

OCR Letter & Large Letter SPECIFICATION REQUIREMENTS



CITIPOST MAIL

SMART MAIL MANAGEMENT

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PLEASE NOTE: The details within this guide are taken directly from Royal Mail's published OCR Specification taken on the 1st of October 2021. For the most up to date information please refer to the relevant and up to date Royal Mail user guide.

Appendix D Large Letter Using Optical Character Recognition (OCR)

Appendix A Technical requirements for the design and presentation for Large Letter Postings

This technical specification defines the features of a Large Letter eligible for the OCR service. Any feature of a mailpiece design that is not detailed within this specification is not permitted unless it has been tested and approved by us prior to posting

1. Introduction

This specification enables you to reduce the cost of your Large Letter mailings by making them machinable. Mailing Items must be sorted to Access 70 using our latest Access Selection Files and must meet the OCR specification as detailed in this Appendix.

These requirements relate to paper based and polymer envelopes; polywrapped items; and Unwrapped items.

During the design printing and enclosing production stages, you must take into account the various tolerances associated with these processes to ensure that every mail piece adheres to the Large Letter OCR requirements.



Large_Letter_Instruc
tions Aug 2016.pdf

2. What kind of Mailing Items can be sent?

Size

Mailing Items must be within the Large Letter format, be rectangular (oblong) or square. All four sides must be straight. The inter Section of each side must be 90 degrees. Both landscape and portrait Large Letters are permitted.

Rectangular Large Letters

Height:

Minimum: 95mm

Maximum: 245mm

Minimum: 145mm

Maximum: 345mm

Square Large Letters

Minimum 145mm x 145mm

Maximum 245mm x 245mm

Minimum 10g

Maximum 750g

Minimum 0.5mm

Maximum 10mm

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

3. Technical Requirements

This Appendix has been separated into general requirements that cover paper and polymer envelopes; polywrapped; and Unwrapped. Where requirements are specific to the type of outer covering used they are listed separately.

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 Royal Mail Access Indicia area. Slogans that contain the words 'Return', 'Address' and 'Undelivered' should be avoided.

5. Inserts

- For Unwrapped Mailing Items, loose inserts are not permitted, and all pages must be secured to the binding.

- All inserts other than paper contents, must be securely fixed in position so they do not move around within the Large Letter. Glue or self-adhesive tabs can be applied to fix any inserts. Metal objects e.g. coins or keys are permitted
- Paperclips with a maximum of 23mm in length or staples with a maximum of 24mm x 6mm are permitted.
- When inserts are included, please be aware that where this creates a 'step changes' in the thickness of the Large Letter the spatial distortion (see Figure 36) i.e. variation in the thickness of the contents, cannot be more than 50% of the thickness of the item up to the maximum thickness 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 1: Spatial distortion



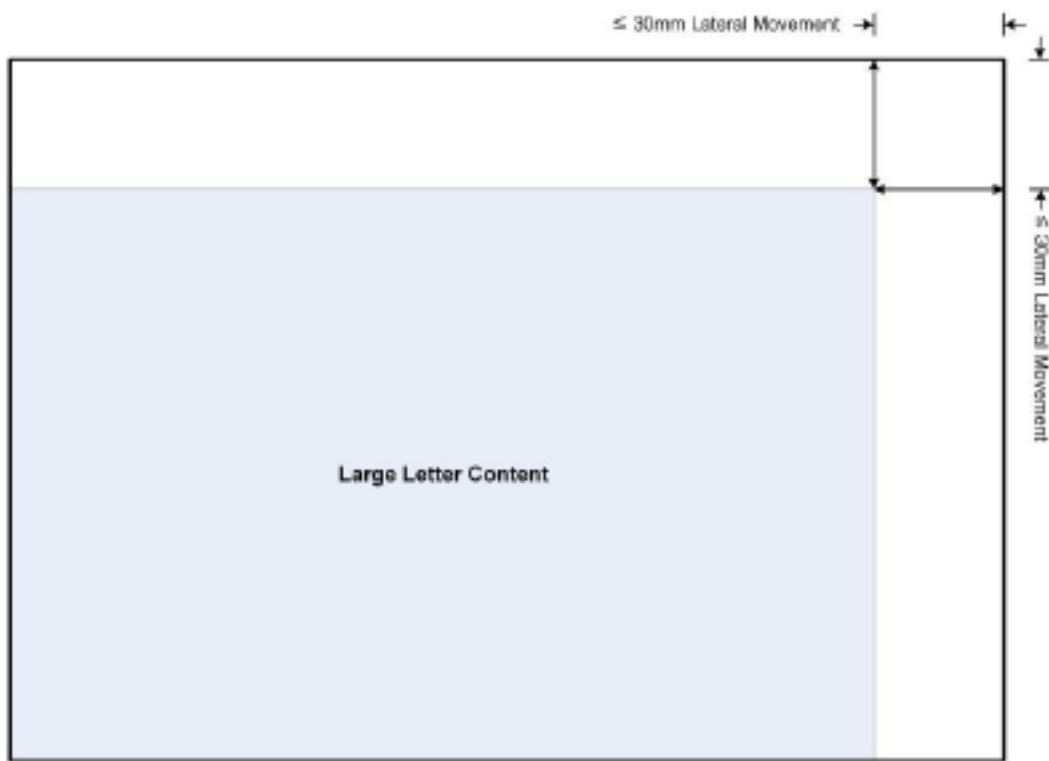
5.1. Inserts for Paper envelopes:

Depending on the thickness of the Large Letter to prevent damage to it and other mail pieces there are limitations on how much 'empty' envelope is permitted i.e. the thicker the Large Letter the less 'empty' envelope permitted. (See Figure 37). The following applies to the movement of the largest paper insert:

- If your Large Letter is up to 2mm thick then there is no restriction on the lateral movement of the largest paper insert up to the maximum envelope of 345mm.
- However, for any Large Letter which has a thickness of 2mm or more than the lateral movement of the insert within the letter can be 30mm or less.

Where the polymer is transparent only the largest insert must be visible to the front of the Large Letter and the lateral movement is < 30mm (see Figure 37). 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 30mm along the long edges and no more than 30mm along the short edges.

Figure 2: Insert movement



6. Material Construction

6.1. Paper envelopes:

- Must be paper based and no perforations are permitted
- Envelope paper weight = 70gsm minimum
- Single piece (folded & sealed) = 100gsm minimum
- Large Letter d postcards = 200gsm minimum

6.2. Polymer envelopes and polywrap:

- 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.

6.3. Unwrapped:

- The cover of the mail must have a paper weight of greater or equal to 50gsm.
- The pages of the booklet must have a paper weight of greater or equal to 50gsm.
- All pages (including the cover) must be of equal .
- All pages must be secured to the binding, and loose inserts are not permitted

- The spine must always be on a long edge.
- The spine must be glued or stapled. (Punch & bind bindings are not permitted).
- Inserts must not be attached to the mail. e.g. Pens or product samples

6.4. Material " General:

- Absorbency: (paper based envelopes): 15 " 35 gsm 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 us. In no instance should Mailing Items be stuck together. When polymer envelopes are used, the glue must be stronger than the polymer and must not produce protruding mounds on the Mailing Item.
- Opacity: greater or equal to 85 % (BS ISO 2471 - Paper and board. Determination of opacity (paper backing)
- Porosity:

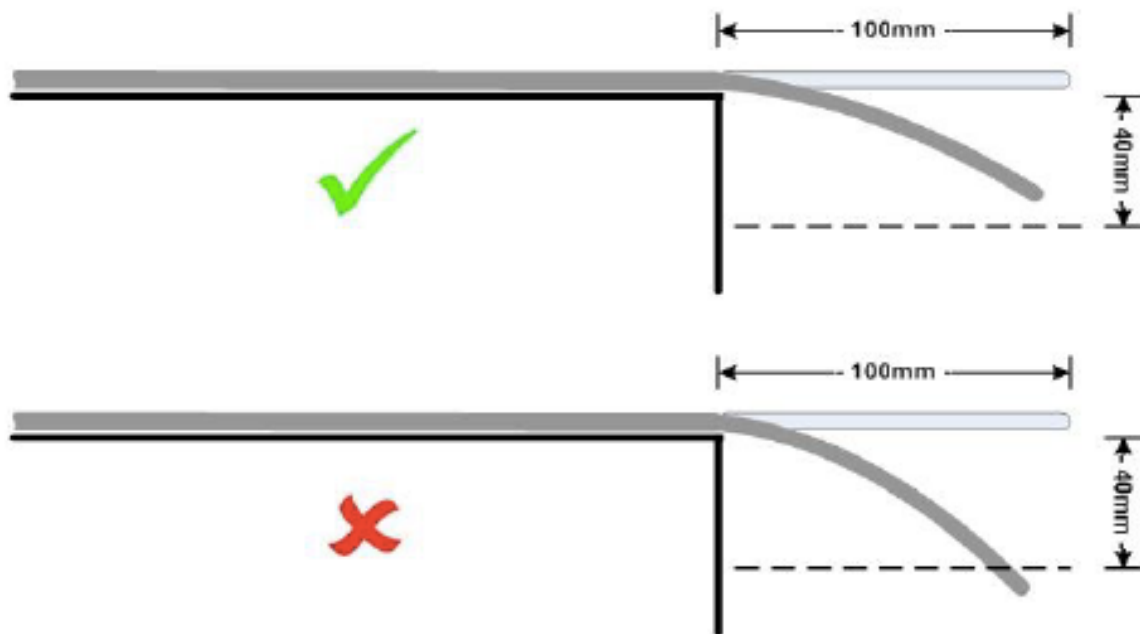
6.5. Rigidity / Stiffness:

The acceptable rigidity / stiffness is ? 8N.mm. There is no upper limit on mail piece stiffness.

This can be measured as follows (see Figure 38):

- 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 the Large Letter is not Machinable.

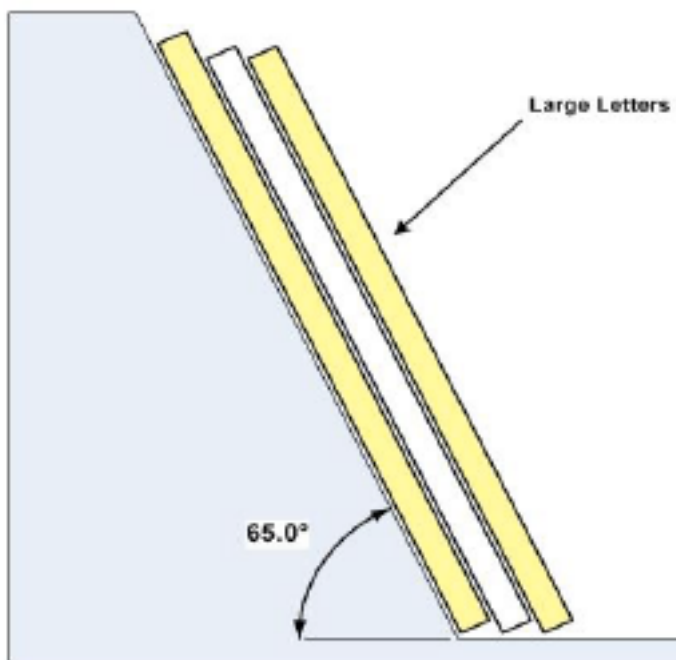
Figure 3: Rigidity and stiffness



6.6. Separation:

The Large Letters must not be stuck together and must be capable of separating to allow them to be effectively processed. When placed on a slope of 65° to the horizontal, the items must be capable of separating, by sliding one from another, under the force of gravity (see Figure 39).

