ON USING PUBLIC PROCUREMENT

FOR CONSTRUCTION

Recycling plastic film















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1 Introduction

The purpose of these instructions is to promote plastic circulation in construction and to guide the use of procurement criteria published in the Criteria Bank, particularly in relation to plastic film recycling. In this document, plastic film refers to polythene-based (PE) plastics used for construction product packaging and interior protection.

The instructions:

- + address circular economy and plastics recycling on the whole
- focus on the promotion of the recycling of plastic film in construction projects, in particular
- + highlight matters to be considered during the life cycle of procurement
- review the procurement criteria that promote the circulation of plastic film in construction.

The drafting of public procurement criteria that increase the recycling rate of plastic film and cover plastic used in construction projects is an important step to increase plastic recycling. The instructions focus on housebuilding.

2 Circular economy and construction plastics in Finland

Finland's objective is to promote circular economy as the foundation of economy at large and become carbon-neutral by 2035. Ecologically sustainable procurement supports low-carbon and circular economy solutions. The Plastics Roadmap for Finland has been drawn up nationally – an extensive programme for the breakthrough of circular economy in plastics in Finland by 2030.

Land use caused by construction and the consumption of raw materials have a significant impact on both nature and the climate. Approximately 50% of the Earth's natural resources and approximately 40% of unrefined energy are used in buildings and construction. The construction sector generates approximately 35% of greenhouse gas emissions and 30% of waste globally.

Construction is one of the greatest applications of plastics. Around 20% of all plastic in Finland is used in construction. More plastics accumulate in buildings in connection with in-use maintenance, additional installations and repairs.

It is predicted that, without specific measures, the amount of plastic waste will increase by nearly one fifth from the present level by 2030. The majority of plastic waste is currently incinerated to produce energy, and plastic waste is a significant source of emissions in Finland. Even in construction, the most plastic waste is generated by packaging materials.

The recovery and recycling of plastics used in construction is still limited. Circular economy for plastics in construction requires

- + development of the planning of construction projects
- + better identification of plastics used in construction
- streamlining of site practices, separate collection, recycling systems and the utilisation of plastic waste.

The most readily recovered and recyclable construction plastics include the various packaging and cover plastics generated in the construction phase. Most of these are plastic film.

The principle of circular economy creates enormous opportunities for the real estate and construction sector to mitigate climate change and prevent biodiversity loss. For example, the reuse and recycling of building materials saves natural resources and reduces emissions and waste generated by the manufacture of new products. The most important measure is to extend the lifecycle of buildings.



Read more:

- The Circular Economy Finland (KiSu) network | Motiva Oy, the Finnish Environment Institute (Syke) and Ministry of the Environment
- + Strategic Programme for a Circular Economy | Ministry of the Environment
- **★** Tools and measures for circular economy in the construction sector | Ministry of the Environment
- + Construction with sustainable use of natural resources | Green Building Council Finland ry
- Materiaalitori (Materials Marketplace) Circular economy marketplace for companies and organisations | Motiva
- ♣ Plastics Roadmap for Finland: Reduce, refuse, recycle and replace | Ministry of the Environment
- **★** Let's accelerate plastic circular economy in construction | Ministry of the Environment
- + Plastics in construction report 9/2020 (pdf, in Finnish) | Ministry of the Environment

You can find the web addresses on p. 33-34 ▶

Green Deal for Plastics in Construction

Green deals are fixed-term agreements that seek solutions to climate challenges, biodiversity loss, overconsumption of natural resources and the promotion of circular economy in Finland. The deal is made between the state and trade and industry or with the public sector, such as municipalities and agencies. Green deals bring together the parties that play a key role in making a difference.

Signing these deals is voluntary, and operators may decide which green deal to commit to. The objectives and measures of the agreements can be applied to public procurements when defining the procurement criteria.

Green deals promoting the sustainability of construction:

- + Plastics in Construction
- Emission-free worksites
- Non-road mobile machinery sector
- Sustainable demolition
- + Sustainable procurements: Early childhood education
- + Circular Economy Green Deal

You can find green deals on the Sitoumus2050 website at sitoumus2050.fi.

The **Green Deal for Plastics in Construction** provides a comprehensive selection of measures to promote plastic circulation and reduce plastic film consumption for companies, municipalities and other organisations.

The objective of the deal is to

- increase the separate collection of plastic films used in the construction supply chain and construction and improve the preparations for their recycling
- + streamline plastic film reuse and recycling
- increase the use of plastic made from recycled materials in the construction supply chain and construction
- optimise and reduce the consumption of plastic film in an environmentally sustainable manner
- increase the use of recycled plastic films in the production of plastic films so that by the end of 2027, 40% of the raw materials used in the production process are recycled plastic films.

Read more

- **★** Green Deal for Plastics in Construction | Sitoumus2050
- ◆ Why should municipalities join the Green Deal for Plastics in Construction? (PDF, in Finnish) | Motiva

The criteria focus on plastic film used in construction

The procurement criteria for construction plastics are based on the Green Deal for Plastics in Construction, which means that the criteria focus particularly on plastic film.

In these instructions, plastic films refer to polythene-based (PE) plastics as well as stretch-and shrink-film plastics (PE-HD, PE-LD and PE-LLD) used in the construction supply chain and construction and for interior protection. Plastic film is used, for example, for construction materials and products (such as wood, insulation, building engineering products, furniture) as packaging plastic and pallet wraps as well as for dust protection and interior protection on construction sites. Plastic film may be clear or coloured. Recycling of plastic film is important as this improves the availability of recycled plastics and complies with the separate collection obligation specified in the Waste Act. Vapour barrier plastic is also considered to be plastic film, but you must determine whether each individual type of vapour barrier plastic is suitable for plastic film recycling.

There is a well-functioning recycling system for plastic film, and plastic film collected from construction sites is generally a good quality raw material for reuse. Recycled plastic film can be used for the manufacture of new plastic film products, such as plastic bags, packaging materials and agricultural plastic.

Read more

- + Plastics are a versatile material group (in Finnish) | Finnish Plastics Industries Federation
- Online course on construction plastics (in Finnish) | Motiva
- Report on the amount and quality of plastic film waste in housing construction projects (PDF, in Finnish) | Aalto University and the Ministry of the Environment

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3 Recycling plastics pays off

The promotion of plastic recycling is an important step towards a more sustainable future. Many countries have set targets for recycling rates and are striving to reduce plastic waste. In construction projects, measures aimed at promoting plastic recycling have an essential impact on increasing plastic recycling rates.

Increasing the separate collection and recycling of plastic film reduces the amount of plastic waste sorted for incineration in construction projects and prevents plastic waste from entering the environment. Using recycled plastic film reduces the need for new plastic raw materials, especially fossil plastic materials, reducing plastic production emissions and saving natural resources by utilising materials as efficiently as possible. Emissions from recycling are considerably lower than those from incineration.

