



Note on plastic waste consultancy performed 2014



Table of contents

1.	Brief introduction on the Copenhagen business composition and progress ...	3
2.	Overview of companies in Copenhagen	3
3.	Summary	4
4.	What to act upon	7
5.	Background for the guidance and consultancy	8
6.	Experience from the waste expert consultancies campaign	8
7.	Procedure for meeting businesses/companies	11

July 2014

Quality Assurance

Done by	Tina Winberg, 30 June 2014
Quality assured by	Mette Skovgaard, 17 July 2014
Approved by	Line Geest Jacobsen, 31 July 2014

1. BRIEF INTRODUCTION ON THE COPENHAGEN BUSINESS COMPOSITION AND PROGRESS

More growth and more private jobs have directed the City of Copenhagen's business policy over the last four years. Since 2010 Copenhagen has created 15,000 new jobs in the private sector. In recent years, start-up rate in Copenhagen was 40 percent higher than the national average. This means, that the desire to starting businesses is much greater in Copenhagen than in the rest of the country.

A new analysis from the Copenhagen Business Services from 2012 also shows that the survival rate has been increasing since 2006. In 2011, 87 % of start-ups in Copenhagen were still alive after one year. Overall, there are now approximately 46,000 companies in Copenhagen, which is 10,000 more than in 2000 and the same number as before the economic crisis started. The majority are small and medium enterprises.

Space is limited in Copenhagen and beyond that there must be room for new businesses, for example in trade, service and manufacturing industries, the city grows by 10,000 new residents each year. Thus companies must adapt in shared offices, commercial property and other commercial premises or - leases, including in buildings with mixed residential and commercial use.

About 75 % of small and medium-sized businesses seeking office in Copenhagen - is preferably chosen to adapt in shared offices. Here you have short notice periods and you can easily up-size or down-size according to business needs. At the same time share a number of common costs so that you often get a cheaper rent.

The many businesses, their choice of facilities and dense location – has been a challenge for the Plastic Zero waste expert consultants. Particularly as regards their lack of knowledge to know their Production Entity Number (PE no.) as to their obligations ensuring that their commercial waste is managed, collected, recycled and reused in accordance with applicable rules and requirements. Furthermore, the facts that waste data are only partially reported to the National Waste Data System.

2. OVERVIEW OF COMPANIES IN COPENHAGEN

A brief overview of the number and type of production units - PE no. registered in Copenhagen is shown below. The figures are based on data from the Central Business Register. The vast majority of production units have no employees or only one employee. Few production units have more than 50 employees, and in these cases there may be several production units in one enterprise VAT number.

NUMBER OF PRODUCTION UNITS PER BRANCH IN COPENHAGEN IN 2013

Type of branch	Total	No employees	1 employee	2-49 employees	More than 50 employees
Primary production	203	92%	3%	4%	1%
Manufacturing	2.021	82%	4%	13%	1%
Energy, water, waste	194	82%	3%	12%	3%
Construction and demolition	2.100	78%	5%	16%	0%
Wholesale and retail	9.296	71%	5%	23%	1%
Transport	1.466	70%	8%	18%	4%
Hotel, restaurant	3.707	69%	5%	26%	1%
Information and communication	3.342	85%	3%	10%	1%
Service, it, investment	34.413	86%	4%	9%	1%
Public services	21.889	84%	2%	12%	2%
Unknown	7.881	100%	0%	0%	0%
Total number	86.512	72.507	2.863	10.179	963

