

NATIONAL RIVERS AUTHORITY PAPER SPECIFICATION STUDY

REPORT SUMMARY

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**National Rivers Authority
Information Centre
Head Office**
Class No
Accession No **ALM**.....

NATIONAL RIVERS AUTHORITY PAPER SPECIFICATION STUDY

REPORT SUMMARY

1.0: INTRODUCTION:

The National Rivers Authority have commissioned the Conservation Consultancy to review NRA environmental policy and targets relating to its use of paper, and to assess the practical potential for NRA to implement its policy and achieve targets set relating to paper type.

The report is presented in three sections.

- **section one:** use of recycled paper.
- **section two:** review of policy and targets
- **section three:** review of NRA paper use and potential for use of NRA environmental standard papers

2.0: USE OF RECYCLED PAPER.

This section provides an overview of the central commercial and technical issues associated with the use of recycled paper, and considers:

- **cost**
- **availability and supply**
- **technical considerations/ fitness for use**
- **aesthetic standards**
- **benefit to the environment**

The section provides NRA with an overview of the central issues and is designed to provide an introduction and a background to the specific issues addressed in sections two and three. No specific recommendations for action by NRA are made in this section.

3.0: REVIEW OF NRA POLICY AND TARGETS.

TARGETS:

Paper Reduction: 5% target is modest, 10% target for paper is achievable. NRA need to record details of weight of paper ordered as an essential pre requisite to implementing a paper reduction programme.

Paper Recycling: 40% of paper purchased by end 1991, 60% by end 1993 is achievable. NRA to consider measuring waste paper recycled as % of all waste paper or all waste rather than % all paper purchased.

Paper Type: at least 50% of all NRA paper purchased to be recycled by end 1992. Target is achievable but not by target date. Section three considers in detail.

POLICY:

NRA have evaluated the environmental impact of paper (NRA policy statement 27.05.92 and "environmental impact-use of paper in the NRA June 1992). This evaluation is environmentally accurate, and the conclusions drawn on best action for NRA to reduce impact are correct, namely:

- reduce paper use
- recycle waste paper
- use recycled paper

Recycled Paper - NRA Standard: NRA have correctly identified the need to establish a definition for recycled paper based on overall % of waste content and type of waste content, with an emphasis on use of low grade waste. We recommend NRA adopt NAPM overall definition 75% minimum waste content, and to use ABCD categories of waste type with a minimum of 45% C/D content in recycled papers used by NRA.

Other Environmental Issues: in addition to meeting above definition recycled papers used by NRA should be made without the use of chlorine, i.e. Totally Chlorine Free (TCF).

NRA also need a supplier questionnaire for paper mills making recycled paper used by NRA to establish specific environmental standards related to manufacturing process.

Where Recycled Paper Cannot be Used: there may be instances where recycled paper cannot be used, all such instances must be rigorously investigated and challenged by NRA management responsible for NRA internal environmental policy. Where it is agreed that a recycled paper cannot be used NRA should use TCF part or non recycled paper as next best options.

Policy Communication: NRA to state environmental quality of recycled paper used on all printed material, together with a brief statement of NRA policy on longer printed material. Use of TCF part or non recycled paper not to be communicated.

NRA staff to be briefed on policy and how to handle external enquiries about the policy.

4.0:

REVIEW OF NRA PAPER USE AND POTENTIAL FOR USE OF NRA ENVIRONMENTAL STANDARD PAPERS.

The Conservation Consultancy reviewed five specific types of NRA paper use in four NRA operational areas, namely:

- photocopy paper
- computer listing paper
- letterhead
- laser copy paper
- promotional material

Identifying all key commercial, technical and aesthetic criteria, and against this profile identifying and evaluating alternative products meeting NRA environmental standards.

PHOTOCOPY PAPER:

Total use by NRA is about 57,000 reams or 142.5 tonnes. Current products reviewed are all non TCF non recycled.

Three alternative products which meet NRA environmental standards evaluated. Two meet overall NRA criteria..

recommendation: both products to be technically trialed, and commercial terms from suppliers to be evaluated by NRA purchasing officers.

LASER PAPER:

All operational areas reviewed bar one use standard photocopy paper or letterhead paper for use with lasers. No need for use of laser guaranteed paper was identified. Not using this quality paper in one operational area would save about £7,000 a year.

recommendation: discontinue use of Laser guaranteed paper.

LISTING PAPER:

No overall estimate of total volume used. Current products reviewed are all non TCF non recycled.

Three alternative products which meet NRA environmental standards evaluated. All meet overall NRA criteria.

recommendation: all three products to be technically trialed, and commercial terms from suppliers to be evaluated by NRA purchasing officers. NRA to consider potential for national contract to cut costs.

LETTERHEAD:

Existing products meet NAPM definition of recycled paper, but not the new higher standard of the NRA. Current products are relatively expensive due to weight (100gsm) watermarked, and use of high grade waste.

Four alternative products meeting NRA environmental standards evaluated, not watermarked, but meeting overall NRA criteria. One paper currently being phased into use in one operational reviewed. Two the same grade of paper as the two papers recommended for photocopy paper.

One watermarked paper meeting NRA environmental standard identified.

Switching all NRA letterhead to paper currently being introduced in one area would save an estimated £30,000 a year.

recommendation: papers matching those recommended for photocopy paper to be trialed, and commercial terms from suppliers to be evaluated by NRA purchasing officers. Potential for national contract to be considered.

PROMOTIONAL MATERIAL:

This category covers a wide variety of items produced locally and centrally. Corporate PR have 87 items scheduled for production this year, using an estimated 177 tonnes of paper, costing in the order of £133,000 (paper only).

Introducing the use of NRA environmental standard papers for promotional material is essential if targets are to be met.

Use of recycled paper for this category of use is relatively difficult. There are relatively few products available that meet the same general technical criteria as most of the paper in use, and much of the present NRA material relies on a particular style that is not easy to match using a recycled paper.

Fortunately this style is now dated in appearance, and a review of corporate design in the near future seems sensible.

Four types of coated paper meeting NRA environmental standards are identified, together with the uncoated papers identified under Letterheads.

recommendation:

- regional promotional material to be produced on recycled paper as items come up for reprint. Use of recycled paper to be built into specification for new items.
- Water Guardians to be re sourced on recycled paper ASAP as visible symbol of NRA action
- Use of recycled paper to form part of brief for any redesign of corporate material, meanwhile trials to ensure best reproduction on recycled paper to be conducted.

5.0: CONCLUSION.

NRA policy for paper is sound and based on a correct environmental assessment. Initial targets set are reasonable.

NRA will be able to use products meeting NRA environmental standards for paper type based on the analysis of five categories of paper in four operational areas.

Depending on the combination of products chosen the changes recommended in this report could save NRA in the order of £37,000 a year.

Introduction of NRA environmental standard papers is most difficult for promotional material and special care will be needed to ensure the highest possible aesthetic standards and to control costs. The large volumes of paper used for promotional material combined with it's role in communicating NRA image do make the use of NRA environmental standard papers a necessity for this application.

**NATIONAL RIVERS AUTHORITY
PAPER SPECIFICATION STUDY**

**A REVIEW OF NRA POLICY AND TARGETS
AND ASSESSMENT OF POTENTIAL TO USE
NRA ENVIRONMENTAL STANDARD
PAPERS**

BY THE CONSERVATION CONSULTANCY

NATIONAL RIVERS AUTHORITY PAPER SPECIFICATION STUDY

National Rivers Authority have commissioned The Conservation Consultancy to review its environmental policy for paper, and the initial targets set in relation to that policy.

National Rivers Authority have further commissioned The Conservation Consultancy to identify the potential for NRA to implement its policy for paper type based on an evaluation of five categories of paper currently in use in four NRA operational areas. The full report is presented here.

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USE OF RECYCLED PAPER.

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SECTION TWO:

REVIEW OF ENVIRONMENTAL POLICY AND TARGETS.

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SECTION THREE:

REVIEW OF NRA PAPER USE AND ASSESSMENT OF POTENTIAL TO USE NRA STANDARD ENVIRONMENTAL PAPERS

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ANNEXE ONE:

RECOMMENDED NRA ENVIRONMENTAL STANDARD PAPERS

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NATIONAL RIVERS AUTHORITY PAPER SPECIFICATION STUDY.

