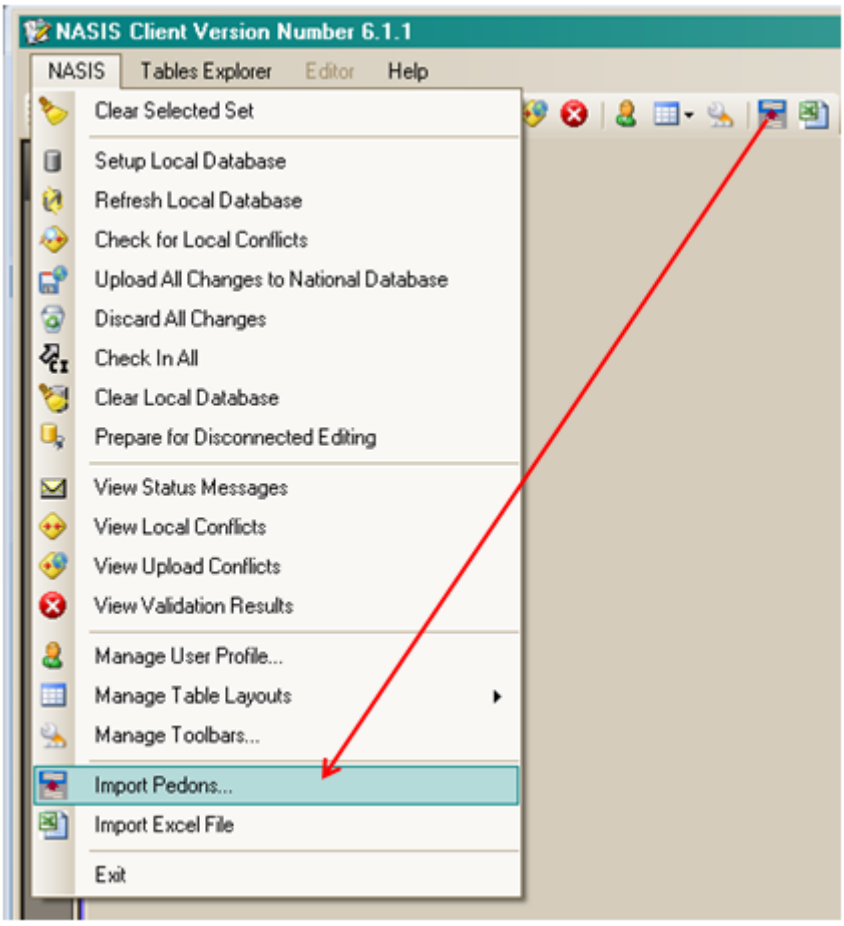
Chapter 10: Importing Soil Data

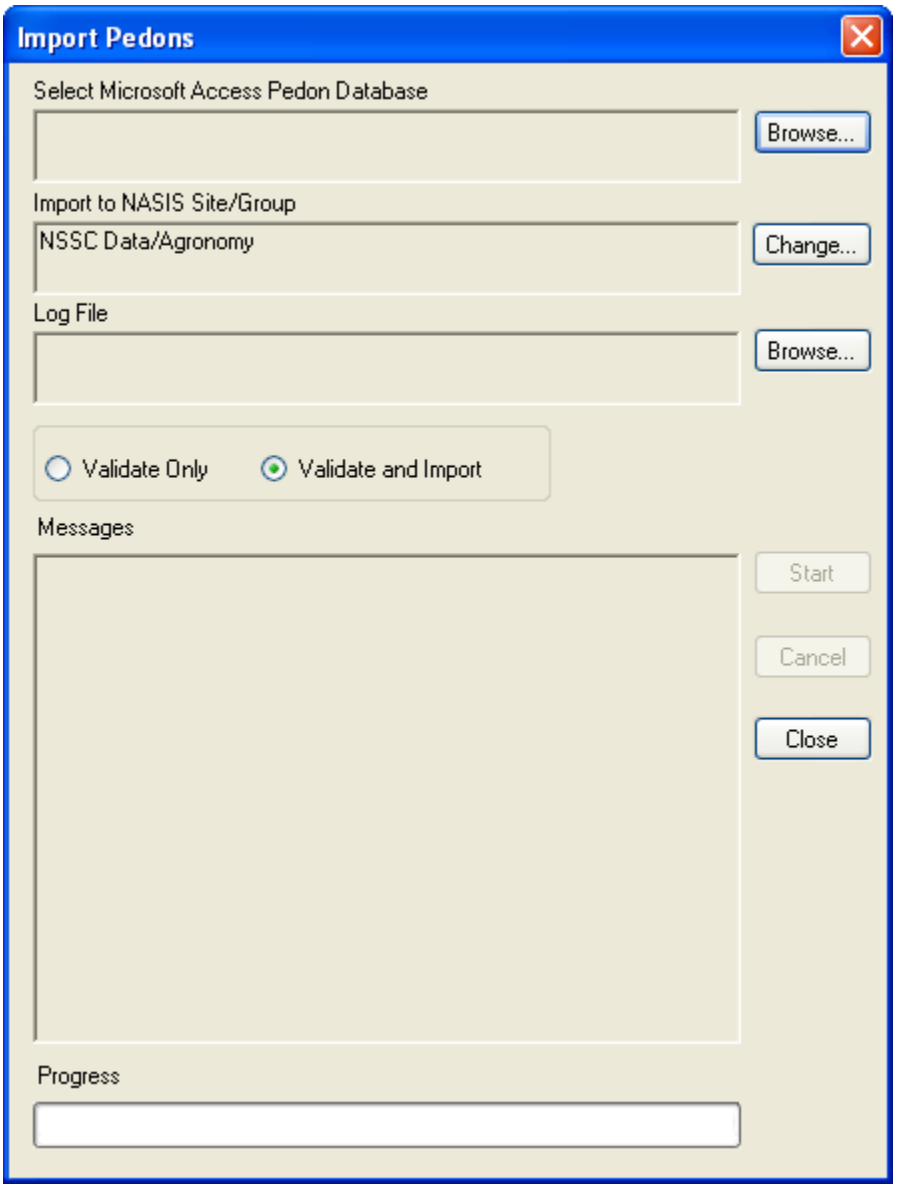
Chapter 9 introduced the database objects and tables associated with collecting and managing point data. The columns can be modified to fit the needs of the user and data can be entered directly into the Site, Pedon, Transect, and Site Association tables in NASIS. However, other methods also exist to capture pedon and related point data that can be imported into NASIS.

Importing Pedons

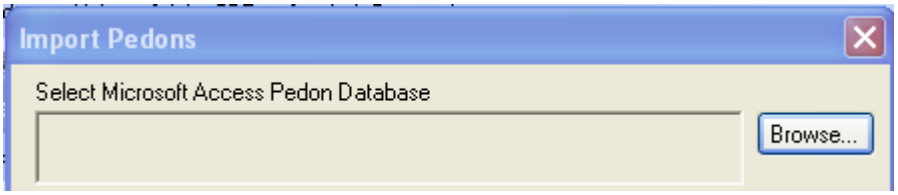
Pedon PC is a viable application for point data entry. To facilitate the capture of all pedon data into the corporate database, an import routine has been built into the NASIS software to import Pedon PC *pedon.mdb* files into the NASIS local database. The Pedon Import routine is initiated from the NASIS Menu or the NASIS Toolbar.