Figure 4: Large Letter separation



6.7. Shape:

Large Letters can be rectangular or square within the permitted dimensions and can be laid out (address and payment indicia) in landscape or portrait format.

6.8. 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.

7. Print contrast:

- Required Print Contrast Ratio for addresses printed on envelopes greater or equal to 50 %
- Required Print Contrast Ratio for addresses printed on window inserts greater or equal to 55 %
- Required Minimum Reflective Difference greater or equal to 30 %
- Required Minimum Background Reflectance greater or equal to 35 %
- Inverse printing i.e. negative contrast is not permitted (i.e. Delivery Address Block lighter than background)

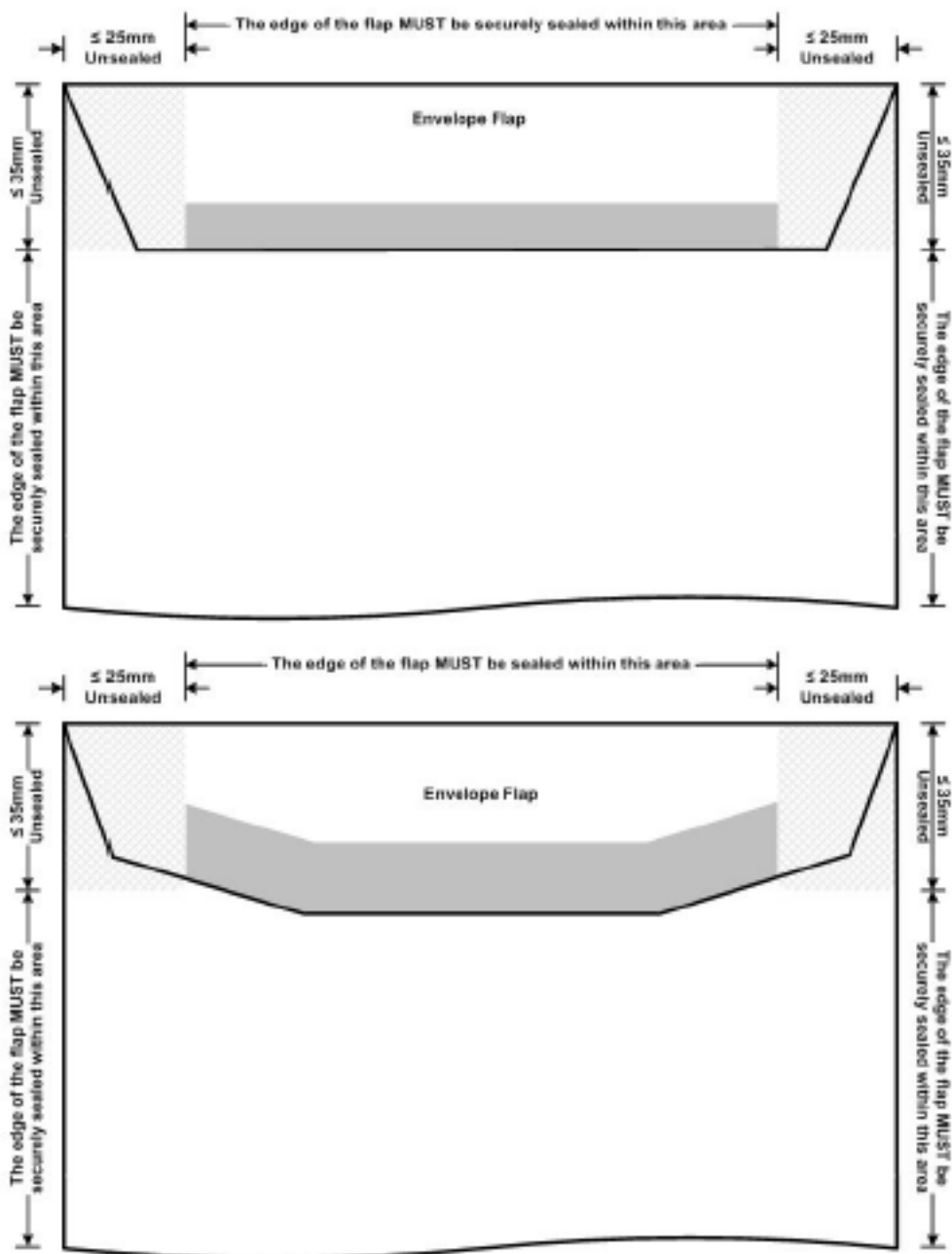
8. Sealing

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

8.1. Paper

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 reverse of the Mailing Item (the front being where the Delivery Address Block and the Access Indicia are located) it must be sealed to within 35mm from the fold of the envelope and 25mm from the envelope side. (see Figure 40)

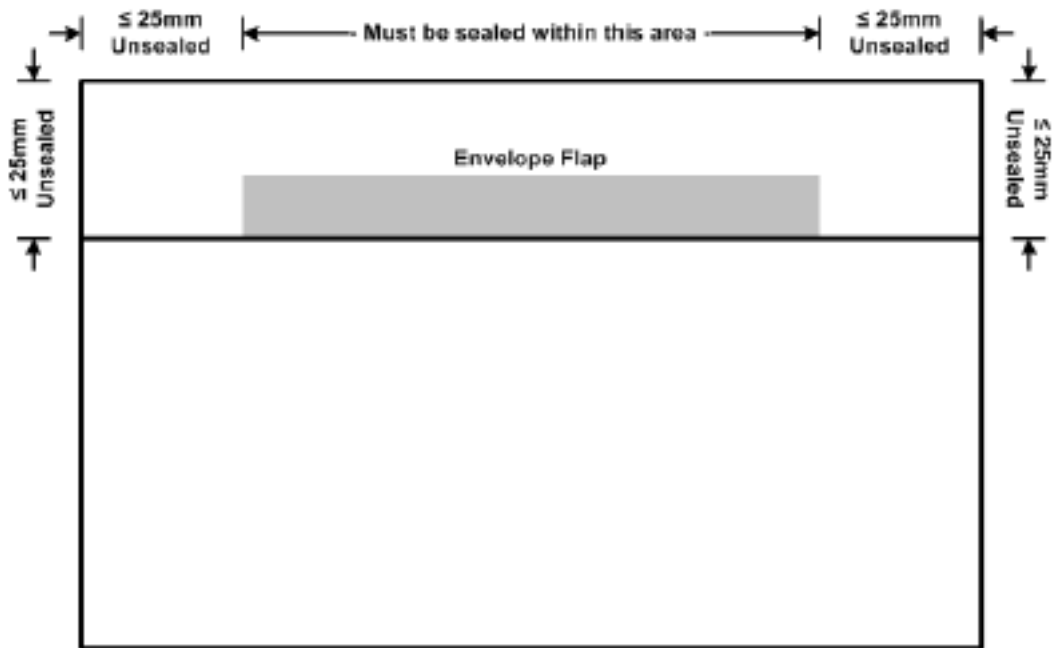
Figure 5: Paper sealing tolerance



8.2. Polymer

Polymer envelopes must be sealed along all the edges and have the opening flap on the back. 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 41).

Figure 6: Polymer sealing tolerance



Items which are poly wrapped must be securely sealed on the front, back and side edges.

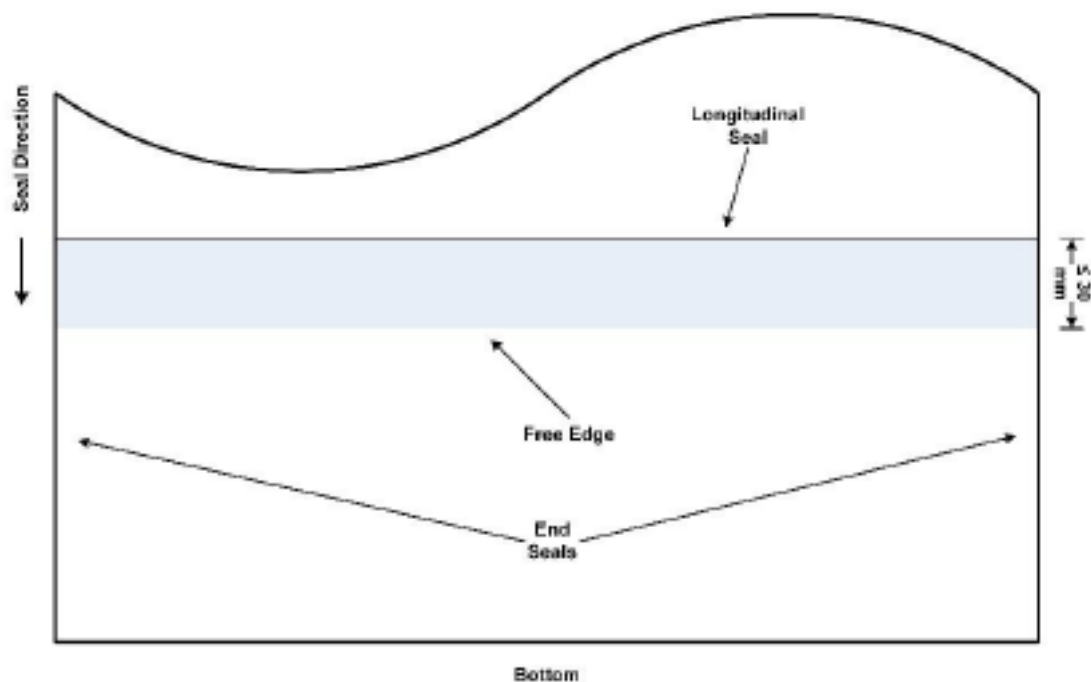
The preferred location for the poly wrapped seal is the back of the Large Letter.

We recommend that if the seal runs along the length or width of the Mailing Item that the free edge of the seal is less than 30mm deep.

Additionally if the poly wrapped seal is on the front of the Mailing Item:

- the seal must not be over the Delivery Address Block; and
- the seal must not be across the width of the Mailing Item.

Figure 7: Poly wrapped sealing



8.4. Windows (paper envelopes)

Although only one window is allowed on a Large Letter you do have the option of using this window for either the Delivery Address or for advertising information. Please 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). If the window is used for the Delivery Address, you must ensure all clear zones are being adhered to.

Options are available when it comes to designing or purchasing window envelopes, as there are no specific requirements for the strength of the window but you do need to ensure that at the point of handover to us:

- 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 specified Delivery Address Block Area. Figures 44 and 45

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 less than or equal to 75 % (ASTM D1003-00 Procedure A (Hazemeter))

9. Addressing Requirements

This Section explains the Large Letter addressing standards

9.1. Address

Please refer to Appendix A of this User Guide for the structure and format of each address.

9.2. Address layout:

- The county, although not required, may be included as the penultimate line of the address
- The phrases "England", "Great Britain" or "United Kingdom" must not be used for addresses to and within England, Wales, Scotland or the outlying islands. This information is not included in PAF®.
- Each line of the Delivery Address Block must be left justified, including the Mailer Defined Information (MDI) if included.
- The Post Town should have the first character(s) in capitals for example: Coventry, Milton Keynes, Ross on Wye, on a single line.
- The Postcode must always appear in capital letters on the last line of the address and there must be one or two character spaces between the two parts of the Postcode.
- Excessively skewed addresses cannot be read. The Delivery Address Block must not skew more than 5 degrees plus or minus from the horizontal
- Blank lines within the Delivery Address Block are not permitted and you must note that if the line spacing between the Mailer Defined Information and the Delivery Address is not the same then the Mailer Defined Information may encroach into the required clear zones.