SECTION ONE

USE OF RECYCLED PAPER.

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1.2: RAW MATERIAL:

Recycled paper manufacturers rely on a cheap source of raw material to make up for other competitive disadvantages. Paper manufacture is all essentially based on one raw material input - wood. Growing trees to supply wood to the cellulose pulp industry and onwards for the manufacture of paper is a commodity business, with a very long planning curve, suppliers of wood think in terms of several decades for future planning. This makes the industry susceptible to fluctuations in demand. Demand for paper is also sensitive to economic cycles.

Typically as demand falls suppliers cut prices to maintain an economic flow of work through their manufacturing plant. Because non recycled paper companies tend to be large and vertically integrated, planning in terms of decades not years or months, they take the view that prices can be cut in the short to medium term, and have the resources to do this.

Recycled manufacturers are much less able to adopt this strategy, and their comparative price competitiveness becomes significantly eroded.

Furthermore recycled manufacturers have little scope to drive down the cost of their main raw material, waste paper, which is cheap in the first place. Downward pressure on waste paper prices makes it uneconomic to collect thereby damaging the whole waste collection infrastructure.

1.3: COST OF RECYCLED VS NON RECYCLED:

At the present time the general competitiveness of recycled paper is historically at its worst point compared to non recycled paper, and this needs to be borne in mind when looking at specific price comparisons.

All available information suggests that prices for non recycled pulp and paper is due to increase significantly (10-25%) in the next 3-6 months and that this will feed through in increased prices to end users. Recycled prices may increase slightly but by a much smaller percentage thus restoring more normal price comparisons.

2.0: AVAILABILITY AND SUPPLY:

Recycled papers probably account for significantly less than 10% of total printing and writing paper sales. It is not surprising that there are fewer products available, either in terms of choice for any given type of product, or choice of weights, sizes, colours etc.

Fortunately there is a great deal of duplication in the non recycled market, and it is possible for recycled products to cover most requirements (but not all) with a much more limited range of products. Because of the above average interest in recycled paper most major suppliers are developing a full range of recycled products, although this does vary.

3.0: TECHNICAL CONSIDERATIONS/ FITNESS FOR USE:

This is a critically important area.

Recycled papers are often perceived to be of a lower technical quality when compared with non recycled paper.

Sometimes this is based on outdated knowledge - quality standards are a great deal higher than they were five years ago.

Sometimes this is based on recycled papers looking different to non recycled, especially in terms of brightness and cleanness. These visual characteristics do not have a bearing on technical standards.

It is also frequently believed that all recycled papers are the same. This is the ~~not~~ case. There are high technical quality recycled papers and those that achieve a lower standard. Selection of an appropriate product on technical grounds is important.

There are some general differences on technical grounds between paper made from recycled waste paper and non recycled paper.

Recycled paper can give off more dust in use which can create difficulties with some equipment.

Recycled paper also tends to be more porous than non recycled, giving off or absorbing moisture from the surrounding atmosphere more readily than non recycled.

Some recycled printing papers perform differently to non recycled having a less smooth surface, being softer and soaking up ink to a greater extent.

However:

- Choosing the right paper will minimise problems.
- These characteristics are basically all characteristics of any paper. Equipment is designed to deal with them, at least up to a point, and adjustments can be made. Most of the problem is in peoples minds.
- Some equipment is more paper tolerant than others. There are now real signs that equipment suppliers are designing machines to be more suitable for use with recycled paper (still a long way to go though).
- Increased demand for recycled paper is driving up quality standards, and this is already apparent. In another sector of the market, newsprint, quality standards are now approaching non recycled with virtually all planned newsprint manufacturing plant based on using high proportions of cellulose fibre from waste paper.

4.0: AESTHETIC STANDARDS:

Recycled paper usually looks different to non recycled. This will depend on the type of waste used and how it has been reprocessed. Typically it is less white and less bright. It might also be less clean, with some recycled ink visible in the paper.

Whiteness and brightness is a major issue in the paper industry, and has become widely regarded as symbolising quality. The challenge for the 90's is to alter this perception.

In fact whiteness and brightness represents environmental degradation. The paper industry has managed to make a virtue out of a necessity. Converting wood into pulp leaves an end result which is the colour of molasses. To make it an acceptable shade huge amounts of bleaching agents are used. The most effective being chlorine.

We now understand that chlorine is one of the most dangerous chemicals known to man. Greenpeace are campaigning for the manufacture and use of chlorine to cease totally.

The paper industry is moving away from the use of chlorine as fast as it can, and we are already seeing non recycled papers come on to the market which are less white and bright as a result.

Any environmentally responsible paper using organisation should vigorously challenge the need for it to use bright white paper.

5.0: WHAT PRICE THE ENVIRONMENT?

Reducing the level of man's impact on the environment has a cost, and this is as true for paper as it is for anything else. In the medium to long term, and sometimes even in the short term the costs can be outweighed by savings.

But at the end of the day can we afford to ignore the cost to the environment? If the answer is no, then we must accept an element of cost, in money, or inconvenience, performance characteristics, or products that look different.

Recycled paper has clear environmental benefits in comparison to non recycled paper. There is wide spread potential for its use if users are prepared to make the effort and make some adjustments.

There are limitations on the amount of cellulose fibre that can be sourced from waste paper but these limitations are many years from being reached. The evidence from other sectors of the paper industry, packaging, newsprint and tissues, where the use of recycled fibre is much more widespread is that technical standards are capable of considerable development.

As the paper industry sees increasing levels of demand from users for recycled printing and writing paper on environmental grounds, those developments will be made.

NATIONAL RIVERS AUTHORITY PAPER SPECIFICATION STUDY.

SECTION TWO

REVIEW OF CURRENT NRA ENVIRONMENTAL POLICY AND TARGETS FOR PAPER.

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2.0: POLICY:

2.1: ENVIRONMENTAL IMPACT OF PAPER:

We agree with the evaluation presented in NRA policy paper dated 27.05.92 and in "environmental impact - use of paper in the NRA" dated June 1992, with the conclusions drawn, and with the recommended course of action.

We would comment specifically as follows:

Manufacturing:

Energy: consumption of renewable energy is as relevant as consumption of non renewable energy. Use of renewable energy by the paper industry diverts its use away from other areas. Wood is potentially one of the most valuable sources of renewable energy available.

Water use: we believe the figures are much higher than those used. Most paper manufacturing occurs outside the UK, as does most of the water use.

Bleaching: although the use of chlorine compounds creates far less toxic waste than the use of chlorine gas, it is still undesirable to use any form of chlorine, including compounds.

Forest Management: sustainable forestry is not an acceptable environmental concept at present. The term only denotes a policy of replacing more trees than are felled, a matter of economic necessity for the industry, and should be described as "sustained yield" forestry.

Sustainable forestry is a much broader and more important concept and environmentalists would dispute that any commercial forestry is environmentally sustainable. Until clear and widely recognised criteria are agreed, together with a procedure for measurement and endorsement NRA cannot take action in this area, and should avoid making any environmental statements with regard to so called sustainable forestry.

Measures to Reduce the Environmental Effects of Paper:

This is a particularly clear assessment of the situation, with all the important points covered. We will limit our comments to the main focus of this report, the use of recycled paper.

NRA have correctly identified recycled paper as the best environmental choice on the grounds that:

- it minimises the impact of commercial forestry
- requires less energy and less water
- generates less polluting waste from the manufacturing process, particularly AOX and Dioxins.
- reduces end product waste for disposal by landfill or incineration.

3.0: RECYCLED PAPER - NRA STANDARD:

NRA have identified that there is confusion about the term "recycled paper", and that it is important for NRA to use a definition which is clear, usable and offers maximum environmental benefit.

Current policy is that recycled paper used by NRA should have a minimum 45% post consumer waste content.

We agree that the type of waste used is important and does need to be defined.

It is also true that post consumer waste is the type of waste least collected for reuse and the most desirable to encourage.

A definition for recycled paper should be based on two aspects.

- percentage of cellulose fibre derived from recycled wastepaper.
- type of waste paper recycled.