Plastic recycling process in Finland

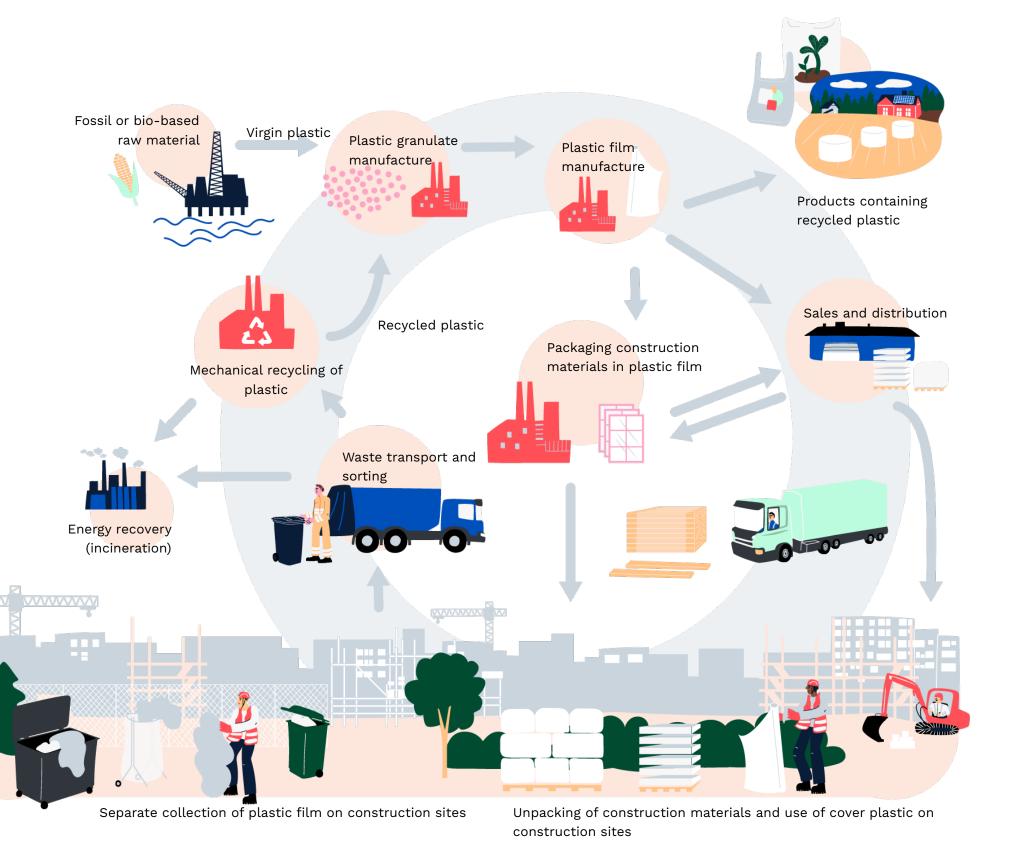
Plastics can be recycled both mechanically and chemically.

Currently, the raw materials used in the manufacture of plastics are mainly oil-based. Polyethylene is the most popular plastic quality in the world, and it is used for the manufacture of e.g. plastic film, which could be manufactured by using recycled materials. The plastic recycling technology currently used in Finland is mainly based on mechanical recycling.

In mechanical recycling, impurities are removed, different plastic types are identified, chopped, melted and granulated into reusable plastic pellets, i.e. plastic granulates, which are used as raw material for new plastic products. The properties of mechanically recycled plastics are generally somewhat inferior when compared to original plastics, which restricts the range of use of recycled plastics. It is important to sort and separate different types of plastics on construction sites in order to obtain high-quality material for recycling. Plastic not suitable for recycling is used as an energy source.

In addition to mechanical recycling, chemical recycling is currently undergoing strong development. It enables the recycling of more types of different plastics. In chemical recycling, plastic polymers are broken down by pyrolysis, gasification or purely chemical methods, i.e. plastic is turned back into substances that can be used to manufacture plastic whose quality corresponds to that of new plastic. Chemical recycling uses plastic waste that can be mixed in quality, as opposed to the raw material of

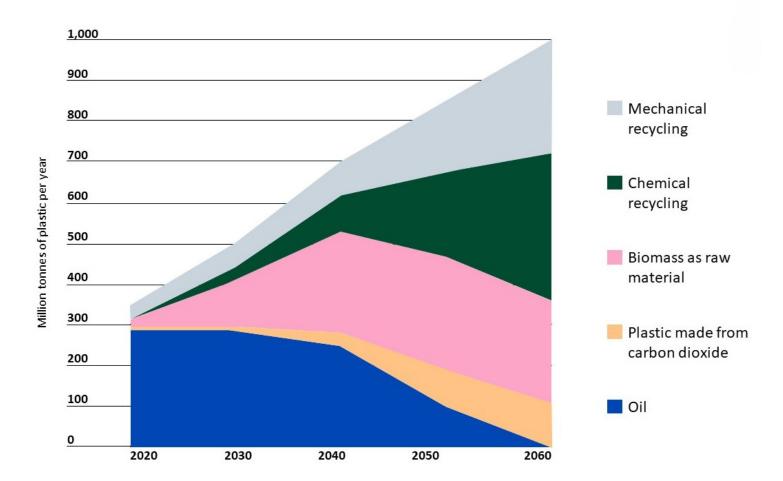
mechanical recycling. Both methods are needed in the future to reach recycling goals.



In addition, different bio-based plastics are being developed as an alternative to oil-based plastics. The raw material of bio-based plastic is biomass made from renewable material, such as cellulose, starch or vegetable oil. However, completely new plastic (so-called virgin plastic) is currently made primarily out of fossil raw materials.

Future plastic raw materials

According to estimates, plastic production will continue to grow strongly in the future. Plastic recycling and bio-based solutions can replace the use of oil as plastic raw materials.



Scenario of plastic raw materials to replace oil by 2060. Source: Tekniikka&Talous, 9/2024.

Read more

- **★** <u>information on plastic recycling (in Finnish) | Finnish Plastics Industries Federation</u>
- ◆ An article on chemical recycling of plastic in the Kemia magazine
- Current status and promotion of plastic recycling in the Helsinki metropolitan area and Lahti | City of Espoo
- **↑** The Circular Economy for Plastics A European Overview 2022. European overview of plastic manufacture, consumption and waste streams in 2020 | Plastics Europe

How can separate collection of plastic film be promoted on construction sites?

The separate collection of plastic film on construction sites will increase in the next few years thanks to the self-imposed recycling targets by construction companies and the measures of the Green Deal for Plastics in Construction. Requirements by developers can speed up the introduction of separate collection. Experience shows that the implementation of a separate collection of plastic film does not increase the waste costs of the site. The success of a separate collection depends e.g. on training, space solutions, possible incentives, requirements imposed on the construction company and tightening waste management regulations. The Ministry of the Environment, Motiva and various waste management companies have published guidelines on sorting plastics.

Plastic film recycling can be promoted in tangible terms on construction sites through measures such as:

Raising awareness:

- + Train employees and subcontractors on plastic film recycling.
- + Include recycling instruction in the site guidelines.

Sorting and collection at construction sites:

- + Set up clear collection points.
- + Determine recycling options with the waste management operator.
- + Sort different types of plastics separately (coloured and clear film separately).

Monitoring and reporting:

- + Monitor the recycling of plastic film.
- ♣ Regularly assess how recycling can be streamlined and which improvements can be made.