9.3. Delivery Address Block structure and layout

The Delivery Address Block is defined as an imaginary rectangular box which surrounds the address, as illustrated in Figure 43 and touches the extremities of the text on each side. An address may consist of up to two elements, all of which are classed as the 'Delivery Address Block'.

Mailer Defined information (MDI) is reference information which may be printed as part of the Delivery Address Block

must be included and comprise of the following:

- Addressee details
- Geographical address and Postcode

Figure 8: Delivery Address Block



There must only be one Delivery Address Block on the Large Letter and it must be on the same side as the Access Indicum used. No other addresses or anything that can be construed as an address can appear on the front of the Mailing item with the exception being the Return Address- see requirements in section 14 of this Appendix D

In addition, to ensure there are no issues when identifying the elements of the address any separation between elements of the MDI must not exceed one space and the line spacing must be consistent with the Delivery Address.

For the MDI a different font which is of a different to the other text of the Delivery Address may be used. The MDI must be in typeface and may comprise of letters, numerals, punctuation marks, ideograms and symbols, Barcodes are not acceptable.

When the Delivery Address Block is on an insert, the Mailer Defined Information (MDI) may tap out to the right and to the top of the window as long as it falls out/falls back in totally and completely, the mail piece will fail specification if it falls out/falls in partially when the Delivery Address Block clear zones are checked.

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.

When printing the Delivery Address the maximum characters per line 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. You are asked to use one of the recommended fonts and ensure that each line of the address has characters which are the same font and point and that the spacing between the words is less than 5mm.

9.4. 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 Delivery Address Block cannot be located in the following areas; Figures 44 and 45

10. Font Types

It is important to get the fonts right, in the first instance please ensure that you do not use italic or bold fonts and the font must be the same or larger than that used in any Return Address information.

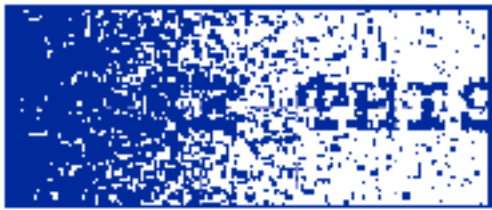
A list of recommended fonts is provided, and you are asked not use serif or handwritten fonts in any instance. If you wish to use an alternative font, the character pitch must be 10-12 characters per 25.4mm with clear vertical gaps of at least 0.25mm between the extremities of the adjacent characters.

10.1. Print Quality:

- Preferred colour is black. If this cannot be achieved then adequate print contrast must be achieved at all times
- 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
- No splashing or ink spatter around characters
- The following should be avoided
- Characters with incorrect proportions



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.).



â" fuzzy or blurred, or strokes which are incomplete, broken or smeared, for any of the above reasons.

Close character spacing â" characters which touch adjacent characters, whether on the same line or those from above or below:

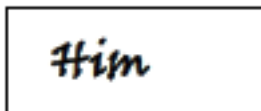


Space -

the spacing between words must be less than 5mm. Proportionally or unevenly spaced text â" characters or words which have too much

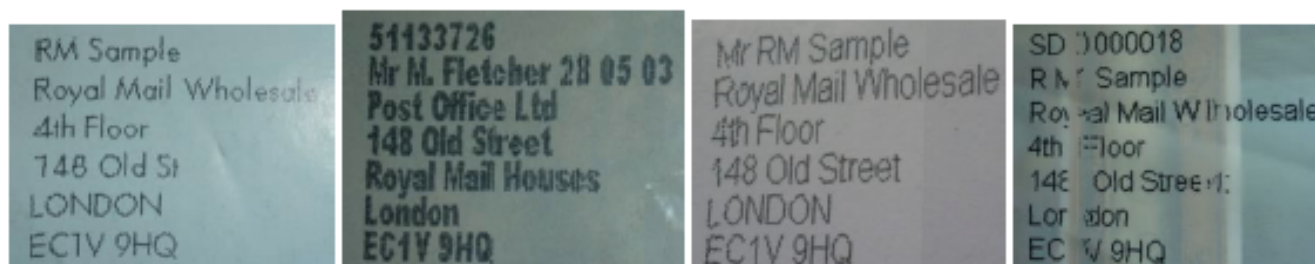


Typeface styles â" italic, inclined graphic, pseudo-script or handwriting imitations. Typefaces with excessive serifs, which touch or overlap adjacent characters or serifs.



Generally, sans-serif fonts are preferable to serif fonts.

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 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.



11. Delivery Address Block positioning.

The Delivery Address Block position is dependent on the orientation of the mail piece. Details of the Delivery Address Block are shown in Figures 44-45.

The delivery address must not be located in the following areas:

- A frame around the envelope 40mm from the top and 15mm around the rest of the perimeter i.e. the bottom, left and right edges.*
- Over the edge of the envelope flap

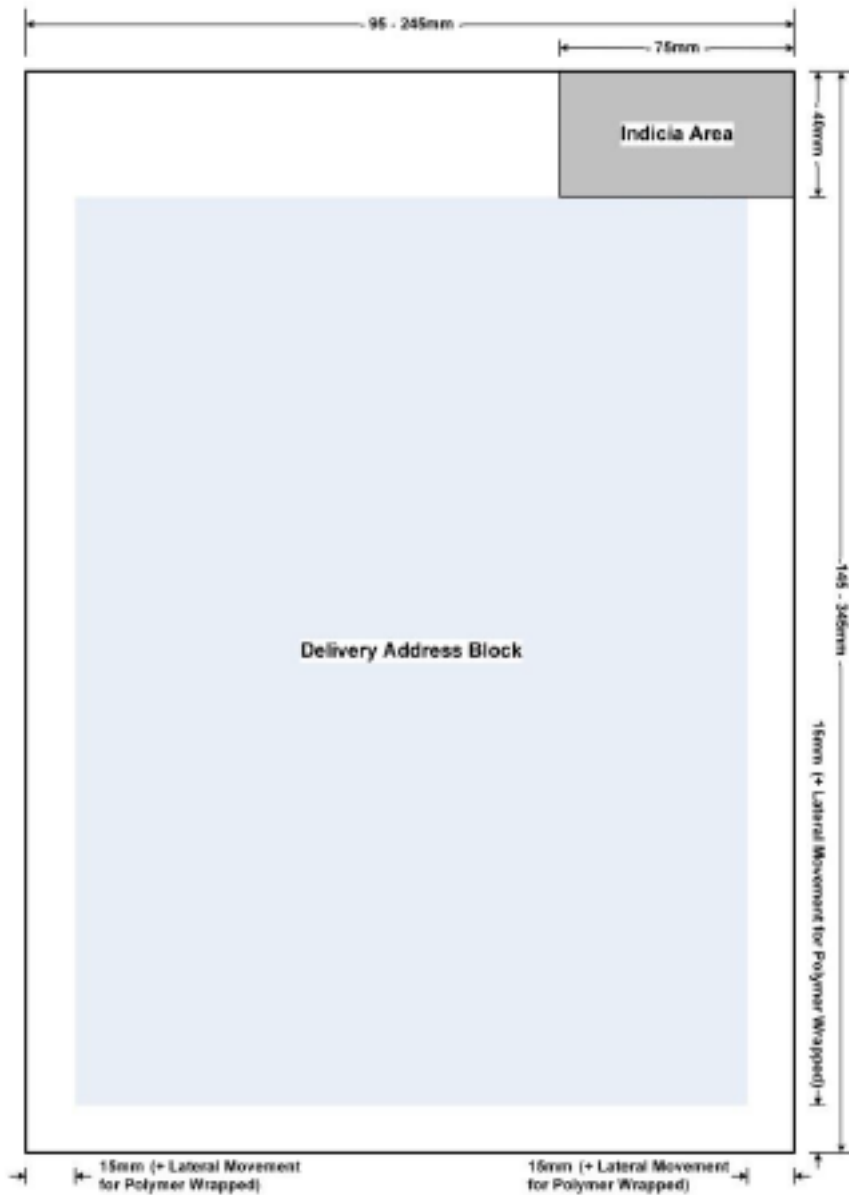
*Please note:

For polymer envelopes or polywrapped items you will need to allow for any lateral movement (maximum 30mm) 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 Block can be read. (e.g. If a Large Letter had 10mm excess polywrap then you would leave 25mm clear)

Figure 9: Landscape Delivery Address Block Area (not to scale)



Figure 10: Portrait Delivery Address Block Area (not to scale)



12. Delivery Address Block Clear Zone

There is a minimum requirement for a clear area of 5mm or more (see Figure 46) to be around the extremities of the full Delivery Address Block. Clear is defined as clear of print; patterning, graphics or any text including, when the Large Letter is tapped to induce maximum movement in turn on each of the four sides.

Figure 11: Delivery Address Block clear zones



When the Delivery Address Block is behind a window or viewed through polymer the total clearance around the Delivery Address Block remains unchanged at greater or equal to 5mm. However, this may consist of clear zones both within the window and on the envelope.

The gap within the window must be greater or equal to 2mm to the left, right, and bottom of the address.

No clear zone is required within the window above the Delivery Address Block, but the Delivery Address must always be visible. 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 greater or equal to 3mm to the left, right, and bottom of the Delivery Address Block (ensuring that there is 5mm clear in total); and a greater or equal to 5mm clear zone on the envelope above the address (see Figure 47).

No other text/information that could be construed as a Delivery Address may be included on the front of the Large Letter. This includes any areas of an insert which may appear in the window of the Mailing Item arising from insert movement. The exception to this requirement is The Return Address- see requirements in section 14 of this Appendix D

Figure 12: Delivery Address Block clear zones



13. Punctuation

Please do not underline any part of the address or postcode.

Punctuation and non-alpha numeric symbols can only be used where it appears in the corresponding PAF record. It can also be used in the recipient's name or in the Mailer Defined Information (MDI) above the address within the Delivery Address Block. 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.

For full details on allowable punctuation within a PAF record please see PAF Digest, available from www.royalmail.com.

Punctuation and graphical symbols may be used within any 'Mailer Defined Information' and addressee elements.

14. Return Address

There can only be one Return Address on the Large Letter.

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 of 10-12pt. This is an example of the layout in Lucida Console, 10pt font.

