Track record IRM

January 2023

bluestream

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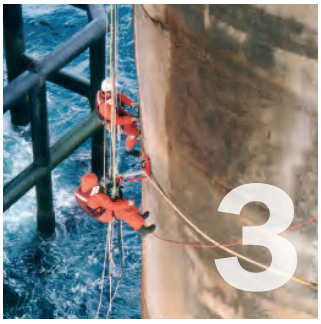

Company details

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Date of incorporation	29-04-2009
Registration	Chamber of Commerce Alkmaar no. 37151264
VAT	NL820712097B01

Registration and certification

ISO9001:2015 certified
NL023416

ISO14001:2015 +SCCM certified
NL023336

ISO45001:2018 certified
NL023335

IMCA Member
(Diving and ROV Sections)

IRATA Full Member
5018/O

Achilles Utilities NCE Qualified
116470

FPAL registered/verified
10042931

Introduction

Bluestream is a leading offshore contractor, providing specialist technical services above and below the waterline. We are highly skilled in diving, Remotely Operated Vehicles (ROVs), working at height, rope access and Unmanned Aerial Vehicles (UAV).

We provide our clients with tailored solutions to ensure sustainability and profitability during the installation, maintenance and decommissioning of their offshore assets. To do this, we combine profound knowledge and decades of experience with the ambition to innovate in a world where the energy industry is evolving.

Proud of our long-term relationships

Our experience dates back to 2009, when Bluestream was founded. Since then, we've worked with virtually all major operators in the southern North Sea, and are proud of the long-term relationships we've built and the contracts that are still in place today.

We're passionate about solving our clients' challenges, whether they're looking for a stand-alone service, a multi-disciplined operation or a fully integrated solution.

To support our services and maintain a high level of quality throughout all our operations, strong engineering and project management teams are in place, as well as in-house Research & Development and inspection departments.

Diving

We own and operate various cutting-edge, modular, air-diving spreads.

ROV

We are well equipped to meet the growing demand for sophisticated, remote, subsea interventions.

Rope access

Rope access enables us to enter hard-to-reach locations by using industrial climbing techniques.

UAV

We provide visual inspection services for onshore and offshore assets.

Inspection, Reporting And Data Management

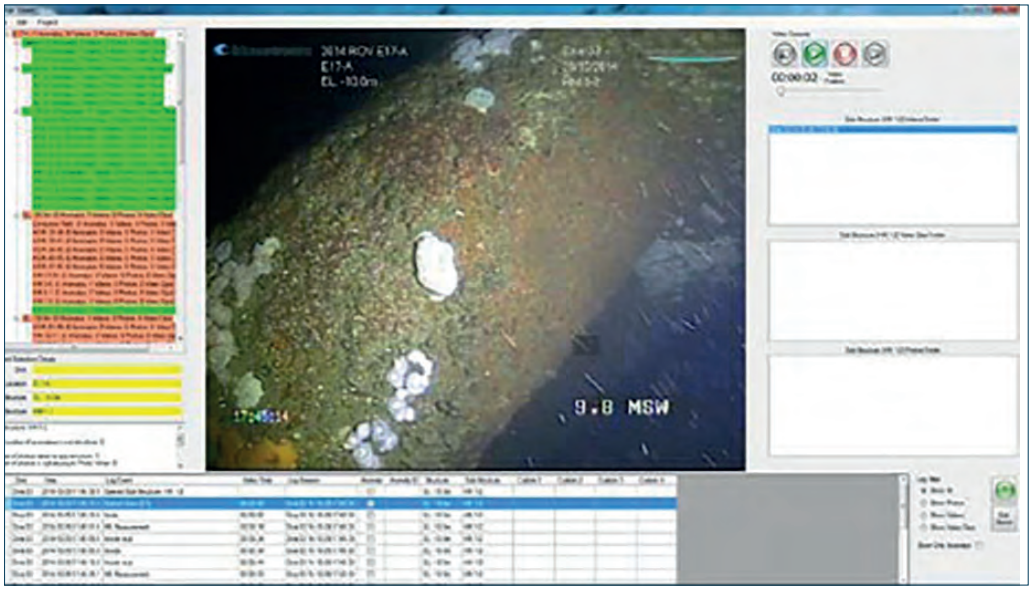
In order to facilitate inspection reporting, tenderer established a dedicated inspection department. This department is based on a back office with experienced inspection coordinators (CSWIP 3.4U) and inspection engineers.

