfolk Vanguard (km)	Project definition	Project data status	Included in CIA	Rationale	
						to this. However, development of the port and associated industrial areas would be considered under a separate DCO and therefore outside the scope of this assessment.	
King’s Lynn B Power Station amendments	Pre-application	Construction expected 2018	28	https://www.kingslyn-nbccgt.co.uk/	Medium	No	Works due to be completed before the project programme is due to begin.
North Norfolk District Council							
PF/17/1951 Erection of 43 dwellings and new access with associated landscaping, highways and external works, and amendments to substation)	Awaiting decision	Anticipated Q2 2018	0.7	Application available: https://idoxpa.north-norfolk.gov.uk/online-applications/applicationDetails.do?activeTab=summary&keyVal=_NNORF_DCAPR_92323	High	No	Works due to be completed before the project programme is due to begin.
Bacton Gas Terminal Extension	Approved	Approved 20/09/2016. Expires 20/09/2019.	3	Approved PDS available https://idoxpa.north-norfolk.gov.uk/online-applications/applicati	Medium	Yes	Bacton Gas Terminal is situated to the north of Happisburgh and will therefore not have a direct impact on affected communities. However, as with other construction projects in this area,

Status	Development period	¹ Distance from Norfolk Vanguard (km)	Project definition	Project data status	Included in CIA	Rationale	
			onDetails.do?activeTab=summary&keyVal=_NNORF_DCAPR_88689			negative perceptions of these projects may influence people’s perceptions of the Norfolk Vanguard project and how they perceive impacts.	
Bacton Gas Terminal coastal protection	Approved	Approved 18/11/2016. Expires 18/11/2019.	2.5	Approved PDS available	Medium		Yes
Bacton and Walcott Coastal Management Scheme	Approved	Expected construction date 2018	1	Public information leaflets available: https://www.north-norfolk.gov.uk/media/3371/bacton-to-walcott-public-information-booklet-july-2017.pdf	Medium		Yes
Breckland Council							
21-31 new dwellings in Necton (BLR/2017/0001/PIP)	Awaiting decision	Not known. Application submitted November 2017.	1.0	http://planning.breckland.gov.uk/OcellaWeb/showDocuments?reference=BLR/2017/0001/PIP&module=pl	Medium	No	There are three ways that housing developments could cumulatively affect communities: <ul style="list-style-type: none">• Through disturbance due to noise, vibration, or dust;• Through increases in local population leading to stress on local services; and
4-8 new dwellings in Necton (BLR/2017/0002/PIP)	Awaiting decision	Not known. Application submitted November 2017.	1.0	http://planning.breckland.gov.uk/OcellaWeb/showDocuments?reference=BLR/2017/0002/PIP&module=pl	Medium	No	

Status	Development period	¹ Distance from Norfolk Vanguard (km)	Project definition	Project data status	Included in CIA	Rationale	
						<ul style="list-style-type: none">Through traffic delays. <p>Although these developments are within Necton they are far enough from the onshore project substation area for cumulative noise impacts to not arise to community receptors.</p> <p>As in-migration due to construction and operational staff of Norfolk Vanguard has been scoped out due to its small scale, it is unlikely to contribute significantly to a cumulative impact.</p> <p>Increased traffic density is considered in Chapter 24 Transport and Traffic. It is not possible to determine if these will culminate in community impacts but it is assumed to be highly unlikely due to the low level of human health outcomes assessed in Chapter 27 Human Health.</p>	
70 dwellings	Approved	Not known.	6.4	http://planning.breck	Medium	No	There are three ways that housing

Status	Development period	¹ Distance from Norfolk Vanguard (km)	Project definition	Project data status	Included in CIA	Rationale
(3PL/2016/0298/D) (Phase 2 of 3PL/2012/0576/O)	(21/09/16)	Application submitted March 2016.		land.gov.uk/OcellaWeb/planningDetails?reference=3PL/2016/0298/D&from=planningSearch		<p>developments could cumulatively effect communities:</p> <ul style="list-style-type: none"> • Through disturbance due to noise, vibration, or dust; • Through cumulative distortion to the labour market; and • Through traffic delays. <p>These projects are far enough from the onshore project substation area for cumulative noise impacts to not arise to community infrastructure receptors.</p> <p>Construction workers that could transfer between housing and the project would probably be providing general services. The increase in demand of these services due to the project is insignificant in comparison to the size of the labour market therefore this will not be considered.</p>