3. SUMMARY

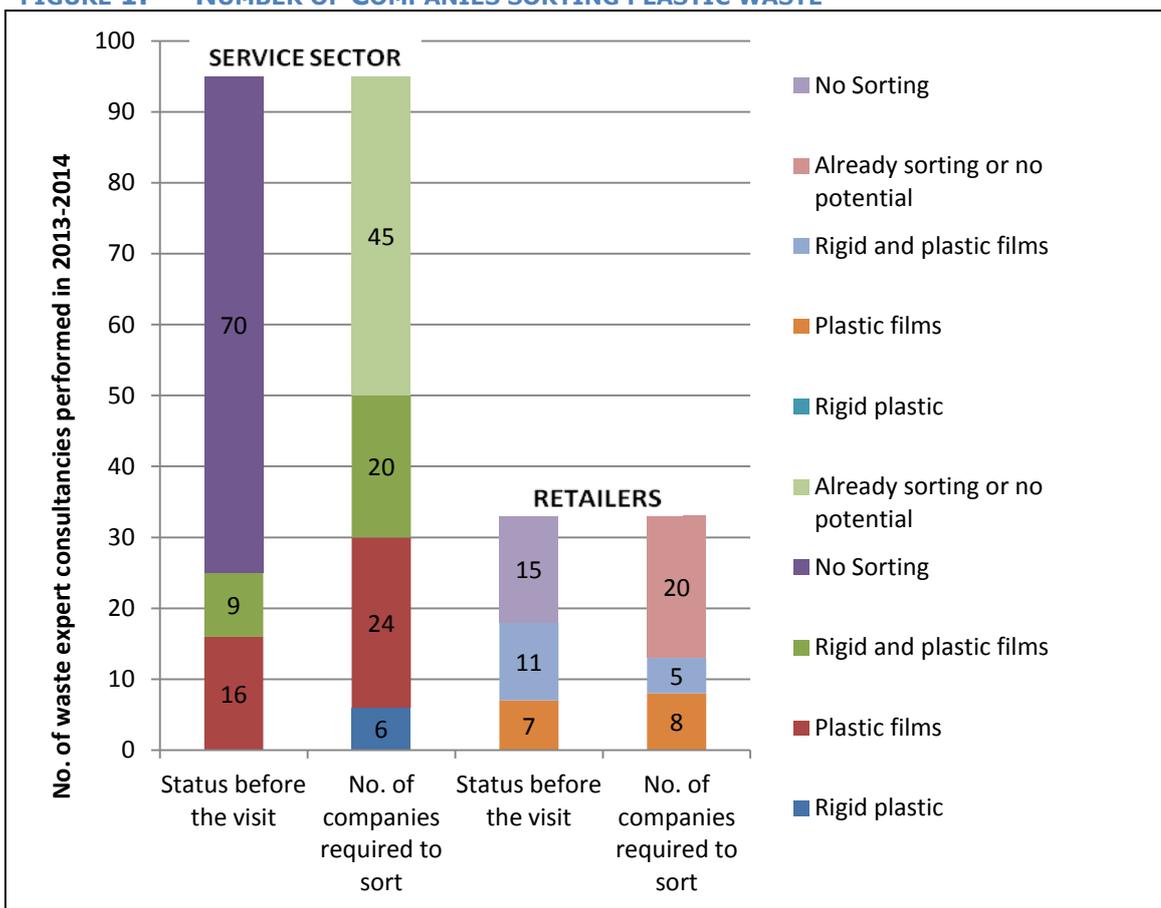
In the period February 2013 to July 2014 Plastic Zero performed 128 waste expert consultancies in Copenhagen: 33 in the retail business and 95 in the service sector. The aim was to perform 150 waste expert consultancies altogether during the project.

The companies have been selected according to: a) more than 50 employees and b) branch codes presumed to have a considerable plastic waste potential. The branch codes include three categories: 1) Banks, finance, research, retirement, legal assistance, etc., 2) Retailers and 3) Management Consulting Services, architects, advertising agencies and travel agencies.

The reason for a supervisory effort for these types of businesses originates from a pilot "Plastic Campaign 2011", where the City of Copenhagen performed 33 waste expert consultancies during the period May – December 2011.

In the following sections, results from the consultancies during 2013 - 2014 are presented. In general, and based on the experience during the project, there seems to be a potential for improvement as to the separate collection of plastic amongst the selected businesses.

FIGURE 1. NUMBER OF COMPANIES SORTING PLASTIC WASTE



The experience in general:

- Based on the consultancies performed shown in figure 1, the retailers are doing a better job than the service sector, when it comes to plastic waste sorting: Approximately half of the retailers are sorting plastic waste – of those 61 % are sorting both rigid plastic and plastic films and 28 % sort out only plastic films.

