North Sea Transition Authority

NSTA Seismic Survey Acquisition Close Out Report

Guidance for submission of seismic survey header information

Date of publication 10/02/2025

The document can be found on the NSTA's website.

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This document is available in large print, audio and braille on request.
Please email: correspondence@nstauthority.co.uk with the version you require.

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Contents

Scope and purpose of this guidance

This document aims to provide clear guidance on the process for submitting seismic survey close-out header information introduced in February 2025, detailing the required format and reporting method. This process will now replace the previous survey close out template that was sent to the NSTA on completion of the acquisition of a seismic survey.

This document provides supplemental information in support of the North Sea Transition Authority's ('NSTA') published guidance: Reporting and disclosure of Information and Samples.

Introduction and Context

The NSTA Digital Strategy 2020-2025 describes how the NSTA will deliver, promote, and influence digital excellence through digitalisation to support the OGA Strategy.

Aiming to be an innovator and a catalyst, the NSTA is helping industry, academia, and the supply chain to use digitalisation to unlock the huge value from data, whilst at the same time providing excellent digital services to its stakeholders in support of regulatory excellence.

The reporting of correct seismic survey summary information following acquisition of seismic surveys is mandatory under s.34 of the Energy Act 2016. This metadata is essential for the creation of a System of Record (SoR) for surveys, which in turn enables the correct reporting of geophysical datasets into the National Data Repository (NDR).

The NSTA's ambition is to enable digital services that ensure digital, data and technology work for all. The requirement for relevant persons to retain petroleum-related Information and Samples (Retention of Information and Samples Guidance) and to report certain of them to the NSTA via the NDR, is explained in: Reporting and disclosure of Information and Samples Guidance. Information on the disclosure of such information can also be found in the document linked.

A main aim of these regulatory requirements is to "ensure greater access to the timely and transparent data necessary for a competitive market".

Submission Instructions

The NSTA now requires seismic survey metadata in the form of a geodatabase feature class. There are four ESRI File Geodatabases (one for each of the main Coordinate Reference Systems (CRSs) the NSTA uses, these being ED 1950, WGS 1984, ETRS 1989 and British National Grid). These are available for download from the NSTA Azure storage site, and linked below in Annex A.

Each geodatabase contains a single polygon feature class designed to capture 2D, 3D, 4D and seismic site surveys.

File Geodatabase Name	Feature Class Name	Feature Class Alias
Seismic_Survey_Reporting_Template_BNG	NSTA_Seismic_Survey_Reporting_Polygon_BNG	NSTA Seismic Survey Reporting Polygon (BNG)
Seismic_Survey_Reporting_Template_ETRS89	NSTA_Seismic_Survey_Reporting_Polygon_ETRS89	NSTA Seismic Survey Reporting Polygon (ETRS89)
Seismic_Survey_Reporting_Template_WGS84	NSTA_Seismic_Survey_Reporting_Polygon_WGS84	NSTA Seismic Survey Reporting Polygon (WGS84)
Seismic_Survey_Reporting_Template_ED50	NSTA_Seismic_Survey_Reporting_Polygon_ED50	NSTA Seismic Survey Reporting Polygon (ED50)

The NSTA no longer requires seismic navigation information to accompany the close out submission as the survey geometries will be provided by the feature class. You are reminded that seismic navigation data is required to be reported to the NDR no later than 6 months after the completion of survey processing. Please see both Reporting and disclosure of Information and Samples Guidance and Information Reporting: Form and Manner of the NDR Information for further details.

For 2D surveys, the NSTA intends to populate the line geometries from navigation data that is later provided to the NDR. The NSTA considers that a simple outline of the 2D survey area will be sufficient until the more detailed line geometries are available. Futher information is available in Annex A.

The NSTA Survey Close Out Feature Class must be reported to the NSTA **no later than 3 months** after survey acquisition is complete. Full and correct completion of the feature class is essential, and non-compliance will necessitate re-submission.

Normally it will be the company that “owns” the survey (i.e. is responsible under the associated exploration or production licence(s) for retaining and reporting associated datasets to the NDR)

who will submit this close out documentation. An acquisition contractor may submit it on behalf of the survey owner.

The feature class should be sent to the NSTA using SFTP. To register for the NSTA's SFTP facility contact us on ISC@nstauthority.co.uk

Full instructions on downloading and populating the template plus submission of the completed geodatabase file are shown in Annex A below.