Return Address

148 Old Street

LONDON

EC1V 9HQ

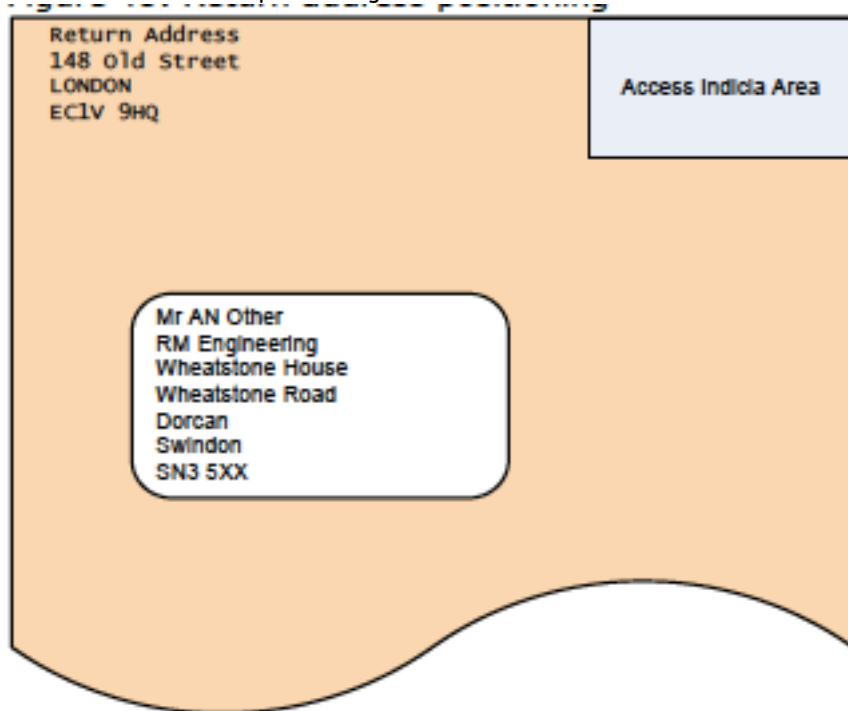
14.2. Location:

There must be only one Return Address Block on the Large Letter and if the of the finished mail piece is equal to or smaller than 240mm x 165mm then it must be placed on the reverse of the mail piece. This ensures incidences are reduced where the incorrect address will be read, possibly resulting in poor quality of service. When on the reverse, it must be within an area within 40mm zone from the top of the mail piece.

For items greater than 240mm x 165mm it is recommended that the Return Address Block be on the reverse.

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 Figure 48).

Figure 13: Return address positioning



Appendix G Using Optical Character Recognition (OCR)

1. Introduction

This technical specification defines the features of a mail piece eligible for the OCR service. Any feature of a mail piece design that does not comply with this specification is not permitted unless it has been tested and approved by us prior to posting. Poll Cards cannot be sent using the OCR service.

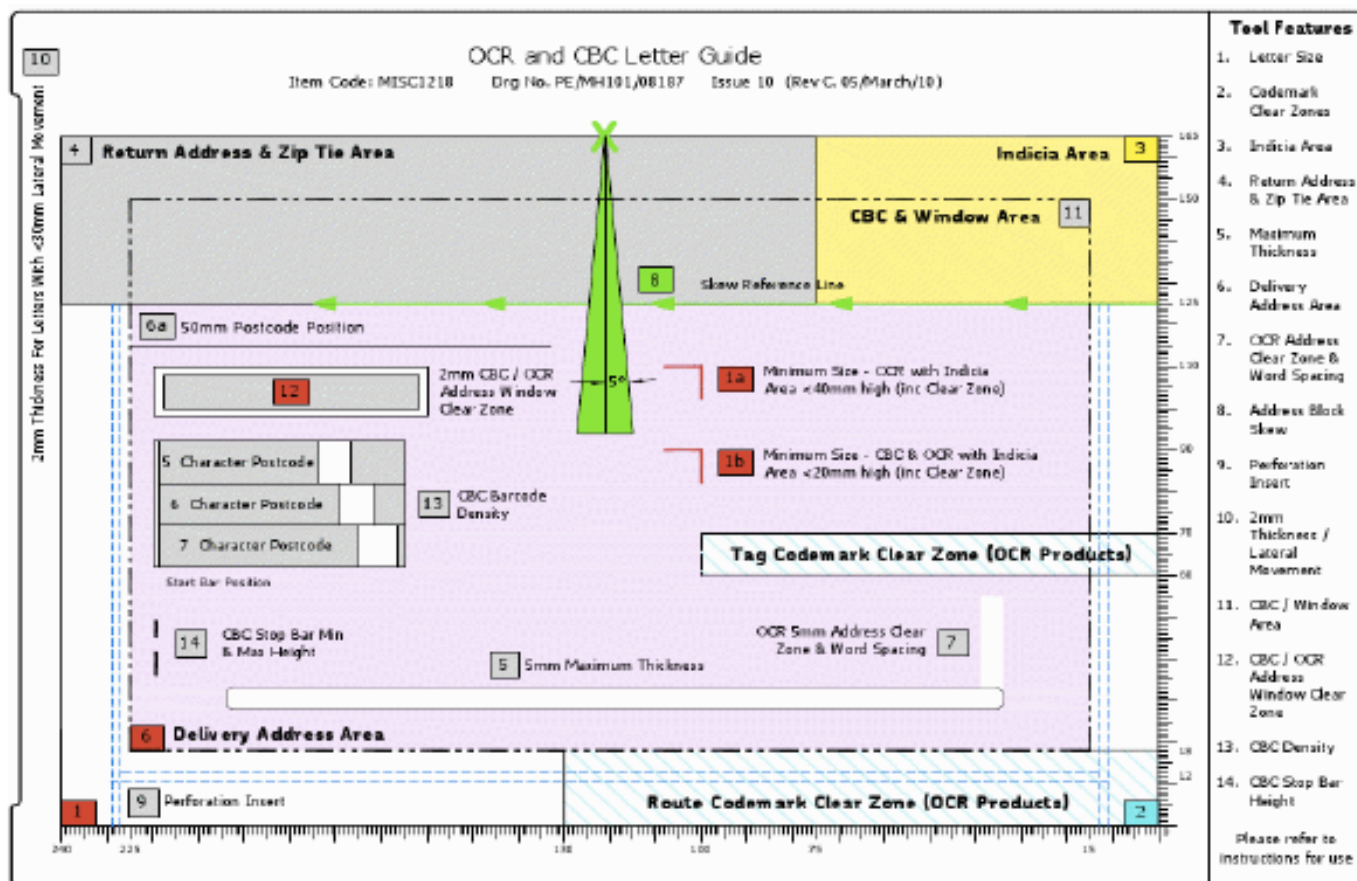
This specification is in essence the standard for 'normal' paper, and 100% unless you use an unusual type of paper 100% your items will probably comply. Issues such as colour, design and layout of items are covered later in this Appendix. During design, printing and enclosing, you should take into account the various tolerances associated with these processes to ensure that every mail piece within your mailing adheres to these requirements.

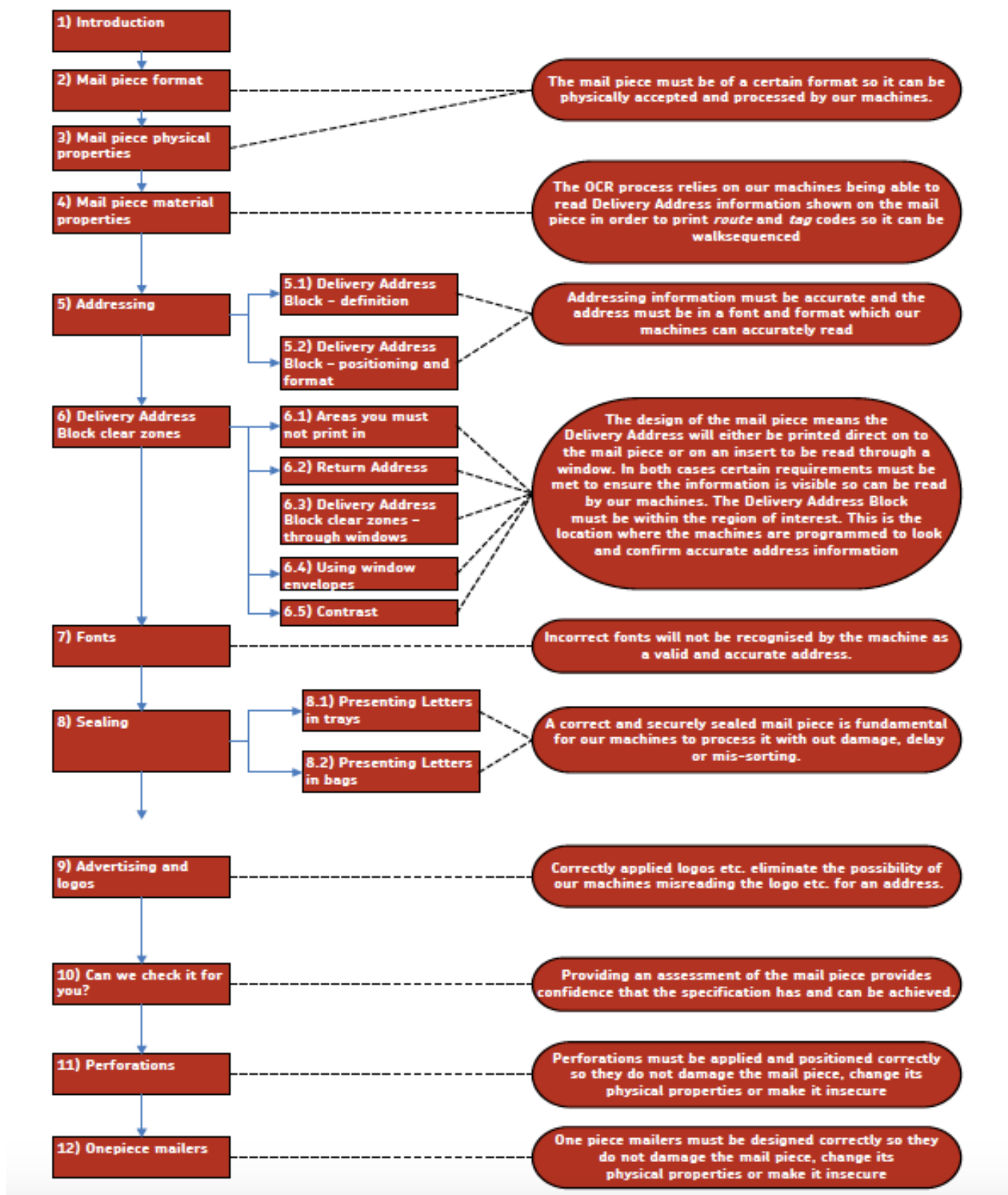
OCR mail is processed by machines which operate at high speeds. These machines integrate stacker feeder systems, belts and pulleys to process and sort the mail through its journey prior to delivery. The sorting process requires mail pieces to be presented and processed through different machines on several occasions (as many as five or six times) so it is necessary that each mail piece is within the physical and material parameters of the specification so it achieves efficient processing with no damage to the machine or mail piece.

This Appendix has been broken in to Sections representing the key stages of mail piece creation with each Section setting out the specification requirements. The flow chart on the next page is designed to provide a high level summary of order and content of these processes with additional explanatory information to help understand why specific attributes are required.

J tools and supporting guidelines are provided free of charge and should be used to quality check mail pieces through design and production stages.

Figure 14: OCR J tool





2. Mail piece format

What kind of items you can send? For Mailing Items to comply with OCR, each mail piece must comply with a range of physical parameters.

Mail piece format	Physical requirements
Size	Rectangular items: <ul style="list-style-type: none">• Maximum size 240mm x 165mm (C5+)• Minimum size 140mm x 110mm Square items: <ul style="list-style-type: none">• Maximum size 165mm x 165mm• Minimum size 140mm x 140mm
Weight	<ul style="list-style-type: none">• Maximum 100g
Thickness	<ul style="list-style-type: none">• Maximum 5mm• Minimum 0.25mm
Shape	<ul style="list-style-type: none">• Rectangular (oblong) or square• All four sides must be straight• Each corner must be 90°• The vertical edge must be equal to or shorter than the horizontal edge• Items printed in 'portrait' format are not allowed

Figure 15: format

Thickness max
5mm / min 0.25mm

Rectangle max
size 240mm
x165mm

Each corner
must be 90°

Rectangle min size
140mm x 110mm

Address must be printed in
landscape orientation

The vertical edge
must be equal or
shorter than the
horizontal edge

Thickness max 5mm /
min 0.25mm

Square max size
165mm x165mm

Each corner
must be 90°

Square min 140mm x
140mm

Address must be printed in
landscape orientation

3. Mail piece physical properties

Items must be flexible enough to be capable of being processed in our sorting machines without damage to the machine, the Mail Item or other Mailing Items. Each Mailing Item must, therefore, be capable of being transported around a pulley with a radius of 140mm with a maximum force of 26 Newtons. Items that are too stiff will not be able to meet this requirement, as shown in Figure 54.