Read more

- + Plastic film calculator for use in residential construction projects. This website also features a research report on the theme | Aalto University
- **♣** Best practices for implementing worksite waste management to enable plastic film collection and best practices for separate collection of plastic film, in particular (PDF, in Finnish) | Motiva
- Guidelines on arranging for the separate collection of plastic film in housebuilding projects and on worksites | Ministry of the Environment
- **★** Information on organising waste management and recycling | Circular Economy Finland

4 Why you should adopt the criteria

The annual value of public procurement exceeds 45 billion. Nearly half of the procurements made by municipalities are directed at construction and renovation. Public organisations can make a significant contribution to the development of a more sustainable built environment by working together with construction companies.

Through innovative procurements, public purchasers may be involved in the development of entirely new products and circular economy solutions. Due to the high volume of public procurements, the requirements related to the client's circular economy play an important role in the market.

Criteria for plastics in construction can impact the environment and the market

Potential impacts of procurement criteria for plastics in construction include:

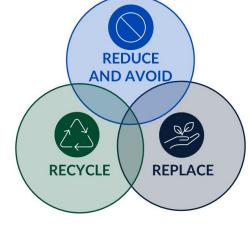
- + Productivity/savings impacts: Separate collection of plastic film is cost-neutral due to the reduction in mixed waste.
- → Improvements to the quality of service: The recycling rate of plastic increases. The contractor will pay more attention to the environment and waste management due to stricter requirements and monitoring.
- → Environmental effects: Waste on worksites is reduced, the recycling rate of plastic increases and the emissions caused by the burning of plastic are reduced.
- + Social impact: Circular economy expertise increases.
- → Impact on cooperation: Cooperation to promote sustainable construction will increase through client demands both in the construction sector and more broadly in the value chain of plastics.
- → Risks: Lack of space on construction sites complicates operations. Lack of information and data, e.g. on recycled materials, makes it difficult to make sustainable choices.
- → Market readiness: The market is ready to introduce separate collection. Demanding materials containing recycled plastics is more challenging and requires more detailed dialogue.
- → Solution scalability and the prevalence of development needs: In addition to new construction projects, the requirements can be adopted to renovations, for example. Similarly, the criteria can be extended to different materials with the aim of e.g. a mixed waste-free worksite.
- → Innovation and growth potential for the company: Increasing the recycling rate will increase the reputation of the contractor as a responsible operator. The requirements promote the recycled plastic market and circular economy business opportunities. In the future, recycling and reuse should become more important factors in choosing construction materials.

5 How to improve procurement to promote recycling plastics

Objectives guide activities

Set clear objectives to increase the rate of plastic recycling in your organisation. The objectives of plastic recycling can be based on the objectives of the Plastics Roadmap:

- + reducing the harm caused by plastics
- avoiding unnecessary consumption
- streamlining the recycling of plastics
- finding alternative solutions.



Goals of the Plastics Roadmap for Finland: Reduce, refuse, recycle and replace

As regards the recycling of plastic film, in particular, it is worth taking advantage of the Green Deal for Plastics in Construction and applying its objectives to the strategies and guidelines for construction procurement.

Within the organisation, it is important to train staff and raise awareness of the importance of plastic recycling, organisational objectives and practices to promote procurement in keeping with the principles of circular economy. You should reserve sufficient time and resources for education, communication and the implementation of document templates.

The potential to make a difference is greatest at the planning stage of procurement

With their choices, the client can seek to contribute to where and how much plastic film is used and recycled. The aim is not to stop using plastic film altogether, but to introduce the recycling of used plastic film to make reprocessed plastic film. It is also important to assess whether the use of plastic film can be optimised or reduced in an environmentally sustainable manner. The primary task of packaging, such as plastic film, is to protect the product and, thus, to reduce losses, for example. The objectives should be recorded in the project plan and in the project procurement document templates.

You can consider e.g. the following questions:

How can the recycling rate of plastic and the use of recycled plastic be increased?

- ♣ Do you oblige contractors to collect plastic film separately?
- → Is there room for the separate collection of plastic film on the worksite? An efficient separate collection can be planned in advance by assessing the amount of plastic film waste at different stages of the work ahead of time. In general, the amount of plastic film waste generated is the largest in the furnishing phase of the building. Cooperation with the waste management operator is essential.

- → Do you determine yourself and encourage contractors to establish from their suppliers e.g. the possibility of using recycled plastic in packaging or cover plastics?
- → Is it possible for you to reduce the use of plastic, especially plastic film, by employing more environmentally sustainable solutions without compromising the health, safety and sustainability of the building?
- → Is it possible for you to select construction products made of recycled plastic for some applications?

How is separate collection of plastic taken into account in reporting?

- → Do you monitor the recycling rate of the construction site? How and to what extent?
- + Have you set targets for the sorting rate and recycling rate as a whole and by waste type?
- → Are you monitoring the separate collection rates of plastic film collected separately on the worksite and the success of separate collection? How?

What information is available? How does data direct you towards lower-emission solutions in planning?

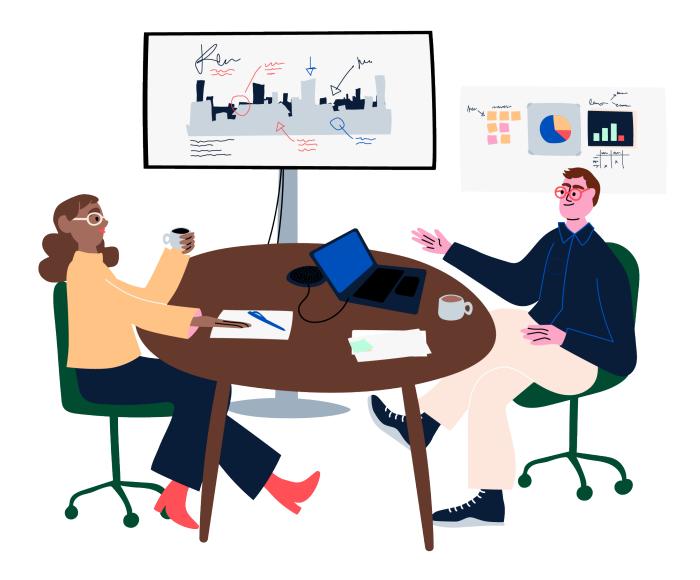
- + Is an environmental product declaration (EPD) required for construction products?
- + How are the use of recycled materials and other environmentally sustainable materials and the life cycle of products taken into account in the planning, carbon footprint assessment and life cycle assessment (LCA) of the building?
- + How can the share of recycled plastic in products or packaging be measured and verified?

The recycling of plastics can be affected on several levels during procurement:



Read more - Guidebooks on promoting circular economy in public procurement

- ♣ Promoting circular economy in municipal procurement Circular economy market overview in the built environment sector | Green Building Council Finland
- **★** Information to support sustainable procurement | Circular Economy Finland
- ➡ Handbook of circular economy procurement | Finnish Environment Institute
- Low-carbon procurement playbook (PDF) | KEINO Competence Centre
- ◆ Procurement Finland tools and guidebooks | Ministry of Finance
- Environment Guide: Procurement criteria for low-carbon building (PDF) | Finnish Government



Taking circular economy and plastic recycling into account during the procurement life cycle

and maintained?