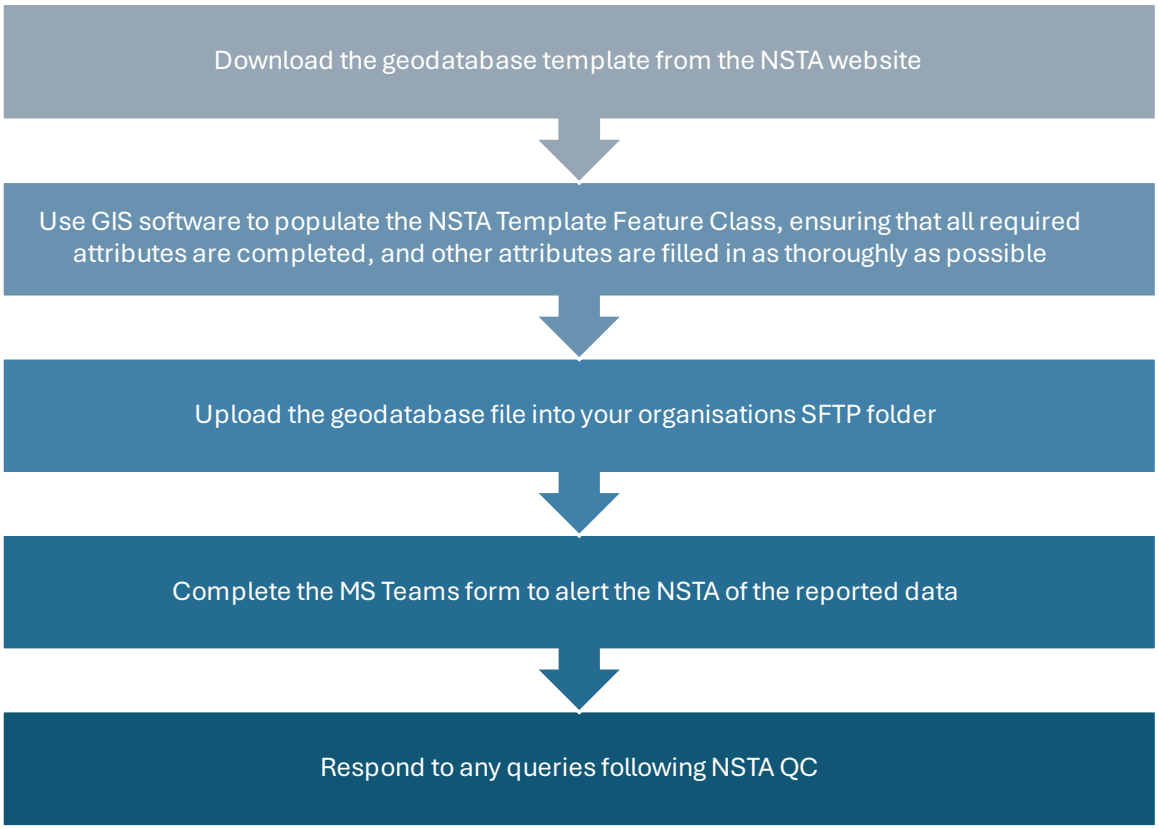
Reportable survey types

All header information for 2D, 3D, 4D and site surveys should be reported to the NSTA using this process within 3 months the final date of acquisition.

This process will not collect information on reprocessed survey information. This data type should be loaded into the NDR directly.

Seismic survey close out process map

Within 3 months of survey acquisition, you should complete the process below to provide the NSTA with the survey header information which will retain a seismic system of record



Attributes and Domain Information

Required feature class attributes

Please find the LINK to accompanying spreadsheet with full details of polygon attributes, polygon schema and polygon domain coding.

Co-ordinate systems

You will note that the co-ordinate system is a free text entry, please use the following table to enter the correct co-ordinate reference system and respective code:

EPSG Geodetic Parameter Dataset Number	Coordinate System Description
4230	ED50 (unprojected)
4326	WGS84 (unprojected)
4258	ETRS89 (unprojected)
4277	OSGB 1936 (unprojected)
23030	ED50 projected UTM 30N
23031	ED50 projected UTM 31N
32630	WGS84 projected UTM 30N
32631	WGS84 projected UTM 31N
25830	ETRS89 projected UTM 30N
25831	ETRS89 projected UTM 31N
27700	OSGB 1936 projected
23028	ED50 projected UTM 28N
23029	ED50 projected UTM 29N
23090	ED50 / TM 0 N
32627	WGS84 projected UTM 27N
32628	WGS84 projected UTM 28N
32629	WGS84 projected UTM 29N
25828	ETRS89 projected UTM 28N
25829	ETRS89 projected UTM 29N
4278	OSGB70 (unprojected)
4279	OS(SN)80 (unprojected)
4230	ED50 (unprojected)

Survey Identifier

One of the compulsory attributes in the feature class is the survey identifier. The NSTA has revised the “Survey Identifier Standard” (SIS, formerly CS9) to consider the need for increased flexibility in company codes.

Company codes assigned under the legacy CS9 survey naming convention consisted of two characters. In the updated SIS, company codes have been expanded to four characters. While legacy codes remain in use, they are now supplemented with two trailing underscores to meet the new four-character format.

The new standard is 12 characters long as follows:

CCCCYYYYSSXX

CCCC	4-character company code. Legacy 2-character codes will have trailing 2 underscores
YYYY	4-character year. Please use the year that survey acquisition completed
SS	2-character survey type (2D, 3D, 4D, SS)
XX	2-character designation for individual survey. Sequential numbering for that year preferred

e.g.

BP__20232D01 (with existing company code)

ACME20233D02 (with example new company code)

Company codes are assigned to licensees by the NSTA, to be used consistently across NSTA services including the Seismic System of Record and the National Data Repository (NDR).

Please refer to this LINK for a list of current company codes.

In the event that the company owning the survey is not listed, please contact ISC@nstauthority.co.uk

The NSTA recognises that the above survey identifier may be used early on in the planning process such as in the required environmental applications to OPRED. In the event that a survey identifier is incorrectly applied, the NSTA will communicate any amendments to the survey owner.

In the case of reprocessed datasets, these can now be assigned project codes in the NDR, that can be tagged with one or more input surveys.