For offshore inspections, a pool of data recorders is trained in-house in tenderer's data management and reporting systems.
These data recorders are placed on board the vessel/platform to perform the inspections, manage the data and prepare reports.

In order to manage the video and photo output of the inspection, the Digital Edge recording hard- and software is used to support the IRM campaigns of various clients. This way, data is managed according to relevant procedures and processes. Tenderer has outlined a short description of the reporting and data management as used during other IRM campaigns.

Digital Edge recording

The primary recording system for the inspection will be Digital Edge DVR. The main advantages are that the unit records in high quality video, which can be shared and watched on any Windows PC with no extra codecs or software.



Client viewer

Each project has a client viewer included so the client can easily navigate both the inspection video and data.

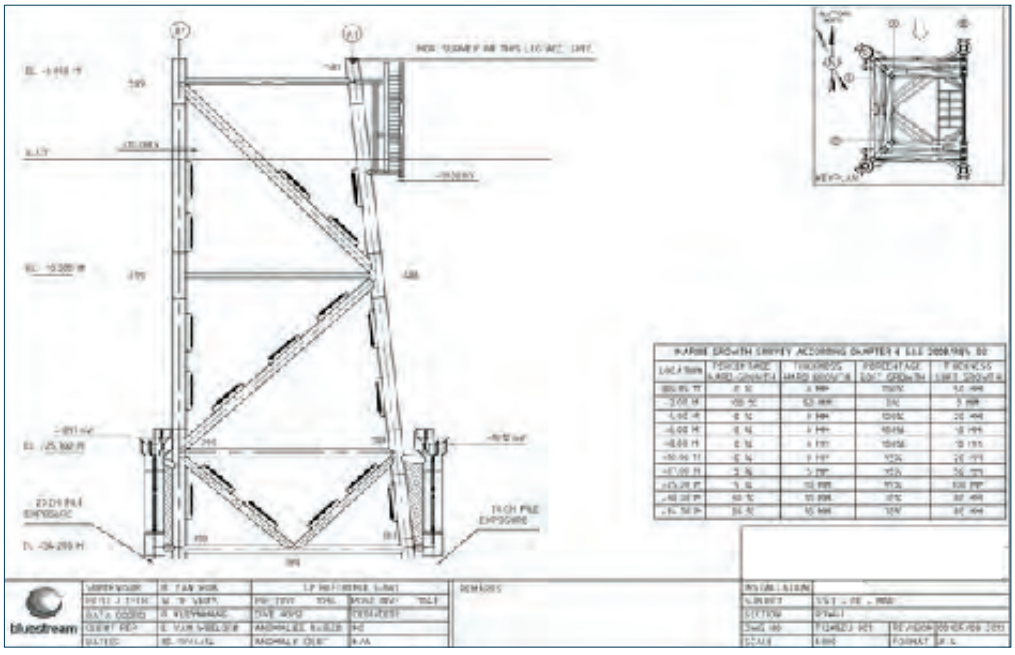
The client viewer has the following features: the ability to review video, video clips and photographs. The program also highlights the completed sections of the inspection.

By choosing the HM to be viewed the following features can be selected:

- Video is displayed in centre of screen;
- Video, video clips and photographs recorded against each structure are displayed in the boxes on the right hand side of the screen and can be individually selected;
- By clicking on individual log events displayed at the bottom of the client viewer the video will advance to the selected event;
- Completed structures are displayed in green;
- Uncompleted structures are displayed in brown.