Status	Development period	¹ Distance from Norfolk Vanguard (km)	Project definition	Project data status	Included in CIA	Rationale	
						Increased traffic density is considered in Chapter 24 Transport and Traffic. It is not possible to determine if these will culminate in community impacts but it is assumed to be highly unlikely due to the low level of human health outcomes assessed in Chapter 27 Human Health.	
Chapter 28 Onshore Archaeology and Cultural Heritage							
National Infrastructure Planning							
Hornsea Project Three Offshore Wind Farm	Pre-Application	Expected construction date 2021	0 – cable intersects project	Full PEIR available: http://hornseaproject3.co.uk/Documents-library/PEIR-Documents	High	Yes	Overlapping project boundaries may result in impacts of a direct and / or indirect nature.
A47 corridor improvement programme – North Tuddenham to Easton	Pre-application	Expected construction date 2021-23	2.5	https://infrastructure.planninginspectorate.gov.uk/projects/eastern/a47-north-tuddenham-to-easton/	Medium	No	No overlapping project boundaries and therefore direct cumulative impacts are negligible. Indirect cumulative impacts, should they occur, would only arise as a result of con-current construction works in relation to the project and the North Tuddenham to Easton dualling due to its proximity (2.5km at the closest point). Designated heritage assets identified in this Chapter which may have
A47 corridor improvement programme – A47 Blofield to North Burlingham	Pre-application	Expected construction date 2021-22	25	https://infrastructure.planninginspectorate.gov.uk/projects/eastern/a47-blofield-to-north-burlingham/	Medium	No	
A47 corridor	Pre-	Expected	18	https://infrastructure.planninginspectorate.gov.uk/projects/eastern/a47-blofield-to-north-burlingham/	Medium	No	

	Status	Development period	¹ Distance from Norfolk Vanguard (km)	Project definition	Project data status	Included in CIA	Rationale
improvement programme – A47 / A11 Thickthorn	application	construction date 2020-21		.planninginspectorat e.gov.uk/projects/ea stern/a47a11- thickthorn-junction/			intervisibility associated with the con-current construction of the project and this project are the Grade I LB Elsing Hall (RHDHV 31) and the Grade II LB remains to the gatehouse of Elsing Hall (RHDHV 327). However, satellite imagery indicates that these heritage assets lie directly north of a wooded area and are unlikely to have any intervisibility with the A47 corridor improvement programme at this location. Indirect cumulative impacts are therefore considered to be negligible.
Norfolk Boreas Offshore Wind Farm	Pre-Application	Expected construction date 2026	0 – projects are co-located	Pre-application outline only	High	Yes	Overlapping project boundaries may result in impacts of a direct and / or indirect nature.
Norwich Western Link	Pre-application	2022	2.8	https://www.norfolk.gov.uk/roads-and-transport/major-projects-and-improvement-plans/norwich/norwich-western-	Medium	No	No overlapping project boundaries and therefore direct cumulative impacts are negligible. Indirect cumulative impacts, should they occur, would only arise as a result of con-current construction works in relation to the project and the

Status	Development period	¹ Distance from Norfolk Vanguard (km)	Project definition	Project data status	Included in CIA	Rationale	
			link/timeline			Norwich Western Link. However, no heritage assets have been identified within this Chapter that will likely share any intervisibility with the construction activities associated with both the project and the Norwich Western Link. Indirect cumulative impacts are therefore also considered to be negligible.	
Third River Crossing (Great Yarmouth)	Pre-application	Expected to start in 2020	28	https://www.norfolk.gov.uk/roads-and-transport/major-projects-and-improvement-plans/great-yarmouth/third-river-crossing	Medium	No	No overlapping project boundaries and therefore direct cumulative impacts are negligible. Indirect cumulative impacts, should they occur, would only arise as a result of con-current construction works in relation to the project and the Third River Crossing project. However, due to the distance between these projects, no heritage assets have been identified within this Chapter that will likely share any intervisibility with the construction activities associated with both the project and the Third River Crossing. Indirect cumulative impacts are therefore also considered to be negligible.

	Status	Development period	¹ Distance from Norfolk Vanguard (km)	Project definition	Project data status	Included in CIA	Rationale
King's Lynn B Power Station amendments	Pre-application	Construction expected 2018-2021	28	https://www.kingslyn nbccgt.co.uk/	Medium	No	No overlapping project boundaries and therefore direct cumulative impacts are negligible. Indirect cumulative impacts, should they occur, would only arise as a result of con-current construction works in relation to the project and the King's Lynn B Power Station amendments. However, due to the distance between these projects, no heritage assets have been identified within this Chapter that will likely share any intervisibility with the construction activities associated with both the project and the King's Lynn B Power Station amendments. Indirect cumulative impacts are therefore also considered to be negligible.
North Norfolk District Council							
PF/17/1951 Erection of 43 dwellings and new access with associated landscaping, highways and external works, and	Awaiting decision	Anticipated Q2 2018	0.7	Application available: https://idoxpa.north-norfolk.gov.uk/online-applications/applicationDetails.do?activeTab=summary&keyVal=_NNORF_DCAPR_92323	High	No	No overlapping project boundaries and therefore direct cumulative impacts are negligible. There is no above ground infrastructure for the project in this section of the cable route (north of North Walsham). Indirect cumulative impacts, should they

	Status	Development period	¹ Distance from Norfolk Vanguard (km)	Project definition	Project data status	Included in CIA	Rationale
amendments to substation)							occur, would therefore only arise as a result of con-current construction works. No heritage assets have been identified within this Chapter that will likely share any intervisibility with the construction activities associated with both the project and the proposed dwellings at this location. Indirect cumulative impacts are therefore considered to be negligible.
Bacton Gas Terminal Extension	Approved	Approved 20/09/2016. Expires 20/09/2019	3.0	Approved PDS available https://idoxpa.north-norfolk.gov.uk/online-applications/applicationDetails.do?activeTab=summary&keyVal=_NNORF_DCAPR_88689	Medium	Yes	Proximity to Norfolk Vanguard project with potential impacts upon an area of high potential for geo-archaeological and / or palaeoenvironmental remains. Direct cumulative impacts may therefore occur to this resource, which is internationally renowned for its Lower Palaeolithic archaeological potential.
Bacton Gas Terminal Coastal Protection	Approved	Approved 18/11/2016. Expires 18/11/2019	2.5	Approved PDS available	Medium	Yes	Proximity to Norfolk Vanguard project with potential impacts upon an area of high potential for geo-archaeological and / or palaeoenvironmental remains.