Ancillary information

General information gathered

The NSTA will store the following information (gathered from the SFTP submission) for compliance reasons and in case of general queries about the survey:

SUBMITTED DATE	**Date feature class file is submitted**
SUBMITTER NAME	**Name of person submitting the feature class**
SUBMITTER TELNO	**Phone no. of person submitting the feature class**
SUBMITTER EMAIL	**Email of person submitting the feature class**
SUBMITTER GROUP EMAIL	**Relevant group email of submitting company**
SUBMITTER COMPANY NAME	**Company name of person submitting the feature class**

Informing the government and public bodies

You are reminded that the Offshore Petroleum Regulator for Environment and Decommissioning (OPRED) may have close out requirements for seismic and other acoustic surveys.

Details are available here:

https://www.gov.uk/guidance/oil-and-gas-offshore-environmental-legislation

or alternatively e-mail bst@beis.gov.uk

Disclosure of survey information

The NSTA may make survey summary information publicly available on receipt. At present the NSTA intends to continue doing this via the Data and Insights pages on the NSTA Website.

For more information on reporting and disclosure under s.34 please refer to the NSTA's Reporting and Disclosure Guidance webpage.

Questions

Please contact ISC@nstauthority.co.uk if you have any questions

Annex A

Please use this set of instruction to download, complete and upload the geodatabase feature class file to the NSTA.

GIS Template Download and Population

There are four ESRI File Geodatabases (one for each of the main Coordinate Reference Systems (CRSs) the NSTA uses, these being ED 1950, WGS 1984, ETRS 1989 and British National Grid).

Each geodatabase contains a single polygon feature class designed to capture 2D, 3D, 4D and seismic site surveys. The polygon feature class needs to be populated with the relevant spatial and attribute information

Please follow the steps below to download, populate and upload the geodatabase feature class file.

Please note that these instructions are based on using ESRI ArcGIS Pro software, however other GIS software are available.

Downloading the ERSI geodatabase template

Download the geodatabase template

You will need to download the ESRI file geodatabase from the NSTA Azure Storage location via this link:

https://datanstauthority.blob.core.windows.net/external/NSTA_Seismic_Survey_Reporting_GIS_Templates.zip

The above link will download the Seismic_Survey_Reporting_GIS_Template zipped folder to your C:\Offline\User.Name\Downloads folder.

Unzip the geodatabase file

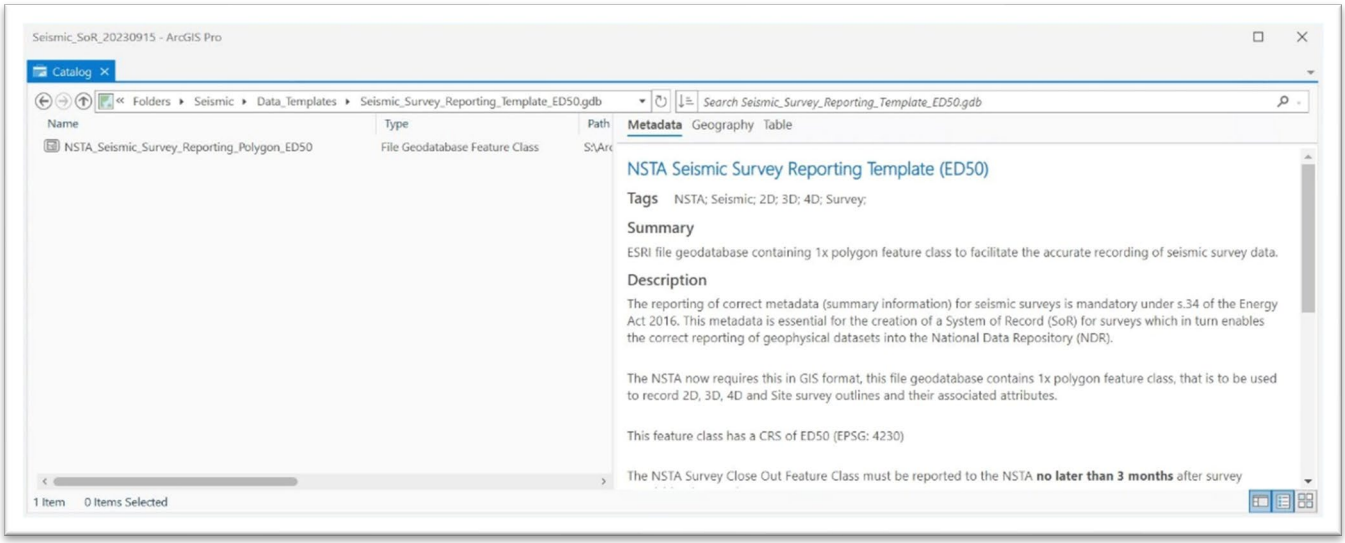
To unzip the file, right click on the zipped folder and select ‘Extract All…’ from the options.

Specify the file location for the zipped folder to extract to and click ‘Extract’.

Once extracted there will be four and a text document detailing the date of the last version update.

- Seisimc_Survey_Reporting_Template_BNG.gdb
- Seisimc_Survey_Reporting_Template_ED50.gdb
- Seisimc_Survey_Reporting_Template_ETRS89.gdb
- Seisimc_Survey_Reporting_Template_WGS84.gdb
- ReadMe

There is 1x polygon feature class in each of these geodatabases, which will display as shown below in a GIS software. Please pick the appropriate template to be used with your information.