Digital Edge workpack

A Digital Edge workpack will be created for each of the assets to be inspected. This will comprise of the structure and substructure of each component.



Data sheets

The data sheets are used to record the progress of the inspection and the inspection results, e.g.:

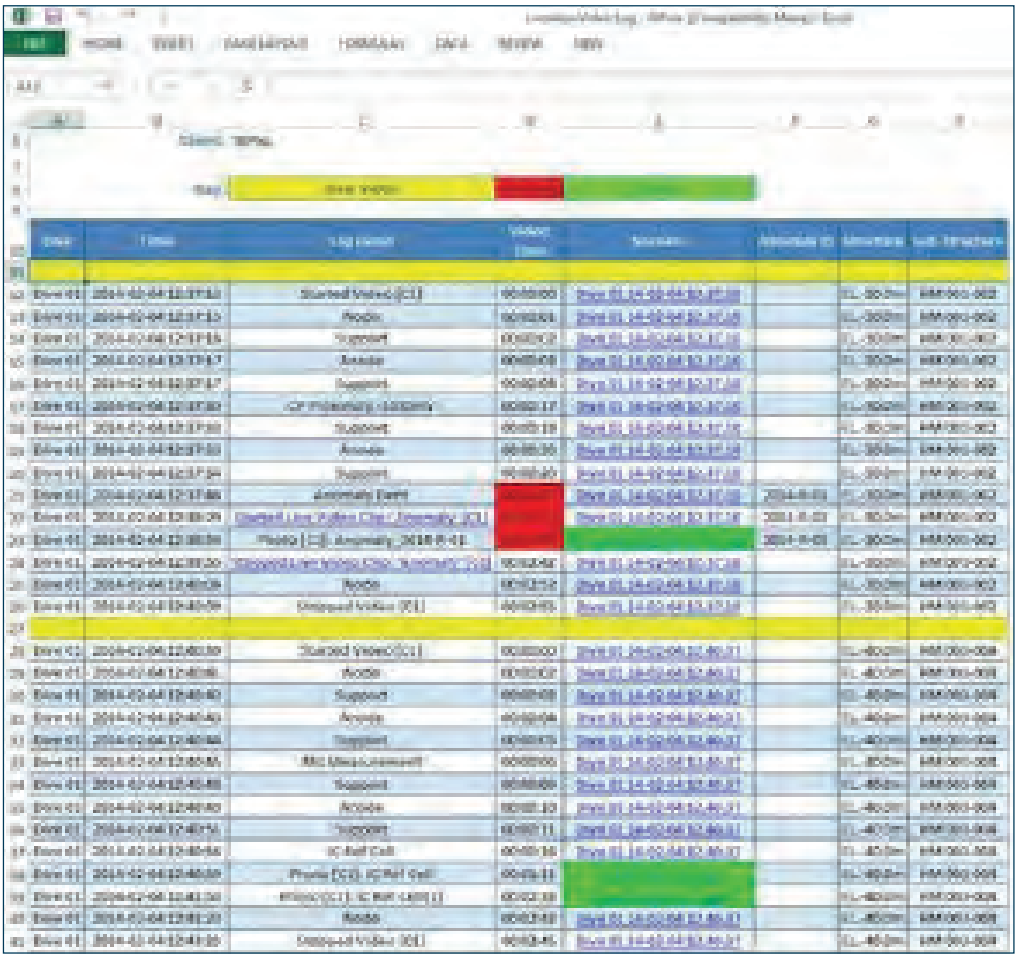
- CP results;
- MG measurement results;
- Pile exposure;
- Scour;
- Specific welds to be inspected;
- Specific anodes to be inspected;
- FMD results;
- Calibrations;
- Personnel carrying out the inspection;
- Date and results;
- GVI results,
- CVI results;
- Completed data sheets can be converted to PDF and included in the final reporting if required.