	Specification of procurement strategies	Procurement planning	Procurement tendering process	Contract	Construction & contract monitoring and reporting
Tips on successful procurement	Make decisions on low-carbon, circular economy and biodiversity policies and objectives to be emphasised in construction procurement at the organisational level. Set clear targets for the reduction of plastic use and recycling of plastic in construction at the organisational level. Make decisions on the objectives and priorities of the procurement/construction project in question.	Appoint a person in charge of corporate responsibility in the procurement preparation working group. Market survey: Review the latest national objectives and recent studies published in the field of circular economy of plastics and construction. Participate in topical sustainable construction events Map how different actors have taken circular economy into account in construction projects Learn more about the objectives and measures of the Green Deal Review the responsibility criteria for public procurement at kriteeripankki.fi Market dialogue: Take issues related to circular economy and plastic recycling into account in the market dialogue Determine the market situation: How can the requirements be verified and the objectives measured?	Decide how and what measures will be taken to implement the objectives in this procurement. Include the criteria to promote plastic recycling in the procurement description, the construction contract program and other applicable documents. Decide on mandatory requirements. The minimum requirement should be the separate collection of plastic film and basic waste reporting. Decide the criteria to be scored and any sanctions/ rewards associated with them.	Ensure that the requirements are recorded in the project documentation, such as the construction contract program and the waste management plan. When necessary, create a reporting template for the contractor to fill in. As a rule, use consistent reporting practices and tools with other municipalities and public organisations.	Monitor fulfilment regularly at site meetings. Use spot checks, if necessary. Make sure that the final report contains the agreed information. Discuss the project results and lessons learnt together with the contractor. If necessary, update the procurement documentation templates based on the project results.
Consider the following questions to increase effectiveness:	What policies and actions have already been implemented? Which of these have the best potential for impact? Do you want to commit to the Green Deal for Plastics in Construction? Do the instructions and models include up-to-date corporate social responsibility issues? How can the promotion of plastic recycling be incorporated into the procurement, design and construction document templates? How will the circular economy competence of staff be improved and maintained?	Could a market survey be carried out together with other operators? In addition to the request for information, can you use interviews and group interviews with different actors in the value chain to obtain a more comprehensive overview of circular economy issues? (e.g. contractor, waste management operator, supplier in the same conversation)? Have clear tasks been defined for the person responsible for corporate responsibility in the procurement preparation working group?	For which criteria can a quantified, measurable target level be set? What is a realistic yet sufficiently ambitious level of requirements? Could similar criteria be extended to cover other materials? How can the contractor best be encouraged to adopt sustainable solutions?	and reporting relate to corporate responsibility reporting on the organisation level? Has a person been appointed	How are lessons learnt from the project adopted on future worksites? Could more ambitious and/or more detailed objectives be set for the next worksite? How is impact monitored in the long term? How could the monitoring stage of the contract be utilised as part of continuous market dialogue?

6 Market dialogue: model questions

Below is a list of example questions that can be used in a market dialogue with the contractor. You can choose the most suitable questions according to your situation. Some of the questions are better suited for discussion with different actors and others for a request for information in the form of a questionnaire. You can also use the measures of the Green Deal for Plastics in Construction as a basis for questions.

Separate collection and waste recycling - practical questions

- + Have you implemented a separate collection of plastic film in your construction projects? On how many worksites? What were some of the things that impacted the implementation?
- + How have you implemented a separate collection of plastic film on your worksites? What challenges have there been in organising separate collection? What kind of good practices would you like to highlight as examples?
- + Has a separate collection of plastic film on the worksite at different stages been taken into account in your waste management plan? How?
- + How do you instruct people working on the site to implement a separate collection on the site and how do people on the worksite identify plastic film? Have the waste containers been labelled clearly and are the collection points clearly marked on the site map?
- → Do you require contractors to collect plastic film separately? How have they been familiarised with waste management on the worksite?
- + How do you promote the better quality of plastics collected in your own operations (e.g. cleanliness)? What kind of good practices would you like to highlight as examples?
- → Do you have situations in a which separate collection of plastic film is not required at the site because it has been agreed that plastic film is sorted at a plant? In this case, what is the recycling rate of plastic?
- ★ What plans do you have to improve separate collection and the recycling rate of plastic film in the future?

Separate collection and waste recycling - reporting

- + Have you set your own targets for the separate collection or recycling rate of plastic film? What are they? (Recycling refers to activities in which waste is used to manufacture products, materials or raw materials for either the original purpose or another purpose; energy recovery or waste used as fuel or refill material are not considered waste recycling.)
- → Do you monitor the worksite-specific sorting and recycling rate? How precise is the information made available? How do you communicate the success of recycling to those working on the worksite?
- → What was the average/best recycling rate per type of waste last year? (Question in the questionnaire e.g. in table format, where all waste types are listed)
- ◆ Do you collect data on plastic film collected separately? If yes, what is the current average

- collection rate and recycling rate?
- Can you provide the customer with a report on the amount of plastic film collected in relation to the gross square area (brm2) built? How?
- Can you provide the customer with a report on the collection rate of plastic film in relation to the amount of mixed and energy waste? How?
- ◆ Can you submit the waste report to the customer in electronic format (transfer file, not just a PDF)? How?
- + How are you planning to improve the reporting of waste management and recycling in the future?

Using recycled materials in protective and packaging plastic

- + Have you used plastic made from recycled materials for indoor protection?
- → Do you know which product groups include / have included protective and/or packaging plastic made from recycled materials?
- ♣ What evidence could you provide of the share of recycled plastic in cover plastic and packaging materials or the use of renewable materials (e.g. supplier's certificates, selfassessment form)?
- → What target percentage could you set for the use of recycled or renewable materials in internal protection? What about plastic film packaging? How could this be verified?
- → Do you require your suppliers to reduce the use of solutions and materials that undermine plastic film recycling opportunities? These include tape and prints on packaging films, stickers that are difficult to remove and coloured plastic film. Which good practices would you like to highlight as examples?
- → One of the objectives is to optimise and reduce plastic film consumption sustainably by utilising more environmentally sustainable materials and/or other solutions. Please provide examples of good solutions and practices for different product groups or uses. In which areas is it difficult to come up with alternative solutions? How could the challenges be solved?
- What kind of circular economy requirements do you have for your suppliers regarding packaging materials? Do you e.g. require them to use plastic film made from recycled material (recycled plastic) in their products or in the packaging of products? Or is it possible for you to use reusable packaging solutions? Please provide examples. How can you verify this?
- + How are you planning to optimise the use of protective and packaging plastics and reduce environmental impact in the near future?

Green Deal for Plastics in Construction and other matters promoting plastic recycling

- ♣ Do you have an environmental certificate? Which one?
- → Are you committed to the Green Deal for Plastics in Construction or similar measures?
- ★ What means do you have to ensure guidance and competence related to plastic recycling and sorting at the site and in your subcontracting chains?

- ♣ Are you taking advantage of the building plastics training package offered by Motiva and/ or other support materials and guidelines prepared under the Green Deal in your own activities? How? If not, are you utilising something similar? How could you verify this to the client?
- What kind of measures are you taking to promote plastics recycling in construction at the moment?
- ★ What do you think would be the easiest and/or most cost-effective way to start increasing the plastic recycling rate?
- + How are you planning to reduce the use of plastic and increase the recycling rate in the future? What measures are you planning on taking in the next 12 months?