For both of these aspects it is important to adopt a standard that is:

- environmentally sound
- capable of measurement
- widely accepted
- implementable

3.1: Recycled Paper - NAPM Definition:

The NAPM definition states that recycled paper must be made from a minimum of 75% cellulose fibre recycled from waste paper (and by implication a maximum of 25% cellulose fibre from any other source).

The definition further excludes waste paper generated by a paper mill from the 75% recycled content.

We would stress here that the term "recycled paper" can only apply to paper made from cellulose fibre recycled from waste paper, not to paper made from cellulose fibre derived from other waste material such as old wooden boxes, sugar cane waste, or straw stubble.

NAPM operate an accreditation scheme for papers which meet this standard.

3.2: ABCD Classification:

The NAPM recycled definition is commonly used in association with a complimentary classification scheme designed to show the type of waste paper used to make a particular recycled paper. Based on a simplified version of the waste categories used by the waste paper collection industry, it defines four broad categories of waste -

- grade A: waste generated by a paper mill (excluded from NAPM definition).
- grade B: white unprinted high quality waste from any other source.
- grade C: white printed high quality waste from any other source.
- grade D: white printed and unprinted low grade waste from any other source.

This classification scheme does have some drawbacks in that:

- It does not identify post consumer waste. Post consumer waste is the category of waste least collected at present and therefore the category to be most encouraged. However the industry has no way of accurately identifying this source of waste.
- It excludes other potential qualities of waste which are recyclable, such as coloured paper.

However the classifications do give useful guidance to the environmental value of the waste used, and is becoming an industry standard.

3.3: RECOMMENDATION:

- NRA to use NAPM definition of recycled paper, as the minimum definition of a paper which can be described as recycled.
- NRA to evaluate all recycled content papers against ABCD waste classification.
- NRA policy is to only use paper with a 45% post consumer waste content. This policy should be adapted to 45% C/D waste grade content.
- recycled papers used by NRA should be Totally Chlorine Free (TCF).
see under 4.1 below.
- NRA should develop a simple environmental questionnaire for mills manufacturing paper considered for use by NRA. Distributors of paper should also receive a more general supplier environmental questionnaire..
see under 4.2 below.

We would stress that this NRA definition of 75% recycled content of which 45% to be C or D grade is a minimum standard. The optimum is to use 100% recycled paper all of which is grade C/D waste.

4.0: ENVIRONMENTAL ISSUES OTHER THAN RECYCLED CONTENT:

It is important to acknowledge that use of recycled paper is a means to an end, not an end in itself.

The "end" is to reduce the environmental impact of paper as much as possible.

In overall terms the best way to achieve this objective is to minimise the use of paper. With specific regard to paper type the most effective course of action by far is to use recycled paper.

It is important that the manufacturing process used to make particular grades of paper used by NRA is of a high environmental standard other than through its use of waste paper as the cellulose fibre source.

4.1: Totally Chlorine Free Paper (TCF):

The use of chlorine to bleach paper is the single most important environmental issue of relevance to the manufacturing stage.

This is an issue of relevance to both recycled and non recycled paper.

We would recommend that NRA ensure that recycled papers used are manufactured without the use of chlorine in any form, and are therefore Totally Chlorine Free (TCF).

TCF paper is defined as paper made from pulp manufactured in a process generating less than 0.1 kg of AOX per tonne of air dried pulp.

Please note that it is highly probable that waste paper used by mills for recycling will have originally been made with the use of chlorine. This is not relevant, the only criteria is that chlorine has not been used in the manufacture of the recycled paper.

Where mills are making a recycled paper with some non recycled cellulose fibre content (to a maximum of 25%) NRA should determine whether the bought in non recycled cellulose fibres have been processed with the use of chlorine or not.

A suggested minimum standard is that any bought in non recycled fibre should have been made in a manufacturing process generating less than 2 kilograms of AOX per tonne of pulp. It is highly desirable that all cellulose fibre should be chlorine free.

4.2: Mill Audits.

As the environmental arguments related to paper become more sophisticated it is increasingly important to ensure that paper mills operate to a high environmental standard across all areas, use of waste paper is not enough in itself.

There are no established easy to use criteria for ensuring this at present, although the proposed EC Ecolabel will eventually be a good guide.

We would recommend that NRA undertake a simple environmental evaluation of the mills manufacturing the grades of recycled paper it proposes to use. This is especially important to NRA as a key area to evaluate is extraction of water, amount of water used, treatment of waste water and quality of waste water returned to an open system.

The Conservation Consultancy could advise further on this aspect if required by NRA.

5.0: WHERE RECYCLED PAPER CANNOT BE USED:

NRA's objective, after minimising use, must be to use TCF recycled paper as defined above wherever possible. However there may be circumstances where it may not be possible for NRA to use TCF recycled paper, as defined above.

The possible circumstances are:

- no product exists.
- no product exists that will work satisfactorily with current NRA or NRA supplier equipment.

(Our review of products in use by NRA did not reveal any instances of these circumstances).

Additional areas of concern might be:

- product costs more than current paper.
- product supplier cannot provide an adequate level of service, or guarantee of supply.
- product appearance is not acceptable.

It is extremely important that any suggested instance of recycled paper not being able to be used is rigorously investigated and challenged. This is especially true where subjective views on appearance are concerned. In most instances solutions are available if sought diligently.

For the products covered in the scope of this Consultancy these issues are specifically addressed.

If any genuine instances are discovered where it is not possible to use a recycled paper we recommend that NRA have a secondary environmental standard..

This standard should be the use of TCF non recycled paper.

No other standard should be used, in particular not sustainable or managed forestry, or use of alternative cellulose fibre sources.

There are products on the market that use either A grade waste paper, or B/C/D grade waste for less than 75% of the cellulose fibre content. When considering non recycled TCF papers these should be given preference.

6.0: POLICY COMMUNICATION:

We agree that NRA should communicate the environmental standard of the paper it uses wherever possible. NRA wants to communicate its high environmental standards to all interest groups, both internal and external. Paper is the main communication vehicle used by NRA and represents an ideal opportunity to get this message across.

NRA are also in a position to raise awareness amongst other paper users that this is an environmental issue, and one which they could practically address.

Including a brief description of the environmental standard of the paper used by NRA on printed material can also be done at no cost.

NRA must also ensure that all staff are properly briefed on NRA policy for paper, the basis for that policy and how it does/may affect them.

NRA staff will also need to be able to respond adequately to external enquiries about NRA environmental policy for paper.

6.2: RECOMMENDATION:

- NRA to include a brief statement of the environmental standard of the paper used for all printed material where that paper meets NRA environmental standards. A standard form of words needs to be agreed along the lines

"Printed on Totally Chlorine Free Recycled Paper 100 C/D."

- Larger NRA documents to include a short form of words encapsulating NRA environmental policy for paper type in addition to the statement above. along the lines

"In line with NRA environmental policy this publication has been printed on Totally Chlorine Free Recycled Paper making best use of natural resources, reducing energy consumption and water pollution, and minimising the use of landfill for the disposal of wastepaper. For more information about NRA environmental policy please contact ?"

- The above standards to be included in NRA style guides, and in all briefs to external agencies.
- NRA to brief all staff on policy for paper, and how to handle external enquiries about it.

Until NRA has converted all possible use of paper to TCF recycled paper use of paper meeting the secondary environmental standard recommended (TCF non recycled or part recycled) should not be communicated. This is specifically relevant to corporate promotional material.

7.0: SUMMARY - CONCLUSIONS AND RECOMMENDATIONS:

7.1: Initial NRA Targets 1992/93:

Paper Reduction:

- 5% target is modest.
- 10% target for reduction of stationery use is realistic
- Promotional material should be included.
- Measuring and recording weight of paper used to be introduced ASAP.

Paper Recycling:

- Target is realistic.
- Target would be better expressed as % of total waste paper generated, or failing that as a % of total office waste generated.

Paper Type:

- Recycled paper is the right choice on environmental grounds. For detailed assesment of implementation see section three of this report.

7.2: Policy:

NRA policy to:

- minimise use of paper
- maximise recycling of waste paper
- maximise use of recycled paper

is the correct policy, and is based on an accurate assesment of the life cycle environmental impact of paper.