Infield and anomaly reports

Standard offshore infield and anomaly templates, as detailed in the Subsea Inspection Manual, will be used to report anomalies and items of interest. Anomaly criteria will be agreed between the company and tenderer. Each anomaly raised will be given a unique reference number.

Video log

During normal ROV or diving operations the user logs events, starts/stops video, takes photos etc. These events go into the log. They are then converted to Excel logs at the end of each dive or at a convenient time. The Digital Edge DVR automatically produces dive, photo, video and anomaly logs.



Video log

The video log has the following features:

- Presented as an Excel spreadsheet;
- All log entries hyperlinked to the relevant video;
- Anomaly serial numbers recorded automatically into the video log;
- Video clips and photographs hyperlinked within the video log.

Reporting

At the end of the inspection Bluestream delivers the following documentation:

- A report detailing the following:
  - SOW completed;
  - Inspection results;
  - Inspection datasheets.
- Digital Edge client viewer;
- Resource document containing equipment specifications and personnel qualifications.

Inspection techniques

It is the intention that a Remotely Operated Vehicle will perform the majority of the inspection tasks detailed below:

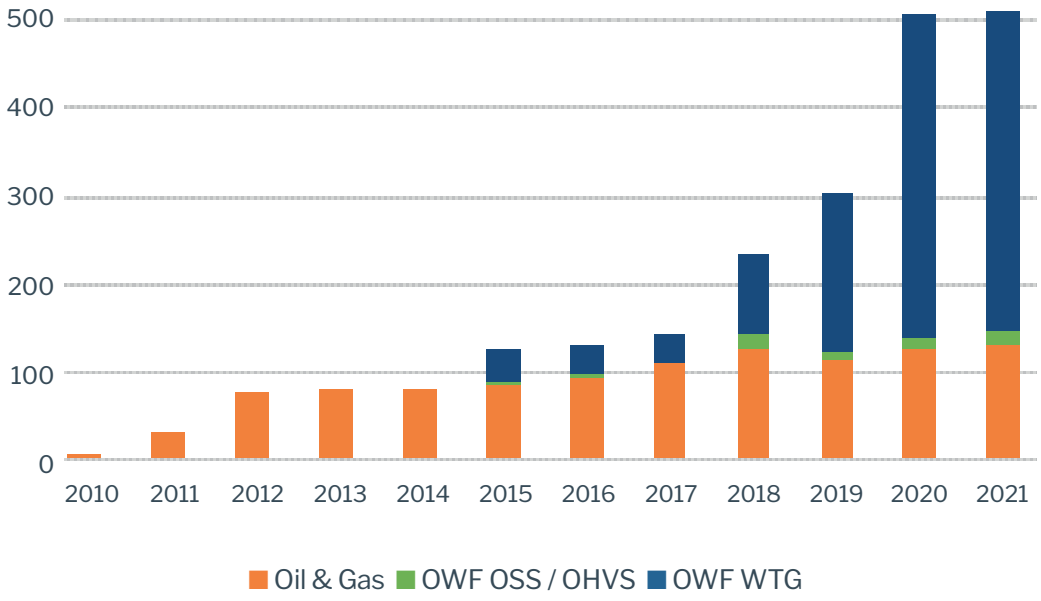
- General visual inspection (GVI) of all components;
- Close visual inspection (CVI) of all components post cleaning as required;
- Detailed visual inspection (DVI);
- Marine growth survey (MG);
- Marine growth removal (MG);
- Cathodic protection survey (CP) including field gradient (FIGS);
- Scour and debris survey;
- Flooded member detection (FMD);
- Ultra-sonic wall thickness (USWT);
- Coating inspections.

Inspections of welds that require either magnetic particle inspection (MPI), alternating current field measurement (ACFM) or electro magnetic detection (EMT) would have to be carried out by CSWIP 3.2 qualified divers.