Read more

+ The market survey guidebook for procurement (in Finnish) | KEINO competence center



7 Construction plastic procurement criteria

The criteria promoting plastic recycling in construction have been developed in dialogue with clients, suppliers and key stakeholders in the field. This ensures that the criteria correspond to the market situation, support the market and are non-discriminatory, comparable and verifiable. The criteria are based on the measures specified in the Green Deal for Plastics in Construction and are specifically intended for housebuilding construction sites.

In addition to new construction projects, you can also use the criteria for renovation projects. In this case, the target level and wording of the criteria should take into account smaller-scale activities and the capabilities of SMEs.

There are four criteria:

- 1. Separate collection of plastic film and increasing the recycling rate
- 2. Use of recycled materials in plastic films cover plastics
- 3. Use of recycled materials in plastic films packaging plastics
- 4. Applicable Green Deal for Plastics in Construction

Separate collection of plastic film and increasing the recycling rate is the most important criterion. Arranging for the separate collection of plastic film should be a minimum requirement in all construction projects.

The criteria are divided into two levels, basic and pioneer, in accordance with the specifications in the Criteria Bank. There are both basic and pioneer-level criteria for separate collection; the other criteria are all on the pioneer level. In particular, pioneer-level criteria should be taken into account in the market dialogue, and the criteria should be applied and worded on a project-by-project basis.



The instructions for the criteria can be found on the following pages.

1 Separate collection of plastic film and increasing the recycling rate

Separate collection of plastic film and increasing the recycling rate (basic level)

The selected contract supplier undertakes to organise a separate collection of plastic films in accordance with the document "Opas kalvomuovien erilliskeräyksen järjestämisestä talonrakentamisen hankkeissa ja työmailla" ("Guide to organising a separate collection of plastic films in building construction projects and on construction sites") prepared in the Green Deal for Plastics in Construction or similar instructions. The supplier also undertakes to ensure on constructions sites that the employees have sufficient training to implement the separate collection.

The aim is to separately collect and recycle all possible plastic film for recycling.

The measures are recorded in the waste management plan or a similar document.

As part of waste management reporting, the selected contract supplier undertakes to report to the client the statutory general information about construction waste, including plastic films. The information to be reported includes, but is not limited to: waste holder, site details, transport company and its details, treatment plant details, waste material details (waste type, quantity, waste name (LoW code) and treatment method (R/D code).

Separate collection of plastic film and increasing the recycling rate (pioneer level)

The selected contract supplier undertakes to organise a separate collection of plastic films in accordance with the document "Opas kalvomuovien erilliskeräyksen järjestämisestä talonrakentamisen hankkeissa ja työmailla" ("Guide to organising a separate collection of plastic films in building construction projects and on construction sites") prepared in the Green Deal for Plastics in Construction or similar instructions. The supplier also undertakes to ensure on constructions sites that the employees have sufficient training to implement the separate collection.

The aim is to separately collect and recycle all possible plastic film for recycling.

The measures are recorded in the waste management plan or a similar document.

At the beginning of the project, the total amount of plastic film to be created by the project is estimated and the estimate is recorded in the plan.

As part of waste management reporting, the selected contract supplier undertakes to report to the client the statutory general information about construction waste, including plastic films. The information to be reported includes, but is not limited to: waste holder, site details, transport company and its details, treatment plant details, waste material details (waste type, quantity, waste name (LoW code) and treatment method (R/D code).

In addition, the selected contract supplier undertakes to report the following data describing the separate collection rate and recycling rate:

- + amount of separately collected plastic films, tonnes
- + amount of separately collected plastic films per gross square meter (brm2) built, tonnes
- + amount of separately collected plastic films per amount of mixed waste, tonnes
- + amount of separately collected plastic films per amount of energy waste, tonnes
- + plastic film recycling rate per separately collected plastic films, tonnes
- + utilisation rate of film plastics per separately collected plastic films, tonnes

The reported waste volumes and recycling rate must be based on figures reported to the supervising authority of the waste treatment plan that can be verified by an external operator, taking into account both the incoming and outgoing waste. The calculation of the recycling and utilisation rate approves the average realisation data provided by the waste treatment plant at the time of the construction project.

Plastic films refer to polythene-based (PE) plastics as well as stretch and shrink-film plastics (PE-HD, PE-LD and PE-LLD) used in the construction supply chain and construction for packaging and interior protection.

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Verification

Tenderer's declaration of compliance (yes/no).

The information has been recorded in a waste management plan or an equivalent document.

Proposal for monitoring the agreement

The client requires that the implementation of the waste management plan is monitored regularly at construction site meetings.

At the end of the project, the selected contract supplier will provide waste reporting with the agreed information.

If more specific objectives were created at the beginning of the project for measures concerning the separate collection, sorting and recycling of different plastics, the realisation at the end of the project will be compared to the planned objectives.

Grounds and guidelines



The criterion is a minimum requirement.

The objective is to increase the material recycling of plastic, i.e. the recycling rate, and reduce the amount of waste being incinerated.

In terms of cost and the environment, it is worthwhile collecting as little as 21 kg of plastic film separately.

The amount and total volume of plastic film waste at different work phases can be estimated by using the plastic film calculator available at kalvomuovi.fi/calculator/ to support the preparation of a more detailed waste management plan and construction site instructions.

The requirement supports the objectives of the Green Deal for Plastics in Construction:

- increase the separate collection of plastic films used in the construction supply chain and construction and improve the preparations for their recycling
- + streamline plastic film reuse and recycling
- increase the use of plastic made from recycled materials in the construction supply chain and construction
- optimise and reduce the consumption of plastic films in an environmentally sustainable manner
- increase the use of plastic films in the production of plastic films so that by the end of 2027, 40% of the raw materials used in the production process are recycled plastic films.

When implementing a separate collection, attention must be paid to good instructions to ensure sufficient quality and cleanliness of the plastic collected. Quality can be improved e.g. by sorting transparent and coloured plastics separately.

Procurement can also set quantitative targets for the separate collection volume, separate collection rate and overall recycling rate.

The separate collection requirement may be extended to cover all packaging waste, including soft cardboard.

At the pioneer level, the selected contractor is required, in addition to a separate collection, to assess the amount of plastic film at the beginning of the project and to report more accurately than at the basic level.

The objective is to increase the material recycling of plastic, i.e. the recycling rate, and reduce the amount of waste being incinerated.

In terms of cost and the environment, it is worthwhile collecting as little as 21 kg of plastic film separately.

The amount and total volume of plastic film waste at different work phases can be estimated by using the plastic film calculator available at <u>kalvomuovi.fi/calculator/</u> to support the preparation of a more detailed waste management plan and construction site instructions.

The requirement supports the objectives of the Green Deal for Plastics in Construction:

- increase the separate collection of plastic films used in the construction supply chain and construction and improve the preparations for their recycling
- + streamline plastic film reuse and recycling
- increase the use of plastic made from recycled materials in the construction supply chain and construction
- optimise and reduce the consumption of plastic films in an environmentally sustainable manner
- increase the use of plastic films in the production of plastic films so that by the end of 2027, 40% of the raw materials used in the production process are recycled plastic films.

When implementing a separate collection, attention must be paid to good instructions to ensure sufficient quality and cleanliness of the plastic collected. Quality can be improved by sorting transparent and coloured plastics separately.

The recycling rate here includes activities in which separately collected waste is used to manufacture a product, material or substance either for the original or other purposes. Utilisation of waste as a source of energy or preparing waste to be used as fuel or soil filling substance is not considered recycling.