Populating the NSTA Template Feature class

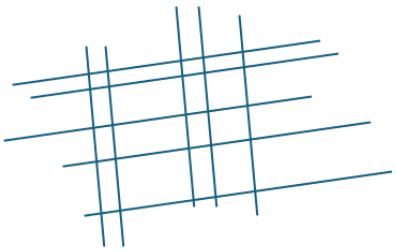
Once you have selected the appropriate CSR feature class template, load it into your GIS software. This file will be referred to as the "NSTA template feature class" throughout this document.

Create a polygon encompassing the seismic survey area and populate the template feature class with the relevant information. All surveys must be represented as polygons.

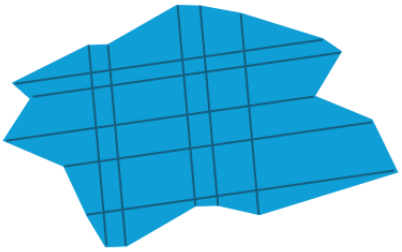
The attribute table contains both free-text fields and dropdown selection options. Attributes designated as ‘REQUIRED’ must be completed to ensure essential data is captured. However, it is strongly recommended that as much information as possible is provided. There are several ways in which you can do this, and they are explained in more detail below:

- Manually populating the information into the NSTA template feature class
- Appending the information into the NSTA template feature class
- Using Copy and Paste Special into the NSTA template feature class

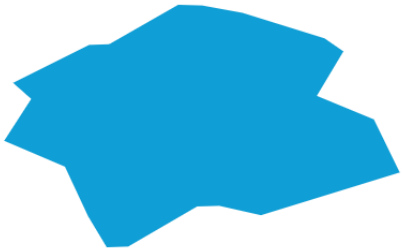
For 2D surveys, a polygon should be drawn around the area covered by the 2D seismic lines (see diagram below). This polygon will serve as the spatial representation of the 2D survey in our GIS system until Navigation data is loaded into the NDR. Once the Navigation data is available, it will be used to generate the seismic lines on the map, and the polygon will be removed to ensure survey location accuracy.



2D seismic lines



Basic Polygon surrounding 2D seismic lines



Basic Polygon expected for Header information submission – polygon will be replaced with lines once NAV information is loaded to the NDR

Please find several methods below on creating a polygon for 2D surveys and are explained in more detail below

- Manually creating a polygon using edit tools
- Using a geoprocessing tool

Once the polygon has been created, and attribute table populated, then rename the template feature class to the following pattern:

Onshore/Offshore_OperatorName_Seismic_Submission_CRS_YYYYMMDD

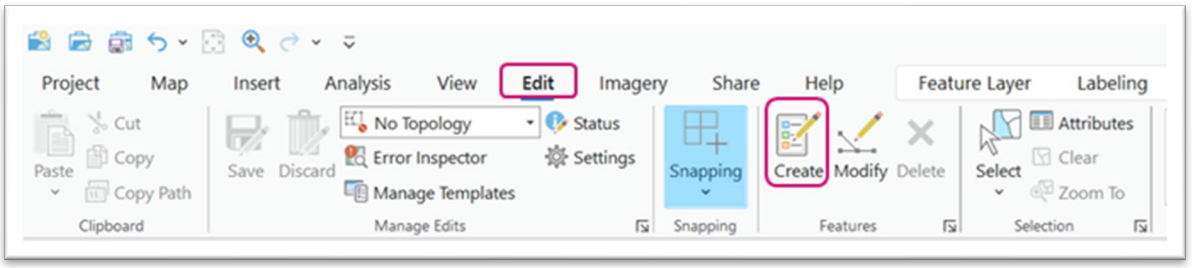
For example:

- ON_ACME_Seismic_Submission_WGS84_20240715
- OFF_ACME_Seismic_Submission_ED50_20240918

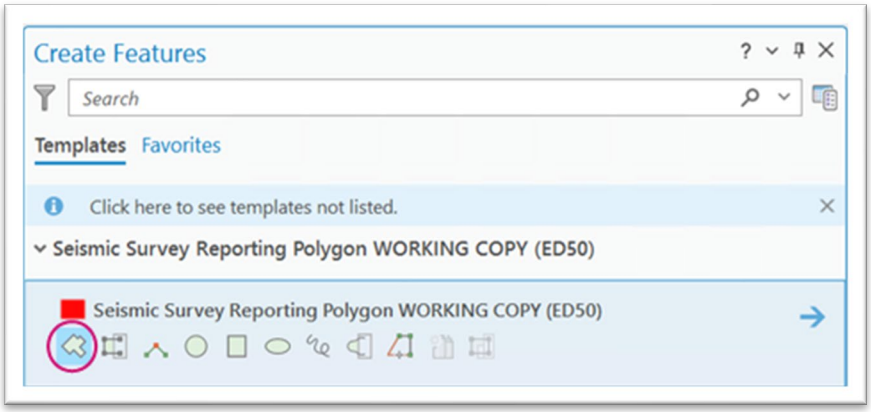
Upload the file geodatabase to the NSTA via SFTP as described below.

2D surveys: Manually creating a polygon using edit tools:

With the survey lines and the NSTA template feature class in the same GIS session. Select the template feature class in the table of contents, select the ‘Edit’ tab, then select Create. (ESRI Link)



Select ‘Create a polygon’ feature, then select ‘Polygon’ from the ‘Create Feature’ pane and create a shape that encompasses all the 2D lines of the survey. Once complete, please ensure you chose ‘Save’ from the ‘Edit’ tab.