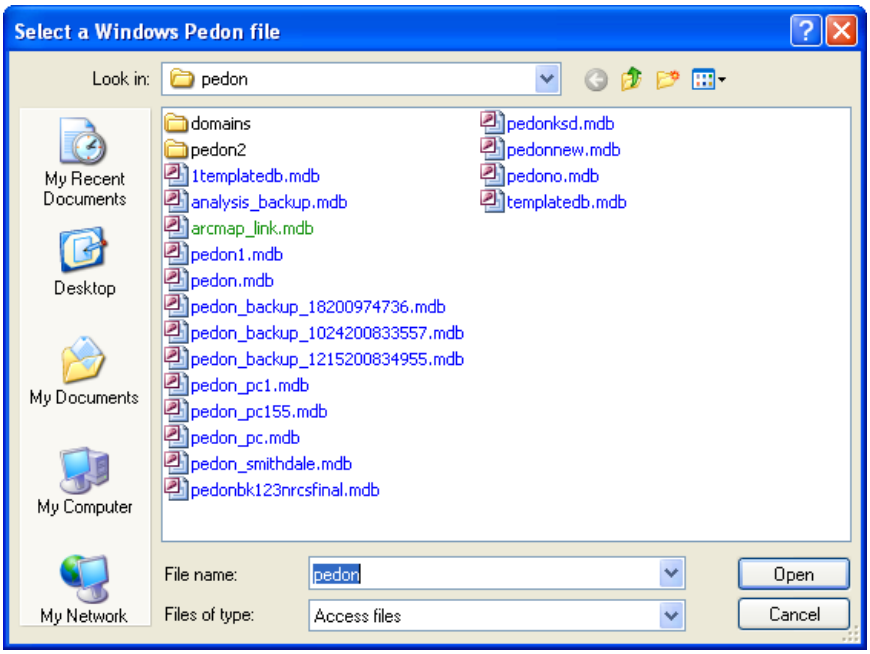
Choosing either option opens the Pedon Import parameter screen. The Pedon Import screen is used to locate the file to be imported and to assign the NASIS site and group for data ownership.



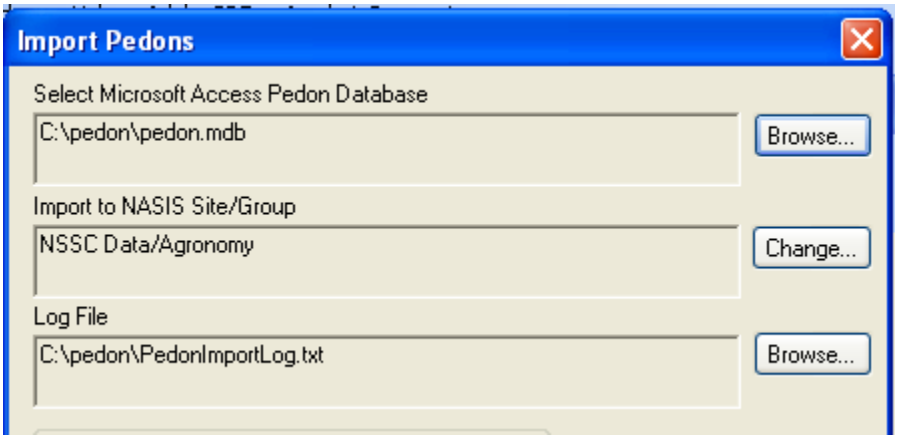
Choosing the “Browse” button opens Windows Explorer to the C:\pedon folder. This folder is the default folder for the Pedon PC program.



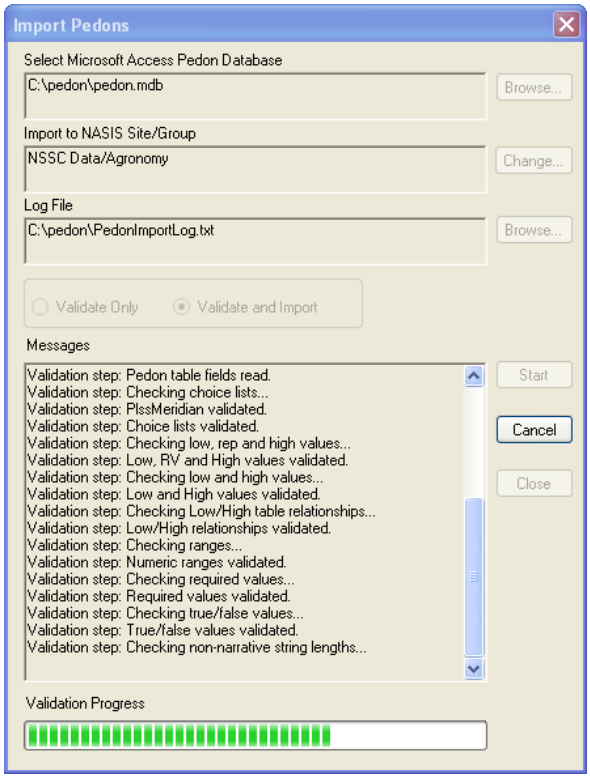
Select the pedon.mdb file to be imported.



