USER GUIDE for

Marketing

Advertising Mail• Sustainable® Advertising Mail

Publishing

Publishing Mail

General Correspondence

Business Mail 1st Class • Business Mail

MACHINE-READABLE

Machine-readable letters and large letters

31st March 2014

MACHINE-READABLE

Machine-readable letters and large letters

Contents

1. Introduction

You can often reduce the cost of your letter and large letter format mailings by making them machine-readable. Always check for actual prices in our price guide for Business Contract Services.

Letter formats
You have the option to prepare your mail:
- to an OCR readable specification; or
- to apply a Barcode

Large letter formats
You have the option to prepare your mail to:
- an OCR readable specification

Please note:
The OCR addressing requirements within this user guide are recommended for our Business Mail 1st Class with Machine-readable Unsorted Advanced option and Business Mail with Machine-readable Unsorted Advanced option, but are mandatory for all other OCR letter products.

This section of the user guide has the design and technical requirements to enable you meet either the OCR or the Barcode specifications. For full product and presentation requirements please refer to the specific product sections of the user guide for your chosen product.

Using this section

For your ease of use this section of the user guide sets out:
- generic requirements for address quality, address standards, font and print quality etc
- specific advice for:
  - Business Mail 1st Class and Business Mail with machine-readable Advanced options
  - OCR letters
  - Barcode letters
  - OCR large letters

For more information on machine-readable letter and large letter requirements please contact your account team, if applicable, or call Royal Mail Customer Services on 08457 950 950.

2. Products which can be sent as machine-readable letters

Category	Product Name	Options
Marketing Products	Advertising Mail	➢ Machine-readable ➢ Machine-readable Plus ➢ Low Sort ➢
	Sustainable Advertising Mail	➢ Low Sort (Entry Level) ➢ Low Sort (Intermediate Level)
General Correspondence	Business Mail 1st Class	➢ Machine-readable ➢ Machine-readable Plus ➢ Machine-readable Advanced ➢ Low Sort
	Business Mail	➢ Machine-readable ➢ Machine-readable Plus ➢ Machine-readable Advanced ➢ Low Sort

3. Products which can be sent as machine-readable large letters

Category	Product Name	Options
Marketing Products	Advertising Mail	➢ Machine-readable ➢ Machine-readable Plus ➢ Low Sort
	Sustainable Advertising Mail	➢ Low Sort (Entry Level) ➢ Low Sort (Intermediate Level)
Publishing Products	Publishing Mail	➢ Low Sort
General Correspondence	Business Mail 1st Class	➢ Machine-readable ➢ Machine-readable Plus ➢ Low Sort
	Business Mail	➢ Machine-readable ➢ Machine-readable Plus ➢ Low Sort

Please note:
For Low Sort item choices, you can send your machine-readable large letters using the segregated bundles option. Please refer to the 'Containerisation' section of the user guide for full details.

4. Accreditation (Quality Assurance Process)

To qualify for a machine-readable letter product, for both sorted and no sortation options, and for the machine-readable large letter products with no sortation options, to be added to your account you must be accredited. To receive accreditation you must have passed the required elements of our QA process, designed to monitor performance on:

- mail piece design
- machine-readability of OCR font or Barcode
- address management (OCR and Barcode)
- DPS allocation and accuracy (Barcode only)

We have developed the QA process to check the above elements against benchmark standards. If you meet these standards you can access discounts for machine-readability and benefit from the discounts available. Only customers who have successfully achieved accreditation through this process are issued with a machine-readable letter contract.

Machine-readable letters

There are 2 parts to the accreditation process:

Address management accreditation (Low Sort products only)

You can achieve address management accreditation in one of 2 ways:

1. if you use a Royal Mail recognised address management software supplier or value added reseller to process your address lists on a regular basis, you can enter their details on QA 'Form A' to receive automatic accreditation.
2. if applying on your own behalf, a '1 in n' sample* of 5,000 addresses is supplied to us electronically together with QA Form A. The sample must be supplied in a certain format, details of which are provided to you with Form A. This involves dividing the number of records in the address database by 5,000 (the sample size required) e.g. a database of 100,000 would be divided by 5,000 (sample size) resulting in a sampling frequency of 20 (100,000 ÷ 5,000 = 20). Therefore record numbers 1, 21, 41, 61 and so on would be extracted for the sample.

Mail piece design accreditation

This element is designed to ensure that physical mail piece parameters meet the specification so that we can process them by machine, and that the OCR address or Barcode is in a form which can be quickly and accurately read by our machines. It is available as both interim assessment and full accreditation.

You can achieve mail piece design accreditation in one of two ways:

1. you can supply us with 210 representative samples. For Barcode products they should all have the full Barcode (including Start and Stop bars, DPS and Checksum) in situ on the mail piece and include any inserts, booklets etc. You should use live addresses (i.e. the same as you would use on your mailing) and include examples of 5, 6 and 7 character postcodes. Alternativelyfor Low Sort services we can supply you with a list of 210 addresses for you to use for this purpose.

When you apply for mail piece design accreditation, your mail pieces will automatically be tested for Barcode or OCR address printing quality.

This stage is mandatory for customers wishing to use the following product options for Advertising Mail, Business Mail 1st Class and Business Mail:

- Machine-readable
- Machine-readable Plus

2. if you are choosing to post letters using a Low Sort option and use a Royal Mail recognised approved printer, mailing house or envelope manufacturer, you can enter their details on QA Form B to receive automatic accreditation. This option is not available for customers posting machine-readable no sortation products
   Full accreditation applications together with the sample items for testing must be accompanied by a completed copy of QA Form B.

Machine-readable large letters with no sortation

There is one part to the accreditation process

This process is not applicable to or necessary for customers who have accounts for the following product options:

- Advertising Mail or Business Mail with Machine-readable, OCR option
- Advertising Mail or Business Mail with Machine-readable Plus, OCR option

and those who are using a product option with no sortation.

Address management

You can achieve address management accreditation in one of two ways:

1. if you use a Royal Mail recognised address management software supplier or value added reseller to process your address lists on a regular basis, you can enter their details on QA Form A to receive automatic accreditation.

2. if applying on your own behalf, a '1 in n' sample' of 5,000 addresses is supplied to us electronically together with QA Form A. The sample must be supplied in a certain format, details of which are provided to you with Form A. This involves dividing the number of records in the address database by 5,000 (the sample size required) e.g. a database of 100,000 would be divided by 5,000 (sample size) resulting in a sampling frequency of 20 (100,000 ÷ 5,000 = 20). Therefore record numbers 1, 21, 41, 61 and so on would be extracted for the sample.

Machine-readable Low Sort large letters

You are not required to undergo accreditation because we will check the standard of your addressing upon receipt of your posting. If you wish to have a 'peace of mind' check done on the accuracy of your data you are welcome to follow the requirements as above and we will be pleased to provide you with feedback and recommendations.

Ongoing accreditation

Once you are accredited you must continue to maintain these standards in order to be eligible for machine-readable letter discounts on an ongoing basis. We will sample all your mailings when we receive them to ensure all contractual requirements are being met. For our Sustainable

Advertising Mail with Intermediate Level Low Sort option you will need to supply us with evidence that you have adhered to requirements.

5. Address Quality

The minimum entry level for postcode accuracy for Low Sort options and machine-readable no sortation options are as follows:

Minimum entry levels	Required for the following products and product options
At least 90% of items must be fully and accurately addressed and postcoded. The postcode must be consistent with the address compared to Royal Mail's PAF®. This is a standard requirement for:	➢ Advertising Mail ➢ Publishing Mail ➢ Business Mail 1st Class ➢ Business Mail
A minimum of 95% address and postcode accuracy must be met for our:	➢ Sustainable Advertising Mail with Intermediate Level Low Sort option ➢ Advertising Mail with Machine-readable Plus option ➢ Business Mail 1st Class with Machine-readable Plus option ➢ Business Mail with Machine-readable Plus option
For Barcode postings, at least 90% of the total items posted must be allocated an accurate DPS, which must be incorporated within the barcode. The remainder of the items with a Barcode must be allocated a default DPS	
A minimum of 95% DPS accuracy for our:	➢ Sustainable Advertising Mail with Intermediate Level Low Sort option ➢ Advertising Mail with Machine-readable Plus option ➢ Business Mail 1st Class with Machine-readable Plus option ➢ Business Mail with Machine-readable Plus option

6. Addressing standards

Addressing inland mail

You must include:

- 1 premise element
- 1 thoroughfare element
- 1 locality element
- the postcode as a minimum

Other elements may be included. If there is no thoroughfare element contained in the PAF® this need not be included.

Premise elements	**(optional)**	***mailer defined information** * **e.g. ZW4367**
		D Faydherbe Operations Director
	Organisation	**Royal Mail**
	Sub-building	**South Wing**
	Building name	**Bell House**
	Building number	**B 25 Bell Complex**
Thoroughfare elements	**Dependent thoroughfare**	**The Mews**
	Thoroughfare	**300 Western Road**
Locality elements	**Double dependent locality**	**Otterley**
	Dependent locality	**Hedge End**
	Post Town	**OXFORD**
postcode	**postcode**	**OX4 5ZZ**

*see Address structure and layout for details on mailer defined information

Address layout

- each address element must be on a separate line of the address with the postcode included as the last line of the address The only exception to this is outlined in section three, Locality elements
- the county, although not required, may be included as the penultimate line of the address
- country words such as “England”, “Great Britain” or “United Kingdom” must not be used for addresses to and within England, Wales, Scotland, Northern Ireland or the outlying British islands. This information is not included in PAF®
- each line of the Address Block must be left justified, including the mailer defined information if included

Premise elements

You must include at least one of these 4 elements, so that a single delivery point is defined. You don’t have to include all the premise elements, even if they are included in PAF® but building numbers must be applied on the same line as the Dependent thoroughfare or Thoroughfare information.

(optional)	***mailer defined information*** **e.g. ZW4367**
	D Faydherbe **Operations Director**
Organisation	**Royal Mail**
Sub-building	**South Wing**
Building name	**Bell House**
Building number	**B 25 Bell Complex**

Thoroughfare elements

PAF® will give one of 3 possible combinations but please note that:

1. the Dependent Thoroughfare Descriptor (Road, Street, Lane, etc.) must be applied on the same line as the Dependent Thoroughfare information, and
2. the Thoroughfare Descriptor (Road, Street, Lane, etc.) must be applied on same line as the Thoroughfare information:
   - no thoroughfare: no need to include anything in this part of the address
   - a thoroughfare but not a dependent thoroughfare: include the thoroughfare
   - both a dependent thoroughfare and a thoroughfare: include the former. If space allows you can also include the thoroughfare, though it's not compulsory
3. building numbers must be applied on the same line as the Dependant Thoroughfare or Thoroughfare information

Dependent thoroughfare	**The Mews**
Thoroughfare	**300 Western Road**

Locality elements

You must include at least one locality element. You don't have to include them all, even if they are included in PAF®. The Post Town should have the first character(s) in capitals for example: Coventry, Milton Keynes, Ross On Wye, on a single line.

Where the address complies with the PAF®, and there is no other text/information on the face of the mail item that could be construed as an address, then any of the following exceptions apply:

- the Post Town maybe followed by a county on the penultimate line of the address, provided that the space between Post Town and county is no more than two character spaces and that the postcode is on the last line of the address
- the county and the postcode may be on the same line provided there are one or two character spaces between the two elements
- the Post Town and postcode can be on the same line, provided that the Post Town precedes the postcode and the space between the two elements is one or two character spaces

The requirement for "no other text/information on the face of the mail item that could be construed as an address" includes any areas of an insert which may appear in the window of the mail item arising from insert movement.

The entire Delivery Address should be printed in title case with the exception of:

- the Post Town must be printed in title case or upper case. e.g. Milton Keynes, ROSS-ON-WYE
- the postcode must always be printed in upper case

Double dependent locality	**Otterley**
Dependent locality	**Hedge End**
Post Town	**OXFORD**

Postcode

- the address must contain the full and accurate postcode. The postcode must be able to generate an address from PAF® which can be matched to the minimum requirements above (at least one premise element, one thoroughfare element and one locality element)the postcode must always appear in capital letters on the last line of the address
- there must be one or two character spaces between the two parts of the postcode. Typically, the first part (i.e. OX4) is the outward code and this identifies a post town or a district within a post town, the second (i.e. 5ZZ) is the inward code which represents the street information

Post Town	**OXFORD**
postcode	**OX4 5ZZ**

7. Addressing structure and layout

An address may consist of 3 elements, all of which are classed as the Delivery Address Block:

1. mailer defined information– reference information printed as part of the Address Block
2. recipient details
3. geographical address and postcode

There must only be one Delivery Address Block on the item and it must be on the same side as the payment indicia used.

8. Required fonts

There are a variety of fonts you can use, though we recommend you use one from the list below wherever possible. We also recommend you regularly check the quality of your print output for clarity. If you have any doubts on either of these requirements, please contact your account manager.

Please ensure that you do not use any serif, handwritten, *italic* or **bold** fonts and the size of the font must be the same size, or in the case of large letter postings, larger than that used in any Return Address information. Non-proportionally spaced fonts are preferred as is addressing in title case (with the Postcode always in capitals).

Fonts or Typefaces with the following characteristics are suitable:

- **size** – Height: 2mm min; 7mm max. Width: 7mm max
- **dimension** – minimum ratio of lower case height (b) to upper case height (a) of between 2:3 and 3:4. A ratio of width (c) to height (a) of approximately 2:3

- **consistency** – each line of the address should be in the same typeface and size
- **quality** – characters must be complete, clear, uniform and of high resolution, with individual stroke thickness of between 8% and 16% of the height of the character
- **contrast** – there should be a contrast between the characters and the background on which they are printed of at least 50% (55% if it is to be read through a window)
- positive contrast or inverse printing (address block lighter than the background) is not permitted
- **character spacing** – there should be a fixed pitch of between 10 and 12 characters per inch (or between 10 and 12 point size), with clear vertical gaps of at least 0.25mm between the extremities of adjacent characters
- if you are using **proportionally spaced text,** please ensure you keep spacing of at least +0.75, as this significantly improves the rate at which addresses can be read
- **line spacing** – allow uniform spacing between all lines of the address, of at least 1mm - 4mm. There should be no blank lines

Please note:
OCR cannot recognise computer zero (Ø). Script type or italic typefaces also cannot be read.

Preferred Fonts

Non-Proportionally Spaced Preferred Fonts (7) Sixe 10-12pt	Acceptable Proportionally Spaced Fonts (22) Size 10- 12pt	
Courier Courier New Letter Gothic Lucida Console Lucida Sans Typewriter OCR B Word Gothic	Arial Avant Garde Calibri Estrangelo Edessa Eurostile Frankfurt Gothic Franklin Gothic (Book) Gautami Geneva Gill Sans Helvetica	Latha Lucida Sans Mangal News Gothic MT Optima Ravi Shruti Trebuchet MS Tunga Univers Verdana

9. Print Quality

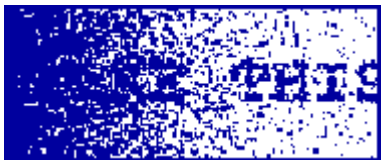
- **Mandatory for OCR letter and large letter postings**
- **Recommended for Barcode**

For polymer and polywrap envelopes, the address may be printed on the polymer or may show through the polymer on an insert. Any overprinted text must adhere to the film and must not break up or wear during processing.

The following are typical problems, which can prevent your mail from being processed by an OCR machine:

- characters with incorrect proportions

- quality of characters – which are poorly printed or defined, either because they have been printed by low quality printers or low resolution dot matrix printers, or because the printer needs maintenance (worn ribbon, low on toner/ink etc)



- characters with poor outlines – fuzzy or blurred, or strokes which are incomplete, broken or smeared, for any of the above reasons.

- close character spacing – characters which touch adjacent characters, whether on the same line or those from above or below

- proportionally or unevenly spaced text – characters or words that have too much space between them. The spacing between words must be less than 5mm

- typeface styles – italic, inclined graphic, pseudo-script or handwriting imitations. Typefaces with excessive serifs, which touch or overlap adjacent characters or serifs,
generally, sans-serif fonts are preferable to serif fonts

- **print contrast** – printing white type on a black background or similar, or combinations of colours such as black print on a strong red background

  when printing on polymer, the Delivery Address Block should not be distorted or broken text as shown below. The characters must not be blurred, smudged, deformed or incomplete. If using dot matrix printing, particularly on polymer, there must be no gaps between the dots. The print / dot matrix must meet the required contrast ratio

Print Quality for large letter postings

- the preferred colour is black. If this cannot be achieved then adequate print contrast must be achieved at all times
- it is mandatory for black to be used when printed directly onto the polywrap or polymer envelopes, when the address is printed on an insert in a polywrapped item or when the address is printed on the polywrap outer
- negative contrast is not allowed
- the characters must not be blurred, smudged, deformed or incomplete splashing or ink spatter around characters is allowed

10. Punctuation

Punctuation requirements:

- punctuation is permitted for postings which do not receive any other machine-readable discounts
- punctuation is allowed in Barcode postings
- please do not underline any part of the address or postcode
- in machine-readable letter and large letter postings, punctuation and non-alpha numeric symbols can only be used on the items where it appears in the corresponding PAF® record punctuation can also be used in the recipient's name or in the mailer defined information above the address within the Delivery Address Block. For full details on allowable punctuation within a PAF® record please see PAF® Digest, available from **www.royalmail.com**, or a member of your account team, or via Royal Mail Customer Services on 08457 950 950
- there must be no punctuation used to separate address elements or components within an address element
- punctuation is permitted within the addressee's name and title / department
- alternatively, you may remove all punctuation from the address, even if it is contained in the corresponding PAF® record

11. Delivery Address Block requirements for OCR letter and large letter

Delivery Address Block requirements:

- the Delivery Address Block must be left justified and printed in a block of text which includes the recipients name, geographic address and postcode
- when printing, please ensure that the skew of the Delivery Address Block is less than 5 degrees
- the line spacing of the block of text must be a minimum of 1mm and no more than 4mm
- the spacing of all other words except for the MDI, when included, within the Delivery Address Block must be within 5mm
- the Delivery Address Block may optionally contain an additional single line of mailer defined information (for example a reference number or SSC) immediately above the recipient's name on a single line
- you cannot have blank lines within the block and please note that if the line spacing between the mailer defined information and the address block is not the same then the mailer defined information may encroach into the required clear zones
- Where you have chosen to have Mailer Defined Information (MDI) it has to be in a single line which has no more than 64 characters, be above the address and the first character has to be left justified and aligned to the Delivery Address Block

In addition, while there are no restrictions to the spacing between elements and characters of the MDI the line spacing must be consistent with the Delivery Address. However, you may use a different font and it may be of a different size to the other text of the Delivery Address Block. The MDI must be in typeface and may comprise of letters, numerals, punctuation marks, ideograms and symbols, Barcodes are not acceptable.

The Delivery Address Block is defined by having an imaginary rectangle drawn around the outer extremities of the address including the recipients' name and where included, the mailer defined information.

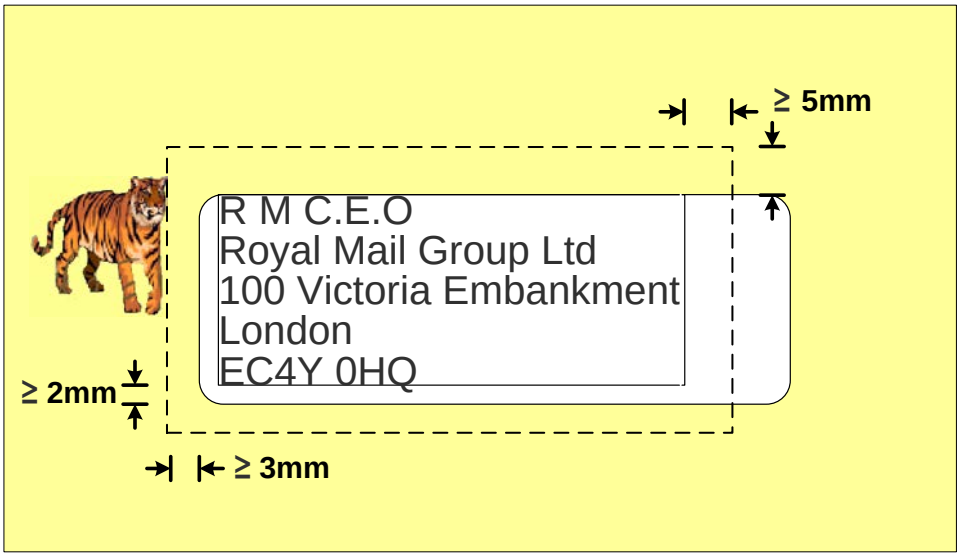
12. Delivery Address Block Clear zone for OCR letter and large letter postings

- no other text/information that could be construed as a Delivery Address may be included on the front of the mail piece. This includes any areas of an insert which may appear in the window of the mail item arising from insert movement
- there is a minimum requirement for a clear area of 5mm or more (see below) to be around the extremities of the full Delivery Address Block. By clear we mean clear of print; patterning, graphics or any text including, when the mail piece is tapped in turn on each of the four sides

- the left, right and bottom edges of the Delivery Address Block must be at least 2mm away from the edge of any label edge provided that there is a total of 5mm clear area between the left, right top and bottom edges of the address block and any print, graphics or patterning on the envelope or any other surrounding material
- where the Delivery Address Block is on an insert within a window or viewed through polymer, the Delivery Address Block must be fully visible, with the left, right and bottom edges of the Delivery Address Block at least 2 mm away from the window edge, no clear zone is required within the window above the Delivery Address Block, but Delivery Address Block must always be visible. In total there must be a 5 mm clear zone around the top bottom, left and right edges of the Delivery Address Block, which is free from text, graphics or patterning. The remaining clear zone requirements are met through the provision of clear zones on the envelope i.e. a minimum of a further clear zone of ≥ 3mm to the left, right, and bottom of the Delivery Address Block (ensuring that there is 5mm clear in total); and a ≥ 5mm clear zone on the envelope above the address. (The window edge itself is not considered an infringement of the 5 mm clear zone
- if the MDI is the top line of the Delivery Address Block it may either be totally visible, partially obscured, or totally obscured by the top edge of the window. These requirements apply at all times including after the item is tapped on any or all four edges to induce maximum insert movement. We will accept the addressee details tapping right up to the edge of the window or they can tap out partially to the top and right or completely to the top but recommend they remain fully visible at all times. The remainder of the Delivery Address Block must remain visible at all times, and the required clear zones met. During design, printing and enclosing, you should take into account the various tolerances associated with these processes to ensure that every mail piece within your mailing adheres to this requirement
- no other part of the Delivery Address Block may tap out of the window on a paper envelope or the 'clear' window area on a polymer envelope or polywrapped item

These requirements apply at all times, including after the mail item is tapped on any of its four edges to induce maximum insert movement.

For clarification, please see the diagram below showing a Delivery Address Block with the 2mm and 5mm clear zones represented in a window (not to scale):



- the shaded area represents the section of the envelope

Please note that whilst the window edge within the 5mm zone needs to be clear of print, graphics or patterning, it can be of any colour – as long as it is clear and solid

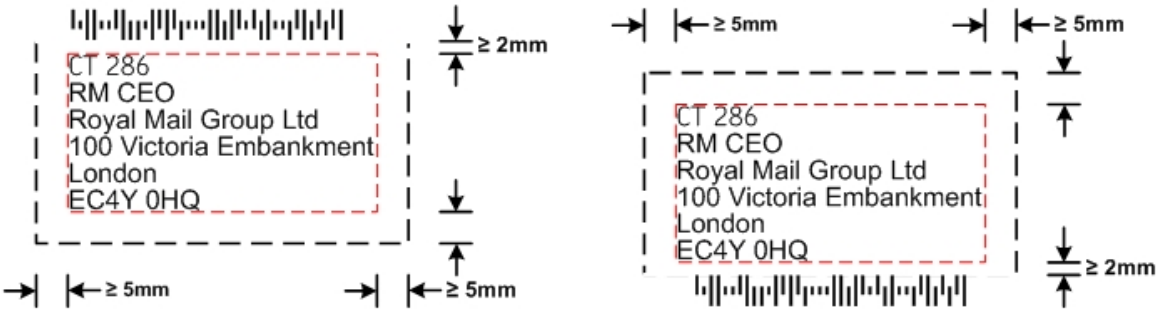
Clear zones required if a Barcode has been applied to an OCR letter posting

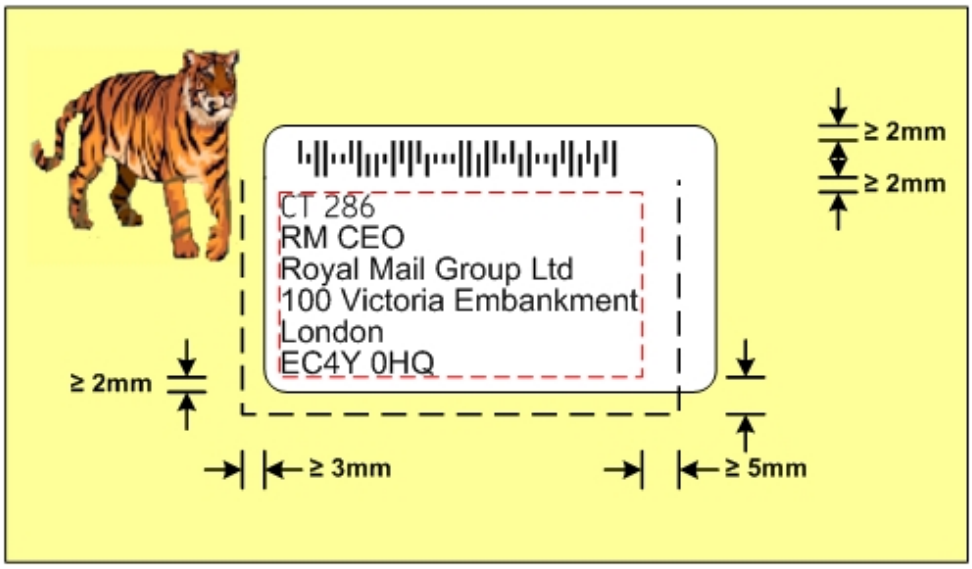
If the posting has been sent as an OCR product yet has a valid RM four state Barcode applied either immediately above or below the Delivery Address Block the clear area requirements are as follows:

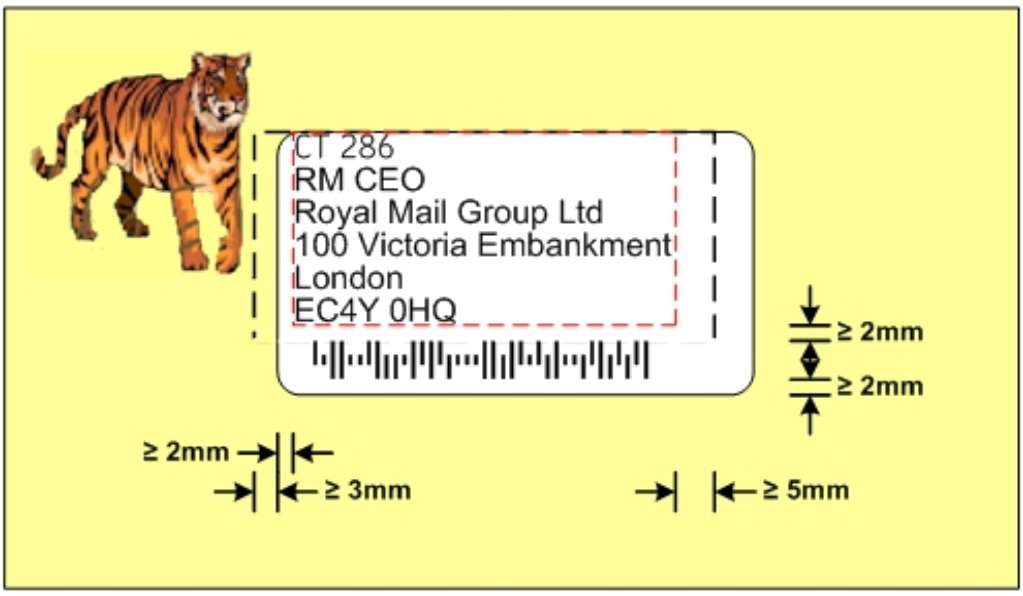
- there must be 5mm clear zone to the left and the right of the Delivery Address Block and the side (above or below) which is not adjacent to the Barcode
- there must be 2mm or more clear zone between the Delivery Address Block and the barcode and no window or label edge may fall within this 2mm clear area
- the Barcode is not permitted to fall out of the window and must have the standard 2mm clear zone around the entire code

These clear zones apply at all times including when the item is tapped on any or all of its four edges to induce maximum insert movement and the entire Barcode and Delivery Address Block together with the required clear zones as detailed above must be visible at all times.