Track record

All referenced projects include a degree of project management and engineering for the safe and efficient performance of the project. This is including, but not limited to: planning, risk management, provision of work procedures and interfacing with the company's other stakeholders.

Number of structures inspected per year



With an increasingly growing presence in the offshore inspection market over the last decade, Bluestream has gained extensive knowledge in inspection requirements for offshore assets.

As shown on the graph above, the inspection portfolio of Bluestream has expanded exponentially since 2010, and successfully completed the inspection of more than 500 structures in 2021. This growth has been experienced in both the oil and gas industry but also, and most noticeably in the renewables industry.

Track record

Oil and Gas

Track record Oil and Gas

The track records detailed below are a brief summary of some of the inspection projects in the Oil and Gas Industry carried out throughout the recent years.

2011 - Ongoing

Total E&P Netherlands B.V. - North Sea - Dutch sector

The annual program consists of the inspection of all Total E&P assets within the Dutch sector. Currently there are 33 platforms and 8 subsea domes which are inspected every year.

Up until 2016 all operations were executed from DSV VOS Shelter which was chartered by Total E&P. Post 2016 all operations were carried out from the DP2 DSV VOS Sugar chartered by Bluestream which again provided the engineering and reporting services and the ROV/diving/rope access equipment and personnel. Since 2017 Bluestream performed the operations diverless.

The ROV inspection consisted of the following tasks:

- General visual inspection (GVI) of all components;
- Marine growth survey and removal (MG);
- Cathodic protection survey (CP);
- Scour and debris survey;
- Flooded member detection (FMD);
- Diverless weld inspections (ACFM).

The rope access program consisted of the following tasks:

- General visual survey of designated structural components as well as bridge(s) vent towers, lifeboat support frames and similar;
- Close visual inspection and integrity verification of bolted or welded components (riser clamps, appurtenance attachments, crane boom, etc);
- Eddy current testing on designated welds;
- Ultrasonic wall thickness measurements on selected components.

The diving inspection program consisted of the following tasks:

- Marine growth removal (MG);
- Eddy current testing;
- Ultrasonic wall thickness reading (structure, conductors & caissons);
- Close visual inspection and integrity verification of riser clamps and appurtenances;
- Anodes survey - physical measurements of designated anodes and depletion calculation (%);
- Debris removal.

2012 - Ongoing

Neptune Energy B.V. - North Sea - Dutch sector

The annual program consists of the inspection of all GDF E&P assets within the Dutch sector. Currently there are 48 offshore assets which are inspected every year.

The program consists of an ROV, diving and rope access inspection program. Bluestream provides the engineering and inspection reporting services and the ROV/ diving/rope access equipment and personnel.

The ROV inspection consists of the following tasks:

- General visual inspection (GVI) of all components;
- Marine growth survey and removal (MG);
- Cathodic protection survey (CP);
- Scour and debris survey;
- Flooded member detection (FMD).

The diving inspection program consists of the following tasks:

- Eddy current testing;
- Ultrasonic wall thickness reading (structure, conductors & caissons);
- Close visual inspection and integrity verification of riser clamps and appurtenances;
- Anodes survey - physical measurements of designated anodes and depletion calculation (%);
- Debris removal.

The rope access program consists of the following tasks:

- General visual survey of designated structural components as well as bridge(s), vent towers, lifeboat support frames and similar;
- Close visual inspection and integrity verification of bolted or welded components (riser clamps, appurtenance attachments, crane boom, etc).

2016 - Ongoing

Oranje-Nassau Energie B.V. - North Sea - Dutch sector

Inspection of the M07A, P11-E, L11-B and Q16FA platforms.
Inspections were carried out vessel based using ROV and diving equipment.

The ROV inspection consisted of the following tasks:

- General visual inspection (GVI) of all components;
- Marine growth survey (MG);
- Cathodic protection survey (CP);
- Scour and debris survey.

The diving inspection program consisted of the following tasks:

- Close visual inspection and integrity verification of riser clamps and appurtenances;
- Marine growth removal.