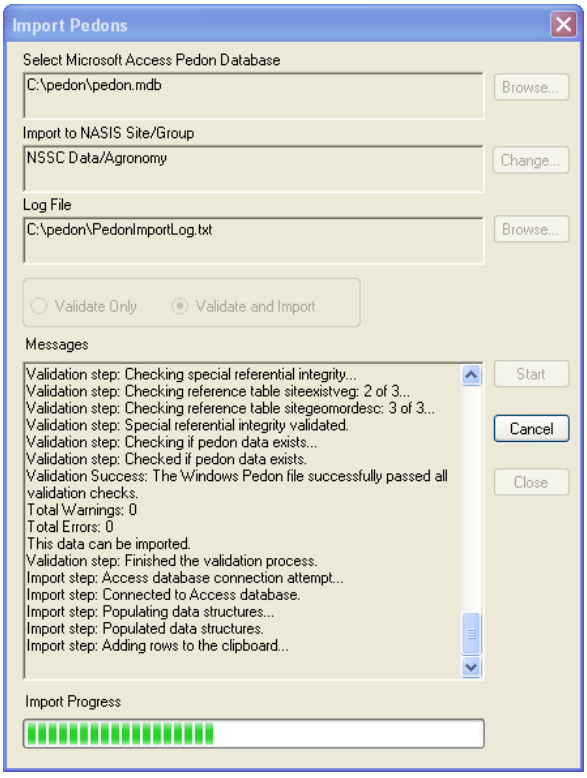
One option is to change the assigned permissions of imported data.
Another option is to change the location of the log file that is generated during the validation and import process.



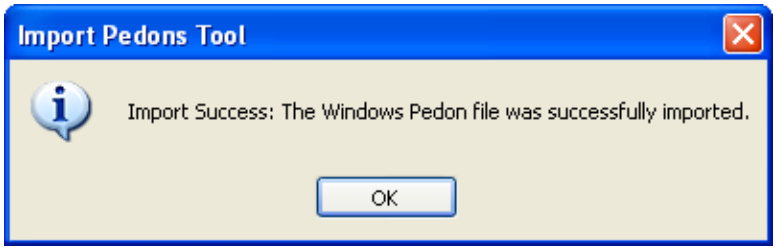
The import process begins with validating the data integrity of the pedon.mdb file.



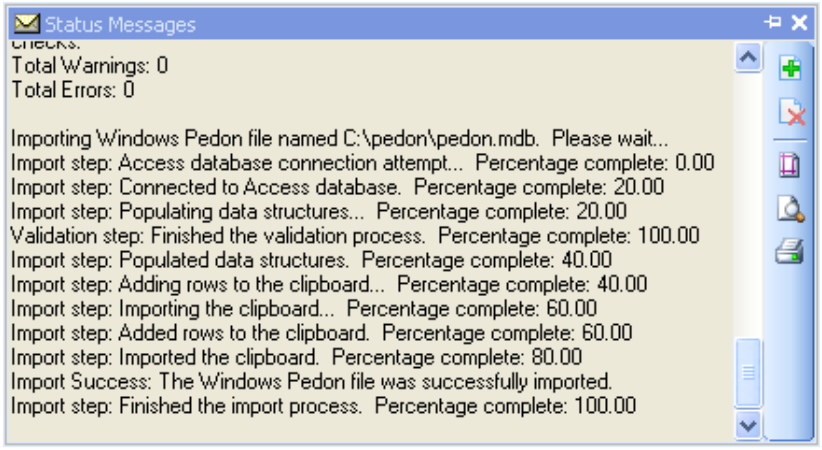
After the validation process is complete, the import routine begins.