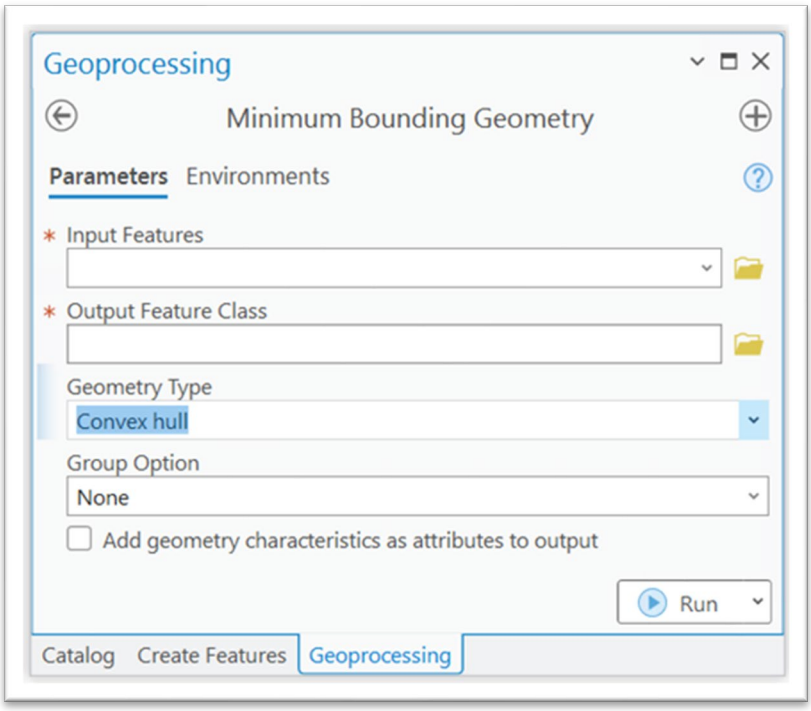


2D surveys: Using a Geoprocessing tool

Creating a polygon

From the Geoprocessing panel search for the ‘Minimum Bounding Geometry’ tool.

This can be located by following: Data Management Tools > Features Toolbox > Minimum Bounding Geometry (ESRI Link).



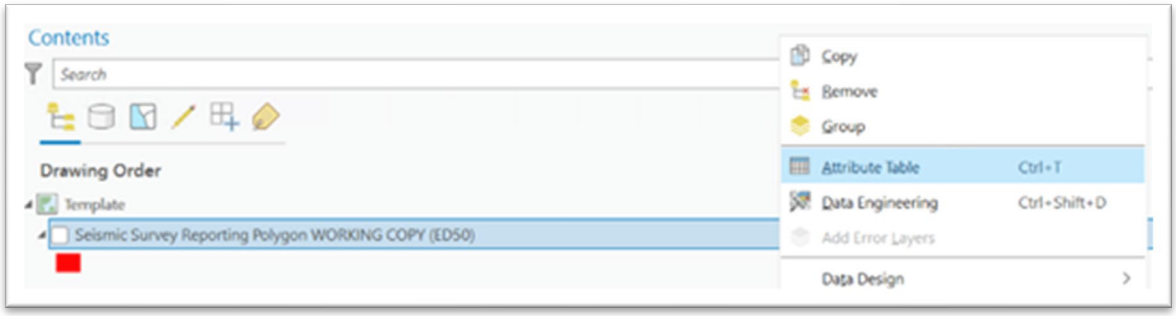
1. ‘Input feature’: this should be your surveys lines (using the arrow to reveal a drop-down list)
2. ‘Output Feature Class’: Define the output location and name.
3. ‘Geometry Type’: Select Convex Hull
4. ‘Group Option’: Select All
5. Leave the ‘Add geometry characteristics’ box unchecked.
6. Click ‘Run’ on the bottom right of the pane.

This tool will create an outline that contains all the feature that comprise the survey. Please note if there are multiple surveys an outline will be drawn around all features.

Manually populating the information to the NSTA template feature class attribute table

Once the output polygon has been completed, you will need to populate the NSTA template feature class with information.