2017 - Ongoing

One Gas (NAM) - North Sea - Dutch sector

The annual program consists of the inspection of all One Gas assets within the Dutch and UK sector. Currently there are 52 offshore assets which are inspected every year.

The ROV operations are performed from the DP2 DSV VOS Sugar. Bluestream provides the engineering and inspection reporting services and the ROV personnel.

The ROV inspection consists of the following tasks:

- General visual inspection (GVI) of all components;
- Detailed visual inspection (DVI);
- Marine growth removal (MG);
- Cathodic protection survey (CP) including field gradient (FIGS);
- Scour and debris survey;
- Flooded member detection (FMD).

2017 - 2022

Wintershall B.V. - North Sea - Dutch sector, SNS

The annual program consisted of the inspection of Wintershall assets within the Dutch sector. These inspections were carried out with divers and ROV from DP2 vessels.

The ROV inspection consisted of the following tasks:

- General visual inspection (GVI) of all components;
- Marine growth survey (MG);
- Cathodic protection survey (CP);
- Scour and debris survey;
- Flooded member detection (FMD).

The diving inspection program consisted of the following tasks:

- Eddy current testing;
- Magnetic particle inspection;
- Ultrasonic wall thickness reading (structure, conductors & caissons);
- Close visual inspection and integrity verification of riser clamps and appurtenances;
- Anodes survey - physical measurements of designated anodes and depletion calculation (%);
- Debris removal;
- Remedial repairs to riser clamp assemblies.

2018, 2020 - 2022

INEOS Oil & Gas Denmark
North Sea - Danish sector

Bluestream performed an inspection scope at subsea structures and subsea pipeline from the provided Supply Vessel Esvagt Server. In 2022 the inspection scope is performed from the DP2 ROVSV VOS Sugar.

The following locations where inspected:

- SCB-1 and SCB-2 (2021);
- Cecilie (2021/2022);
- Hejre Jacket(2022);
- Nini A and Nini E (2021/2022);
- Siri platform (2022);
- Siri Sal (2021/2022);
- Stine Subsea Wells (2020/2022).

2011 - 2018
and 2021

Petrogas E&P Netherlands B.V.
North Sea - Dutch sector

The annual program consisted of the inspection of Petrogas E&P assets within the Dutch sector. Currently there are 19 platforms and 7 subsea domes which are inspected yearly.

Before 2014 the diving inspections were performed from the anchored DSV VOS Shelter and the ROV Operations were platform based. In 2014 both ROV and diving inspections were performed from the DP2 DSV VOS Shine.
In 2015 from the DP2 DSV Deep Helder.
In 2017, 2018 and 2021 Bluestream carried out vessel based and platform based inspections.

Bluestream provided the engineering and inspection reporting services and the ROV/diving equipment and personnel.

The ROV inspection consisted of the following tasks:

- General visual inspection (GVI) of all components;
- Marine growth survey and removal (MG);
- Cathodic protection survey (CP);
- Scour and debris survey;
- Flooded member detection (FMD).

The diving inspection program consisted of the following tasks:

- Eddy current testing;
- Ultrasonic wall thickness reading (structure, conductors & caissons);
- Close visual inspection and integrity verification of riser clamps and appurtenances;
- Anodes survey - physical measurements of designated anodes and depletion calculation (%);
- Debris removal;
- ACFM inspection.

2016 - 2021

Dana Petroleum Netherlands B.V.
North Sea - Dutch sector

Annual platform inspection services on board F2A Hanze and P11-B De Ruyter platforms. The inspections were performed using platform based ROV operations.

The ROV inspection consisted of the following tasks:

- General visual inspection (GVI) of all components;
- Marine growth survey (MG);
- Cathodic protection survey (CP);
- Scour and debris survey;
- Flooded member detection (FMD);
- Ultra-sonic wall thickness (USWT).