7.3: Recycled Paper Standard:

- Recycled paper to be defined as per NAPM standard, i.e. made from a minimum of 75% cellulose fibres from B/C/D grades of waste paper.
- In all cases recycled paper used by NRA to be further classified by % of B/C/D grades of waste paper used in manufacture. NRA to use recycled paper with a minimum 45% C/D waste content.
- In addition to defining recycled % and content NRA to use TCF paper (see below).

7.4: Other Environmental Issues:

- In addition to using recycled paper NRA should use Totally Chlorine Free Paper (TCF).
- NRA to devise supplier environmental questionnaire for mills making paper, and a more general questionnaire for distributors of paper to NRA.

7.5: Where Recycled Paper Cannot Be Used:

- all cases where recycled paper is reported as unsuitable for NRA use to be vigorously investigated by NRA environmental manager.
- Where agreed that recycled paper cannot be used, a secondary environmental standard to be applied, i.e. TCF paper with preference given to TCF paper with some B/C/D waste content.
- NRA not to use alternative cellulose fibre sources or managed/sustainable forestry as an environmental standard.

7.4: Policy Communication:

- NRA to agree of words to communicate environmental standard for TCF recycled paper only on all printed material. To be included in design manual and in all briefs to external suppliers.
- NRA to produce a statement of its environmental policy for paper for communication to NRA staff.
- NRA to brief staff on how to handle external enquiries about NRA policy for paper.

**NATIONAL RIVERS AUTHORITY PAPER
SPECIFICATION STUDY**

SECTION THREE

**REVIEW OF NRA PAPER USE
AND ASSESSMENT OF POTENTIAL
TO USE NRA ENVIRONMENTAL STANDARD
PAPERS**

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NATIONAL RIVERS AUTHORITY PAPER SPECIFICATION STUDY

REVIEW OF NRA PAPER USE AND ASSESSMENT OF POTENTIAL TO USE NRA ENVIRONMENTAL STANDARD PAPERS

1.0: BRIEF:

This report looks at five categories of NRA paper use, based on information collected from four NRA operational areas.

The report determines the existing environmental status of products presently used in each category, and the key commercial, technical and aesthetic criteria that apply.

Against this profile alternative products which meet NRA's environmental standard are identified and compared with the key identified criteria. Categories of NRA paper use reviewed are:

- photocopy paper
- computer listing paper
- letterhead
- laser copy paper
- promotional material

NRA operational areas covered are as per brief (see annexe two).

2.0: NRA ENVIRONMENTAL STANDARD FOR PAPER TYPE.

Based on an assessment of the life cycle environmental impact of paper NRA have determined that "Best Environmental Practice" for paper type is to use recycled paper. NRA have determined that an environmentally appropriate definition of recycled paper is -

- made from a minimum of 75% cellulose fibre sourced from recycled waste paper.
- the 75% to exclude mill generated waste paper (e.g. category A grade waste).
- 45% of cellulose fibre content to be category C or D grade waste.
- paper/pulp to be Totally Chlorine Free.

This is a minimum definition for cellulose fibre content the optimum "Best Environmental Practice" is 100% C/D grade waste content.

NRA PRODUCT CATEGORIES

3.0: PHOTOCOPY PAPER:

3.1: CURRENT PRODUCT:

Brand, Supplier, Unit Price, and Volume:

Chapmans own brand, Chapmans, £1.44 per ream (500 sheets)
57,000 reams or 142.5 tonnes*.

Xerox Blue Pak, Rank Xerox, £1.65 per ream.
9,400 reams or 23.5 tonnes.

Copyprint, Modo, £1.65 per ream
10,000 reams or 25 tonnes.

* estimated total NRA volume.

Environmental Standard:

All operational areas reviewed presently use 100% non recycled, non TCF products.

Technical Criteria:

Photocopy paper is used with a variety of photocopiers. NRA are currently phasing in a national contract with Canon which will provide a much greater degree of standardisation.

Canon machines are the most common make of machine in use. One Xerox 5090 high speed machine, and some Oce low/medium volume machines are also in use.

Canon will only endorse their own brand paper for use on their equipment. However they are prepared to evaluate other papers for clients using their equipment and as part of Cannon's contract to supply NRA have confirmed that in general their machines can use recycled paper without problem. Our experience with other clients is that machines are very paper tolerant.

Xerox have a similar policy. Xerox high speed machines, including the 5090, are technically more demanding on paper and NRA have already experienced this with non recycled copier. NRA only have one 5090 in use which will in due course be replaced with Cannon machine/s.

In addition to photocopiers, photocopy paper needs to be suitable for use through local laser printers as either a primary or secondary process.

NRA are starting to standardise on Hewlett Packard (HP) laser printers. HP do produce technical guidelines for paper, but as with photocopy suppliers these tend to be of limited usefulness.

Special papers are made for use through laser printers. However they are very expensive, and not normally necessary. Laser compatible paper, as opposed to laser guaranteed paper, is quite adequate.

Commercial Criteria:

Price: NRA are in the process of establishing a national contract for the supply of copy paper, which will be available to all NRA regions. The national contract price is £1.44 per ream.

Non national contract prices currently paid by NRA regions surveyed are £1.65 a ream.

On a national annual usage of 57,000 reams each additional one penny per ream costs £570.00.

Contract: the new national contract has been awarded to Chapmans Office Stationers, a part of the WH Smith Group. NRA have negotiated an opt out for copy paper but at the same time have been offered a price held contract for 24 months.

Other local contracts reviewed are either not held to a fixed-time period or are about to expire.

Supply: Chapmans will in theory deliver one ream to any NRA office on a next day basis. More realistically Chapmans would expect to deliver 25 reams next day. Principal NRA offices will order 100 reams at a time. Modo and Xerox offer a similar service level.

Aesthetic Criteria:

Paper used by NRA at the moment is a standard bright white appearance. Most usage is internal and no particular requirements regarding appearance were noted.

A compatible appearance to the letterhead paper is useful.

3.2: OPTIONS FOR "BEST ENVIRONMENTAL PRACTICE".

There are relatively few photocopy grade papers available which meet NRA's environmental standard which are widely available in the UK and are likely to work to a satisfactory technical level.

The products identified are:

- Cyclus copier, 100% C/D TCF
- Recyconomic copier, 100% C/D TCF
- Canon own brand recycled copier. 100 C/D TCF
- Rank Xerox own brand recycled copier. 100 C/D TCF
- Kingsley Copier, 55B/45C TCF.

Cyclus copier is made in Denmark by Stora Papyrus. It is also available as an uncoated printing paper in a variety of sizes and weights (including board weights), as an envelope, and in reels suitable for conversion to business forms or listing paper. It is not available in colours. Cyclus is supplied in the UK by three Paper Merchants, Judds, Beswicks, and Classic.

Recyconomic copier is made in Germany by Steinbeis. It is available in five pastel colours, and as an uncoated printing paper (but not in board weights). Recyconomic is available to all trade suppliers in the UK through the two import agents, Zweckform UK and John Heyer Paper. In practice Modo Paper are the best national source of supply.

Canon and Rank Xerox will not reveal the manufacturing source for their own label papers. However we are confident that in both cases the product is made by Steinbeis, and is the same as Recyconomic.

Kingsley copier is an own brand name for Cameron copier made in the UK by Sunderland Paper. It is available in a range of colours and for offset printing, envelopes and listing paper.

Commercial Criteria:

Price:

NRA's new contract price at £1.44 is highly competitive even in the present climate of deflated prices. The fact that this price has been guaranteed for 24 months is very surprising, and we can only think that either the supplier, or possibly the mill, is prepared to lose money on this contract.

Estimated prices for the recycled brands are:

Cyclus: £1.53 - £1.70 per ream. Beswicks.
£1.60 - £1.80 per ream. Judds.
£1.64 per ream. Chapmans

Price bands are dependent on exact delivery requirements.

Recyconomic: £1.42 per ream. Modo
£1.56 per ream. Chapmans

Canon own brand: £1.55 per ream Canon.

Xerox own brand: £1.69 per ream. Rank Xerox.

Kingsley: £1.80 per ream. Fyne Paper.

None of the above are on a price held basis.

Service:

All the companies quoting are able to give an efficient next day service. Paper merchants are generally less suited to making small (e.g. under five reams) deliveries, and will offer better prices for larger drops.