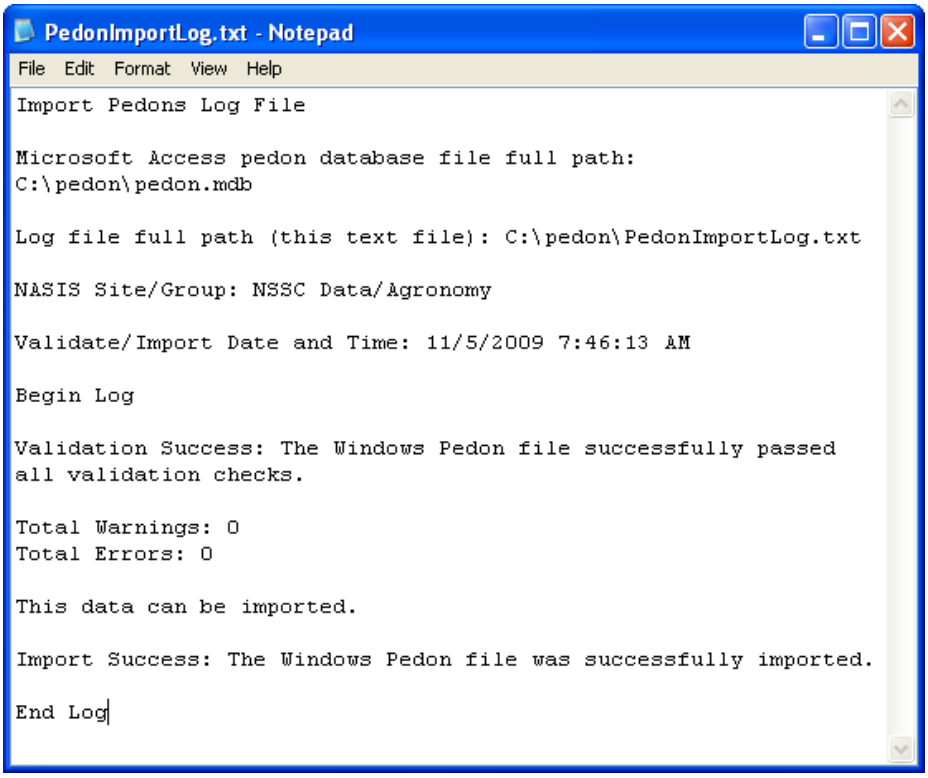
Upon completion, a dialog box appears if the import was successful.



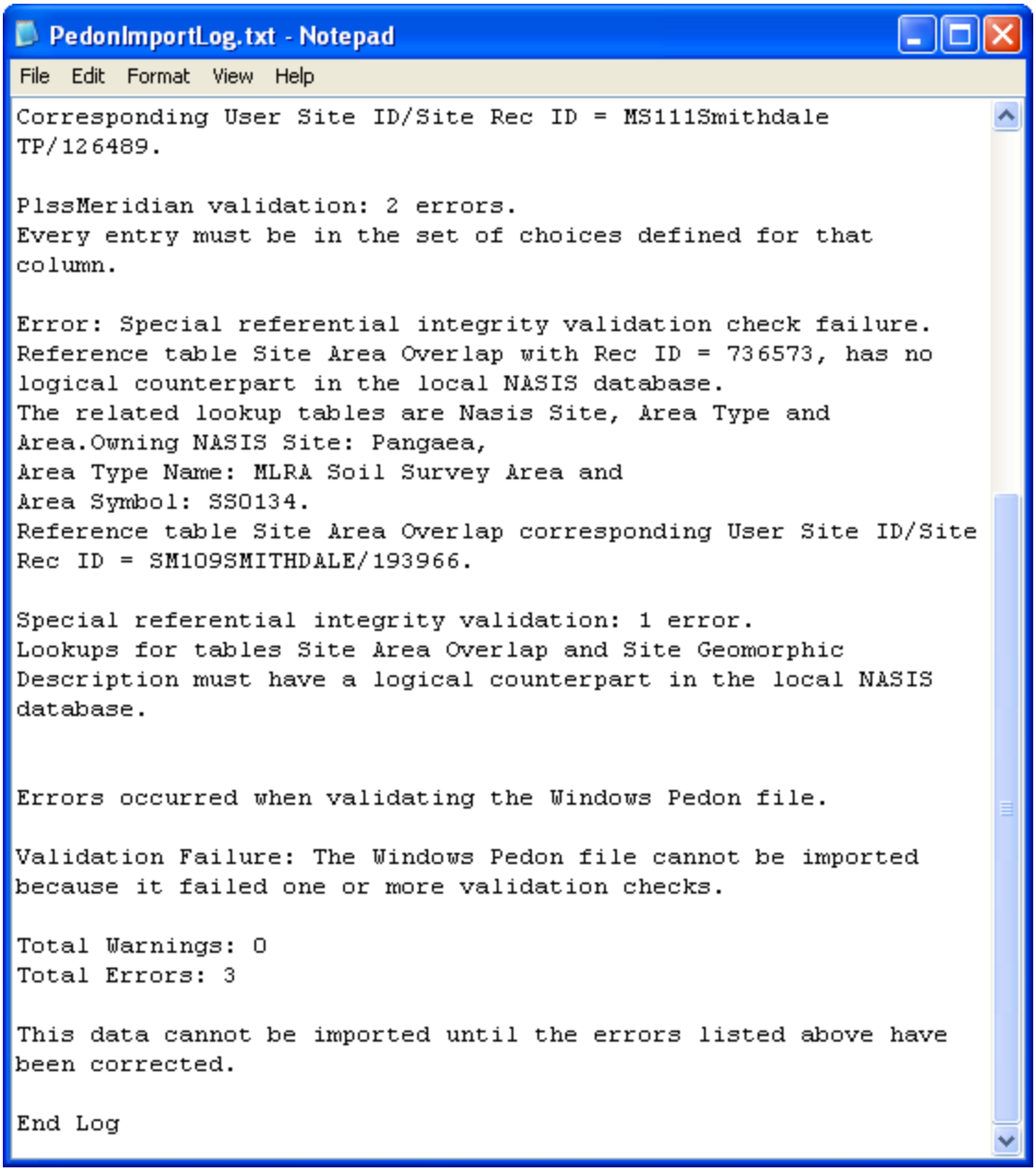
The log file is created in the Status Messages Panel in NASIS.