	Status	Development period	¹ Distance from Norfolk Vanguard (km)	Project definition	Project data status	Included in CIA	Rationale
							Direct cumulative impacts may therefore occur to this resource, which is internationally renowned for its lower Palaeolithic archaeological potential.
Bacton and Walcott Coastal Management Scheme	Approved	Expected construction date 2018	1.0	Public information leaflets available: https://www.north-norfolk.gov.uk/media/3371/bacton-to-walcott-public-information-booklet-july-2017.pdf	Medium	Yes	Although there is no geographical overlap between the project boundaries, cumulative impacts of a direct or indirect nature may occur to deposits of geoarchaeological interest that are present and intersect both the onshore project area and the proposed Bacton and Walcott Coastal Management Scheme.
Breckland Council							
21-31 new dwellings in Necton (BLR/2017/0001/PIP)	Awaiting decision	Not known. Application submitted November 2017.	1.0	http://planning.breckland.gov.uk/OcellaWeb/showDocuments?reference=BLR/2017/0001/PIP&module=pl	Medium	No	No overlapping project boundaries and therefore direct cumulative impacts are negligible. Indirect cumulative impacts, should they occur, would only arise as a result of con-current construction works in relation to the project and the Former Necton Diner proposal (Part 2 of the Brownfield Register)

Status	Development period	¹ Distance from Norfolk Vanguard (km)	Project definition	Project data status	Included in CIA	Rationale	
						<p>and also during the operational phase due to the presence of above ground infrastructure (e.g. onshore project substation and dwellings).</p> <p>The main heritage asset identified within this chapter that could potentially have combined intervisibility (of construction works and above ground infrastructure) arising from the project and the Former Necton Diner proposal is the Grade I LB Church of All Saints (RHDHV 36). This highly designated heritage asset is not, however, considered to be subject to significant indirect impacts with respect to its setting as a result of the project, on the basis that it is well screened by intervening vegetation, trees, hedgerows and built form. Indirect cumulative impacts are therefore considered to be negligible.</p>	
4-8 new dwellings in Necton	Awaiting decision	Not known. Application	1.0	http://planning.breckland.gov.uk/OcellaWeb/showDocuments?	Medium	No	No overlapping project boundaries and therefore direct cumulative

Status	Development period	¹ Distance from Norfolk Vanguard (km)	Project definition	Project data status	Included in CIA	Rationale
(BLR/2017/0002/PIP)	submitted November 2017.		reference=BLR/2017/0002/PIP&module=pl			<p>impacts are negligible.</p> <p>Indirect cumulative impacts, should they occur, would only arise as a result of con-current construction works in relation to the project and the Former V A Infant School (Part 2 of the Brownfield Register) and also during the operational phase due to the presence of above ground infrastructure (e.g. onshore project substation and dwellings).</p> <p>The main heritage asset identified within this chapter that could potentially have combined intervisibility (of construction works and above ground infrastructure) arising from the project and the Former V A Infant School proposal is the Grade I LB Church of All Saints (RHDHV 36). This highly designated heritage asset is not, however, considered to be subject to significant indirect impacts with respect to its setting, as above. Indirect cumulative impacts are therefore also considered to be negligible.</p>

	Status	Development period	¹ Distance from Norfolk Vanguard (km)	Project definition	Project data status	Included in CIA	Rationale
70 dwellings (3PL/2016/0298/D) (Phase 2 of 3PL/2012/0576/O)	Approved (21/09/16)	Not known. Application submitted March 2016.	6.4	http://planning.breckland.gov.uk/OcellaWeb/planningDetails?reference=3PL/2016/0298/D&from=planningSearch	Medium	No	No direct or indirect impacts are considered to arise cumulatively as a result of the project and this housing proposal.
98 dwellings at Swans Nest with access from Brandon Road (3PL/2017/1351/F) (Phase 3 of 3PL/2012/0576/O)	Awaiting decision (due 30/03/2018)	Not known. Application submitted Jan 2016.	6.4	http://planning.breckland.gov.uk/OcellaWeb/planningDetails?reference=3PL/2017/1351/F&from=planningSearch	Medium	No	No direct or indirect impacts are considered to arise cumulatively as a result of the project and this housing proposal.
175 dwellings with access at land to west of Watton Road, Swaffham (3PL/2016/0068/O) (Swans Nest Phase B)	Awaiting decision (due 13/10/2017)	Not known. Application submitted Jan 2016.	6.4	http://planning.breckland.gov.uk/OcellaWeb/planningDetails?reference=3PL/2016/0068/O	Medium	No	No overlapping project boundaries and therefore direct cumulative impacts are negligible. Indirect cumulative impacts, should they occur, would only arise as a result of con-current construction works in relation to the project and the proposed dwellings, as well as any indirect impacts during the operational phase due to the presence of above ground infrastructure in relation to the project and the proposed

