

# NPP mapping from BECS Direct Entry

Guidance for corporates,  
government and third parties

Version 2.0



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## Document control

### Amendment history

Version	Date	Comments
1.0	22 November 2019	Published
2.0	20 May 2025	Update to design, NPP logo and content

## NPP Mapping from BECS Direct Entry

### Background

Currently, the BECS Direct Entry file (DE/ABA file) is the most common format for corporate and government customers to provide payment instructions to their financial institution for BECS transactions (direct credits or direct debits). The BECS Direct Entry file format is a fixed length format with limitations on the data that can be captured and passed between the parties involved in the payment.

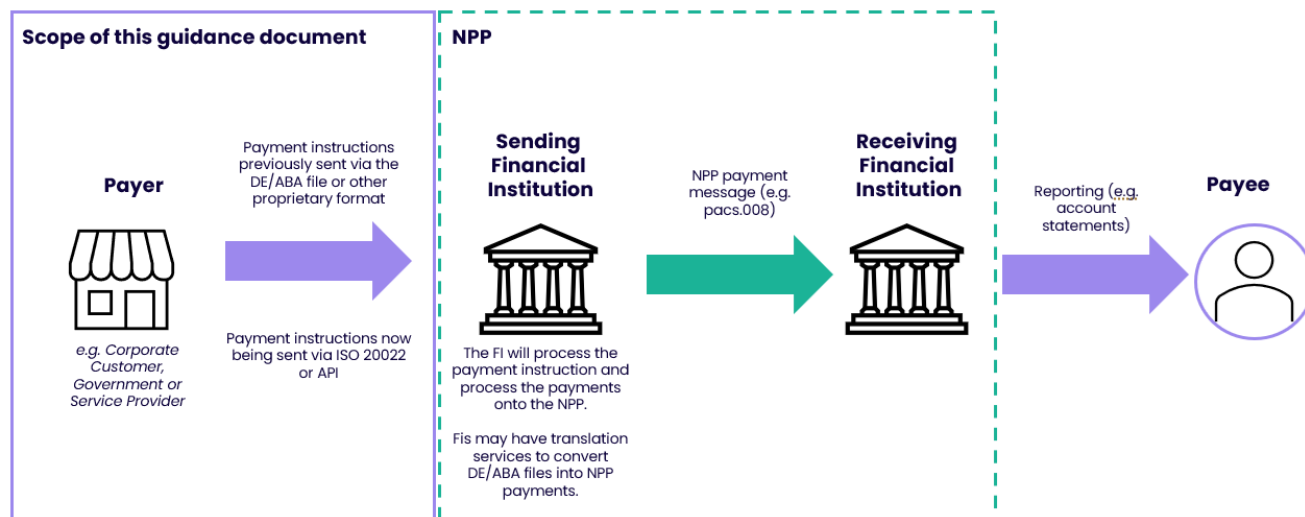
The NPP uses ISO 20022, which is a global standard for financial messages communications. It provides a consistent language and structure for the exchange of payments as a set of comprehensive xml formatted messages. It also supports the ability to carry more data than the 18 characters available in BECS direct entry payments, with more than 1,400 data field available.

A direct entry file can consist of many transactions which are then processed as bulk payments through BECS. On the NPP, transactions are processed line-by-line payments in real-time. Payment instructions for NPP payments can be submitted using an ISO 20022 payment initiation message (pain.001 - Customer Credit Transfer Initiation message) or via an API version of this message.