Please note that the following diagrams are not to scale:


CT 286
RM CEO
Royal Mail Group Ltd
100 Victoria Embankment
London
EC4Y 0HQ
≥ 2mm
≥ 5mm
≥ 5mm
≥ 5mm
≥ 5mm
≥ 2mm


CT 286
RM CEO
Royal Mail Group Ltd
100 Victoria Embankment
London
EC4Y 0HQ
≥ 2mm
≥ 2mm
≥ 2mm
≥ 3mm
≥ 5mm


CT 286
RM CEO
Royal Mail Group Ltd
100 Victoria Embankment
London
EC4Y 0HQ
≥ 2mm
≥ 2mm
≥ 2mm
≥ 3mm
≥ 5mm

13. Return Addresses

- **Mandatory for OCR letter and large letter postings**
- **Recommended for Barcode**

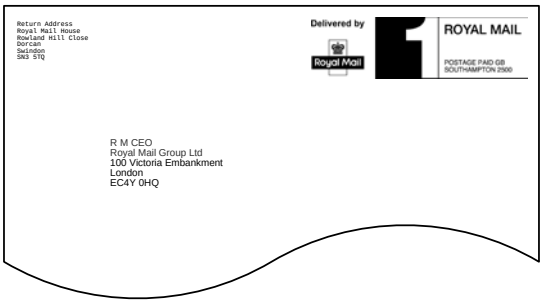
We recommend that in each instance you apply a valid UK return address to all your mail as this not only allows us to return items which cannot be delivered but helps you maintain accurate address files. The preferred requirements are that the Return Address is on the back of the item and in an area no more than 40mm from the top, it is positioned central and left justified, it is a valid PAF® address and the font and point size used are either 'Lucida Console' or 'Letter Gothic' fonts of 10-12pt.

The following requirements are mandatory for large letter postings and recommended for letter postings where applicable:

- there can only be one return address on the large letter
- content: the content of any return address must follow the structure as shown for the delivery address but most importantly it has to have the words 'Return Address' as the single prefix on the top line of the block of text and must be printed using either the 'Lucida Console' or 'letter Gothic' fonts 10-12pt.
  This is an example of the layout in Lucinda Console, 10pt font:

```
Return Address
Royal Mail House
Rowland Hill Close
Dorcan
Swindon
SN3 5TQ
```

- location for stamped or PPI mailings:
  - there must be only one Return Address Block on the large letter and if the size of the finished mail piece is C5 (162mm x 229mm) then it must be placed on the back of the mail piece. This is because we need to ensure that we reduce any instances where the incorrect address will be read, possibly resulting in poor quality of service. When on the back, it must be within an area within 40mm zone from the top of the mail piece
  - for items larger than C5 (>162mm in length and > 229mm in height) we recommend the return address to be on the back. This is not mandatory
  - when on the front, it must be in the top left corner, no more than 75mm from the right edge and cannot extend to lower than 40mm from the top edge of the letter and cannot be closer than 12mm to the Delivery Address Block (see below)(not to scale:


Return Address
Royal Mail House
Rowland Hill Close
Dorcan
Swindon
SN3 5TQ
Delivered by
Royal Mail
ROYAL MAIL
POSTAGE PAID GB
SOUTHAMPTON 2500
R M CEO
Royal Mail Group Ltd
100 Victoria Embankment
London
EC4Y 0HQ

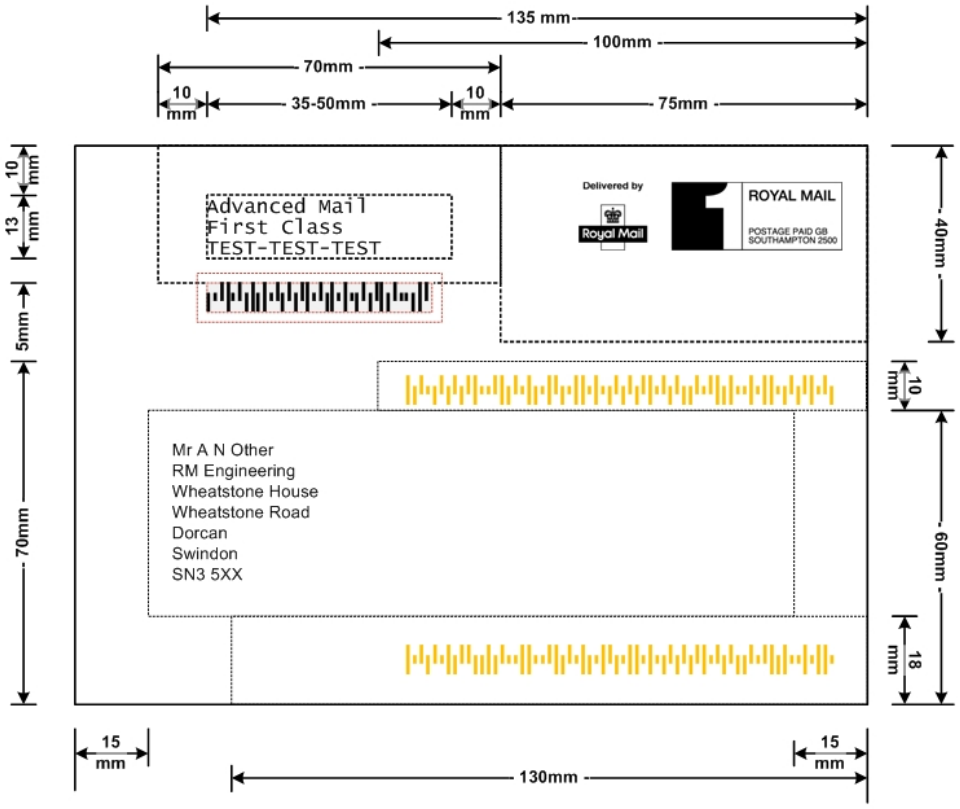
14. Business Mail 1st Class and Business Mail with Machine-readable Advanced options (Business Mail Advanced or BMA)

Specific requirements

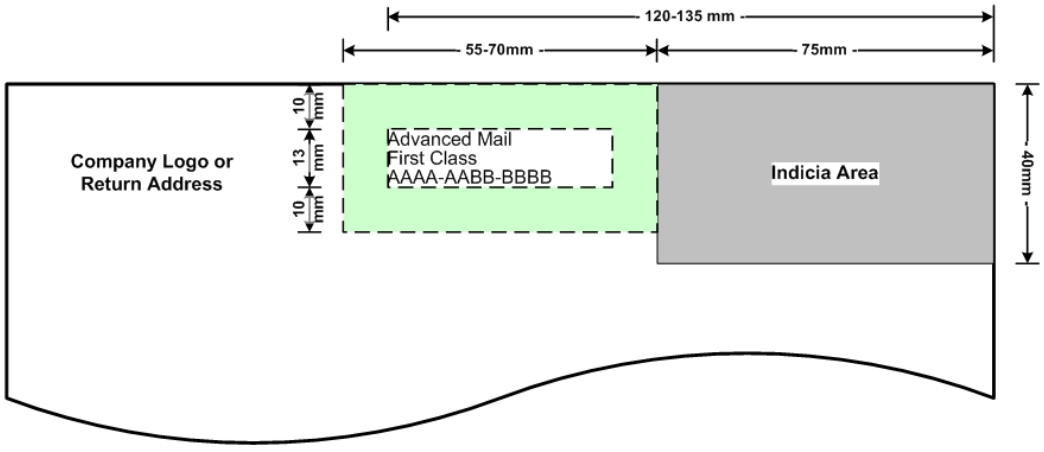
- a licence plate must be printed on every envelope outer in your Business Mail 1st Class and Business Mail with Machine-readable Advanced option mailings. This can be done by yourself or your envelope supplier
- for BMA letters bearing a PPI (i.e. mailings posted on Account) the licence plate consists of licence text and a licence barcode. Your unique licence number appears in the licence text and is encoded in the licence barcode
- for franked letters (i.e. posted through a meter) the licence plate consists only of the licence text that includes your unique licence number. Barcodes are not yet required on franked BMA items. The franked impressions are printed using blue ink or black ink if the machine also produces PPI mail. Franked impression users can also use blue ink for other Royal Mail products
- please note that it is not possible for a meter to produce the licence plate that is required for BMA letters bearing a PPI [1], as meters cannot produce the required licence barcode
- you can use the same BMA licence number on envelopes, provided the same (and correct) Account number is used for that particular licence number, to post BMA mail from more than one posting site (for example where you may want to use a single set of printed envelopes). The discount you will receive will be based on the minimum volume threshold (for a discount) being achieved at each posting site, i.e. a discount will be available for each posting which reaches at least 500 items per posting site, per day. A discount will not be awarded on BMA postings which are less than 500 items per posting site, per day
- always use envelopes printed with a BMA licence number supplied by Royal Mail and the related licence barcode (for items posted on account). There will be one licence number for 1st Class and one for 2nd Class
- for PPI mailings (i.e. posted on Account) we strongly recommend that you use the Business Mail Advanced Artwork Generator which will produce a graphic of the PPI indicia, the licence plate text (including the licence number) and the related licence barcode
- although not recommended, you may create a PPI mail piece using the individual elements by downloading the PPI indicia and using an encoder to create the barcode. The sections below set out the information you will need if you choose to create your mail piece in this way

[1] Previously some meter machines were used to produce the licence plate text required for PPI letters.

- licence plate (made up of licence text and licence barcode) position for PPI mail pieces (i.e. posted on Account):



- licence plate position for franked mail pieces (i.e. posted through a meter):



- licence text requirements:
  - the licence number is contained within the licence text which will have the following key words and attributes:

    for First Class mailings:
    Advanced Mail
    First Class
    TEST-TEST-TEST
    and for Second Class mailings:
    Advanced Mail
    Second Class
    TEST-TEST-TEST
  - in the licence number (represented by alpha characters), the 'TEST-TE is the Advanced licence ID and 'ST-TEST' are the related 'Reed-Solomon' error correction characters. There must be no spaces in the licence number (just hyphens).
  - the licence text sits within an imaginary box called the licence text box. This licence text box length (from left to right) must be greater or equal to 35mm and less than or equal to 50mm

- licence text box clear zone

  Make sure there is a clear zone around the licence text box (an imaginary box drawn around the licence text) (illustrated in figure above by the larger box surrounding the smaller box with the licence text in it). The clear zone around the licence text box has to have these dimensions:
  - left and right (with a return address block or company logo): not less than 10mm
  - left and right (with no return address block or company logo): not less than 5mm
  - top: 10mm exact
  - bottom for PPI mail pieces (i.e. posted on Account): 5mm exact between the bottom of the licence plate text and the top of the licence plate barcode.
  - bottom for franked mail pieces (i.e. posted through a meter): not less than 10mm
  - a clear zone of 10mm left, right and above the licence plate text is recommended
  - the left side of the licence plate should be between 135mm and 120mm from the right side of the mail piece. 135mm is recommended

- licence barcode clear zone

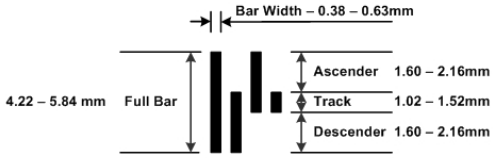
  Make sure there is a clear zone around the licence barcode (illustrated in figure above by the larger box surrounding the licence barcode) of 2mm on all sides. The top side of this clear zone can overlap with the bottom edge of the clear zone around the licence text.

- licence plate tolerance

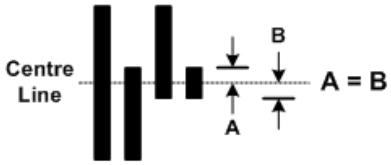
  For both PPI and franked items, the licence plate has a vertical print tolerance of +/- 2mm and a horizontal tolerance of +/- 2mm. The licence plate must maintain the positional and clear zone constraints.

- printing requirements:
  - PPI users should print the licence plate in black ink
  - meter users should print the licence plate in blue ink or black ink for machines producing a PPI. (Note that you can use blue ink for all Royal Mail products when using a meter)
  - the printing of the licence plate must be no more than +/-5° to the horizontal plane

- the licence barcode is made up of encoded content which is outputted as a string of text that consists of four characters: D, A, F and T. A special font is then applied which presents each character as a bar. D becomes a 'Descender' bar, A becomes an 'Ascender' bar, F becomes a 'Full' bar, and T becomes a 'Track' bar. An example of minimum and maximum dimensions is shown below:



- it is recommended that bar width is set at 0.54mm (with a width tolerance of +/-0.05 mm), the Ascender and Descender height is set at 1.9mm and the track bar is 1.3mm high (with height tolerances of+/- 0.1mm). The recommended pitch is 21.2 (+/- 0.2) bars per inch (25.4mm)
- we advise that licence barcodes are printed using black bars on a white background. Print contrast ratio is a measure of how well the black bars stand out from the background. We require the print contrast ratio to be a minimum of 40%. Please note that 'positive contrast' or 'inverse printing' (e.g. bars lighter than the background) is not permitted
- the print quality must be consistent throughout the licence barcode. The edges of the bars must be sharp and clearly defined. No part of a bar can be less than the minimum thickness or greater than the maximum thickness permitted. We do not recommend printing any licence barcodes using a dot printer but if you choose to there must not be any gaps between the dots within a bar
- there must not be any missing bars or space between characters in a 4-state licence barcode
- the track bars must be symmetrical about the centre line of the code (with a +/-10% tolerance of the height of the track bar)



➢ licence plate text specifications:

- licence plate text must be 12pt with normal character spacing
- the fonts for the entire licence plate must be:
  - OCR-B (preferred)
  - Letter Gothic
  - Lucida Console
- text must be left justified
- there must be no font mix within the licence plate
- there must be no use of bold, italic or underlined text
- the first character of each key word must be upper case, all other characters must be lower case
- the licence number characters must be all upper case
- the line spacing must be normal single line spacing

- there must be no outline box
- the licence number and correct characters will be subject to the following character set: ABCEGHJKLRSTUXYZ

- technical requirements:
  Please refer to the OCR requirements within the User Guide for size, thickness, weight, flexibility, material, paper colour, reflective difference, paper weight, absorbency, sealing, perforations (please note that no perforations are permitted along the long edge of the mail piece where the licence block is located), one piece mailers, advertising windows, opacity, reflectivity, addressing standards & location, definition of an address block and clear zones, window material & location, printing & print contrast, background, company logos, indicia area, clear zones, tag and route code zones, recommended addressing standards, address layout and fonts together with advice about punctuation. Please note the OCR address fonts, format and clear zones are recommended for our Machine-readable Unsorted Advanced product option to maximise the level of discounts received. They are not mandatory but non-OCR readable addresses can reduce the overall discount available from the mailing.

- return address:
  - with franked and PPI letters, you can print the return address block to the left of the Advanced licence plate, so long as you respect the clear zone. You may limit the line length of the return address block in order to achieve the clear zone tolerance
  - it is recommended that return addresses are on the back of the envelope

15. Machine-readable letters – mail piece specifications for OCR and Barcode

The following applies to both OCR and Barcode letter postings.
Mail pieces must be rectangular (oblong) or square. All four sides must be straight. The intersection of each side must be 90°.

Flaps

- opening flaps must be gummed and sealed as far along the edge as possible
- all remaining edges must be sealed

Sealing Tolerances
Trayed Mail

- For DL and C5 Letters with Rectangular or Trapezium shaped opening flaps presented in trays only, there is a maximum tolerance of up to 35mm from the left and right edges and 35mm from the top edge where the flaps do not have to be gummed or sealed. NB. An envelope manufacturing tolerance of 2mm is permitted i.e. the minimum Letter Length here is 218mm. See figure 1a and figure 1b.
- For Letters that have opening flaps that are less than 218mm long, there is a maximum tolerance of up to 25mm from the right and left edges and 35mm from the top edge where the flaps do not have to be gummed or sealed. See figure 2a and figure 2b

Figure1a - Envelope Flap Sealing – Example 1 (not to Scale):

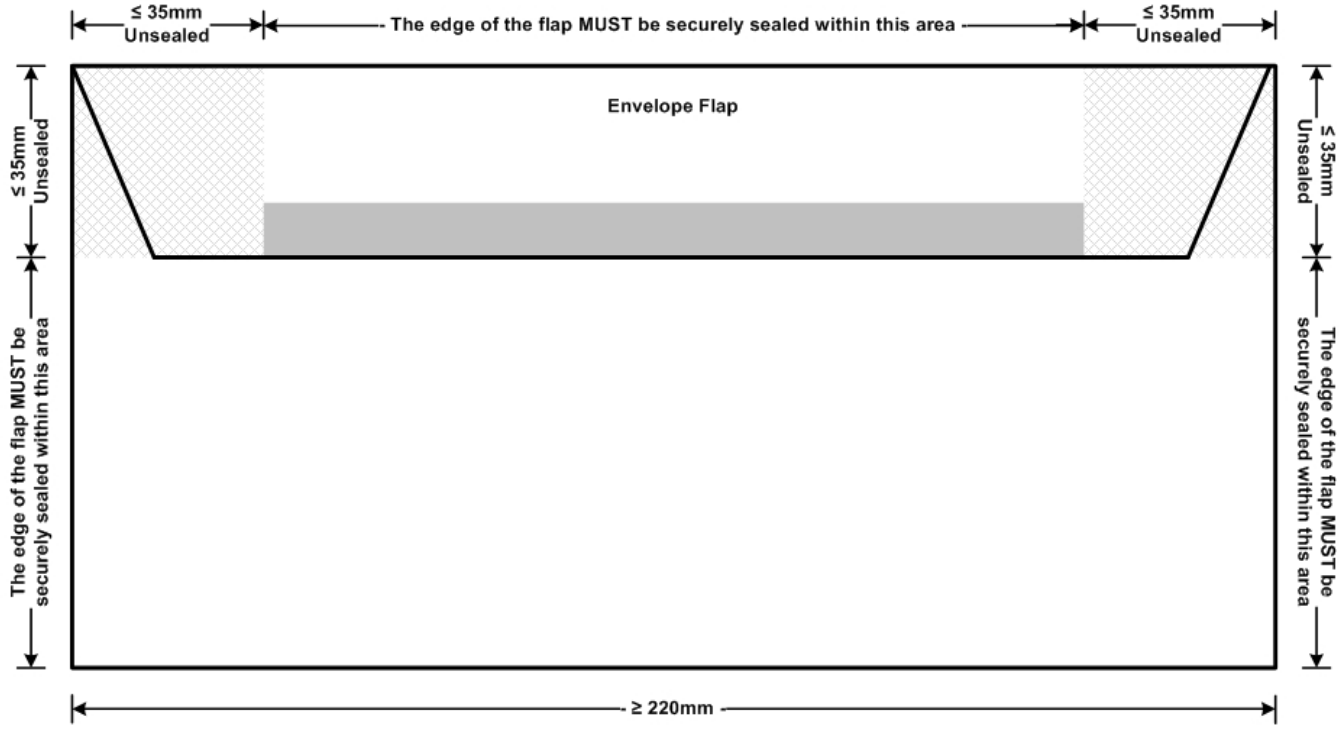
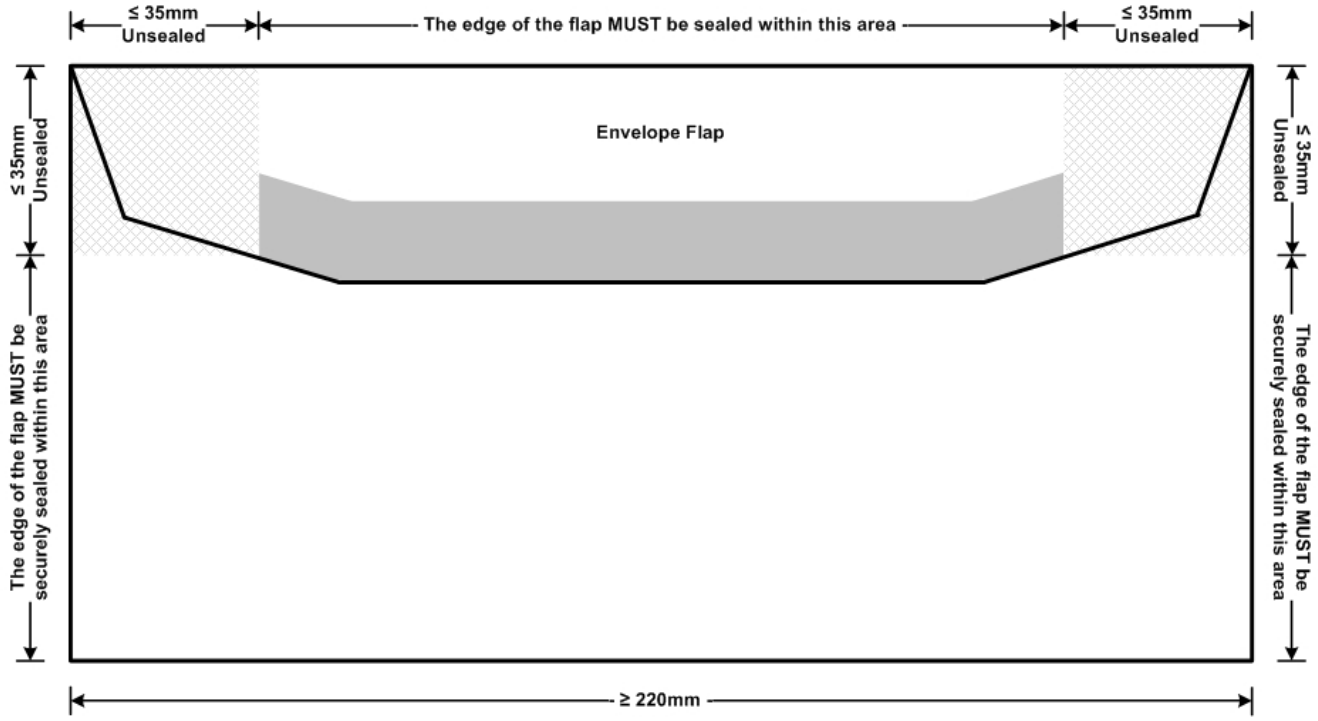


Figure1b - Envelope Flap Sealing – Example 1 (not to Scale):



Sealing Tolerances

Bagged Mail

- There is a maximum tolerance of up to 25mm from the right and left edges and 35mm from the top edge where the flaps do not have to be gummed or sealed.. See **figure 2a** and **figure 2b**.