Status	Development period	¹ Distance from Norfolk Vanguard (km)	Project definition	Project data status	Included in CIA	Rationale	
						dwelling. However, as the project onshore substation and associated works are not considered to result in any significant indirect impacts upon the setting of heritage assets, indirect cumulative impacts are also considered to be negligible.	
Chapter 29 Landscape and Visual Impact							
National Infrastructure Planning							
Norfolk Boreas Offshore Wind Farm	Pre-Application	Expected construction date 2026	0 – projects are co-located	https://corporate.vattenfall.co.uk/norfolk-boreas	High	Yes	Norfolk Boreas onshore project substation and National Grid substation extension would be sited adjacent to the respective onshore infrastructure of the Norfolk Vanguard project. There is the potential significant cumulative effects may arise in conjunction with this project and therefore it is included in the CIA.
Hornsea Project Three Offshore Wind Farm	Pre-Application	Expected construction date 2021	0 – cable intersects project 32km between substation	Full PEIR available: http://www.dongengr.co.uk/en/Pages/PEIR-Documents.aspx	High	Yes	Hornsea Project Three Offshore Wind Farm onshore cable route would cross the Norfolk Vanguard onshore cable route to the north-east of Reepham and construction compounds would be located near

Status	Development period	¹ Distance from Norfolk Vanguard (km)	Project definition	Project data status	Included in CIA	Rationale	
			locations			disused Oulton Airfield. Other onshore infrastructure would be sited in distant locations from Norfolk Vanguard onshore infrastructure. There is the potential significant cumulative effects may arise in conjunction with this project and therefore it is included in the CIA.	
Dudgeon Offshore Wind Farm	Commissioned	Constructed	0	http://dudgeonoffshorewind.co.uk/	Complete/ high	No (considered in main assessment)	National Grid substation extension sited adjacent to constructed and operational Dudgeon Substation. This development is operational and is therefore included in the main assessment and not included in the CIA.
A47 corridor improvement programme – North Tuddenham to Easton	Pre-application	Expected construction date 2021-23	2.5	https://infrastructure.planninginspectorate.gov.uk/projects/eastern/a47-north-tuddenham-to-easton/	Medium	No	A47 improvement works would have a limited influence on the cumulative situation owing to separation distance and limited inter-visibility with Norfolk Vanguard onshore infrastructure. The potential for significant cumulative effects to arise in conjunction with this project are limited and therefore it is not
A47 corridor improvement programme – A47 Blofield to North	Pre-application	Expected construction date 2021-22	25	https://infrastructure.planninginspectorate.gov.uk/projects/eastern/a47-blofield-to-north-burlingham/	Medium	No	

	Status	Development period	¹ Distance from Norfolk Vanguard (km)	Project definition	Project data status	Included in CIA	Rationale
Burlingham							included in the CIA.
A47 corridor improvement programme – A47 / A11 Thickthorn	Pre-application	Expected construction date 2020-21	18	https://infrastructure.planninginspectorate.gov.uk/projects/eastern/a47a11-thickthorn-junction/	Medium	No	
Norwich Western Link	Pre-application	2022	2.8	https://www.norfolk.gov.uk/roads-and-transport/major-projects-and-improvement-plans/norwich/norwich-western-link/timeline	Medium	No	The Norwich Western Link works would have a limited influence on the cumulative situation owing to separation distance and limited inter-visibility with Norfolk Vanguard onshore infrastructure. The potential for significant cumulative effects to arise in conjunction with this project are limited and therefore it is not included in the CIA.
Third River Crossing (Great Yarmouth)	Pre-application	Expected to start in 2020	28	https://www.norfolk.gov.uk/roads-and-transport/major-projects-and-improvement-plans/great-yarmouth/third-river-crossing	Medium	No	The Third Crossing works at Great Yarmouth would have a limited influence on the cumulative situation owing to separation distance and limited inter-visibility with Norfolk Vanguard onshore infrastructure. The potential for significant cumulative effects to arise in conjunction with this

Status	Development period	¹ Distance from Norfolk Vanguard (km)	Project definition	Project data status	Included in CIA	Rationale	
						project are limited and therefore it is not included in the CIA.	
King’s Lynn B Power Station amendments	Pre-application	Construction expected 2018-2021	28	https://www.kingslyn-nbccgt.co.uk/	Medium	No	The Kings Lynn B Power Station amendment works would have a limited influence on the cumulative situation owing to separation distance and limited inter-visibility with Norfolk Vanguard onshore infrastructure. The potential for significant cumulative effects to arise in conjunction with this project are limited and therefore it is not included in the CIA.
North Norfolk District Council							
PF/17/1951 Erection of 43 dwellings and new access with associated landscaping, highways and external works	Awaiting decision	Anticipated Q2 2018	0.7	Application available: https://idoxpa.north-norfolk.gov.uk/online-applications/applicationDetails.do?activeTab=summary&keyVal=_NNORF_DCAPR_92323	High	No	Development at Laundry Loke in North Walsham would have a limited influence on the cumulative situation owing to separation distance and limited inter-visibility with Norfolk Vanguard onshore infrastructure. The site is situated in the centre of the town and surrounded by urban development. The potential for significant cumulative effects to arise in conjunction with this project are