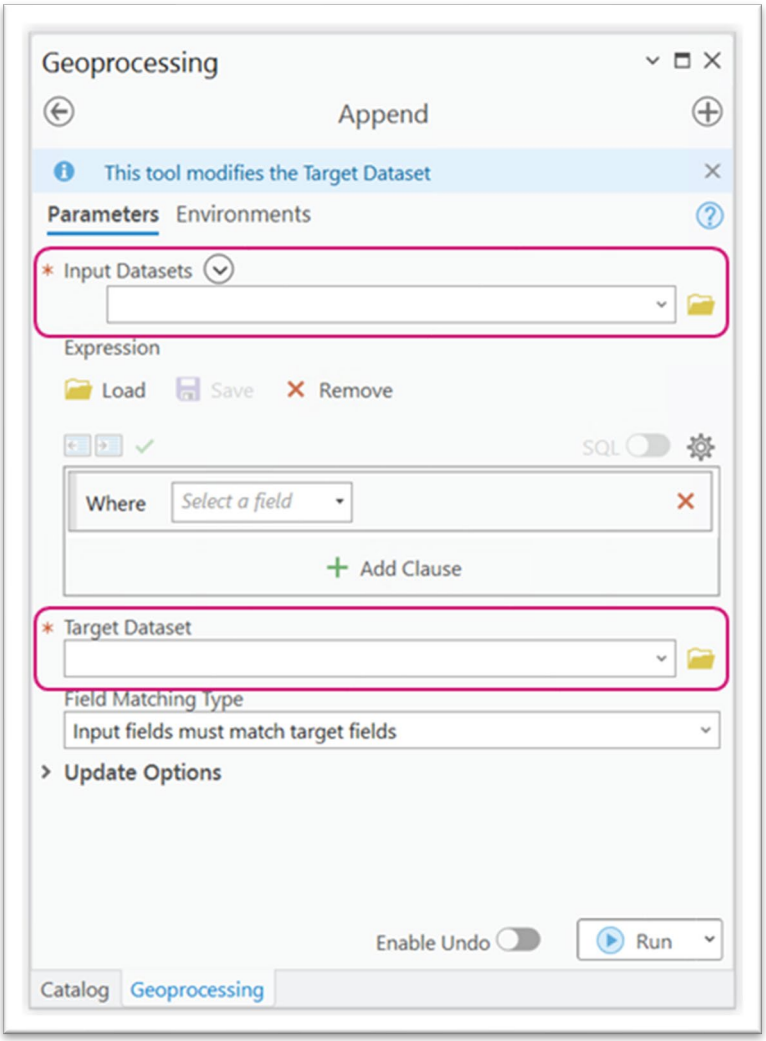
To open the ‘Attribute Table’, right click on the layer in the table of contents and select ‘Attribute Table’ from the contextual menu.



Manually populate the table with relevant information. You may enter free text, or double click on selected columns to view the predefined drop down list.

Appending the data to the NSTA template feature class

Once you have created the polygon, you can add the information to the NSTA template feature class using the ‘Append tool’. This can be located from the geoprocessing panel search for ‘Append’, or by locating using the following path: Data Management Toolbox > General > Append (ESRI Link).



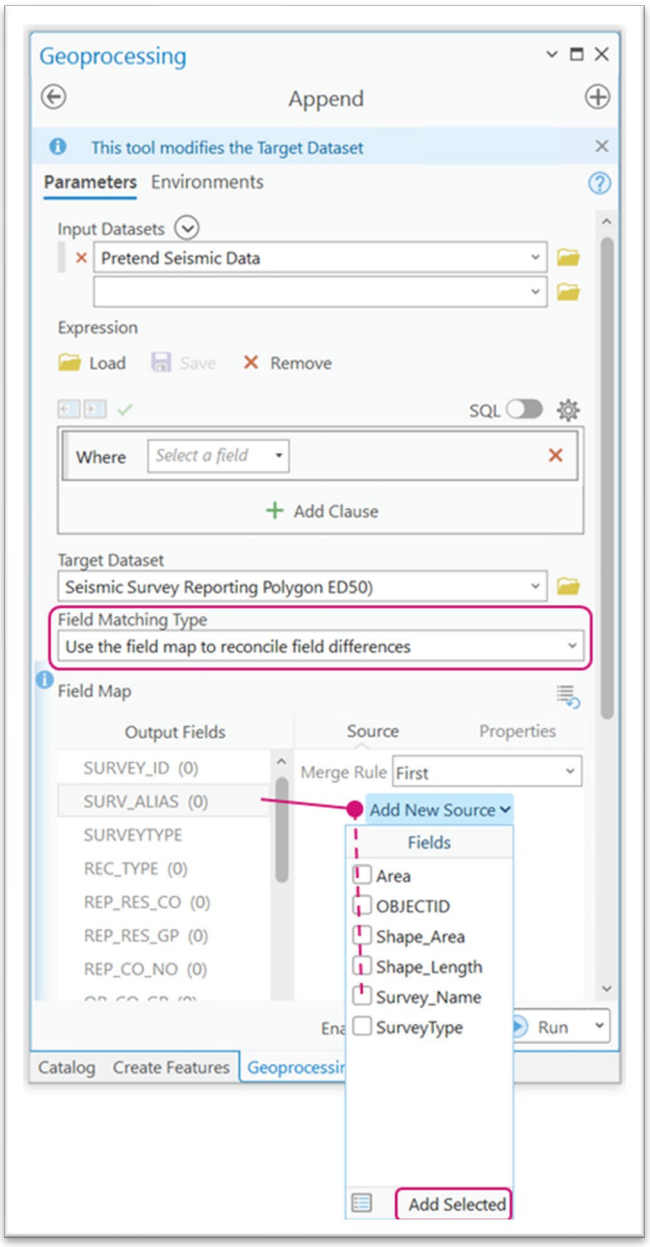
1. ‘Input Datasets’: Please select any polygon that needs to be added to the NSTA template feature class as part of the overall seismic submission:

- The output from the above Minimum Bounding Geometry operation.
- A manually created polygon that was not created within the NSTA template feature class.
- Any other 2D, 3D, 4D or Site Survey polygon.

Regardless of the polygon’s history the process of adding it to the NSTA template is the same.

2. ‘Target Dataset’: Select the NSTA template feature class.