Figure2a - Envelope Flap Sealing – Example 1 (not to Scale):

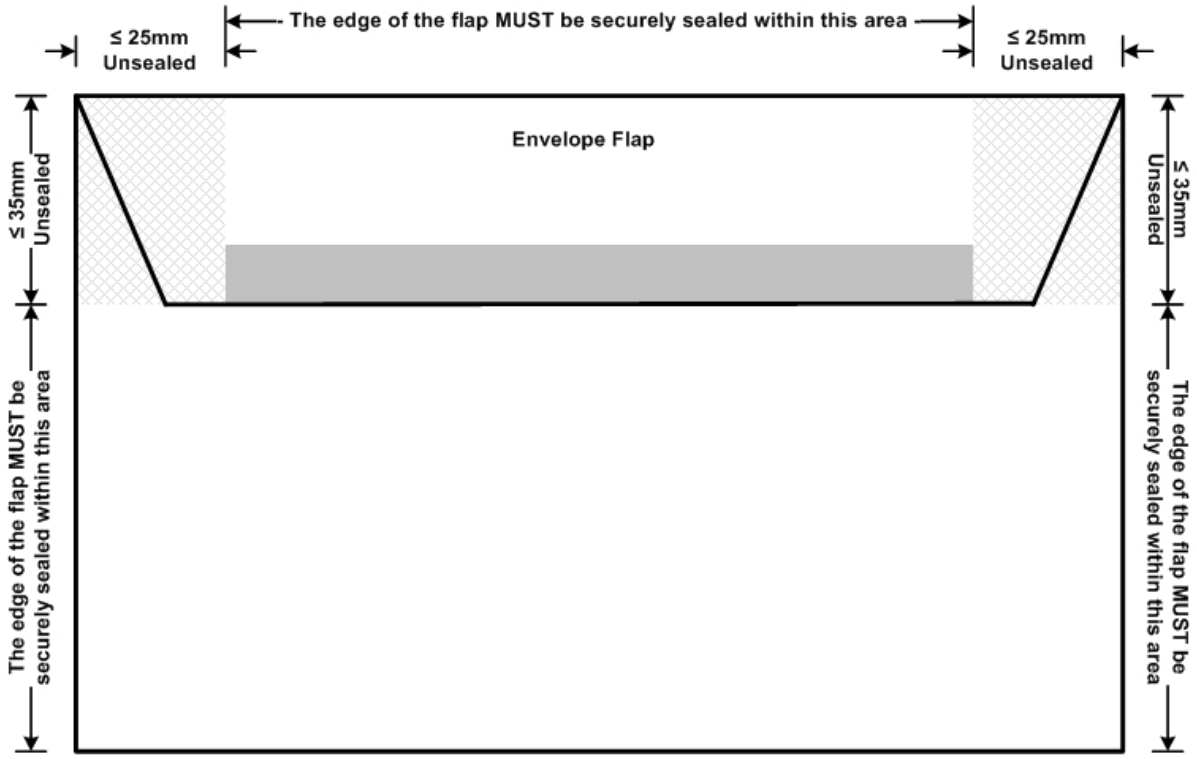
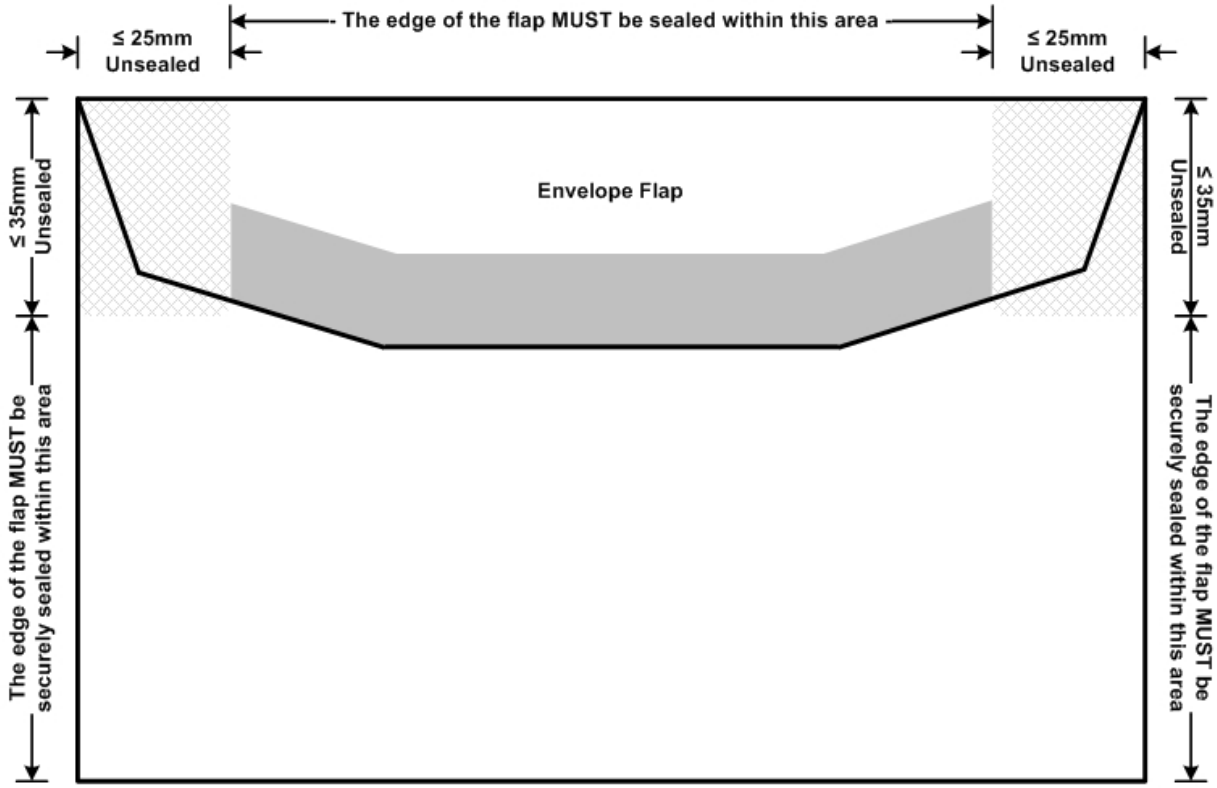


Figure 2b - Envelope Flap Sealing - Example 2 (not to Scale):



Inserts

The maximum amount of lateral movement of an insert within the envelope should not exceed 20mm. Alternatively, where the overall total mail piece thickness does not exceed 2mm, the maximum allowable insert movement is 30mm. Where envelopes contain more than one insert, the maximum lateral movement applies to the largest insert only, which is not necessarily the insert with the address printed on it. All other inserts within the mail piece may have greater lateral movement. Excessive insert movement within the envelope may cause the envelope to buckle and/or become damaged in our automation equipment.

Metallic items must not be contained within the mail piece with the following exceptions:

- staples maximum size of 24mm by 6mm
- paper clips maximum size of 23mm length

This requirement ensures mail is processed safely without damaging our automation equipment, and thereby safeguarding the mail piece.

Mail piece dimensions

Weight	➢ maximum: 100g ➢ maximum for Advertising Mail Multi-stage: 15g
Thickness	➢ minimum: 0.25mm ➢ maximum: 5mm
Height*	➢ minimum: 90mm ➢ maximum: 165mm
Length*	➢ minimum: 140mm ➢ maximum: 240mm
Square items	➢ minimum 140mm x 140mm ➢ maximum 165mm x 165mm
Business Mail Advanced	➢ minimum 110mm x 145mm x 0.25mm ➢ maximum 165mm x 240mm x 5mm

Please note:

- to continue to meet our clear zone requirements, as per the OCR specification, you will need to use the smaller size PPI design of 14mm x 35mm
- the items must be sealed continuously and securely on all sides
- 'Portrait' items are permitted for Barcode.
- Rectangular items must have vertical edges which are equal to or shorter than the horizontal edges
- Rectangular items in 'portrait' orientation are not allowed with OCR

These dimensions apply to the finished mail piece

Material

- you cannot use polythene, plastic or transparent items or envelopes with apertures
- to benefit from Sustainable Advertising Mail you will need to adhere to additional requirements – see the product specific Sustainable Advertising Mail section of this user guide
- opacity - the paper on which the address is printed on must be more than 85% opaque to prevent any character on the back side showing through (BS ISO 2471 paper and board)
- porosity - < 700 ml/minute
- absorbency – 15-35g of water in one minute
- reflection – the background reflectivity of the material on which the address is printed must be at least 35% in the red region (600nm) when measured by a spectral reflectometer
- Envelopes must be made of paper with a density no less than 70g per square metre (gsm). Postcards must be made of paper with a density no less than 200gsm and at least 0.25mm thick.

Perforations

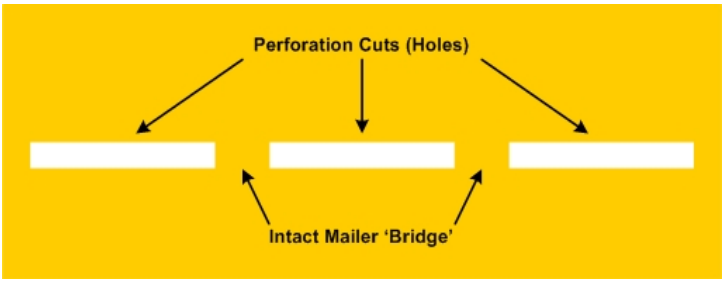
Items with perforations or tear-off strips must meet the specifications detailed below in order to ensure they can be processed efficiently and without any damage being caused. In addition, whilst it is not mandatory, if you wish to post items with either a 'roulette' perforation or a 'zip strip', you have the option of going through part of our QA process as this will enable you to get any new mail piece designs checked prior to posting. Please contact the relevant member of your account team for further advice.

You have the option of using either 'Roulette' or 'Zip Strip' perforations, or designing a 'Pressure Seal' envelope which effectively has double roulette perforations on the back.

Roulette Perforations

- the perforations must be die cut into the items, the cut being the hole, and the bridge being the paper that is left intact and subsequently torn when the mail piece is opened. See **figure 3.**

Figure 3



- the paper weight for the items must be ≥ 100gsm
- the mail piece must be in either landscape or portrait orientation - portrait is only allowed for Barcode items
- the perforations may be located to both 'short' sides of the mail piece, and one of the long sides of the mail piece, i.e. only 3 sides may be perforated as illustrated in **figures 4, 5 and 6**
- the perforations must be inset from the edge of the mail piece by 12 ± 1mm as illustrated in **figures 4, 5 and 6**
- the cut of the short side perforations must be set at 1.3 – 2mm and with a bridge of 0.8mm as illustrated in **figure 7**. Each cut must be of uniform size and each bridge must be of uniform size
- the cut of the long side perforation must be set at 0.5 – 1.4mm and with a bridge of 0.4mm as illustrated in **figure 7**. Each cut must be of uniform size and each bridge must be of uniform size
- the cuts must be rectangular in shape and have a width of 0.1mm
- the short side perforations must extend from each edge of the envelope as illustrated in **figures 4, 5 and 6**
- the long side perforation must not extend beyond the short side perforations as illustrated in **figures 4, 5 and 6**
- the indicia must not be printed over the perforations. Please note that this requirement effectively reduces the area available for your indicia as follows:

- in landscape orientation where the indicia is adjacent to both 'long' edge and 'short' edge perforations the indicia must be inset and be 12 ± 1mm on 2 sides (as illustrated in figure 2). This limits the area available for your indicia to a maximum of 64mm by 29mm
- in landscape orientation where the indicia is adjacent to just the 'short' edge perforation the indicia must be inset on 1 side by 12 ± 1mm (as illustrated in figure 5). This limits the area available for your indicia to a maximum of 64mm by 40mm
- in portrait orientation where the indicia is adjacent to just the 'short' edge perforation the indicia must be inset on 1 side by 12 ± 1mm (as illustrated in figure 6a). This limits the area available for your indicia to a maximum of 75mm by 29mm
- in portrait orientation where the indicia is adjacent to both 'long' edge and 'short' edge perforations the indicia must be inset and be 12 ± 1mm on 2 sides (as illustrated in figure 6b). This limits the area available for your indicia to a maximum of 64mm by 29mm

- the other colour must be visible through the perforations in the Tag and Route Codemark Clear Zones
- the perforated edges must be securely sealed all round from the perforation to the letter edges
- the glue must not run out onto the outside of the mail item or produce protruding mounds on the mail item
- the glue must be fully cured before you give your mailing to us
- the tensile strength of the glue must be 4.5N and fibre tear must be exhibited on separation

Figure 4- Perforated Mail piece – Top (Not to Scale):

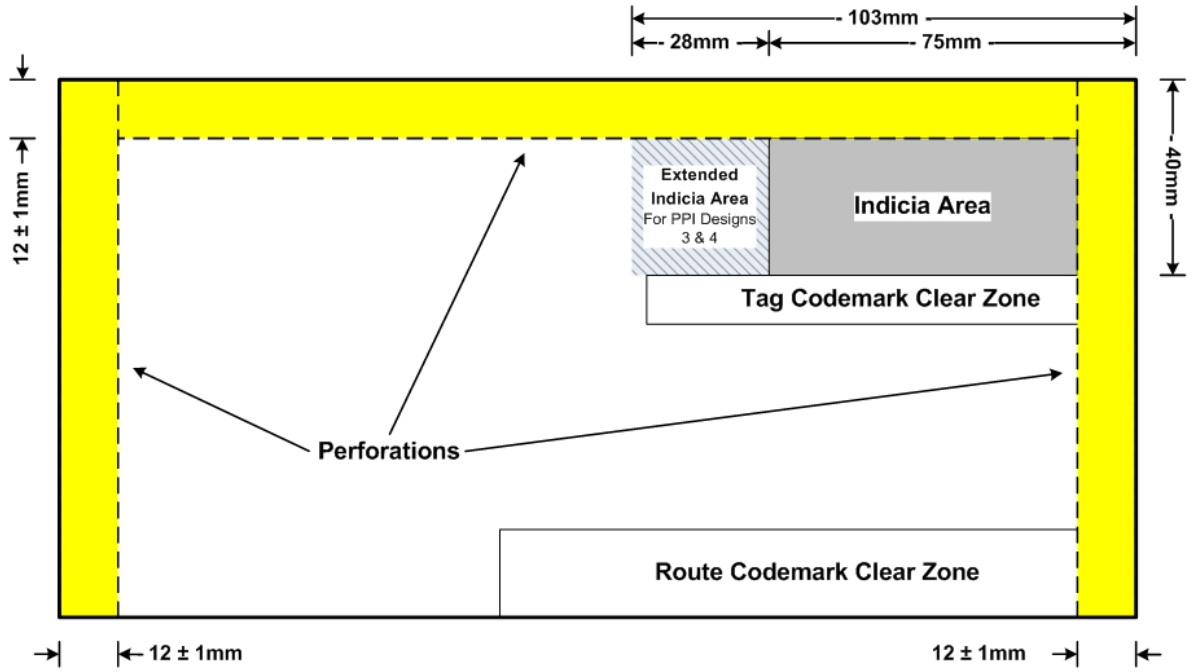


Figure 5 - Perforated Mail piece - Bottom (Not to Scale):

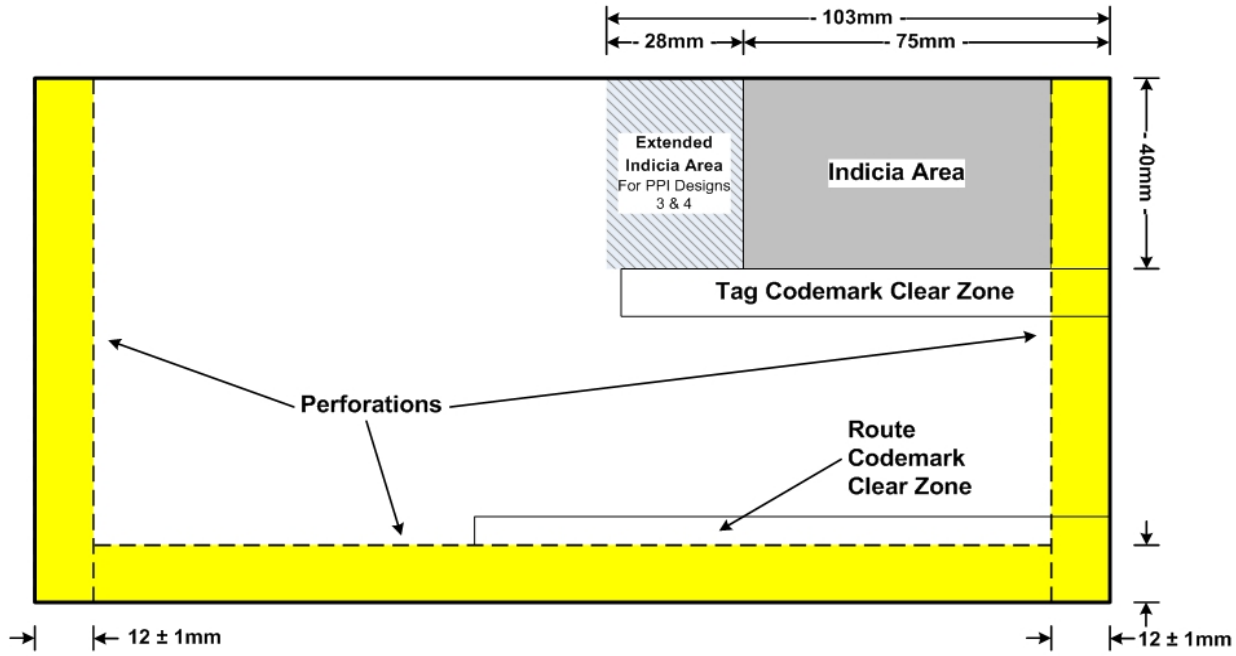


Figure 6- Perforated Mail piece – Portrait (Not to Scale):

6a. Horizontal perforation to the left:
6b. Horizontal perforation to the right:

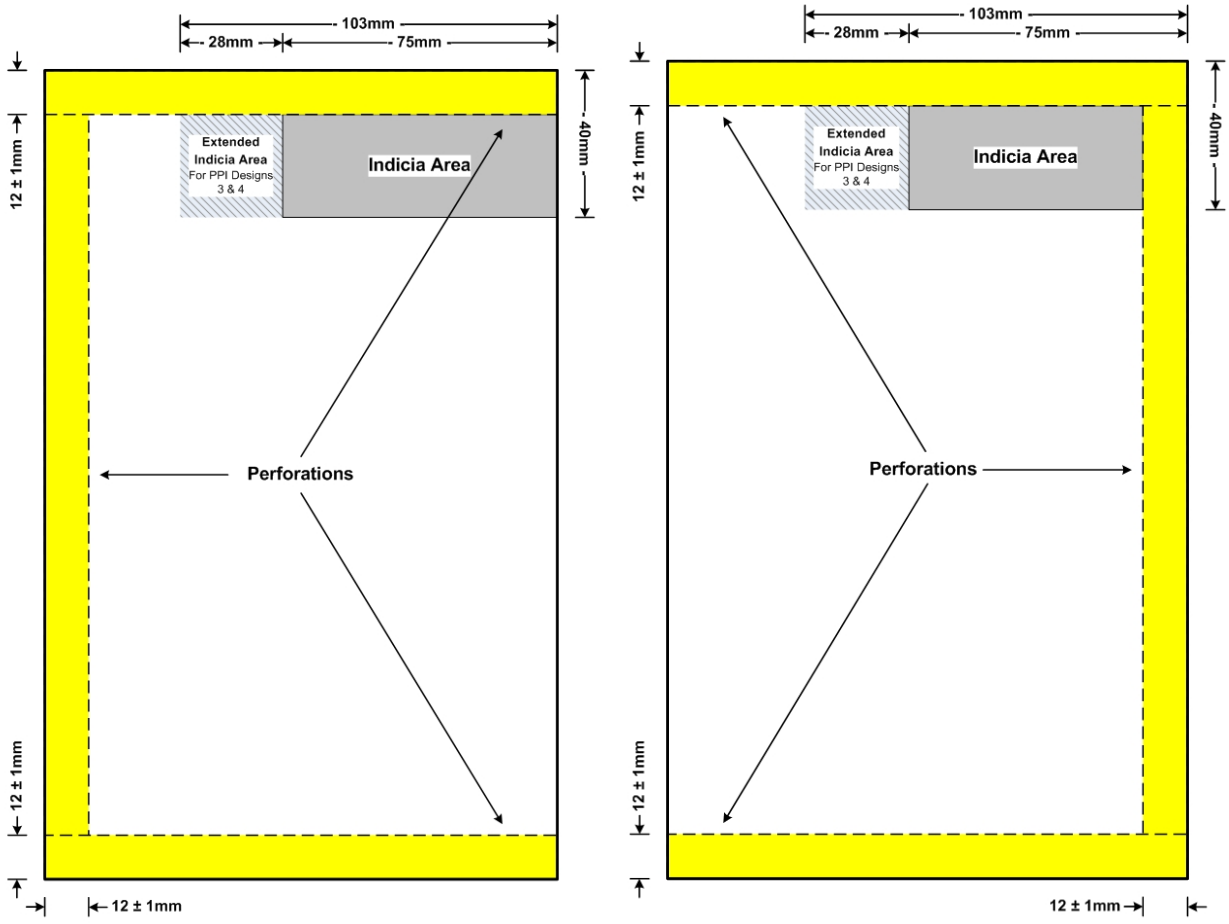
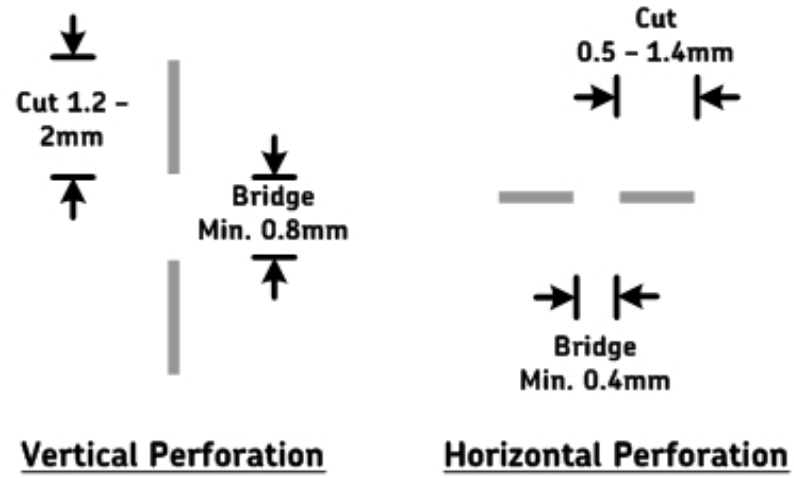


Figure 7 - Perforation Dimensions (Not to Scale):



'Pressure Seal' envelope

A Pressure Seal Envelope is a single sheet of paper which has been folded either two or three times to make a DL or C5 size mail piece. The short sides need to be sealed and are opened by means of a standard perforation. One long side has to be a fold, the other will be sealed and have effectively a 'double' perforation to allow the item to be fully opened.

- the short sides have perforations through all layers of the letter (there will be 3 layers of paper for DL or 2 layers of paper for C5 size mail pieces)
- the long side has a Roulette perforation that does not go through to the front of the mail piece. The item is opened by removing the short edge perforated strips first and then tearing back the tear off strip on the back.

Design & general requirements:

- the item is produced from a single sheet of paper
- inserts are not permitted
- DL design must be ≥ 100gsm (3 ply)
- C5 design must be ≥ 150gsm (2 ply)
- landscape or portrait are permitted
- items must not be square
- perforations to be on both short sides
- the Roulette Tear strip must be on the back of the letter
- the longest edge from the indicia must be a fold (bottom edge for Landscape, left side for portrait)

Perforated strip (short edges):

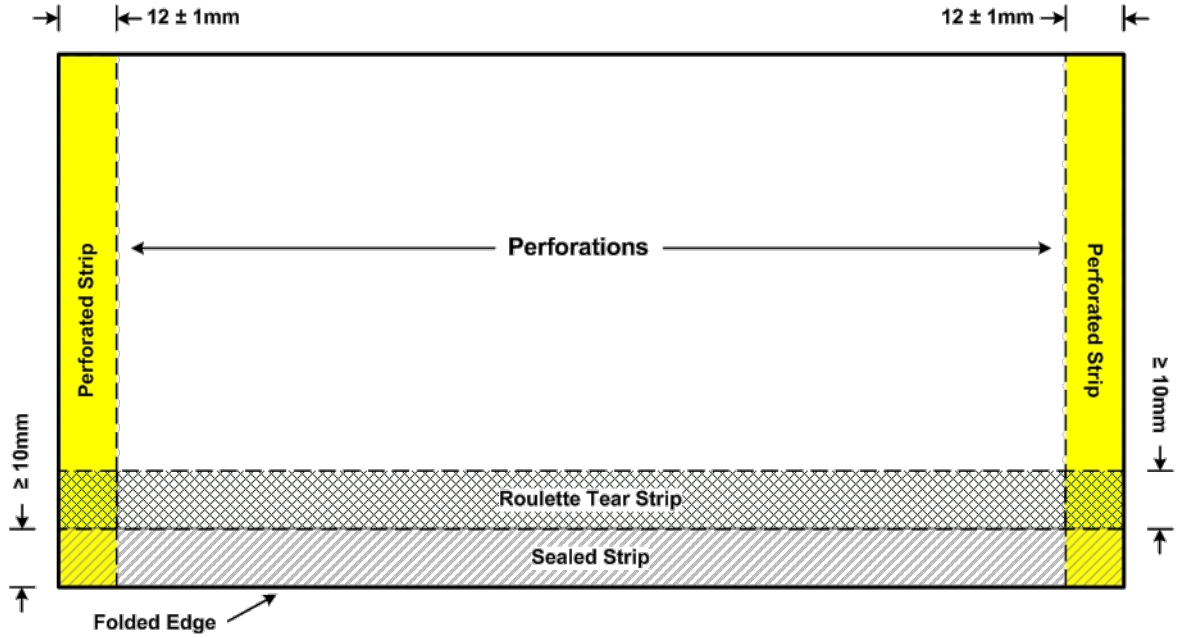
- as per requirements described under Roulette Perforations
- the cut of the Perforated Strip perforations must be set at 1.3mm – 2mm and with a bridge of ≥ 0.8mm
- the cuts must be rectangular in shape and have a width of ≤ 0.1mm

Perforated strip (long edge on back):

- only one Roulette Tear strip is permitted on each letter
- it must be die cut into the letter
- it must be placed on the back of the letter (i.e. the side which does not have the Delivery Address and PPI and must run parallel to the long edge
- it must be ≥ 10mm from the long edge of the letter & must be ≥ 10mm wide
- ihe cut must be set at ≤ 3.3mm and with a bridge of ≥ 0.6mm as illustrated in **figure 8** below
- each cut must be of uniform size
- each bridge must be of uniform size
- the cuts must be rectangular in shape and have a width of ≤ 0.1mm.
- the 'long' perforation may extend into the 'short' side perforations. If this occurs, it must be securely sealed i.e. the strips totally sealed along their length
- the edge between the tear strip and the edge of the letter must be securely sealed along its entire length

- sealing adhesive must be ≤ 80 microns thick
- the glue must not run outside the mail item or produce protruding mounds
- glue must be fully cured before the mail is presented to us
- Tensile strength of the glue must be ≥ 4.5N and fibre tear must be exhibited upon separation

Figure 8 – 'Pressure Seal' envelope perforations & dimensions (not to scale):



Zip Tie Perforations

- the Zip Tie must be die cut into the item
- the paper weight for the item must be ≥ 150gsm
- the items may be presented in both Landscape and Portrait orientation
- the Zip Tie must always be placed on the back of the items
- the Zip Tie may be positioned either horizontally or vertically, but the 'Tear' direction of the Tie is dependant upon the orientation of the mail piece. figure 9 and figure 10 below illustrate the back of landscape and portrait oriented mail, the orientation, and 'Tear' directional requirements (the relative position of the Indicia on the front of the mail piece being illustrated)

Figure 9 – Zip Tie Orientation – Landscape Mail (not to Scale):