The utilisation rate includes the material amounts excluded from the recycling rate that involve utilising the material as a source for energy, for example. Utilisation also includes things such as using the material in the support structures of infrastructure, but it excludes using the material in the support and other structures of landfills.

Procurement can also set quantitative targets for the separate collection volume, separate collection rate and overall recycling rate. For example, a target of at least 70% can be set for the recycling rate of plastics.

The separate collection requirement may be extended to cover all packaging waste, including soft cardboard.





2-3 Using recycled materials in plastic film - cover plastic and packaging plastics

Use of recycled materials in plastic films – cover plastics (pioneer level)	Use of recycled materials in plastic films – packaging plastics (pioneer level)			
The selected contract supplier undertakes to carry out the following actions: The selected contract supplier aims to optimise and reduce the consumption of plastic film used for indoor construction and protection by utilising more environmentally sustainable materials and/or other solutions, such as the reuse of cover materials.	The selected contract supplier undertakes to carry out the following actions: The selected contract supplier aims to optimise and reduce the consumption of plastic film in the construction project by requiring the supplier to use in their packaging more sustainable materials and/or other solutions, such as the reuse of packaging materials.			
Whenever possible, cover plastics made partially or completely from recycled plastic are used on the construction site. To enable this, the selected contract supplier undertakes to ask the supplier of the plastic film whether products containing recycled plastic are available and to determine the share of recycled plastic in the product, as long as this can be determined by reasonable means.	The selected contract supplier aims to increase the utilisation of recycled material in packaging plastics in cooperation with its suppliers.			
The selected contract supplier undertakes to report the actions taken to the client.	The selected contract supplier undertakes to report the actions taken to the client.			
Plastic films refer to polythene-based (PE) plastics as well as stretch- and shrink-film plastics (PE-HD, PE-LD and PE-LLD) used in construction for interior protection.	Plastic films refer to polythene-based (PE) plastics as well as stretch- and shrink-film plastics (PE-HD, PE-LD and PE-LLD) used in the construction supply chain and construction for packaging.			
Verification				

Tenderer's declaration of compliance (yes/no).

Proposal for monitoring the agreement

At the beginning of the project, the client ensures that the planned measures have been recorded in the project documentation, and regularly monitors their implementation during the project.

At the end of the project, the selected contract supplier will provide reporting with the agreed information.

If quantitative targets for the amount of recycled plastic were created at the beginning of the project, the realisation at the end of the project is compared to the planned targets.

Grounds and guidelines

Taking circular economy into account in construction projects is an important method in promoting circular economy and reductions in emissions.

Construction plastics account for 15–20% of the plastics used in Finland, and only a small part of this is recycled. Most of the life cycle greenhouse gas emissions from plastics are caused by incinerating plastic for energy. By increasing the recycling rate of plastics, emissions from plastics can be significantly reduced.

The requirement supports the objectives of the Green Deal for Plastics in Construction:

- + increase the separate collection of plastic films used in the construction supply chain and construction and improve the preparations for their recycling
- + streamline plastic film reuse and recycling
- + increase the use of plastic made from recycled materials in the construction supply chain and construction
- + optimise and reduce the consumption of plastic films in an environmentally sustainable manner
- + increase the use of plastic films in the production of plastic films so that by the end of 2027, 40% of the raw materials used in the production process are recycled plastic films

Further measures and the accuracy of reporting shall be agreed on a project-by-project basis based on the market dialogue.

If information on recycled plastic is not available for all the protective plastics used, the report may discuss product groups.

If the necessary information is not available for all the packaging plastics used, the report may discuss product groups.

Quantitative targets for the share of recycled plastic used in packaging and protective plastic films may also be set on a project-by-project basis. The target share of recycled plastic film (amount of recycled plastic in the product) can be set at a minimum of 20–50% per product group, for example.



4 Applicable Green Deal for Plastics in Construction

Applicable Green Deal for Plastics in Construction (pioneer level)

The Green Deal for Plastics in Construction is complied with in the works covered by this procurement.

The selected contract supplier undertakes to develop operations in cooperation with the client during the contract period by seeking and implementing measures and best practices to optimise and reduce the use of plastic film and other construction plastic and to increase the recycling rate in accordance with the Green Deal for Plastics in Construction.

The following development areas are focused on, in particular, in this project: [completed by the procurement unit XX]

The selected contract supplier undertakes to define the objectives and actions in the environmental plan or other relevant document and to report the actions taken at the end of the project.

Verification

Tenderer's declaration of compliance (yes/no).

Proposal for monitoring the agreement

At the beginning of the project, the client and the selected contract supplier jointly determine the project's objectives, measures and indicators in accordance with the recommendations of the Green Deal for Plastics in Construction and record them in the project documentation.

The implementation of the agreed measures is regularly monitored in cooperation meetings.

At the end of the project, the selected contract supplier will provide reporting with the agreed information.

If quantitative targets for the amount of recycled plastic were created at the beginning of the project, the realisation at the end of the project is compared to the planned targets.



Grounds and guidelines

The Green Deal for Plastics in Construction supports the client in achieving targets set for carbon neutrality and circular economy.

Construction plastics account for 15–20% of the plastics used in Finland, and only a small part of this is recycled. Most of the life cycle greenhouse gas emissions from plastics are caused by incinerating plastic for energy. By increasing the recycling rate of plastics, emissions from plastics can be significantly reduced.

The minimum target for the overall recycling rate in the Government Decree on Waste (VNa 978/2021) is 70%. As a light material, plastics have a minor impact on the total recycling rate of construction site waste calculated by weight, meaning that specific requirements and measures related to plastics can influence the recycling rate of plastics.

The objective of the Green Deal for Plastics in Construction is to:

- increase the separate collection of plastic films used in the construction supply chain and construction and improve the preparations for their recycling
- + streamline plastic film reuse and recycling
- increase the use of plastic made from recycled materials in the construction supply chain and construction
- optimise and reduce the consumption of plastic films in an environmentally sustainable manner
- increase the use of plastic films in the production of plastic films so that by the end of 2027, 40% of the raw materials used in the production process are recycled plastic films.

In the early stages, the Green Deal covers plastic film in the construction supply chain and in construction, i.e. plastics used mainly for construction product packaging and indoor protection, which account for most of the volume of plastic waste generated on new construction and renovation sites.

If the tenderer is committed to the Green Deal for Plastics in Construction, this can be verified on the Sitoumus2050.fi website.

Further measures and the accuracy of reporting shall be agreed on a project-by-project basis based on the market dialogue. Green Deal documents can be used as templates for creating actions and reporting.

A procurement may emphasise selected measures and set quantitative targets, e.g. for separate collection, the recycling rate or the share of recycled plastic in the packaging and cover plastic or construction products containing plastic used.