### Comparison of BECS (direct entry) and NPP:

	ABA files used for BECS transactions	ISO 20022 used for NPP transactions
<b>Structure</b>	<ul style="list-style-type: none"> <li>Tailored to the BECS payments</li> <li>Fixed file format</li> </ul>	<ul style="list-style-type: none"> <li>A universal financial industry messaging standard</li> <li>Flexibility structure with the optionality to populate certain fields</li> </ul>
<b>Data</b>	<ul style="list-style-type: none"> <li>Allows for one 18 character/description field</li> </ul>	<ul style="list-style-type: none"> <li>Allows for 280 characters description and an additional 35 characters reference field</li> <li>Additional fields for other information</li> </ul>
<b>Error handling</b>	<ul style="list-style-type: none"> <li>Depends largely on the practices of the institutions processing them</li> </ul>	<ul style="list-style-type: none"> <li>Includes capabilities for comprehensive error handling mechanisms</li> </ul>
<b>Timing</b>	<ul style="list-style-type: none"> <li>Payments typically takes 1 – 2 days to be processed</li> </ul>	<ul style="list-style-type: none"> <li>Payments are processed in real time</li> </ul>
<b>File submission</b>	<ul style="list-style-type: none"> <li>Bulk file format</li> </ul>	<ul style="list-style-type: none"> <li>Single (e.g. API) and bulk (e.g. ISO pain.001 message)</li> </ul>

Some financial institutions may also provide translation services, which take the existing DE or ABA files and translate each record into an NPP payment for processing. Corporates, governments or third parties should consult with their financial institution to determine if these services are available.



## Guidance from ABA to ISO format

The following guidance covers the mapping of fields between the DE/ABA file to an ISO 20022 pain.001 message.

A financial institution's ability to accept pain.001 messages from their customer is proprietary and at their discretion. Their solution may also include proprietary requirements in addition to this guidance. As per the above Terms and Conditions, nothing in this document should be construed as a representation or warranty by AP+ or any NPP participating financial institution in relation to corporate or government payment services offered by those participating financial institutions.

The following assumptions and conditions should be considered when using this mapping guidance:

- The mapping contained in this guidance document is based on a general Direct Entry file to a pain.001.001.06. This mapping guidance will be updated as newer versions of the pain.001 message are adopted for use;
- A single Direct Entry/ABA file submitted by a corporate or government to its financial institution for processing that may contain 'records' for multiple individual payments. These individual records within the Direct Entry file equates to individual 'records' within the pain.001 messages;
- The processing date in the Direct Entry file header record will represent the date for the payment to be processed and will be carried through to the NPP pain.001 message. The acceptance and processing of the pain.001 and the date and time associated with the NPP payment is dependent on the processing conditions determined by the financial institution;
- Trace records (Bank Accounts) which may be used in the processing of payments under BECS Direct Entry are not included in the mapping. Under NPP, payment returns are made back to the original Payer's account. Financial Institutions may offer proprietary solutions that support the use of trace accounts;
- Mapping of a Direct Entry record to an NPP pacs.008 (FI to FI Customer Credit Transfer). Payment message is not included as part of this guidance as the pacs.008 message is only exchanged between

NPP financial institutions. The mapping outlined in this guidance document does not reflect the minimum data elements required to be populated by a financial institution to create the message;

- Any SLAs associated with processing a payment instruction, in the form of a pain.001, is at the discretion of the processing financial institution.

This guidance is based on data elements required for a NPP single credit transfer message. Any further guidance, including any data elements used specifically by any NPP overlays or additional fields that your financial institution may require, are available from your NPP FI.

