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# Purchasing textiles made from recycled fibres

**Ministry of Defence (The Netherlands)**

## Background

The Ministry of Defence of the Kingdom of the Netherlands (MODNL) employs around 58,800 people, operating across the army, navy, air force, military police and other supporting roles.

The MODNL is one of many public sector buyers in the Netherlands that signed up to the Dutch Government's 2013 Green Deal, which aims to accelerate sustainable economic growth through, for instance, sustainable public procurement (SPP) practices. This programme brought together 45 public and private parties, and tasked them with carrying out two circular procurement initiatives in order to increase experience, share insights, and create a pool of best practice.

The MODNL must buy large volumes of textiles in order to equip its personnel with uniforms and other items. As such, it decided to explore the potential for increasing the 'circularity' of its textiles sourcing by requiring that producers supply items which are made, in part, from recycled textiles.

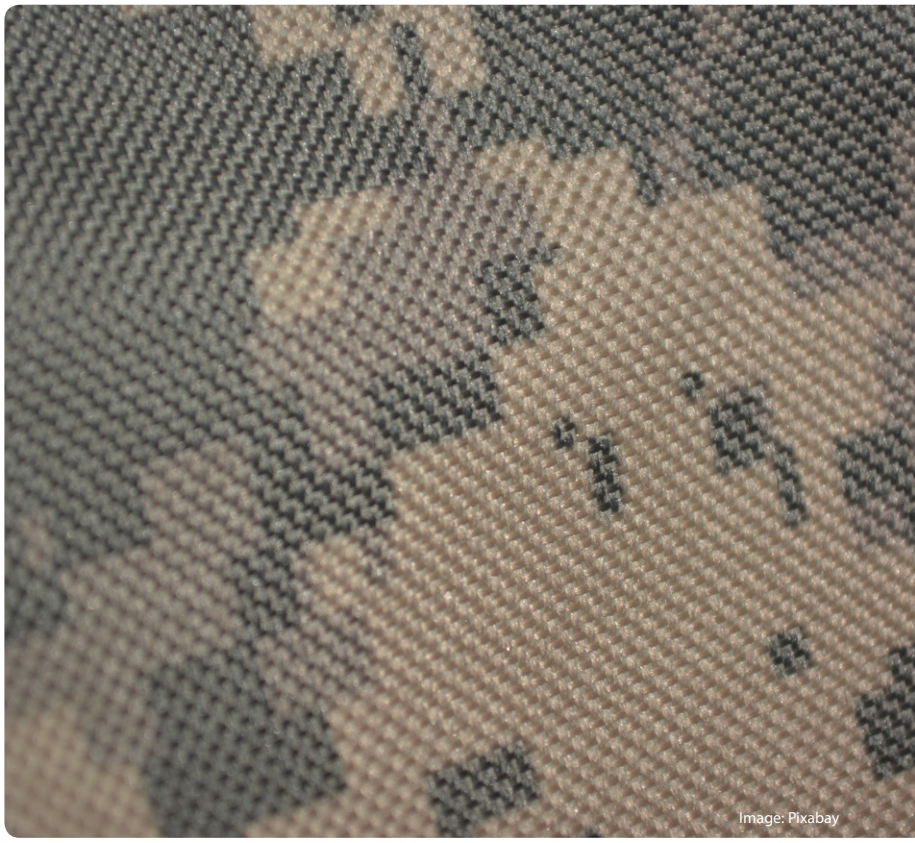

Image: Pixabay

## Procurement objectives

In order to assess the potential of the market to provide textiles made from recycled fibres, the MODNL conducted a market engagement process, published a Request for Information in January 2014 and held an open meeting to sector-related potential suppliers.

One of the aims of the market engagement phase was to gauge whether it was possible to introduce a requirement for suppliers to include recycled fibres for certain new products. Market research showed that this was a viable option, resulting in the reformulation of tender requirements to enable tenderers to put forward more innovative solutions. This stimulated the market to add more recycled content.

The feedback received from suppliers was that in order for them to innovate and thus meet the recycled textile approach specified by the MODNL, a greater focus on functional rather than descriptive technical specifications was needed. For example, it was decided that for towels, the functional value of water absorption was more important than technical values such as tensile strength.