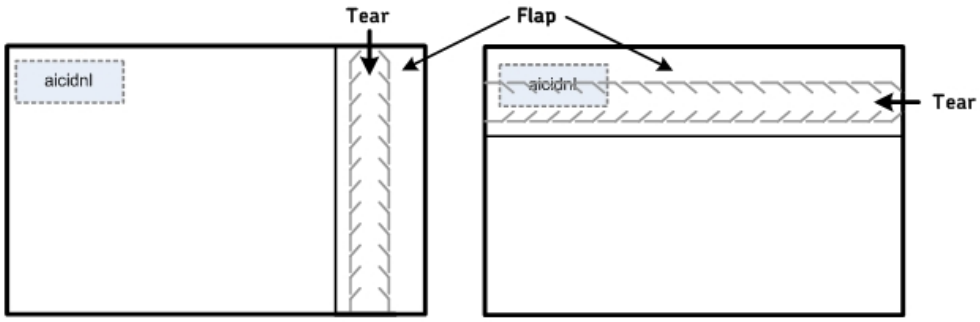
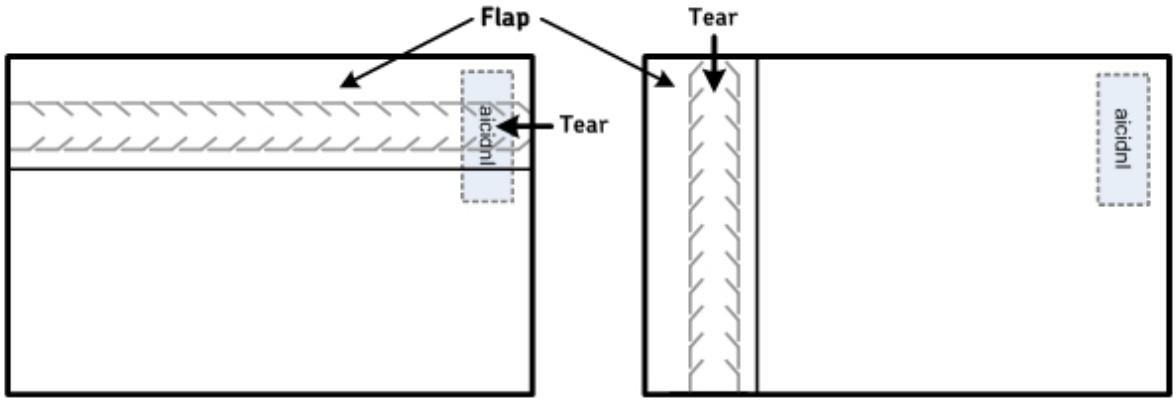
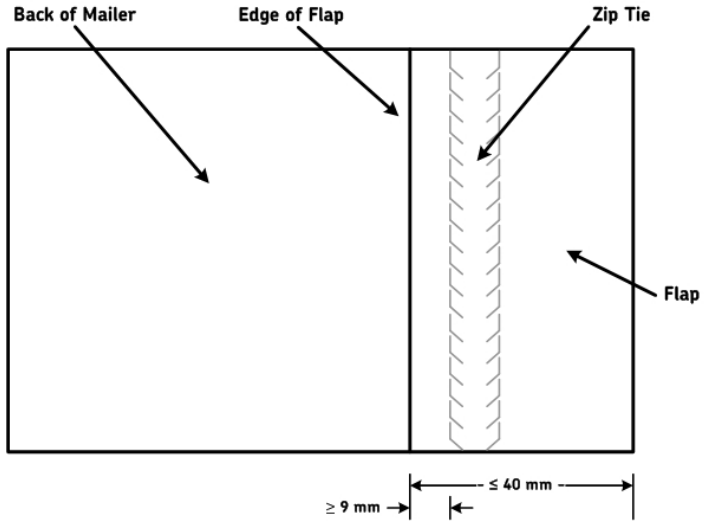


Figure 10 – Zip Tie Orientation – Portrait Mail (not to Scale):



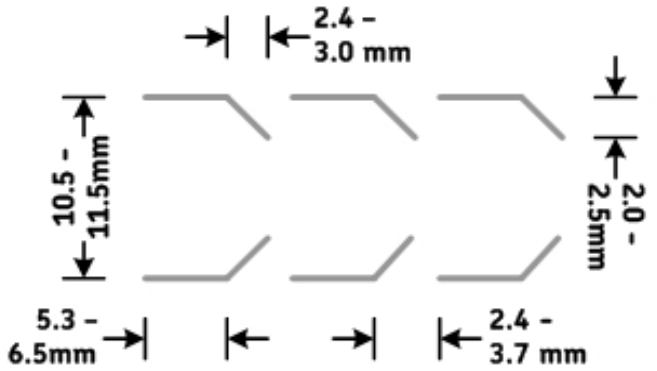
- the Zip Tie must be located on a flap that is ≤ 40mm wide as illustrated in **figure 11**
- the Zip Tie must be positioned ≥ 9mm from the edge of the flap as illustrated in **figure 11**

Figure 11 – Zip Tie & Envelope Flap (not to Scale):



- the dimensional requirements for the cut of the Zip Tie are provided in **figure 12** below:

Figure 12- Zip Tie Dimensions (not to Scale):

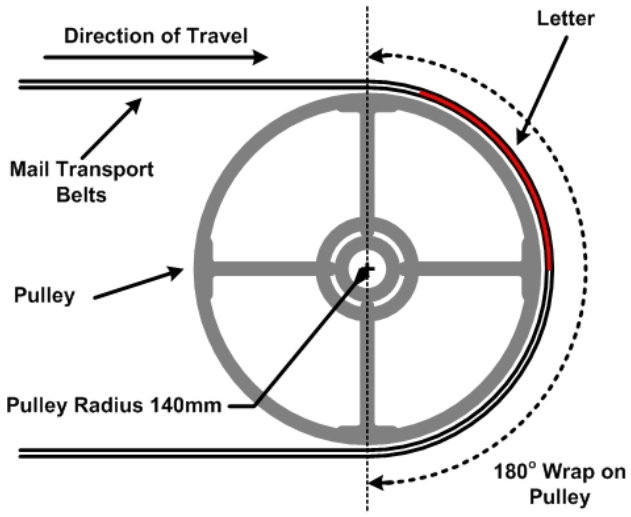


- all cuts and bridges must be of uniform size.
- The cuts must be rectangular in shape and have a width of ≤ 0.1mm
- the glue used to seal the flap must not run out onto the outside of the mail item or produce protruding mounds on the mail item
- the glue must be fully cured prior to presentation of the mailing to us
- the tensile strength of the glue must be ≥ 4.5N and fibre tear must be exhibited on separation

Flexibility

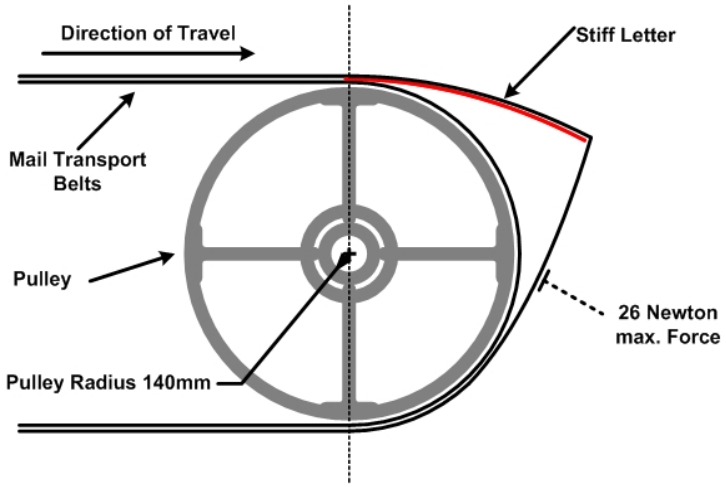
Items must be flexible enough to be capable of being processed in our sorting machines without damage to the machine, the mail piece, or other mail pieces. Each mail piece must therefore be capable of being transported around a pulley with a radius of 140mm with a maximum force of 26 Newtons.

Figure 13 - Illustration of Flexibility requirement



Items that are too stiff will not be able to meet this requirement as shown below.

Figure 14 - Illustration of Failed flexibility



Sealing Advice (for envelope edges, not including the closing flap)

The objective is that the unsealed side seams cannot easily be lifted. This is achieved if the glue is close enough to the edge.

The envelope will have a fold and an opening flap. It must be sealed continuously and securely on the remaining sides which are not the closing flap i.e. the glue used to seal the sides must be in the form of a continuous seal and placed in such a position that the two elements of unglued paper cannot be easily lifted, separated, folded or torn.

Window envelopes – general

- gloss – the maximum gloss value of the window material is to be 150 when measured at 60º in accordance with ASTM 2457 'Standard Test Method for Specular Gloss of Plastic Films'
- haze – the window haze should not exceed 75% in accordance with ASTM D1003 'Standard Test Method for Haze of Plastic Films'
- strength – the window should be robust enough not to become deformed. It should be fixed to the envelope evenly across the surface area it is in contact with
- fit – where the Barcode is printed onto an insert to be read through a window, the fit of the insert will be such that the complete Barcode (including the 2mm clear zone) and the address must always remain visible in the window. During design, printing and enclosing, you should take into account the various tolerances associated with these processes to ensure that every item within your posting adheres to this requirement
- windows on mail pieces should normally only appear on the front of the mail piece. However, you have the following options:
  - you may have a maximum of two windows on the front of a mail piece
  - you can have a window on the back of the mail piece providing that the specification as detailed below is met
- windows should not take up more than 50% of the surface area of the mail piece

Windows on the front and back of envelopes

Physical properties

- Minimum mail piece length is 212mm (maximum is 240mm)
- Maximum thickness is 1mm
- Paper inserts only
- Maximum weight is 20gsm

Window properties

Standard requirements for machine readable envelopes apply to the front window. The window on the back must be circular with a maximum diameter of 48mm. The perimeter of the window must be 31 +/- 2mm from the bottom of the envelope and centred along the long edge.

One-piece Mailers

Generic requirements for one piece mailers

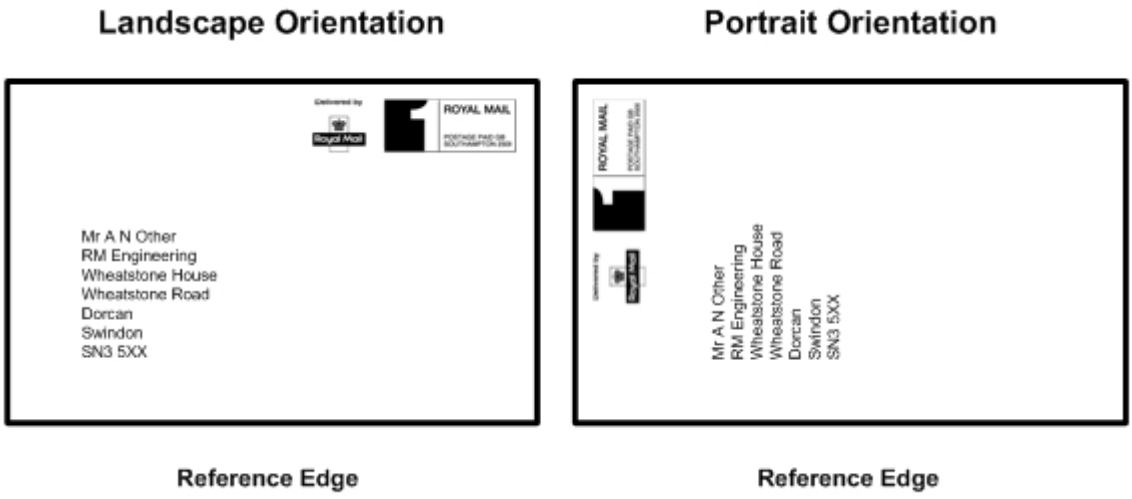
All requirements for OCR and Barcode mail pieces apply to the one-piece mailer specification, unless specified otherwise below.

Sealing

- the item must be securely sealed
- the glue must not be brittle or easily broken
- the viscosity of the glue must be sufficient to ensure that the glue does not run out onto the front face of the mail item and doesn't produce protruding mounds on the mail item
- the cure time for the glue must be sufficient to ensure that it has fully cured prior to posting
- the glue must not seep to the outside of the mail piece
- the bottom edge of the item must be a fold:
  - the bottom edge for landscape items is the longest edge beneath the Delivery Address. (This applies to both OCR and Barcode mailings). Please see figure 15
  - the bottom edge for portrait items is the longest edge on the left of the mail piece (this only applies to Barcode products). Please see figure 15.

  i.e. the fold is on the bottom edge when the mailer is presented to our machines

Figure 15 – Reference Edge for One Piece Mailers



Flaps on one piece mailers

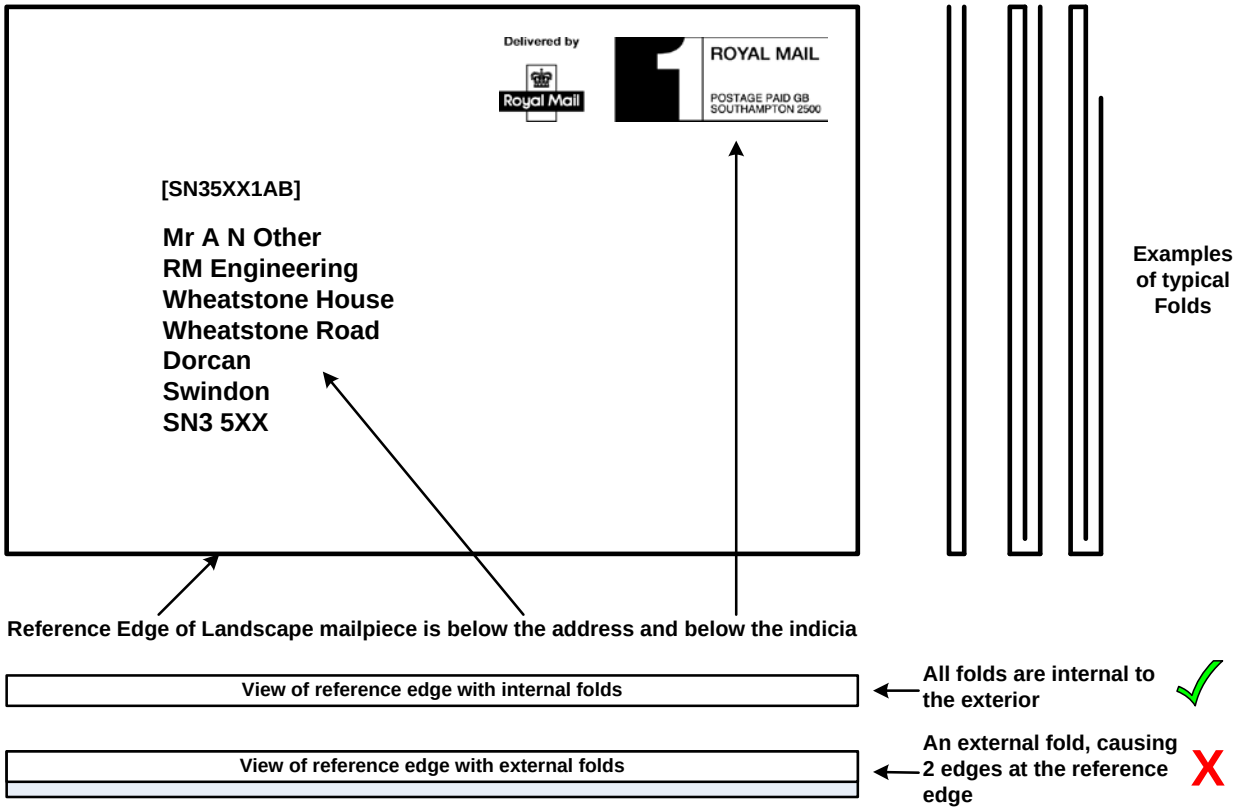
Where flaps are present on a one-piece mailer they must comply with the following requirements:

- all edges, other than the fold, must be glued
- the sealing of the flap must meet the gluing requirements outlined above (either spot or continuous glue seal)
- the minimum fold for a flap is > 25mm
- the maximum fold for a flap depends on the mail piece size, but the edge of flap must be < 40 mm or more from the bottom of the mail piece
- for the OCR service where the flap is on the front of the mail piece (i.e. where the Delivery Address and Indicia are), the edges of the flap must not interfere with the 'tag code' clear zone

Standard one piece mailer

- the peel adhesion strength of the glue must be 0.4N or fibre tear must be exhibited on separation
- minimum and maximum size dimensions for the mail piece as per OCR and Barcode product options
- the paper weight must be > than 100gsm.
- the face of paper on which the Delivery Address is printed must be >85% opaque to prevent any character on the reverse side showing through
- if the mail piece has multiple folds these must be tucked inside so that there is only one fold on the outer of the mail piece. If multiple folds are used, they must be glued such that all edges of the mail piece are fully sealed. Concertina folding is not accepted. Please see **figure 16**.

Figure 16 - One Piece Mailer Folds

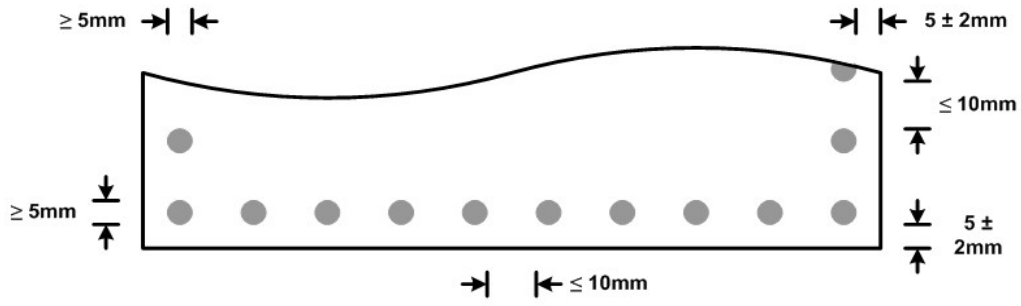


- the glue weld must be no more than 80 microns thick
- the mail item must be securely sealed by a number of glue spots or by a continuous glue line

Spot gluing on standard one piece mailers

- the distance between the two closest edges of the spots must be < 10mm
- the size of the spot must be > 5mm in diameter
- the maximum distance from the edge of the mail piece for the glue spots is 5mm +/-2mm. Please see figure 17

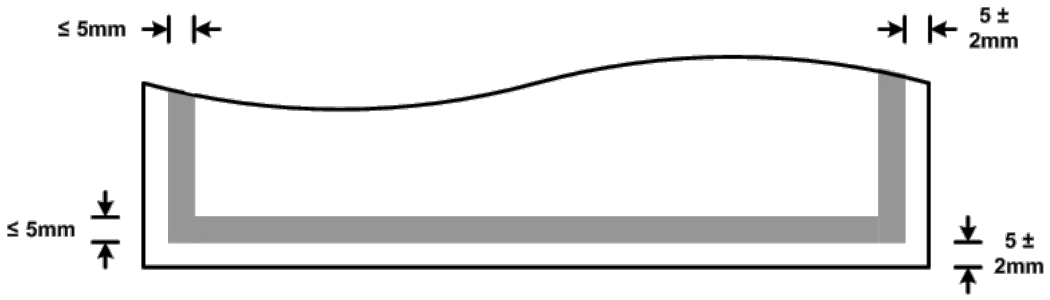
Figure 17 (spot glue not to scale)



Continuous gluing on standard one piece mailers

- the glue line must be < 5mm wide
- the maximum distance from the edge of the mail piece for the glue strip is 5mm +/- 2mm. Please see figure 18

Figure 18 (continuous glue not to scale)



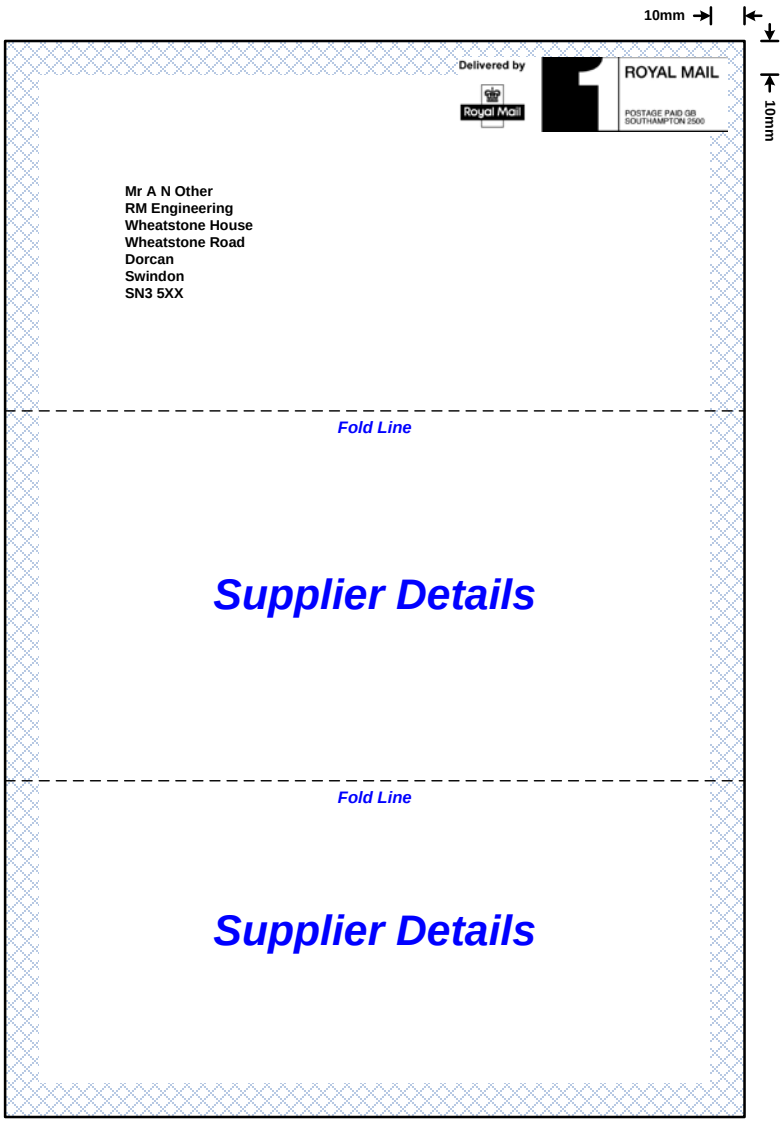
General advice for standard one piece mailers

It is advisable to leave a 10mm clear zone around the perimeter of sheet clear of print to ensure the adhesive properties of the glue are not impaired due to the properties of the printing ink.

Coupon one piece Mailer

This one piece mailer design is folded 3 times to produce a pocket in which a small booklet can be inserted. See figure 19

Figure 19 - Coupon One Piece Mailer



Design for coupon one piece mailer

- the mail piece must be 165mm 5mm x 145mm 5mm
- a 165mm x 145mm mail piece is formed from a sheet of paper 395mm x 165mm, and it is folded as follows:
  - Fold 1 – 70mm from bottom edge to form a pocket that holds inserted coupon book
  - Fold 2 - 215mm from bottom forms back of mail piece;
  - Fold 3 - 360mm from bottom of sheet forms sealing flap 35mm deep
- the booklet inserted must be 85 x 130mm in size
- the maximum thickness for the mail piece, including the insert, is 1mm

- the booklet must be stuck to the back of the mail piece to preventing movement of the insert during processing
- the paper weight must be 115 gsm
- the mail piece weight must be 15g

Gluing Requirements for coupon one piece mailer

- the sides of the mail piece (excluding the flap) must be sealed with continuous 10mm band of adhesive to the edge of the mailer
- the peel adhesion strength of the glue used for the side seals must be 0.25N or fibre tear must be exhibited on separation
- the long edge of the flap must be sealed with single 6mm-9mm wide line of adhesive, or 2 lines of adhesive that are 2mm -3 wide and 2mm - 3mm apart. The adhesive must be no more than 5mm from the edge of the flap
- the sides of the flap must be sealed to the edge of the mail piece with a single 6mm - 9mm wide line of adhesive, or 2 lines of adhesive that are 2mm - 3 mm wide, and 2mm - 3mm apart
- the peel adhesion strength of the glue used for the flap must be 0.2N or fibre tear must be exhibited on separation

Please see **figures 20** and **21**

Figure 20 - Coupon Mailer Dimensions (not to scale)

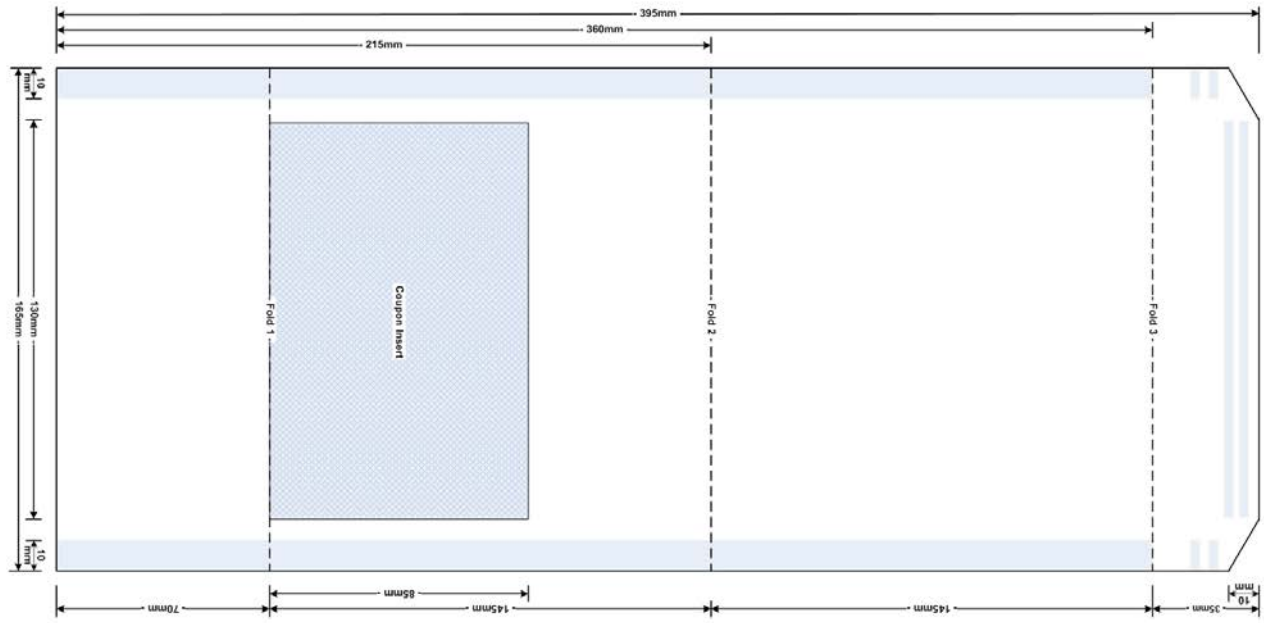
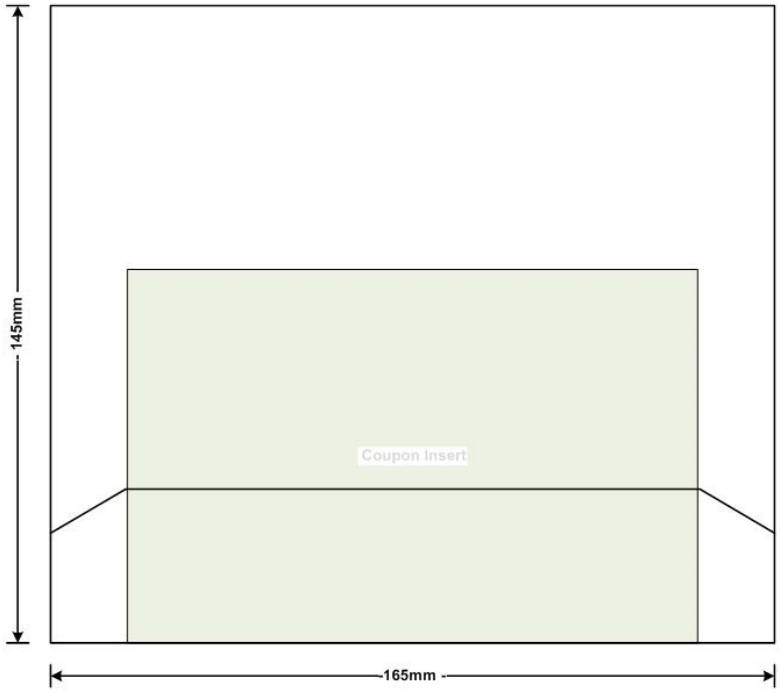


Figure 21 – Finished Coupon Mailer (not to scale)



Feature one piece mailer

This one piece mailer is folded and designed to open out into a full page feature that is not damaged by fibre tear as a result of gluing. The requirements below apply to mail pieces of Letter format.