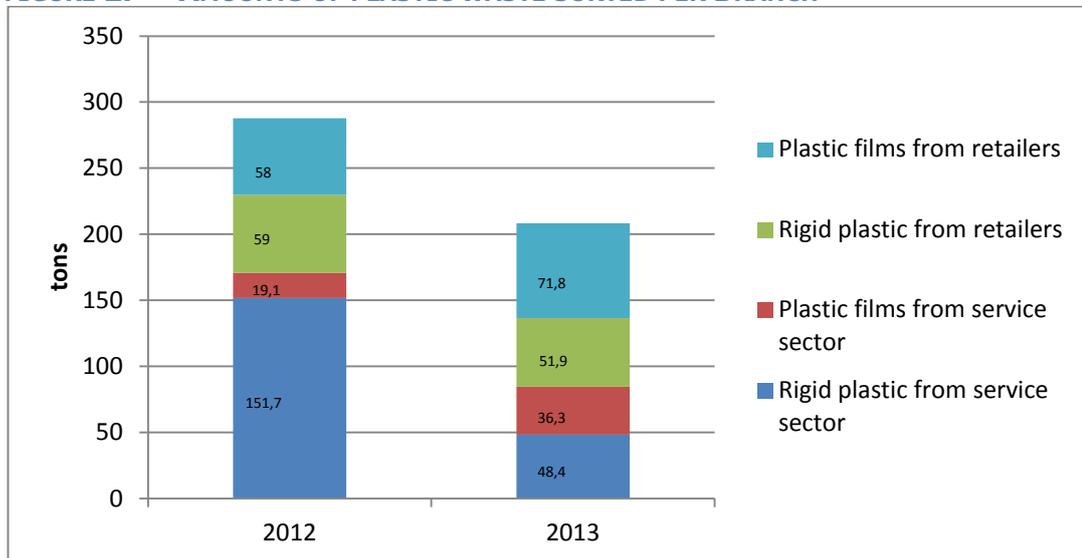
In the service sector the results are less positive. One fourth are sorting plastic waste - of those 38 % are sorting both rigid plastic and plastic films - 62 % sort out only plastic films.

- These differences in practice may be explained in a greener and more sustainable culture within the retail business; they have a longer history dealing with reuse and recycling of waste materials, such as plastic films and rigid plastics. The plastics produced at the retailers, especially films - are often very clean and easy to sort. A proper sorting system, large amounts and logistics result in reduced waste management costs.
- Even though, many companies do not sort out plastic waste. This can be due to not being familiar with the local authorities' sorting requirements or lack of motivation, storage facilities and time. Many companies will not spend the extra time it takes to arrange a sorting and collection scheme as well as staff time on actual separation.

Other companies excuse this lack of sorting, with the fact that they have not received any orders or commitment from the head management to do so.

- Thereof we can conclude that many companies are far from being aware of their obligations to keep up to date in relation to knowledge of the waste legislation and their responsibility to source separate the reusable plastic waste and ensuring that the plastic is reused, pursuant to the Waste Ordinance 1309 §§ 64 and 67.
- On average, 0.43 kilogram of plastics per inhabitant has been sorted by the enterprises in 2012 and 2013.

FIGURE 2. AMOUNTS OF PLASTIC WASTE SORTED PER BRANCH



- It has not been possible to obtain sufficient data for the reported amounts of plastic waste - by company, business, industry or the exact type of plastic. This is partly due to:
 1. The plastic waste generated in 2014 is the earliest reported to the National Waste Data System by. 31 December 2014.
 2. The company did not carry out any sorting of plastic.
 3. The waste collectors or treatment facilities did not carry out the statutory reporting of data.
 4. The plastic data are reported on an incorrect value code or EWC code.
 5. The plastic data are reported on the company's main PE no.

6. The company's production of plastic waste is reported on the commercial properties PE no. – If the company is letting.
 7. The company has balled and stored the plastic waste and gets it picked up when the amount is large enough.
 8. The company has handed over the plastic waste to a Recycling Centre.
- Shared offices in business properties and company estates is a major challenge when it comes to waste management:
 - I. It is not easy to get a proper first contact to the company you wish to address.
 - II. It is problematic to get in contact with the person in charge of the waste management. Overall, in these constellations this is a task for the administrator, the janitor or the facility management. They manage the waste in total, produced at the business properties/ company estate. Therefore, in shared offices, property and estates, it is almost impossible to get valid waste data, covering the total production of waste, exclusively from one business to another.
 - Outsourcing the waste handling to the cleaning staff or part-time staff, such as kitchen staff etc. is quite a common phenomenon amongst the companies or businesses. This practice results in continuously incorrect sorting, and waste already sorted out by the respective company, ends up in the wrong bins - due to the lack of awareness of how to handle waste, as well as cultural- and lingual challenges.
 - The companies are not aware of their responsibility to stay updated with current legislation. That includes their obligations to: know their own Production entity number/ PE no. And to keep their company data up to date in the Central Business Register.
 - Another issue relates to the data on waste collected for recycling. Waste data reporting is mandatory in Denmark. Waste collectors and waste treatment facilities are therefore obliged to report the amounts of waste they have collected or received, to the National Waste Data System. However, there are massive gaps in their reporting procedure and large amounts of waste data are missing. As a result, these data are basically not satisfactory.