8 Tips on employing the criteria – more impact

Separate collection of plastic film and increasing the recycling rate

- The separate collection requirement and the recycling rate targets should be extended to all waste types and other packaging materials, including cardboard. Also take this into account in the market dialogue. Specify the target level for the recycling rate by waste type.
- Surplus vapour barrier plastic from installation work may also be suitable for recycling. You should also ask the supplier on a project-by-project basis whether the vapour barrier plastic used is suitable for plastic film recycling.
- + Add the following as a requirement:
 - The selected contract supplier undertakes to reduce the use of solutions and materials that undermine plastic waste recycling opportunities.
 - When collecting plastic film, coloured and clear film is sorted separately. All colours of plastic film can be sorted with coloured plastic film, whereas only clear plastic film should be sorted with clear plastic film.
 - The selected contract supplier must fill out and display the Green Deal for Construction Plastic sorting instructions table or similar guidelines.
- This condition can also be applied to smaller repair work. In this event, adapt the measures and reporting requirements to smaller operators and waste quantities. E.g. require reporting to the extent that information is reasonably available from the waste management operator or, if the contractor takes the waste to the recycling station themselves, waste load data and payment receipts shall be accepted as reporting.
- Create procedures and possible reporting models for the monitoring of the contract prior to the start of the project to ensure comparability between different sites and facilitate client-level data collection.
- + Utilise the materials created for the Green Deal for Plastics in Construction.



Using recycled materials in plastic film - cover plastic and packaging plastics

- → Data collection is a key objective in the initial stage. More requirements may be added later.
- **◆** Expand the requirements to cover all materials used for packaging and protection. Also take this into account in the market dialogue.
- + Add the following as a requirement:
 - X% of the cover plastic / packaging plastic film must be made from recycled plastic material.
 - The selected contract supplier reports the amount of plastic film used in packaging and protection (kg) to the client and undertakes to optimise the amount of plastic used.
 - The selected contract supplier reports the share of recycled plastic film they use to the client (on separately agreed product groups) and undertakes to increase the share of recycled plastic in plastic used for packaging and interior protection.
- The quality of the plastic used and collected matters: find ways to optimise the material according to the protection needs of the product/site. For example, it is easier to utilise plastic films and protective plastics containing only one material in the materials cycle. No tape, no stickers, etc.

Applicable Green Deal for Plastics in Construction

- → The contractor may not be required to join the Green Deal for Plastics in Construction, but the measures and objectives of the Green Deal may be required in procurement.
- → Add a requirement that the selected contract supplier must name at least one employee who is a key participant in this construction project and has completed Motiva's training on construction plastics.
- ◆ Extend the requirements and market dialogue to include construction products. Find out which construction products include recycled plastic or other materials that are more environmentally sustainable and favour them.
- What solutions could be used to promote solutions to replace and reduce the total amount of plastic in structures?
- Setting a carbon footprint limit value for a building also promotes the use of low-carbon materials.
- + Requiring an Environmental Product Declaration (EPD) for products directs the product manufacturer to use less fossil materials also in packaging.
- → Favour responsible operators. When the selected contractor has ambitious targets set for responsibility and circular economy along with useful indicators for them, they are more likely to implement measures related to the recycling of plastic.



9 Instructions on selecting criteria in the Criteria Bank and using them

The procurement criteria presented in the instructions are available in the Criteria Bank maintained by Motiva. General instructions on the use of model criteria are given below.

Submit a request for information and organise a market dialogue. The client is always ultimately responsible for the functioning of the criteria. When setting new responsibility requirements or combining pioneer-level criteria, especially for the first time, you should always submit a request for information or organise a market dialogue. This ensures that products and services meeting the criteria are available and that tenderers have the possibility to meet the requirements of the invitation to tender.

Utilise the criteria

- + as minimum requirements in the invitation to tender
- + as price-quality ratio benchmarks, or
- + as terms of contract.

Prioritise and select the most meaningful criteria based on your responsibility targets and experience. Select the criteria that are relevant and important to you. Use pioneer level criteria, in particular, with caution in relation to the nature, value and quality of the procurement. Depending on the procurement, one well-chosen criterion can produce the desired effect.

Set the target level of the criteria and check the wording based on your own objectives, needs, resources and the market survey and dialogue. The recommended criteria and their limit values are proposals that can be adjusted upwards or downwards. In addition to this, always tailor the language, formatting, text location, etc. to the invitation to tender.

Introduce good practices to document templates. Once the criteria have been tailored to the invitation to tender, export the texts to your document templates as appropriate. This will make it easier to utilise the criteria in subsequent procurements. For each procurement, check the Criteria Bank for the latest information.

Read more

- + The Criteria Bank Responsibility criteria for public procurement
- ➡ Instructions on selecting and using criteria in procurement | The Criteria Bank , Motiva

10 How were the criteria created?

The market dialogue and formulation of the criteria presented in these instructions were carried out in cooperation with contractors, operators in the plastic value chain and other stakeholders between September 2023 and March 2024 as follows:

- 1. Company interviews: interview with a few clients and construction companies in order to identify current challenges and opportunities.
- 2. The first draft of the criteria on the basis of the measures in the Green Deal for Plastics in Construction.
- 3. An open workshop for experts in municipal construction procurement and other parties interested in the formulation of the criteria. Workshop participants had the opportunity to comment on and develop the first criteria drafts.
- 4. Survey on municipalities. The aim of the survey was to clarify the current situation regarding plastics recycling in municipal construction procurement and to understand the potential requirements in municipalities to promote plastics recycling.
- 5. Open request for information from companies in the sector to collect detailed information. The questions were based on the measures of the Green Deal for Plastics in Construction for construction contractors. The request for information was sent by email to operators associated with the Green Deal for Plastics in Construction and published on the City of Espoo website.
- 6. Small group discussions to identify market opportunities and constraints, in particular from the perspective of verification and reporting. Based on the most recent draft criteria. At the same time, interaction between different circular economy operators in plastics was facilitated in order to increase mutual understanding and promote the circular economy business. The invitation to participate in small group discussions was sent to selected operators, most of whom were committed to the Green Deal for Plastics in Construction. Discussions were held with different actors in the plastics value chain on two themes: 1) plastic entering the worksite and 2) plastic waste collected from the worksite. A contractor, a plastic manufacturer, a construction product manufacturer and a municipal construction client participated in the first discussion. In addition to the participants mentioned above, two waste management operators took part in the second discussion.
- 7. Comments on the draft criteria in two stages. First, the document was commented on internally at the City of Espoo and within the project group, followed by a public request for comment as a Webropol survey. The request for comment was published on several channels, including the City of Espoo website and the Motiva Criteria Bank.
- 8. Discussions in the steering group for the Green Deal for Plastics in Construction before finalising the criteria.

Read more

- + Survey: Municipalities' attitude towards construction plastics procurement | City of Espoo
- ♣ Newly released public procurement criteria improve recycling rate of construction plastics
 | City of Espoo

11 Final words

Recycling plastics pays off The carbon footprint of recycled plastic is up to 80% smaller than that of virgin plastic, depending on the type of plastic. The recycling rate of construction plastics is still very low in Finland, meaning that all measures to increase it are important. A separate collection of plastic film for recycling also improves the availability of domestic recycled plastic raw material and promotes the recycled plastic market. Municipalities and other public organisations can influence the activities of companies and the products and services that are being developed for the market through procurement.

Hopefully, the procurement criteria for plastics in construction and these instructions will help your organisation in introducing requirements promoting plastic recycling in procurements and extending circular economy thinking to other materials and practices.