	Status	Development period	¹ Distance from Norfolk Vanguard (km)	Project definition	Project data status	Included in CIA	Rationale
							limited and therefore it is not included in the CIA.
Bacton Gas Terminal Extension	Approved	Approved 20/09/2016. Expires 20/09/2019	3.0	Approved PDS available https://idoxpa.north-norfolk.gov.uk/online-applications/applicationDetails.do?activeTab=summary&keyVal=_NNORF_DCAPR_88689	Medium	No	Bacton Gas Terminal Extension would have a limited influence on the cumulative situation owing to separation distance and limited inter-visibility with Norfolk Vanguard onshore infrastructure. The potential for significant cumulative effects to arise in conjunction with this project are limited and therefore it is not included in the CIA.
Bacton Gas Terminal Coastal Protection	Approved	Approved 18/11/2016. Expires 18/11/2019	2.5	Approved PDS available	Medium	No	Bacton Gas Terminal coastal protection would have a limited influence on the cumulative situation owing to separation distance and limited inter-visibility with Norfolk Vanguard onshore infrastructure. The potential for significant cumulative effects to arise in conjunction with this project are limited and therefore it is not included in the CIA.
Bacton and Walcott Coastal Management	Approved	Expected construction date	1.0	Public information leaflets available:	Medium	No	Bacton Coastal Protection Scheme would have a limited influence on

	Status	Development period	¹ Distance from Norfolk Vanguard (km)	Project definition	Project data status	Included in CIA	Rationale
Scheme		2018		https://www.north-norfolk.gov.uk/media/3371/bacton-to-walcott-public-information-booklet-july-2017.pdf			the cumulative situation owing to separation distance and limited inter-visibility with Norfolk Vanguard onshore infrastructure. The potential for significant cumulative effects to arise in conjunction with this project are limited and therefore it is not included in the CIA.
Breckland Council							
21-31 new dwellings in Necton (BLR/2017/0001/PIP)	Awaiting decision	Not known. Application submitted November 2017.	1.0	http://planning.breckland.gov.uk/OcellaWeb/showDocuments?reference=BLR/2017/0001/PIP&module=pl	Medium	No	Development of the Diner site at Necton would have a limited influence on the cumulative situation owing to separation distance and limited inter-visibility with Norfolk Vanguard onshore infrastructure. The site is situated on the north-west of the village and is set within an existing urban context. The potential for significant cumulative effects to arise in conjunction with this project are limited and therefore it is not included in the CIA.
4-8 new dwellings in Necton	Awaiting	Not known. Application	1.0	http://planning.breckland.gov.uk/OcellaWeb/showDocuments?reference=BLR/2017/0001/PIP&module=pl	Medium	No	Development of the former school site at Necton would have a limited

	Status	Development period	¹ Distance from Norfolk Vanguard (km)	Project definition	Project data status	Included in CIA	Rationale
(BLR/2017/0002/PIP)	decision	submitted November 2017.		eb/showDocuments?reference=BLR/2017/0002/PIP&module=pl			influence on the cumulative situation owing to separation distance and limited inter-visibility with Norfolk Vanguard onshore infrastructure. The site is enclosed within the existing village core. The potential for significant cumulative effects to arise in conjunction with this project are limited and therefore it is not included in the CIA.
Swan's Nest, Brandon Road, Swaffham – 3PL/2012/0576/0 and other associated applications	Approved (08/04/2017)	Part operational / part still to be constructed. Following phased programme.	6.4	http://planning.breckland.gov.uk/OcellaWeb/planningDetails?reference=3PL/2012/0576/O&from=planningSearch	Complete/ high	No	Development at Swan's Nest on the south-side of Swaffham would have a limited influence on the cumulative situation owing to separation distance and limited inter-visibility with Norfolk Vanguard onshore infrastructure. The site is set on the southern side of the town. The potential for significant cumulative effects to arise in conjunction with this project are limited and therefore it is not included in the CIA.
Chapter 30 Tourism and Recreation							

Status	Development period	¹ Distance from Norfolk Vanguard (km)	Project definition	Project data status	Included in CIA	Rationale	
National Infrastructure Planning							
Norfolk Boreas Offshore Wind Farm	Pre-Application	Expected construction date 2026	0 – projects are co-located	Pre-application outline only.	High	Yes	Impacts would relate to visual and noise impacts to onshore tourism and recreation assets, primarily concentrating around mobilisation areas and works at the project substation and National Grid extension. Cable landfall will be co-located for both projects and has been included in the impact assessment for this Chapter, therefore is not within the CIA. Any secondary infrastructure may have temporary noise/vibration impacts and long term visual impacts.
Hornsea Project Three Offshore Wind Farm	Pre-Application	Expected construction date 2021	0 – cable intersects project	Full PEIR available: http://www.dongenergy.co.uk/en/Pages/PEIR-Documents.aspx	High	Yes	The Hornsea Project Three onshore cable route will cross the Norfolk Vanguard cable route. The exact location and manner of this crossing will determine the magnitude of cumulative impacts on local tourism and recreation assets. Details of this crossing will be discussed with Orsted (formally DONG Energy), local stakeholders and the Local Planning Authority.