Design for feature one piece mailer

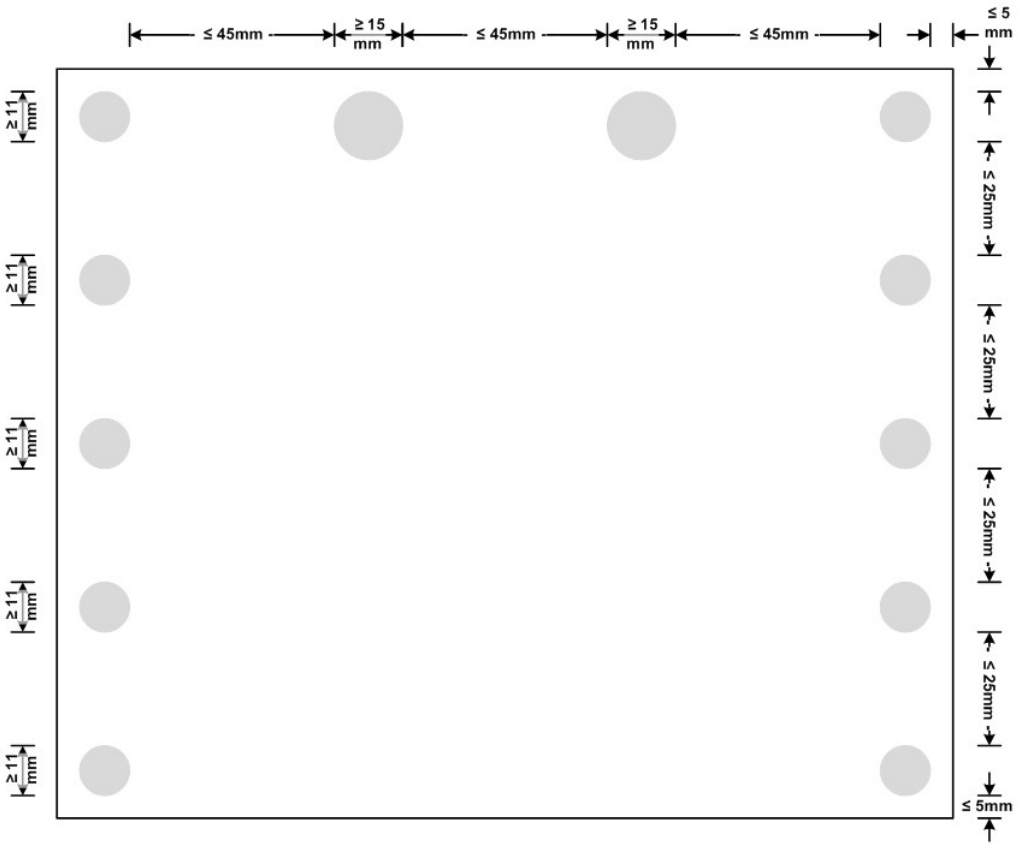
- the fold must be on the bottom edge for landscape mail and on the left edge for portrait mail. i.e.the fold is on the bottom edge when the mail piece is presented to our machines
- inserts are not permitted
- the mail piece may have a maximum of 2 folds
- the paper weight must be 150gsm - 190gsm
- the paper must have a thickness of 130-175 microns

Gluing Requirements for feature one piece mailer

- the sides of the mail piece (excluding the flap) must be sealed with adhesive spots that are 5mm from the edge of the mailer. The glue spots on the side seals must:
  - have a peak peel adhesion strength 0.2N
  - be ≥ 11m in diameter
  - be ≤ 25mm apart
- the long edge glue seal must:
  - have a peak peel adhesion strength 0.25N
  - be 15m in diameter
  - be 45mm apart
- the glue weld must be 80 microns thick

Please see **figure 22**.

Figure 22 - Feature one piece mailer (not to scale)



16. Machine-readable letters – OCR specifications

How it works

Using OCR enables you to print your addresses in a typeface that our sorting machines are able to read, by breaking each line down into separate characters or words and looking for vertical white paths between them.

However, in order for OCR to function properly, only certain fonts can be used and print quality must be of a certain standard. For example, using typefaces that are more unevenly spaced than others or printing labels on a printer where the ink is running low may cause the item to be rejected and us having to resort to manual sorting mode, which can cause delay and affect your discount level.

Address Standards and Printing

You must ensure that you follow the addressing standards and Delivery Address Block requirements as laid out earlier in this document.

Background Reflectance (BR) and Reflective Difference (RD)

In order to provide sufficient reflectance from the mail piece material that allows sufficient light to be reflected back, a BR value of a minimum of 35% is required. Mail pieces not meeting this requirement will appear as block of dark grey or even black, making it impossible to identify the address on the mail item.

In order to provide sufficient contrast between the mail piece material and the printed address, the RD between the mail piece background and the Printing Reflectance must be a minimum of 30%. Mail pieces not meeting this requirement will appear as black making it extremely difficult to distinguish the address from the mail piece material

Clear zones

Clear Zones are the areas on your posting you should leave free of any markings. They are used by our machines to print and read code and locate addresses. You should leave Clear Zones in the following areas:

- 5mm around the address (see also above)
- starting from the bottom edge up to 18mm high, stretching to 130mm from the right edge
- starting 60mm from the bottom edge up to 10mm high, stretching 100mm from the right hand edge

In addition, no part of the address should fall within 40mm of the top of the mail piece. However, if you cannot meet this specific requirement, then as long as there is no other print or graphic on the envelope that could construed as an address, and providing the address conforms to the PAF®, then the address block may encroach into the 40mm clear zone as long as the last line of the address is wholly no nearer than 50mm from the top of the envelope.
If logos and statements are applied to Sustainable Advertising Mail envelopes, clear zones must apply.

17. Machine-readable letters – Barcode specifications

The Royal Mail Barcode is a four state Barcode symbology developed by us for use in automated mail sortation processes.
The character set includes both alpha and numeric characters, enabling high data encoding and processing speed with all types of printing systems. The code's design also incorporates a data synchronisation element. This can be used to track data independently of the speed at which the read head moves over the Barcode.

Address Standards and Printing

- there are no constraints for fonts used for printing addresses for Barcode mail. However, all addresses must be visible and legible and laid out as per the details in the Address Quality and Address Standards of this section
- for Barcode mail pieces with window envelopes, the mailer defined information can tap out either totally or partially and the top line of the address block i.e. the recipient's name may be tapped out of the window to the right and top provided that the remainder of the address is fully visible and that the recipient's name taps back into the window. Note the Barcode itself must maintain its 2mm clear area throughout the tap test

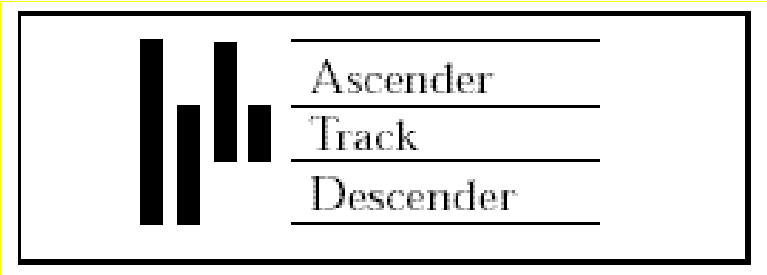
Background Reflectance (BR) and Reflective Difference (RD)

In order to provide sufficient reflectance from the mail piece material that allows sufficient light to be reflected back, a BR value of a minimum of 35% is required. Mail pieces not meeting this requirement will appear as a block of dark grey or even black, making it impossible to identify the Barcode on the mail item.

In order to provide sufficient contrast between the mail piece material and the printed Barcode, the RD between the mail piece background and the PR must be a minimum of 30%. Mail pieces not meeting this requirement will appear as black making it extremely difficult to distinguish the Barcode from the mail piece material.

Characteristics of Barcode

Each alphanumeric character consists of four bars, of which two have ascenders and two descenders. The track element is present in all bars.



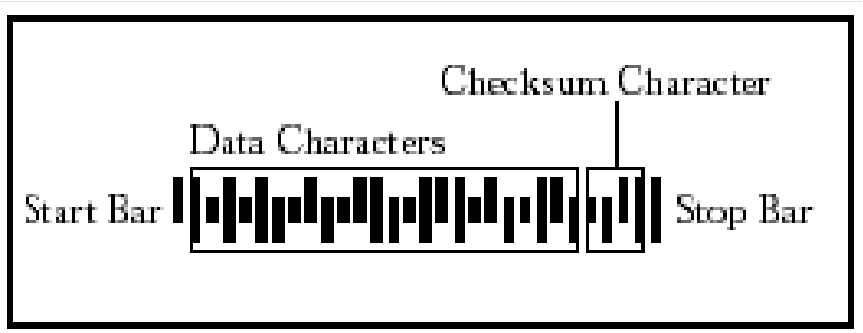
Barcode alphanumeric character set

Using this form of coding, there are only 36 valid characters in the entire character set:

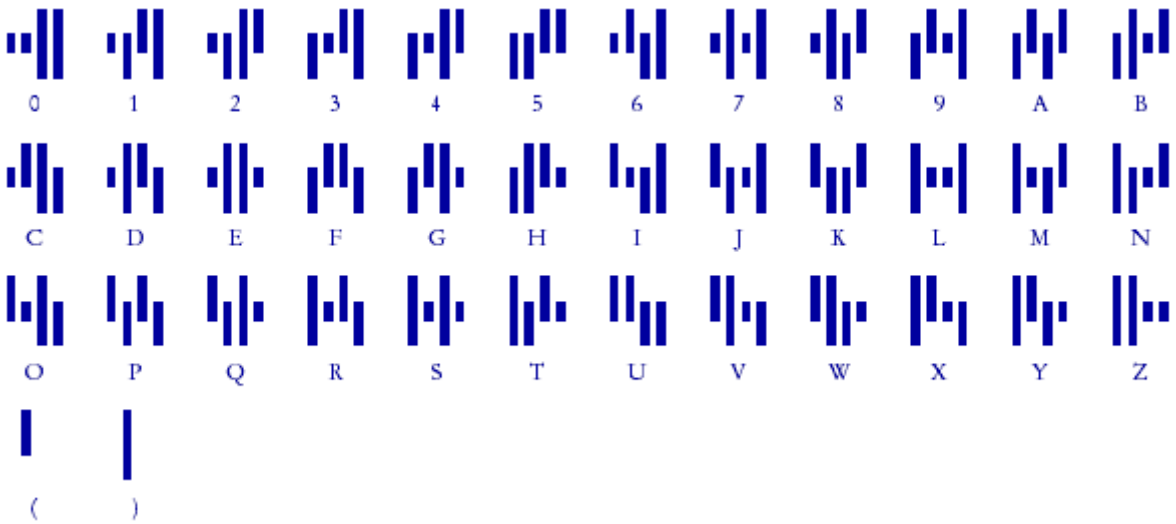
- numeric characters 0–9 and
- alpha characters A–Z
- open and close brackets (–)

Complete Barcode

A complete Barcode is made up by a set of distinct bars and spaces for each character, followed by a Checksum character and enclosed by a unique Start bar, Stop bar and surrounded by a Clear Zone. Unique Start and Stop bars at the extremities of a full code enable the orientation of the code to be identified and thus enable it to be machine-read in any direction.



Complete Barcode character set:



Clear Zone

The Clear Zone is the area covered by the code with an additional border of at least 2mm on all sides. It consists of a background with constant reflectance, to comply with the optical specification in this section of the user guide.

This means that no other print or the edge of the window must fall within 2mm of the Barcode.

Optical specification

The Barcode must be printed so that it contrasts with the background, typically black bars on a white background, and the print quality shall be consistent throughout the code.

The optical characteristics of the printed Barcode characters can vary substantially, depending on the varied print processes used to produce them, and the quality of the substrate onto which they are printed. Please make sure that the reflectance and print quality characteristics are maintained within acceptable limits, to ensure the reading process is reliable.

Print Contrast Ratio (PCR)
The PCR is an indication of how well the printed Barcode on the mail piece stands out from the background. For Barcode mail this must be a minimum of 40%. Positive Contrast or Inverse Printing (Barcode lighter than the Background) is not permitted.

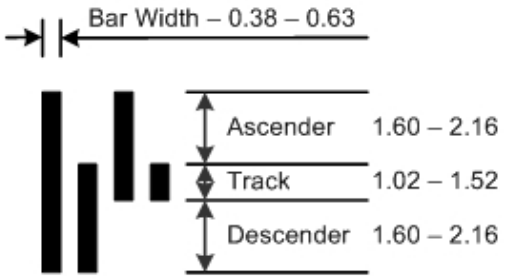
Symbology, dimensions and tolerances measurement
When Barcodes are magnified, their edges may not always be clearly defined, making accurate measurement more difficult. In order to ensure that measurements are within required specifications, it is necessary to define the edges between each light and dark element of the Barcode. The edge of a bar is defined as:

> "the position where the apparent reflectance is exactly halfway between the minimum and maximum reflectance values of the adjacent bar and space, when viewed using a circular sample aperture of less than 0.6X, where X is defined as the nominal width of the bars in the code"

Dimensions
The minimum possible length for a Barcode is 35.98mm for a 5 character postcode (including Start and Stop bars, a DPS and a Checksum at a pitch of 24 bars per inch). The maximum possible length for a Barcode is 53.34mm for a seven character postcode (including Start and Stop bars, a DPS and a Checksum at a pitch of 20 bars per inch). You will also need to allow for the 2mm Clear Zone around the Barcode.

The Barcode has been developed for use with most common printing systems. However, as many of these systems might not be able to match ideal requirements, we have also incorporated systems that read imperfect Barcodes to the extent those practical algorithms will allow. The dimensional tolerances shown below represent the maximum tolerances that are acceptable when using the Barcode.

Tolerances for the Barcode

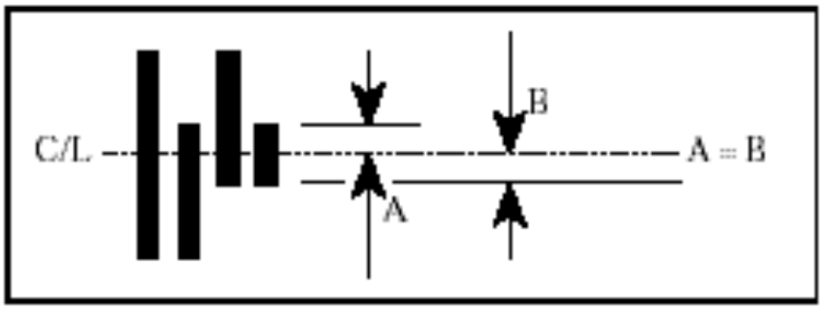


Barcode edges must be sharp and clearly defined to help eliminate misreading.
For clarification, to ensure that this form of code can be read:

- the width requirements apply throughout the whole bar i.e. no part of the bar can be less than 0.38mm wide or greater than 0.63mm wide
- the print quality must be consistent throughout the code and there must be no gaps between the printed dots

Vertical alignment

The track element of the bars must be symmetrical about the centre line of the code +/- 10% of the height of the centre line.



Skew

The skew of each bar in the code must be less than 5°, in either clockwise or anti-clockwise rotation, as illustrated by the angles marked 'Y' in the diagram.

Additionally, the sum of overall code skew and bar skew must be less than 5° in total, as illustrated below. The angle 'X' must be referenced to a line parallel with the longest edge of the mail piece, as shown in the diagram below.

Maximum skew tolerances

Data Formats

Barcode format

The Barcode enables you to encode routing data onto your mail items. All Barcodes contain a full postcode, with additional information to enable each delivery point in the United Kingdom to be identified uniquely.

The Barcode format is made up of six component parts:

- Start bar
- outward postcode
- inward postcode
- DPS
- Checksum character
- Stop bar

The different possible combinations of alphanumeric characters within a postcode results in seven different Barcode formats, which are listed in the table below:

Barcode character table:

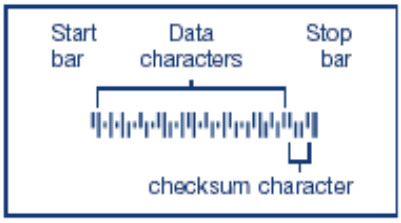
START BAR	OUTWARD POSTCODE	DATA CHARACTERS INWARD POSTCODE	DPS	CHECKSUM	STOP BAR
S	ANA	NAA	NA	C	S
S	AAN	NAA	NA	C	S
S	AANN	NAA	NA	C	S
S	AANA	NAA	NA	C	S
S	AN	NAA	NA	C	S
S	ANN	NAA	NA	C	S
S	AAA	NAA	NA	C	S

A=Alpha, N= Numeric, S= Start/Stop, C= Checksum

Printing in Barcode format

In order to print the alphanumeric characters listed above in Barcode format you will need a copy of the Barcode font, Royal Mail four state code (RM 4SCC) You can obtain this from most font suppliers, or a Windows True Type version is available from your account manager, or from the Royal Mail Technical website **www.royalmailtechnical.com.** When using the Windows True Type Font to print a Barcode, you should make sure that the point size used will ensure that the Barcode dimensions will fall within the maximum and minimum criteria as defined earlier in this section.

Constituent parts of a barcode



Start and Stop bars

Start and Stop bars identify the beginning and end of the Barcode as well as its orientation. The Start bar consists of a track and ascender, while the Stop bar consists of ascender, track and descender. The Start character is positioned at the normal left-hand end of the complete code, adjacent to the first significant data character. The Stop bar is positioned at the normal right-hand end of the complete code adjacent to the Checksum character.

To see the relationship between Start and Stop bars and encoded data characters, please refer to the diagram.

Inward and outward codes
The Barcode character (see previous page) table illustrates the seven inward and outward postcode formats.

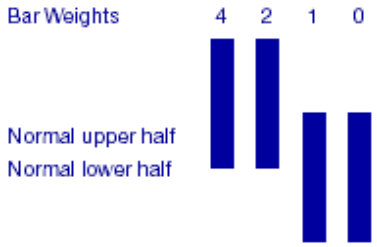
Delivery Point Suffix or DPS
The DPS, in conjunction with the outward and inward codes, uniquely identifies each delivery point. The DPS consists of two characters, as shown here:

NA (N = Numeric character, A = Alpha character) checksum character

For Barcode mailings, at least 90% (95% for Business Mail Plus, Advertising Mail Plus and Sustainable Advertising Mail Intermediate) of the total items posted must be allocated an accurate Delivery Point Suffix (DPS), which must be incorporated within the barcode. The remainder of the items with a barcode must be allocated a default DPS. The default codes are 9U, 9W, 9X, 9Y or 9Z (but no others).

Checksum character
The Checksum character is printed on the normal right-hand end of the data characters, to provide a means of error detection. The Checksum is a valid character that is formulated using a simple algorithm. Each of the four bars within a character is assigned a weighting in relation to its position within the character.

Typical Checksum character:



The character is then split horizontally into the normal upper half and normal lower half. In each half a multiplier is set to zero, for the absence of an ascender or descender. Each bar weighting is then multiplied by its multiplier and then summed together to produce a normal upper half combination value. If the combination value equals six the value is reassigned to zero.

For the character illustrated above, the normal upper half combination value is 0.
(4x1) + (2x1) + (1x0) + (0x0) = 0

The normal lower half combination value for the same character is 1.
(4x0) + (2x0) + (1x1) + (0x1) = 1

The combination values for the characters are then summed to produce normal upper half and normal lower half combination totals. These totals are then divided by 6. The modulus of each division is then used as the combination value, in order for the Checksum character to be produced.

The Checksum algorithm is only performed on the main data characters contained in the code. The Stop and Start bars do not form part of the Checksum calculation.

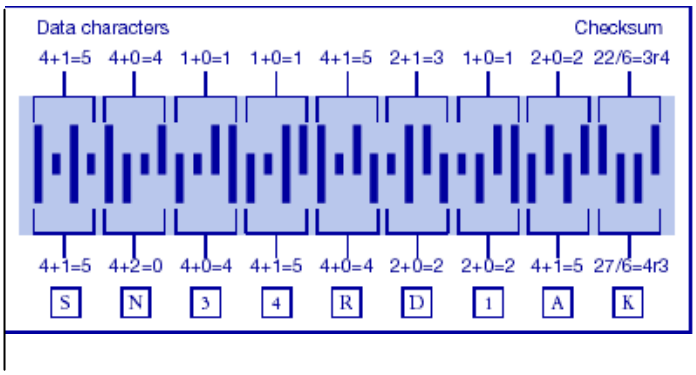
Checksum calculation for a six character postcode (SN3 4RD), plus DPS (1A), is shown here. The algorithm described has been converted into a simple table that can be used to calculate the Checksum character more easily.

A Checksum calculation table:

Column reference

Row reference	1	2	3	4	5	0
1	0	1	2	3	4	5
2	6	7	8	9	A	B
3	C	D	E	F	G	H
4	I	J	K	L	M	N
5	O	P	Q	R	S	T
0	U	V	W	X	Y	Z

An individual Checksum calculation:



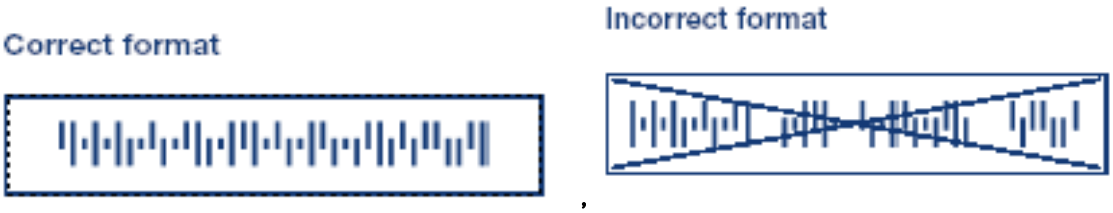
The complete Barcode character set is arranged into a 6 x 6 array and each character can be referenced by row and column co-ordinates. To calculate the Checksum character, simply sum together the row references for all the data characters contained in the code and then divide the sum by six. The modulus of the division will give the row reference for the Checksum character. The process is then repeated for the column reference.

Example: SN3 4RD with a DPS of 1A:

Sum of row references = 5 + 4 + 1 + 1 + 5 + 3 + 1 + 2 = 22 Divide by 6 = 22/6 = 3r4 Checksum character row reference = 4	Sum of column references = 5 + 0 + 4 + 5 + 4 + 2 + 2 + 5 = 27 Divide by 6 = 27/6 = 4r3 Checksum character column reference = 3
Therefore, from the Checksum Calculation table on previous page, the Checksum character is K (row 4, column 3).	

Correct Barcode format

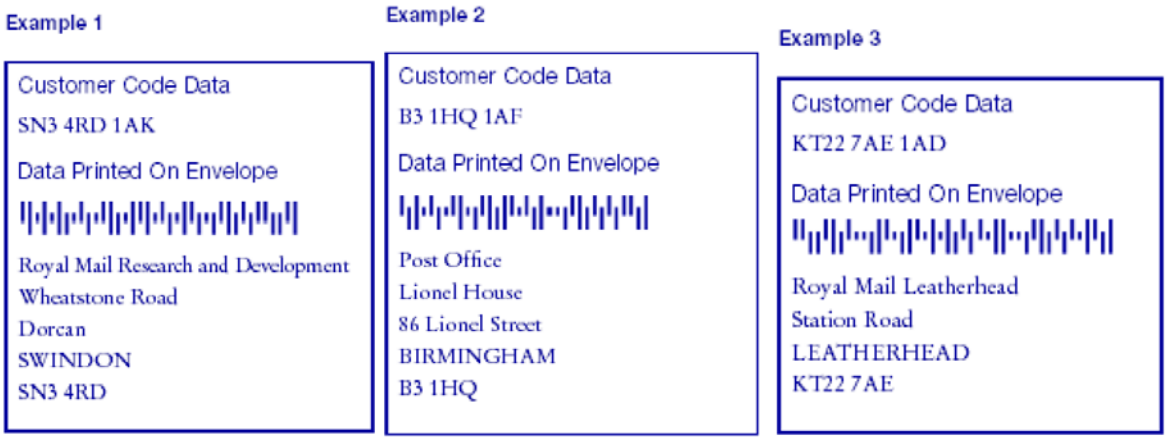
The Barcode must be a continuous string of characters and must not include gaps or space characters. The length of the Barcode will vary depending on the number of characters in the postcode. The Code Density is 20 to 24 bars per 25.4mm and must be equally spaced.



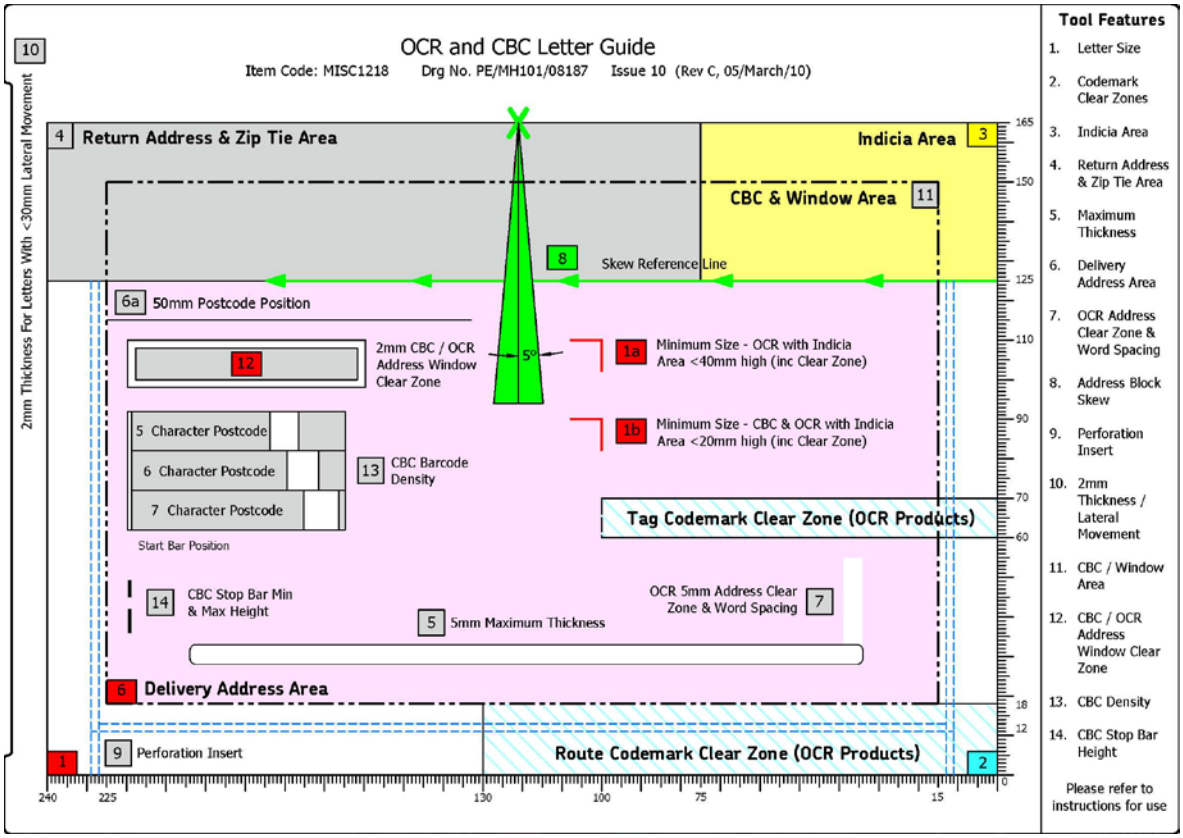
Barcode examples

The outward and inward postcodes are the only parts of the Barcode that should be printed in human-readable form as part of the normal address. See the following three examples, which are not drawn to full size.