Figure 16: Flexibility test - pass

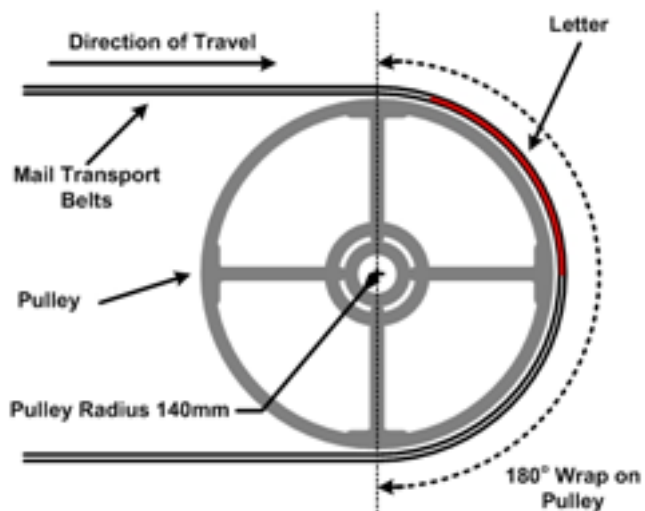
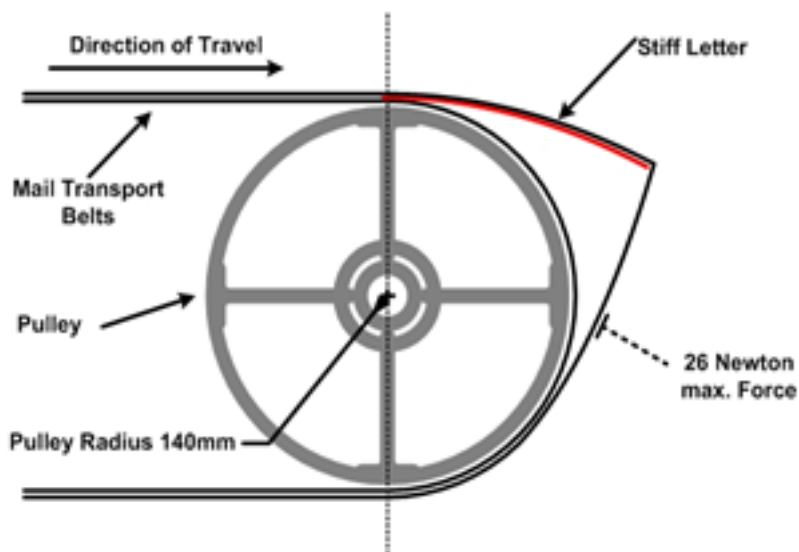


Figure 17: Flexibility test - fail



3.2. Inserts

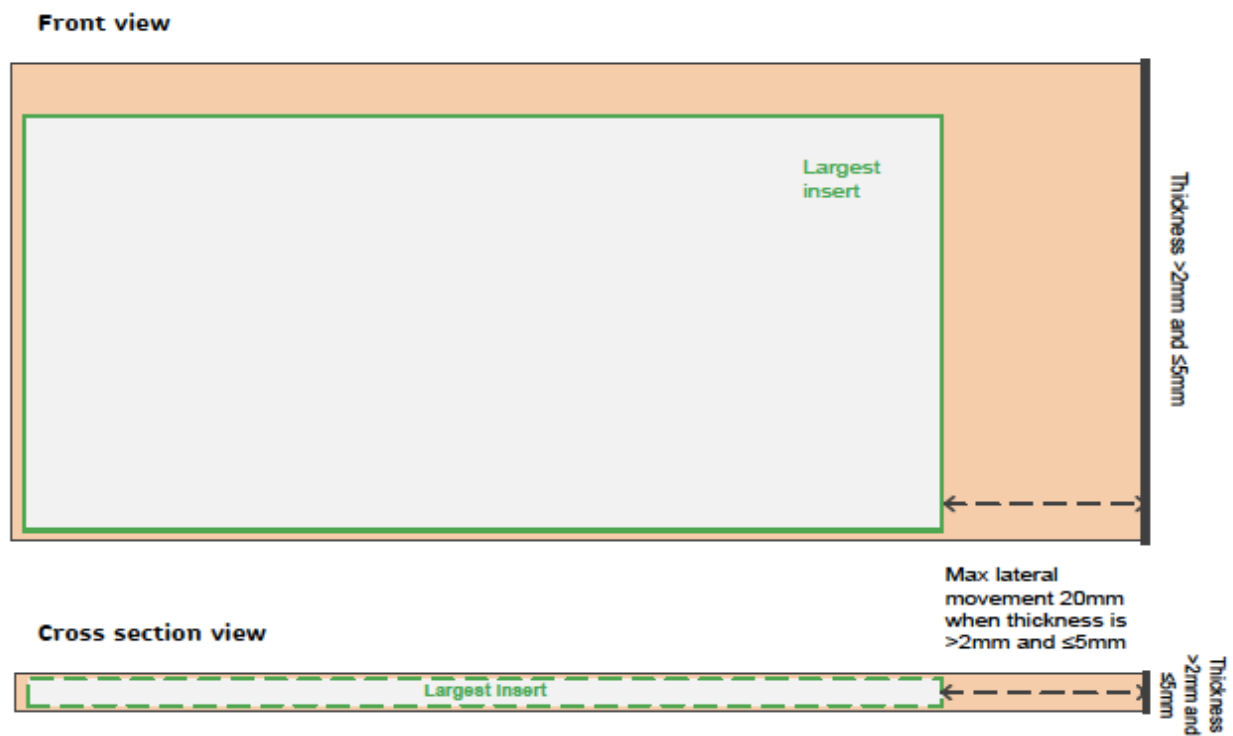
An insert is defined as anything that is inserted or enclosed into a mail piece. Items such as pens, keys gifts etc. that are inserted in mail pieces must not alter the properties of the mail piece such that the mail piece falls outside of the OCR automation requirements. Typically the significant factors affected are stiffness, thickness, and insert movement.

For any insert other than paper contents, you must make sure they are fixed in position so they do not move around during processing. You can use glue or self- adhesive tabs to fix any inserts No metallic items should be contained within the mail piece with the following exceptions: staples maximum 24mm by 6mm paper clips maximum of 23mm length

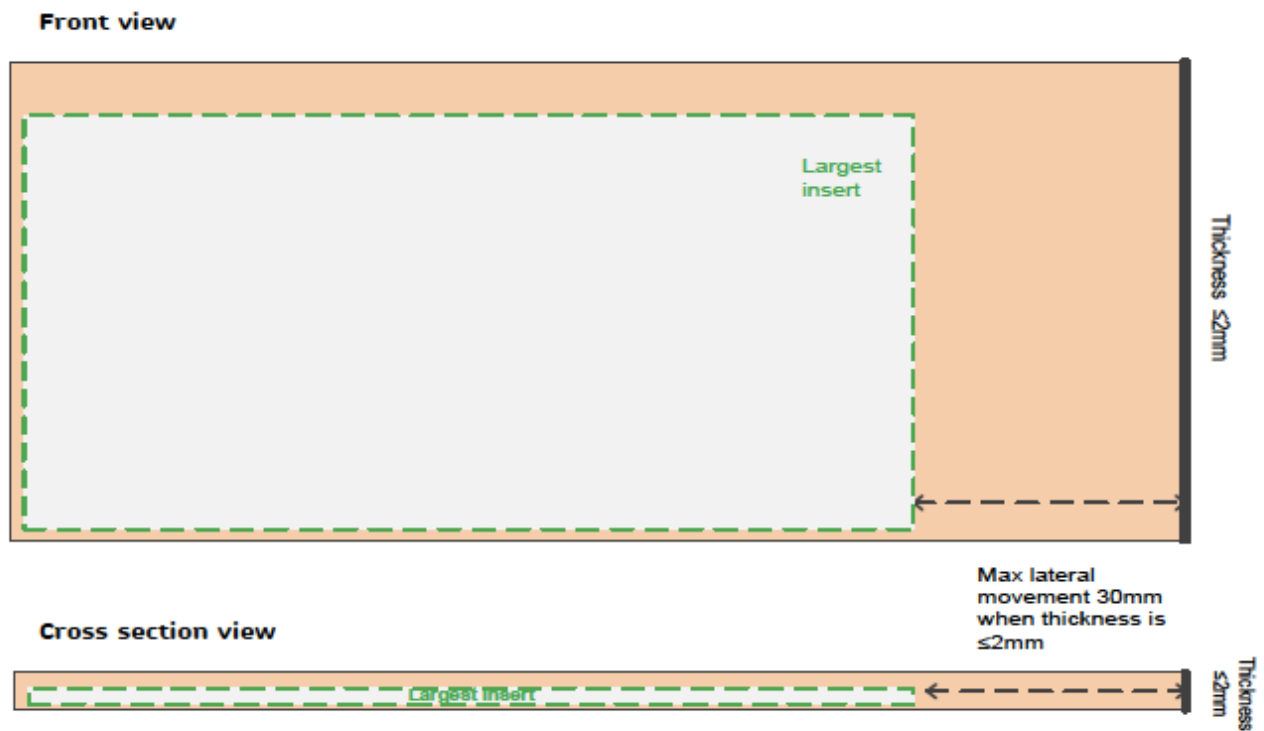
3.3. Lateral movement

The maximum amount of lateral movement of the largest insert within the envelope must not exceed 20mm.

Figure 18: Lateral movement



Where the overall total mail piece thickness does not exceed 2mm, the maximum allowable largest insert movement is 30mm.



4. Mail piece material properties

Envelopes: 70gsm minimum.

Postcards: 200gsm minimum with a minimum thickness of 0.25mm thick

Envelopes must be paper based; you must not use polythene, plastic or transparent items, or aperture envelopes (i.e. windows envelopes without a film)

The paper on which the address is printed on must be equal to or more than 85% opaque to prevent any character on the reverse side showing through.

Porosity value less than 700ml/minute.

Absorbency value required 15–35gsm of water in one minute.

The most suitable colours for your mail pieces are white, cream or buff. Other colours are possible so long as they are light or pastel shades and contrast by at least 50% (55% where the address is read through a window) in tone with the address. Use of red or dark colours is not allowed, as it makes it difficult for our machines to read the address or codes.

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% in the red region (600nm) 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 address on the mail item.

In order to provide sufficient contrast between the mail piece material and the printed address, the Reflective Difference between the mail piece background and the printing reflectance (PR) must be a minimum of 30%. Mail pieces not meeting this requirement will appear as block making it extremely difficult to distinguish the address from the mail piece material.

5. Addressing

5.1. Delivery Address Block – definition

The Delivery Address Block is defined as an imaginary rectangular box which surrounds the address, as illustrated in Figure 56, and touches the extremities of the text on each side. It may consist of up to 2 elements:-

1. Mailer Defined Information (MDI)¹ reference information. This is optional and if used must be in the line immediately above the addressee.