	Status	Development period	¹ Distance from Norfolk Vanguard (km)	Project definition	Project data status	Included in CIA	Rationale
Dudgeon Offshore Wind Farm	Constructed	Constructed	0	http://dudgeonoffshorewind.co.uk/	High	No	Cumulative impacts are not anticipated to occur with Dudgeon Offshore wind farm as, although the substations for both projects will be located in close proximity, there are no tourism and recreation assets which may be affected.
A47 corridor improvement programme – North Tuddenham to Easton	Pre-application	Expected construction date 2021-23	2.5	https://infrastructure.planninginspectorate.gov.uk/projects/eastern/a47-north-tuddenham-to-easton/	Medium	No	Roadworks may have a cumulative impact on Pedestrian Amenity but as the roads listed for the improvement programme are not within the area highlighted as potentially impacted by Norfolk Vanguard (Section 30.8.2 Impact 9), it is unlikely to have an effect on the tourism industry.
A47 corridor improvement programme – A47 Blofield to North Burlingham	Pre-application	Expected construction date 2021-22	25	https://infrastructure.planninginspectorate.gov.uk/projects/eastern/a47-blofield-to-north-burlingham/	Medium	No	Roadworks may have a cumulative impact on Pedestrian Amenity but as the roads listed for the improvement programme are not within the area highlighted as potentially impacted by Norfolk Vanguard (Section 30.8.2 Impact 9), it is unlikely to have an effect on the tourism industry.

	Status	Development period	¹ Distance from Norfolk Vanguard (km)	Project definition	Project data status	Included in CIA	Rationale
A47 corridor improvement programme – A47 / A11 Thickthorn	Pre-application	Expected construction date 2020-21	18	https://infrastructure.planninginspectorate.gov.uk/projects/eastern/a47a11-thickthorn-junction/	Medium	No	Roadworks may have a cumulative impact on Pedestrian Amenity but as the roads listed for the improvement programme are not within the area highlighted as potentially impacted by Norfolk Vanguard (Section 30.8.2 Impact 9), it is unlikely to have an effect on the tourism industry.
Norwich Western Link	Pre-application	2022	2.8	https://www.norfolk.gov.uk/roads-and-transport/major-projects-and-improvement-plans/norwich/norwich-western-link/timeline	Medium	No	Roadworks may have a cumulative impact on Pedestrian Amenity but as the roads listed for the improvement programme are not within the area highlighted as potentially impacted by Norfolk Vanguard (Section 30.8.2 Impact 9), it is unlikely to have an effect on the tourism industry.
Third River Crossing (Great Yarmouth)	Pre-application	Expected to start in 2020	28	https://www.norfolk.gov.uk/roads-and-transport/major-projects-and-improvement-plans/great-yarmouth/third-river-crossing	Medium	No	Roadworks may have a cumulative impact on Pedestrian Amenity but as the bridge is not within the area highlighted as potentially impacted by Norfolk Vanguard (section 30.8.2 Impact 9), it is unlikely to have an effect on the tourism industry.

	Status	Development period	¹ Distance from Norfolk Vanguard (km)	Project definition	Project data status	Included in CIA	Rationale
King's Lynn B Power Station amendments	Pre-application	Expected construction 2018 - 2021	28	https://www.kingslyn nbccgt.co.uk/	Medium	No	Due to the distance of King's Lynn B Power Station from the project it is unlikely that cumulative effects would occur. There is the potential for increased accommodation demand but the assessment (Section 30.6.5 of Chapter 30 Tourism and Recreation shows that the accommodation stock across Norfolk is substantial so any additional impact would be negligible.
North Norfolk District Council							
PF/17/1951 Erection of 43 dwellings and new access with associated landscaping, highways and external works, and amendments to substation)	Awaiting decision	Anticipated Q2 2018	0.7	Application available: https://idoxpa.north-norfolk.gov.uk/online-applications/applicationDetails.do?activeTab=summary&keyVal=_NNORF_DCAPR_92323	High	No	Low density of tourism receptors within the vicinity of the development therefore a low likelihood of cumulative impact.
Bacton Gas Terminal Extension	Approved	Approved 20/09/2016.	3	Approved PDS available https://idoxpa.north-	Medium	Yes	Cumulative impacts may occur with the projects at Bacton through