Logos and statements on Sustainable Advertising Mail items must still adhere to the machine-readable letter specification.



18. Template for OCR and Barcode letter postings



This OCR and Barcode mail piece guide is available through a member of your Royal Mail account team. Please see the template above, which illustrates these Clear Zones. This is available from a member of your account team as a plastic template.

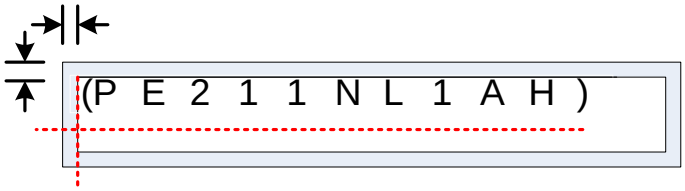
Clear zones for OCR posting

- the address can appear anywhere within the pink shaded area (as shown), but must be at least 15mm from the top left or right edges, and at least 18mm from the bottom edge
- please leave clear a zone 18mm from the bottom edge, and 130mm from the right edge. This is the route code clear zone for Royal Mail codemarking
- please leave clear a zone 100mm from the right edge and 10mm high, with its top edge 70mm from the bottom edge. This is the tag code clear zone for Royal Mail codemarking
- if you are printing a return address on the front of the envelope, it must be wholly in an area no lower than 40mm from the top of the envelope and no less than 75mm from the right side of the envelope. This will prevent our automation equipment from sorting the mail piece to the return address
- where the return address is positioned on the back of the envelope, it must be in the 40mm zone from the top of the mail piece and the preferred, but not mandatory, position is in the centre of the flap.
- only one indicia (PPI, stamp or postage meter) is allowed on a mail piece and it must be in the top right hand corner, in an area 75mm (w) x 40mm (h) as shown above
- logos and statements on Sustainable Advertising Mail items must still adhere to the clear zone specification

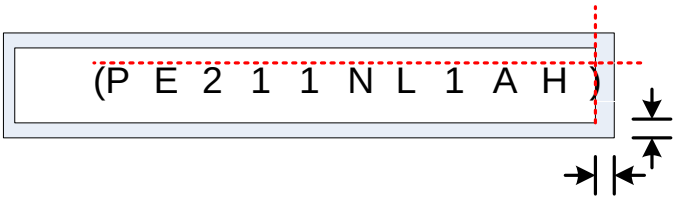
Clear zones for Barcode postings

You must leave 2mm clear around the Barcode at all times. This includes no print, graphics or window edges. Please see example below:

2mm border required at the top & on the left side of barcode
Ignore anything underneath the dotted line



2mm border required underneath & on the right side of barcode
Ignore anything underneath the dotted line



- all mail pieces displaying a full postcode must also have an accurate Barcode printed on them. Items with partial or incorrect postcodes or without a postcode must not have a Barcode printed on them
- only one indicia (PPI, stamp or postage meter) is allowed on a mail piece and it must be in the top right hand corner, in an area 75mm (w) x 40mm (h) as shown above
- the Barcode must be printed on the front face of the item and must be within the Barcode area' which is:
  - between 18mm and 125mm from the bottom edge
  - at least 15mm from the top, right and left edges
- for portrait items, the bottom edge is defined as whichever of the longer edges the Barcode is nearest to
- for square items the Barcode must fall within the areas mentioned above when viewed with the address upright
- when using window envelopes, you should ensure the position of the Barcode does not infringe any of these clear zones when the full range of insert movement within the envelope is taken into account. During design, printing and enclosing, you should take into account the various associated tolerances
- customers may print other Barcodes, which are not four state codes, on the face of the items (e.g. for data capture of returns) but this must be with our prior agreement. This will ensure that your Barcode format does not conflict with the Royal Mail Barcode and cause the mail to be delayed or processed using another product which may not give the equivalent level of discount

19. Machine-readable large letters – specific requirements

Getting started

Please can you check the entry requirements i.e. volume, sortation levels and labelling found in the relevant section of this user guide for each product, available on **www.royalmailtechnical.com.** If you can meet the requirements of the product chosen, you then need to meet the following:

- your items must be within the large letter format but we will permit C5 (162mm x 229) items which are polywrapped (these will be charged at large letter format)
- your items must meet our OCR requirements detailed later in this section

Address standards and printing

You must ensure that you follow the addressing standards and Delivery Address Block requirements as set out in this section of the user guide.

Mail piece dimensions

Weight	➢ minimum: 10g ➢ maximum: 750g
Thickness	➢ minimum: 1mm ➢ maximum: 10mm
Height	➢ minimum: 162mm ➢ maximum: 245mm
Length	➢ minimum: 229mm ➢ maximum: 345mm
Square items	➢ minimum 229mm x 229mm

Please note:

These dimensions apply to the finished mail piece i.e. the outer covering and including the contents.

Technical requirements

For ease of use, this element of the user guide has been separated into general requirements which cover paper and polymer envelopes and polywrapped mail pieces, then requirements specific to the three outer covering options are listed.

Design of Logos or Advertising

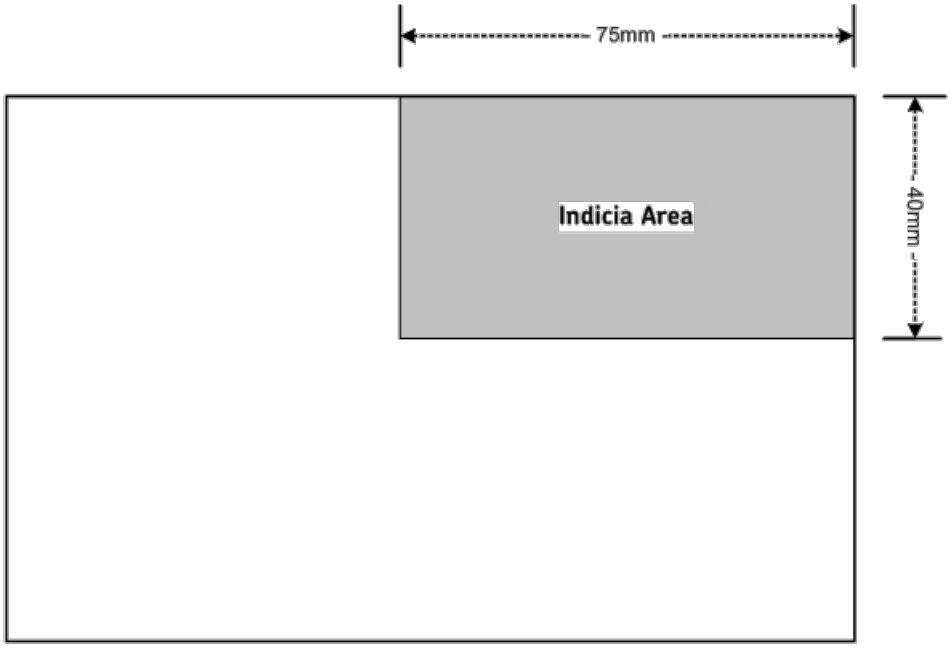
To reduce any potential for Address Interpretation errors, these must not look like an address, geographical location, country or a Royal Mail bag or bundle label and they must not be printed in the Delivery Address Block, the clear zone around it or the Indicia area. Slogans where the company name contains the words 'Return', 'Address' and 'Undelivered' should be avoided.

Please note:

Logos and advertising may go into the general indicia area (40mm x 75mm) area (see figure 23) but must not go into the indicia's clear area which varies as follows:

- Response services is variable, please refer to Response Service specification
- PPIs require 2mm clear around the image

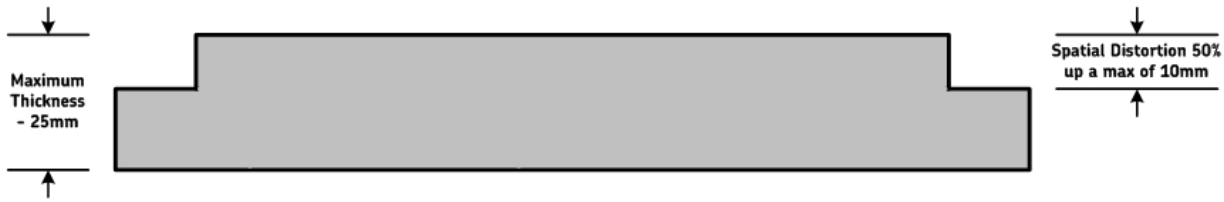
Figure 23:



Inserts

- for any insert other than the paper contents, you must make sure they are fixed in position so they don't move around during processing. You can use glue or self adhesive tabs to fix any inserts
- inserts other than paper that are placed in an envelope must be fixed in position and attached to the insert, such that they cannot move around during the processing of the mail item. The inserts may include small metal objects such as keys, coins, and badges
- if you do choose to have any inserts, please be aware that where you have 'step changes' in the thickness of the mail piece, the spatial distortion (see figure 24) i.e. variation in the thickness of the contents, cannot be more than 50% of the thickness of the item up to a maximum of 10mm and the address must be on the 'flat side of any item, it cannot be placed on any irregular or convex shaped sides

Figure 24:

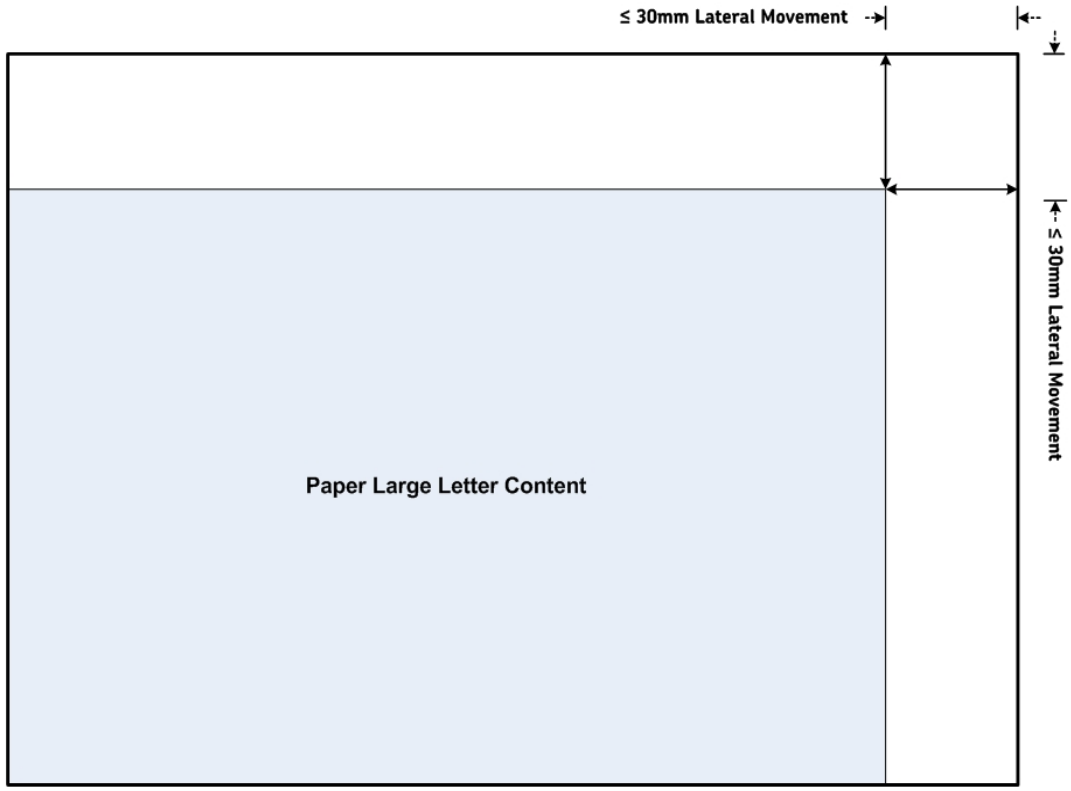


- for paper envelopes – depending on the thickness of your item, to prevent damage to your item and other mail pieces there are limitations on how much 'empty' envelope you can have

i.e. the thicker the item, the less 'empty' envelope we would ask you to have (see **figure 25**) .
The following applies to the movement of the largest paper insert:

- if your item is up to 2mm thick then there is no restriction on the lateral movement of the largest paper insert up to the maximum envelope size of 345mm
- however, for any item which has a thickness of 2mm or more then the lateral movement of the insert within the letter can be 30mm or less

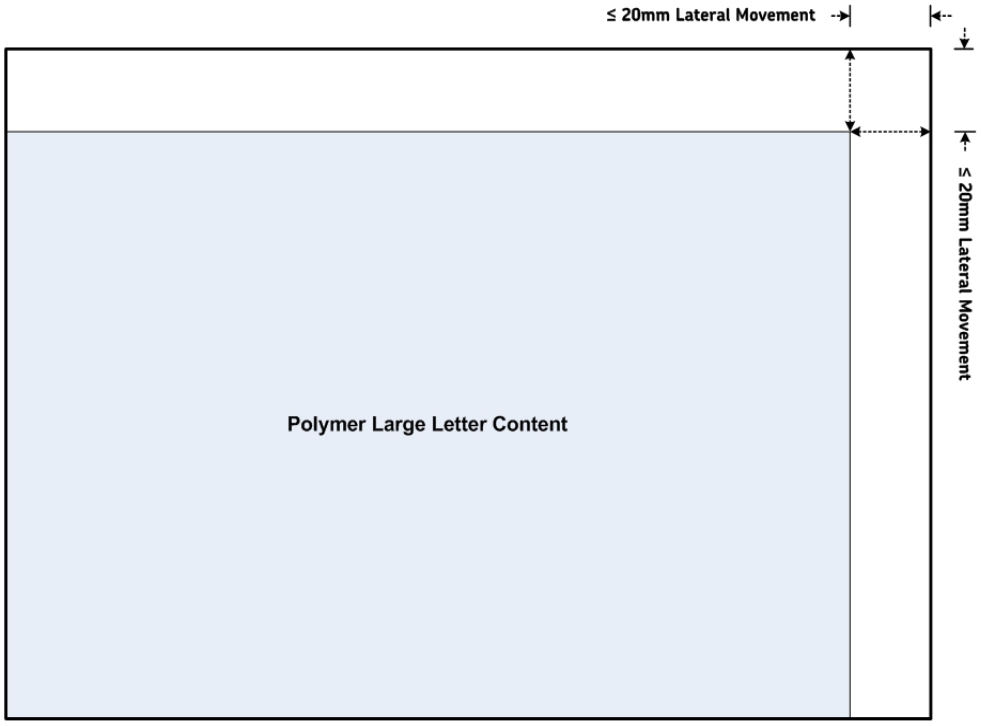
Figure 25:



- for polymer envelopes or polywrapped items – where the polymer is transparent only the largest insert must be visible to the front of the large letter and the lateral movement is ≤ 20mm (see **figure 26**). Please be aware, there is no requirement for the content to be referenced to the bottom left corner, you just need to ensure that there is no more than 20mm along the long edges and no more than 20mm along the short edges

Please note:
For polymer envelopes or polywrapped items you will need to allow for any lateral movement when defining the Address block location. The assumption must be made that the poly may fold during processing and, should this happen we still need a defined clear area from the edge to ensure the Delivery Address Block can be read.

Figure 26:



Material – Construction

Paper envelopes

- (they must be paper based and no perforations are permitted)
- envelope paper weight = 70gsm minimum
- single piece (folded & sealed) = 100gsm minimum
- large letter sized postcards = 200gsm minimum

Polymer envelopes and polywrap

- it must be made of polymer film e.g. polyethylene
- materials produced from polymer fibres that are randomly distributed and non-directional (laid as a web) and bonded together by heat and pressure are not acceptable e.g. Tyvek

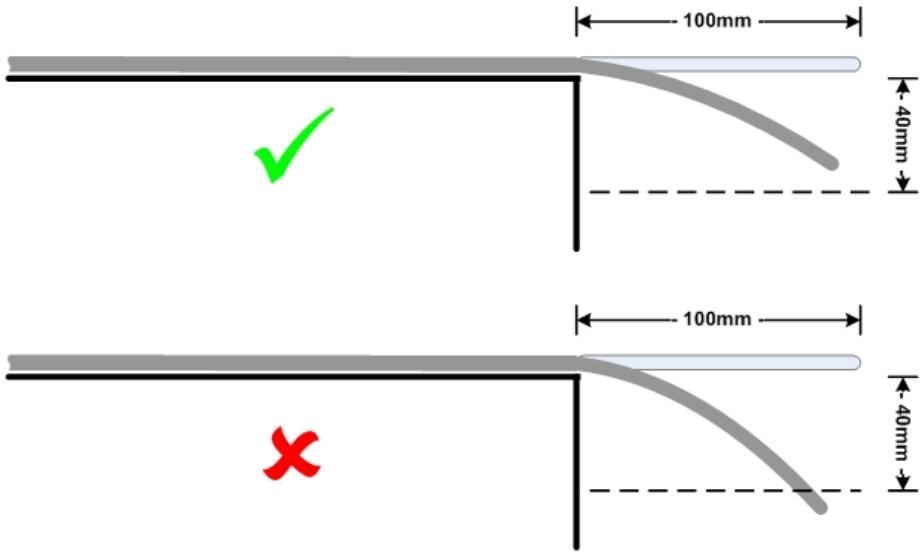
Material – General

- Absorbency (paper based envelopes): 15–35g of water in 1 minute (BS EN 20535 - Paper and board. (Determination of water absorptiveness)
- Glue: Any adhesives used in the production of envelopes must not leak onto the open surface of the envelope and must be dry when the mail is presented to Royal Mail. In no instance should mail pieces be stuck together. When polymer envelopes are used, the glue must be stronger than the polymer and must not produce protruding mounds on the mail item
- Opacity: ≥ 85 % (BS ISO 2471 - Paper and board. Determination of opacity (paper backing))
- Porosity: < 700 ml/minute (BS 6538-2 - Air permeance of paper and board)
- Rigidity / Stiffness: The acceptable rigidity / stiffness is ≥ 8N.mm. There is no upper limit on mail piece stiffness

This can be measured as follows (see figure 27):

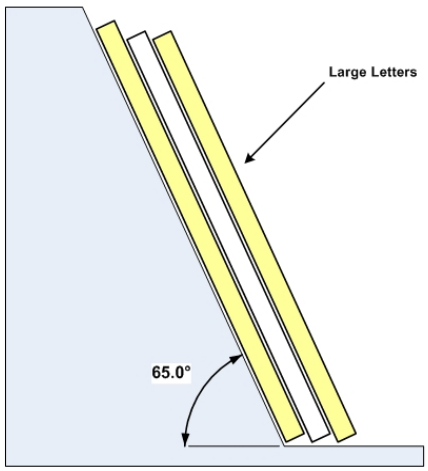
- a single large letter should be placed on a flat surface with the shortest edge of the large letter overhanging a straight edge of a flat surface by a horizontal distance of 100mm
- the leading edge of the large letter is then released and allowed to bend down under its own weight
- if the leading edge drops to 40mm or more, then the stiffness is less than 8N.mm and the large letter on machine-readable

Figure 27:



- **Separation:** The items must not be stuck together and must be capable of separating to allow them to be effectively processed. When placed on a slope of 65º to the horizontal, the items must be capable of separating, by sliding one from another, under the force of gravity (see **figure 28**)

Figure 28:



- Shape: Items can be rectangular or square within the permitted dimensions and can be laid out (address and payment indicia) in landscape or portrait format. We do require you to ensure that the four sides are all straight lines and intersected by a 90 º angle

Polywrap outer

- the film must be intact, undamaged and must not be punctured or torn
- perforations are not acceptable
- the film must be sufficiently strong enough to tolerate handling without tearing or splitting at the seals
- the film must be > 15 µm (15 microns) thick when measured at any point on the large letter other than the seal
- any overprinted text must adhere to the film and must not break up or wear during processing
- there must only be a single layer of film covering the Delivery Address Block

Print contrast

- required Print Contrast Ratio for addresses printed on envelopes ≥ 50 %
- required Print Contrast Ratio for addresses printed on window inserts ≥ 55 %
- required Minimum Reflective Difference ≥ 30 %
- required Minimum Background Reflectance ≥ 35 %
- inverse printing i.e. negative contrast is not permitted (i.e. address block lighter than background)

Sealing

This section is divided into the paper and polymer / polywrap requirements as they are different.

Paper envelopes must be sealed securely on the back, front and edges. A tolerance of 35mm x 25mm is permitted on the opening flap. Regardless of whether the opening flap is placed on the front or back of the item (the front being where the Delivery Address Block and the payment Indicia are located) it must be sealed to within 35mm from the fold of the envelope and 25mm from the envelope side.

Figure 29:

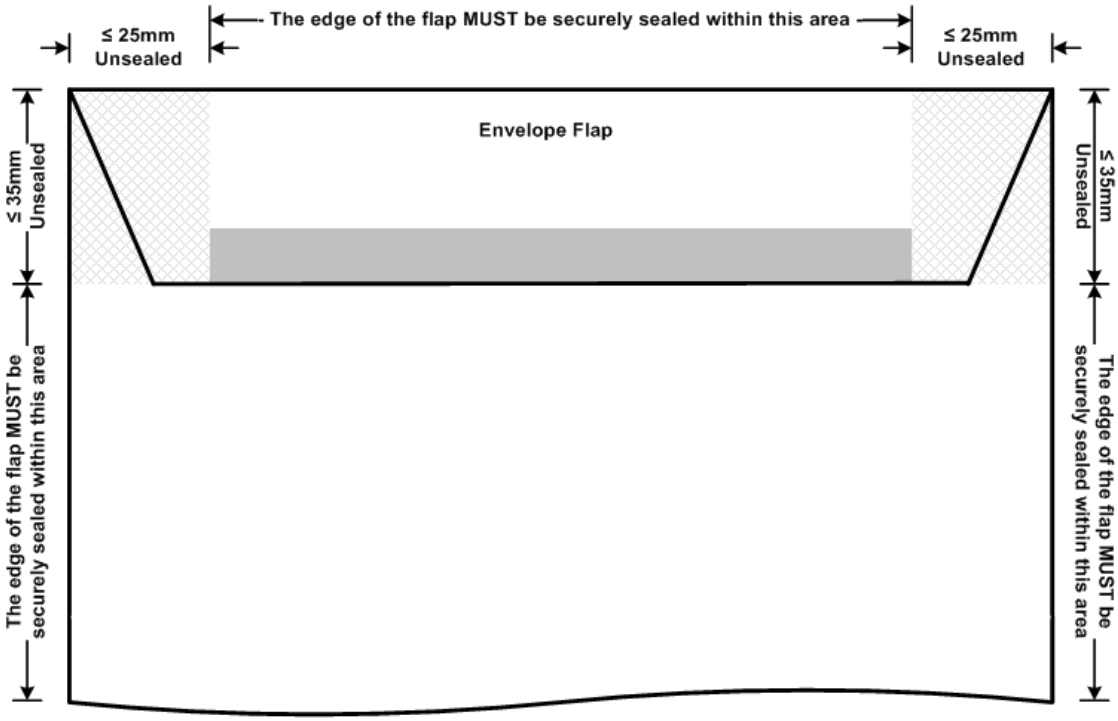
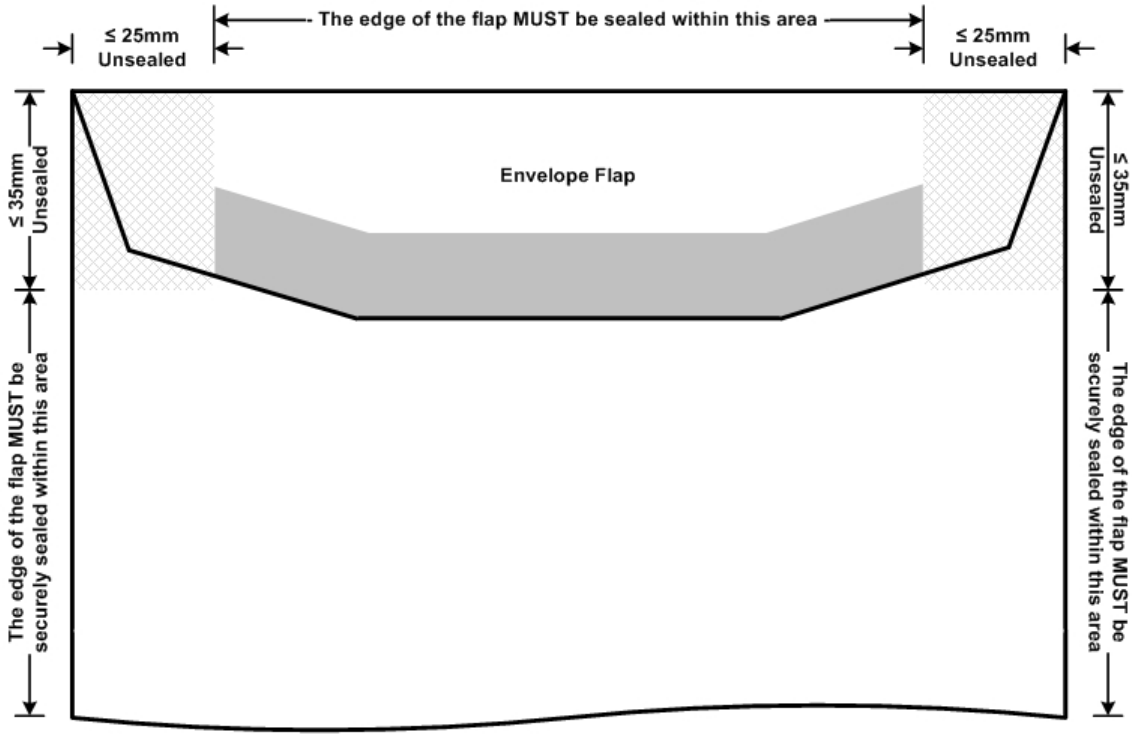
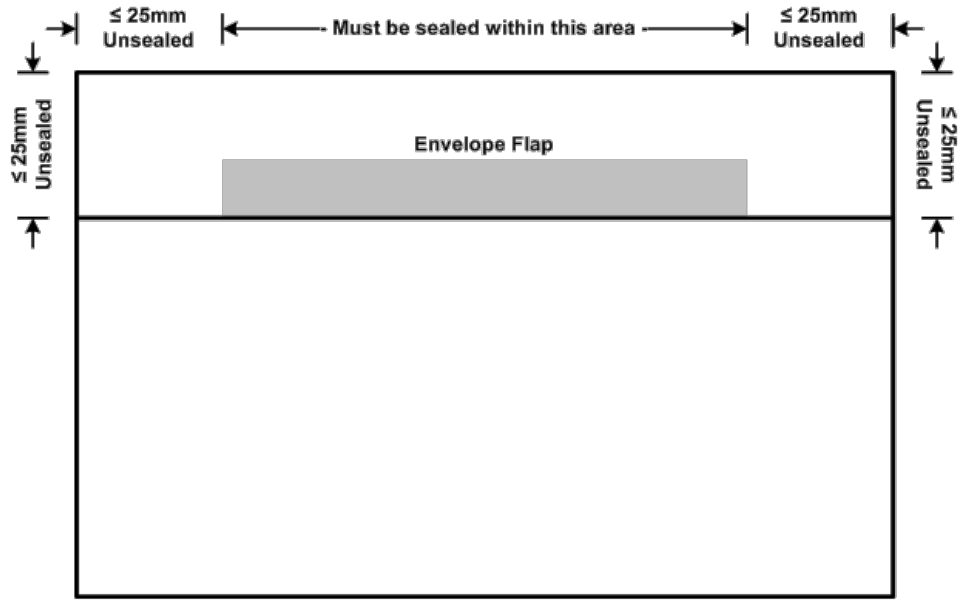


Figure 30:



Polymer envelopes must be sealed along all the edges and have the opening flap on the back (see **figure 29**). The opening flap has to be sealed to within a minimum of 25mm from the fold of the envelope flap and 25mm from the sides of the envelope (see **figure 31**).