3. ‘Field Matching Type’: Set to 'Use the field map to reconcile field differences.' This allows you to precisely specify which attributes should populate each column, which is crucial when the schemas (data layouts) of the two datasets differ.
    a. Use the Field Map parameter to map/match any fields from the input dataset to fields in the target dataset. As shown below this allows the correct transfer of attribute data regardless of attribute column name.



    b. Ensure to click Add Selected for each field mapped, if not added then the attribute data will not be appended.
    c. Any attribute columns not mapped will not be appended to the target dataset.
4. When all field mapping is complete select Run.

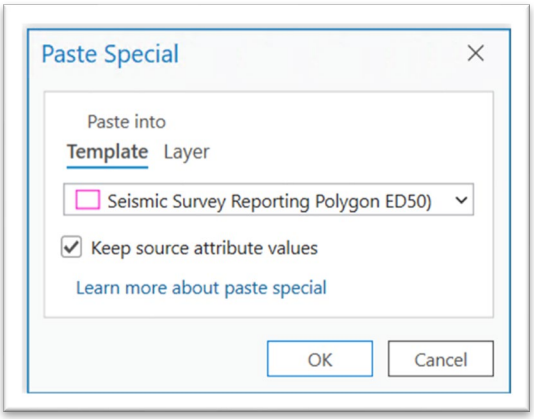
The spatial and attribute data for the input feature(s) will be appended (added) to the NSTA template feature class.

Open the attribute table for the template feature class to ensure all outlines have been added.

Edit those attribute columns that are “REQUIRED” as per the earlier instructions and any additional columns if you have the relevant information, once complete save all edits.

Using Copy and Paste Special into the NSTA template feature class:

1. Using the ‘Selection’ tools, select the polygon you wish to add to the NSTA template feature class.
2. Under the ‘Clipboard’ tools select ‘Copy’. Click on the arrow under ‘Paste’ and select ‘Paste Special’ (ESRI Link)
3. From the drop down select the NSTA template feature class as the layer to ‘Paste’ into.



4. Select Ok

When ‘Keep source attribute values’ is checked on any fields in the input data that match fields in the layer being pasted into will be populated with the corresponding attribute information.

GIS submission to NSTA via SFTP

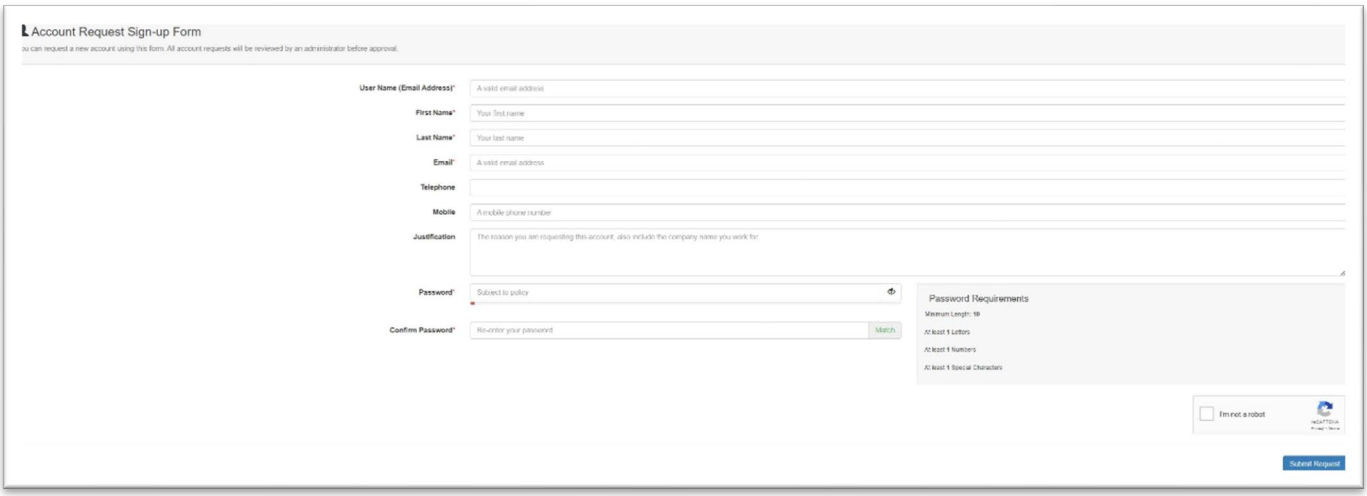
To complete the submission of seismic information the populated file geodatabase needs to be uploaded to the NSTA via an SFTP folder.

If you do not yet have an account, please request an account for the NSTA's SFTP site using the following link: North Sea Transition Authority Web Client Web Client (nstauthority.co.uk)

When requesting an account please state in the justification box that you will be submitting seismic information and which company group you will be submitting for. This is so you will be given access to that company's folder.