### Guidance for mapping a Direct Entry file to an NPP ISO 20022 pain.001 message:

DE File Descriptive Record (0)				pain.001	
Char Pos	Field Size	Field Description	Specification	pain.001.001.06 Element	NPP Guidance
1	1	Record Type 0	Fixed value "0"	N/A	
2-18	17	Reserved	Blank filled	N/A	
19-20	2	Reel Sequence Number	Format: Numeric, zero filled. Commence at 01 E.g. "01"	N/A	
21-23	3	Payer FI's Abbreviated Institution Name.	Format: Text. Upper Case only.	If applicable, may be used to determine the Payer FI's BICFI for /AppHdr/To/FIId/FinInstnId/BICFI.	Payer Financial Institution
24-30	7	Reserved	Blank filled	N/A	
31-56	26	User Preferred Specification	Format: Text, left justified, blank (trailing) filled All blanks not allowed.	/AppHdr/Fr/OrgId/Nm · /CstmrCdtTrfInitn/Grp Hdr/InitgPty/Nm	Payer Name as registered with the Payer FI
57-62	6	User Identification Number	Format: Numeric, right justified, zero filled.	N/A	May be used to determine the linked bank account for use in Detail Record (1).
63-74	12	Description of entries on file	Format: Text, left justified, blank filled. All blanks not allowed E.g. "PAYROLL"	N/A	At Payer FI's discretion, can be used for description.
75-80	6	Date to be processed (i.e. the date transactions are released to all Financial Institutions)	Format: Numeric, zero filled Pattern: DDMMYY. Must be a valid date. E.g. "300415"	/CstmrCdtTrfInitn/PmtInf/ReqdExctnDt	May be an agreed arrangement that this date will represent the scheduled date of payment. Note: Date needs to be converted to YYYY-MM-DD format

81-120	40	Reserved	Blank filled	N/A	
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DE File Detail Record (1)				pain.001	
Char Pos	Field Size	Field Description	Specification	pain.001.001.06 Element	NPP guidance
1	1	Record Type 1	Must be '1'	N/A	
2-8	7	Bank/State/Branch Number	BSB in format xxx-xxx	/CstmrCdtTrfInitn/PmtInf/CdtTrfTxInf/ CdtrAcct/Id/Othr/Issr Set the following to "BBAN": /CstmrCdtTrfInitn/PmtInf/ /CdtTrfTxInf/CdtrAcct/Id/Othr/ /SchmeNm/Cd  /CstmrCdtTrfInitn/PmtInf/DbtrAcct/Id/Othr/Issr Set the following to "BBAN": /CstmrCdtTrfInitn/PmtInf/DbtrAcct/Id/Othr/SchmeNm/Cd	Payee's BSB Note: Remove Hyphen          Payer's BSB Note: Remove Hyphen
9-17	9	Account number to be credited /debited	Format: Numeric, alpha (26 letters of the alphabet), hyphens and spaces, right justified, blank filled.	Concatenate Payee's BSB (excluding the " " character) and Account Number into: /CstmrCdtTrfInitn/PmtInf/ /CdtTrfTxInf/CdtrAcct/Id/Othr/Id  Concatenate Payer's BSB (excluding the " " character) and Account Number into: /CstmrCdtTrfInitn/PmtInf/DbtrAcct/Id/Othr/Id	Payee's Account Number          Payer's Account Number
18	1	Indicator	"N" – for new or varied Bank/State/Branch number or name details, otherwise blank filled. Withholding Tax Indicators: "W" – dividend paid to a resident of a country where a double tax agreement is in force. "X" – dividend paid to a resident of any other	N/A	

DE File Detail Record (1)				pain.001	
Char Pos	Field Size	Field Description	Specification	pain.001.001.06 Element	NPP guidance
			country. "Y" – interest paid to all non-residents. The amount of withholding tax is to appear in character positions 113-120. Note: Where withholding tax has been deducted the appropriate Indicator as shown above is to be used and will override the normal indicator.		
19-20	2	Transaction Code	As defined by Direct Entry	<i>/CstmrCdtTrfIntr/PmtInf/PmtTpInf/CtgyPurp/Cd</i>	Where the transaction code 53 is identified it is recommended that the Code SALA is used <sup>3</sup> .  Other specific payment codes may be used where payments represent the following: <ul style="list-style-type: none"> <li>• Superannuation – PENS<sup>4</sup></li> <li>• Tax - TAXS<sup>5</sup></li> </ul>
21-30	10	Amount	Only numeric valid. Must be greater than zero. Shown in cents (in DE file) without punctuations. Right justified, zero filled. Unsigned.	InstdAmt is represented in dollars therefore requires the decimal place to be included: <i>/CstmrCdtTrfIntr/PmtInf/CdtTrfTxInf/Amt/InstAmt</i> Set the Currency Code ("Ccy") attribute for InstAmt to "AUD"	Payment Amount
31-62	32	Title of Account to be credited/debited	Format: Surname followed by given names each separated by a space. E.g. CITIZEN John James	<i>/CstmrCdtTrfIntr/PmtInf/CdtTrfTxInf/CdtrNm</i>  <i>/CstmrCdtTrfIntr/PmtInf/DbtrAcctNm</i>	Payee Name  Payer Account Name

<sup>3</sup> For details on how to populate [salary and payroll payments](#).