Supply:

All products are made by established volume manufacturers, no supply problems are expected.

Technical Criteria:

The above papers all meet the general technical criteria required by NRA and NRA equipment suppliers. Papers are not laser guaranteed but are laser compatible. Kingsley copier is least likely to prove satisfactory on high speed machines, and does not benefit from the same level of quality control as the other papers.

The single Xerox 5090 photocopier operated by NRA may be problematic, but will need to be trialed.

Aesthetic Criteria:

Recyconomic is a light grey shade, and although it is a clean sheet and text is easier to read from this shade of paper, it is very obviously different to the paper used at present.

Cyclus is a white paper, although less bright than the present paper. In overall terms Cyclus is reasonably close to the present paper but still noticeably different.

For Cannon and Xerox see Recyconomic.

3.3: RECOMMENDATION:

Of the products and suppliers surveyed Recyconomic from Modo offers the best price, currently below NRA non recycled. It also has the benefit of coming in five colours.

The principal issue in considering Recyconomic is the shade. Moving away from bright white papers is an important step in environmental terms. Some of our previous clients have deliberately chosen this shade of paper to be a clear demonstration of their environmental commitment.

Cyclus matches Recyconomic environmentally and technically, and is less different in appearance terms. It is also being used by Anglian for letterheads, and if used for all NRA letterheads would have the benefit of matching. However it is not available in colours.

Prices quoted for Cyclus are above the new NRA contract price, but broadly comparable with existing local contract prices.

Recommendation:

- NRA to trial Cyclus and Recyconomic in a cross section of machines with special emphasis on Xerox 5090.
- NRA to negotiate exact prices with Beswicks, Judds and Chapmans (Cyclus), Modo and Chapmans (Recyconomic), and Cannon (Recyconomic as own brand) bearing in mind better prices to be obtained by limiting minimum order drops.
- To extend range of recycled colour copier negotiate supply of Kingsley tints (55B/45C TCF) from Fyne Papers, and Recyconomic colours if Cyclus chosen as white paper.

4.0: LASER PRINTER PAPER:

Of the four operational areas considered only one, buys a special laser guaranteed paper. All others use standard photocopy paper and letterhead paper.

We were unable to establish any particular reason for the use of a special paper. At present 2,500 reams of 85gsm Fabric plus (6.6 tonnes) a year are used.

This paper costs £4.22 per ream. Using photocopy paper at £1.44 per ream will save £6,950 a year, at £1.65 per ream £6,425.

4.1: RECOMMENDATION:

- All NRA operational areas to use copier paper for use through laser printers.

5.0: LISTING PAPER:**5.1: CURRENT PRODUCT:****Brand, Supplier, Unit Price and Volume:**

John Dickinson non TCF non recycled
11"x14.5" 60gsm single part music ruled
Continuous Computer Supplies/ John Dickinson
£3.75 per 000, 2.4 million sheets a year.

Unspecified non TCF non recycled
11"x14.5" 60gsm single part music ruled and A4 60gsm single part microperf
Polytypos
£3.87 and £2.61 per 000, 350,000 and 150,000 sheets a year.

Datamatic Own Brand non TCF non recycled
11"x14.5" 60gsm single part music ruled and A4 60gsm 2 part plain
Datamatic
£4.39 and £11.18 per 000, 600,000 and 480,000 a year. *

* Use of A4 2 part is being phased out.

Environmental Standard:

All papers found are 100% non recycled non TCF.

Technical Criteria:

NRA use a wide variety of printers in conjunction with listing paper. All machines are dot matrix, and relatively paper tolerant. Equipment suppliers include Honeywell Bull, Epson, IBM OKI and DEC.

Equipment suppliers routinely recommend so called woodfree paper for use with their printers which in theory automatically excludes the use of recycled paper. Woodfree is a description of a particular way to make pulp from wood. It is not a technical standard in itself.

We see no evidence to suggest that recycled paper will be unsuitable for use on any of the equipment NRA use.

Commercial Criteria:

Price:

11"x14.5" single part 60gsm music rule, range:

£3.75 per 000

£3.87 per 000

£4.39 per 000

A4 single part 60gsm plain:

£2.61 per 000

Contract:

No national contract. Local contracts either expire at the end of 1992 or are not tied to a time period.

Supply and Service:

All suppliers able to offer next day service for one box if required. In practice minimum order for free delivery is 20 mixed boxes, with 2/3 day delivery.

NRA regions buy from both convertors and brokers.

Aesthetic Criteria:

All output is for internal documents, although one region does sell time share space on their main frame. Current papers used are all bright white. However no special requirements for appearance were identified.

5.2: OPTIONS FOR "BEST ENVIRONMENTAL PRACTICE":

Recycled paper has been accepted as a legitimate raw material for the manufacture of listing paper for some years, mainly on cost grounds. However listing converters tend to change their base paper quite frequently depending on prices and what is available.

At the moment converters are able to buy standard woodfree paper as cheap or cheaper than recycled paper and this has considerably affected the availability of suitable products. As yet there are insufficient end users specifying recycled listing paper on environmental grounds as opposed to cost grounds to convince converters to retain recycled products in their range.

The supply chain for listing paper is significantly different to the supply chain for other products covered in this report. Listing paper is a converted product, with most of the products available being converted by third party companies rather than by the paper maker.

These third party suppliers do change the source of their paper without necessarily informing their customers. It can be difficult to ensure the consistent supply of a specific environmental grade.

We have sourced suitable recycled papers from three suppliers. At present they are each supplying a different paper quality.

- Continuous Computer Supplies (current supplier to NRA).
John Dickinson Recycled, 100 recycled minimum 75% C/D TCF
Price: £4.00 per '000
- Datamatic (current supplier to NRA).
Saverflow Recycled, 100% C/D TCF.
Price: £3.89 per '000.
- Pennine Data.
Desonne Recycled, 100% C/D TCF
Price: £3.60 per '000.

Prices are based on 2.4million sheets a year.

Commercial Criteria:

Price comparisons between conventional non recycled and recycled listing paper are not good at the moment. The industry expects recycled to regain it's position as a cheaper option than non recycled over the next six months.

White recycled listing paper made mainly from B grade waste is currently uncompetitive in comparison to non recycled. However low white and grey papers made principally from C/D grade waste are still broadly price competitive with non recycled papers and will regain a competitive edge during 1993

This is a good example of the benefit from NRA policy to use recycled paper with minimum 45% C/D fibre content. NRA will benefit in terms of cost, and NRA will help to ensure that this type of product establishes itself with suppliers on environmental grounds.

Technical Criteria:

NRA do not have a demanding technical requirement from listing paper. All recycled products will meet the standard.

Aesthetic Criteria:

The recycled papers identified will be noticeably different in appearance. This will not affect performance in any way.

5.3: RECOMMENDATION:

This product area represents a good opportunity for NRA to introduce a product that meets its environmental standards without any technical or appearance compromise, and to give suppliers a clear signal that major users are buying C/D waste content products on environmental grounds.

NRA regions surveyed use a variety of different products with usage individually ranging from moderate to small. We believe scope exists to rationalise the range of products in use, and for a national contract to be considered.

- NRA to trial all identified products to confirm machine compatability.
- NRA to consider the potential for a national contract to improve purchasing power.

6.0: LETTERHEADED STATIONERY:

6.1: CURRENT PRODUCT:

Brand, Supplier, Unit Price, and Volume:

NRA have specified the use of a recycled paper for its letterhead and associated stationery since its inception.

The current specification is for a 100gsm white recycled paper with a cut to register watermark. The products available meeting this high specification fail to meet new NRA environmental standards and are expensive.

Originally all regions used Conservation White Wove. Some now use Croxley Heritage on cost grounds. Anglian are in the process of switching to Cyclus on environmental and cost grounds.

All regions buy letterhead from local printers, tending to go out to tender frequently and using several different printers. Anglian have negotiated a price for Cyclus directly with the Local stockist, Beswicks, who supply direct to NRA printers.

No unit prices exist for letterheaded stationery.

Environmental Standard:

All areas reviewed use a recycled paper meeting the NAPM recycled standard but, with the exception of Cyclus in Anglian, not meeting NRA standards on grounds of C/D content.

Conservation White Wove: 75B TCF.