2. The Delivery Address must be included and is comprised of the following:

- Addressee Elements " This may include the relevant punctuation
- Geographic address " The information in the address must correspond with the information in PAF®. Only punctuation that appears in the corresponding PAF® record may be included.

The Delivery Address element must be printed in only one type and of font.

1: The MDI does not have to be part of the Delivery Address Block; it is preferred to be elsewhere on the mail piece outside of any clear zones

Figure 19: Delivery Address Block



There must only be one Delivery Address Block and it must be on the same side as the Access Indicum used. No other addresses or anything that can be construed as an address can appear on the front of the Mailing Item with the exception of the Return Address- see requirements in section 6.2 of this Appendix G

Mailer Defined Information.

If you wish to print the MDI as part of the Delivery Address Block you may print it in a different font and different from that used in the Delivery Address element. The data must be in a type face and may comprise of letters, numerals, punctuation marks, ideograms and symbols. Barcodes are not permitted. All spaces between all lines within the Delivery Address Block including the MDI must be the same.

5.2. Delivery Address Block " positioning and format

- All lines of the Delivery Address Block must be justified left.
- The address can appear anywhere in the pink shared area as shown in Figure 51. It must be at least 15mm from the top, left and right edges and at least 18mm from the bottom edge.
- The extremities of the Delivery Address Block must be at least 2mm away from the edge of the label or window.
- Additionally, there must be 5mm clear zone around the Delivery Address Block that is free from text, graphics or patterns.
- Excessively skewed addresses cannot be read. OCR can only tolerate a maximum skew of plus or minus 5 degrees from the horizontal.
- All punctuation may be omitted from all parts of the Delivery Address.
- Punctuation, if included within the Delivery Address, must remain restricted to the punctuation that appears within the corresponding PAF® record. Do not use punctuation in abbreviations such as 'St' for 'Street' or 'Rd' for 'Road'.
- Punctuation may be used in the Mailer Defined Information (MDI) and/or the addressee's name or the addressee' title. For full details on allowable punctuation within a PAF® record please see PAF® Digest available from www.royalmail.com, or your Access Account Director.

- The preferred address format is where each line of the address element is on a separate line and the Postcode must be on the last line of the address. Please see Appendix A, Addressing Mailing Items, for 'Elements of Address and Address Structure'. Please note that 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 the insert movement.
- The Country name (United Kingdom, Great Britain, England, etc.) must not be used.
- The Postcode must be in capital letters and contain either one or two spaces between the two parts

6. Delivery Address Block clear zones

6.1. Areas you must not print in

You must leave the following areas clear of any markings. These areas are called 'clear zones', and are used by our machines to print and read codes on Mailing Items and locate the address. You must leave clear zones in the following areas.

- 5mm around the Delivery Address Block.
- 18mm from the bottom edge and 130 mm from the right edge. This is for Royal Mail route code marking.
- A zone 100mm from the right hand edge and 10mm high, with the zone's top edge starting 70mm from the bottom edge of the item. This is for Royal Mail tag code marking.
- The address may appear anywhere within the pink shaded Delivery Address Block Area (shown on the OCR template at Figure 51)
- No part of the address may fall within 40mm of the top of the mailpiece. However, if you cannot meet this requirement, then as long as there is no other print or graphic on the envelope that could be construed as an address, and providing the address conforms to PAF®, the Delivery Address Block may encroach in to the 40mm, clear zone as long as the last line of the Delivery Address Block is no nearer than 50mm from the top of the mailpiece.

The clear zone around the Delivery Address Block must be at least 5mm as shown in Figure 57 The Delivery Address Block must be at least 5mm away from any print or graphics. The left, right and bottom edges of the Delivery Address Block must be at least 2mm away from the window edge. Additionally, there must be 5mm clear zone between the left, right, top and bottom edges of the Delivery Address Block and any print, graphics or patterning on the envelope or any other surrounding material.

Figure 20: Delivery Address Block clear zones



6.2. Return Address

- Each Mailing Item must bear a UK Return Address
- A Return Address should go on the reverse of the Mailing Item and it must be wholly in an area no more than 40mm from the top of the mail piece.
- It is preferred that it is positioned central from either side and be structured as left justified.
- In exceptional cases if a Return Address is on the front of the Mailing Item it must be wholly in an area no lower than 40mm from the top of the Mailing Item and no less than 75mm from the right hand edge of the envelope. This will prevent our automation equipment from sorting the mail item to the return address
- The Return Address must be identified as a Return Address and it is recommended that the Return Address be preceded by the words 'Return Address';
- The Return Address must be a valid PAF® address; and
- It is recommended that the font and point used are either 'Lucida Console' or 'Letter Gothic' fonts of 10-12pt

6.3. Delivery Address Block clear zones " through windows

When window envelopes are used, the total clearance around the Delivery Address Block remains unchanged at or more than 5mm, but this may consist of clear zones both within the window and on the envelope. Figure 58 shows how the 5mm zone can be constructed.

Figure 21: Delivery Address Block clear zones



There must be a minimum of at least 2mm between the left, right, and bottom edge of the Delivery Address Block and window edge. No clear zone is required within the window above the Delivery Address Block, but the Delivery Address, must always be visible.

We recommend the addressee details remain in view but we will accept the addressee details tapping right up to the edge of the window or they can tap out partially or wholly to the top of the right providing that the remainder of the Delivery Address remains wholly visible.

Where a MDI is printed as the top line of the Delivery Address Block the MDI may tap cleanly and completely out of the window providing that the remainder of the Delivery Address Block remains completely visible. These requirements apply at all times including after the Mailing Item is tapped on any of its four edges to induce maximum insert movement.

The remaining clear zone requirements may be met through the provision of clear zones on the envelope i.e. a clear zone which is free of print, graphics or patterning of at least 3mm to the left, right, and bottom of the Delivery Address Block; and a clear zone of at least 5mm on the envelope above the Delivery Address Block.

6.4. Using window envelopes

Windows may be included on envelopes for a variety of reasons so it is necessary to ensure that the inclusion of a window(s) does not physically impact the mail piece in such a way that may prevent our machines from processing it. The following window options only are permitted:

Option to have a window on the front	Option to have a window on the back	Example of use	Requirements
✓		The address is read through the window	See Section 6.4.1
	✓	The address is printed on the front of the envelope and the window on the back is used for non-address information.	See Section 6.4.2
✓	✓	The address is read through the window on the front and the window on the back is used for non-address information	See Section 6.4.3

The front face is defined as the side containing the indicia and the Delivery Address

6.4.1. Address is read through a window

If you intend your address to be read through a window, please follow these requirements:

- Windows must be rectangular in shape, and each corner of the aperture must be radiused
- The window must not interfere with the clear zones for our route and tag codes. (Please see Figure 51)
- The window position must be at least 15mm from the top, left and right edges of the envelope, and at least 18mm from its bottom edge.
- The maximum gloss value of the window material must be equal to or less than 150 when measured at 60° in accordance with ASTM 2457 Standard test method for specula gloss of plastic films.
- The window haze should be equal to or less than 75% in accordance with ASTM D1003-00 Standard test method for haze of plastic films.
- The window envelope material must be robust enough not to become deformed and fixed to the envelope evenly across the surface area it is in contact with.
- The item inside the envelope must fit securely, and not move around. The Delivery Address must always be fully visible with a 5mm clear zone around the Delivery Address Block at all times which is free from text, graphics or patterning.
- The number of windows on a single mail item must not exceed two.
- The windows must not exceed 50% of the surface area for one face of the mail item and must appear on the front of the mail item (the same side as the address). The windows must not infringe on any of the clear zones on the Mailing Item (Please see Figure 60 OCR template)

6.4.2. Addresses printed direct on to the mail piece

If you intend your address to be printed on the front of the envelope and include a window on the reverse for non-address information please follow these requirements:

- Only one window is permitted.
- The window must not exceed 50% of the surface area
- The window envelope material must be robust enough not to become deformed and fixed to the envelope evenly across the surface area it is in contact with.

6.4.3. Windows on front and back of envelopes

Envelopes with a window on each side, one on the front and one on the back can only be used if the following requirements are met:

Mail piece Physical Properties:

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

Window Properties

- The window on the front face must be rectangular with a maximum of 90mm length and 45mm height. It must be positioned so it does not interfere with any required route and tag clear zone. The window on the back must be circular with a maximum diameter of 48mm. The perimeter of the window must be 31mm \pm 2mm from the bottom of the envelope and centred along the long edge.

6.5. Contrast

Printing

The address must be darker than the paper. For example don't print the address in white ink on dark paper. Please do not print text behind the address, as our machines cannot read against it. There must be a minimum of 50% contrast ratio (55% for addresses behind windows) between the print of the address and the background.

Background

Printing or embossing of security backgrounds, if essential, should be faint, of uniform consistency and be on the inside of the envelope. The contrast factor must not be greater than 10%.

7. Fonts - which Typeface to Use?

Using Optical Character Recognition (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 may mean it is sorted manually which can cause delay and how much you are charged.

There are a variety of fonts you can use, though we would recommend using one from the list shown wherever possible. We would 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 Access Account Director.

Fonts

Addressing in title case is preferred (with the Postcode always in capitals)
The ampersand character may be used
All fonts can be in 10pt-12pt

Acceptable Non-Proportionally Spaced Fonts

Courier

Courier New

Letter Gothic

Lucida Console

Lucida Sans Typewriter

OCR B

Word Gothic

Acceptable Proportionally Spaced Fonts

Arial

Avant Garde

Calibri

Estrangelo Edessa

Eurostile

Frankfurt Gothic

Franklin Gothic (Book)

Gautami

Geneva

Gill Sans

Helvetica

Latha

Lucida Sans

Mangal

News Gothic MT

Univers

Optima

Ravi

Shruti

Trebuchet MS

Tunga

Univers

Verdana

Typefaces with the following characteristics are also 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.



Each and every line of the Delivery Address (including the addressee's name) must be in the same typeface and point .

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). There should be a fixed pitch of between 10 and 12 characters per inch (or between 15 and 10 point), 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.

allow uniform spacing between all lines of the address, of between 1mm and 4mm (measured from descender to ascender). There should be no blank lines.

Please note; OCR machines can read anything up to 64 characters per line (including spaces). OCR cannot recognise computer zero (0). Script type or italic typefaces also cannot be read.

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 (e.g. 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.

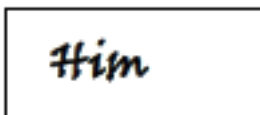
Close character spacing – characters which touch adjacent characters, whether on the same line or those from above or below.



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 – bold, italic, inclined graphic, pseudo-script or handwriting limitations. 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

8. Sealing

All items must be securely sealed on all sides, taking care to avoid too much gum. Envelope flaps may fold either to the back or front of the mailpiece. If the flap folds to the front (address side) of the mailpiece, the edge of the flap must not fall within the clear zones required for route and tag codes.

- You must not use metal clips or staples.
- The items must be sealed on all sides securely and continuously

One Piece Mailers are permitted, please contact your Access Account Director for the full specification.