The log file is stored as a text file.

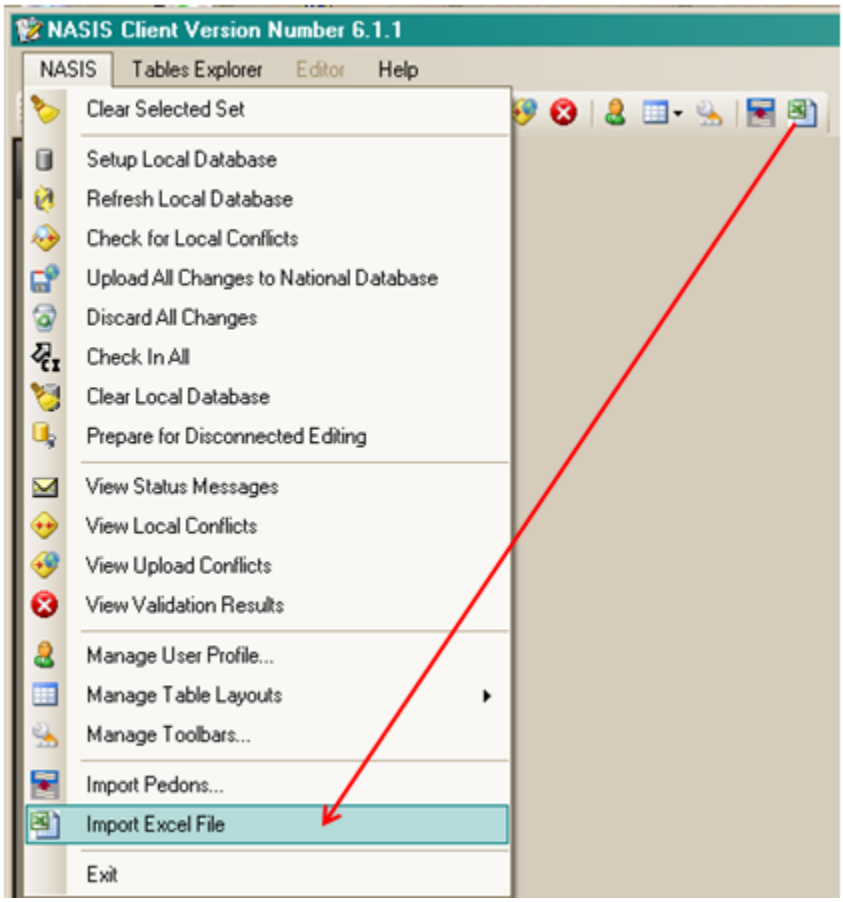


If the import fails, the log file appears onscreen and provides details of the failure. The data must be corrected prior to importing.