Status	Development period	¹ Distance from Norfolk Vanguard (km)	Project definition	Project data status	Included in CIA	Rationale	
		Expires 20/09/2019.		norfolk.gov.uk/online - applications/applicationDetails.do?activeTab=summary&keyVal=_NNORF_DCAPR_88689			creation of sediment plumes or decreased water quality. This is assessed in Chapter 9. Negative perceptions of these projects may influence people’s perceptions of the project and how they perceive impacts to community infrastructure. Although research shows that tourists have a generally positive view of wind farms, as detailed in section 30.6.6 of Chapter 30 Tourism and Recreation.
Bacton Gas Terminal coastal protection	Approved	Approved 18/11/2016. Expires 18/11/2019	2.5	Approved PDS available	Medium	Yes	
Bacton and Walcott Coastal Management Scheme	Approved	Expected construction date 2018	1.0	Public information leaflets available: https://www.north-norfolk.gov.uk/media/3371/bacton-to-walcott-public-information-booklet-july-2017.pdf	Medium	Yes	
Breckland Council							
21-31 new dwellings in Necton (BLR/2017/0001/PIP)	Awaiting decision	Not known. Application submitted November 2017.	1.0	http://planning.breckland.gov.uk/OcellaWeb/showDocuments?reference=BLR/2017/0001/PIP&module=pl	Medium	No	There are two ways that housing developments could cumulatively effect tourists: <ul style="list-style-type: none">Through disturbance due to noise, vibration, or dust; and
4-8 new dwellings in Necton	Awaiting decision	Not known. Application	1.0	http://planning.breckland.gov.uk/OcellaW	Medium	No	

	Status	Development period	¹ Distance from Norfolk Vanguard (km)	Project definition	Project data status	Included in CIA	Rationale
(BLR/2017/0002/PIP)		submitted November 2017.		eb/showDocuments?reference=BLR/2017/0002/PIP&module=pl			<ul style="list-style-type: none">Through traffic delays.
70 dwellings (3PL/2016/0298/D) (Phase 2 of 3PL/2012/0576/O)	Approved (21/09/16)	Not known. Application submitted March 2016.	6.4	http://planning.breckland.gov.uk/OcellaWeb/planningDetails?reference=3PL/2016/0298/D&from=planningSearch	Medium	No	Although these developments are within Necton they are far enough from the onshore project substation area for cumulative noise impacts to not be an issues to community infrastructure receptors. Increased traffic density is considered in Chapter 24 Transport and Traffic. It is not possible to determine if these will culminate in community impacts but it is assumed to be highly unlikely due to the low level of human health outcomes assessed in Chapter 27 Human Health.
98 dwellings at Swans Nest with access from Brandon Road (3PL/2017/1351/F) (Phase 3 of 3PL/2012/0576/O)	Awaiting decision (due 30/03/2018)	Not known. Application submitted Jan 2016.	6.4	http://planning.breckland.gov.uk/OcellaWeb/planningDetails?reference=3PL/2017/1351/F&from=planningSearch	Medium	No	
175 dwellings with access at land to west of Watton Road, Swaffham (3PL/2016/0068/O) (Swans Nest Phase B)	Awaiting decision (due 13/10/2017)	Not known. Application submitted Jan 2016.	6.4	http://planning.breckland.gov.uk/OcellaWeb/planningDetails?reference=3PL/2016/0068/O	Medium	No	
Chapter 31 Socio-economics							
National Infrastructure Planning							
Norfolk Boreas	Pre-	Expected	0 – projects	Pre-application	High	Yes	Impacts will relate to job creation

	Status	Development period	¹ Distance from Norfolk Vanguard (km)	Project definition	Project data status	Included in CIA	Rationale
Offshore Wind Farm	application	construction date 2026	are co-located	outline only			and community infrastructure. The scale of impacts will depend on whether Norfolk Boreas onshore cable ducts are laid at the same time as Norfolk Vanguard or whether cable route will need to be partially excavated to install second ducts. It is assumed landfall will be the same place but any secondary infrastructure or extensions may have temporary noise/vibration impacts and long term visual impacts.
Hornsea Project Three Offshore Wind Farm	Pre-application	Expected construction date 2021	0 – cable intersects project	Full PEIR available: http://hornseaproject3.co.uk/Documents-library/PEIR-Documents	High	Yes	It is anticipated that Hornsea's onshore cable route will cross the Norfolk Vanguard cable route. How this interaction of construction is managed will determine the magnitude of impacts on community infrastructure. However, in general the socio-economic impacts of due to construction and operation parallel those described in this chapter.
Dudgeon Offshore Wind Farm	Commissioned	Constructed	0	http://dudgeonoffshorewind.co.uk/	High	Yes	The Dudgeon onshore cable route is to the north of Norfolk Vanguard,

	Status	Development period	¹ Distance from Norfolk Vanguard (km)	Project definition	Project data status	Included in CIA	Rationale
							connecting to the grid at Necton, on the same site as the connection for Norfolk Vanguard. Community comments received during consultation express frustration due to impacts from this project. Therefore, the cumulative impact will probably be felt more through a negative perception relating to communities and community infrastructure.
A47 corridor improvement programme	Pre-application	Expect 2021 to 2022	2.5km at closest point up to 23km at furthest	Current timescales estimate that the DCO will be submitted in Summer 2018	Medium	No	Works due to be completed before the project programme (Plate 31.2 of Chapter 31 Socio-economics) is due to begin.
Norwich Western Link	Pre-application	2022	2.8	https://www.norfolk.gov.uk/roads-and-transport/major-projects-and-improvement-plans/norwich/norwich-western-link/timeline	Medium	No	With regards to the potential for cumulative impacts associated with the potential overlap of construction traffic and impacts on worker numbers, noting the lack of information available at this stage, it is not possible to provide a meaningful assessment of cumulative impacts. It is therefore proposed that, if approved, through the