2020

Petrogas E&P Netherlands B.V.
North Sea - Dutch sector

Bluestream performed a dropcell inspection at the following platforms:

- A18;
- Haven;
- Helder;
- Helm;
- Hoorn;
- Horizon.

2019

Verus Petroleum Ltd. - North Sea - UK sector

Bluestream performed a ROV survey of the Viking subsea wellhead and valve skid. The survey was executed in preparation for upcoming decommissioning and was performed by the OSV Relume with two ROV systems.

2009 - 2017

Sparrows Offshore Services Ltd.
North Sea - Dutch sector

Crane inspections using rope access on behalf of NAM.

- Survey of crane boom and mainframe to secure or remove potential dropped objects;
- Visual inspection on crane boom and main frame to inspect on damage, degradation and integrity of all components and ancillary equipment;
- Eddy current and magnetic particle inspection on critical welds of crane boom and mainframe;
- Ultrasonic wall thickness inspection on crane boom and mainframe tubulars and plate work.

2014 - 2017

Dana Petroleum Netherlands B.V.
North Sea - Dutch sector

Annual platform inspection services comprising of:

- Van Nes Subsea IRM inspection & tubing hanger annulus pressure reinstatement at P11-B-01 Van Nes location;
- Subsea IRM inspection & tubing hanger annulus pressure reinstatement at P11-C-01 Van Ghent location.

Both scopes (change out loading hose and IRM) were conducted using the DP2 DSV Stril Server.

Track record

Renewable Energy

Track record Renewable Energy

The track records detailed below are a brief summary of a selection of the inspection projects in the Renewable Energy Industry carried out throughout the recent years.

2019 - Ongoing

Zeeenergie C.V. and Buitengaats C.V. (Gemini Windfarm) - North Sea - Dutch sector

Structural inspection of the Gemini offshore wind farm. The inspections were carried out in 2021 by utilising DP2 ROVSV VOS Sugar and in 2022 by utilising the ROVSV Voe Vanguard.

The inspections included visual inspection of the behaviour of the foundations, boatlandings, J-tubes, scour protection, bell mouth, marine growth and anodes and potential readings of the cathodic protection systems.

30 WTG Monopile foundations and 2 OHVS jackets were inspected.

The topside inspections for Gemini Offshore wind farm in 2020 were carried out by utilising DP2 walk to work vessel Galyna.
A total of 72 Wind Turbine Generators (WTG) locations were inspected.

2020 - Ongoing

Northland Deusche Bucht GmbH/ Nordsee One GmbH - North Sea - German sector

Bluestream performed inspection scopes at subsea structures at Deutsche Bucht Wind Farm and Nordsee 1 Wind Farm. The inspections were carried out by utilising DP2 ROVSV VOS Sugar and in 2022 the inspection scope was carried out by the ROVSV Voe Vanguard.

The inspections included a general visual inspection, Corrosion protection, Marine growth measurement and Cable protection.

2018 - 2022

Deutsche Wind Technik B.V.
North Sea - Dutch and German sector

Bluestream performed structural inspections at:

- Amrumbank;
- Arkona;
- Butendiek;
- Dan Tysk;
- Horns rev 3;
- Luchterduinen;
- Merkur;
- Nordergründe;
- Prinses Amalia Offshore Windfarms (2019);
- Sandbank;
- Trianel Windpark Borkum I;
- Westermeerwind.

The ROV inspections include general visual inspection of the foundations, boat landings, J-Tubes, scour protection, bellmouths, marine growth, cathodic protection systems and the assessment of previously reported anomalies.
A total of 92 Wind Turbine Generators (WTG) and 2 Offshore Substations (OSS) were inspected in 2018. In 2019 Bluestream inspected 120 WTG's and 7 OSS's in 8 wind farms.
Remedial works on ICCP systems are part of the 2019 planned diving interventions.