The invalid Waste Data System makes it very difficult for the waste experts to withdraw useful data. For the system to work as intended, the reporting of waste data need to be made much more effective.

- Finally, companies and businesses that do sort rigid plastic, or those instructed to do so by the Plastic Zero waste consultants, find a major challenge in finding a waste collector or transporter, to pick up 'household-like' rigid plastic. This is mainly due to the collector's high requirements, regarding the volume, source separation per plastic type and plastic purity. These are criteria that are very difficult for an average business to comply with. According to collectors, these criteria determine whether it is worthwhile for them to contract with a company or not.

In certain cases it has not been possible for a company sorting rigid plastic, even to get a "collection price" from the main waste collectors on the market, for dealing with this plastic fraction.

Even though the requirements made by the Copenhagen authorities are more relaxed for a company to follow and differ from the collectors' requests. The Copenhagen authority allows sorting and reuse of rigid plastics, having

contained food products etc. However, the emphasis is on the fact that only companies producing large amounts of plastic waste to be imposed to separate.

4. WHAT TO ACT UPON

Partnerships and cooperations:

- ❖ Partnerships with the commercial lease in business properties/ company estates and the municipalities, could be an approach to disseminate knowledge in respect to the legal requirements to waste handling and management of commercial waste.
- ❖ Prospectively, collaborative forum meetings with the cleaning industry, possibly trade associations – should be established, to make this sector aware of the challenge in “incorrect sorting”. Cleaning Service Companies/ -employees should be introduced to a short waste handling course – organized by the municipalities or other relevant actors. This course should define what the specific waste handling implies; in this way to secure, that the cleaning company in the future will handle commercial waste in accordance with the rules and requirements for proper sorting.

Waste data optimization and increased dialogue:

- ❖ Waste data are valuable for; the business/ company itself, waste consultants, collectors and other relevant actors within the waste industry - to quality assure the amount of waste produced p.a. As for public actors/ municipalities, waste data serves as a tool in developing plans, environmental inspection and waste consultancies. When it comes to the collectors and the treatment facilities reporting procedure, there is a need for more efficient reporting of waste data. In view of recent years’ tendencies a greater use of fines, cf. legal rights, might be effective, as a consequence of neglect.
- ❖ Increased dialogue between municipalities waste collecting companies and other relevant stakeholders, by means of seminars and workshops - could be another way to take action. There is a broad consent, based on experiences from the project, that all stakeholders need to engage in a dialogue, in order to improve the reporting of waste data to the National Waste Data System, and hereby the validity of the reported data. Additionally, to build consensus in terms of quality, collection and handling of plastic waste. What are the waste collectors and – transporters role in relation to the waste solution they suggest to a given business or company – Should the legislation be reflected in it?

Demands for storage facilities for waste management in business properties:

- ❖ Most of the storage facilities in new business properties, -estates etc. do not comply with the actual needs. Municipalities / local authorities should make demands to the construction sector, in order to build spacious storage facilities for waste management, in the construction of new commercial buildings/- properties.

5. BACKGROUND FOR THE GUIDANCE AND CONSULTANCY

Plastic Zero' s affaldskonsulenter har i perioden februar 2013 – juli 2014 besøgt 128 af Københavns større virksomheder. Målet var at føre 150 tilsyn. Tilsynsstrategien har taget udgangspunkt i mere dialog og service, med det formål, at rådgive og vejlede de københavnske virksomheder om korrekt sortering og indsamling af bl.a. deres genanvendelige plastaffald.

Virksomhederne er valgt ud fra specifikke branchekoder der formodes at have et stort plastpotentiale og virksomhedens størrelse - mere end 50 ansatte, fordelt over 3 kategorier: 1) Pengeinstitutter, finansiering, forskning, pension, juridisk bistand m.m., 2) Detailhandelen og 3) Virksomhedsrådgivning, arkitekter, reklamebureauer, rejsebureauer.

Baggrunden for en tilsynsindsats for netop disse virksomhedstyper, stammer fra Københavns Kommunes erfaringer fra Plastkampagnen 2011 jf. Affaldsplan 2012, initiativ 29.