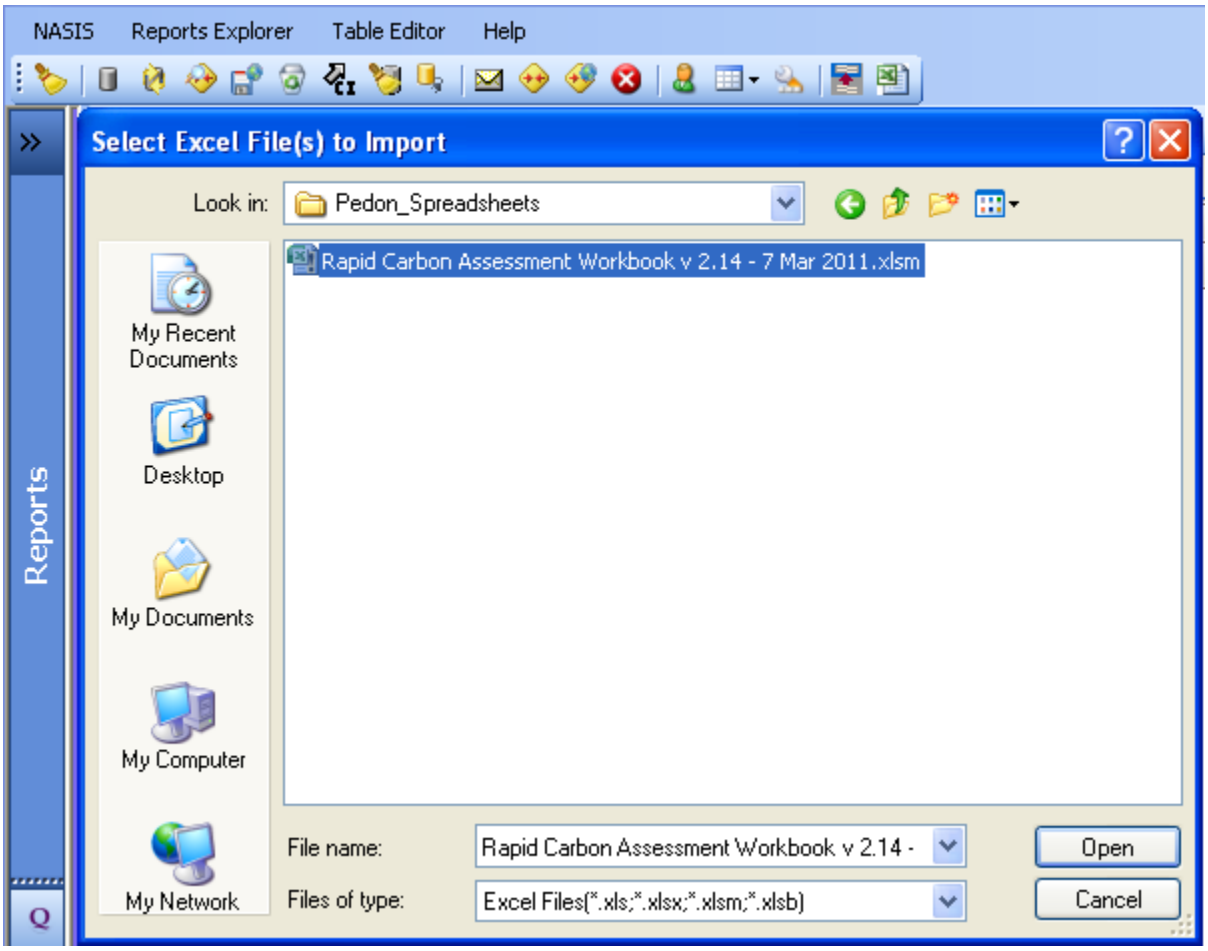


Importing Excel Workbooks

In addition to importing pedon data from Pedon PC, it is also possible to import additional soil data from Excel workbooks used to record data unavailable in Pedon PC and for special projects, such as the Rapid Carbon Assessment (RaCA) project and the Dynamic Soil Properties (DSP) project. The data structure in NASIS 6.1 has been modified with additional tables and data elements used in capturing data for RaCA and DSP. To facilitate the capture of RaCA and DSP data into the corporate database, an import routine has been built into the NASIS software to import Excel workbooks and worksheets. The RaCA and DSP field and SSO Soils Laboratory data are captured using the Microsoft® Excel spreadsheet software. Both projects use an Excel workbook containing several worksheets designed specifically for each respective project. The Excel Worksheet Import routine is implemented from the NASIS Menu or the NASIS Toolbar.



The menu or toolbar opens a dialog box that allows the user to browse for the Excel file(s) that he or she wishes to import. The user can browse to SharePoint sites or other network locations where files may be stored. Multiple workbook files can be imported at the same time.



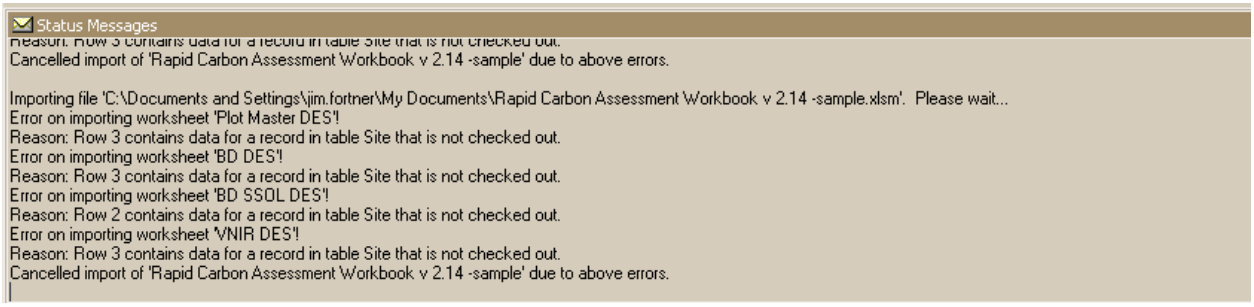
The following rules are associated with the spreadsheet import process:

- Only specific, approved, Excel workbook files can be imported. The spreadsheed has to first be put into the proper workbook format.
- A workbook mapping file (XML) is created by NSSC for each workbook version. These files are stored in the NASIS database.
- The RaCA and DSP workbooks APPEND worksheet data to existing site and pedon records. Therefore, the corresponding site, site observation, and pedon records MUST already be in the NASIS local database. The site and pedon description data can either be entered directly into NASIS or imported from Pedon PC.