8.1. Sealing Tolerances

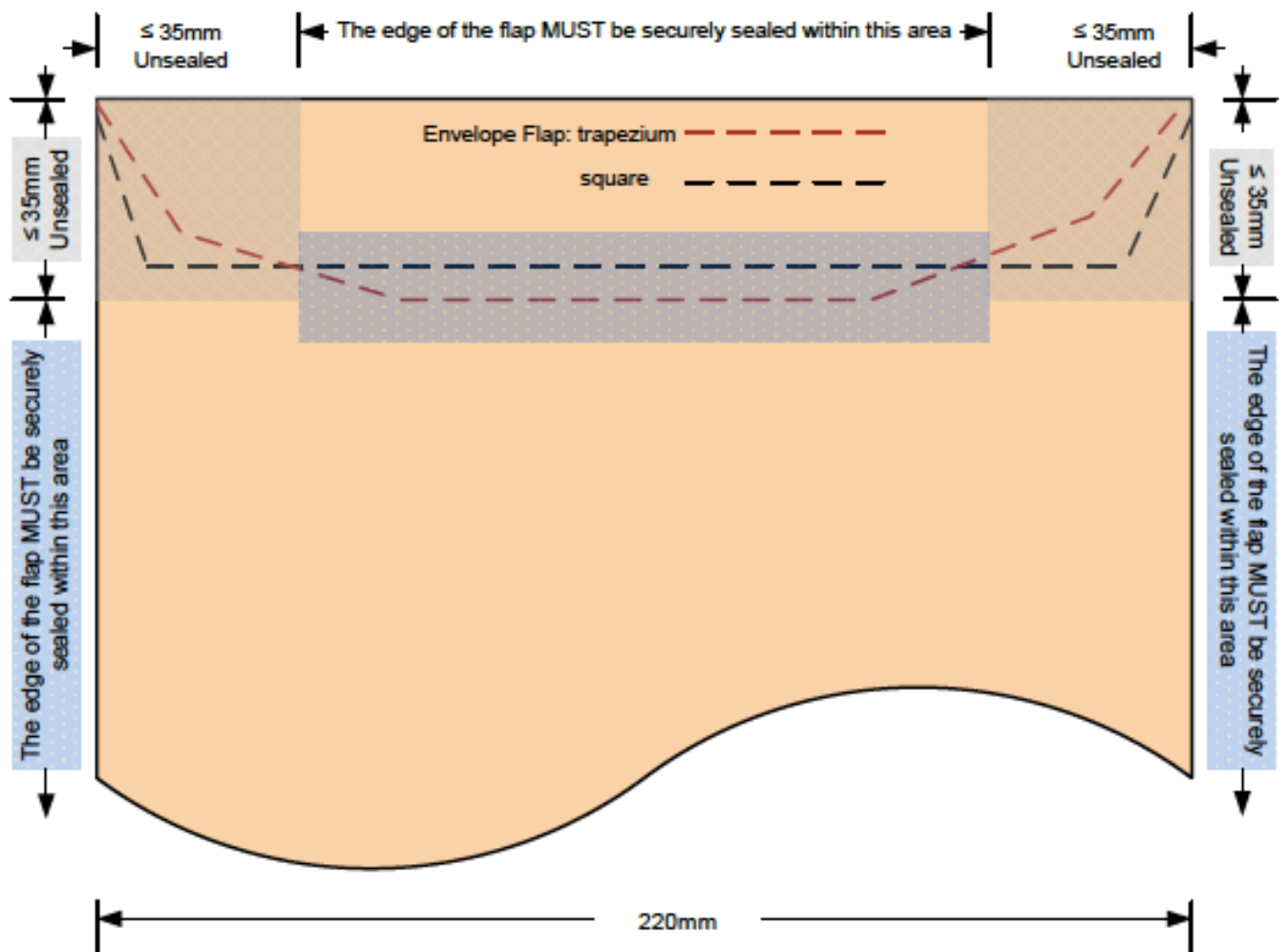
Opening Flaps must be sealed as far along the edge as possible. All remaining edges must be sealed.

8.1.1. Letters presented in trays

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 (as illustrated in Figure 59) where the flaps do not have to be sealed²

Figure 22: Sealing for mail in trays

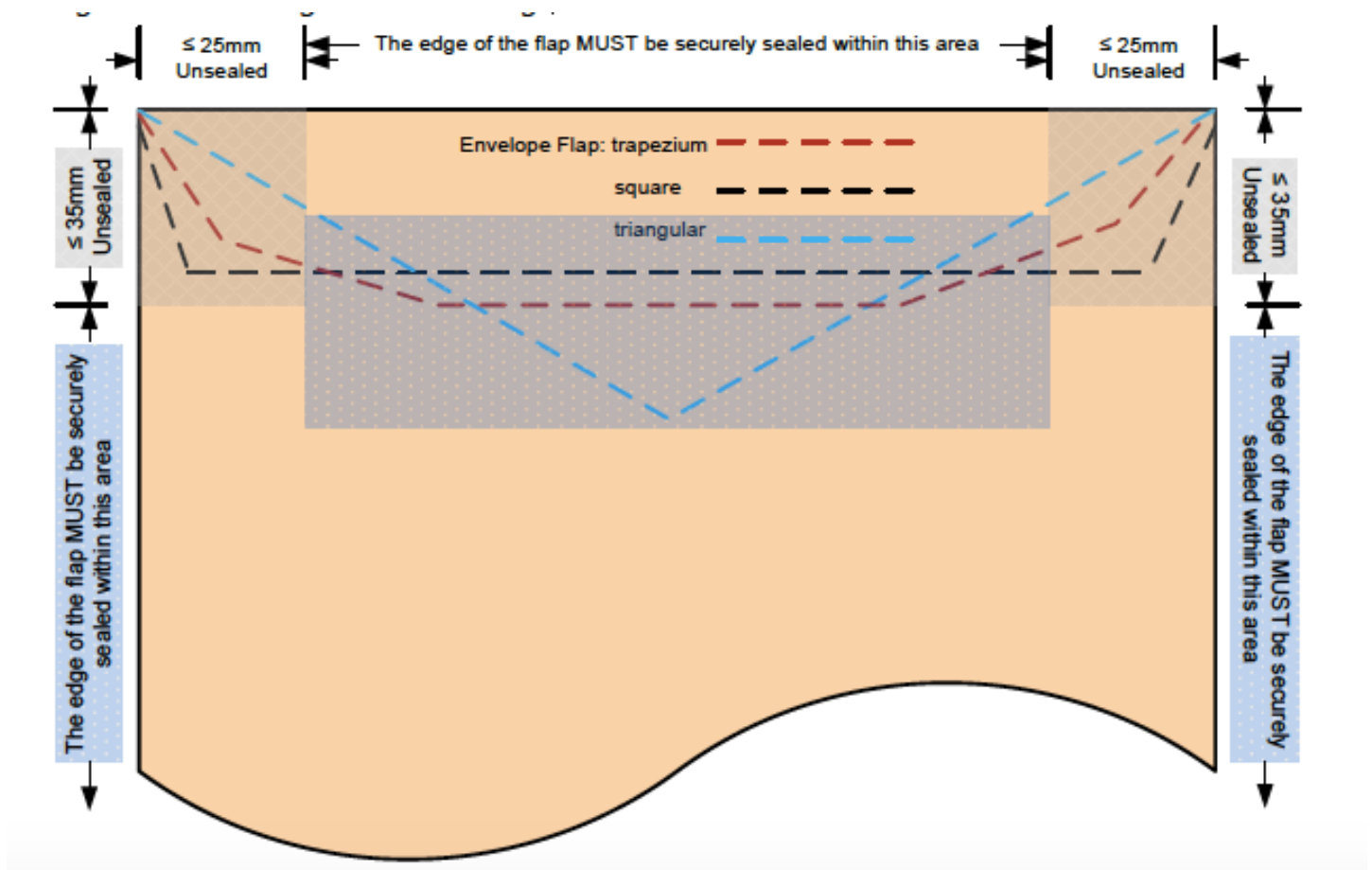
²: An envelope manufacturing tolerance of 2mm is permitted i.e. the minimum Letter length here is 218mm



8.1.2. Letters presented in bags

For all other Letters there is a maximum tolerance of up to 25mm from the left and right edges and 35mm from the top edge (as illustrated in Figure 60) where the flaps do not have to be sealed.

Figure 23: Sealing for mail in bags



9. Advertising, logos and other devices

These can be used so long as they do not fall into any of the clear zones. They must not look like an address or a barcode

10. Can we check it for you?

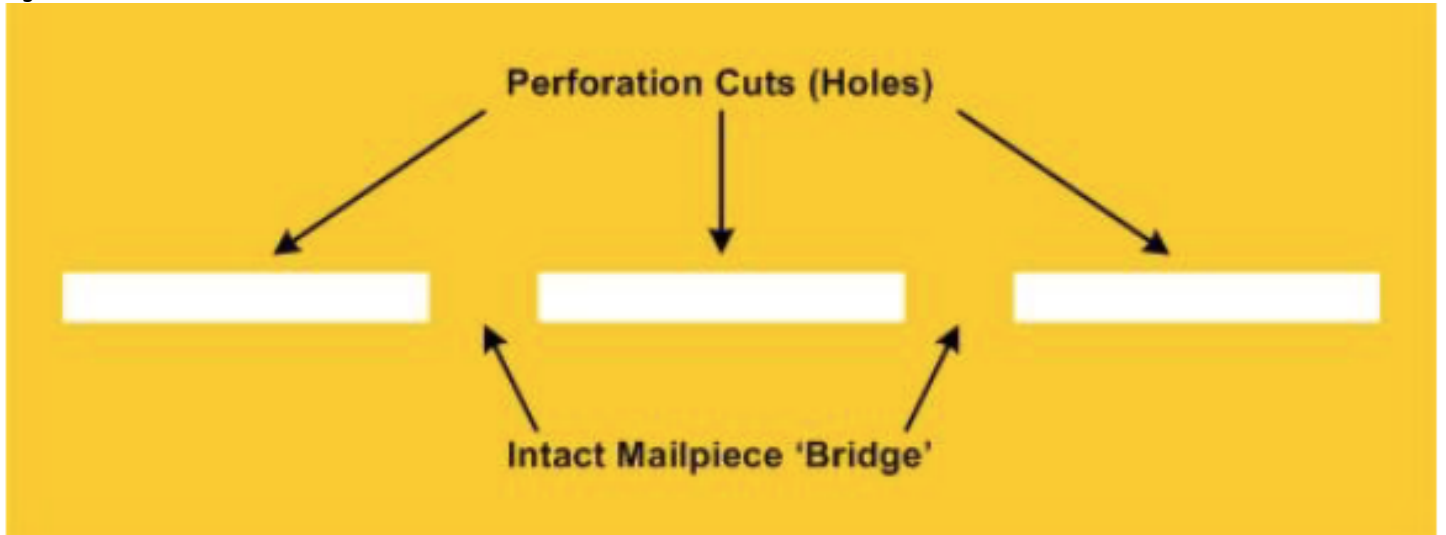
Once you have passed the Quality Assurance process, if you are unsure whether a particular mailpiece complies with all the conditions, why not send us a sample in advance. We will advise you of any problems, and suggest ways of redesigning it. Please contact your Access Account Director.

11. Perforations

Perforations are defined as a series of holes in a mailpiece to make opening easy. The "cut" is the hole and the "bridge" is the paper that is left intact and subsequently torn when the mailpiece is opened

Roulette and Zip Tie perforations are acceptable, and requirements for these perforations types are provided in the following Section. Please see Figure 61 for elements of a perforation.