Authors

The procurement criteria for municipalities and other public organisations promoting the recycling rate of construction plastics were created as part of the Closed Plastic Circle – from Pilots into Practice project in August 2023–April 2024. The project is part-financed by the EU. The City of Espoo, together with Metropolia University of Applied Sciences and HSY, is responsible for the implementation of the work. The criteria have been drawn up in cooperation with municipal experts and in a market dialogue between industry operators. The criteria were based on the Green Deal for Plastics in Construction, among other material. The criteria focus especially on the recycling of plastic film. Each organisation can apply the criteria on a project-specific basis and include them in their own documentation templates, where applicable.

Further information: <u>kestava@espoo.fi</u>, Centre of excellence for sustainable development, City of Espoo



Useful links

A summary of the links that have been used as the source material for these instructions and that will provide more information on the topic:

- ★ <u>kiertotaloussuomi.fi</u> Circular Economy Finland (KiSu) is a hub of skills and knowledge which unites those who seek solutions with those who offer them. The network is coordinated by the Ministry of the Environment and the Ministry of Economic Affairs and Employment.
- ➡ <u>ym.fi/kiertotalousohjelma</u> and <u>ym.fi/rakentamisen-kiertotalous</u> Ministry of the Environment strategic programme to promote a circular economy and measures related to circular economy in the construction sector
- <u>figbc.fi/rakennetun-ympariston-kiertotalous</u> Guidebooks and other material to promote circular economy in construction | Green Building Council Finland
- **★** <u>ym.fi/muovitiekartta</u> Plastics Roadmap for Finland: Reduce, refuse, recycle and replace The Plastics Roadmap 2.0 is an extensive national programme for the breakthrough of circular economy in plastics in Finland by 2030.
- **★** <u>ym.fi/vauhditetaan-muovin-kiertotaloutta-rakentamisessa</u> Measures to promote circular economy in terms of plastic in construction
- ➡ ym.fi/documents/1410903/40549091/rakentamisen_muovit_A4_v3.pdf Rakentamisen muovit: Rakennustyömaiden kierrätyskelpoisten muovijakeiden kierrätyksen tehostaminen ja kierrätysmuovituotteiden käytön lisääminen rakentamisessa (in Finnish) (Construction plastics: Streamlining the recycling of recyclable plastics on construction sites and increasing the use of recycled plastic products in construction) | Ministry of the Environment
- ◆ sitoumus2050.fi/rakentamisen-muovit#/ Green Deal for Plastics in Construction
- → motiva.fi/files/21717/Miksi kunnan kannattaa liittya Rakentamisen muovien green dealiin.pdf —
 Miksi kunnan kannattaa liittyä mukaan Rakentamisen muovit green dealiin? (in Finnish)
 (Why municipalities should join the Green Deal for Plastics in Construction)
- ◆ plastics.fi/fin/muovitieto/muovit/ Muovit ovat monipuolinen materiaaliryhmä (in Finnish)
 (Plastics are a versatile material group) | Finnish Plastics Industries Federation
- motiva-verkkokurssit.fi/kurssit/rakentamisen-muovit-miksi-rakentamisen-muoveja-pitaa-kerata-ja-kierrattaa
 Online course on plastics in construction (in Finnish) | Motiva
- plastics.fi/fin/muovitieto/muovit_ja_ymparisto/muovien_kierratys/ Information on plastic recycling in Finnish | Finnish Plastics Industries Federation
- **t** <u>kemia-lehti.fi/muovin-kemiallisessa-kierratyksessa-oljy-synnytetaan-uudelleen/</u> Article on chemical plastic recycling in the Kemia magazine (in Finnish)
- https://www.espoo.fi/en/news/2024/01/packaging-plastic-circulates-relatively-well-helsinkimetropolitan-area-and-lahti-hard-plastic-and
 Packaging plastic circulates relatively well in the

- Helsinki Metropolitan Area and Lahti hard plastic and construction plastic not so much
- ◆ plasticseurope.org/knowledge-hub/the-circular-economy-for-plastics-a-european-overview-2/ The Circular Economy for Plastics A European Overview 2022. European overview of plastic production, consumption and waste streams in 2020 | Plastics Europe
- circulareconomy.europa.eu/platform/en/knowledge/chemical-recycling-circular-perspective Chemical Recycling in circular perspective | European Circular Economy Stakeholder Platform. A research report on how chemical recycling is guiding us towards circular economy and a carbon-neutral chemicals industry.
- **kalvo-muovi.fi** Plastic film calculator for use in residential construction projects. This website also features a research report on the theme | Aalto University
- ★ motiva.fi/files/17682/Kalvomuovien_erilliskerayksen_tyomaaopas.pdf Parhaita käytäntöjä erilliskeräyksen mahdollistavaan työmaan jätehuollon toteuttamiseen yleisesti sekä parhaita käytäntöjä erityisesti kalvomuovien erilliskeräykseen (PDF) (in Finnish) (Best practices for implementing worksite waste management to enable plastic film collection and best practices for separate collection of plastic film, in particular) | Motiva
- ym.fi/documents/1410903/42733297/
 Opas+kalvomuovien+erilliskeräyksen+järjestämisestä+talonrakentamisen+hankkeissa+ja+työmailla.
 pdf/ Opas kalvomuovien erilliskeräyksen järjestämisestä talonrakentamisen hankkeissa ja työmailla (in Finnish) (Guidelines on arranging for the separate collection of plastic film in housebuilding projects and on worksites) | Ministry of the Environment
- kiertotaloussuomi.fi/tieto/ohjauskeinot/jatteiden-kasittely-ja-jatehuolto/ Information on arranging for waste management and recycling (in Finnish)
- figbc.fi/julkaisut/kiertotalouden-edistaminen-kuntien-hankinnoissa Kiertotalouden edistäminen kuntien hankinnoissa Rakennetun ympäristön toimialan kiertotalouden markkinakatsaus (in Finnish) (Promoting circular economy in municipal procurement Circular economy market overview in the built environment sector) | Green Building Council Finland
- kiertotaloussuomi.fi/taito-ja-tyokalut/kiertotaloutta-vauhdittavat-hankinnat/ Information to support sustainable procurement (in Finnish)
- <u>issuu.com/suomenymparistokeskus/docs/circwaste_kiertotaloushankintojen_k_sikirja_18.5</u>. Kiertotaloushankintojen käsikirja (in Finnish) (Handbook of circular economy procurement) | Finnish Environment Institute
- + Hankinta-Suomen työkalut ja oppaat Procurement Finland tools and guidebooks in Finnish
- julkaisut.valtioneuvosto.fi/bitstream/handle/10024/80654/YO_2017_Vahahiilisen_rakentamisen_hankintakriteerit.pdf
 Procurement criteria for low-carbon building in Finnish
- hankintakeino.fi/fi/materiaalipankki/hankinnan-markkinakartoitus-opas Hankinnan markkinakartoitus -opas (in Finnish) (The market survey guidebook for procurement) | KEINO competence center
- ★ <u>kriteeripankki.fi</u> Responsibility criteria for public procurement
- ★ <u>kriteeripankki.fi/fi/c/71</u> Instructions on selecting and using criteria in procurement | The Criteria Bank, Motiva
- **↑** https://www.espoo.fi/en/news/2024/02/survey-municipalities-attitude-towards-construction-plastics-procurement Survey: Municipalities' attitude towards construction plastics procurement.
- https://www.espoo.fi/en/news/2024/06/newly-released-public-procurement-criteria-improve-recyclingrate-construction-plastics – News article on newly released public procurement criteria