	Status	Development period	¹ Distance from Norfolk Vanguard (km)	Project definition	Project data status	Included in CIA	Rationale
							development of the Traffic Management Plan, Norfolk Vanguard Limited and its Contractors would engage stakeholders to try and establish opportunities to co-ordinate activities and avoid peak traffic impacts.
Third River Crossing (Great Yarmouth)	Pre-application	Expected to start in 2020	28	https://www.norfolk.gov.uk/roads-and-transport/major-projects-and-improvement-plans/great-yarmouth/third-river-crossing	Medium	No	Analysis does show that the port of Great Yarmouth is a strategic port for the offshore wind industry in the East of England and industrial areas have been designated for development. Therefore, there may be some cumulative effect due to this. However, development of the port and associated industrial areas would be considered under a separate DCO and therefore outside the scope of this assessment.
King's Lynn B Power Station amendments	Pre-application	Construction expected 2018	28	https://www.kingslyn nbccgt.co.uk/	Medium	No	Works due to be completed before the project programme (Plate 31.2 of Chapter 31 Socio-economics) is due to begin.

Status		Development period	¹ Distance from Norfolk Vanguard (km)	Project definition	Project data status	Included in CIA	Rationale
North Norfolk District Council							
PF/17/1951 Erection of 43 dwellings and new access with associated landscaping, highways and external works, and amendments to substation)	Awaiting decision	Anticipated Q2 2018	0.7	Application available: https://idoxpa.north-norfolk.gov.uk/online-applications/applicationDetails.do?activeTab=summary&keyVal=_NNORF_DCAPR_92323	High	No	Works due to be completed before the project programme (Error! Reference source not found.) is due to begin.
Bacton Gas Terminal Extension	Approved	Approved 20/09/2016. Expires 20/09/2019.	3	Approved PDS available https://idoxpa.north-norfolk.gov.uk/online-applications/applicationDetails.do?activeTab=summary&keyVal=_NNORF_DCAPR_88689	Medium	Yes	Bacton Gas Terminal is situated to the north of Happisburgh and will therefore not have a direct impact on community infrastructure. However, as with other construction projects in this area, negative perceptions of these projects may influence people’s perceptions of the Norfolk Vanguard project and how they perceive impacts to community infrastructure.
Bacton Gas Terminal coastal protection	Approved	Approved 18/11/2016. Expires 18/11/2019.	2.5	Approved PDS available	Medium	Yes	
Bacton and Walcott	Approved	Expected	1	Public information	Medium	Yes	

Status	Development period	¹ Distance from Norfolk Vanguard (km)	Project definition	Project data status	Included in CIA	Rationale	
Coastal Management Scheme		construction date 2018		leaflets available: https://www.north-norfolk.gov.uk/media/3371/bacton-to-walcott-public-information-booklet-july-2017.pdf			
Breckland Council							
21-31 new dwellings in Necton (BLR/2017/0001/PIP)	Awaiting decision	Not known. Application submitted November 2017.	1.0	http://planning.breckland.gov.uk/OcellaWeb/showDocuments?reference=BLR/2017/0001/PIP&module=pl	Medium	No	There are three ways that housing developments could cumulatively effect communities: <ul style="list-style-type: none">• Through disturbance due to noise, vibration, or dust;• Through cumulative distortion to the labour market; and• Through traffic delays. Although these developments are within Necton they are far enough from the onshore project substation area for cumulative noise impacts to not be an issues to community infrastructure receptors. Construction workers that could transfer between housing and the
4-8 new dwellings in Necton (BLR/2017/0002/PIP)	Awaiting decision	Not known. Application submitted November 2017.	1.0	http://planning.breckland.gov.uk/OcellaWeb/showDocuments?reference=BLR/2017/0002/PIP&module=pl	Medium	No	
70 dwellings (3PL/2016/0298/D) (Phase 2 of 3PL/2012/0576/O)	Approved (21/09/16)	Not known. Application submitted March 2016.	6.4	http://planning.breckland.gov.uk/OcellaWeb/planningDetails?reference=3PL/2016/0298/D&from=planningSearch	Medium	No	

Status	Development period	¹ Distance from Norfolk Vanguard (km)	Project definition	Project data status	Included in CIA	Rationale
						<p>project would probably be providing general services. The increase in demand of these services due to the project is insignificant in comparison to the size of the labour market therefore this will not be considered.</p> <p>Increased traffic density is considered in Chapter 24 Transport and Traffic. It is not possible to determine if these will culminate in community impacts but it is assumed to be highly unlikely due to the low level of human health outcomes assessed in Chapter 27 Human Health.</p>

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