In the end, two contracts were awarded, one for the supply of 100,000 towels and 10,000 washcloths, and another for the supply of 53,000 overalls.

## Criteria used

**Subject matter of the contract**:
Procuring towels and overalls containing at least 10% recycled post-consumer textile fibres.

**Technical specifications**:
Towels and overalls had to contain at least 10% recycled post-consumer cellulose fibres. Suppliers were required to demonstrate this through microscopic testing*.

It was also specified that these fibres had to come from post-consumer textile material, as opposed to production waste or other alternative sources.

**Award criteria**:
The contract was awarded to the most economically advantageous tender. Each bid was assigned a score out of a possible 100 points (maximum) based on price, the maximum percentage of recycled content and certification of this, and data sheets demonstrating the quality and materials used.

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The points for the maximum percentage of recycled content were calculated as follows:

- ≥50 % – 20 points
- 30 % – 10 points
- 10 % – 0 points

The contract was awarded to the bidder with the highest score.

*Photographs taken from the microscopic testing done of natural cellulose fibres – for example, cotton. A microscopic search is done of the fibre length, the quantity of damaged fibres and the kind of fibres. The test is able to demonstrate the amount of recycled fibres included.

## Results

The contracts were awarded in June 2016, and are worth approximately €430,000 for towels and wash cloths and €1.38 million for overalls. Six suppliers submitted bids, however, only four were able to meet the tender requirements in two of the three Lots. The third Lot - for scarves and handkerchiefs - received no valid bids.

Two Belgian companies now supply the MODNL with towels and wash cloths, and overalls. A high percentage of recycled fibres are processed in the new textile fibres: 36% and 14%. The parties also learn and innovate during the four-year term, which could result in a higher percentage of recycled material later on in the execution of the contract.

As this was a pilot procedure, no limit was placed on the price per product. The use of recycled post-consumer materials in new products resulted in a 25% price increase, compared to the previous contract.

At the same time, a separate eight-year contract was also signed for reuse services, in which a third party was contracted to sort items of clothing for reuse and resale, with income being returned to the MODNL. This will result in considerable savings for the MODNL, and the contract includes a provision to expand it to the entire central/national government.

Furthermore, in recognition of its sustainable approach to procurement, this purchase won the 'Innovation Procurement of the Year' in the 2017 Procura+ Awards organised as part of the Procura+ European Sustainable Procurement Network.

## Environmental impacts

According to the Technical Report for the EU Green Public Procurement (GPP) Criteria for Textile Products and Services, key life cycle environmental impacts of textile production include hazardous effects on the aquatic environment, greenhouse gas emissions, acidification and smog, and early product failure, which can result in the consequent waste of biotic and abiotic resources.

In the end, the 100,000 towels purchased by the MODNL contained 36% recycled post-consumer textiles fibres, and the overalls contained 14% recycled post-consumer textiles fibres. This resulted in estimated savings totalling:

- 233,478,000 litres of water use
- 68,880 kg $CO_2$ emissions
- 23,520 MJ of energy consumption

In order to meet the requirements of the tender, manufacturing companies were challenged to find and integrate post-consumer textile resources into their production processes, thus supporting a more circular approach to (consumer) textile collection and reuse.

By using post-consumer fibres, the need for production of new content is reduced, thereby diminishing the strain production has on the environment.

## Lessons learned

- Specifying requirements is essential to encourage the right responses to tender. However, the MODNL found that the original requirements included too many technical specifications. Instead, circular invitations to tender must be described in much more functional terms to give the market room to be more creative and thus innovate.

- Similarly, the market needs to be given a reasonable period of time to respond to tender requests for information. The usual 52 days from publishing the contract to closure is too short for the market to look into new or different production methods.

Additionally, the MODNL would advise others who are considering a similar path

- Not to stick too closely to existing prices/costs in pilot projects, as tight budget ceilings limit development potential.

- Keep suppliers informed about the Invitation to Tender schedule, so they have plenty of time to prepare for it.

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Reference source (also for further information): Workwear: Dutch Ministry of Defence, REBus.

For related information, please see European GPP criteria for Textiles and the Technical Background Report.