Figure 31:



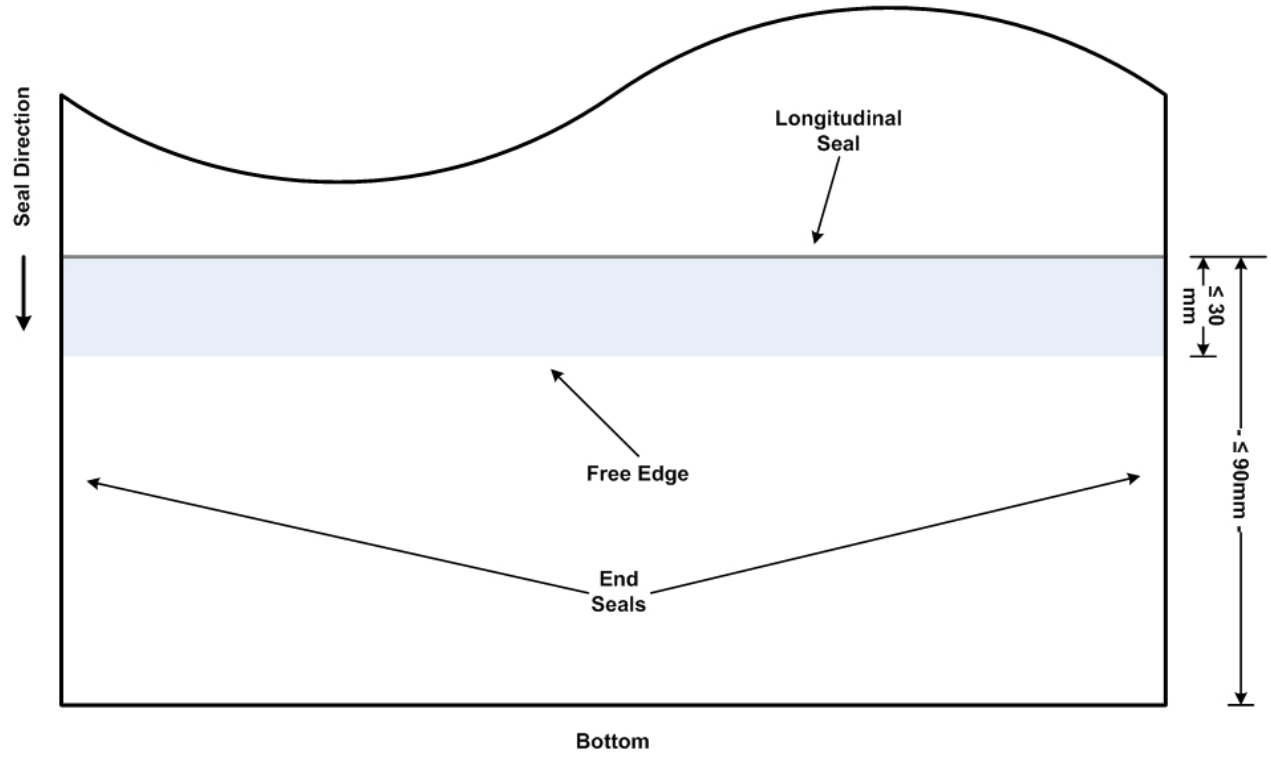
Items which are poly wrapped must be securely sealed on the front, back and side edges. The requirements for any seal which runs along the length, or width, of the item are as follows:

- this seal must be sealed at each end along the full length of the seal
- the free edge of the seal must be less than 30mm deep
- the preferred location for the seal is the back of the large letter
- due to the requirements for the seal when placed on the front, it cannot be across the width of the mail piece (but if on the back it can)

If you have chosen not to have the seal on the back and have placed it on the front then please ensure you also meet the following requirements:

- the seal must not be over the Delivery Address Block
- the seal must be towards the bottom of the large letter and be no more than 90mm from the bottom edge (see figure 32)

Figure 32:



Windows (paper envelopes)

Although you are only permitted one window on your mail piece, you do have the option of using this window for either the Delivery Address Block or for advertising information. You do need to ensure that the window is not an open space i.e. there must be a transparent film covering the aperture and that it is square or rectangular (circular windows are not permitted).

As we don't wish to limit your options when it comes to designing or purchasing window envelopes, we do not have any specific requirements for the strength of the window but you do need to ensure that when we receive the work from you:

- the window film is not flimsy i.e. must be sufficient strength & quality that it is not visibly creased or crumpled

- that it is flat and securely and evenly sealed to the inside of the envelope, this includes the requirement that the corners of the aperture are curved rather than straight as this will help prevent damage occurring when the items are going through the final machine sortation stage
- that it does not take up more than 25% of the surface area on the side where it is found
- the window area where it is used for an address must fall within the Delivery Address Block area – please see figures 33, 34, 35 and 36
- Gloss (window and poly film): The gloss value must be ≤ 150 (American standards of testing and materials (ASTM) 2457 Measured at 60 degrees)
- Haze (window and poly film): The haze value must be ≤ 75 % (ASTM D1003-00 Procedure A (Hazemeter))

Delivery Address Block

When printing the Delivery Address Block the maximum characters per line of the address block is 64 and please ensure that the content of one address line is not wrapped onto a second line i.e. Team Valley Trading Estate must be printed on the same line and not spread over two. We

ask you to use one of the recommended fonts and sizes (detailed earlier in this section of the user guide) and ensure that each line of the address has characters which are the same font and point size and that the spacing between the words is less then 5mm.

Please note:

The figures shown are separated into paper and poly, trayed and untrayed and includes C5 (162mm x 229mm) format because of the smaller area, due to the PPI and return address area, permitted for the Delivery Address Block.

The Delivery Address Block cannot be located in the following areas (figures 33a&b&c, 34a&b&c, 35a&b and 36a&b):

Paper envelopes:

- the indicia area (40mm from the top of the envelope x 75mm from the right)
- the return address area (40mm down from the top and no less than 75mm from the right)
- the 'Tag Code Zone' (referenced on the longest edge of the large letter, 33mm up from the bottom right corner and covering an area 30mm high and 110mm long)
- a 'frame' around the item (15mm around the perimeter i.e. the bottom, left and right edges)
- over the edge of the envelope flap

Polymer envelopes or polywrapped items:

- the indicia area (40mm from the top of the envelope x 75mm from the right)
- the return address area (40mm down from the top and no less than 75mm from the right)
- the 'Tag Code Zone' (referenced on the longest edge of the large letter, 33mm up from the bottom right corner and covering an area 30mm high and 110mm long – this must include the lateral movement i.e. the excess poly of which 20mm is the maximum permitted)*
- a 'frame' around the perimeter of the item (up to 35mm i.e. a mandatory 15mm and the remaining clear area is the excess poly of which 20mm is the maximum permitted Therefore, if for example, your mail piece only had 10mm excess polywrap then you would be expected to leave 25mm clear)*
- over the edge of the envelope flap

Figure 33a- (trayed PPI landscape paper) (not to scale):

This figure indicates that if you were to tray landscape items then any code marks would be applied in the bottom right corner.

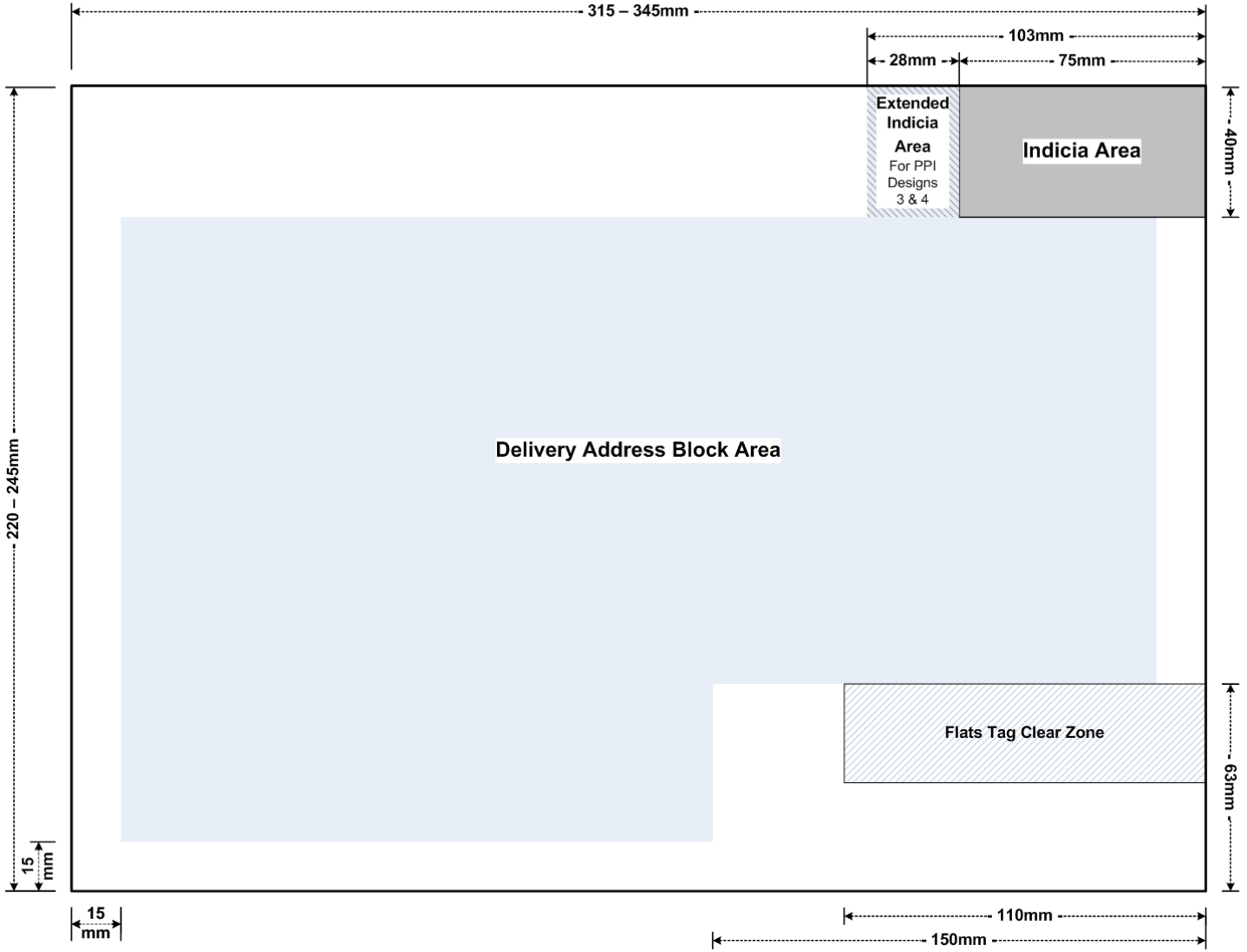


Figure 33b- (trayed landscape poly) (not to scale): This figure indicates that if you were to tray landscape items then any adhesive label and code marks would be applied in the bottom right corner.

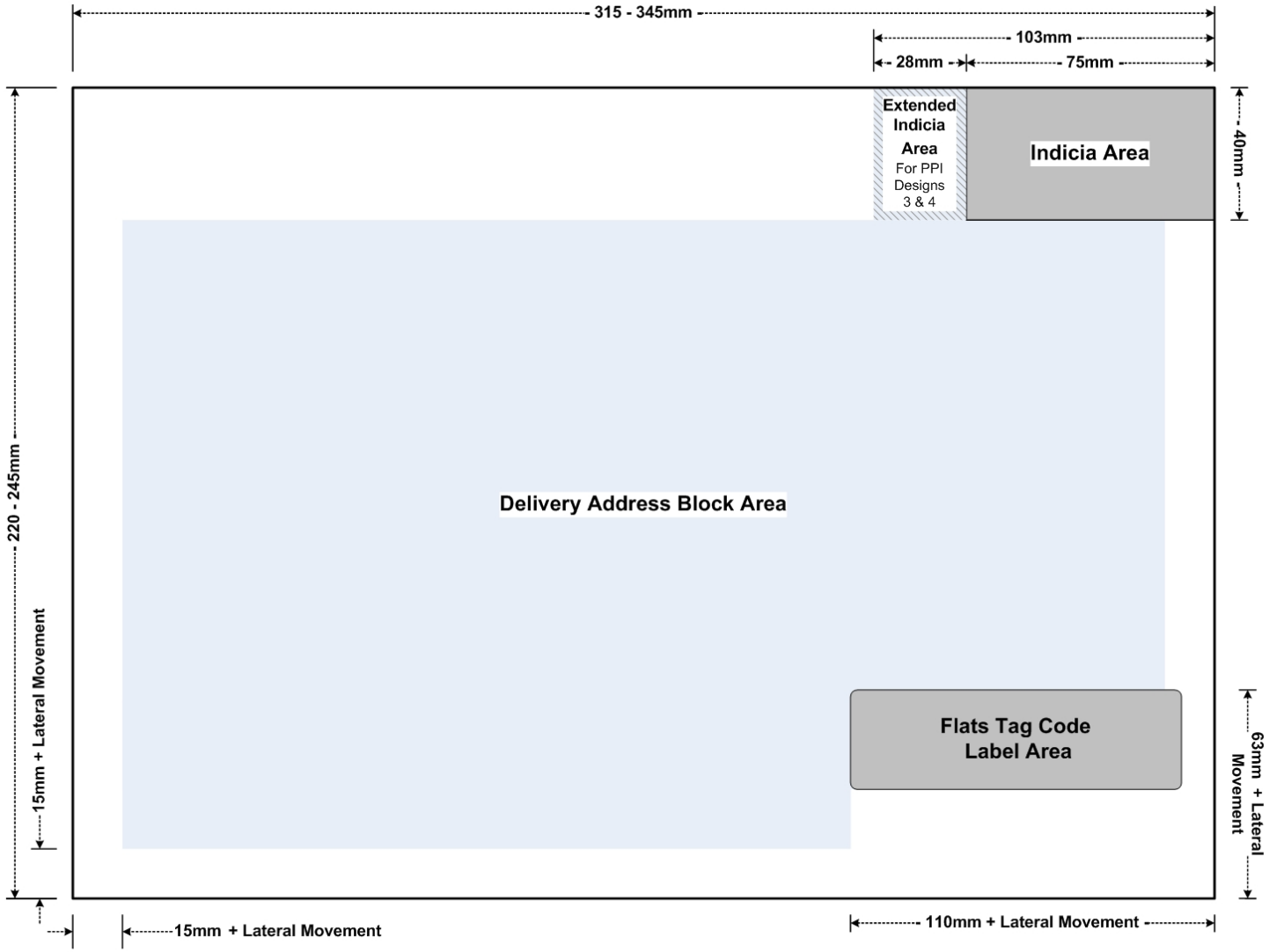


Figure 33c (trayed poly C5 – 162mm x 229mm - landscape) (not to scale):

This figure indicates that if you were to tray C5 items then any adhesive label and code marks would be applied in the bottom right corner.

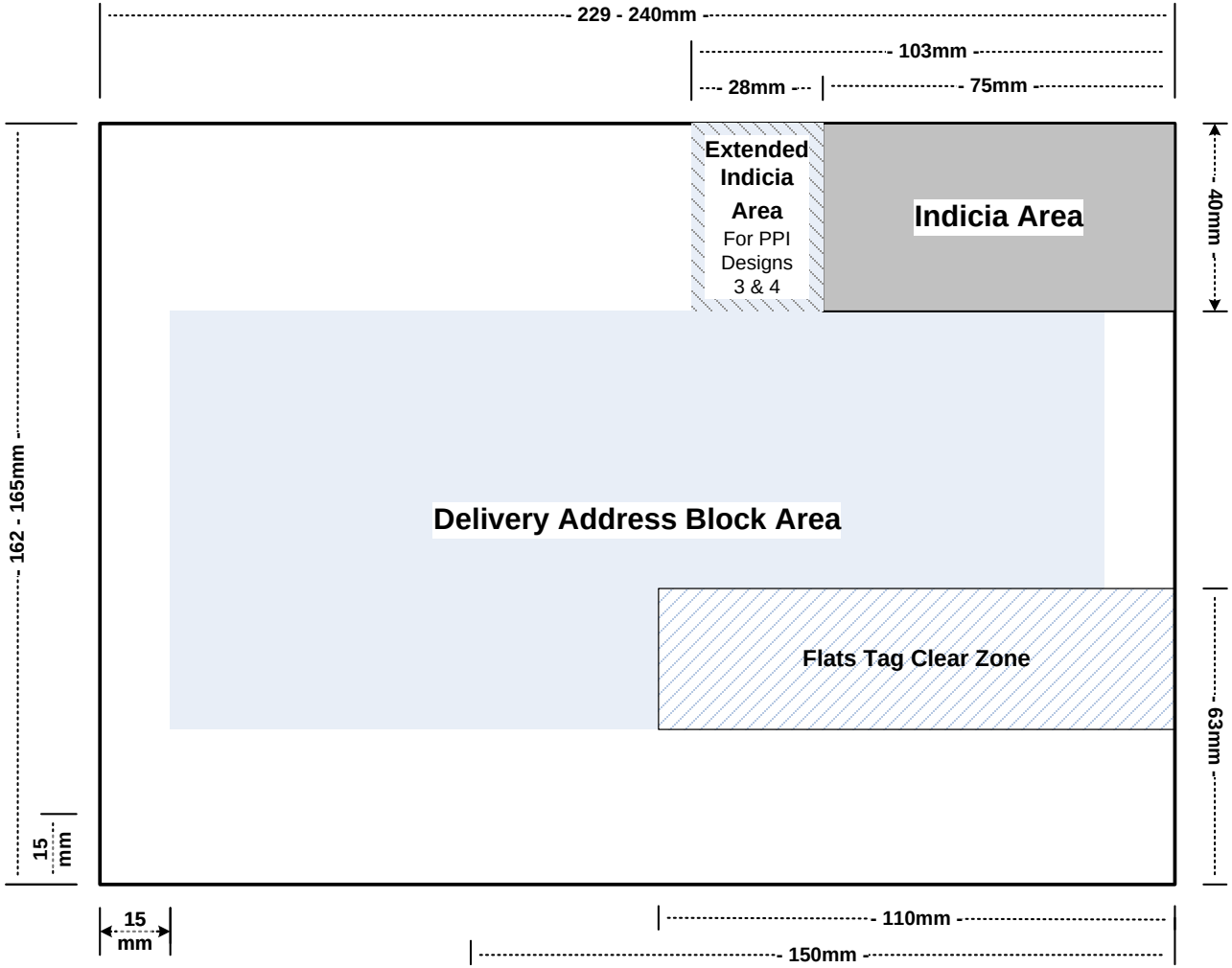


Figure 34a (trayed portrait paper) (not to scale):

This figure indicates that if you were to tray a portrait item then any code marks would be applied in the bottom left corner if the Indicia was in the top right corner.

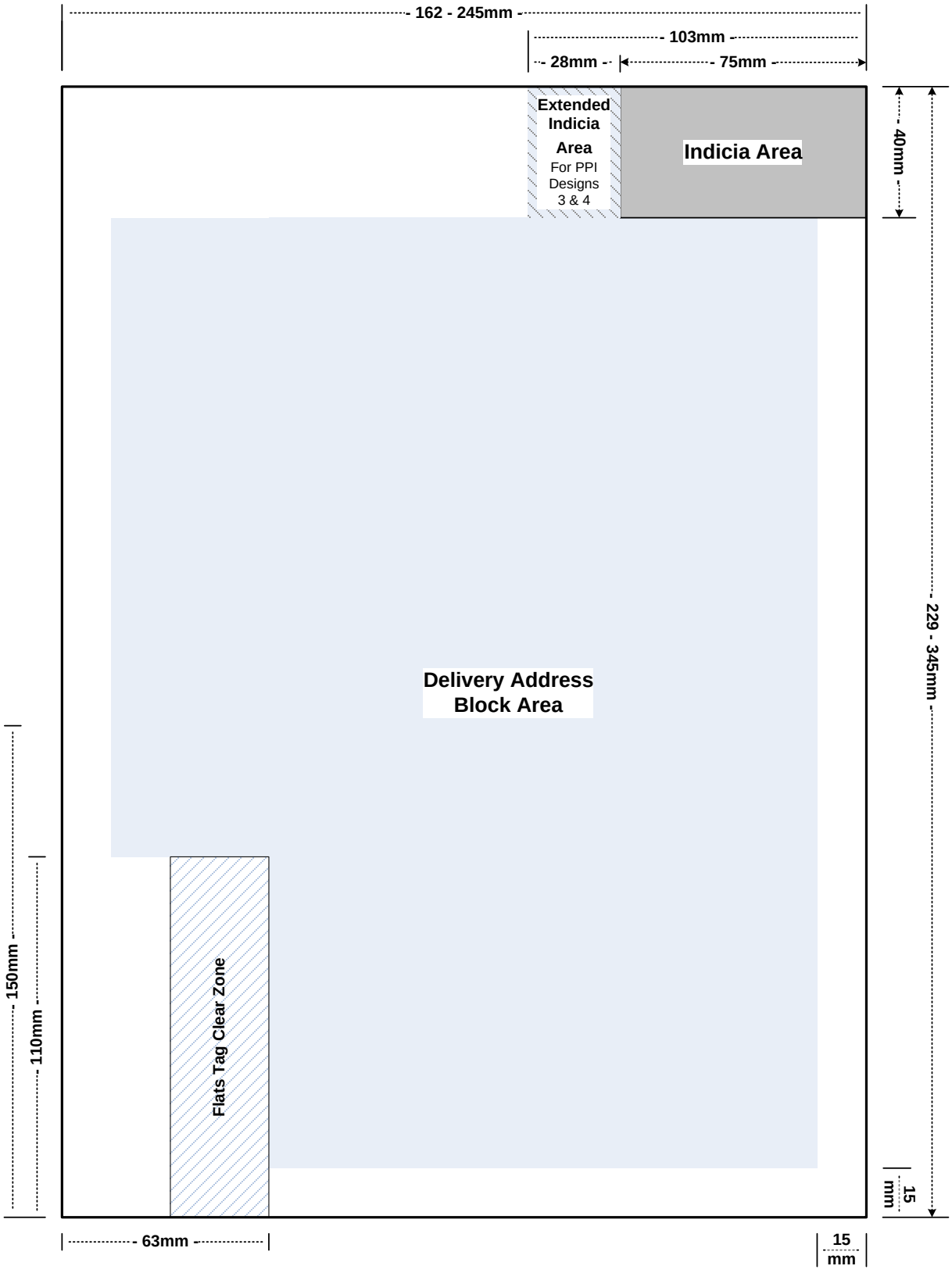


Figure 34b (trayed portrait poly) (not to scale):

This figure indicates that if you were to tray a portrait item then any label and code marks would be applied in the bottom left corner if the Indicia was in the top right corner.

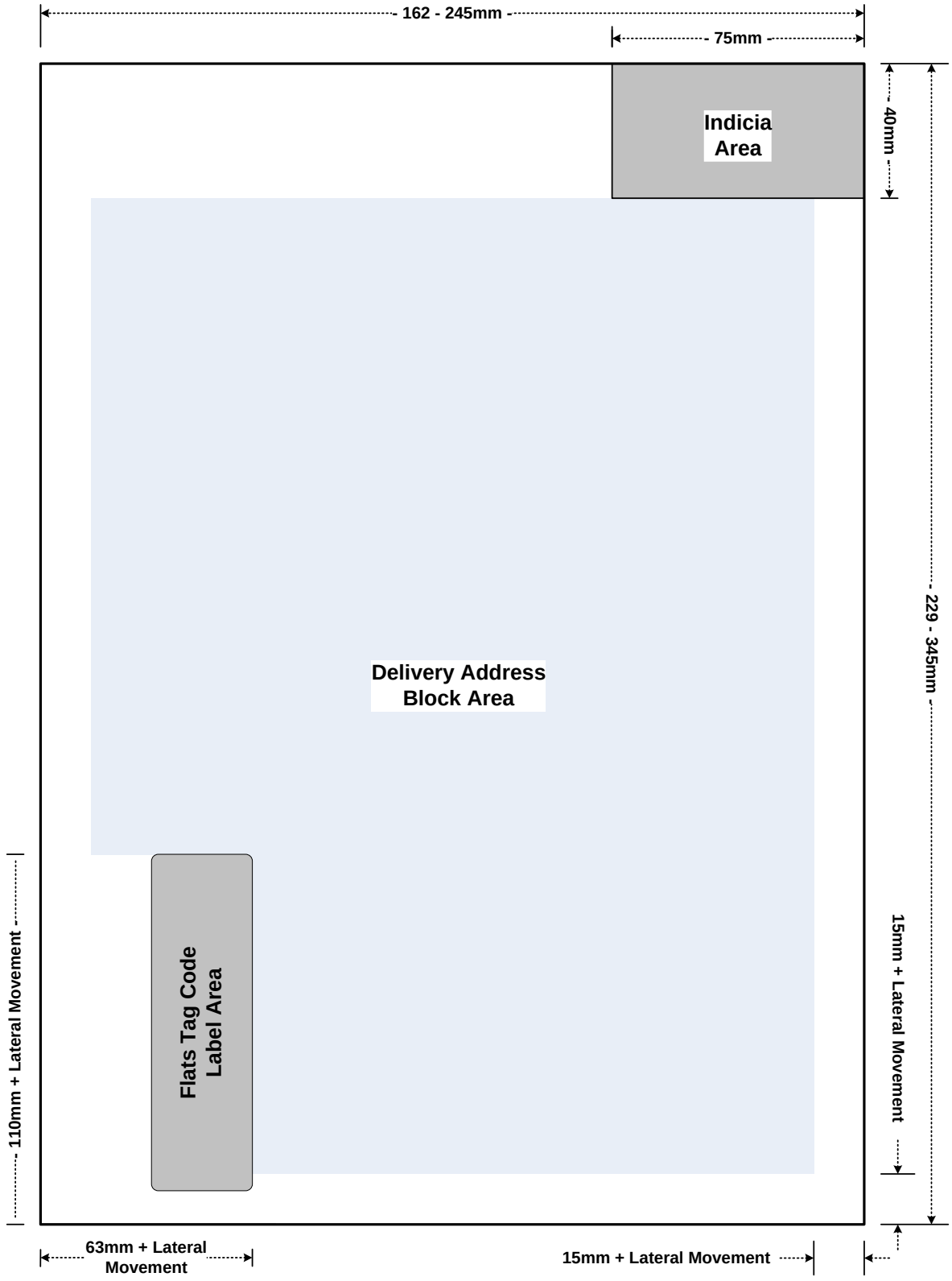


Figure 34c (trayed portrait poly C5 – 162mm x 229mm) (not to scale):

This figure indicates that if you were to tray a portrait item then any code marks would be applied in the bottom left corner if the Indicia was in the top right corner.