6. EXPERIENCE FROM THE WASTE EXPERT CONSULTANCIES CAMPAIGN

Der er foretaget 128 tilsyn. Tilsynene er fortrinsvis foretaget februar 2013 - juli 2014.

FIGURE 1. NUMBER OF COMPANIES SORTING PLASTIC WASTE

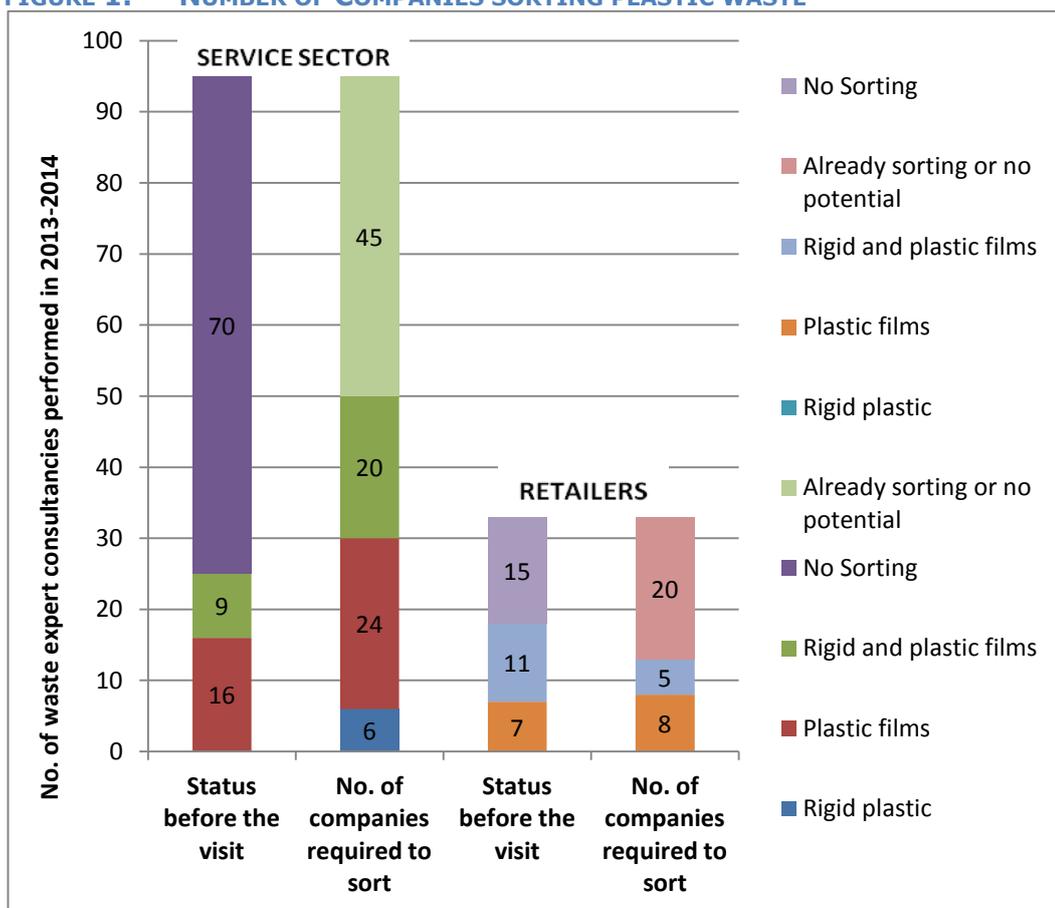
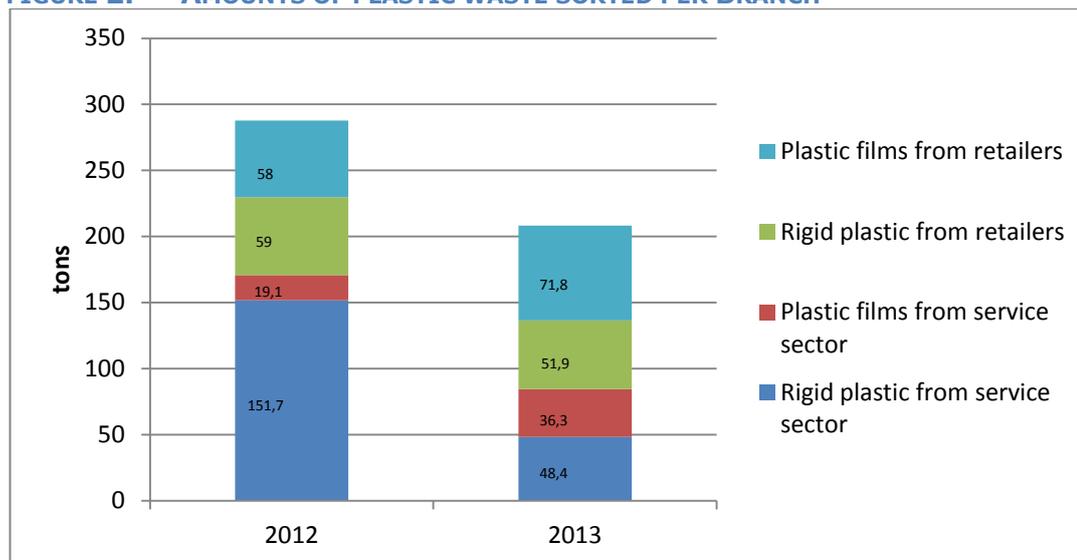