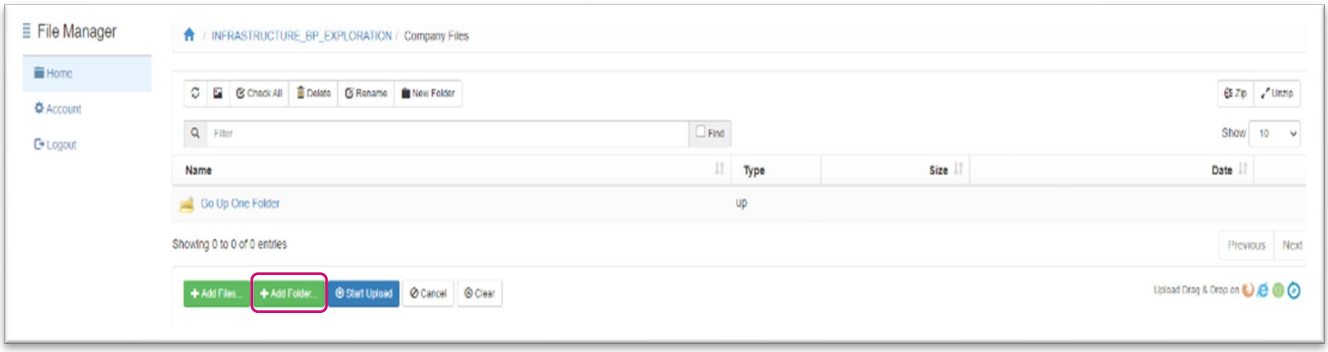
If you have an existing account, your password may have expired. In this instance, please contact ISC@nstauthority.co.uk requesting the password to be reset, the password will then be reset and provided to you.

We will then add your account to the appropriate folder, please confirm which company group you will be submitting for. If you request a new account and already have an existing account, the request will be rejected as you cannot have two accounts with the same name and contact details.

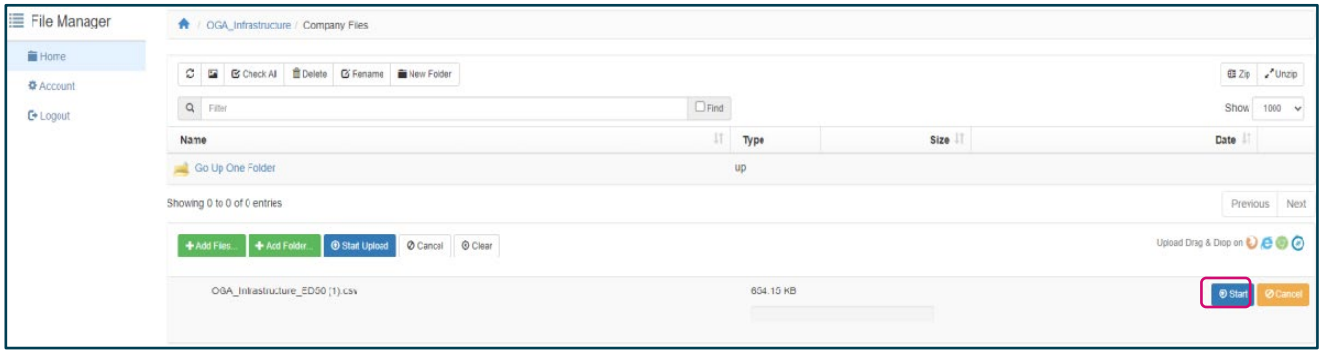


The NSTA requires the information to be submitted in feature class format, within a file geodatabase when viewed in file explorer, a geodatabase will be displayed as a folder ending in .gdb.

Once you have successfully logged into the SFTP site, navigate to the folder named ‘Company Files’ and use the ‘Add Folder’ (for a geodatabase) button to add the information to the SFTP folder.



Once you have loaded the required files into the SFTP they still need uploading, this can be done by clicking the start button (see below). Once the information has been fully uploaded it will be moved into the folder, note for larger files this may take some time. Please do not refresh the browser as it will cause a failed upload. Once the information is in the folder there is no further action needed in the SFTP folder.



IMPORTANT NOTE: Please only upload a file geodatabase to the folder, please don’t add subfolders or use zipped folders.

Survey close out completion form

Once the geodatabase file has been uploaded to the SPFT folder then please go to the following link and complete the MS form to confirm you have finished uploading and the information is ready to be validated:

NSTA Seismic Survey Submission Form will record your submission for audit trail purposes, as well as notifying the necessary parties at the NSTA.

Changing data attributes after submission

There may be occasions where changes to the seismic close out submission are required. These are to be expected when:

- Issues during QC of the submission
- Update to 'Actual End of Processing Date'
- Change of survey ownership

For any changes to the information, please use the NSTA Seismic System of Record Data Change Request Form. This will record your data change request for audit trail purposes and ensure that any changes made to the information have been requested by the current data owner.

Quality Checks

The NSTA will perform checks on the submission before the information is released to the NSTA Data and Insights webpage.

These checks include, though are not limited to:

- Check the template file name has been updated and named correctly
- Check the GIS data opens correctly and is complete (i.e. if 2 surveys are being reported, that there are two polygons and two lines of attributes)
- Check the Survey ID has been applied correctly
- Check the location of the survey polygon aligns with the acquisition licence and sit within the OPRED consented area
- Check there is reference to the PETS application, whether that's the Survey ID or Survey Alias
- Check company name and number are correct
- Check all 'required' attributes have been completed
- Check the CSR specified in the attribute table is the same as the supplied data

Contacts

Questions or comments in relation to this document, should be directed to the Data and Compliance Team: ISC@nstauthority.co.uk

North Sea Transition Authority

The North Sea Transition Authority is the business name for the Oil and Gas Authority, a limited company registered in England and Wales with registered number 09666504 and VAT registered number 249433979. Our registered office is at Sanctuary Buildings, 20 Great Smith Street, London, SW1P 3BT.

www.NSTAuthority.co.uk