2019 - 2022

Trianel GmbH - North Sea - German sector

Bluestream performed an inspection scope at subsea structures and ICCP anodes at Trianel Windpark Borkum I and Trianel Windpark Borkum II.

A total of 40 Wind Tubine generators (WTG) and 1 Offshore Subsation (OSS) were inspected at Trianel Windpark Borkum I and a total of 10 Wind Tubine generators (WTG) were inspected at Trianel Windpark Borkum II

2022

TenneT TSO GmbH - North Sea - German sector

Structural inspection of various TenneT offshore platforms. The inspections were carried out by utilising DP2 ROVSV VOS Sugar fitted with three ROV's.

The inspections included:

- General visual inspection;
- Close visual inspection;
- Marine growth inspection;
- Scour protection measurements and scour depth readings by means of Blueview technology;
- Cathodic protection readings;
- Anode consumption readings by means of 3D photogrammetry;
- Wall thickness inspections.
- Dimensional inspections.

2018 and 2020 - 2021

G-tec S.A, - North Sea - Belgian/German sector

Bluestream performed an inspection scope at subsea structures from the provided Research/ Survey Vessel "Mintis".

The following locations where inspected:

- C-Power OWF:
- Merkur OWF;
- Rentel OWF;
- Seamade OWF.

2021

Ørsted Wind Power Denmark A/S North Sea - German sector

Bluestream performed an inspection program at subsea structures at Borkum Riffgrund and Gode Wind Offshore Wind Farm. The inspections were carried out by utilising DP2 ROVSV VOS Sugar.

The inspections included a general visual inspection, corrosion protection, marine growth measurements and cable protection systems (CPS).

2019

ABB AG/TenneT TSO GmbH
North Sea - German sector

Bluestream performed subsea and topside inspection of DolWin Beta Offshore Substation.

The project was executed in three phases:

- Topside rope access inspection,
- Subsea inspection and unmanned aerial vehicle inspection, both supported by the VOS Sugar,
- Further topside rope access inspection.

Final reporting for all 3 phases was delivered by Bluestream. DOLWIN BETA is owned by Tennet and ABB performs maintenance services.

2017 - 2018

OWA N.V. - Gemini OWF Inspection
North Sea - Dutch sector

Structural inspection of the Gemini offshore wind farm. The inspections were carried out by utilising DP2 ROVSV VOS Sugar.

The inspections included visual inspection of the behaviour of the foundations, boatlandings, J-tubes, scour protection, bell mouth, marine growth and anodes and potential readings of the cathodic protection systems.

30 WTG Monopile foundations and 2 OHVS jackets were inspected.

2017

ABB AG - North Sea - German sector

Inspection of the DolWin Beta platform. The inspections were carried out from the jack up vessel Seajacks Zaratan and included a GVI, scour/rock dump inspections, J-Tube inspections and future & existing cable route inspections.

2016

ABB AG - North Sea - German sector

Engineering, execution and reporting of the DolWin Alpha and Borwin Alpha offshore substation structural inspection programs.

The 2016 program was the initial inspection and included topside inspections and subsea cathodic protection system measurements.

2015

OWA N.V. - North Sea - Belgian sector

Underwater inspection at Thorton Bank OWF (1 GBF and 10 WTG jackets plus the OTS jacket).

Scope of work:

- Visual inspection of the structural behaviour of the GBF's;
- Visual inspection of the flanges of the bell mouth, including the first 2 meters of the scour protection around the entire GBF;
- Visual inspection of the boat landings and its connections on all foundations;
- Visual inspection of the J-tubes, bell-mouths and cable interfaces;
- Visual inspection of the legs and the cross connection pipes of the jacket foundations.

2014

Siemens AG - North Sea - German sector

Inspection of the HelWin 1 and HelWin 2 platforms. Inspections were carried out by ROV from platform supply vessel Blue Aries.

The scope on both platforms included a platform GVI, scour survey, J-tube survey, cathodic protection measurements, grout inspection and seabed clearance debris survey.

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