FIGURE 2. AMOUNTS OF PLASTIC WASTE SORTED PER BRANCH



Ad. Fig. 2. Det har ikke været muligt, at få fyldestgørende data for de indberettede mængder plastaffald - fordelt på virksomhed, branche og plasttype. Dette skyldes dels, 1) At plastaffaldet er genereret i 2014 og først indberettes pr. 31. december 2014. 2) At virksomheden ikke har foretaget nogen sortering af plast. 3) At de pågældende plastdata er indberettet på en forkert værdikode eller EAK-kode. 4) At de pågældende plastdata er indberettet på virksomhedens hoved P-nummer. 5) At virksomhedens produktion af affald er indberettet på erhvervsejendommens/ udlejers P-nummer - i de tilfælde virksomheden er lejer. 6) At virksomheden har opballet og opbevaret plasten, og først får den afhentet, når der er økonomi i det. 7) At indsamlere/ modtageanlæg ikke har foretaget den lovpligtige indberetning af data. 8) At virksomheden har afleveret plasten på genbrugsstationen.

Erfaringer generelt:

- Detailhandlen er meget bevidst om reglerne for sortering og indsamling af plast. Dette skyldes formodentligt, at det er økonomisk fordelagtigt for virksomheden at sælge plastaffaldet, samtidig med at udnyttelse af ressourcer og genbrug, er forankret i virksomhedskulturen – mange budgetterer ligefrem med denne indtægt.
- Manglende sortering og indsamling skyldes i største grad manglende kendskab til sorteringskrav, motivation, pladsmangel og tid – samt at de ikke har fået tilsagn om at gøre det "oppefra". Mange virksomheder vil ikke ofre den ekstra tid det tager at sætte sortering og indsamling i system.
- De virksomheder der overholder sorteringskravene og sorterer hård plast af husholdningslignende karakter (post consumer) eller de virksomheder, der af Plastic Zero's affaldskonsulenter er blevet pålagt at få en privat plastordning til virksomhedens hårde plast (post consumer) - har store udfordringer med at få plasten afsat til en indsamlevirksomhed eller affaldstransportør. Ikke engang de større aktører på markedet har været villige til at indgå aftale med de mange virksomheder der har efterspurgt en indsamler til afhentning af denne hårde plastfraktion. Det er dog lykket for et få tal.

Dette skyldes først og fremmest, at indsamlernes krav til den pågældende virksomhed hvad angår mængde, kildesortering og plastens renhed, er alt for

høje og umulige at efterkomme. Ifølge indsamlervirksomhederne, er kriterierne afgørende for, om det kan betale sig for dem at indgå en privat aftale med en given virksomhed.

Plastaffaldet skal ifølge indsamleren leve op til følgende kriterier:

- ♦ Plastaffaldet skal være helt rent – vasket, og ikke brugt til emballering af fødevarer, med mindre de er vasket rene.
 - ♦ Plastaffaldet skal være sorteret i plasttyperne: LDPE, HDPE, PP, PS, PET.
 - ♦ Plastaffaldet skal udgøre store mængder, min. 200-500kg pr. tømning.
- Ifølge Københavns Kommunes regler og krav, skal alle københavnske virksomheder kildesortere væsentlige mængder plast fra andet affald og sikre at det genanvendes – også selv om plasten fx har indeholdt fødevarer og er lettere beskidt. Dog lægges der vægt på, at det udelukkende er virksomheder der producerer store mængder plastaffald, der pålægges at udsortere plasten.
 - Da Plastic Zero's affaldskonsulenter repræsenterer en myndighed, er tilsynsmedarbejderens møde med den affaldsansvarlige ofte af defensiv karakter. Folk er af den opfattelse, at et besøg fra kommunen ofte er forbundet med nye krav, der besværliggør deres normale arbejds gange.
 - De fleste virksomheder er langt fra bevidste om, at de selv skal holde sig opdateret i forhold til viden og kendskab til den pågældende lovgivning. Heraf at virksomhederne selv har ansvaret for at kildesortere det genanvendelige plastaffald samt sikre, at plasten genanvendes jf. Bekendtgørelse om affald nr. 1309 §§ 64 og 67.
 - Virksomhederne er ikke klar over hvad et P-nummer/ produktions-enheds nummer er, eller hvilket P-nummer de har, og hvorfor dette er vigtigt. De er heller ikke klar over, at det er virksomheden selv, der er forpligtet til at opretholde og opdatere virksomhedens oplysninger i CVR registret.

I relation hertil, er det ofte umuligt eller tidskrævende for kommunens tilsynsmedarbejder, at få fat i det rette P-nummer. Der findes dog andre muligheder end i CVR registeret, at søge efter P-numre. Men det er mest optimalt at man kun skal søge et sted.

I de tilfælde hvor det ikke lykkes at finde virksomhedens P-nummer besværliggøres det, forud for besøget - at få indblik i hvilke fraktioner virksomheden kildesorterer og de samlede mængder affald, virksomheden producerer.

- Hidtil viser vores erfaringer, at der konsekvent er fejl eller mangler i indberetningerne af affaldsdata til det Nationale Affaldsdatasystem. For de fleste virksomheder gælder, at indsamleren/ modtageren kun har indberettet data for enkelte affaldstyper/-plastfraktioner samt enkelte år. I få tilfælde har virksomheden fået indberettet affaldsdata for alle år.
- Kvaliteten af indberetningerne afhænger af indsamleren/ modtageren. Der er stor forskel på de enkelte indsamlervirksomheder og modtageanlægs indrapportering af affaldsdata.

Derudover, bør det drøftes fremadrettet - hvad der er indsamlevirksomheder og affaldstransportørernes rolle, i forhold til den affaldsløsning de tilbyder en given virksomhed – bør lovgivningen afspejles heri?

7. PROCEDURE FOR MEETING BUSINESSES/COMPANIES

1. Contact the company to arrange meeting:

- a. Contact the company by telephone and ask for the operation manager or waste manager. Check if possible the company's website for contact information.
- b. Briefly explain the cause and purpose of the visit. Mention the possibility, that the meeting maximum takes half an hour.
- c. Agree on date of visit. The company is required to submit Vat. Production unit no., the day before the agreed meeting.
- d. Send a letter of notice or a meeting confirmation on email. Create a template to ease up the procedure. The company must be notified at least 14 days before the meeting / supervision takes place.

2. Before supervision:

- e. Check in the filing system whether there is any information relating to the company.
- f. Check out the company in the Business Register.
- g. Extract data from National Waste Data System, based on the company's Vat. Production unit no.
- h. Create the "case" in the municipality's filing system and attach the documents to the case.
- i. Surf around on the company's website – are the website up dated?
- j. Prepare a folder with relevant pamphlets, links and information about waste management, a copy of the waste data report and supervision scheme. Remember the contact information; Name and telephone of the person you will be meeting.

3. On supervision:

- k. Show gratitude to the facility manager or the person in charge of waste managing, for having taken the time to meet.
- l. Get the person to speak. Ask for a brief description of the company's daily life – which types of commercial waste the company has. Be listening, empathetic and take notes.
- m. Ask to see the company's storage facilities, where they have their waste containers. Ask about their waste carrier – and emptying frequency? If there is potential for further sorting and improvement, mention it here.
- n. Finally briefly summarize what is talked about and possibly agreed. If the company does not have a plastic-scheme – agree on a date to follow-up.

- o. Within the agreed date, the company must conclude an agreement with a waste carrier or waste transporter to collect the company's sorted plastic. The agreement / contract must be documented in writing.
- p. Send a copy of the note or supervision scheme, based on the conclusions of the meeting and other relevant documents.