Croxley Heritage: 90B TCF

Cyclus: 100C/D TCF .

Technical Criteria:

Paper used needs to be able to run through single colour printing presses and for the A4 letterhead to run through photocopiers and laser printers in low volume.

In practice there are no demanding technical applications for NRA letter heading, and all papers under consideration are technically suitable .

Commercial Criteria:

Price: There are no fixed unit prices for letterheaded stationery. Individual jobs are priced as one offs by each region.

Examples of annual regional budgets are:

- total annual expenditure of £8,500 for these items including paper and print using Conservation White Wove 100gsm .
- total annual expenditure of £9,200 for paper only using Croxley Heritage.

Contract: no regions surveyed have entered into a contractual arrangement for the supply of letterheads.

Supply/Service: all regions use local suppliers with no particular service requirements. Quality of the printed job and price are the two main considerations.

Aesthetic Criteria:

Letter heading is an important part of NRA's corporate communication, and overall appearance is clearly important. However we did not find any strong feeling in any region on this issue. In fact we understand that before using Conservation ordinary 80gsm bond was commonly in use.

6.6: OPTIONS FOR "BEST ENVIRONMENTAL PRACTICE":

Environmental Standard:

Current papers used do meet the commonly accepted standard for recycled paper, but not the NRA standard for use of lower grade waste.

Existing environmental recommendations for NRA letterhead were established in the late 80's and at the time represented good environmental practice. Since then environmental standards have developed and the existing NRA standard no longer represents best environmental practice.

With one exception all recycled watermarked papers available also fail on this basis. The only watermarked paper available in the UK which meets the standard is Conservation PCW 25B/75C TCF, available in 90gsm

There are a wide range of non watermarked recycled printing papers that meet the NRA standard, including Cyclus (which is being used by Anglian), and Recyconomic, which are both potential photocopy papers for NRA use. Kingsley offset and Savatree are other suitable products.

An option available to NRA is to use the most obviously recycled paper on appearance grounds. We have noted elsewhere the need to challenge assumptions about paper whiteness which is achieved at considerable environmental cost. On these grounds the most suitable paper to use is Recyconomic which could be used as a matching product for photocopying.

Commercial Criteria:

NRA currently use a high quality, and therefore expensive, paper. Croxley Heritage, a slightly lower quality paper has been introduced as a cheaper option, but is still an expensive paper.

- The potential exists for NRA to reduce its stationery bill by a considerable amount by any or all of the following -
 - using unwatermarked paper.
 - reducing weight from 100gsm to 90 or 80gsm (also reduces amount of paper used).
 - negotiating a centralised price either with one printer, or with one paper supplier.

Papers meeting NRA environmental specification should also be cheaper than papers currently in use.

The experience at Anglian, which is introducing an unwatermarked 100gsm TCF 100C/D paper with a price negotiated directly with a paper supplier on the basis of an annual requirement illustrates the potential.

Anglian report that these measures will reduce their annual bill from £9,200 for Croxley Heritage to only £3,200. Assuming Anglian to represent 20% of total NRA volume the potential total saving is £30,000 a year.

Although Cyclus is a good choice of paper on environmental and commercial grounds there are other comparable products. We have identified two for comparison purposes.

- Savatree 100% recycled TCF 30B 70C/D TCF
Supplier: Howard Smith Paper.
Price: £29.66 per '000 sheets 100gsm SRA2 at Tonne rate.
- Kingsley 100% recycled TCF 55B 45C/D TCF.
Supplier: Fyne Paper.
Price: £30.99.

The comparable price for Cyclus 100C/D TCF is £23.76

Recyconomic Offset is not available as a stock line in 100gsm at present, but can be supplied to order.

- Recyconomic Offset, 100% C/D TCF
Supplier: Modo Paper
Price: £22.50 (based on pro rata 80gsm price).

Technical Criteria:

No options under consideration will create technical problems.

Aesthetic Criteria:

NRA currently use a white recycled paper. Moving to a paper with a high percentage of low grade waste to meet the NRA environmental standard will inevitably mean using a paper which will be less white. This represents an important opportunity for NRA to demonstrate its commitment to best environmental practice, and to reflect an image more in tune with the 90's.

6.3: RECOMMENDATION:

For NRA to meet the laid down environmental standard the choice is either to use the only available watermarked sheet at a similar cost to the current paper, or to change to an unwatermarked sheet with the significant cost savings that go with this.

Centralised purchasing of paper will give further cost benefits, and in the case of a watermarked paper, introduces the possibility of an NRA personalised watermark (this may have a cost implication, but is mainly to do with minimum quantity of paper ordered).

There is also the possibility of using different papers and/or different weights for different letterheads.

- NRA to use unwatermarked recycled bond 45C/D TCF minimum.
- If NRA wish to use a watermarked paper for any letterhead application Conservation PCW to be used.
- Letterhead to be trial printed on Cyclus, Recyconomic, and Conservation PCW to determine suitability.
- NRA to negotiate a national price for paper/s from supplier/s able to service all regions.

7.0: PROMOTIONAL MATERIAL:

7.1: CURRENT PRODUCTS:

Brand, Supplier, Unit Price and Volume:

Promotional material covers an enormous range of items produced at a Head Office level and by individual regions. Corporate PR have identified 11 distinct categories of material being produced. 87 individual Head Office documents are scheduled for the current year using an estimated 177 tonnes of paper. Total paper consumption is unknown but is probably in the order of 400 - 600 tonnes a year.

A wide range of suppliers are used, including designers as well as printers. Printing of corporate items has been centralised with one printer.

Total cost of items is not known.

Environmental Standard:

Items reviewed vary. Some instances were found of recycled paper being used. In the majority of cases non recycled non TCF paper is used.

Head Office items have either already been changed to TCF non recycled or will be at the next reprint. TCF non recycled is the minimum action that can be claimed to have any environmental benefit, and is a long way from the standard now being set by NRA. (although promotional material is currently excluded from this standard).

Technical Criteria:

Technical criteria for printing paper is not easy to identify. A wide variety of paper types can be successfully printed, and the printing processes available are in principal highly flexible.

At present NRA use conventional paper qualities suitable for offset printing without any specific machine adjustment.

The technical specification of printing paper has a large bearing on the final appearance of the printed product. Technical criteria tend to be closely linked to aesthetic criteria.

Commercial Criteria:

Individual items are costed as one offs. Paper is only one element in the total cost, usually less than half the direct cost from the printer without taking into account design and copy writing costs.

At present only items produced for Head Office are produced on a standard paper quality with a centrally negotiated price based on annual usage.

Paper is firstly and formostly selected for its ability to give the finished item the desired appearance. Having decided the sort of paper required the relative cost of different papers will be considered.

Overall costs for promotional material can be influenced in a wide variety of ways, the cost of paper based on current specifications is a minor issue in this context.

Representative promotional items produced by each region and by Corporate PR. have been analysed and used for comparison with the same item produced on recycled paper.

Aesthetic Criteria:

Promotional material is used to represent the NRA to all interest groups. Its appearance is considered to be extremely important and much time, effort and expense is taken to ensure the desired standard is reached.

Paper is important both because of its actual qualities, both appearance and touch, and because of the way it affects the finished print

Much of the material produced by NRA is printed on coated paper which allows good definition for photographs and for colour printing, and generally "lifts" the appearance of print on the paper making it clearer and sharper.

NRA corporate design was developed in the late 80's and typically represents values for that era. Design values for the 90's, especially for organisations wanting to reflect environmental concern have changed considerably.

7.2: OPTIONS FOR "BEST ENVIRONMENTAL PRACTICE":

Promotional material offers the greatest area of challenge to NRA in terms of implementing an environmental policy for paper type.

Although total quantity of paper used is not known this is clearly the largest area of paper use. Head Office material alone accounting for more than total NRA use of photocopy paper.

NRA will not be able to achieve its environmental targets without tackling this area of paper use, and in terms of internal and external perception it is essential that NRA environmental policy is seen to apply to promotional material if it is to be credible.

Products Available:

There are only four qualities of coated recycled paper available in the UK that meet NRA environmental standards.