- The user importing the workbook data MUST be a member of the NASIS group that owns the site and pedon records. Site and pedon records in NASIS MUST be checked out for the workbook data to import.
- The user site ID, user pedon ID, site observation date, and horizon designation MUST agree between NASIS and the workbook.
- The ecological site ID MUST be in the Ecological Site Id lookup table in NASIS or the import process will fail.
- The ecological site name does not need to be populated in the workbook.
- For local plant issue—
    - Plant symbols and names on the spreadsheets MUST already be in the Local Plants table in NASIS.
    - Symbols and names MUST match EXACTLY!

- If a national plant symbol is entered, a local plant name MUST be entered or the import will fail.
- Any mismatch of user site ID, user pedon ID, site observation date, horizon designation, ecological site ID, plant symbol, or local plant common name causes the import process to fail.
- A workbook file can be imported more than once to add more data, such as VNIR filename, dry bulk density sample weights, etc.
- Data values that have already been imported once should NOT be edited on the spreadsheet and reimported because this adds a new data record in NASIS. The original value should be modified. Any editing of existing data should be done in NASIS.

After selecting one or more workbooks to be imported, a progress dialog box appears.

Messages are displayed in the Status Messages window, indicating if problems are encountered with the import or if the process was completed successfully.
The message “Import failed – site and pedon records not checked out” is an example.



Corrections to the appropriate workbook must be made to allow the data to be successfully imported.

A message indicates that the import was completed successfully.