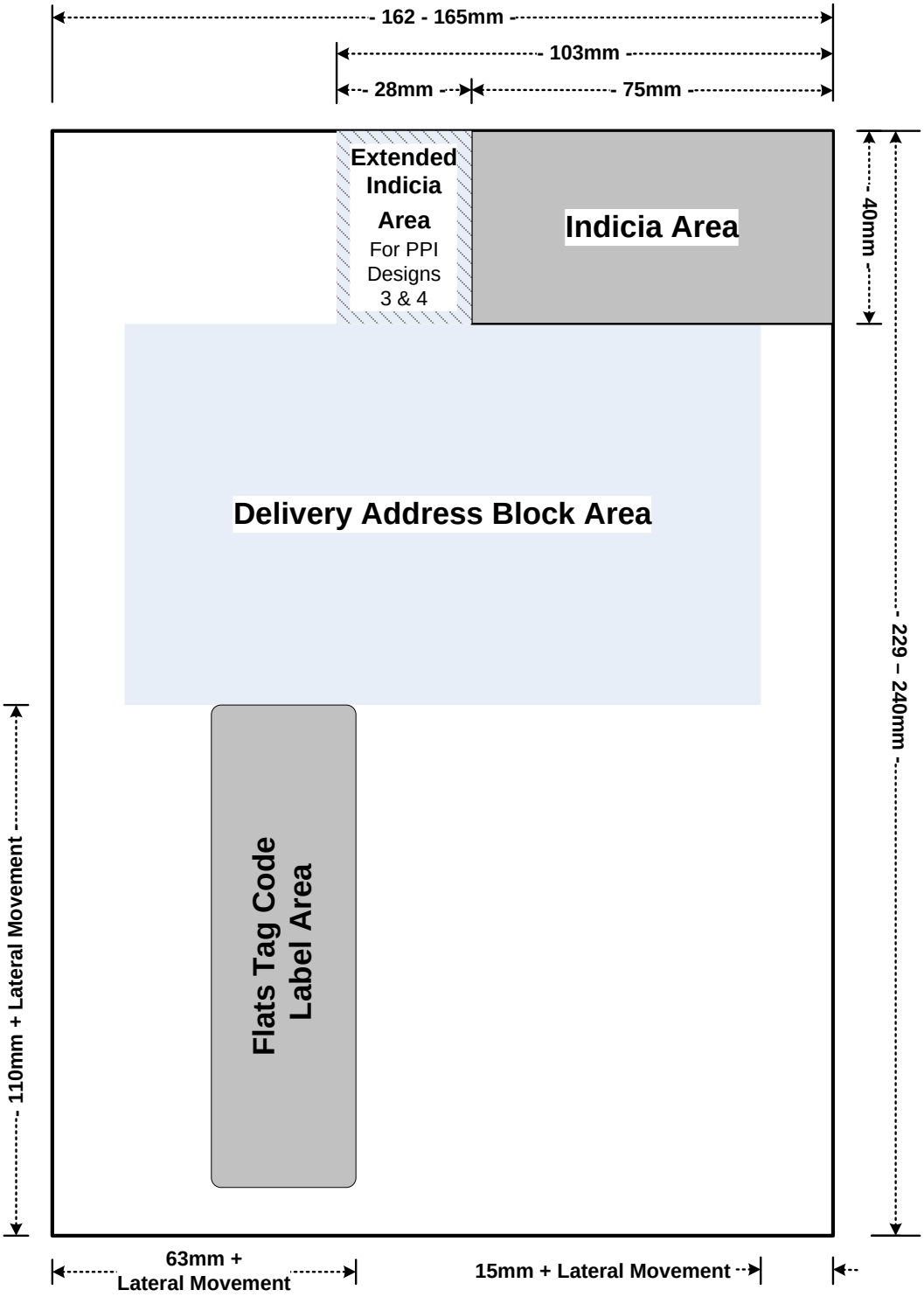


Figure 35a (untrayed landscape paper) (not to scale):

This figure indicates that if you were to bag or present a landscape item in an ALP then there would be two possible areas a code mark would be applied, bottom right and top left.

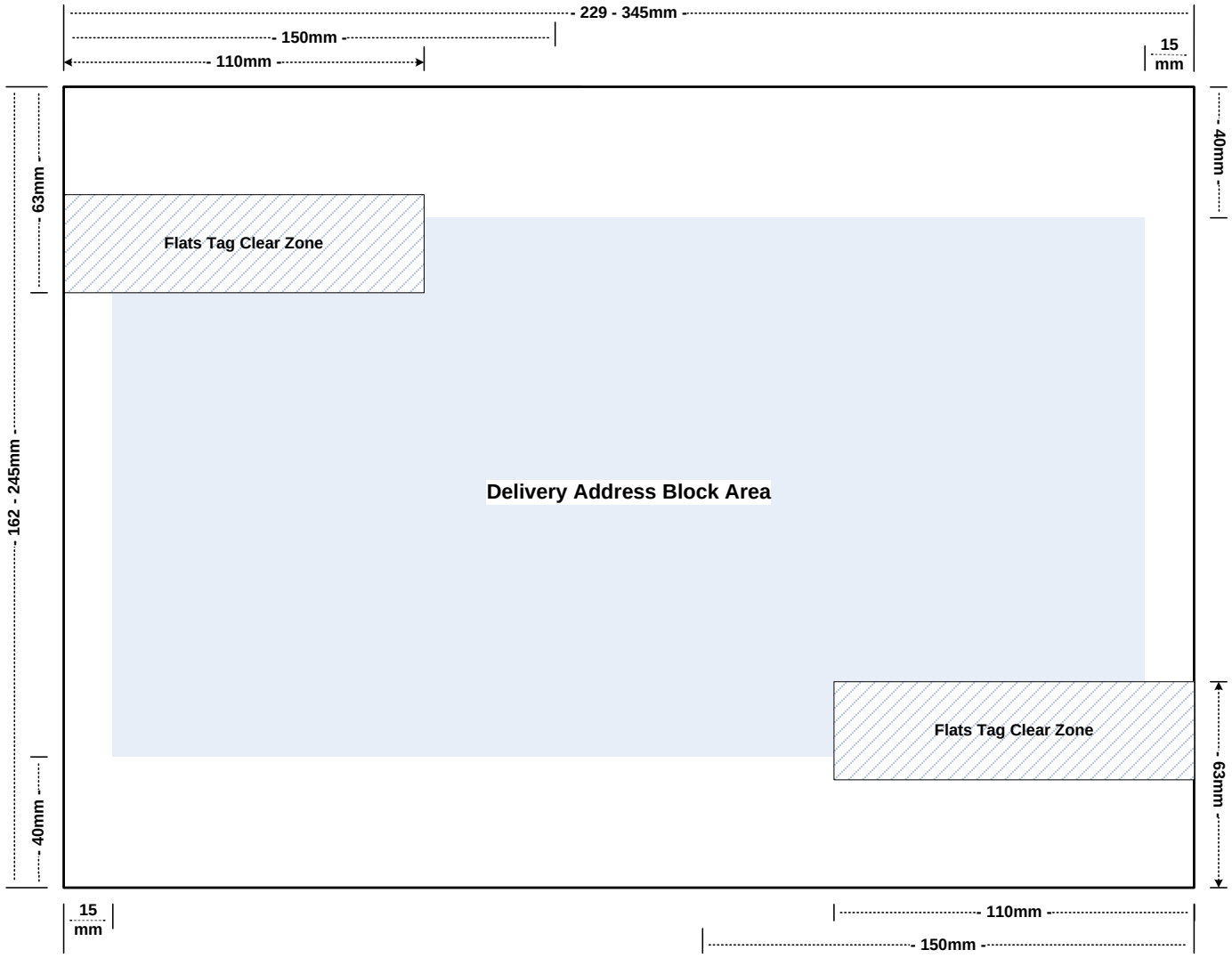


Figure 35b (untrayed landscape poly) (not to scale): This figure indicates that if you were to bag or present a landscape item in an ALP then there would be two possible areas a label and code mark would be applied, bottom right and top left.

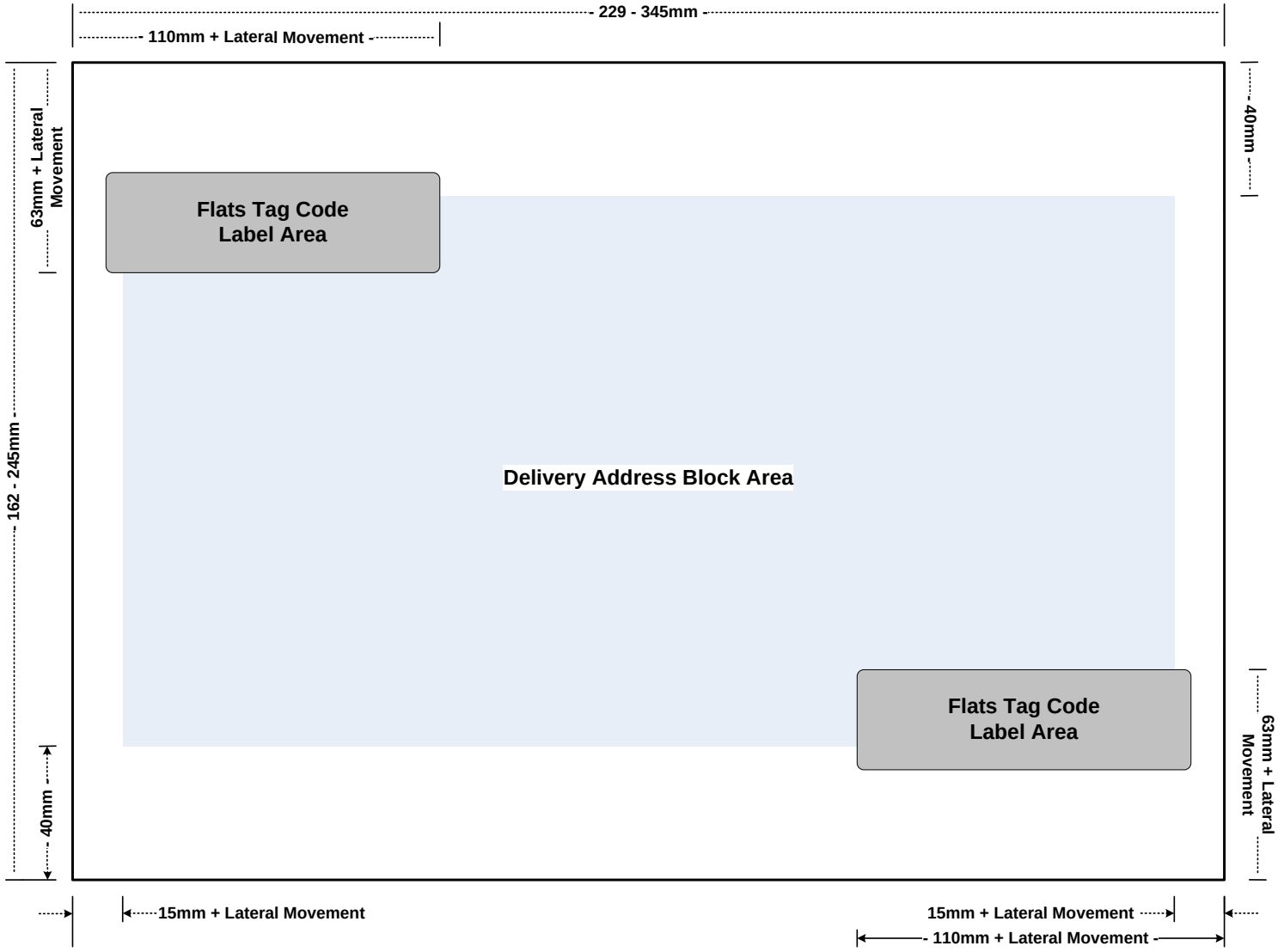


Figure 36a (untrayed portrait paper) (not to scale):

This figure indicates that if you were to bag or present a portrait item in an ALP then there would be two possible areas a code mark would be applied, bottom right and top left, if the indicia was in the top right corner.

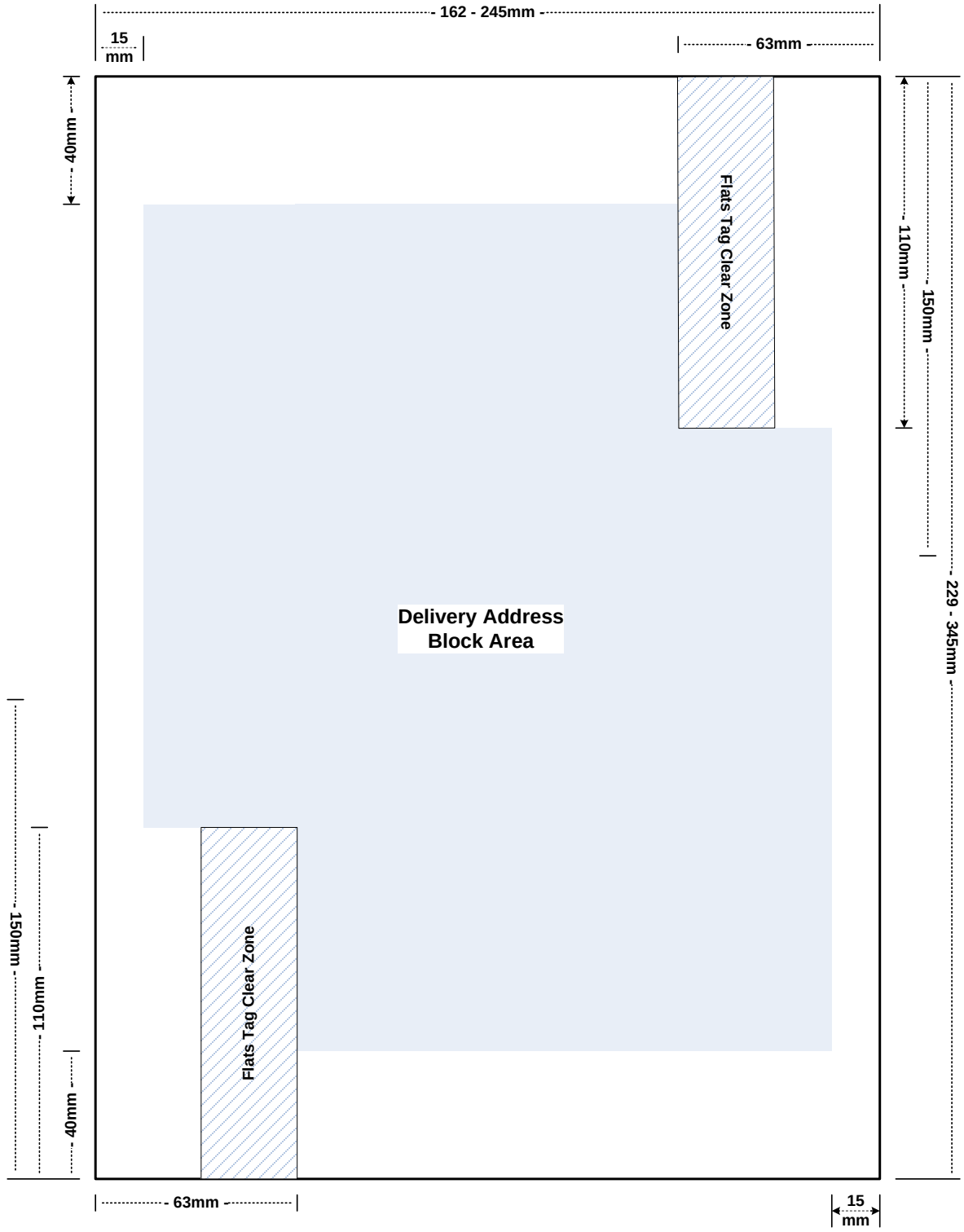
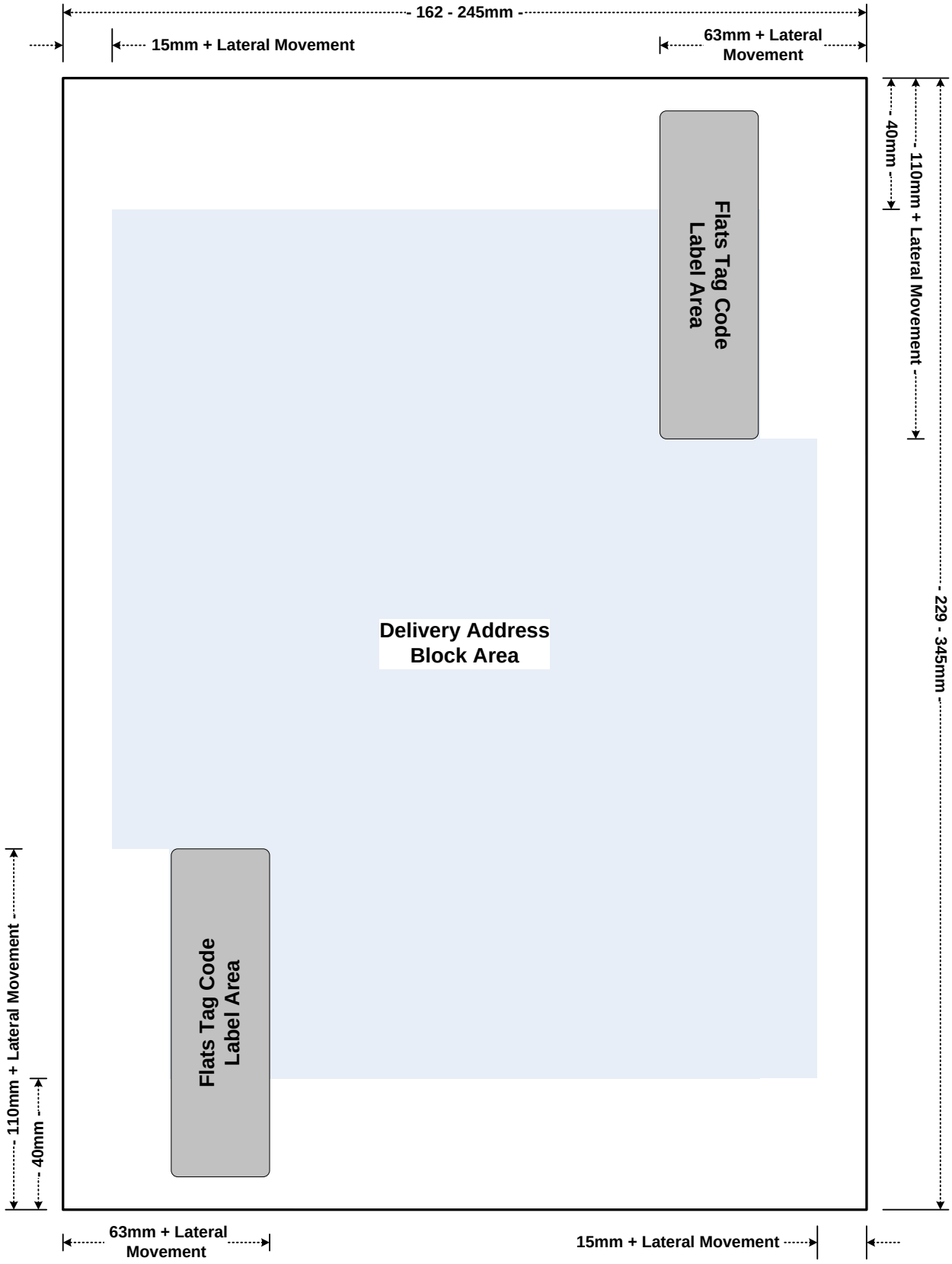


Figure 36b (untrayed portrait poly) (not to scale):

This figure indicates that if you were to bag or present a portrait item in an ALP then there would be two possible areas a code mark would be applied, bottom right and top left, if the indicia was in the top right corner.



Please note:
For polymer envelopes or polywrapped items you will need to allow for any lateral movement when defining the Delivery Address Block location. The assumption must be made that the poly may fold during processing and, should this happen we still need a defined clear area from the edge to ensure the Delivery Address can be read. See page 23.

20. Machine-readable large letters – Label and barcode application areas

To allow us to give you as creative a specification as possible we have removed any mandatory requirements specific to areas where our Barcodes or labels and Barcodes will be affixed. The information within this section will allow you to make an informed decision when it comes to designing your creative artwork or Direct Mail.

Please be aware that when you tray the mail, there will fewer areas where the barcode or label with a barcode could be applied. This is because the mail will then only be presented to the machine in one of two ways. However, when mail is bagged it has to then be tipped and trayed at the receiving office and this increases the likelihood of the Barcode or label and Barcode being applied to any one of four areas.

In general, if you have a plain paper outer envelope then a Barcode will be sprayed directly onto the item and if you have a very creative mail piece or if it is polywrapped or in a poly envelope then a label will be applied and a barcode sprayed onto the label.

Please note:
- these defined areas relate to how the mail is presented to the machines, so there may be instances where a label could be applied a little higher or slightly more towards the left than indicated. This applies to polywrapped items specifically and is purely because the excess poly around the insert may fold
- 'the bottom edge' of a mail piece is always the longest edge on which the mail piece will be 'fed' through and presented to the machine. Items are always processed in 'landscape format', trayed square items are processed with the Delivery Address Block and PPI uppermost with the PPI to the top right

Trayed

Trayed items are presented to the machines as follows, the Delivery Address Block and Payment indicia will be located accordingly:
- landscape items (figures 33a ,33b, and 33c) the address will be upright and the payment indicia in the top right hand corner
- portrait items (figure 34a, 34b and 34c) the item will be rotated to lie on one of the longest edges so that the payment indicia is vertical in the top left hand corner and the address in a vertical position

Paper envelope, polymer envelope & polywrap items

When you tray your items, because the orientation of the mail piece within the tray affects how it is 'fed' through the machine there will be one possible area where we will apply a label if

necessary and spray a 'tag code' mark – please note that you must include the 'excess poly' to the area below (i.e. add a maximum of 20mm to the right and 20mm to the bottom):

- starts from the right hand edge and 33mm from the bottom edge
- the code application area is 110mm long and 30mm high

Segregated bundles, bagged or in ALPs

When the items are in bags or ALPs, then the items are presented i.e. in landscape orientation. They are only put to the machine along one of their longest edges therefore, code marks could be applied in one of two areas for item above C5 (162mm x 229mm), or one of four areas for items C5 size or below

Paper envelope, polymer envelope & polywrap items

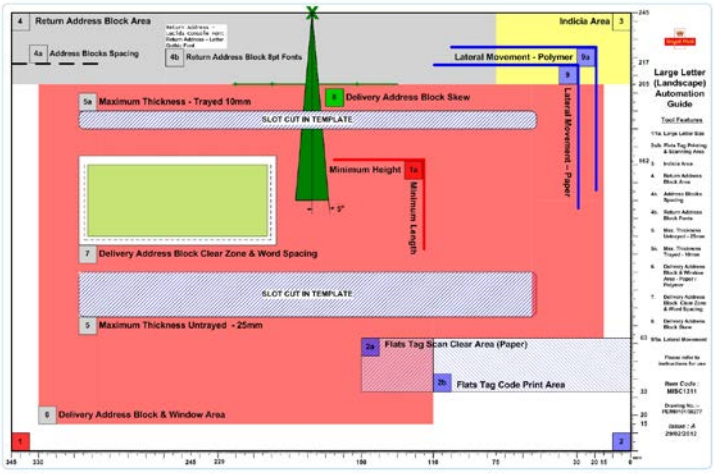
When you do not present your items in trays, because the orientation of the mail piece is not pre-defined there will be two possible areas where we will apply a label if necessary and spray a 'tag code' mark - please note that you must include the 'excess poly' to the area below (i.e. add a maximum of 20mm to each edge):

- 1a. Starts in from the bottom right hand edge and 33mm up from the bottom edge
- 1b. Is 110mm long and 30mm high, and
- 2a. Starts from the top left hand edge and 33mm down from the top left edge
- 2b. Is 110mm long and 30mm deep

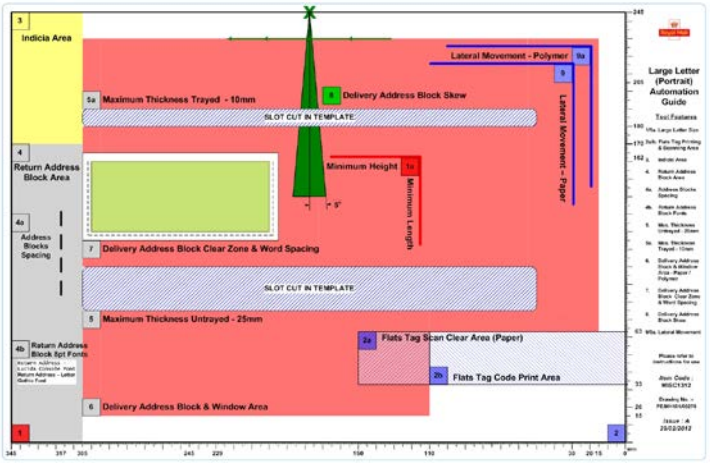
See figures 35a and 35b and figures 36a and 36b .

21. Templates for large letter postings

Landscape



Portrait



22. Discounts

Discounts for machine-readability

You can obtain discounts for products which you have chosen not to sort, such as our Advertising Mail or Business Mail with Machine-readable option. You will not be required to do any sorting to the Royal Mail Selection Files, but you will receive discounts for making your mail machine-readable and presenting it correctly.

Machine-readable and sortation discounts

You chose to sort your mail to a maximum of 86 selections using The Royal Mail Selection Files for our products with a Low Sort option and for this work you receive both sortation and discounts for machine-readability.