- Guardian Matt Coat: 45B/45C TCF
- Guardian Blade Coat 45B/45C TCF
- Biovie Matt Coat. 30B/70D TCF
- Corona Gloss Coat. 24C/56D

Guardian Matt and Gloss are the same paper with different coatings. Made in the UK they are the original recycled coated papers. Guardian is a mill name, and the paper is sold under merchant own brand names. The most widely available being:

- SylvanCoat and SylvanBlade, available from Paperback and Bunzle Group.
- Reprise coated from Robert Horne
- Envirocote from McNaughtons

These papers are available in a relatively large range of stock weights and sizes, including the only coated board weights (Matt quality only).

Weight range: Matt , 80gsm - 280gsm.
Blade, 90gsm - 135gsm

Biovie Matt is a French made paper with a higher environmental standard than Guardian. It is less white and comes in a limited weight range. It has a significant price advantage against Guardian.

Stockists: Paperback and Brand Papers.
Weight range: 80 - 115gsm.

Corona Gloss is the newest recycled coated paper available in the UK, and is in a different class on several grounds.

Corona is a "light weight coated" paper. This is a recognised grade in the paper market, and is used mainly for high volume publishing. It has a high coating weight and is typically designed to give special performance characteristics at the lowest possible unit cost.

Corona is made in Japan and is the first recycled paper to meet this definition. In its home market it is designed to match non recycled comparable products in every respect, in particular performance and price.

In the UK the situation is different. The paper costs considerably more due to currency and transport cost, and is not likely to find a market against comparable non recycled products.

It is being sold in the UK as an alternative to higher priced gloss coated printing papers. Although it is not strictly speaking a comparable paper it does offer print opportunities not otherwise available on a recycled paper.

Corona is especially interesting as it demonstrates the potential for manufacturing a grade of paper from 80% low grade waste which is fully competitive, in an area of the market that the paper industry had previously claimed was technically and commercially impossible.

Stockist: Paperback.

Weight range: 85 - 118gsm.

Commercial Criteria:

Cost: no reliable total cost figures are available for NRA spend on promotional material. 177 tonnes of paper estimated for use by NRA corporate material at a typical paper cost of £750.00 a tonne gives a paper cost of £132,750 for these items alone.

For the purposes of this exercise we have looked at a number of individual items to give an indication of current cost, and the cost of using a recycled paper.

- **Item:** Guardians of the Water Environment.
Produced for: Corporate PR
Format: 1/3 A4 12 page leaflet.
Paper: 130gsm SRA2 Macoprint TCF
Quantity: 50,000 copies, 26,250 sheets of paper, weighing 983 kilos.
Total Cost: £5,700.00
Paper Cost: £737.00

Recycled Paper: Reprise Matt 130gsm, £1,027.00 (prices supplied by printer).

Total Cost: £5,990.00

- **Item:** Weather Radar.
Produced for: Corporate PR
Format: A4 8 page booklet
Paper: 170gsm SRA2 Macoprint TCF
Quantity: 30,000 copies, 31,200 sheets of paper, weighing 1,528 kilos
Total Cost: £3,700.00
Paper Cost: £1,146.00

Recycled Paper: Reprise Matt. 170gsm, £1,596.00. (prices supplied by printer).

Total Cost: £4,150.00

- **Item:** Water Guardian - NRA newspaper
Produced for: Water Guardians editor.
Format: A3 broadsheet 8 page.
Paper: 100gsm SRA1 Challenger Matt.
Quantity per issue: 10,900 copies, 12,000 sheets of paper weighing 691 kilos
Total Cost: * £2,886.00. * excludes cost of producing copy.
Paper Cost: £620.00

Recycled Paper: Envirocoat 100gsm, £846.00 (price supplied by printer)
 Envirocoat 90gsm, £761.00 (pro rata 100gsm price)

SylvanCoat 100gsm.£785.00 (price supplied by
 Paperback)

SylvanCoat. 90gsm £714.00 (ditto)

Biovie 100gsm. £603.00 (price supplied by Paperback)

Biovie 90gsm £542.00.(ditto)

Corona 105gsm £765.00 (price supplied by Paperback)

Corona 85gsm £619.00 (ditto)

Cyclus 100gsm £504.00 (pro rata NRA Anglian price)

- **Item: Severn Bore.**

Produced for: Severn Trent.

Format: 4 page A5 booklet.

Paper: 150gsm SRA2 Beswick Satin.

Quantity: 5,000 copies, 2,750 sheets of paper, weighing 119 kilos.

Total Cost: £525.00

Paper Cost: £90.00.

Recycled Paper: Envirocote 150gsm, £166.00 (price from printer) .

Total cost: £601.00.

- **Item: Glas Y Doran, Garden Festival Supplement.**

Produced for: Welsh Region

Format: A3 folded to A4.

Paper: 100gsm Matt art non recycled non TCF.

Quantity: 50,000 copies, 51,000 sheets of paper, weighing 1,469 kilos.

Total Cost: £4,725.00

Paper Cost: £2,090.00

Recycled Paper: SylvanBlade. 100gsm. £2,071.00 Total Cost:
 £4,706.00

SylvanCoat. 100gsm. £1,905.00 Total Cost:
 £4,540.00

Corona 105gsm £1,857.00 Total Cost:
 £4,492.00

Biovie 100gsm £1,464.00 Total Cost:
 £4,099.00

Recycled prices based on Paperback listed tonne rates.

- **Item: Fisheries Bye Laws**
Produced for: Anglian Region
Format: A5 leaflet
Paper: 115gsm and 240gsm Sovereign Matt non recycled non TCF
Quantity: 5,000 copies, 4,000 sheets 115gsm and 2,500 sheets 240gsm, weighing 305 kilos.
Total Cost: £1,059.00
Paper Cost: £364.00

Recycled Paper: SylvanCoat 115 and 280gsm. £491.00 (price supplied by printer).

Total Cost: £1,186.00

For Head Office items recycled coated papers appear to be significantly more expensive than the current paper specified. Macoprint is one of the better priced papers on the market, and on present comparisons from the printer costs approximately £750.00 a tonne, compared to approximately £1,000 a tonne for Reprise Matt.. On the estimated total tonnage for corporate material of 177 tonnes this amounts to an environmental premium of £44,250.

We believe that this premium is artificially high. NRA should be able to negotiate much better prices based on total tonnage used. At list tonne rate Macoprint costs £1,345.00 a tonne, against an actual price to NRA of £750.00. Reprise Matt at list tonne rate costs £1338.00 a tonne against a current quoted price to NRA of £1045.00. Although there is probably less potential to negotiate price discounts based on volume for Reprise or other recycled papers, it should be possible to do considerably better than presently indicated.

Reprise Matt is also one of the most expensive recycled papers available. If NRA could reduce the weight of paper used to 115/118gsm Biovie or Corona could be used, at a cheaper price and a better environmental standard. Lower weights will also reduce the quantity of paper used helping to meet other NRA environmental targets, and cutting costs further.

It also seems highly probable that the total number of sheets of paper used for NRA corporate material could be reduced by a significant percentage, cutting not only the cost of paper used but also all associated costs.

NRA should also consider the potential to use uncoated recycled papers. Cyclus currently costs Anglian region £730.00 a tonne.

As previously mentioned the cost of promotional material can be reduced in a wide variety of ways, most not involving the paper cost at all. Any evaluation of the cost of implementing NRA environmental policy in this critical area of paper usage needs to bear this in mind.

The comments made for Head Office material apply equally to regional material.

Technical Criteria:

Guardian Matt and Blade, and Biovie, which are the three main papers under consideration, all have different performance characteristics to the papers currently used by NRA.

This is in the sense that they will reproduce a printed image differently, not that they will not work on the machinery they would be used with.

The solution is to take these performance characteristics into account throughout the process. Designers and printers both need to do this if the best result is going to be achieved.

Aesthetic Criteria:

Promotional material is the area of paper use where appearance counts most highly, both in terms of the paper itself, but more importantly in terms of the finished printed product.

Recycled paper provides a less straightforward choice for this application. The paper industry has yet to develop coated recycled papers to compare on equal terms with non recycled products.

The papers that do exist tend to have different performance characteristics and cannot simply be substituted for traditional coated non recycled papers.

Many of the items produced by NRA do not require an especially high standard from the paper and could be switched to a coated or uncoated recycled paper without much difference in appearance.