<sup>4</sup> For details on how to populate [super payments](#).

<sup>5</sup> For details on how to populate [tax payments](#).

DE File Detail Record (1)				pain.001	
Char Pos	Field Size	Field Description	Specification	pain.001.001.06 Element	NPP guidance
63-80	18	Lodgement Reference	Reference as submitted by the User, indicating details of the origin of the entry, e.g. Payroll Number, Invoice, Unique Customer Identifier or PRN.	/CstmrCdtTrfInitn/PmtInf/CdtTrfTxInf/PmtId/EndToEndId (Optional)  CstmrCdtTrfInitn/PmtInf/CdtTrfTxInf/RmtInf/Strd/CdtrRefInf/Ref (Optional)  /CstmrCdtTrfInitn/PmtInf/CdtTrfTxInf/RmtInf/Ustrd (Optional)	End-to-End ID  Where applicable, the Lodgement Reference for salary and payroll payment, payroll or tax payments, creditor reference may be used.  Where applicable the Lodgement Reference may be optionally replicated in the Unstructured Remittance information.
81-87	7	Trace Record (Bank State Branch)	BSB in format xxx-xxx Used to enable retracing of the entry to its source if necessary.	N/A	
88-96	9	Trace Record (Account Number)	Right justified, blank filled.	N/A	Payment returns for NPP payments are sent back to the original Payer's account. Financial institutions may offer solutions to support trace accounts.
97-112	16	Name of Remitter	Name of originator of the entry. This may vary from Name of the User. Must not contain all blanks. Left justified, blank filled.	/CstmrCdtTrfInitn/PmtInf/Dbtr/Nm	Payer Name
113-120	8	Amount of Withholding Tax	Numeric only valid. Show in cents without punctuation. Right justified, zero filled. Unsigned.	N/A	



DE File Total Record (7)				pain.001	
Char Pos	Field Size	Field Description	Specification	pain.001.001.06 Element	NPP Comment
1	1	Record Type 1	Must be '1'	N/A	
2-8	7	BSB Format Filler	Must be '999-999'	N/A	
9-20	12	Blank	Must be blank filled.	N/A	
21-30	10	File (User) Net Total Amount	Numeric only valid. Must equal the difference between File Credit & File Debit Total Amounts. Show in cents without punctuation. Right justified, zero filled. Unsigned.	N/A	
31-40	10	File (User) Credit Total Amount	Numeric only valid. Must equal the accumulated total of credit Detail Record amounts. Show in cents without punctuation. Right justified, zero filled. Unsigned.	/CstmrCdtTrfInitn/GrpHdr/CtrlSum	Note: where pain.001 represents more than one transaction. CtrlSum is represented in dollars therefore requires the decimal place to be included.
41-50	10	File (User) Debit Total Amount	Numeric only valid. Must equal the accumulated total of debit Detail Record amounts. Show in cents without punctuation. Right justified, zero filled. Unsigned.	N/A	
51-74	24	Blank	Must be blank filled.	N/A	
75-80	6	File (user) count of Records Type 1	Numeric only valid. Must equal accumulated number of Record Type 1 items on the file. Right justified, zero filled.	/CstmrCdtTrfInitn/GrpHdr/NbOfTx	Note: where pain.001 represents more than one transaction. NbOfTx is represented in dollars therefore requires the decimal place to be included.
81-120	40	Blank	Must be blank filled.	N/A	