Figure 24: Perforation elements

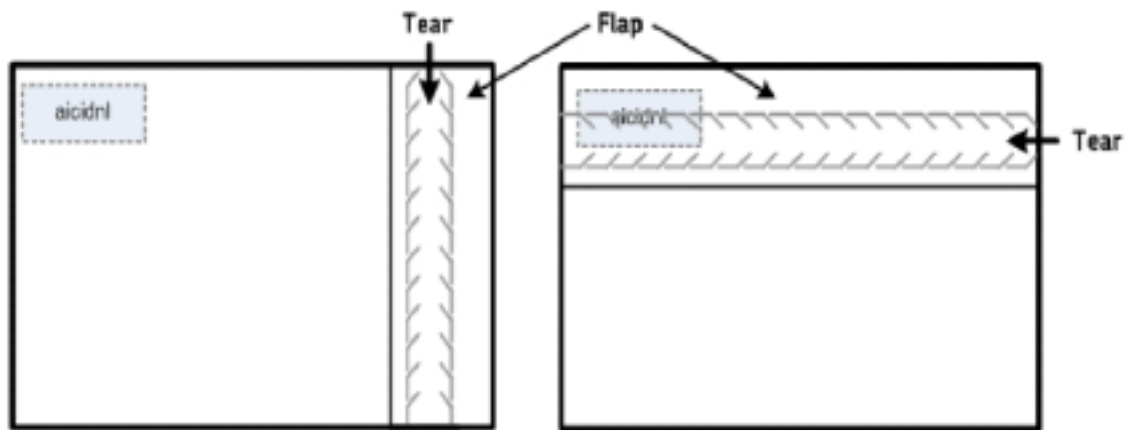


11.1. Zip Tie Perforations

Zip Tie perforations are acceptable subject to the following requirements:

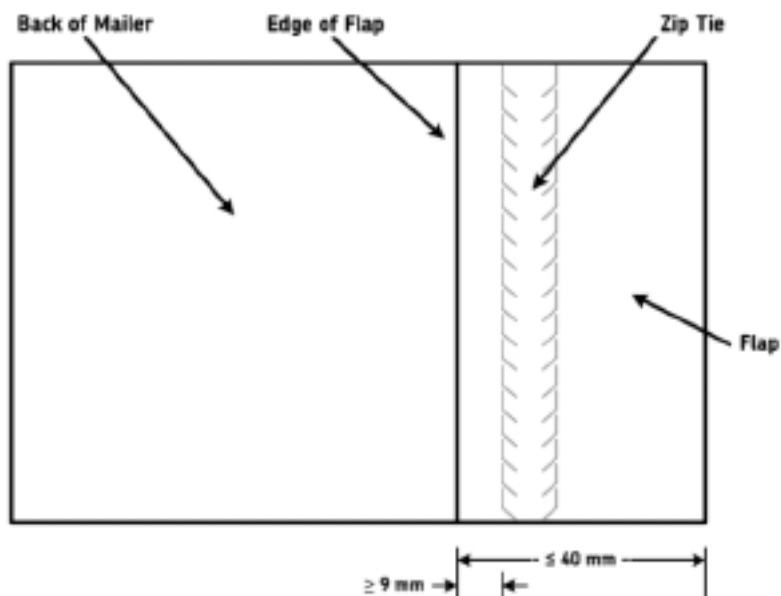
- Only one Zip Tie is permitted on each mailpiece
- The Zip Tie must be die cut into the mailpiece;
- The paper weight for the mailpiece must be greater or equal to 150 gsm;
- The mailpiece must be presented in landscape orientation only;
- The Zip Tie must always be placed on the back of the mailpiece;
- The Zip Tie may be positioned either horizontally or vertically, but the 'Tear' direction of the Tie is dependent upon the orientation of the mailer. Figure 62 illustrates the back of a landscape orientation mailpiece, the orientation and 'Tear' directional requirements (the relative position of the Access Indicia on the front of the mailpiece being illustrated);

Figure 25: Zip tie orientation



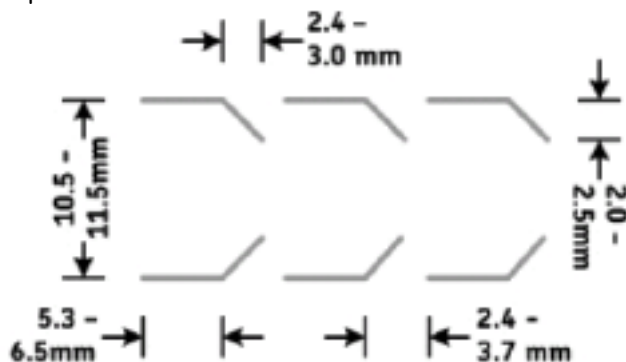
- The Zip Tie must be located on a flap that is less than or equal to 40mm wide as illustrated in Figure 63;
- The Zip Tie must be positioned greater or equal to 9mm from the edge of the flap as illustrated in Figure 63;

Figure 26: Zip tie envelope flap



- The dimensional requirements for the cut of the Zip Tie are provided in Figure 64 below;

Figure 27: Zip tie dimensions



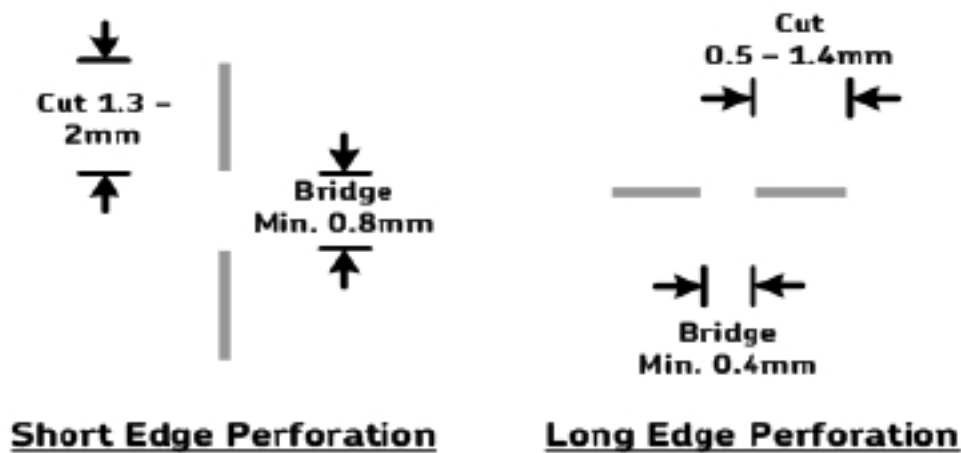
- All cuts and bridges must be of uniform ;
- The cuts must be rectangular in shape and have a width of less than or equal to 0.1mm;
- The glue used to seal the flap must not run out onto the outside of the mail item or produce protruding mounds on the mail item;
- The glue must be fully cured prior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

11.2. Roulette Perforations

Acceptable requirements for Roulette perforations are as follows:

- The perforations must be die cut into the mailpiece;
- The minimum paper weight must be greater or equal to 100gsm;
- The mailpiece must be in landscape orientation only;
- Perforations can only be present on any 3 sides, with only one of those sides being either of the longest sides;
- The perforations must be inset from the edge of the mailpiece by 12 ± 1 mm;
-
- The cut of the long side perforations must be set at $0.5 \hat{=}$ 1.4mm and with a bridge of greater or equal to 0.4mm as illustrated in Figure 65. All cuts and bridges must be of uniform ;
- The cuts must be rectangular in shape and have a width of less than or equal to 0.1mm;
- The short side perforations must extend from the edge of the envelope;
- The long side perforations must not extend beyond the short side perforations;
- The indicia must not be printed over the perforations;
- No 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 prior to presentation of the mailing to us;
- The tensile strength of the glue must be greater or equal to 4.5N and fibre tear must be exhibited on separation.

Figure 28: Perforation dimensions



11.3. Pressure seal envelopes incorporating Roulette Perforations

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 mailpiece. 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 mailpieces). The long side has a Roulette perforation that does not go through to the front of the mailpiece. The item is opened by removing the short edge perforated strips first and then tearing back the tear off strip on the reverse.

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 permitted
- Perforations to be on both short sides
- The Roulette Tear strip to 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)

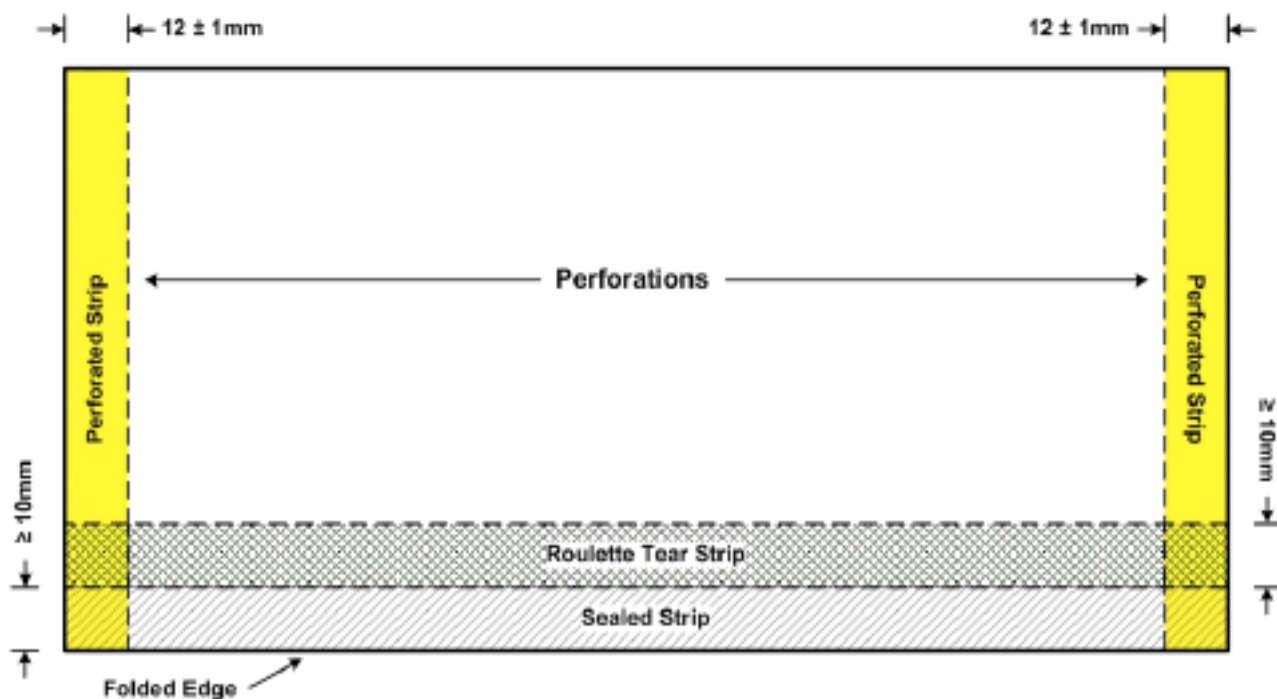
Perforated strip (short edges):

- The cut of the Perforated Strip perforations must be set at 1.3mm ± 0.2mm and with a bridge of greater or equal to 0.8mm
- The cuts must be rectangular in shape and have a width of less than or equal to 0.1mm.

Perforated strip (long edge on reverse):

- 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
- The cut must be set at
- Each cut must be of uniform
- Each bridge must be of uniform
- The cuts must be rectangular in shape and have a width of
- 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 to be
- The glue must not run outside the mail item or produce protruding mounds
- Glue to 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 29: Pressure seal envelopes



12. Single sheet mailer

Please contact your Access Account Director to discuss the design and construction requirements for mailers created from a single sheet of paper.

Get in touch
to find out how we can help.



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