Other items would be noticeably different. This would apply mostly to Head Office material. Head Office items are the most "designed" and make most use of non recycled coated paper characteristics. In particular we have noted that current NRA corporate design is based on presenting hard sharp images. This image is least easily reproduced on recycled paper which is better suited to soft images.

7.3: RECOMMENDATION:

Head Office Material:

Promotional material is the largest area of paper use in the NRA, and Head Office material is the largest element within overall promotional material. An effective environmental policy needs to include these items.

NRA have most control over this area of promotional material, with the greatest scope to effect uniform change to the highest possible standards.

At the same time this area is the least suited to a simple substitution of existing paper for recycled paper.

We feel that effective action to introduce the use of recycled paper in this area should be seen as part of a fresh look at NRA corporate design. This should include the use of recycled paper as a central part of the design brief.

Current NRA corporate design no longer reflects an appropriate image for an environmentally aware organisation in the 1990's and this represents an urgent challenge for NRA to address.

In addition to the above Corporate PR should routinely record environmental information relating to paper type and quantity immediately.

Water Guardians Newspaper:

This is the main means of internal communication for NRA, and as such must be a high priority for the use of recycled paper. Guardian Matt and Biovie are both suitable papers which with care will give similar levels of reproduction to the paper currently used. Corona gloss would give a superior presentation to the current paper. Cyclus uncoated would be a more obviously different paper (because it is uncoated) but in our opinion would be suitable, and would be a more visible symbol of NRA action on paper. It also has the benefit of offering a greater cost saving. We have already identified Recyconomic as a paper representing the very best in environmental terms with a clear demonstration of NRA commitment in this respect. Technically Recyconomic is as suitable for printing Water Guardians on as Cyclus.

We understand that the print contract for Water Guardians is about to go out for tender and this is an ideal opportunity to introduce a recycled paper.

We recommend that:

- all three types of recycled coated paper, and Cyclus uncoated are considered
- recyconomic is evaluated
- a weight reduction to save money and contribute to associated environmental objectives is considered.
- when looking at alternative suppliers NRA should evaluate ability to print on recycled paper, and attitude towards doing so.
- NRA consider negotiating price directly with suppliers (as per cyclus through Anglian).

Regional Material:

There is significant scope to introduce the use of recycled paper for regional promotional material, and in some cases this is already happening.

We would recommend that:

- regions begin routinely identifying environmental information for paper qualities being used, both for type and quantity, and setting up systems needed to monitor this
- regions use uncoated recycled paper wherever possible
- where coated paper is felt to be necessary, use one of the four recycled grades included in this report.
- ensure that designers and printers familiarise themselves with performance characteristics, and take these into account.
- take action to ensure best possible prices are obtained for recycled paper. Direct negotiation with suppliers (as with Anglian for Cyclus) being the suggested route.
- take steps to share experience and knowledge between regions.

NRA PAPER SPECIFICATION STUDY.

RECOMMENDED PAPERS.

PHOTOCOPY PAPER:

Cyclus Copier: branch manager.	Beswick Paper, 0533 824466, Chris Roberts (current supplier of cyclus offset to NRA Anglian).
sales director.	Gerald Judd Paper, 0532 527777, Geoff Cope Chapmans, 0531 631631, Debbie Oakley. (current NRA national contract supplier copy paper).
Recyconomic Copier:: Burkin.	Modo Paper 0222 237773. Les Jones (current supplier to NRA Wales). Chapmans (as for cyclus copier). Cannon (own branded), 081 773 3173, Julia (current NRA national contract photocopier supplier).

LISTING PAPER:

John Dickinson Recycled	Continuous Computer Supplies, (current supplier to NRA Anglian).
Saverflow:	Datamatic. 0222 86511, Gareth King. (current supplier to NRA Wales).
Desonne:	Pennine Data, 0254 680066, Rob Allen.

LETTERHEAD: (ALSO SUITABLE FOR GENERAL UNCOATED PRINT).

Cyclus:	Beswick Paper (as for copier).
	Gerald Judd Paper (as for copier)
Savatree:	Howard Smith Paper, 0604 706090, Vince
Collins.	
Kingsley	Fyne Paper, 021 328 3656, Ken Beckett
National Contracts	
Recyconomic	Modo Paper (as for copier).

PROMOTIONAL MATERIAL:

Biovie Matt:	Brand Papers, 0788 540000, David Alder
Director.	
	Paperback**, 081 980 2233, Mr Kuiper Sales
Director.	

Guardian Matt and Blade sold as-

SylvanCoat	Paperback (as for Biovie)
Envirocote:	McNaughton Paper, 081 311 7111, Chris
Gravett buyer,	
Reprise	Robert Horne, 0604 495333, Martin Stears
product manager.	
Corona Gloss	Paperback (as for Biovie).

**** Paperback is a specialist supplier of recycled printing paper and office stationery products. NRA may be interested in other items they supply. NRA Bristol currently buy envelopes from them.**

NATIONAL RIVERS AUTHORITY

PAPER SPECIFICATION STUDY

ENVIRONMENTAL POLICY

OPERATIONAL REQUIREMENT

Background

The National Rivers Authority (NRA) is an independent government Agency with statutory responsibilities and powers in relation to pollution control, water resources, flood defence, fisheries, recreation and conservation of the water environment.

Paper Use/Specification Overview

NRA expenditure on paper is approximately £400,000 per annum. Other paper-based products are included in an overall stationery expenditure of £1.5 million per annum.

A high proportion of the regulatory, administrative and information functions of the NRA are office based. The use of paper is therefore both a major item of expenditure and an essential medium through which the Authority communicates internally and externally.

Paper and stationery are to be subject to national procurement directives in the near future. Currently however, paper buying is dispersed throughout the regions and is not subject to any standard procedure. Paper using equipment and paper types are therefore diverse.

Need for national NRA standard specification for paper

The current lack of knowledge of the variety of paper types and paper machinery in use throughout the NRA presents a barrier to achieving a reduction in the Authority's own environmental impact by using low impact paper products. It is important to review present paper use and identify suitable low impact alternatives in order both to implement the NRA's Environmental Policy and to communicate this commitment to others. Targets have been set in the current Corporate plan to increase the use of recycled paper products throughout the NRA.

Proposed Approach to the study

- 1 - Review reported specifications of papers and paper using machinery currently in use in specified NRA locations.
- 2 - Visit a cross section of regional locations to look at paper use, typical equipment in which it is used etc.
- 3 - Liase with local buyers of paper
- 4 - Consult at national level with NRA staff who specify and/or use large volumes of

paper or who have previously examined aspects of paper use, and establish standard paper specifications for each category in '6' below:-

John Batten: Welsh region - ref. paper, photocopying machinery etc.

Lloyd Marlow: Anglian region - ref. paper

Mark Yeomans: Bristol Head Office - national procurement, general

Julie Jupe: Bristol Head Office - Public Relations, printed paper

Ian Gerard: Severn Trent region - office administration, general

- 5 - Review/comment on existing NRA paper policy in the light of current knowledge of paper life cycles, new paper technologies etc.
- 6 - With regard to present policy of specifying paper of at least 40% post-consumer waste fibre which is chlorine-free in manufacture, identify at least 3 alternative brands from different suppliers/mills in each of the five categories given below which are compatible with existing needs/equipment and competitively priced with present NRA supplies:
 - i) computer listing paper
 - ii) photocopier paper
 - iii) typing/laser copying paper
 - iv) letterhead
 - v) paper for print
- 7 - Complete study and issue deliverable items listed below by one month from date of commissioning

Deliverables

- A Concise report on current use of papers listed above as seen in NRA locations along with a standard specification for each.
- A Written Review of current NRA policy paper and targets.
- A list of any Recommended Changes to NRA policy
- A List of alternative paper brands/suppliers in categories described above.

Liason with NRA during study

- Initial meeting with Environmental Policy staff and others to determine details of approach.
- Consultation in regions as outlined above.
- A presentation of key findings and suggested further action for regions with respect to details of local paper applications.

Available Information in Support of the study

- NRA Corporate Plan 1992/93
- NRA Environmental Cost Assessment - Paper Use
- NRA Environmental Policy
- NRA Targets 1992/93 and 1993/94

DAVE STANLEY
Project Coordinator - Environmental Policy

16th October 1992